

PROCEEDINGS
of the
AMERICAN SOCIETY *for*
PSYCHICAL RESEARCH

VOL. XXII

THE MARGERY MEDIUMSHIP

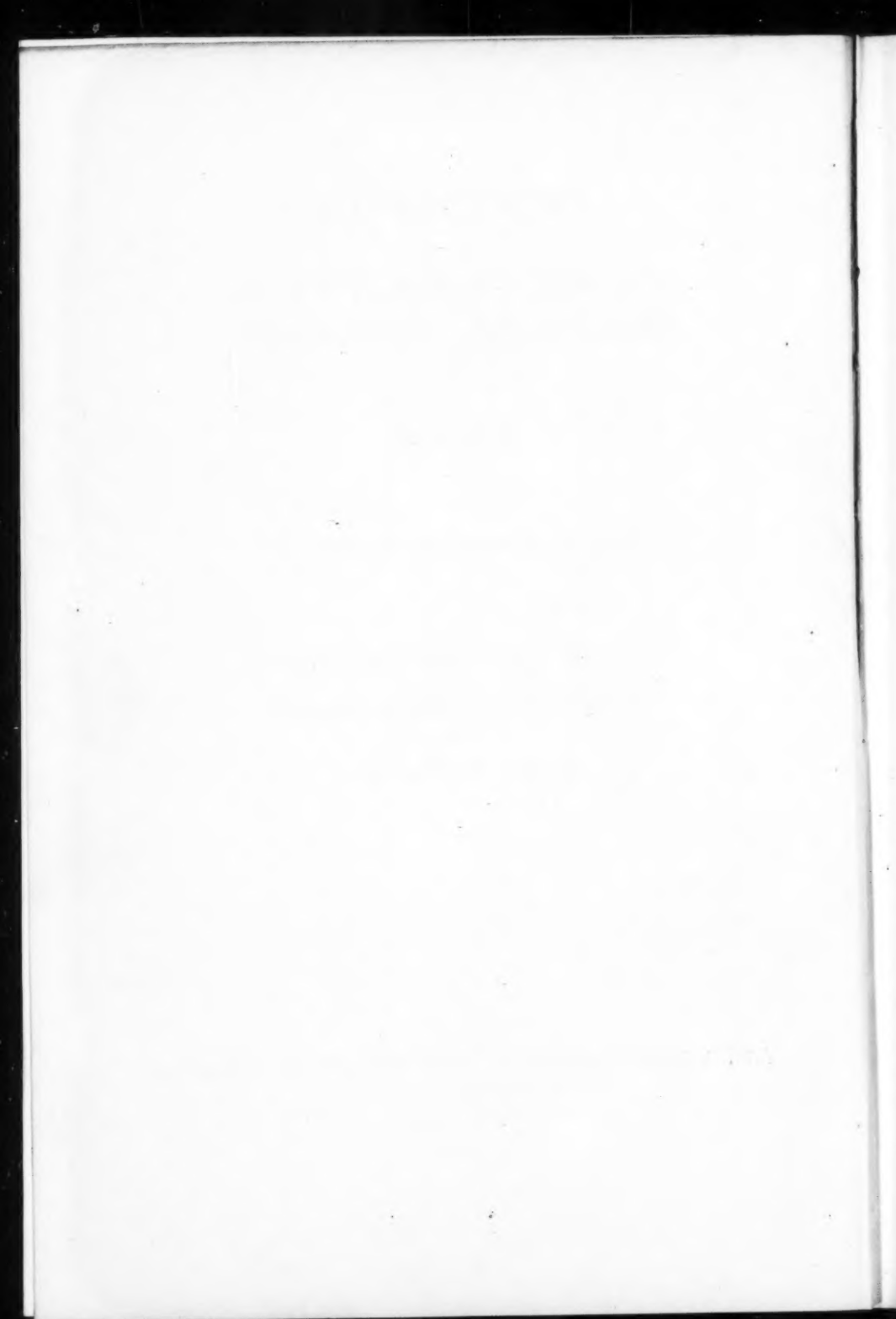
THE "WALTER" HANDS

A Study of Their Dermatoglyphics

by

Brackett K. Thorogood

THE AMERICAN SOCIETY FOR PSYCHICAL RESEARCH
15 Lexington Avenue
New York
1933



1. 22.34

Budget 3

Am. Soc. for
Physical Res.

(Cont.)

CHAPTER

TABLE OF CONTENTS

133.07

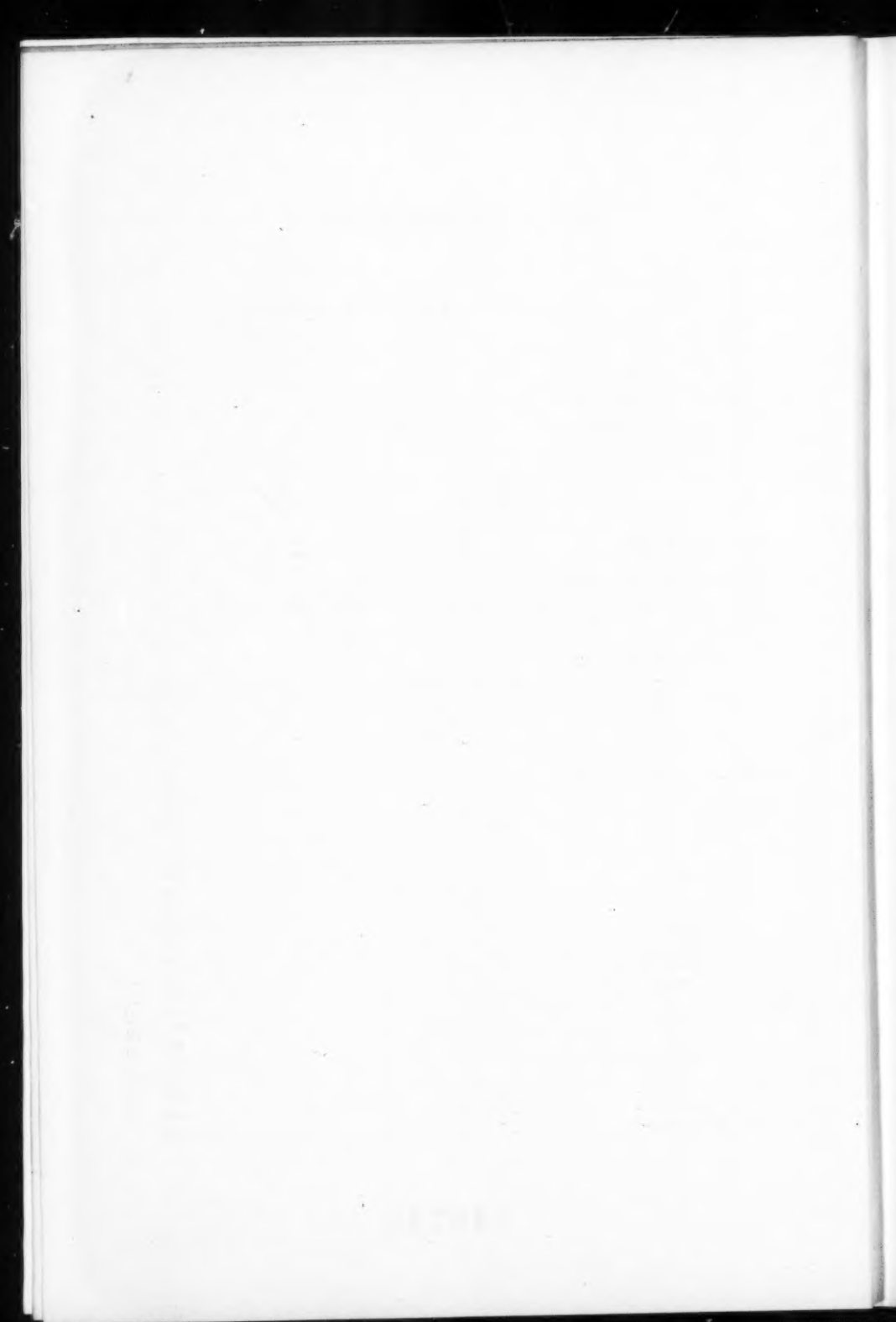
A512P

v. 22

1926 PAGE 27

Preface.	v
I: Introduction.	1
II: Definition of Certain Terms and Certain Preliminary Matters.	3
III: The "Walter" Hands.	15
IV: The "Walter" Fingers.	27
V: The "Walter" Finger Tips.	29
VI: Types of Finger Patterns.	30
VII: The "Walter" Palms.	32
VIII: Paraffin Gloves.	33
IX: Early Wax Impressions.	40
X: Classification of Waxes.	43
XI: Prints Obtained at Solus Sitzings.	59
XII: Impressions Other Than "Walter's".	61
XIII: Impressions Made Under Unusual Conditions.	63
XIV: Special Cases.	65
XV: Mixed Prints.	69
XVI: Changed Impressions.	87
XVII: Comparison of the Hands of "Margery", "Walter" and "Dr. X".	97
XVIII: Certain Criticisms.	115
Conclusions.	146
Appendices:	
I.	157
II.	157
III.	158
IV.	162
V.	166
VI.	182
VII.	190
VIII.	195
IX.	196
X.	197
XI.	198
XII.	199
XIII.	199
XIV.	200
XV.	201
XVI.	203
XVII.	209
XVIII.	211
XIX.	212
XX.	212
XXI.	215
XXII.	215
XXIII.	218
XXIV.	222
XXV.	223
XXVI.	224
Bibliography.	225

248740



P R E F A C E .

The purpose of this third volume of Proceedings on the Margery Mediumship is to present a report of certain investigations of the finger-print phenomena, made by Mr. Brackett K. Thorgood, Research Consultant of the Society. The circumstances which occasioned the investigation require a somewhat detailed statement of explanation, not only to insure a complete understanding of the Report, but also to make them a matter of permanent record in the history of the case.

Beginning in 1924 efforts were made to repeat in this mediumship the production of paraffin gloves that Geley had obtained in his experiments with the medium Kluski. A number of such gloves were obtained. Out of this gradually developed the notion of obtaining finger prints of "Walter," the control. No one, of course, had any knowledge whatever or, indeed, any theory as to how the finger-print patterns of a dead man could persist and be reproduced through a mediumistic agency; but the development of this mediumship has been characterized throughout by a definite plan of proposing to the control a series of problems of constantly increasing complexity and apparent difficulty designed to test in an experimental manner the scope and essential nature of the powers exercised by the control. The registering of finger prints was one of the problems thus presented to "Walter." Various media were tried, including ink, paraffin smeared on glass, and several plastic substances; but with no very great success. By filling the paraffin gloves with plaster of Paris and thus obtaining molds of the hands, it was found that a model of the surface structure of the teleplasmic hand or fingers was obtained, but the details of the pattern were seldom clear and the process was very cumbersome and uncertain.

On July 30, 1926, "Margery" visited her dentist, Dr. "X" of Boston, who had been a frequent sitter at the séances held

during the first year or so of the mediumship, but who had not been present since 1924. She discussed with Dr. "X" the progress of the phenomena and particularly the efforts to obtain finger prints and the difficulty of finding a proper substance to receive the impressions. He suggested the use of a dental wax called "Kerr" and showed her how to use it by making on sample pieces several impressions of his own thumbs. "Margery" returned home in the late afternoon with these impressions and a number of pieces of unused wax, and found there Mr. Charles S. Hill, Mr. E. E. Dudley, Mr. Wendell P. Murray, a lawyer of Boston, and Dr. and Mrs. E. W. Brown. Dr. Brown had called to attend "Margery's" mother who was ill. "Margery" told this group about the "Kerr" and showed them the impressions that Dr. "X" had made. It was decided to try the new wax at a séance to be held in the evening. Mr. Dudley, who was particularly interested in the finger-print experiments, was given the used waxes and took them away with him.

It is necessary to state that Mr. Dudley not only denies that he received the waxes impressed by Dr. "X," but also claims further that he did not then even know that Dr. X had made any impressions at all. On the evidence, however, we are satisfied that the facts are as above stated.

At the séance that evening Mr. Dudley was present, the "Kerr" was used and several prints were obtained. The results were highly satisfactory, and thereafter "Kerr" was used exclusively in all finger-print experiments. Upwards of 200 prints have since been obtained on "Kerr," most of them being claimed by "Walter" to be prints of his own thumbs.

Experiments with the thumb-print phenomena continued intermittently for the ensuing five years with Mr. Dudley in general charge and supervision of the work. With no initial experience in the subject he applied himself diligently to the task of becoming familiar with finger-print science and practice, made the acquaintance of several police experts, discussed the subject with them and soon began to consider himself an expert. In collaboration with J. Malcolm Bird, who was then Research Officer of the Society, Mr. Dudley prepared the series

of articles describing the finger-print experiments which were published in the Journal during 1928, and others which were published in 1929.

Mr. Bird ceased to be Research Officer in January, 1931, leaving in galley or page proof an unfinished manuscript of a proposed volume of Proceedings dealing with the Margery case which included a somewhat lengthy account of the finger-print experiments prepared by or with the collaboration of Mr. Dudley. Mr. Dudley was suggested as a candidate to succeed Mr. Bird as Research Officer. He was not appointed, but was specially employed by the Society to rewrite the manuscript and complete it for publication. This job was nearly finished and most of the corrected proofs returned to the Society,¹ when, on March 11, 1932, Mr. Dudley wrote Mr. W. H. Button, President of the Society, saying that he had "additional evidence," on the finger-print experiments which would require "some changes" in the text of the Proceedings, "not extensive but involving a paragraph here and there."

A week later, after an interview with "Margery" hereinafter referred to, Mr. Dudley wrote another letter to Mr. Button elaborating the somewhat cryptic statement of the first letter and claiming that he had discovered that the so-called "Walter" prints were in fact identical with the prints of a living man, one of the early sitters. These two letters are printed as Appendices I and II on page 157, *infra*. It later developed that the early sitter referred to was "Margery's" dentist, Dr. "X." Other correspondence with Mr. Dudley followed and on April 4th Mr. Button and Mr. Walton, Chairman of the Research Committee of the Board of Trustees, interviewed Mr. Dudley at length on the subject, in Boston. He was told that the matter of his new evidence would be carefully investigated and considered, and was requested to prepare for the Society a publishable statement of his discovery and what he claimed in respect thereto. This he promised to do, saying that it would take him only a few days. If the promise was sincere when made

¹ This is referred to by Mr. Thorogood as "Manuscript Proceedings."

other factors seem soon to have intervened to mold the situation for other purposes than the scientific study of the case. Frequent requests to Mr. Dudley thereafter for his promised statement were not complied with until June 13th when a statement was received by Mr. Button with a somewhat peremptory demand for prompt publication. On June 13th he was invited to come to New York at the Society's expense to confer with the Research Committee on the subject, but this he at once declined to do. Investigations conducted in the meantime revealed that negotiations were under way for the publication of the story as a sensational exposé in a popular weekly magazine of wide circulation.

It was then decided that before anything was published by the Society on the matter a full and adequate examination of all the facts was imperative, and Mr. Dudley was informed that the Society had adopted that policy and that when such examination was concluded the full facts would be published with all the relevant evidence. Mr. Dudley's statement and exhibits were returned to him at his request. In view of the impending publicity a statement briefly explaining the situation was inserted in the July number of the Journal. For ready reference this statement is reprinted as Appendix III on page 158ff, *infra*.

The story was ultimately rejected by the popular magazine, but Mr. Dudley found a publisher in Dr. W. F. Prince of the Boston S.P.R. which printed a somewhat revised and expanded article in Bulletin XVIII, in October, 1932, with supporting articles by Hereward Carrington and Arthur Goadby. Mr. Goadby shortly thereafter resigned as a Trustee of the A.S.P.R. As the alleged excuse for noticing the matter at all Dr. Prince, as editor of the Bulletin, prefaced it with a claim that the facts were being threatened with suppression by this Society. A further comment *a propos* Bulletin XVIII was thereupon published in the Journal for November, 1932, and is likewise reprinted, as Appendix IV, page 162ff, *infra*. Dr. Prince, relying heavily on Mr. Dudley's alleged discovery, subsequently announced publicly that the mediumship had suffered a stroke of paralysis, is a patent fraud, and its supporters dupes. He

also makes denunciatory capital out of the claim that Mr. Dudley, from being an ardent advocate and supporter of the mediumship, has been compelled at last to become an exposé of the case and has in fact dealt it a death blow by his discovery.

In Bulletin XVIII it is suggested both by Mr. Dudley and by Mr. Goadby that the motives and sincerity of Mr. Dudley had been brought into question by the officers of this Society, and that doubts were entertained as to the authenticity of his data. Mr. Dudley's motives are obviously of no importance if his evidence is valid and the identity he claims a real one. The Society, therefore, is not interested in probing them *per se*, because the issue is solely one of objective fact. But on that issue the surrounding circumstances are relevant and material, including any motive or bias that might operate to affect the credibility or impartiality of a person on whose testimony some of the evidence rests. Furthermore, since he himself has publicly raised the question of his motives, and his editorial sponsor has publicly in subsequent writings and with no known dissent by Mr. Dudley presented him as an investigator who has been compelled solely by evidence, more or less accidentally discovered, to reverse his scientific judgment on the case, something must be said about Mr. Dudley's relations with Lime Street and various aspects of his conduct directly connected with the matter at issue.

It is always unpleasant to discuss personalities, but the duty to set forth the facts relevant to the matter covered by this Report is inescapable. Too often has charitable reticence suppressed facts that should be known if the truth is to be uncovered and false claims refuted.

In February, 1925, Mr. Dudley introduced himself to "Margery" by a fulsome letter commending her course in the face of the criticism and controversy then raging in the newspapers over the case. He was later personally presented at Lime Street and attended many sittings. He displayed great interest in and familiarity with the history and literature of psychical research. His personal experience with the physical phenomena of mediumship was limited, but he developed facility in assisting

at the séances and an eager desire to be useful. He wrote for the newspapers letters and articles discussing the case and its investigators, and at all times talked voluminously and with seeming understanding of the problems presented by the various experiments carried on. He became very friendly with the entire Crandon family, enjoyed the run of the house and was fully trusted. He had some mechanical skill and was helpful in arranging and in handling apparatus. He finally became a regular member of the Lime Street group, came and went as he pleased and for him the house was always open, day or night. After a while it developed that he was somewhat needy financially and for a long period Dr. Crandon paid him for his services. He became a sort of séance-room major-domo and general assistant. As the finger-print program developed his eagerness and facility in picking up the details and technique of finger-print practice soon gave him a somewhat dominating position as one who knew the subject far better than anyone in the group, and he was given general charge of the experiments. He ordinarily marked and dated the waxes, made the analyses and classifications of the prints and attended to photographing the exhibits. He took the waxes home with him at any and all times and retained them without question for as long as he wished. He kept lengthy detailed records of the séances. The work of preparing accounts of the experiments for publication was largely and in many respects exclusively his. No one, in fact, was more intimately familiar than Mr. Dudley with the entire mediumship and particularly with every step and detail of the finger-print program, its origin and its development and the daily reactions toward it of the entire Lime Street group.

In the fall of 1929 Mr. B. K. Thorogood was brought to Lime Street by Mr. Dudley who says he "took him in as a collaborator." Because of Mr. Thorogood's interest in the subject he became a frequent if not a regular attendant at the séances. He had skill and ability and wide experience in several lines of scientific work and was so keenly intelligent in applying his trained mind to the problems presented in the case, that

the circle became convinced that he might easily become a real leader in the scientific study of the subject. In the summer or fall of 1930 Dr. Crandon decided to put Mr. Thorogood in full control of the séances. He announced this arrangement rather abruptly without previous warning and informed the group, including Mr. Dudley, that thereafter Mr. Thorogood would have entire charge. No one could come to a séance without the consent of Mr. Thorogood who was to have sole direction of initiating and conducting future experiments. The announcement was somewhat of a blow to Mr. Dudley who says "I found myself forced out"; but he, nevertheless, continued for a while to attend some of the séances and to work on the re-writing of the Proceedings Manuscript. He soon complained that Mr. Thorogood was appropriating his ideas of research and became somewhat sullen and morose. Later some one interfered with and sabotaged certain of the experimental apparatus that Mr. Thorogood had set up in the séance room, and Dr. Crandon quietly put a lock on the séance-room door. Mr. Dudley, to his great discomfiture, for the first time did not have the freedom of that room and upon discovering the lock flew into a temper. Although invited to the séances he thereafter gradually dropped out.

Mr. Dudley's growing sense of ill treatment and resentment was further accentuated when he learned that the Society had formally engaged Mr. Thorogood as a Research Consultant to undertake a series of new experiments with the mediumship. The man Mr. Dudley introduced to Lime Street had, in Mr. Dudley's opinion, completely supplanted him and was, moreover, about to appropriate as his own, ideas and suggestions of which Mr. Dudley claimed to be the author. Nursing his feelings of disappointment and resentment Mr. Dudley absented himself completely from Lime Street and embarked upon the efforts that brought about the announcement of his alleged discovery.

In March, 1932, "Margery" learned that Mr. Dudley had been to her doctor's office and had asked for his finger prints under circumstances that caused the doctor some embarrass-

ment. The doctor protested to "Margery." She sent for Mr. Dudley, who on March 18th, spent some time at Lime Street telling her that he had just discovered that the "Walter" prints were identical with those of her dentist and displaying photographs arranged to demonstrate the identity. He talked about the mills of the gods grinding slowly; admitted that he was incensed at the way he had been treated and announced a conviction that he must publish the story. On the same evening he wrote the letter to Mr. Button which is printed as Appendix II.

After the announcement of his alleged discovery Mr. Dudley undertook to minimize the importance of the part he played in the development and conduct of the finger-print experiments. In a letter to Mr. Button dated March 27, 1932, he said:

"I have never controlled the course of these finger-print experiments, never occupied the position of control while they were being made, nor had a solus sitting. The prints are made in darkness, therefore, I am dependent on the statements of others as to most of their actions, and these statements I must take on faith, as must the reader of the reports. If these statements are unreservedly accepted it would appear that a considerable number of the prints were made supernormally. I have testified to my part in these sittings, and to my knowledge as to what others have or have not done. Beyond that I cannot properly go."

Theoretically this statement is fair enough and, aside from the questions of fact it involves, is unexceptional and sound if applied to strangers or fortuitous collaborators dealing with a matter as among themselves at arm's length and with allowable mutual suspicion of each other's good faith and competency. Practically the statement assumes, contrary to the fact, that such was the situation Mr. Dudley occupied at Lime Street. It implies the harboring of a contemporaneous suspicion on his part as to the good faith of the medium and sitters that did not in fact exist. If Mr. Dudley sought to imply by his statement that he distrusted the Lime Street group or any of them or any person taking part in the séances as observer or

active participant, and that he thought there was any reason to question their good faith or to believe there was collusion and confederacy to deceive, or even any suspicion thereof, it is strange that the first indication of such an attitude came only after he, as he has said, was "forced out" and had a grievance. If he, in fact, had suspicions, justified or not, that any one of his collaborators was lying or unintentionally making inaccurate or untrue statements as to any part of the séance action, his suppression of the fact was unethical in respect to the Society which accepted his written work as sincere. We feel it is more consistent with the facts to interpret the resort to theoretical distrust of other witnesses as an attempt to escape from his frequently announced convictions of supernormality, and leave the way open for others to imply that Mr. Dudley entertained suspicions of fraudulent manipulations. Such technique is revealing as to some things but does not add anything of value to the subject and cannot be honored as a legitimate part of scientific methodology.

After the receipt of Mr. Dudley's letter of March 18th Mr. Thorogood was instructed to suspend all other work with the case and undertake, along any lines he might determine, a careful, exhaustive and unsparing examination of the whole series of finger-print phenomena with particular reference to the alleged identity of the "Walter" prints with those of Dr. "X," and report the result of his study for publication with as much speed as possible.

Mr. Thorogood was well qualified for the task. After attending the old Chauncey Hall School in Boston he received professional training in mechanical and electrical engineering at the Lowell Institute School of the Massachusetts Institute of Technology. He practiced his profession for twenty years and for ten years was instructor in the Mechanical Engineering Department of the Graduate School of Engineering of Harvard University from which he resigned to take charge of the rehabilitation and training of ex-service men as Educational Counselor at Franklin Union, a technical institute in Boston. He has remained in charge of its day courses ever since. Dur-

ing his years at Harvard University he took various courses in science, engineering, mathematics and psychology, and served as consultant in engineering and research, and as personnel expert for large industrial plants. During the World War, in addition to his other activities, he was employed on aeronautical work and as instructor for officers in the mathematics of heavy artillery fire. For more than thirty years Mr. Thorogood has pursued the study of abnormal psychology and psychic phenomena as an avocation. In June, 1931, he was engaged as Research Consultant by the American Society for Psychical Research.

In presenting his report on the finger-print phenomena we wish to commend the skill, perseverance and courage Mr. Thorogood has displayed in doing the necessary work. A constant barrage of criticism from many quarters for alleged delay in concluding his investigation served only to quicken his sense of responsibility for accurate, dependable study of the facts and sound conclusions. We hope the report will be found by competent critics to embody all of these.

On the merits of the issue as to the identity of the "Walter" prints we leave the matter to be judged upon the evidence and inferences contained in the Report; but we believe that the alleged identity has been disproved. Mr. Thorogood's report shows that so many elements of uncertainty and so many suspicious and ambiguous circumstances surround the waxes used by Mr. Dudley as alleged examples of "Walter" prints, that any careful and impartial reader must feel, as we do, that their authenticity as genuine séance room productions has been wholly impeached or at least so seriously brought into question that they must in the end be disregarded as data in reaching any disinterested judgment on the real merits of the question. In planning his investigation Mr. Thorogood undertook first to secure under his own control new data that could not be questioned as to authenticity and would be free from any possible doubt as to origin and subsequent history. The fundamental soundness of such procedure will, we believe, be conceded by the most meticulous stickler for scientific methodology. The

"standard Walter hands" thus obtained are in themselves a remarkable result of applying experimental laboratory technique to the study of mediumistic phenomena, and constitute a notable achievement in research.

Whatever conclusion one may come to on the issue of identity, however, there will remain the problem of how the prints are obtained. The evidence bearing on that problem, we believe, rules out normal action, fraud and trickery as the explanation. The records of the séances at which prints were obtained are voluminous and circumstantial, but unfortunately the great majority of them have never been published. Accounts of typical séances may be found in the *Journal of the Society for 1928-1932*.

For convenient reference and as illustrations of the circumstances under which finger impressions are obtained, we print as Appendix V, page 166ff, *infra*, the record of a séance held on April 10, 1928, in which Dr. R. J. Tillyard, F.R.S., as the sole sitter, obtained three prints under conditions of control that were beyond criticism; and as Appendix VI, page 182ff, *infra*, the record of a séance held March 11, 1931, at which Mr. W. H. Button as the sole sitter procured a print while the medium was bound to her chair with surgeon's tape in such a manner that she could move neither hand nor foot. The hypothesis of fraud or trickery in these two séances, as in many others, can be maintained only by the most obdurate of skeptics.

The evidence not only rules out fraud but, we believe, overwhelmingly demonstrates that the prints obtained in the "Margery" séances are supernormally produced. For a brief discussion of the meaning of this expression as used in this connection see page 3ff, *infra*. No one, not excepting Dr. Crandon or the medium herself, had fuller or better opportunity than Mr. Dudley to know the facts and to detect any fraudulent or normal factor, or any suspicion thereof, in the process of production. That he at any time detected and for any reason whatever suppressed mention of any such circumstances, is quite unbelievable; and no one has as yet suggested such conduct by Mr. Dudley as even remotely possible. He, on the

contrary, in season and out of season, orally and in published writings, has maintained that the evidence justifies acceptance of the supernormality of the phenomena as a fact, and that he today believes there was any element of fraud, trickery or deception involved is not at all credible. The belief or opinion of any one person as to such a matter is, of course, rather unimportant, unless he be a person of such qualifications, accomplishments and general reputation that his opinion would be accepted as *per se* weighty evidence. In the instant situation Mr. Dudley's belief or opinion is of some relevancy because it is being represented to be hostile to the honesty of the mediumship under circumstances that are expected to give it great weight in the minds of the public. It thus becomes a proper inquiry to ask what is Mr. Dudley's opinion on the value of the evidence as proof of fraud in the case. Direct questions to him on the point have been evaded.

Assuming that the identity of the "Walter" prints with those of Dr. "X" is established, Mr. Dudley might, indeed, say with consistency that claiming as his own the finger-prints of another is a serious reflection upon the reputation of "Walter" for truth and veracity; but he would not, we believe, voluntarily say that in his judgment it proved or even indicated fraud in any degree on the part of the medium or anyone connected with the séances. The theory of the matter that it presents a sort of practical joke by the control would add one more problem no less intriguing than many others in the subject. In a letter to Mr. Button on March 24, 1932, Mr. Dudley said: "From a strictly scientific standpoint identification (of the prints) has very little bearing on the question of a supernormal versus a normal origin."

It was obvious, nevertheless, that if the prints claimed to be "Walter's" were in fact identical with those of Dr. "X" a conclusion of fraud would immediately be drawn and heralded by everyone interested in discrediting the subject in general and the Margery Mediumship in particular. The event justified the prediction. Mr. Dudley was of course well aware of this inevitable result. He did not have to cry fraud himself; if so minded, he had only to invite others to do so, and then enjoy

the prominence and publicity that would be accorded to him at the expense of the Crandons.

No fault can be found with Mr. Dudley for making the discovery, if he did make it, or for using it if possible in any proper way for his own advantage. And, of course, no honest person would advocate suppressing any real evidence, regardless of what it might prove or how disturbing it might be to the people involved or how disastrous to their reputations. The Society, on the other hand, recognized that the circumstances surrounding the alleged discovery raised so many suspicions as to the reality of the alleged identity and the validity of the evidence offered in its support, that careful investigation before accepting Mr. Dudley's story and giving it official publicity was not only a reasonable course to follow but a compulsory one in fairness to all concerned. The certainty of misinterpretation, malicious and otherwise, of that course, if adopted by the Society, was fully realized, but the risk was gladly assumed. Fear of unjust criticism is never a deterrent to responsible action soundly conceived. The very violence, moreover, of Mr. Dudley's asserted belief in the simplicity of the question and in the utter finality and conclusiveness of his case for the alleged identity, and his desire for immediate publication of his account without waiting for the matter to be looked into or checked by anyone else, added considerably to the feeling that the question was not so simple and that the merits of the issue were not to be so easily foreclosed and did not interest him so deeply as a desire to capture a certain fame and to disturb the peace of mind of his former friends and associates and expose them to the discomfort of an attack upon their honor and integrity which was sure to follow. In pursuing the course he took, whether on his own initiative or under the prodding of others with their own particular ends to serve, we feel that Mr. Dudley departed very far from the path of a disinterested investigator, and justified an inference that there was something material hidden in the situation that only the most careful investigation would disclose. The Society was thus abundantly justified in adopting the course it took of investigating the claim first and publishing the results

only when the work was completed. Itch for publicity is the last passion that should afflict a scientist or a researcher in this field.

In January, 1930, before the discordant circumstances above referred to had developed, Mr. Dudley contributed to the Journal a theoretical discussion of the reversal of psychic casts and an "Analysis of the Finger-print Problem on the Basis That a Mold or Molds Are Used in Their Production." The latter part of the article we reprint as Appendix VII, pages 190ff (Psychic Research, Vol. XXIV, pp. 32-34, Jan., 1930). Mr. Dudley there convincingly argued that the use of *rigid molds* to produce the prints was an "assumption palpably absurd," and that the use of *flexible molds* for such purpose presented difficulties which made the second assumption almost equally improbable. The hypothesis of "ideoplastic production," (a theoretical supernormal process) was then suggested by Mr. Dudley as well supported by the evidence.

There is no subsequent statement by Mr. Dudley that we know of, which in any way answers, modifies or is inconsistent with the arguments advanced by him in that article, and it is, we believe, a fair statement to say that Mr. Dudley today still clings in his own mind to the supernormal ideoplastic hypothesis of production as true, whether the prints are, as he claims, identical with those of a living man, or are not.

Mr. Dudley himself has in fact not charged fraud in the case, and we do not believe that, in his right mind and acting voluntarily, he will. He is content to let others bear the odium or enjoy the credit for such a charge. His close association, however, since 1931 with those who do charge fraud and his willingness to remain silent on that specific issue while they defame the mediumship largely on the basis of his statements, is a situation from which inferences relevant to the merits of the issue may be legitimately drawn. Our own inference is that it destroys any possible belief in the good faith of Mr. Dudley and fatally impairs his credibility as a reliable investigator. Beyond that, we think, no inference relevant to the issue can properly be drawn. Mr. Dudley may assert, and in fact has asserted, that he has simply stated the facts and is not responsible in any way

for what others may charge, or for the inferences that others may draw from the facts he claims to be established. This position, we believe, under the circumstances is an insincere pose, without even technical propriety, much less ethical justification. Having assumed to hold himself out publicly as a scientific investigator and an authority on the subject for over six years, and having accepted employment by the Society on that basis, Mr. Dudley cannot so easily evade the duty to be frank with the public and the Society which gave him a forum and opportunity to speak to those interested. His complete silence as to charges of fraud made largely, as he well knows, as inferences from his supposed discovery, indicates, not devotion to truth and adherence to scientific methodology, but simply a willingness to let others, his associates and friends of the moment, inflict the wounds which he cannot honestly or decently inflict himself. If one does draw the inference that Mr. Dudley by his silence concurs in the charges of fraud, we believe that a willingness to allow his position on so important a matter to be left in any doubt is equally discreditable. Psychical research is not advanced by such methods, but encountering them in the subject is, unhappily, a frequent experience and to the serious student they finally become like barnacles on a ship that moves forward despite them but makes better progress when they are removed.

We are not at all sure that all of the circumstances pertinent to the problem have as yet been uncovered, because much is involved that cannot be subjected to laboratory analysis. But within the limits of their ability and with the means at hand, the Society and its Research Consultant have sought to present fairly and in precise and accurate form all the facts and evidence that have been discovered or found available that seem relevant to an understanding of the finger-print phenomena and the claim as to identity of the prints. It is hoped that this volume of Proceedings may be found a worthy contribution to the history of the case and of value in the solution of problems presented by one of its most intricate and interesting phases.

THE "MARGERY" MEDIUMSHIP

THE "WALTER" HANDS

A STUDY OF THEIR DERMATOGLYPHICS

"Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider."

BACON

I

INTRODUCTION

In the Spring of 1932, the writer was asked by the Research Committee of the American Society for Psychical Research to review from the beginning all available material and subject matter pertaining to the finger impressions, claimed to be supernormal, which for the past eight years had been a feature of the "Margery" mediumship, for the purpose of determining whether there was sufficient evidence of the uniqueness of these prints to answer satisfactorily any possible question as to their identity, authenticity and supernormality.

The immediate occasion for this investigation arose out of the announcement by Mr. E. E. Dudley that he had discovered that the finger impressions claimed to be "Walter's" were in fact identical with those of a living man, and our study was to include an examination of all the available evidence bearing on that claim.

The details of this investigation and the conclusions to which it has led us are set forth in this report.

At the very beginning of our task we found that the early records were not sufficiently complete or accurate to serve as the sole basis of our study, so it became necessary for us to conduct further experiments for the purpose of securing additional data from our own observations of the phenomena and under our own conditions of control.

The documentary record of this mediumship disclosed from the beginning a persistent attempt to apply to the study of the phenomena produced a laboratory technique of experimentation, and the experiments which we initiated and carried through were in themselves a test of the *repeatability* of the phenomena under new and rigorous conditions. The results of our efforts constitute what we consider well-nigh conclusive evidence of the validity and supernormality of the phenomena studied.

We also found it necessary to make a careful study of the dermatoglyphics of many of the earlier prints, and of the possibility of artificial duplication as well as of the production of replicas by normal means, all of which entailed correspondence with experts both in this country and abroad.

In addition, a great deal of experimental and photographic work was carried on in the laboratory in order to check various phases of this study.

Our conclusions, therefore, have been reached after an exhaustive study of all the early material that was available, such as contemporaneous records, literature, photographs, ink-prints, paraffin gloves, plaster casts and waxes, as well as of new and authentic wax impressions, made both in relief and intaglio and obtained in connection with this study through the medium "Margery" under controlled conditions in the presence of only the writer, his associates and the official stenographer.

II

DEFINITION OF CERTAIN TERMS AND CERTAIN PRELIMINARY MATTERS

In order that our meaning may be quite clear as we progress with this report, it may be well to present here our interpretation of several terms which we shall have frequent occasion to employ, such as "*Walter*" thumb impressions, "*Walter*" voice, and such words as *supernormal*, *identity* and *authenticity*.

We are using the word *supernormal* in the sense in which it is employed by Osty, Geley, and other writers on psychic phenomena.

Osty, in his work entitled "*Supernormal Faculties in Man*" (p. 11) writes: "We can therefore take as 'supernormal' all knowledge which reaches us by other means than by the activity of the mind working on the direct or indirect reports of the known senses".

Geley, in his volume "*From the Unconscious to the Conscious*" (pp. 261-2) says: "There is no hard and fast line between the normal and the supernormal; both have their origins in the vital *processus* and the only difference is that the one is familiar to us and therefore gives us the illusion of understanding it while the other derives its occult character from the fact that it is unusual." Further on, he says: "In fine, there is no supernormal, as there are no miracles! The supernormal is but the unusual manifestation of Self, released by decentralisation, revealing itself by all its powers, even those that are highest and most latent; in contrast with the normal psychic life which only allows of narrow manifestations, strictly confined within bounds of material 'representation.'"

By "*Walter* thumb impressions," we mean those impressions, generally made in a plastic, which have been obtained in the séance room during experiments carried on by the Lime

Street group and others, and which the "Walter" voice (which purports to be the voice of Walter Stinson, deceased brother of the medium "Margery") has specifically claimed as being his own, and which are quite different and distinct from impressions similarly and at times coincidentally produced, but which "Walter" has claimed were those of other persons.

Up to the present time there has been no evidence that there are in existence any prints of this man's fingers made while he was living. He died in 1911 before these phenomena appeared. There is, to be sure, a razor which had been used by him, upon the handle of which a fragment of a finger print was found by Mr. Fife and later described in the *Journal of the Society*;¹ and quite recently the writer discovered with the aid of ultra-violet light another partial print on the blade of the same razor. Both of these prints, however, are too fragmentary to be of substantial value for the purpose of comparison with the wax impressions. Considerable effort has been made, at one time or another, to find finger prints on other articles known to have belonged to Walter Stinson, but without success.

Therefore, for the identification of the "Walter" prints as those of the medium's deceased brother we must, at any rate for the present, rely in the first instance solely upon the statements of the "Walter" voice, and this we do.

Now as to the "Walter" voice, upon the statements of which we have based our acceptance of the identity of these prints. Since we have no authentic prints, or in fact any prints at all which are definitely known to have been made by the living Walter Stinson, our only evidence is the declaration of the "Walter" voice. This, therefore, raises the question of the origin of this voice, which may be reduced to two possibilities.

1st. That the voice is a purely *normal* one emanating from the medium, from a confederate, or from some physical mechanism;

2nd. That it is *supernormal*—that is, that Walter Stinson, *per se*, is talking, by means of or through the use of a hypo-

¹ *Psychic Research*, Dec. 1928, p. 698, Fife report on razor blade.

thetical psychic mechanism obtained or developed from the entranced medium; or that the medium unconsciously and subjectively is producing the voice by exercise of some power the existence of which or its possession by man is unrecognized by science.

Considering the first possibility: This voice as heard in the séance room is full, resonant and masculine though at times somewhat husky, and approximates, if it does not quite equal, in range, quality and volume, an ordinary human voice. It emanates from the general neighborhood of the entranced medium but its point of origin seems to move freely in an area of several feet in all directions from the medium. It talks intelligently, initiates discussions, answers questions that are asked, and carries on argument and conversation in a way which no mechanism yet devised could possibly do without our knowledge, in this séance room and under the control we use.^{1a} The use of a confederate is for the same reason impossible. And it has been satisfactorily demonstrated² that the voice functions quite independently of the medium's vocal organs, or at least of their use in any ordinary manner.

As to the second possibility: There is no known scientific way of proving that the voice which we hear and with which we carry on conversation is that of the deceased Walter Stinson, either produced directly or by the aid of the medium "Margery"; nor can we prove that it is or is not a subjective power of the medium, unconsciously employed, although it has happened several times in our presence that the "Walter" voice has spoken before the medium entered the trance condition; and she herself has even carried on conversation with the voice when she was to all appearances still awake.

There are many able defenders of both of these theories. But that the voice is supernormal there is abundant evidence. We shall briefly mention only one proof of several which our

^{1a} It has been our practice, wherever and whenever possible to isolate the phenomena by elimination of the human factor, first, by localizing the controlled apparatus at the locus of the phenomena, and second, by localizing the phenomena in controlled space.

² Proceedings A.S.P.R., Vol. I, p. 258, by Bird.

experiments have demonstrated (the record of which has not yet been published), as follows: We took a sensitive microphone similar to those used in radio broadcasting and placed it in a closed and sealed box (Fig. 1) which was mechanically, acoustically, electrically and magnetically shielded from external physical influences, and connected the microphone electrically with a loud speaker located in a distant part of the building, all connections and equipment being likewise shielded. The characteristic "Walter" voice was reproduced by the loud speaker and recognized by all who heard it, while no sound was audible to those who sat in the room in which box, microphone and medium were located. Under the controlled conditions there was no possibility that the microphone and loud speaker could have been made to function by any normal means whatsoever. The result of this experiment in applying to the problem of the "Walter" voice a strict laboratory technique of isolation, which precluded the possibility of any physical connection between the medium and the interior of the box in any commonly accepted understanding of the words, we believe affords sufficient proof that this phenomenon is *supernormal*.

To persons who have not been present at a "Margery" séance and are not familiar through personal experience with the work of the Lime Street group these statements may not of themselves seem conclusive, but anyone who says that this phenomenon of the "Walter" voice is not *supernormal* betrays thereby that he is not familiar with the facts.

It will probably for a long time to come be the lot of researchers in the field of psychic phenomena, to have the evidence and conclusions they present meet *a priori* denial and rejection by the vast majority of people. But adventurers in new fields can well abide the scorn of the doubters, for it is the essence of adventure to explore new things and stand, even though alone, for the facts discovered.

In the presence, however, of this sort of repeatable laboratory experiment conducted with scientific care and precision, *a priori* skepticism must at least pause, and hesitate to condemn or deny. To ignore and wave it aside with the loud noise

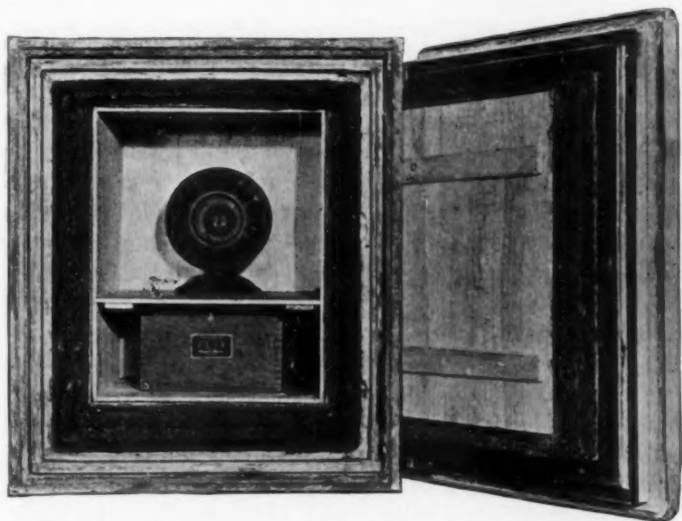


FIGURE 1.

Interior of voice box, showing condenser microphone. This box is about twenty inches on a side and weighs over one hundred pounds. Outside the soundproofing material, which is built into it, there is a continuous sheathing of copper and another of soft iron.



of ignorant and uninformed negation is again, as has so often been done in the past, to substitute prejudice for the true spirit of science.

Whatever may be the explanation of this phenomenon, it is obvious that this voice is directed by Intelligence. It is quite a common occurrence for it to joke, tell stories, compose poetry, reminisce, give instructions, react almost instantly to a question or statement, sometimes answering directly, but often denying any knowledge of the subject broached. When serious matters are under consideration, if the voice says a certain thing will be accomplished it is rarely that this promise is not eventually kept, although its consummation may take days or weeks or months, for "Walter" claims, when presented with a new problem, that he must study or develop the necessary technique and learn how to attain desired results just as anyone would have to do.

To illustrate by concrete facts, the writer has on numerous occasions asked for specific finger prints. One case in particular, the record of which has been published, is that of the Sir Oliver Lodge prints.³ We asked "Walter," without warning, if he could produce them for us (Sir Oliver being in England at the time), and he not only said that he could, but did so at the times he said he would. There were some nineteen of these, in all, and Mr. Bell of Scotland Yard⁴ has shown that they agree with Sir Oliver's actual prints. In this case the man whose prints were obtained is living.

On another occasion we obtained the prints of a man who was not living—namely C. S. Hill⁵—and they check with his actual lifetime prints which were on file. In this instance "Walter" told us beforehand whose prints he would make.

Several similar experiments have been commenced upon which the work has not yet been completed.

When we began to investigate the "Walter" thumb prints for this report the writer definitely asked "Walter" for im-

³ Journal A.S.P.R., Mar. 1932, Lodge article by Thorogood.

⁴ Journal A.S.P.R., Mar. 1932, p. 118, Bell report on Lodge Prints.

⁵ Journal A.S.P.R., Feb. 1932, Hill's Prints by Dr. Richardson.

pressions of at least part of his right hand with the thumb attached, in order to obtain its orientation, specifying further that this print of the hand should include lines, ridges and pores. "Walter" at once said that he would make the whole hand, with all the fingers. This took time. We did not get it immediately. First we obtained part of the palm with the thumb, then parts with the fingers, and so on. But eventually we had the entire hand. Then the writer asked for the left hand in a similar manner. As each piece of wax was impressed, "Walter" told us what it represented. And finally he told us he would give us hands *in relief*—that he would, in other words, produce normal positives. He even asked the writer, when we were working on the left hand, to name the individual fingers, one by one, as we wanted him to produce them. This was done and the fingers thus made check with those of the other reliefs of the left hand.

All this tends to show that when a serious investigation is under way "Walter" does his best to perform his part of the work, and that his statements with regard to what he will do may be relied upon. We feel justified, therefore, in calling these the "Walter" prints.

We shall later show that the patterns of the fingers thus obtained in relief check with those of the plaster casts made from the early paraffin gloves,⁶ and also with most of the authentic wax impressions which, according to such records as are available, have been claimed by "Walter" to be his.

Now as to the authenticity of the material which bears the impressions we have obtained during our investigation. We used for the most part a proprietary dental wax called "Kerr" which readily softens under heat (usually being immersed in hot water), takes the impression of the fingers in good detail, and quickly hardens without distortion.

The identification of these pieces of wax has always been possible, for we have not depended upon shape and appearance alone but upon other characteristics, such, for instance, as the presence of various foreign substances which we had previ-

⁶ Proceedings A.S.P.R., Vol. I, Chapter XLI, Paraffin Gloves.

ously secretly added to or imbedded in them. In the case of every one of these recent prints the wax was prepared beforehand by the writer in his laboratory, and remained in his exclusive possession up to the time of his placing it in position to receive the imprint, and from the time it was retrieved until its examination.

Finally, we would again emphasize our belief in the supernatural production of the "Walter" hands which we are about to consider. The main reason for this investigation is the claim that the thumb-print impressions issuing from the "Margery" séance room are supernormally produced, otherwise they would have no interest for persons pursuing psychic research. With regard to this, we state definitely and categorically that we obtained the above mentioned hands in relief, and many other impressions, in a manner which the facts prove to have been supernormal.

The conditions of control under which these hands—which we are using as our standard "Walter" hands—were produced will be given in connection with the detailed description of each hand. For the present, it is sufficient to say that the medium and her apparel were always searched by our own agent immediately before and after each séance, as was the séance room, which was locked on the inside as soon as the group had entered and kept locked until the séance was over; and that an official stenographer took down all conversation. The stenographer sat at a table, somewhat apart, in a substantial red light, so that she could always see and be seen.

There was no possibility that a die was used in making any of these impressions. The hands and feet of the medium were always under the uninterrupted control of some member of the writer's small group of investigators, which usually consisted of Mr. Adams, Mr. Fife and himself. When "Sary," another medium, was present—as occasionally happened—she also was under complete control.

If the reader will consider the size of some of these reliefs, which required pieces of wax eight or ten inches square and half an inch thick, he will realize how improbable it would be,

under the conditions imposed and in the space of forty seconds (for some have been made in this brief space of time) for the medium or any hypothetical confederate to manipulate a mold or die so as to make an impression in the wax and remove the die from it undetected, to say nothing of the difficulty of smuggling such a necessarily cumbersome article into or out of the séance room without immediate detection. Moreover, since no two impressions are exactly alike, their artificial production would have necessitated the use of many dies, not one, even when taking into consideration the known fact that no single die would be likely to produce two impressions exactly alike.

Mr. E. E. Dudley, writing in the January, 1930, number of the *Journal* (Vol. XXIV, pp. 31-34) presented an analysis of the problem on the basis of normal production by the use of molds. Said he: "The varying forms of these imprints imply a flexible original. For, if the original (whether mold or otherwise) were not flexible there must of necessity be such a multiplicity of rigid molds as to make the assumption palpably absurd."^{6a}

Furthermore, on several occasions the writer obtained impressions in wax when only the medium and he were present in the locked and searched séance room. Some of the Sir Oliver Lodge⁷ thumb prints, among others, were obtained under such conditions.

And as final and conclusive proof of the supernormality of these phenomena,^{7a} the writer has obtained thumb prints

^{6a} See Appendix VII, p. 190, *infra*.

⁷ *Journal A.S.P.R.*, Mar. 1932, p. 97, Lodge Prints.

^{7a} For a presentation of the view that it is impossible to prove scientifically that phenomena are genuine and supernormal, see "The Paradox of Psychic Research", by Edwin G. Boring, Professor of Psychology at Harvard, in the *Atlantic Monthly*, Vol. 137, pp. 81-87 (January 1926). The argument as to supernormality is that when the investigator has excluded every possible agency of production that his ingenuity can conceive, and the phenomena still persist, he has not proved supernormality but simply that he does not know how the phenomena do occur. Furthermore, to establish the reality of the supernormal would be to bring it within the normal. In respect to the "Walter" phenomena discussed by Mr. Thorogood, however, much is in fact known as to the mechanism of production, e.g., the reality of the teleplasmic structures as the means of impressing the waxes is established by overwhelming proof, although little is known as to the source and conditions of the occurrence of the teleplasm. There is, nevertheless, no room to-day in the inn of orthodox science for teleplasm, and to call its occurrence, therefore, a "supernormal phenomenon" seems justified. Finger impressions made by a



FIGURE 2.

Impression obtained February 23, 1932, under the most rigid conditions of control, in a sealed, locked box.



(Fig. 2) on a plastic in a *closed locked box*.^{*} (Fig. 3.)

With regard to the minutes of the special sittings had in connection with this report, notes were taken in shorthand by the official stenographer, and at practically no time in the last two years of investigation have we depended upon the memory of anyone present for an account of what was said or done where such points would be of importance. This claim can not be made for many of the earlier séances at which these phenomena appeared. In general the early records were compiled by Mr. E. E. Dudley at his leisure and from his memory. Dr. Crandon also kept notes of many of the earlier experiments, which he usually made directly after each séance, but in numerous cases neither his records nor those made by Mr. Dudley can now be found. Therefore, with all respect for the reports of the earlier séances, those which are available can not always be relied upon since they were not stenographic records made coincidentally with the phenomena.

Now let us explain the terms *positive* and *negative* as we use them in connection with these impressions.

The pattern on the inner surface of an actual hand we term a *normal positive relief*. If this surface of the hand is pressed into softened wax it produces an impression which we term a *normal negative*. In the wax the ridges on the skin of the hand produce *furrows*. But if an ink print is made from a hand or finger by any of the numerous methods in use, the ink marks are made by the ridges of the skin and such a print is designated a *normal positive*.

Now if we compare the pattern on the inner surface of the actual hand face up with that of its ink impression it may be seen that the lines of one run in a reversed or opposite direc-

teleplasmic structure are likewise properly described as "supernormally produced." The term "supernormal" as used in psychic research is thus a relative expression which for the practical purposes of description and exposition is useful and of fairly well settled connotation. Of course, when the professors get around to accepting the reality of the facts described by psychic researches to-day as "supernormal" they will catalogue them as part of the normal universe, which in truth they are. Criticism of terminology is always valuable but it can never be a satisfactory substitute for patient examination of the facts, and when serving as an excuse for failure to give the subject adequate attention it is a confession of inertia.—Editor.

^{*} Journal A.S.P.R., July 1932, p. 268, Locked Box.

tion from the lines of the other, or one may be said to present a mirrored view of the other. It is also true that the lines of a *normal negative*, such as an impression in wax, run in an opposite direction from those of the normal positive relief, but they do *not* present a mirrored view of it for the reason that the negative is an intaglio impression.

Whether an impression in wax is a positive or a negative may in some cases be easily determined, but in others it may be very difficult or practically impossible to decide this point. If in this investigation we were dealing with prints made in a normal manner only, or even artificially produced, the presence of certain characteristics would help us to determine these points; but in the case of prints made supernormally we can not, even where these characteristics exist, expect always to find that they agree in all their indications.

These characteristics are:

1st. *Location of the pores.* If we succeed in finding in a print indication of pore structure we know that the particular locality carrying the pores is a friction ridge, since as a matter of anatomy pores are to be found only on these ridges.⁹

2nd. *Form of the pores.* If, on the wax we are examining, the pores should appear as small depressions in the ridges the impression is a positive; but if, on the other hand, the pores should show as small nodules in a depression the wax must be a negative. Unfortunately, on many of the séance waxes which we have there is no indication of pores, so that absolute classification as positive or negative by this means is impossible.

3rd. *Width of ridges.* Another point to be considered is the width of the friction ridges in comparison with the width of the furrows. This, in our opinion, can not always be taken as conclusive evidence in the analysis of these waxes, for we have found that on some of them no difference in width is apparent.

4th. *Joint lines.* If a joint line, or skin crease, is depressed it is evidence that the impression at this point is positive; while if it is raised it will indicate that the impression is nega-

⁹ Gray's Anatomy, 21st Edition, p. 1070.

Luigi Luciani, *Human Physiology*, Macmillan, 1913.

Wentworth and Wilder, *Personal Identification*, 1932 Edition.

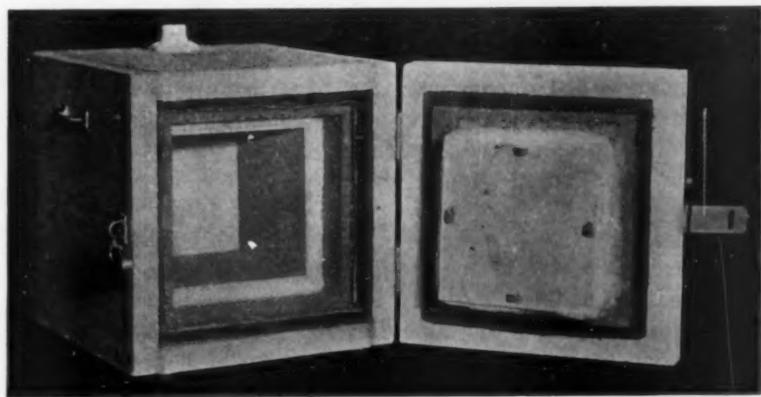
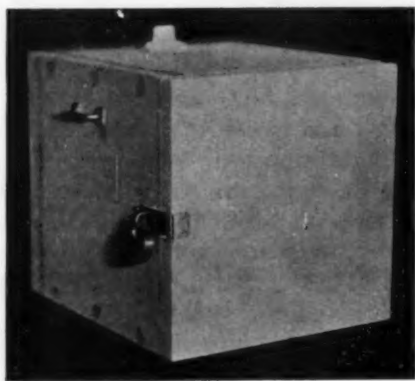


FIGURE 3.

Box locked, and open. The impression of February 23, 1932, was obtained in this box while it was locked and sealed. This box could not have been opened without detection.



tive. But here again, while in the majority of cases these supernormal prints seem to run true to form, there are instances in which part of an impression is negative and part of it is positive.

5th. *Scars and other marks.* Old scars and other marks of this nature are, in general, depressions in a positive, and ridges or raised areas in a negative. But very often there appear in the waxes imperfections which are not at all of a supernormal nature but may in reality be due to the fact that the plastic when heated is very soft and necessarily alters its form at the merest contact with anything whatsoever.

Of course, none of the above points would be of any use in helping us determine whether an impression is or is not a so-called mirror print. That could be determined only when we have a standard impression or print to compare it with, such as we shall show in our standard "Walter" hands.

Now, whether we attempt to analyze impressions in wax by studying them directly or by studying photographs of them, we shall be very likely to encounter difficulty for the reason that it is very hard, even with the most careful lighting, to eliminate illusion;^{9a} and in the case of a photograph there is always possibility that the print may have been made from the wrong side of the photographic negative, thus reversing the orientation of the design.

Because of these many questionable factors, therefore, we are basing our conclusions on those waxes only which are clear and distinct and in which the greatest number of the above characteristics can be determined. We shall mention other waxes, and in fact make use of them, but they are not such as may be used to decide an issue. To eliminate illusion when using the microscope, we have made practically all our observations with binocular stereoscopic-vision instruments.^{9b}

In order that the reader may more clearly understand what we mean when we use *positive*, *negative*, and other terms in connection with these prints, let us illustrate by means of an actual finger and wax impressions made from it.

^{9a} Luckiesh, *Visual Illusions*, Van Nostrand, 1922.

^{9b} See Appendix VIII: Letter from Bausch-Lomb Optical Co.

In Figure 4, A is a photograph of a living finger. In it the friction ridges and the pore structure show quite clearly. The actual finger we designate a *normal positive relief*.

If we take this finger (A) and press it into soft wax, we shall produce an impression which is a *normal negative* (intaglio) as shown in B. The furrows or depressions appearing in this illustration were made by the ridges of the actual finger while the ridges were made by the furrows of the real finger.

If now we use B as a die, and press it into soft wax we shall obtain an impression which is shown at C. This is a model in relief of the original finger, and may also be designated a *normal positive relief*. Here, what appear as ridges correspond with the ridges, and the furrow with the furrows, of the original finger.

Two other terms which we wish to illustrate and which in the early papers on this subject by Bird, Dudley and others have been emphasized, but which we shall use very little, are *mirror-positive* and *mirror-negative*. Still using the illustrations in Figure 4:

If we look at A in a mirror the reflection will appear as at A'.

B' shows a mirror-negative, and while it is of exactly the same structure as B, it will be noticed that the pattern is reversed.

C' shows a mirror image of C. In this, the detail is the same as in C but is a reversal of it. In orientation and design it is similar to an ink print.

D shows a photograph of an actual ink print of finger A, made by lightly coating the finger with printer's ink and pressing it upon a piece of paper. The only difference between D, and A or C, is that the ridges in D run in the reverse direction from those of the others. An ink print, if carefully made, shows not only the ridge design but the pores which are in the ridges. The supernormally produced impressions, whether positive or negative, rarely show the pores.

E is an enlargement of the tip of the core of D, showing the pores.

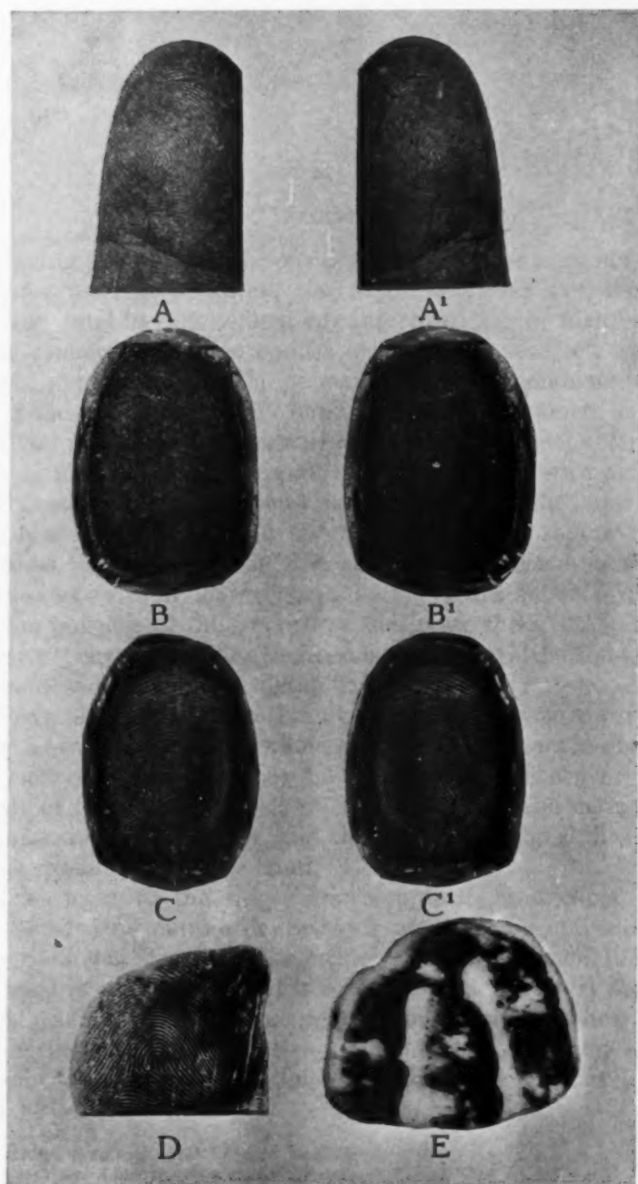
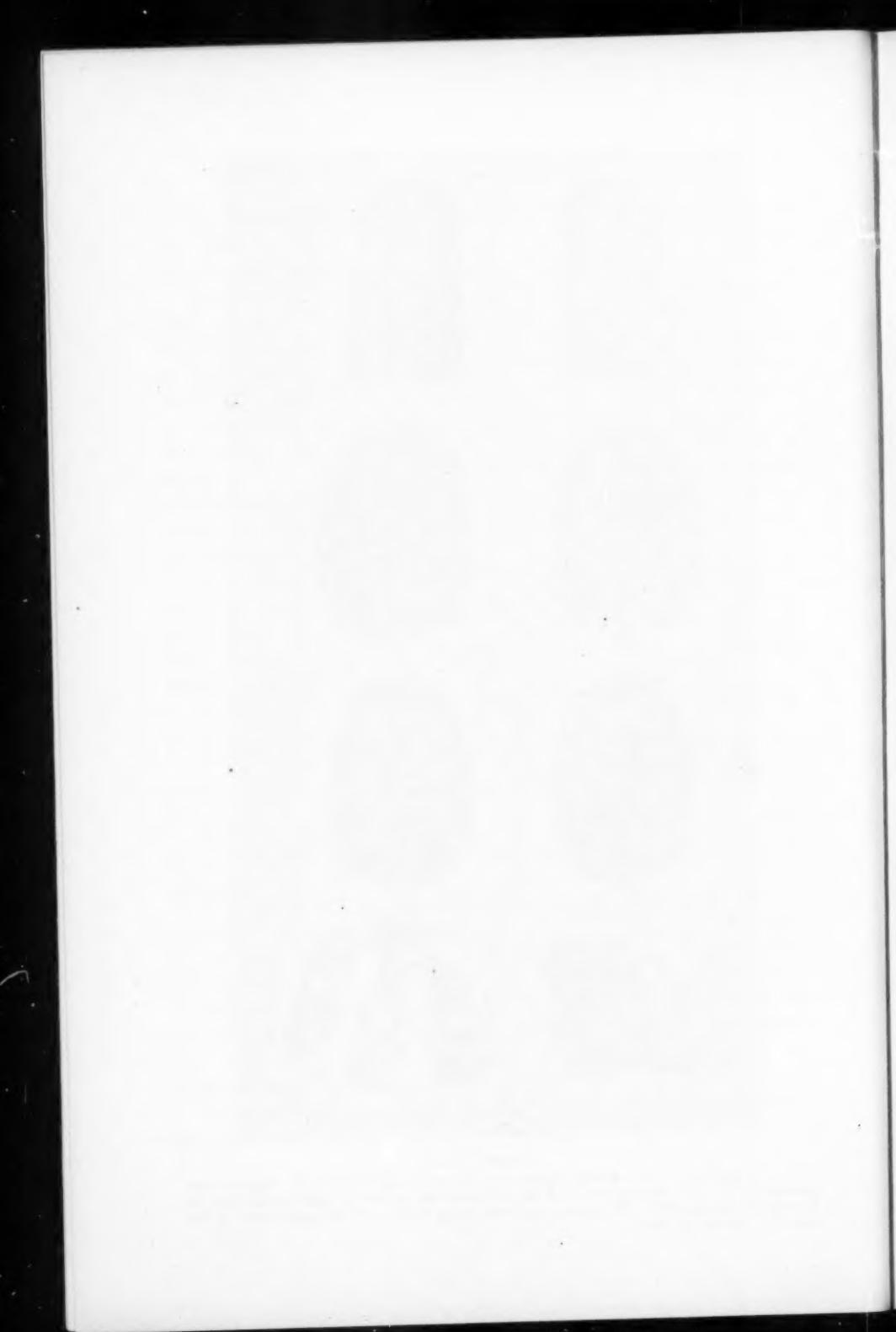


FIGURE 4.

A. Photograph of an actual finger. A'. Mirror image of A. B. Negative impression of A. B'. Mirror image of B. C. Artificial replica in relief made from B. C'. Mirror image of C. D. Actual ink-print made by A. E. Enlarged view of the core of D showing pores.



III

THE "WALTER" HANDS

Having presented with considerable detail the methods which we have used in obtaining the impressions we are about to illustrate, and having defined our interpretation of many of the terms commonly used in connection with this subject, we now present photographs of the palmar surfaces of complete "Walter" hands in relief, a left hand which was obtained on May 10, 1932, in Figure 5; and a right hand, obtained on May 23, 1932, in Figure 6. The originals of these hands were obtained under conditions of absolute control, and at the time they were made they were said by "Walter" to be reliefs of his hands as they appeared in life, so that in all respects we are satisfied as to their identity, authenticity, and supernormality. For the purpose of this report we designate them the standard "Walter" hands. The conditions under which they were obtained will be given in detail later.

The statement that the hands *are in relief* has a very important bearing upon this whole subject. Macroscopic observation clearly shows that they have every appearance of being models of the inner surfaces of actual hands. The main lines, the joint lines, the creases, and the papillary ridges all appear as they would on a living hand.

If we examine the ridges microscopically, the sweat pores may be seen as minute depressions on the tops and sides of many of them. This shows conclusively that the model is that of a hand in relief, or that it is what we term a normal positive relief, just as a living hand is a normal positive relief. The size of the sweat pores and the number per centimeter length of ridge or per square centimeter of area seem to agree with those of a normal palm.¹⁰

¹⁰ Gray's Anatomy, 21st Edition, p. 1078.

Clark and Lhamon, *Anatomical Record*, 1917, Vol. 12.

Wentworth and Wilder, *Personal Identification*, 1932 Edition, p. 295.

In many of the reliefs which we have obtained there are numerous defects, such for instance, as the absence of skin markings in certain areas, or of whole fingers. Some of these defects may have been due to poor preparation of the wax before use, or to the manipulation of it when hot and in the process of being impressed, and since these are established by the evidence to be supernormal phenomena, there is also the possibility that the forming agent may not have been complete. But among so many exhibits there should be no difficulty in clearly distinguishing the points to which we shall call attention, although for close study nothing can replace the actual waxes themselves, since no matter what care may have been taken in making the photographs, the lights and shadows in the picture may cause illusion which it is no simple matter to analyze. We have already referred to this difficulty.

Looking at the photographs of these two standard hands (Figs. 5 and 6), we notice that all the fingers are shown, therefore clearly orienting their dermatoglyphics, and for the first time in the history of this case definitely indicating which finger patterns belong to the right hand and which to the left, a thing it would be impossible to determine were only the detached finger tips available for examination. In other words, we no longer need to rely upon the statements of "Walter" or of anyone to know to which hand, if either, right or left, a detached finger belongs. All that is necessary is to compare the pattern of the finger in question with the patterns of the fingers on these hands to determine whether it is identical with any of them.

Observing the fingers still more critically, we find that on the original waxes the ridges are clearly raised and the joint lines depressed, while the pore structure appears substantially as it would on a normal hand.

Examining now the finger tips, let us take the index, middle, ring and little fingers of both hands. Here the microscope shows structure in relief similar to that already detailed, although the design on each finger tip is different from that of the others. These tips in some cases have the appearance of



FIGURE 5.

The standard "Walter" left hand in relief, obtained under strict conditions of control on May 10, 1932. This shows clearly for the first time the orientation of finger and thumb patterns.





FIGURE 6.

View of standard "Walter" right hand in relief, obtained under strict conditions of control on May 23, 1932. This shows for the first time the orientation of the finger and thumb patterns; also a characteristic scar(s) of "Margery's" right hand.



being pinched, and are slightly smaller in proportion than the fingers to which they belong, while in others they are well formed; and where there are joint lines they are depressed as they should be in a normal positive.

These statements are not based on the study of one set of waxes alone, for we have eight either complete or partial right hands, and seven complete or partial left hands, all in relief, as well as several detached finger tips and thumbs which show joint lines and ridge patterns that check with those of the homologous fingers of the complete hands. Almost all of these were made at the request of the writer, and at the times when, without previous intimation, he asked for them; and they were all produced under severe conditions of control.

When we first attempted to get complete hands, it seemed on "Walter's" part to be a process of learning how to make them, as we have already mentioned. The results of the first efforts were very poor, but as the experiments proceeded the results rapidly improved until the startling models illustrated in Figures 5 and 6 were obtained. In the beginning we used large slabs of a low temperature wax which would soften under body temperature, but which required considerable pressure in order to record skin markings. About all that was obtained on these were partial right thumb impressions (Fig. 7), which in two or three instances, however, clearly show the core.

On April 8, 1932, using large pieces of Kerr, we obtained two impressions. The first one (Fig. 8) shows a very rough and crude outline of the palm with only a slight indication of the thumb, the skin markings of the upper part of the palm, and beginnings of the fingers. The second wax (Fig. 9) shows less of the palm outline and less of the thumb, but beginnings of the four fingers and some skin markings.

While there are few papillary ridges on these two waxes, enough of the "Walter" characteristics are present to warrant the statement that they check with the "Walter" right hand already illustrated in Figure 6.

On April 12, 1932, we obtained three impressions in Kerr. In the first one (Fig. 10) the wax was very much lumped and

distorted, but there are, nevertheless, indications of three fingers, and palm markings. The second wax (Fig. 11) shows much more of the palm design and also more of the fingers, the last three fingers each showing two joints. There are also apparent a few of the ridges of the thumb, and a small part of the core. The third wax (Fig. 12) was much like the second, with enough of the palm characteristics present to indicate that it was an attempt at making a relief of the right hand. In the case of the last two waxes, the markings on the bulb of the thumb are too indistinct to be of much help.

On April 13, 1932, we obtained our first more or less complete right hand (Fig. 13), showing most of the palmar surface and the three joints of each finger, although it does not show the thumb particularly well. This hand is peculiar, however, in the fact that the tips of the index, middle and ring fingers are negative, as are also the tip and part of the second joint of the little finger, but the rest of the lines, joints, palm, and the bulb of the thumb are in relief, and clearly agree with our standard hands. These finger tips, which are negative impressions, appear as if they had been an afterthought and were added after the hand was made. Nevertheless, they agree with the standard "Walter" hands.

On this evening also we obtained a right thumb impression (Fig. 14) which "Walter" stated was a mirror print. Now, to us a "mirror print" is one which looks like the mirror image of a normal print, and the general direction of the lines on this one would indicate that it may be such a print; but upon close examination it looks more like a normal negative, which is what we think "Walter" really means when he says "mirror print," as we shall later show. Due to the fact that this wax had been over-heated it is full of tiny holes caused by bubbles, which destroy some of the details.

The third piece of wax (Fig. 15) (which was the first one to have been impressed on this evening) bears two impressions. These are poorly made, although the lines that show are fairly sharp. "Walter" said they were negative impressions of his right thumb and right index finger, and the markings that can be seen check with those members on the complete hand.



FIGURE 7.

One of the first attempts by "Walter" at making the impression of his hand, in soft pink dental wax. This shows several partial impressions of the "Walter" right thumb.





FIGURE 8.

One of "Walter's" first attempts at making his right hand impression in Kerr. This shows slight beginnings of the fingers with their ridge designs.



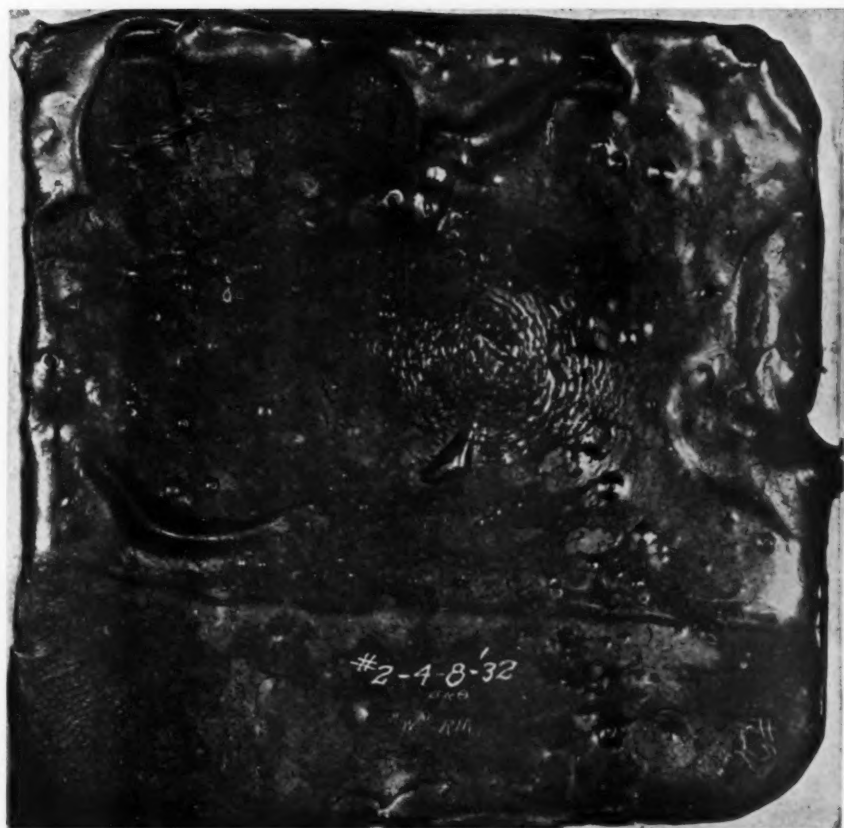


FIGURE 9.

Another attempt at a "Walter" right hand, showing roots of fingers and, in the lower left hand corner, what appear to be skin markings of the wrist.





FIGURE 10.

A much distorted piece of wax showing somewhat more of the fingers and some of the papillary ridge design of the palm.

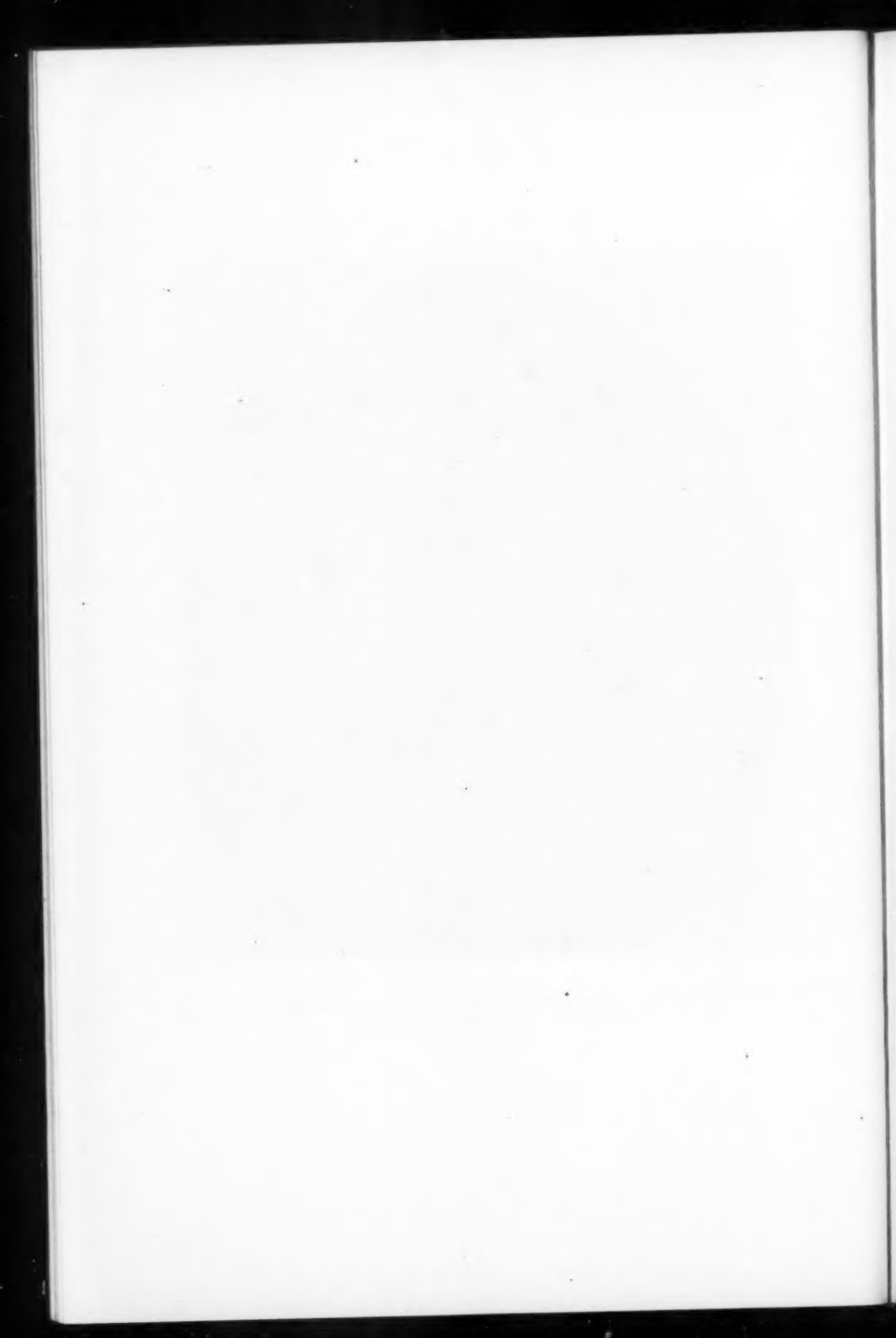




FIGURE 11.

This shows slightly more of the palm, some of the fingers and the tip of the core of the right thumb.

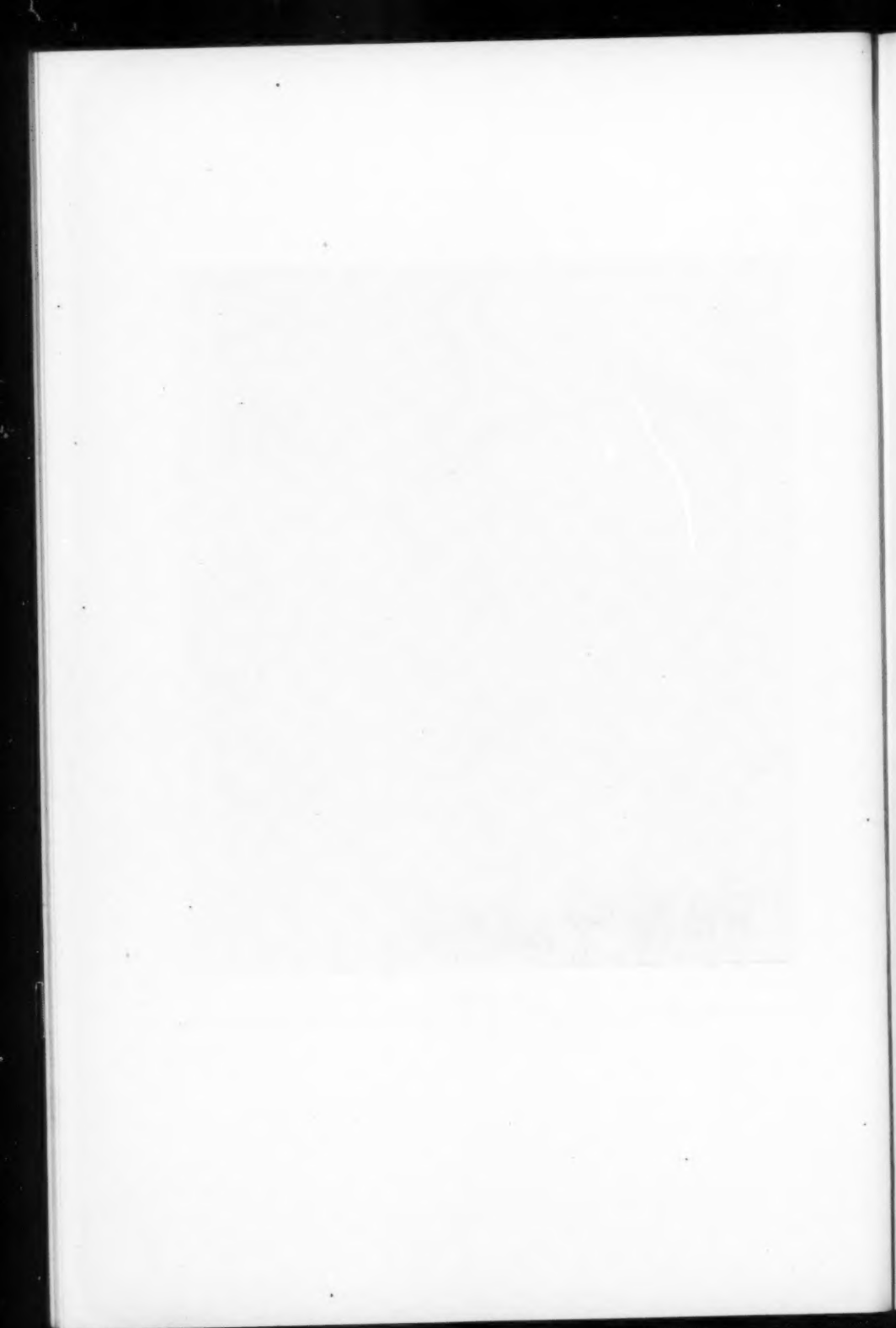




FIGURE 12.

Some of the papillary ridge design at the roots of the fingers, especially the deltas at the base of the index and middle fingers.

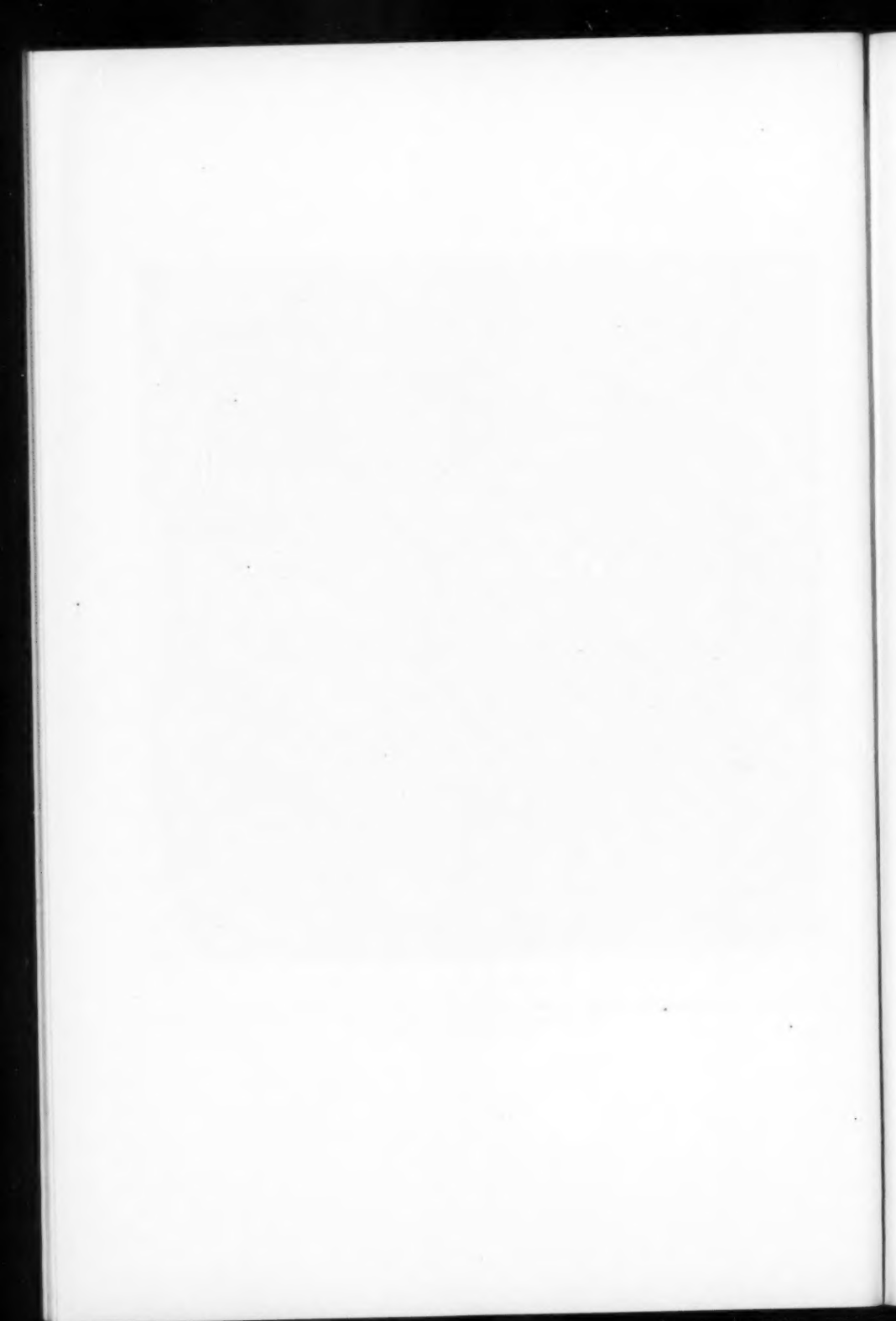




FIGURE 13.

The first more or less complete right hand, although with many imperfections. The peculiarity in this is that while the hand as a whole is in relief the tips of the four fingers are normal negatives.

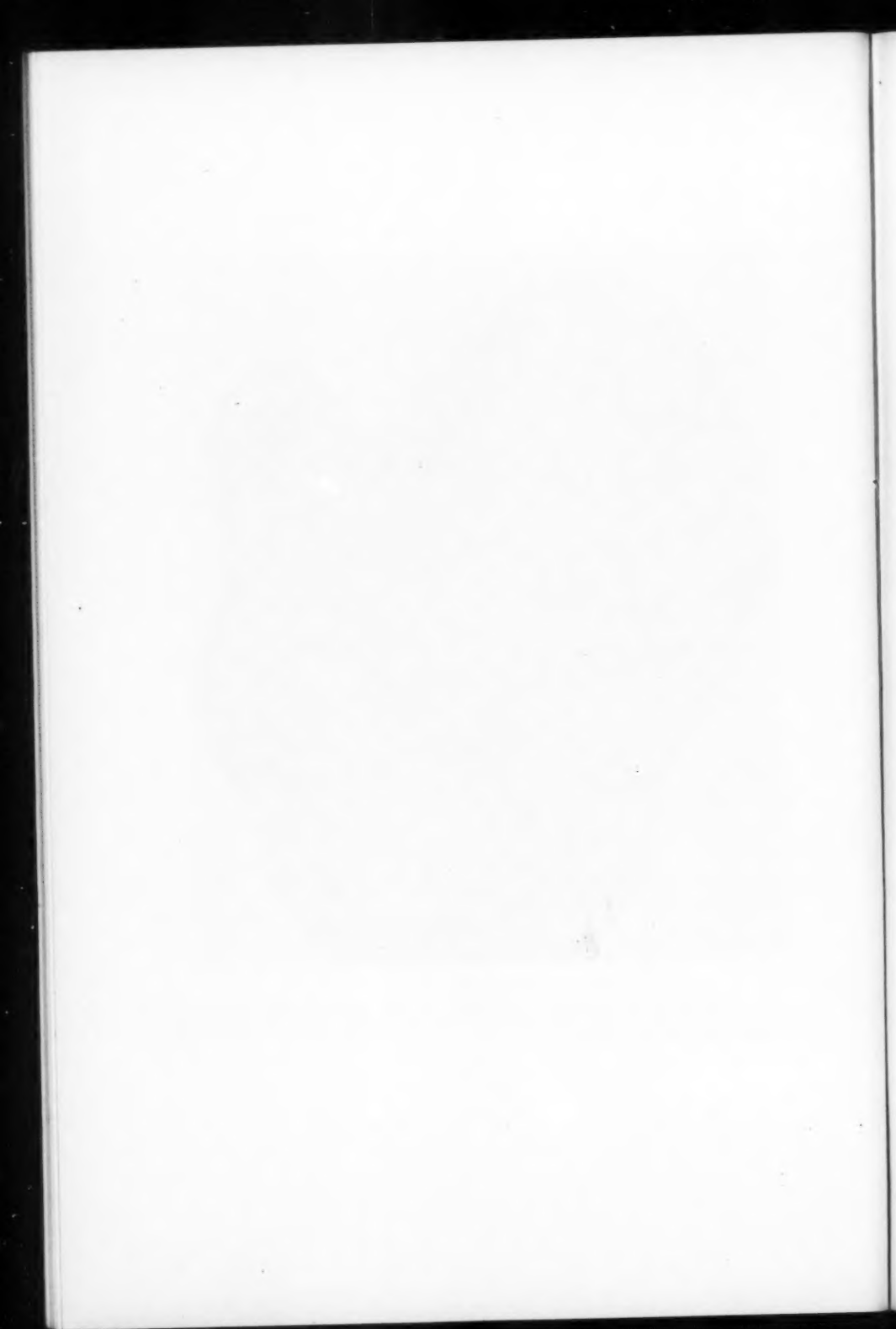




FIGURE 14.

Supposedly a mirror-print of the "Walter" right thumb, obtained on May 13, 1932, but in reality it is more like a normal negative. Small craters scattered over the surface are due to overheating of the wax by a gas flame which was used instead of hot water to soften it.





FIGURE 15.

A rather poor negative impression of the "Walter" right thumb and index finger. The wax is quite deformed and is very thin in places.



On April 20, 1932, we retrieved a very irregular chunk of wax (Fig. 16) which, however, shows part of the palmar surface very distinctly, and the beginning of one finger. Here again, such of the design as there is agrees with that of the standard "Walter" left hand. This was the first attempt at making a left hand.

On April 22, 1932, we obtained three wax impressions in relief (Fig. 17), the left index, left middle and left little finger, one at a time, in this order, as specified without previous notice by the writer. They are clear, with well marked ridges and joint lines, and agree with the homologous fingers of the "Walter" standard left hand.

On April 28, 1932, we obtained a very fair left hand in relief (Fig. 18), showing the first joints of some of the fingers, part of the index finger, and the complete middle finger and thumb. The palm markings are quite clear, as are most of the lines that show on the fingers, and all agree with those of the standard "Walter" hand. The bulb of the thumb is attached to the joint in a peculiar manner, and is not quite normal in appearance. This thumb, however, shows all the characteristics of the "Walter" left thumb, including a scar which we shall discuss later. It took eight minutes to make this particular hand.

On May 2, 1932, we obtained another left hand (Fig. 19), with the last two joints of all four fingers missing. The ridge designs of the palm and of the stumps of the fingers and thumb are quite clear and check in all respects with our "Walter" left hand.

On the back of this wax are several partial impressions of the "Walter" right thumb (Fig. 20), which likewise agree with the standard; and there are also traces of what appears to be the "Walter" right palm, but they are indistinct.

On May 3, 1932, a quite complete left hand (Figs. 21 and 21a) was obtained by Mr. Button—the writer not being present—which has the characteristics of the "Walter" left hand. The tips of the ring and little fingers, while formed, show no ridge design.

On the following evening, May 4th, Mr. Button obtained an-

other left hand (Fig. 22), the fingers of which are bent back on themselves in a way in which no normal hand could be bent unless the bones were broken. If this wax had been bent back after the print was made the fingers would show some signs of distortion which they fail to do. Both of these waxes bear the typical "Walter" left thumb, the scar showing clearly, and have been described and illustrated in the Journal.¹¹

On May 9th "Walter" said he was going to try to make both his hands back to back, and we obtained as a result a somewhat distorted piece of wax (Fig. 23) showing clearly on one side the left palm and the complete thumb and first joints of the fingers, with much detail of ridge markings, all fully agreeing with our standard "Walter" left hand.

The other side of the wax (Fig. 24), upon which the right hand in relief was supposed to show, was greatly warped and bent out of shape. Nevertheless, there are enough of the palm and finger markings to show that it is of the right hand. The thumb, which is in relief, agrees with our standard "Walter" thumb, and there appears to be no indication of a scar, although there is an imperfection in the wax which might be mistaken for a scar; but this thumb is peculiarly located beside the little finger as if accidentally shifted over into this position when the left hand was made.

On the 13th of May another right hand was made (Fig. 25) on which the ridge design of the thumb is not very good, the little finger is practically missing, and the ring finger only partially made and showing no markings worth while. Only the first two joints of the middle finger show, the tip being bent over the back as though the wax had been too soft to keep its shape. The index finger is quite complete, and checks, as does the palm, with our standard right hand.

Now let us turn our attention more specifically to the two hands in relief, which we are using as our standard "Walter" right and left hands.

On the 10th of May we obtained the left hand which is illustrated in Fig. 5.

¹¹ Journal A.S.P.R., Sept. 1932, p. 335.



FIGURE 16.

One of the first attempts at making a left hand (May 20, 1932). While this wax carried many imperfections not supernormal, such part of the palm as does show clearly bears excellent papillary ridge design.



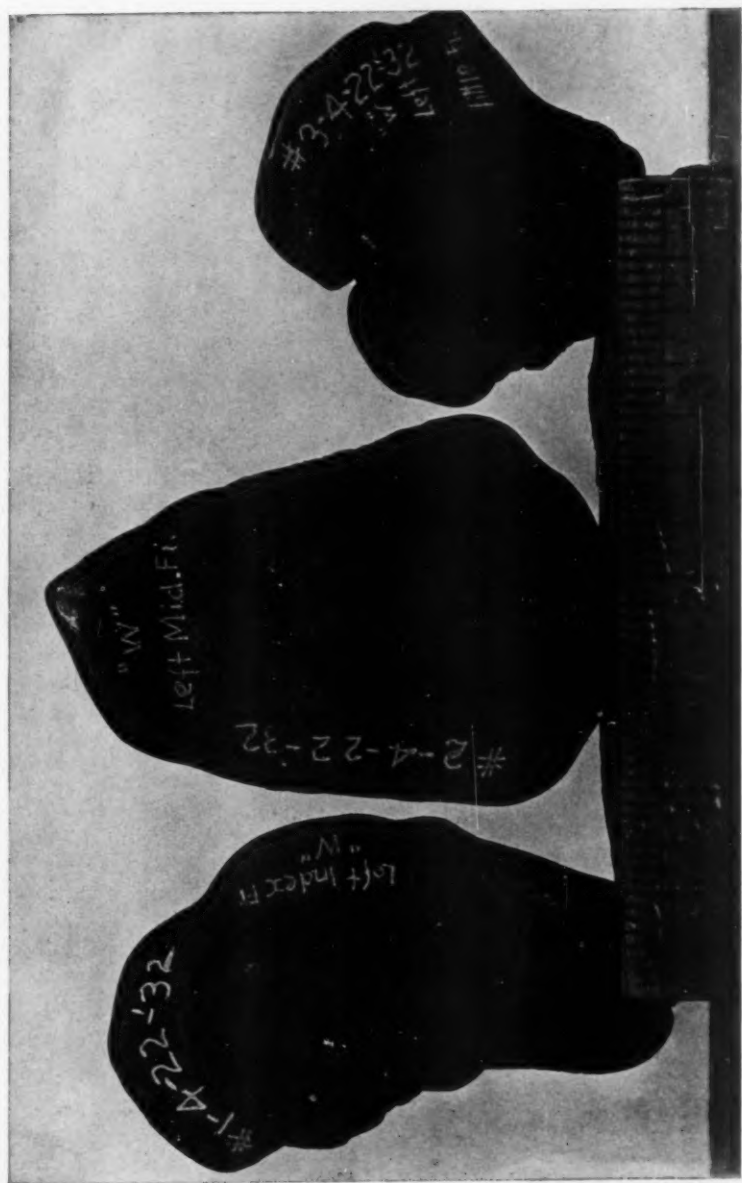


FIGURE 17.

This shows tips of the index, middle and little fingers of the "Walter" left hand, all in relief, and made in this order as requested by the writer without warning.





FIGURE 18.

A partial left hand, quite well shaped, but lacking much of the ridge design and the tips of the fingers.





FIGURE 19.

A quite well formed palm of the "Walter" left hand, showing the general ridge design and the scar on the left thumb.



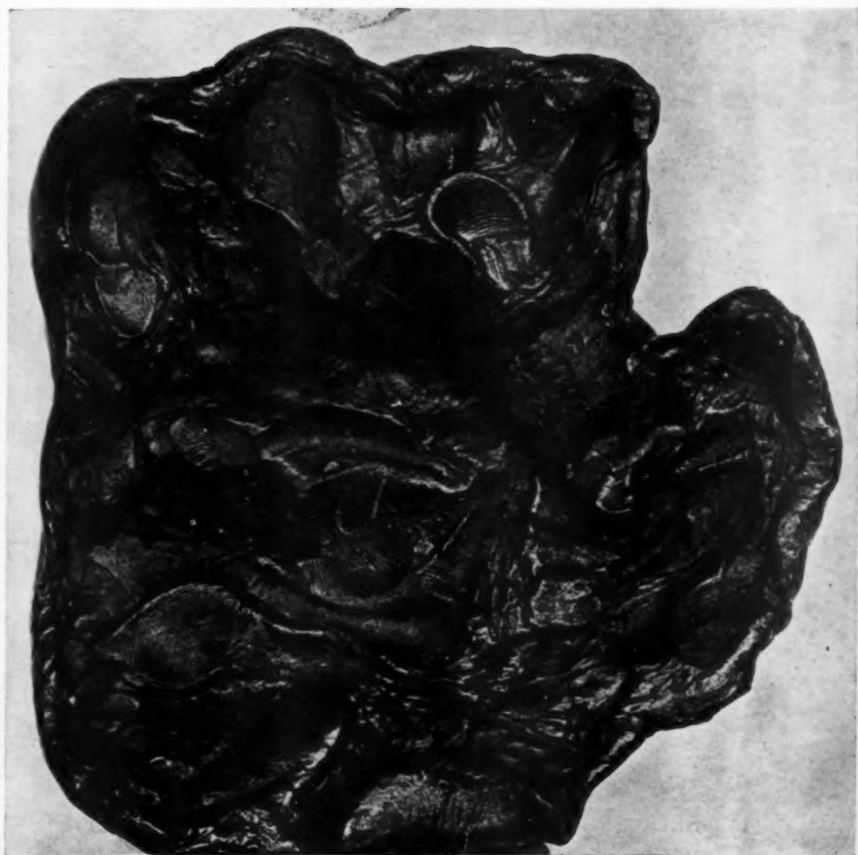


FIGURE 20.

The back of the wax illustrated in Figure 19, which was made on May 2, 1932; it bears several partial impressions of the "Walter" right thumb.





FIGURE 21.

"Walter" left hand in relief, produced on May 3, 1932, in two minutes. The fingers are bent back at about 90° .





FIGURE 21A.
Another view of hand shown in Figure 21.





FIGURE 22.

Two views of a "Walter" left hand in relief bent back on itself. This was obtained on May 4, 1932, in forty seconds. This wax has the appearance of having been impressed while the wax was bent in this position, not of having been deformed after the impression was made.





FIGURE 23.

This shows a "Walter" left hand, somewhat bent, with the ends of the fingers missing. It was an attempt at making a right and left, back to back. The reverse side shown in Figure 24.





FIGURE 24.

Part of a "Walter" right palm in relief, which was impressed into the same piece of wax shown in Figure 23. This is much less complete, and the thumb, while in relief, is located near the beginning of the little finger.





FIGURE 25.

A rather poor "Walter" right hand, but with the index finger well formed and the ridge design clearly showing an ulnar loop.



The wax upon which this hand was made was prepared by the writer at his laboratory by taking eighteen or twenty pieces of Kerr as they came from the manufacturer and fusing them into a single slab. The resulting block of wax was approximately eight inches square and nearly half an inch thick. It was quite regular in shape, relatively smooth on both sides, and contained few hollows, depressions, air bubbles, or other imperfections.

While this wax was in a very plastic condition, at the time of preparing it, a fine copper wire covered with two layers of silk wound in opposite directions was carefully imbedded along one side of it as a means of identification. This wire was a No. 36 Brown & Sharpe gauge, making it 0.005 of an inch in diameter. Only Mr. Adams and the writer knew of this wire being so placed. After this was thoroughly imbedded so that no ends showed, a few crystals of copper sulphate, which are of a bluish green color, were also concealed in the wax. These were added for the purpose of better identification, and not even the writer's colleagues knew that the copper sulphate crystals had been added until after the wax had been used in the séance room.

This wax, sealed in a large and heavy envelope, was taken to the séance at Lime Street by the writer, and was continuously in his possession until, during the séance and while the medium was in trance he removed it from the envelope and placed it on top of a cloth which was in a square cake tin which had also been purchased by him and brought to the séance room this same evening. This tin, which had a perfectly smooth bottom, bearing only the manufacturer's trade mark, was placed on the table in front of the medium.

At 9:15 scalding hot water was poured over the wax, completely covering it. We say the water was "scalding hot." It was in a tea kettle on an electric plate beside the writer's chair and was boiling when poured into the pan. At 9:22 the writer took the same piece of wax out of the cold water, which was in a duplicate cake tin which had also been brought by him. He immediately took the wax to the full red light at the stenogra-

pher's table and scratched on its back the date and length of time it had been out of his possession (seven minutes), examined it to see if the wire or any of the crystals were to be seen, and placed it in the envelope to take back to the laboratory, keeping it in his possession all the while. At the laboratory it was examined more carefully for the identifying wire and chemicals, which were found. There was absolutely no doubt as to its being the identical piece of Kerr which the writer had taken to Lime Street, only now its surface bore a relief of a left hand.

Mr. Adams also checked its identity by means of the imbedded wire.

We may say here, as will be seen in the transcript of the minutes of that evening,¹² that no sooner had the wax been put in the hot water than "Walter" asked what those little pieces of wire were, saying that they stuck in his fingers.

On this evening only Mr. Adams, Mr. Fife, the two mediums—"Sary" and "Margery"—Miss Barry (the stenographer) and the writer were in the room.

Before the mediums or the stenographer came into the room, Adams, Fife, and the writer went in and locked the door, and with plenty of white light searched it thoroughly,—cabinet, equipment, walls, floor and ceiling; arranged the electric stove and placed the tea kettle on it to heat the water; put the two cake pans on the table—which was to be in front of the medium—putting cold water in one of them and a cloth in the other. This cloth is used to prevent the hot wax from sticking to the tin and to facilitate its removal from the water. We may note here that these very large pieces of wax take considerable time to heat through, and are likely to be softer at the edges than in the centre.

The stenographer in the meantime carefully searched both mediums and their shoes, stockings, and séance garments, with negative results and neither of them left her side until we allowed them to enter the séance room. We also observed them carefully as they entered, and as soon as they were in the room

¹² Appendix IX: Minutes of meeting of 5-10-32.

the writer closed and locked the door, placing the key in his pocket. We might add that the lock may be operated only from the inside, as the keyhole is not cut way through the door, and there is no other means of entrance to or exit from the room except the fireplace, which is small in section, and two windows on the Lime Street side, which are about thirty feet above the street and do not open onto any balcony or fire escape.

Adams immediately took control of "Sary," and the writer of "Margery," the stenographer going at once to her table where a good red light was burning so that she could be seen the entire time. Mr. Fife was also in the room to observe all that took place.

"Margery" was placed in her chair back of the table upon which the two tins were arranged. The legs of this chair are let down into a good sized board to the under surface of which are attached rubber cushions, so that it is very difficult, either with the hands or feet, to change the position of the chair once one is seated in it.

The centre of the chair is approximately thirty inches from the centre of the table in front of it.

The table is a plain light pine affair, with no drawers or opening where anything might be concealed.

We were at first seated in this order,—"Margery," on her right Fife, on his right "Sary," on her right Adams, on his right Thorogood, on his right "Margery."

This was at 9:10 P.M.

Within a very few minutes "Margery" being in trance, "Walter" asked us to change our seating, which we did, making a final arrangement of "Margery," Adams, "Sary," Fife and "Margery" with Thorogood seated within the circle directly in front of the table.

Adams controlled "Margery's" right hand and her right knee with his left hand; Fife in a similar way controlled her left hand and knee; Adams controlled "Sary's" left hand and Fife controlled her right, she being seated somewhat behind the writer, who was free to use both hands to manipulate the hot water and wax.

The séance was over at 9:30, requiring only twenty minutes for the entire proceeding, during which a red light near the séance table was on nearly all the time, in addition to the stenographer's red light. A red-flash pocket lamp also was used frequently by the writer.

As soon as the séance was over the writer unlocked the door, and the stenographer accompanied both mediums into another room where she thoroughly searched them and their garments with negative results. During this time Adams, Fife, and the writer again searched the séance room and all its equipment, with like negative results.

The examination of the wax bearing the impression showed very conclusively that it was the same piece which had been taken into the séance room.

The time taken to heat and soften the wax, to fashion upon it this hand in relief and place it in the cold water was but seven minutes, and the time consumed in actually making the impression must have been less than a third of that period.

There was no possible chance for either medium to take anything into the room or out of it, and at no time was "Sary" close enough to the table to reach it. The stenographer was in her chair fully six feet away during the entire time. The wax was out of the writer's possession only while it was in the water, and during this interval he had one hand under the table on "Margery's" knees and kept the other on top of the table.

We cannot too strongly stress the fact that this hand in relief has every appearance of having been made all at once by a single co-ordinated process. The impression is complete, with the palm, fingers, finger tips, and thumb, and there is no indication of any part of it having been added separately. This, in itself, might indicate supernormality, for few of us could orient *our* thumb in the same plane with *our* hand. Thus, the impressing mechanism must be flexible.¹³ It is, of course, possible to so mold the wax about the hand as to get the thumb impression at the same time with the rest of the hand, but in such a case

¹³ Journal A.S.P.R., Jan. 1930, p. 33.

the plane of the thumb would appear at an angle of forty-five degrees or more with the palm, as in Figure 26. Moreover, the resulting impression would be a negative, whereas our standard "Walter" hand is a positive. *A positive could not be made normally by any direct method.*

The finger and palm prints of all those present at this sitting have been taken, and show no similarity to the "Walter" hand.

On May 23, 1932,¹⁴ we obtained a complete right hand, which we have already illustrated and presented in Figure 6 as our standard right hand.

The preparation of the wax for this séance was the same as for that of May 10th, except that for identification purposes crystals of sodium bichromate were used in addition to crystals of copper sulphate, the former being of a reddish color. The same procedure was used throughout, the only difference being that the wax was actually out of the writer's possession for a shorter length of time, although the séance itself lasted longer.

We started at 9:10 P.M. The "Walter" voice was heard at 9:20. The writer put the wax into the hot water, which was already in the dish, at 9:28 and at 9:29 withdrew the wax from the cold water dish and examined it in red light, marking as before the date and length of time it took to impress it, *one minute*. It was found to be a right hand in relief, as "Walter" had said, and he called our attention to a scar in the palm, saying that it was really "Margery's" scar, although the hand was his. This particular phenomenon will be dealt with later.

The personnel of the group at this séance was the same as that of May 10th,—Fife, "Sary," Adams, "Margery," the stenographer who sat apart at a table, and the writer.

The mediums and their apparel were searched both before and after the séance, as were room and equipment, all with negative results, and during the séance the door was locked and the key kept by the writer.

¹⁴ Appendix X: Minutes of meeting of 5-23-32.

After the séance the wax was identified as the same piece the writer had brought with him, but now it bore an impression in relief of a right hand.

Thus, we have shown that for a period of over two months "Walter" was engaged, at the specific request of the writer, in the task of producing impressions of his hands, and the results indicate the efforts of a technician mastering his material to attain a definite result by the familiar process of trial and error. We shall not at this time discuss the technique involved or offer any explanation thereof, but the atmosphere of working on a difficult technical problem with an unseen collaborator was an outstanding feature of an otherwise quite normal piece of laboratory research. The elation and satisfaction displayed by "Walter" upon the completion of his task had all the genuineness and spontaneity one might expect from a colleague who had found the answer to a mundane engineering or laboratory problem.



FIGURE 26.

Dr. "X's" right palm intaglio, showing the impression of the thumb completely attached to the palm. This was made in one operation.



IV

THE "WALTER" FINGERS

Now let us consider more specifically the thumbs of these standard hands. Both of them show very definite, although different, characteristics as to core and other markings. The design of the right thumb pattern shows that it is of the ulnar loop type and that the core consists of a staple or hairpin, although the thumb on our standard hand is not as well developed as others we have obtained and does not show the complete design of the joint. The part of the joint line which shows is depressed. On this thumb there appears to be no scar near the core.

The core of the left thumb is likewise of the ulnar loop type, but consists of a spike which is somewhat curved at its upper end and bifurcated at its lower end. One very noticeable characteristic of every authentic left thumb which we have in relief, and there are ten of them, is the definite scar which cuts clean across the thumb at an angle of about thirty degrees with the joint line, pointing upward toward the index finger, as shown in the photograph, and which cuts the above-mentioned bifurcation of the spike about five mm. from the tip. This scar is depressed in all those thumbs that are in relief. The edges of the ridges, where they were cut, are somewhat puckered and also somewhat sheared¹⁵ in relation to each other, which is not an unusual condition in scars. This scar was said by "Walter" to have resulted from a cut received while whittling, when he was a boy. There is, of course, no way to check this statement.

A better view of the standard "Walter" right and left thumbs in relief is given in Figure 27. All the characteristics

¹⁵ Sir Francis Galton, *Finger Prints*, 1892 Edition, p. 59.

we have just enumerated may be clearly seen in this illustration.

A number of other right and left thumbs, obtained recently, are shown in Figures 28 and 29, and while some of them are incomplete, the details of structure are generally clear.

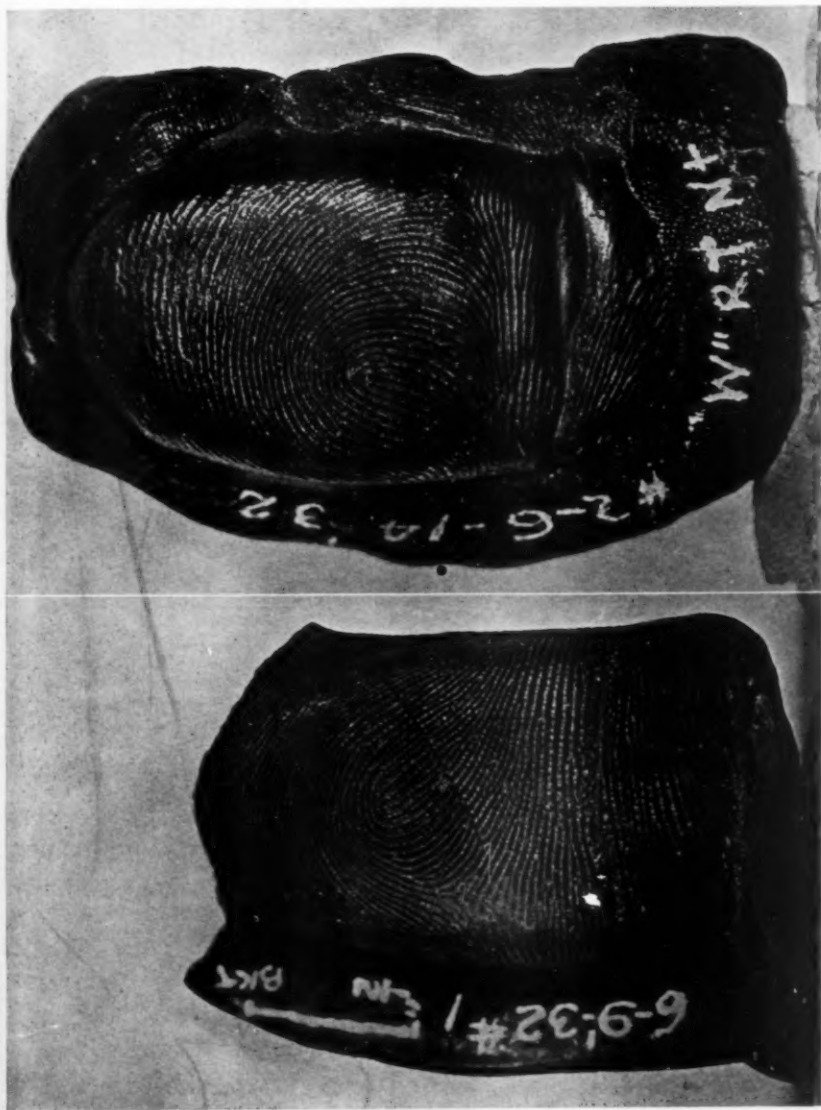


FIGURE 27.

The standard "Walter" left and right thumb impressions in relief, both to the same scale. Note that the left is somewhat smaller and finer in detail and as to pore structure and clearly shows the scar across the bulb. The right shows the ridges worn and somewhat flattened, the core as a staple, and the joint line with its bifurcation.

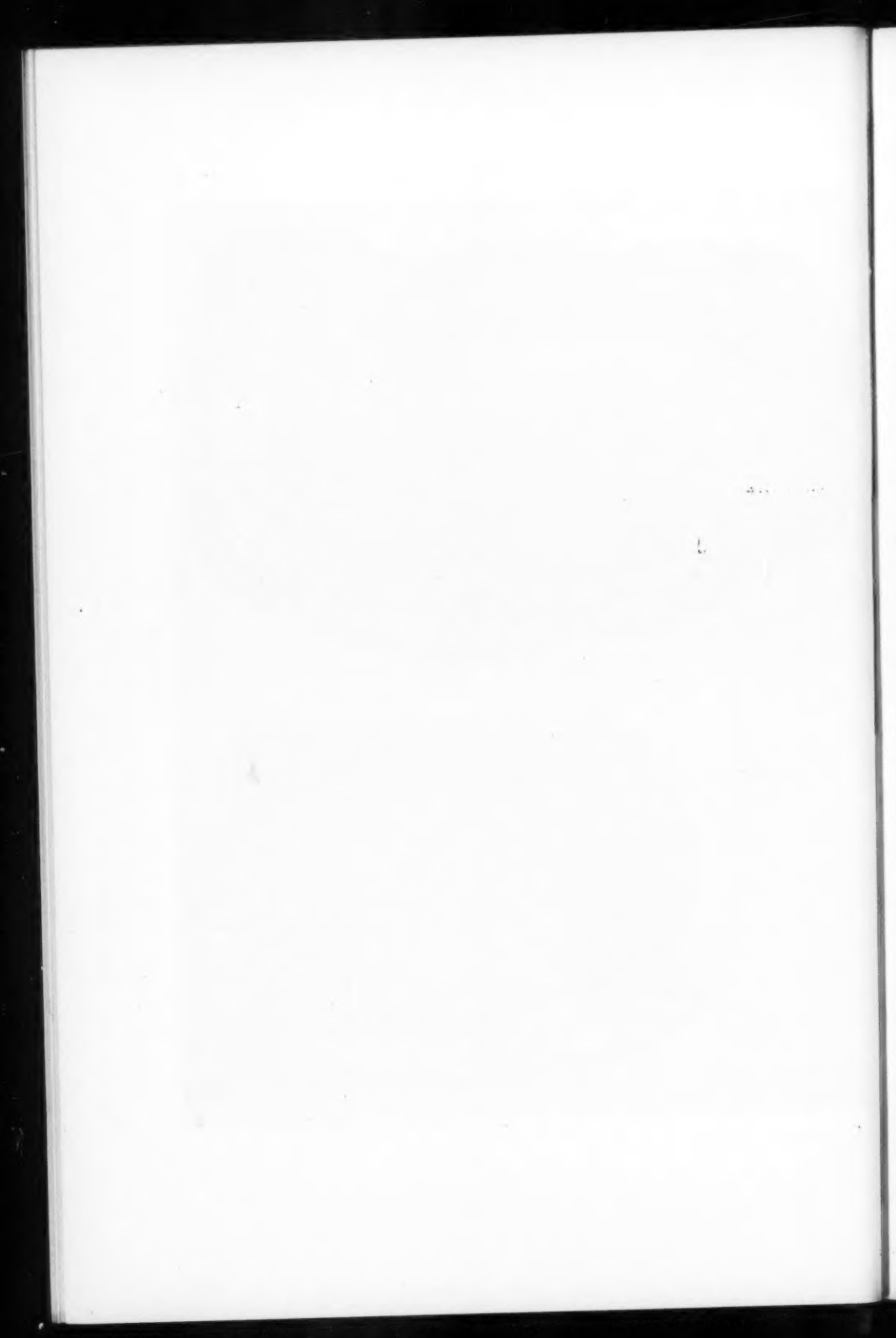




FIGURE 28.

A group of normal positive reliefs of the "Walter" right thumb. These are only partial, and the reproduction is not very clear, but all show a staple at the core. Several of these have a concretion somewhat above the tip of the core, the middle wax showing this especially well.

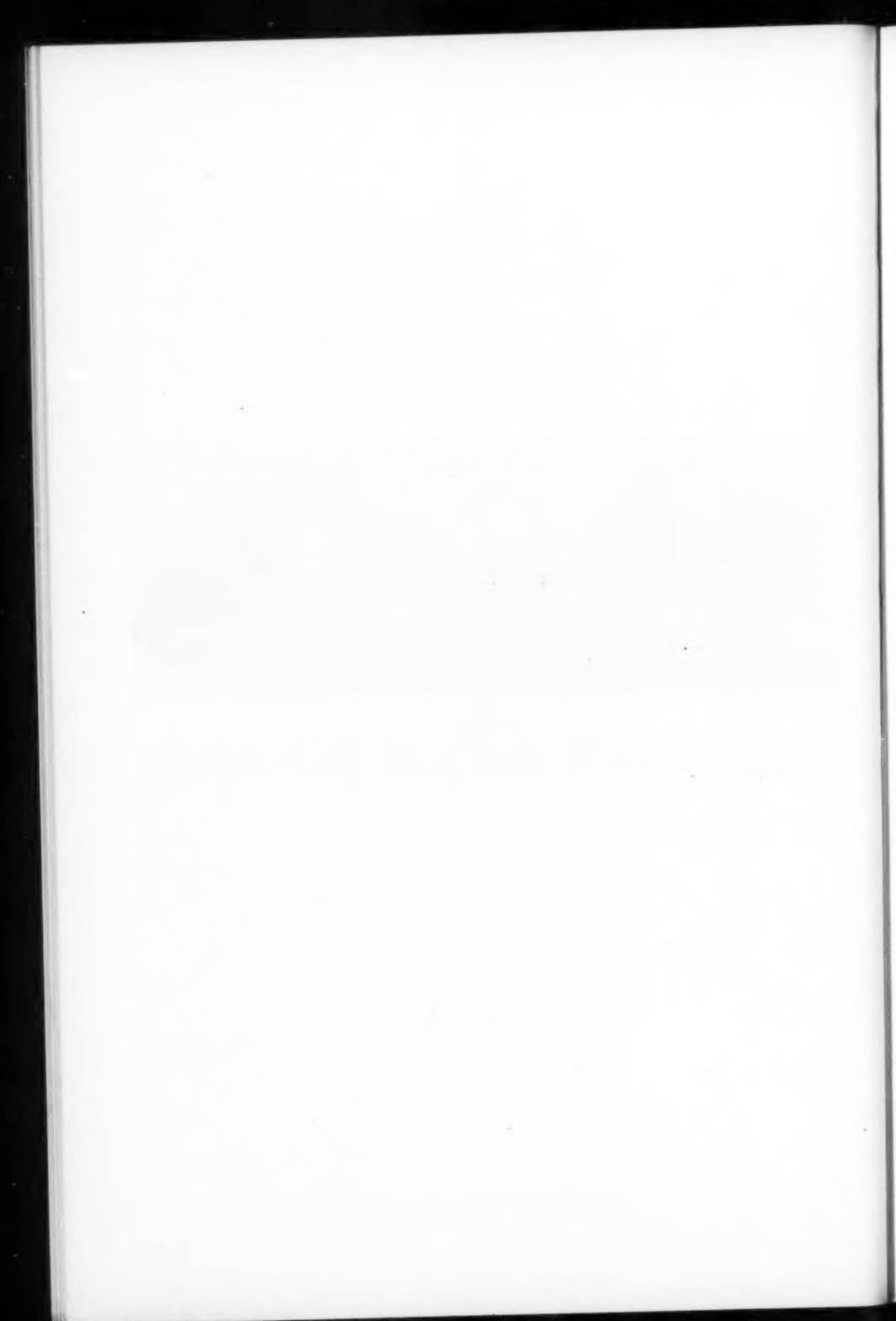




FIGURE 29.

Four "Walker" left thumb normal reliefs, all well executed and showing the typical scar. Below the joint line on these there is a sharp, vertical imperfection. This is found in other wax impressions, both of "Walker" and others, and we have not yet been able to account for it. A sceptic would undoubtedly claim it is due to a joint in the die.



V

"WALTER" FINGER TIPS

In Figure 30 we show a classification sheet giving the ridge design of each finger tip. These views are similar to those which would be obtained if it were possible to make ink prints directly from these hands. What was actually done, however, in this case, was to use the photographs of the finger tips in relief and reverse them so that the orientation would agree with that of actual ink prints.

It will be noticed that under most of these prints there is a short diagonal line placed there by the expert who made the classification. This indicates the direction of the slant of the loop, where a loop exists. The figures beside each print indicate the ridge count.

The fingers of the right hand are all of the ulnar loop type, the little finger having what is sometimes called an eyelet ulnar loop.

The index finger of the left hand is of the radial loop type, the ring or fourth finger has an ulnar central pocket loop, and the remaining fingers have plain ulnar loops.

VI

TYPES OF FINGER PATTERNS

For those who are not familiar with this subject, let us say that for our purpose we are dividing finger print types into three classes,¹⁶ as shown in the ink-prints in Figure 31, *A* being known as a whorl, *B* a loop, and *C* an arch. It so happens that all the "Walter" fingers fall under classification *B*. When the lines of this type of design open in the direction of the little finger, the pattern is known as an ulnar loop; and when they open toward the thumb side of the hand, it is known as a radial loop. The word *loop*, however, does not necessarily mean that the core of the pattern is an actual loop (or staple, as it should be termed) for the core may consist of a rod or of several rods; it simply indicates the general appearance of the pattern.

In addition to the core, there is another important feature in connection with the different classes of impressions, which is known as the *delta*. This is the point where three ridges come together to form a Y, as shown in this same figure. There are two of these deltas in a whorl, one in a loop, and none at all in an arch.

The ulnar loop, which is so frequently found in the "Walter" fingers, happens to be the most common type of loop, occurring in over 66 per cent of all hands. Professor Kristine Bonnevie has shown the frequency of the ulnar and radial loops,¹⁷ not only for the fingers combined but also individually.

It is important to note that since the ulnar loop is of such frequent occurrence we are bound to have many fingers carrying this type and, therefore, that there must be many fingers having similar ridge patterns with only slight differences of minutiae.

Using Professor Bonnevie's values, in the City of Boston,

¹⁶ Sir Francis Galton, *Finger Prints*, 1892 Edition, p. 78.

Wentworth and Wilder, *Personal Identification*, 1932 Edition, p. 184.

¹⁷ Appendix XI: Prof. Bonnevie's frequency table of loops.

Name <i>"W"</i>		Classification No. <i>1 UUZ 9 (1/9)</i>		
Dept. _____		Ref. <i>1 RUZ 7</i>		

RIGHT HAND				
1. Right Thumb <i>22</i>	2. R. Fore Finger <i>4</i>	3. R. Middle Finger <i>8</i>	4. R. Ring Finger <i>18</i>	5. R. Little Finger <i>9</i>
				

LEFT HAND				
6. Left Thumb <i>12</i>	7. L. Fore Finger <i>4</i>	8. L. Middle Finger <i>9</i>	9. L. Ring Finger <i>16</i>	10. L. Little Finger <i>7?</i>
				

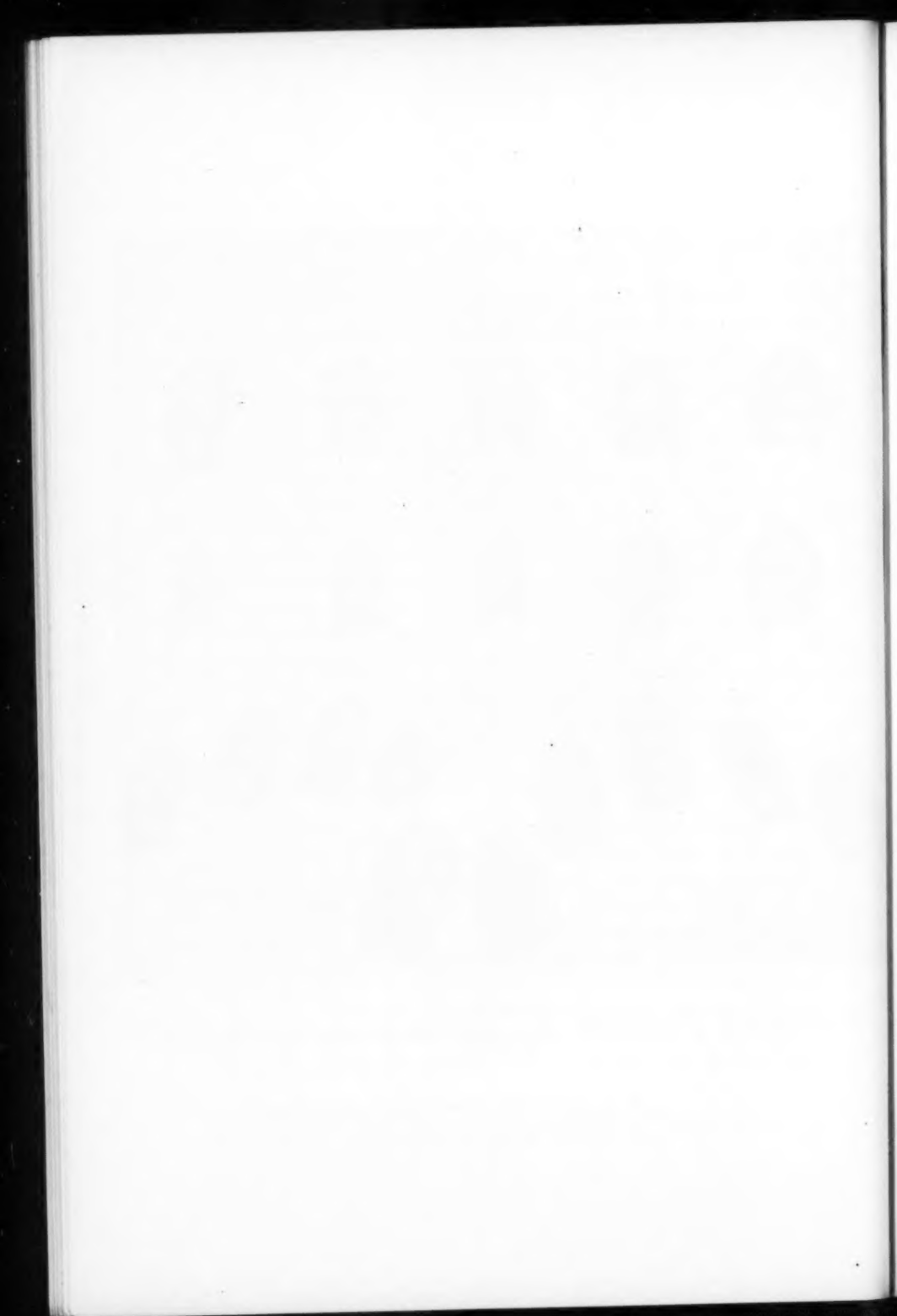
LEFT HAND		RIGHT HAND	
			

Name of Expert *Bert Wentworth* *Dover, N.H.*

Date Taken *Jan. 22, 1933*

FIGURE 30.

Classification by Mr. Bert Wentworth of the "Walter" digits, arranged in a similar manner to ink-prints.



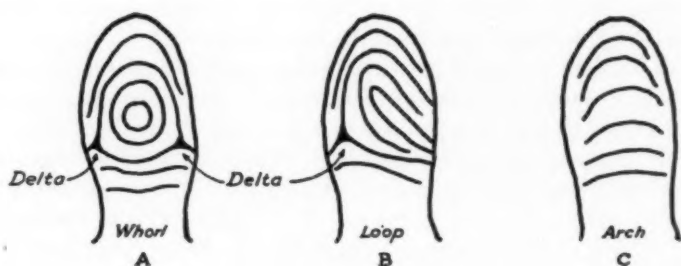


FIGURE 31.

Classification of finger-print design used by us. The usual classification includes four or more types, but for our purpose three types only are necessary.



where there are over 780,000¹⁸ people, 55 per cent of these, or 429,000, would have the ulnar loop type of pattern on the right thumb. How many of these would have a staple at the core, and how many a rod or rods is unknown, as there are no statistics covering these finer divisions; but it is probably reasonable to assume that there are about as many of one as the other, although we have some data which tend to show that staples predominate. In any case, it is easy to see that among all these thousands of staples the variations or differences between many of them must of necessity be very slight. Nevertheless it seems to be a well-established practice among bureaus of identification if two or more prints contain eight to twelve clearly defined characteristics in common *and show no single difference* to consider that the prints are of the same digit and therefore of the same individual; and it is a well-recognized fact that no two individuals, even if they be identical twins, have any two fingers which are exactly alike.

But Professor H. H. Newman¹⁹ says:

"There are, however, numerous instances in which the prints of two or more homologous fingers are so nearly alike as to be indistinguishable to the naked eye. *When, for example, the patterns in both individuals are simple loops, having the same shape and involving the same number of ridges, it is possible only by using considerable magnification to discover differences in the branching ridges and breaks in ridge continuity.*"

This is also true of the other types (Fig. 31a) as well, and it is especially true of the pore structure. And let us bear in mind that in the "Walter" reliefs or intaglios the finer details may not show.

¹⁸ Murdock's Directory of City of Boston for 1932.

¹⁹ Journal of Genetics, Vol. 23, No. 3, Dec. 1930.

VII

THE "WALTER" PALMS

Now let us examine the main lines of the palms of our standard hands.

By *main lines* we do not mean the creases which are so prominent in the palms of the hands, but certain friction ridges which are used in the classification of palms. Figure 32 shows the right and left hands greatly reduced in size, but presented here in order to indicate these lines more clearly. Each palm, as may be seen, is somewhat different from the other.

It will be noted that the line *A* crosses the palm of the right hand at a much lesser angle than does the corresponding line of the left palm, and that the positions of the deltas, *a*, *b*, *c*, and *d* are quite different.

There are several ways of classifying palms. To the lay reader this classification would mean even less than that of the finger prints, and we shall not go into the details at this time but shall rely for the present solely upon the differences which are apparent in the illustration, leaving the actual classification until later.

From the foregoing, it may be seen that for the first time the "Walter" hands have been completely obtained and the fingers definitely oriented with regard to their position and pattern.

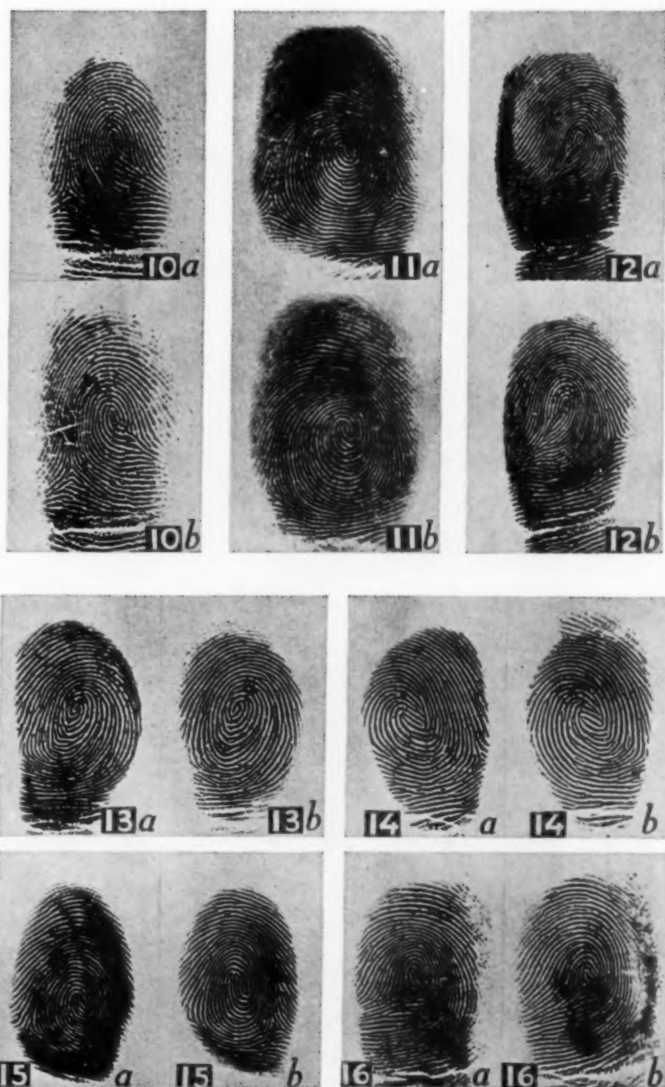
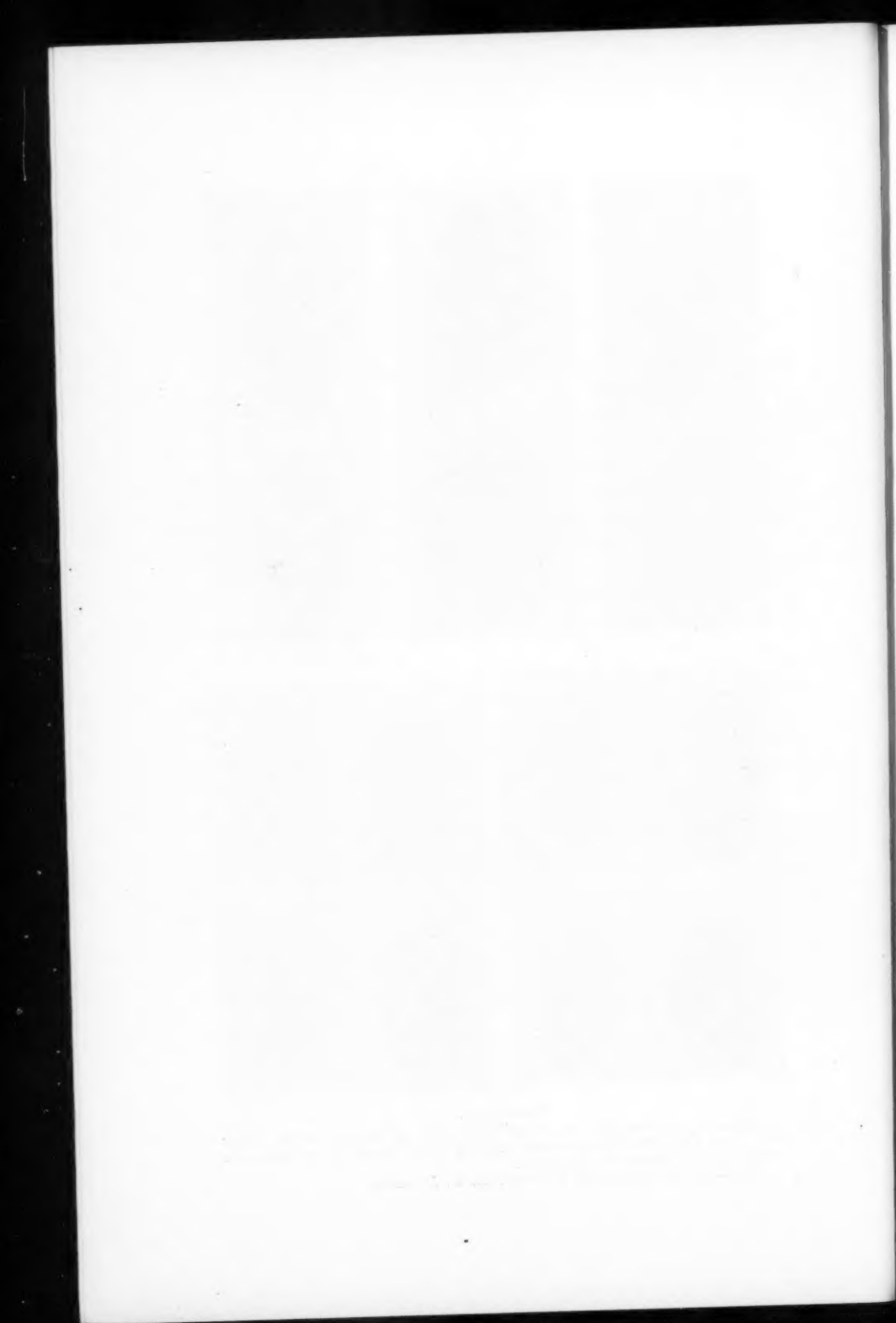


FIGURE 31A.

Patterns on homologous fingers of three pairs of identical twins. They show very close resemblances even in those cases where the patterns are unique or very unusual in character.

Reprinted by courtesy of Professor H. H. Newman.



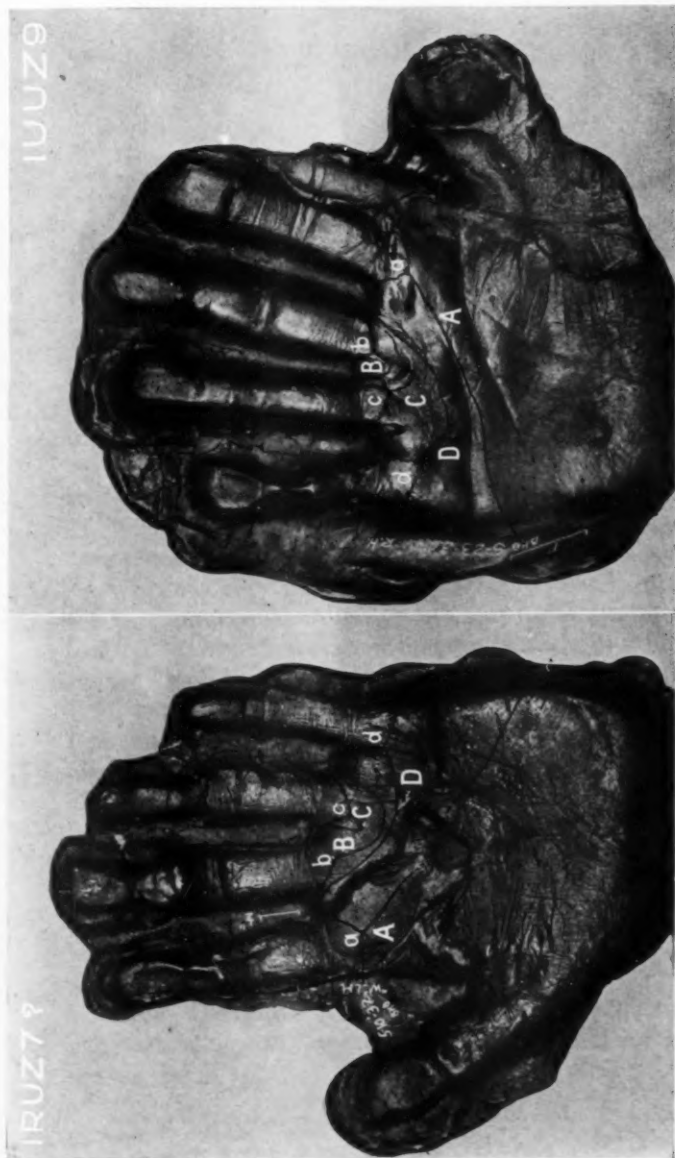
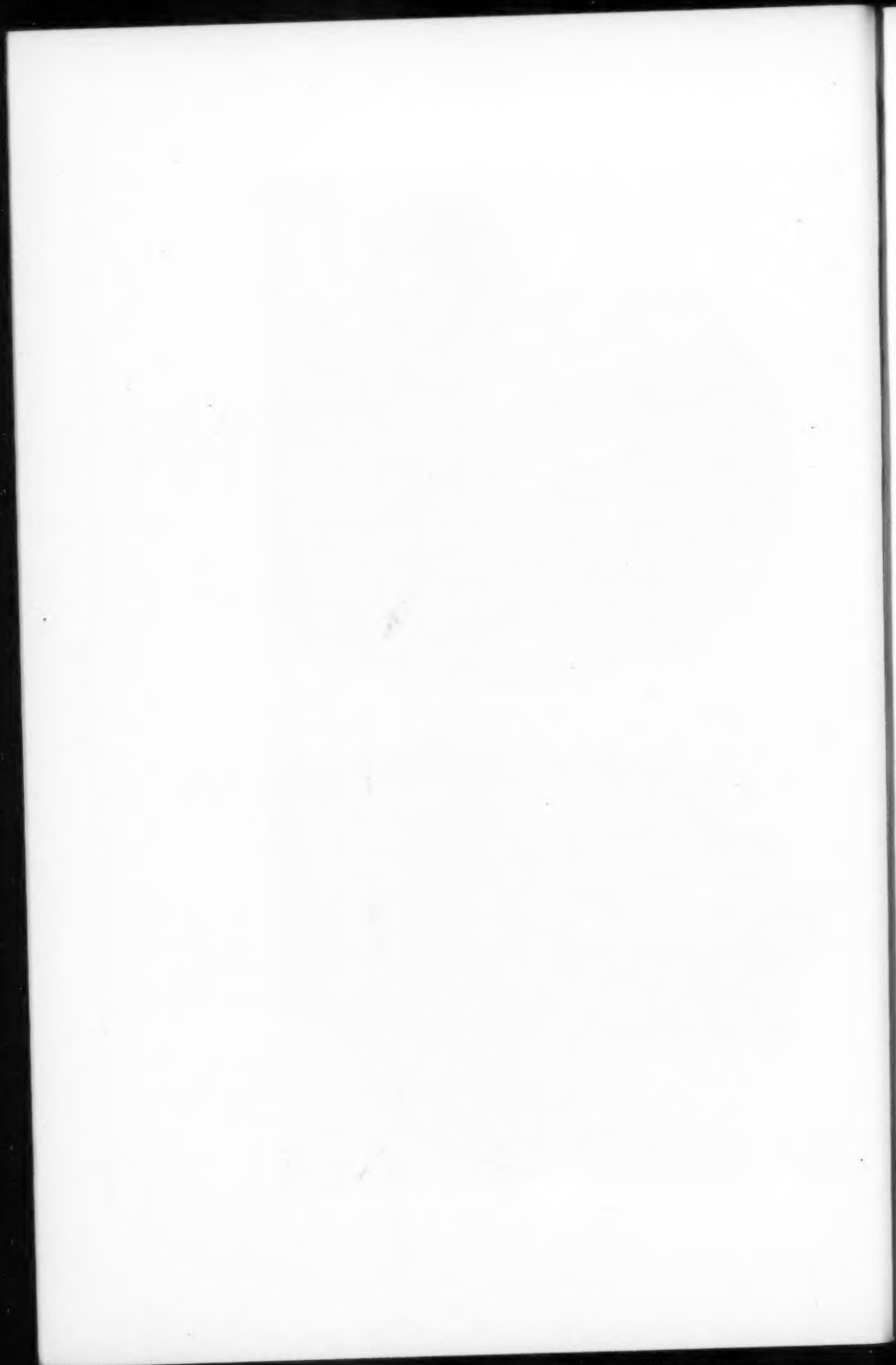


FIGURE 29.

Standard "Walter" hands, showing some of the main palm lines and their classification, as well as a classification of the finger tips by Wentworth.



VIII

PARAFFIN GLOVES

Let us now turn our attention to the paraffin gloves obtained at Lime Street during earlier experiments, and the casts made from them, and see to what extent they agree with the more recent impressions which we have just discussed.

Before impression wax (Kerr) was used, a number of attempts were made to obtain so-called "paraffin gloves" similar to those so successfully obtained by Geley²⁰ in his experiments in Europe.

One of the first paraffin gloves (if not the first) thus obtained was of a right hand, and was produced at Lime Street on May 17, 1924. Someone made a plaster cast from this glove, necessarily destroying the latter in the process.

We were very anxious to obtain this cast in order to study the ridge markings on the thumb, but for a time it could not be located. Later, however, a memorandum²¹ was found at Lime Street which had been left by Mr. E. E. Dudley on December 29, 1931, to the effect that he had taken the cast away for study. Previous to the finding of this memorandum Mr. Dudley had disclaimed any knowledge of the whereabouts of this cast, but after he had been requested several times to return it, it was finally left at Dr. Crandon's office and was then turned over to the writer.

This cast (Fig. 33), while fairly complete, is somewhat misshapen and withered in appearance, the fingers in places having a pinched look not unlike the tips of our relief waxes already discussed. Because of the difficulty of removing the air from the glove when pouring in the plaster, not many ridge markings are apparent, but such as there are must, of course, be in relief.

²⁰ Geley's *Clairvoyance and Materialization* translated from French by Stanley De Brath.

²¹ Appendix XII: E. E. Dudley's note with reference to cast.

We were very much disappointed, upon examining it, to find that many of the ridge markings on the ball of the thumb (Fig. 34, A), especially at the core, had been obliterated, leaving only a new clean surface (B) at this point, although the cast as a whole was somewhat dark with age. This left us only the original photographs for study, although we did obtain one of the original negatives ^{21a} for this purpose, which, when carefully examined under proper illumination, showed that the papillary ridge design of the thumb was of the ulnar loop type. From this negative we made an enlargement of the core, and although the ridge markings have numerous defects (due to air bubbles) which might easily be misinterpreted, there is indication that the core may be a staple. Since this conclusion is based solely on the old photographic negative, it is, of course, not so well founded as it would have been had it been based on a study of the markings on the cast itself, but the general indications are that these agree, at least to some extent, with those of our recently obtained reliefs of the "Walter" right thumb.

We have also a second paraffin glove, which had been filled with plaster of Paris with the probable intention of removing the glove to obtain the cast, but this had never been done. The writer removed the paraffin from the tips of the thumb and fingers of this glove, hoping to obtain finger or thumb ridge markings, but only a few minor ones were found. This was likewise a right hand of about the size of the one first mentioned. It shows only a little of the palm, but the fingers are somewhat better shaped than those of the first cast. It bears no date and there is nothing to indicate to whom it belonged.

A third glove, also of a right hand, (Fig. 35), which bore no date ²² and into which no plaster of Paris had been poured, was carefully examined by means of transmitted light with the hope of being able to observe any ridge markings that might be present. Nothing could be seen on the fingers, however, so

^{21a} Photograph by Wm. H. Kunz.

²² Proceedings A.S.P.R., Vol. I, p. 457.



FIGURE 33.

Plaster cast from paraffin glove of May 17, 1924. This thumb is clearly of the ulnar loop type and, despite imperfections, shows many of the "Walter" characteristics.



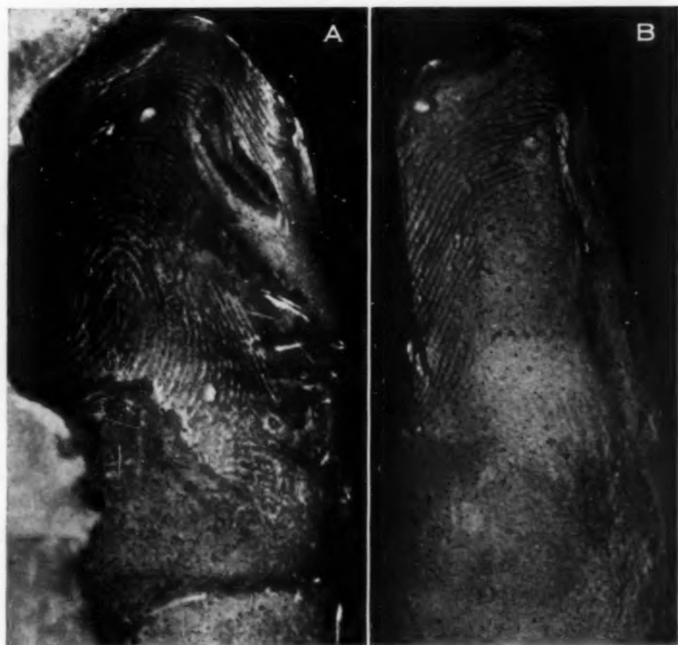


FIGURE 34.

A shows the tip of the plaster cast, shown in Figure 33, as it formerly appeared; and *B*, in nearly the same position, as it appeared when received by the writer, the core markings having been practically obliterated.



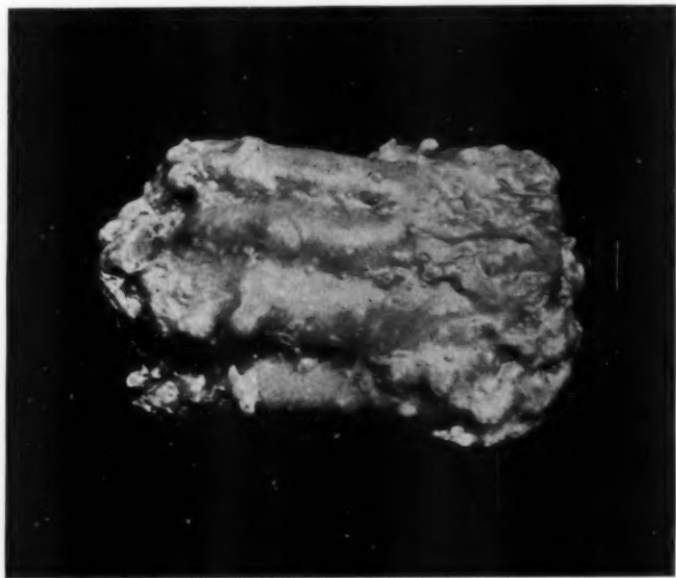
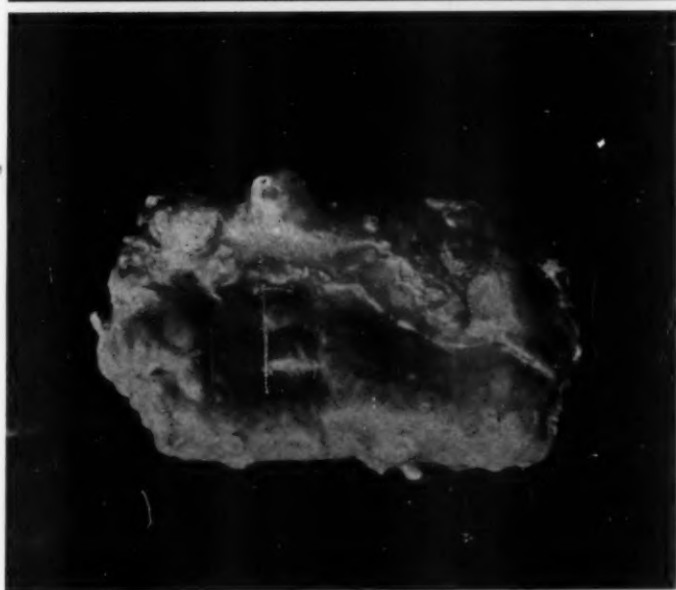
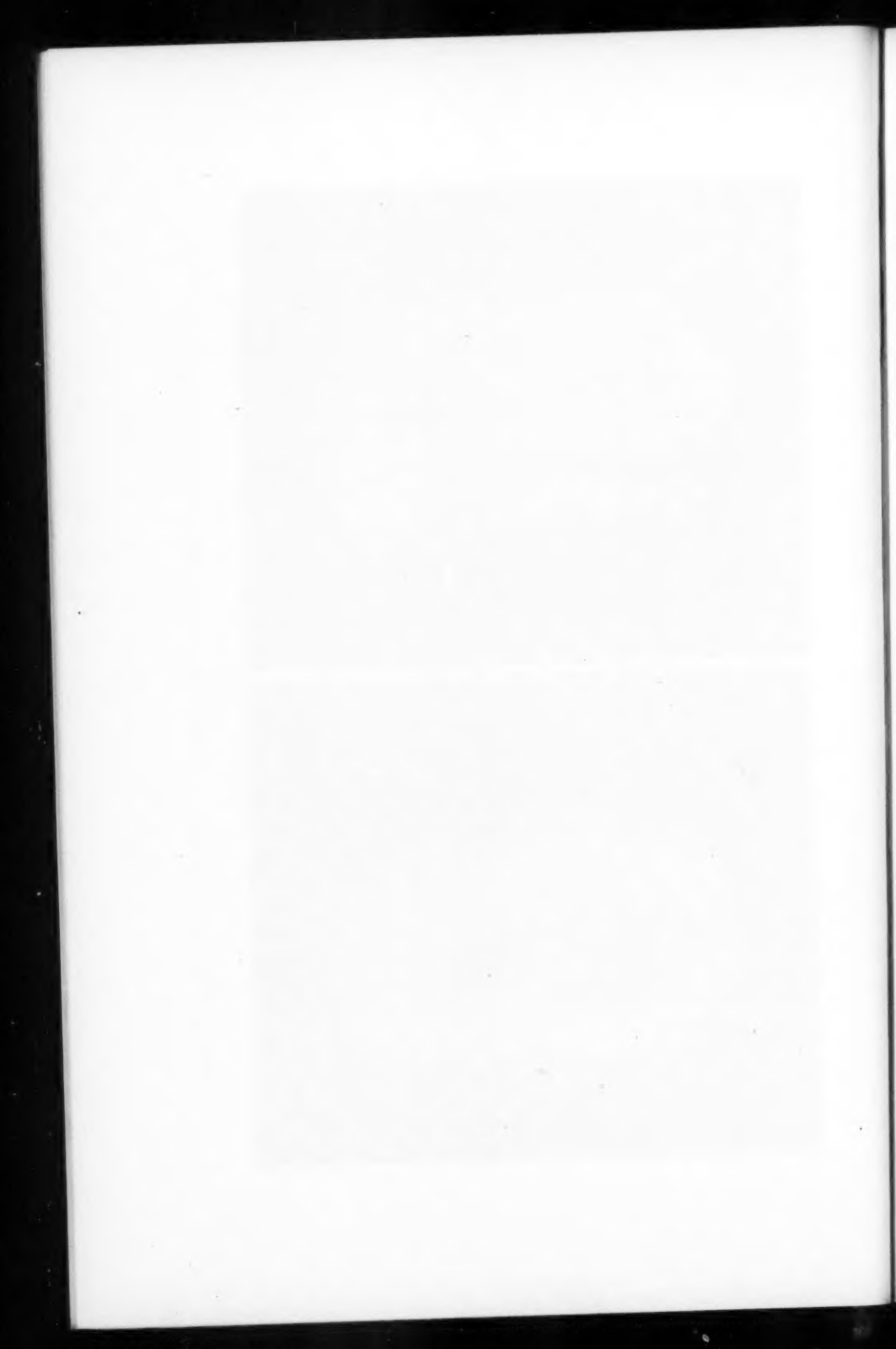


FIGURE 35.
Back and front views of a paraffin glove, probably the second one made at the stance of April 30, 1926.



these (exclusive of the thumb) were filled with plaster of Paris and the paraffin then removed. No ridge markings showed, but the fingers and nails are of the same general appearance as the others.

The writer took the thumb of this hand and on the nail side of it carefully cut an opening through the paraffin thus exposing the interior. Here was found evidence of ridges. Those markings, however, which appear as ridges on the inside of the paraffin, were, of course, caused by the furrows of the thumb about which this glove was formed. In other words, this mold or glove theoretically should have been a normal negative, and it had every indication of being such.

Due to the fact that the paraffin was of a yellowish color and that it was not easy to work through the opening we had made, it was rather difficult to photograph; and when the ridge markings were examined under medium power and with the proper illumination, there was not enough detail to show whether the centre of the core was a rod or a staple. The slant of the ridge markings, however, indicates that it was of the ulnar loop type. The writer then dissected this paraffin thumb mold and was able to examine the pattern more thoroughly, but the actual core (Fig. 36) could not be determined, due to its imperfect structure. The remaining space in this glove was then filled with plaster, but when the paraffin was removed nothing was obtained but the stumps of the fingers and a very thin sheet of plaster, with no markings, where the palm should be.

We have another plaster cast of four connected fingers of the right hand (Fig. 37). According to the date marked on this, it was made from a glove which was produced on April 30, 1926. These fingers are much flattened and distorted, especially the little one, but on all of them the nails are very well formed and the skin markings on the back of the hand are quite distinct. Part of the papillary ridge design is fairly clear on all the tips except that of the little finger which was obliterated in the casting, by an air pocket, as were also the lower part of the index and ring fingers. However, as much of the pattern on these finger tips as can be made out seems to correspond with the

pattern on the finger tips of our recently obtained standard right hand, that is, all seem to be ulnar loops with the possible exception of the thumb tip. These will be discussed shortly.

In addition to the above we have a similar cast (Fig. 38), very much deformed, consisting of the last two joints of the little finger, part of each of the other three fingers, and what appears to be the nail of the thumb.

It is interesting to note that the tip of the little finger shows some ridge design (Fig. 39) which seems to agree with the ridge design of the little finger on the wax relief recently obtained in our own experiments. The only date this bears is the year—1926.²³

Mr. Bird, in Volume I of the Proceedings dealing with the Margery Mediumship, edited by him, in Chapter XLI mentions the different gloves made on this date and shows a photograph of the cast of the better of the two right hands which had been together but had fallen apart when the paraffin was removed.

It seems as if there must be some error here, for certainly the structure shown in Figure 37 is better than that shown in Figure 38.

So far as we know, there is nothing in the records or the Proceedings which indicates whose hands these represent, although Mr. Dudley quotes "Walter" as stating that he knew who made the glove but as declining to say at that time who it was. We do not know to which glove of the set this refers.

According to Mr. Dudley's statement in the manuscript Proceedings, there appear to have been made on this date (April 30, 1926) one mold, consisting of a right and left hand clasped, carrying ridge markings; a short, thick, right hand without markings; and a mold containing two right hands together with both thumbs detached, but buried in the paraffin of the corresponding gloves. Apparently the two illustrations we are using are of the two latter, although one thumb is attached. These, as we have said, are poorly formed.

The tip of the thumb which shows in Figure 37 is classified

²³ Proceedings A.S.P.R., Vol. I, p. 456.

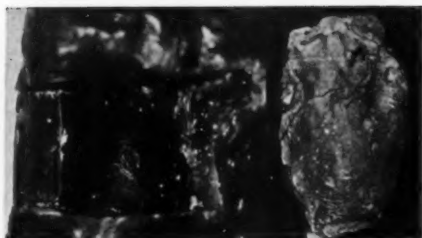


FIGURE 36.

View of a section of the back of the thumb of paraffin glove, cut away and exposing part of the negative impression on the ball of the right thumb. Beside it, a plaster cast made from this.





FIGURE 37.

Plaster cast of right hand made April 30, 1926. The tip of the thumb, which was apparently separate, does not show sufficient detail to allow of determining whether it bears an ulnar or a radial loop. It is not certain that the thumb belongs with this hand.





FIGURE 38.

Plaster cast of a right hand, very much deformed, obtained April 30, 1926. Apparently, this and the one shown in Figure 37 were made at the same time and were lightly clasped together.



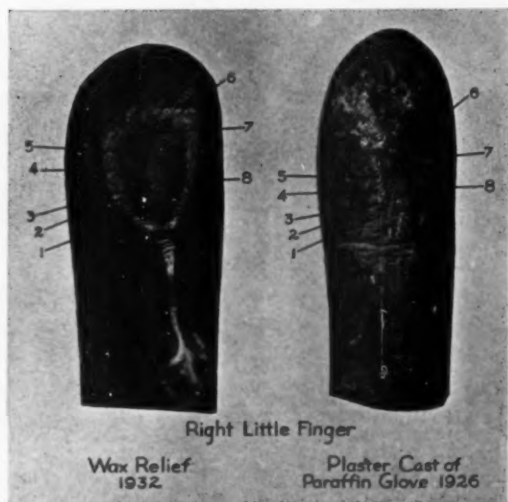
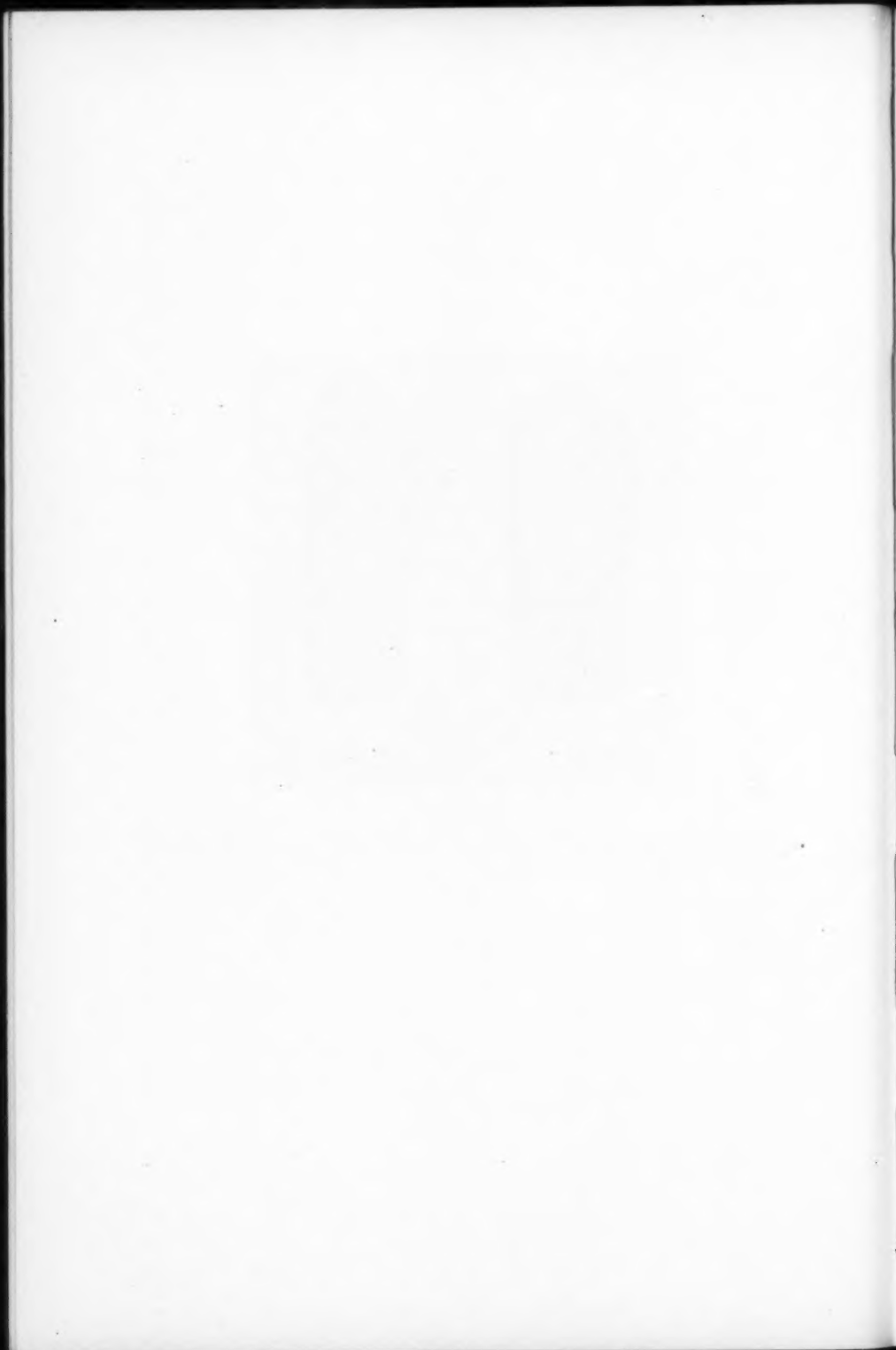


FIGURE 39.

Comparison of the little finger of one of the plaster casts of April 30, 1926, and that of the standard "Walter" right hand. Plaster cast so worn that it is difficult to make out many of its characteristics.



by Mr. Dudley as a radial loop, on the assumption that it belongs to the same hand as do the fingers, and as having a small ridge count. The photograph indicates that the loop may be a radial, although the ridges are so obliterated that we could not say that it might not possibly be an ulnar loop, on the same assumption that he makes, i.e. that it belongs with these fingers.

If it is radial, it is certainly not a "Walter" right thumb.

It seems hardly reasonable to think of it as the tip of the left thumb.

Mr. Dudley classified the five fingers of this hand—at least we believe the hand shown in Figure 37 is the one he is using—and his classification as compared with that made by Mr. Wentworth for both our standard "Walter" right and left hands, is as follows:

	<i>Thumb</i>	<i>Index</i>	<i>Middle</i>	<i>Ring</i>	<i>Little</i>
Right (E.E.D.) ^{22a}	R ?	U or A	U	U 6 ?	U 10 ?
Right (B.W.)	U 22	U 4	U 8	U 18	U 9
Left (B.W.)	U 12	R 4	U 9	U 16	U 7 ?

It is rather difficult to draw any conclusions from these figures.

Mr. Dudley feels that the ridge counts of the index finger if ulnar, and of the middle finger, are small. He says the patterns on the little fingers of these casts, over corresponding areas, show some fifteen identical characteristics, but as in one of the casts that we show the ball of the little finger is missing, we assume that the one to which he refers belongs to the right hand of the other set which was produced on the same evening.

Nevertheless, there are numerous characteristics which indicate that there are some points of similarity between this cast and our standard hand.

We also have a single broken finger which apparently belonged to another cast, which is undated, and on which the ridge design of the tip is fairly clear, although partially obliterated by a large air pocket. The general shape of this finger, which has

^{22a} Manuscript proceedings by E. E. Dudley.

very good skin markings all over it and shows the nail, would indicate that it is the index finger of a right hand, but because of the defect on the under side, due to the air pocket, we cannot determine its identity.

When the fingers of these various casts are compared, they show many points of similarity, such as length of joints, general appearance, and texture of skin, all of which seem to indicate that they represent one and the same hand.

On November 19, 1932, we received two finger casts, shown in Figure 40, which Dr. Erik Twachtman of Cincinnati, Ohio, had had in his possession ever since 1926.²⁴ These were still partly covered with a thin coating of paraffin which, when removed, revealed plaster casts, one of which (A) appears to be the index finger of a right hand. The tip of this bears a well marked design which agrees with the design on the index finger (Fig. 41) of the right hand of our recent waxes.

The other cast (B) is apparently that of a left thumb, although of this we do not feel certain, for while the bulb contains some ridge markings there are not enough of them to warrant classification, and the part where the scar would be located, were it a "Walter" thumb, is practically obliterated. The general slant of the lines, however, would indicate it to be of the ulnar loop type, if it is a left thumb.

According to the records, still other casts have been obtained at Lime Street, but they cannot now be located. Also, we understand that some of the early investigators attempted to make gloves of their own hands in experimenting with paraffin. How successful they were we do not know, but we do know that there are now materials in which even difficult molds of human hands may be made.^{24a} Figure 42 shows a cast from such a mold.

The writer has examined photographs of some of the missing casts, but there are no markings which show, so they are of little importance in this connection except for the fact

²⁴ Appendix XIII: Dr. Twachtman's report on casts.

^{24a} Dr. Poller's method of molding by the Moulage Process.



FIGURE 40.

Plaster casts of two fingers received from Dr. Twachtman, one apparently a right index finger and the other a left thumb.



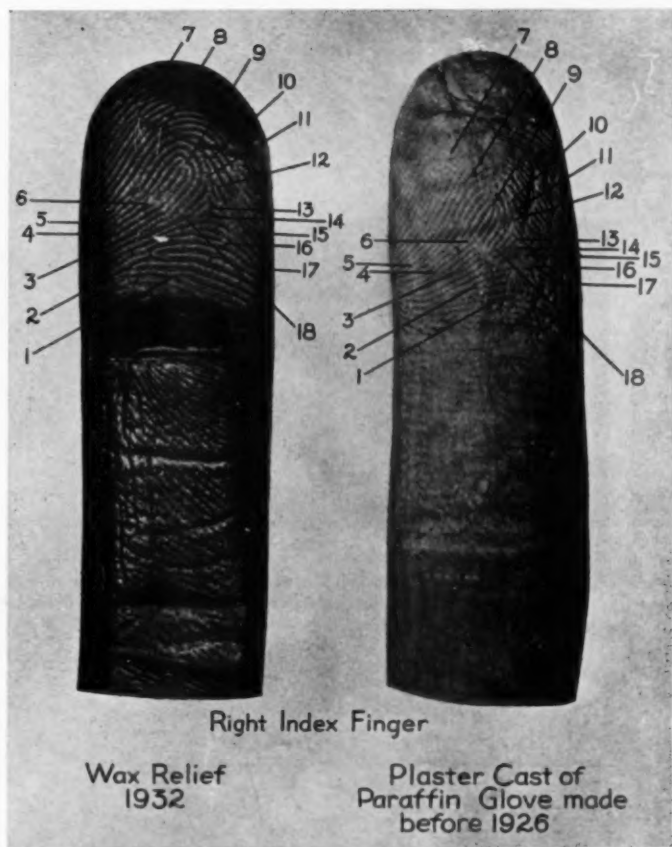


FIGURE 41.

Comparison of the plaster cast of index finger received from Dr. Twachtman and that of standard "Walter" right hand, showing numerous points of similarity.

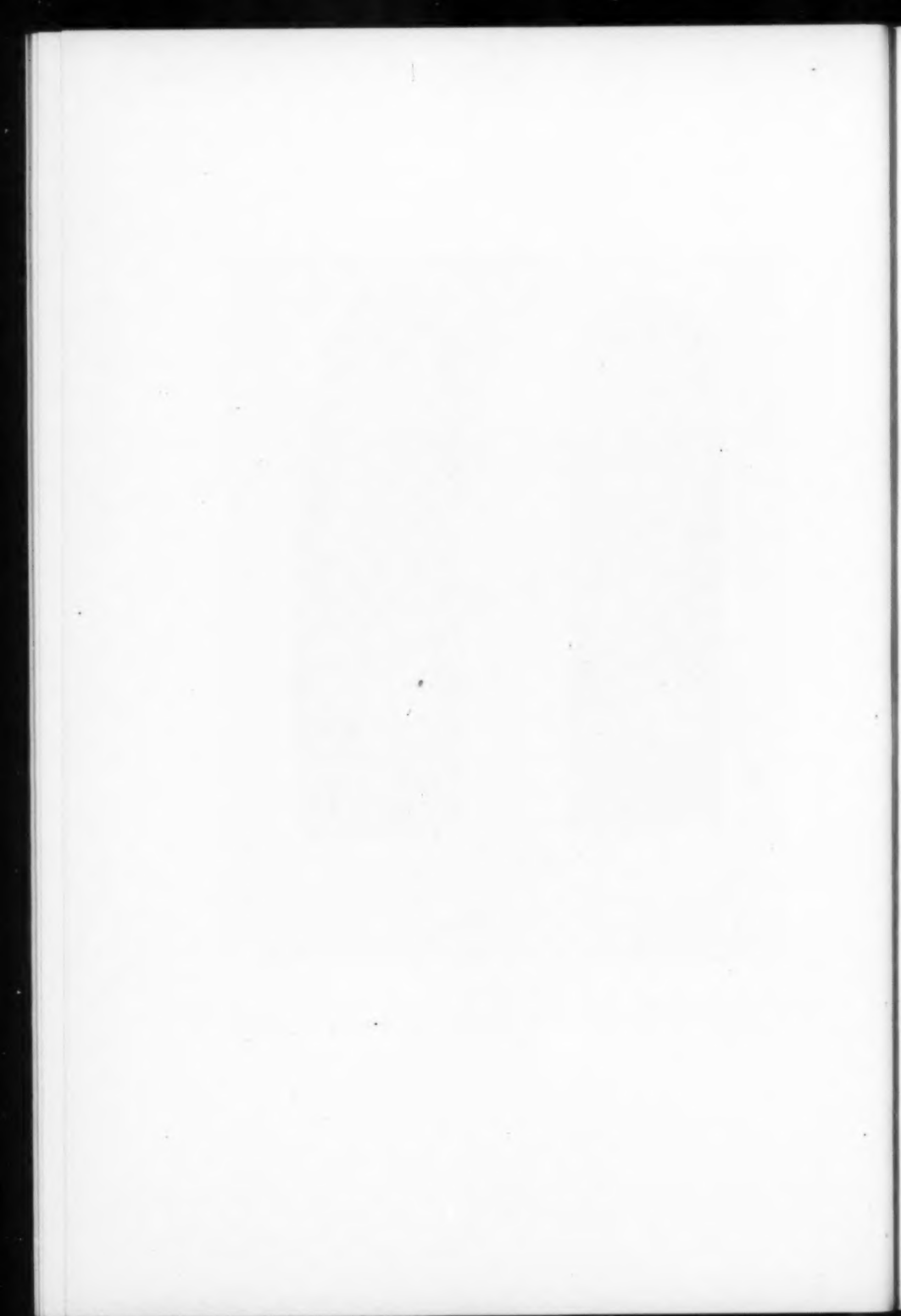




FIGURE 42.

Cast from living body—a seamless one piece mold. It was formerly supposed that such difficult molds could not be made in one piece. Now, by the use of the method of Professor Poller of Paris, this has become comparatively simple.



that they conform in general appearance to the others already mentioned.

We are not placing particular weight upon the evidence afforded by these gloves, insofar as the thumbs are concerned, since they all lack sufficient detail of the core, but they do agree with the standard "Walter" right thumb in being of the ulnar loop type. *It is important to note, however, that these early casts, which the records state are of the "Walter" hands, correspond in many details of finger tip pattern, and of the palms in those cases where the palm design is apparent, with those most recently obtained in wax, indicating that they all represent one and the same hand.*

IX

EARLY WAX IMPRESSIONS

We shall now turn our attention to the earlier waxes in order to show to what extent, if any, they agree with our standard "Walter" hands, but before doing so let us record how wax (Kerr) first came to be used in these experiments.

On July 30, 1926, "Margery" visited her dentist, Dr. "X," for treatment. While she was there they discussed some of the psychic phenomena which had been taking place in her séances, and especially the subject of the paraffin gloves. He was naturally interested, as he had formerly been a member of the group at Lime Street, although that was before any of the gloves had been produced. He suggested to "Margery" the possibility of using in these experiments a dental impression compound, a molding wax called Kerr, which softens under a temperature of from 120° to 130° F. In cooling it has little distortion, and, if care is taken, usually gives a clear cut impression.

The dentist showed "Margery" how this wax might be used by actually making impressions of his own thumbs. When she left for home she took these with her, together with pieces of unused Kerr, and on that evening, July 30, 1926, the first wax impression, a positive, was obtained. The history of the sample impressions made by Dr. "X" will be discussed later in this report.

Just how many supernormal wax impressions of all kinds have actually been made during the history of this case we do not know, but there must have been very nearly two hundred of them. We have studied more than one hundred which were made between July 30, 1926 and July, 1932. On many of them the impressions are much too faint to be of any use whatsoever. Some of those that were fairly well impressed are only partial prints, and others that have fair markings are undated or unnumbered,

or so poorly identified that they cannot be checked against the early records.

Several years ago the writer made in his laboratory, for Mr. Dudley, photographs of a group of seventy-five of the so-called "Walter" prints, which Mr. Dudley desired more for the purpose of showing the multiplicity of the waxes than anything else. We are showing two views of this group—the obverse in Figure 43 and reverse in Figure 44. Checking the waxes we have for examination against those shown in this group, we find that we have only about half of them. Very few waxes have been given away, and as Mr. Dudley had general charge of all the waxes for several years, we presume he can account for many of those which we cannot find.

Before entering upon the discussion of these early waxes, we may say that apparently there is little difference of opinion as to the proper classification of many of them as normal positives or normal negatives. The differences of opinion which do exist as to proper identification we believe to be due chiefly to assumptions made in the interpretation of the design which, in our opinion, the facts do not warrant. These points will be brought out as we discuss typical waxes. We might say here that, in addition to some waxes which in the past have been classified as containing characteristics of both positive and negative impressions of the "Walter" thumbs, there are others, which have also been supernormally produced, which have characteristics of more than one individual in their pattern, depending to some extent, perhaps, upon conditions existing at the time the phenomena took place. Such results could not occur under the control we imposed in our own experiments unless by some supernormal means of production, and, we might add, there have been a number of instances, well known to those frequenting Lime Street, where, when a print was being made, "Walter" has said that there was difficulty in preventing some of the characteristics of the medium from getting into the design. Waxes having just these indications have been obtained in the past, and "Walter" has stated that he cannot always control the situation. Our standard "Walter" right hand, illustrated in

Figure 6, shows a scar, s, to which we have already referred, on the palm near the base of the thumb, which "Walter" told us was "Margery's" scar. He called our attention to this scar at the time of making the print and before we had had an opportunity to examine it. It does not appear on any of the other right hands we have obtained. "Margery" in fact, has a scar on her right hand somewhat corresponding to the scar on the wax.

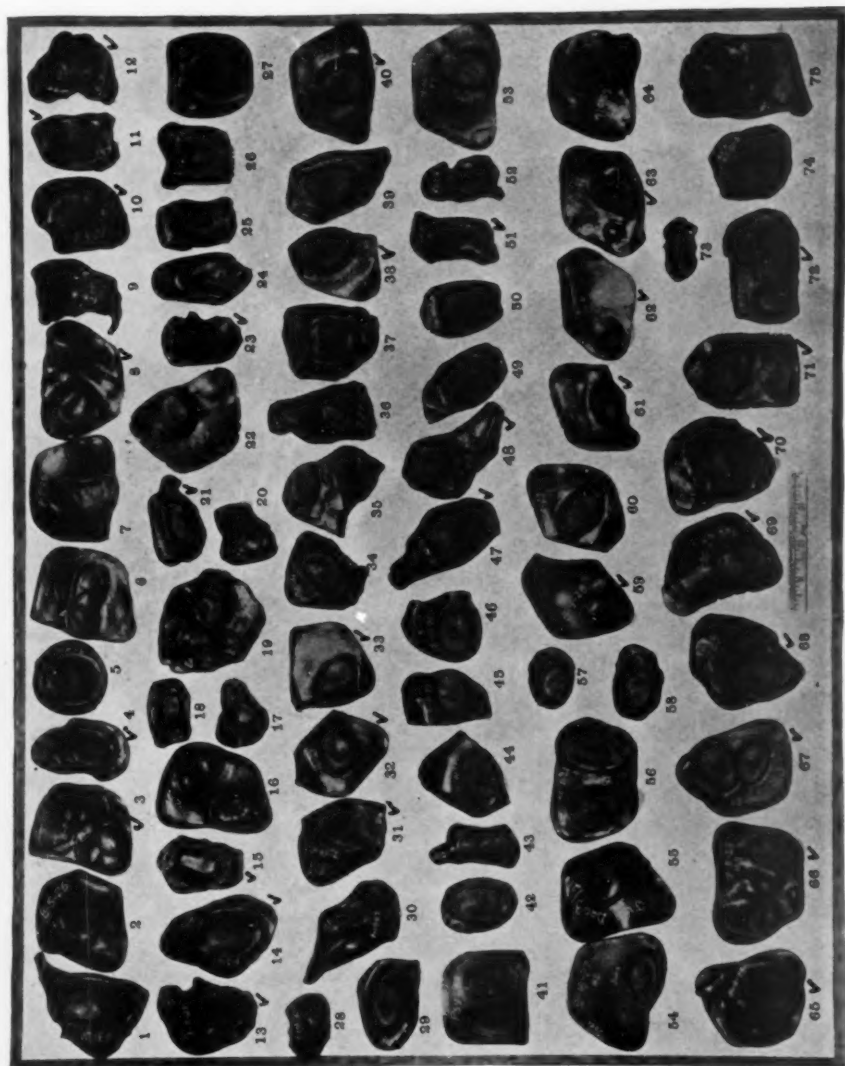


FIGURE 43.

Group of seventy-five waxes, each bearing one or more impressions, which were photographed by the writer early in 1930 for the purpose of showing the variety of such waxes rather than their detail.



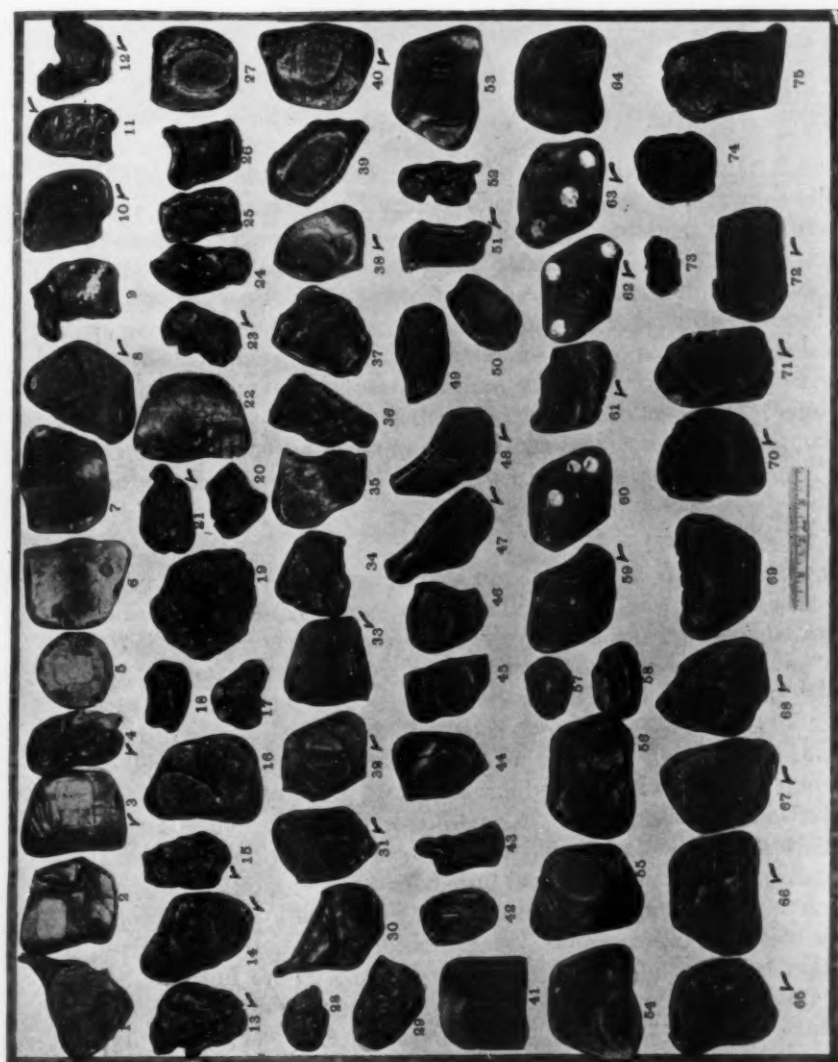


FIGURE 44.

Backs of waxes illustrated in Figure 43, showing in some cases marks of identification.



X

CLASSIFICATION OF WAXES

We have studied critically in the preparation of this report more than one hundred waxes, about sixty of which were old ones, that is to say, waxes which had been obtained during the earlier period of the finger-print phenomena.

For convenience in presenting the data pertaining to these, we are arbitrarily dividing them into nine groups, either according to their principal characteristics or to the conditions under which they were produced. Some of these waxes have such faint or worn patterns that they are practically useless for comparison but most of them have a design that can be determined, and we shall show that these agree with our standards.

A. POSITIVE IMPRESSIONS

This type of impression was apparently the first to be produced, and we have some twenty of the older ones. Until recently "Walter" claimed that positive impressions were the easiest for him to make, but he now says that he can as easily make a negative as a positive *if the energy is sufficient* and has the right qualities—whatever that may mean.

The wax supposed to have been the one first made, that marked 1 of July 30, 1926,²⁵ actually bears two impressions, one on either side (Fig. 45). One of these, possibly the first, is only partial, perhaps having been somewhat obliterated when the second one was impressed, and is a little more distinct than the one on the other side which shows an elongated print and a partial joint line which is depressed. The general direction of the core and the position of the delta on this latter print indicate that it is probably a normal positive relief of the "Walter" right thumb, and it is so classified in the Journal,²⁶ although this

²⁵ *Psychic Research*, August, 1928, p. 463.

²⁶ *Ibid.*, p. 464.

classification appears to have been based wholly on the appearance of a scar which was depressed and which was said to show in the upper right hand section of the print. We shall have more to say about this scar later.

In our opinion there is not enough detail in either of these prints at the present time to indicate their ridge patterns. Apparently the wax was not deeply marked, the lines being very light, and it is now much worn from handling.

Figure 45 also shows a print made August 5, 1926, which is elongated like the first. This design is somewhat clearer, although this wax, also, is quite worn. In this print the centre of the core might easily be taken for a rod rather than a staple. This is partly due to the fact that the core is quite worn and that the right-hand side of this central staple is somewhat accentuated by a minute globule of wax which lies at a higher level than the surrounding elements, giving it the appearance of being separate from them. There may also be another reason for this appearance, which occurs on a few other waxes, and which we shall treat in detail later. This wax also seems to show the depressed scar at the upper right which was mentioned in the Journal in connection with No. 1. Undoubtedly the print was intended for a normal positive relief of the "Walter" right thumb.

There are two prints dated September 5, 1926, both elongated and both rather poorly made, but showing a depressed joint line and scar at the upper right. The cores of these prints are now so faint that they can scarcely be made out, although one is similar to that of the print of August 5th. These likewise appear to be attempts at a normal positive relief of the right thumb.

An imprint dated March 21, 1927 shows a depressed joint line, and the position of the delta and slant of the lines of the core indicate that it is a normal positive relief, but the core is now so worn that the details are difficult to determine although it bears indications of being a staple. The scar at the upper left, noted in connection with previous waxes, is depressed.

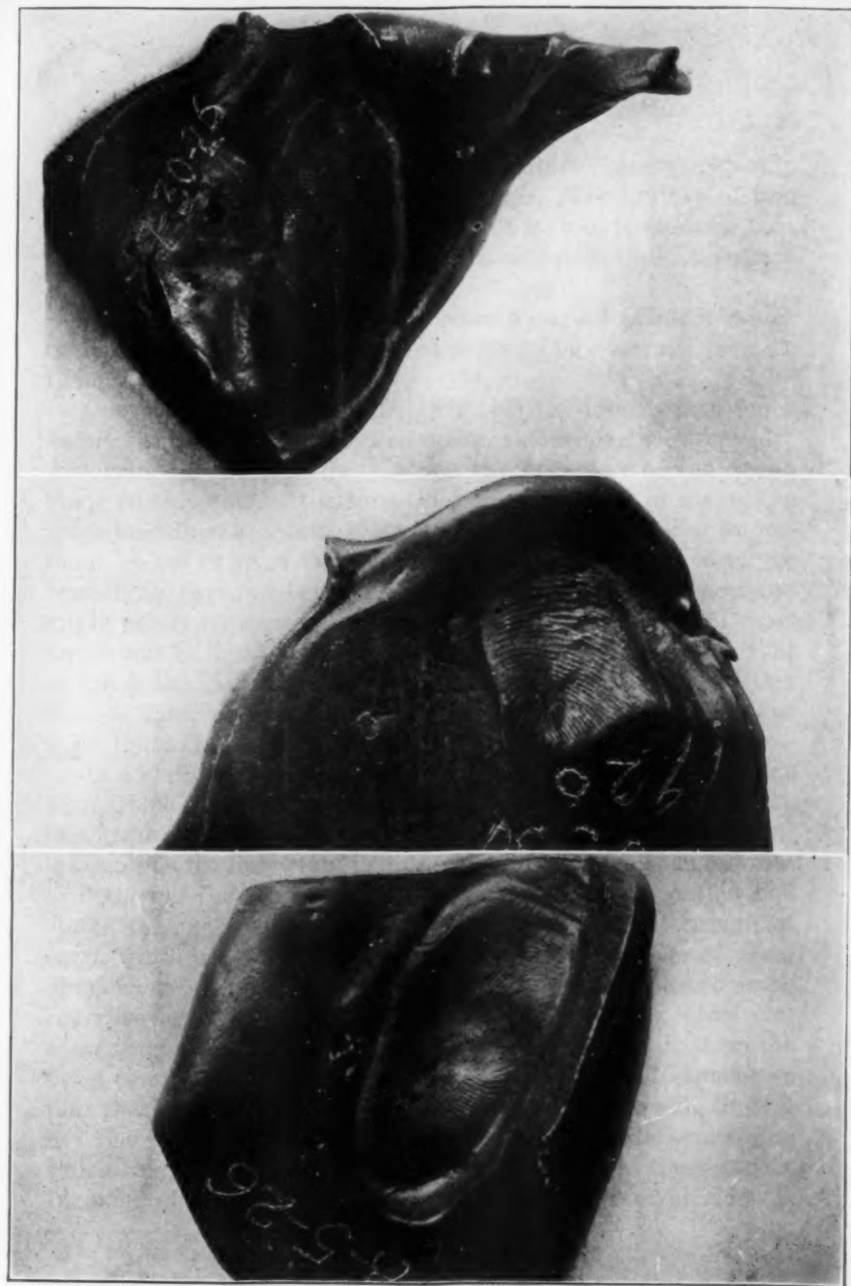


FIGURE 45.

Two views of the first impression obtained in dental wax (Kerr), the upper showing a more or less complete thumb impression, although poorly made; center view showing what remains of the impression which was on the back of the upper one. Lower cut shows what appears to have been the second impression obtained at a later date.



THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637
TEL. 773-936-5000
FAX 773-936-5001
WWW.CHICAGO.EDU

A wax dated June 9, 1927, is much distorted and shows only a partial print which is exceedingly poor. The texture of this print is much like the previous one but it, too, is so worn that it cannot now be positively identified although indications are that it is a normal positive relief.

A wax of June 30, 1927 also bears a partial print, in which the core is a staple. This, too, appears to be a normal positive relief.

One wax of July 14, 1927, (Fig. 46), is described in much detail in the manuscript Proceedings and in the Journal.²⁷ According to the records this was the fifth wax of the group made on this date. It is somewhat hemispherical in shape, the ridge markings are quite clear, and a feature of especial importance is the extra wide furrow at the centre of the core, the remaining furrows being of normal width. This impression might easily be classed as a sport, certainly as a special case, and might be lightly passed over if it were not for the fact that so much has been made of it in the Journal. Because of this it is of interest to consider how it varies from our standard right thumb in relief, if at all.

In a statement from the manuscript Proceedings, about this wax, which is marked No. 35 on the back, and, as old No. 23, is shown in *Psychic Research*, August 1928, p. 461, emphasis is laid upon the important fact to which we now come, as follows:

"During the séance talk, "Walter" of his own notion had stated that he would make a print with the central trough of extra width but with all other ridges and depressions of usual dimensions. This was in fact a bit of a joke. *There was a small controversy raging about the identity of the true central element in positive and negative prints;** Walter said that on the print coming next he would stretch out this central element so that there could be no mistake about it and no trouble finding it. The photograph indicates strikingly that he did something which casual examination would interpret in just those terms. In point of fact, the print is a positive. The central ridge is

²⁷ *Psychic Research*, August, 1928, p. 460.

* (Our italics.)

completely excised, so that the central element of this print consists of a depression of triple width occupying the space ordinarily taken up by the true central ridge and the depressions at either side. Two points should be emphasized here—that Fife and Dudley examined the print immediately after the séance closed and found it in precisely the condition in which the photograph shows it; and that, while there remain what might be taken for traces of the missing ridge, there are no marks in any sense suggesting the ravages of a tool.”

We now quote again, this time from *Psychic Research*, August, 1928, p. 460, where Dudley, after referring to a promise by “Walter” “to make the central trough in the loop broad,” says: “*Realizing that he was speaking in terms of the negative prints*” * and that what we have here is a positive in which the central trough becomes the central ridge, we see that he has wholly made good on this promise.”

And further on, “We were somewhat disturbed by the fact that following the delivery of this print, no other normal positive was made by Walter for a matter of some months. in fact until his attention was called to this fact all subsequent prints were either negatives or mirror positives.”

When “Walter’s” attention was called to this lack of normal positives, “he at once made not one but several”, all of which were fully executed, but Mr. Dudley did not illustrate or describe them because they lay beyond the time period covered by the report he was making.

Let us analyze the foregoing in the light of what we now know.

A careful study of this wax, especially at the core, shows slight traces at the top, and considerably more at the lower end, of the missing ridge of which Mr. Dudley speaks and under about thirty magnifications there are visible a number of fine grooves running practically the whole length of the core.

Let us look at a diagrammatic view (Fig. 47) of the core of the “Walter” normal positive right thumb in relief (A).

* (Our italics.)



FIGURE 46.

One of the impressions obtained July 14, 1927, which is a "Walter" right thumb in relief and shows that one side of the staple has been almost eliminated.



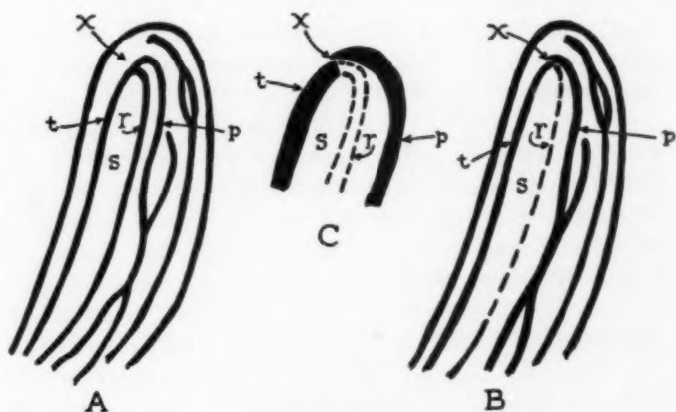


FIGURE 47.

A shows diagrammatically the "Walter" right thumb in relief; *B* shows one side of the staple partially removed as in Figure 46. *C* shows tip of core and how it would appear if reconstructed.



We note that this core *s* is a furrow surrounded by a staple whose side ridges are marked *r* and *t*, and that to the right of this is a ridge *p* which in many prints terminates at point *x*. The diagrammatic sketch of the wax to which we are referring is shown at B. In this the right-hand side of the staple *r* is shown as a dotted line. This is the side which a casual examination of the wax shows to have been left out or excised. Notice also that at point *x* in the enlarged diagram *C* the top of what is left of ridge *r* of the staple joins with ridge *t* of the staple. Now, under high magnification, as has already been stated, there is indication of remnants of this ridge *r* not only all along this core, but also at point *x* where it would normally join were it fully present as shown in A.

In other words we find again what we have so frequently noted, that the "Walter" right thumb has a staple at the core and therefore that in general this wax agrees with our standard right thumb. Mr. Dudley mentions other peculiarities such as certain dimensions and the position of the delta, but these do not affect the core.

Let us examine "Walter's" statement concerning this matter as recorded by Mr. Dudley.

"Walter" had promised to make the central trough in the loop broad so that there would be no question as to what it looked like. It is apparent that one way in which this might be accomplished would be by removing the side of the staple marked *r* in our drawing. This would leave the ridge *p* still connected with the left side of the staple *t* thereby keeping the type of the formation of the core the same without interfering with the spacing of the other ridges, and giving us the results shown in B to which we have already referred.

It would appear that it was "Walter's" intention to so accentuate the core of his thumb that there could be no question with regard to its design; and certainly there could be no object in removing part of the design if by so doing its pattern would be changed.

We have further evidence in the fact that on another oc-

casian,²⁸ when "Walter" was asked without warning if he could make an enlarged impression of his own thumb he said he could, and did it immediately, as may be seen in Figure 48 of a wax made on November 14, 1930. But this was not enlarged in the way which we expected, for the wax has the appearance of having been pulled out considerably longer and somewhat wider after the impression had been made and before it had had time to cool, thus spreading out the pattern, although not uniformly. Such a procedure in the wax under discussion would have affected other ridges as well as the staple. Therefore, it appears as if in order to accentuate this point, one side of the staple had in some way been modified, still leaving a complete staple at the core because of the contiguous ridge already mentioned.

If, as Mr. Dudley claims, the core is a rod, the only way of widening it would be by stretching it. Removing it would not give the same result. The ridges, not the furrows, are the elements, and the furrows are the spaces between these elements.

There is no mention in the old records, so far as we are aware, of any statement by "Walter" which specifies what the core of his right thumb in relief is like, but at the time of making this wax "Walter" said he would make the loop broader and in our recent experiments he has stated that the core of the right thumb in relief is a loop, which is what is technically known as a staple.

We do not understand what basis Mr. Dudley had for his statement to the effect that he realized that "Walter" was speaking in terms of negative prints when he spoke of the furrow in the centre of the core of his thumb.

Moreover, Mr. Dudley said that there had been a controversy over just what constituted the core of the thumb in relief,—as quoted above; and still further on, he says that he (Dudley) was disturbed because no more normal positives—with the rod at the core according to his classification—were received for some time, and that when this was called to "Walter's" atten-

²⁸ Appendix XIV: Minutes of meeting 11-14-30.



FIGURE 48.

A rather unusual impression in wax of the "Walter" right thumb, obtained November 14, 1930, and made on demand that "Walter" produce an enlarged print of his right thumb. This has every appearance of having been enlarged by stretching when the wax was soft, and if so was done supernormally.



tion the latter made several positives which were fully executed. We presume by this that Mr. Dudley means that he obtained some with a rod in the centre. According to his statement he did not use or publish these because they were produced at a later date than the period his report was covering.

We, too, recognize this wax—No. 35 of July 14, 1927—as a normal positive relief of the “Walter” right thumb, but having a staple at the core, not a rod as Mr. Dudley believes.

The simplest way to emphasize the character of this central element would seem to be by the widening of this staple, which would be accomplished by the removal of one of the sides. If the centre of the core were a *rod*, its removal would entirely change the character of the core, not emphasize it. (When one speaks of the core one refers to the ridges, not to the furrows caused by them.)

We have a wax dated July, 1927, the exact date looking like a 12 although it is very indistinct. While this is a small piece of wax with only the upper part of the print showing, it is quite distinct and is without question a “Walter” normal positive relief and shows clearly the staple at the core. If this is a wax of the 12th we wonder if it may not be the wax of that date which is mentioned in the manuscript Proceedings as having disappeared.

We also have a wax bearing a small partial impression, dated April 14, 1928, which is very clearly a “Walter” normal positive relief with a staple at the core.

Another very good wax showing quite clearly the ball of the “Walter” right thumb is marked P2 (Fig. 49) but the date cannot be deciphered. Whether this P stands for positive we do not know but that the impression is the “Walter” normal positive there is not the least doubt, and there is a well defined staple at the core.

We have also the five impressions which were shown in Figure 28, none of which is complete. Each of these is clearly of the “Walter” right thumb in relief and shows a staple at the core.

To recapitulate, therefore, these normal positive reliefs of

the "Walter" right thumb show almost without exception that the core is a staple. There are a few in which the tip of the core is not very clear; and a few in which it appears as a rod. These latter will be discussed under another heading.

To the best of our knowledge there have been no positive impressions of the "Walter" left thumb except those of recent date which we obtained in our experiments resulting in a standard "Walter" left hand, and a few which were shown in Figure 29, which clearly show the characteristics of this digit including the well marked scar.

B. NORMAL NEGATIVES

Turning now to the normal negative impressions, one of the earliest that we have is that of February 3, 1927, wax No. 11. This wax (Fig. 50) is of particular interest and is described at some length in the manuscript Proceedings. The core of this print distinctly consists of a ridge which, if it were used as a die, would give us a positive agreeing with our standard "Walter" normal positive relief.

Let us see what Mr. Dudley has to say about this in the manuscript Proceedings:

"PIECE No. 11 is the third print made on February 3d, and was first listed as a normal negative. There is no doubt as to the propriety of its inclusion in the negative category but it is somewhat of a misnomer to call it "normal," inasmuch as it is the print upon which "Walter" has presented one of the most *ingenious* of his *arbitrary variations* from the *norm*.

"This print is of such importance in the discussion of the ideoplastic hypothesis of the origin of these phenomena, that an indexed photograph* is presented at this point.

"The upper part of the print, down to a point about a quarter-inch below the core, is quite regular, but below the curved line A-A' there is a distinct departure from the norm; the ridges appear to continue as in a normal print except that they are straight instead of curving to the right as they should. A careful examination of the print proves that *the character-*

* No copy of this photograph is available to the writer.

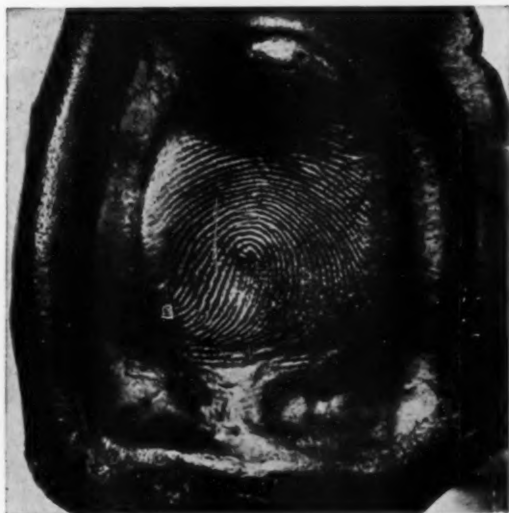


FIGURE 49.

A wax bearing a "Walter" right thumb in relief, showing quite clearly a staple at the core with a well defined tip and no indication of a plateau or sink in this region.





FIGURE 50.

A wax intaglio of the "Walter" right thumb, obtained on February 3, 1927. This can not be called a wholly normal negative, but the center and upper part of the core show clearly, in the actual wax, that the "Walter" thumb must have a staple in the positive.



istics above line A-A' are repeated below that line, as shown by the index numbers 1-1', 2-2', etc., but are offset one ridge to the right. An exception occurs with No. 4; the normal bifurcation coming so close to the transition line A-A' that only the lower characteristic is shown.

"Near the central loop the ridges are continuous across A-A', but beginning about seven ridges to the left there is a slight offset at the point of junction. This offset is very slight, and there is no indication, even at the extreme left of the print, that any mechanical operations have been performed on any of these minutiae.

"Obviously, such a print cannot be produced by a double imprinting from the same digit, since the ridges carrying the repeated minutiae are almost straight instead of curving as they do above the transition line. Therefore, the conclusion seems inescapable that the alteration was deliberately conceived and carried out."

From the above it will be seen that Mr. Dudley classifies this wax as a normal negative with some variations, and according to his statement these variations do not affect the upper part of the core and *yet the core agrees fully with our standard.*

We have two waxes of March 5, 1927, one of which is much distorted and marked very faintly but sufficiently to show that it, like the other, is a normal negative. One shows a raised joint line, and the core of this wax is fairly clear although the upper end of it is worn, so that the ridges appear to form a loop. This condition will be discussed later on in connection with the positive waxes having a similar characteristic.

A wax dated June 30, 1927, is badly distorted and appears as if a part of it had been broken off after the wax had been impressed. This impression is only partial but it is evidently a normal negative and the core clearly agrees with our standard. Mr. Dudley, in the manuscript Proceedings, so classifies it.

We have one print of July 9, 1927, with indications of being a normal negative, and according to Mr. Dudley's statements this wax bears identification marks (which we presume are the notches on its edge and an X on the back) and was identified by Mr. Bird.

Wax No. 32, of July 14, 1927, has been broken in halves and mended, which probably accounts for the absence of most of the cloth markings which Mr. Dudley mentions as appearing on the back. It is a normal negative, although not particularly well impressed, and shows a ridge at the core, thereby agreeing with our standard.

On August 23, 1927, according to the records, three prints were made, all of which were supposedly normal negative impressions of the "Walter" left thumb. Mr. Fife and Mr. Dudley were both present at the time, and according to their statements these waxes were identical in design.

Since we are going to discuss these left thumb impressions in connection with some of the criticisms of the "Walter" left thumb impressions we shall here only mention that we have in our possession, and have had for some time, two of these waxes. That marked No. 1 is shown in Fig. 51. It has been somewhat damaged but not to an extent which interferes with its identification. That marked No. 3 is shown in Fig. 52 and if the reader will examine these he will notice the deep scar across the center of the ball of the thumb, to which we have already referred in considering the "Walter" hands.

The joint lines on these waxes are raised, although in the photograph they may not look so.

These waxes agree in detail with those of our standard "Walter" left thumb.

On August 18, 1927, five excellent normal negative impressions of the "Walter" right thumb were obtained. We have four of these, No. 1, No. 3, No. 4 and No. 5,—all of which show a negative joint line, most of the ball of the thumb and the delta, and the core particularly well. Three of them have been broken and repaired, one by the writer, the others before they were received by him. They are in general well executed, and we class them as normal negatives, and believe that the evidence indicates that they are all "Walter" normal negative right thumb impressions.

If we take any one of these four waxes and examine it carefully we shall find that not only is the joint line raised as



FIGURE 51.

One of the three negative impressions of the "Walter" left thumb obtained on August 23, 1927. It agrees with our standard "Walter" left thumb. This wax is in our possession. Note characteristic scar.





FIGURE 52.

Another of the three negative impressions of the "Walter" left thumb obtained on August 23, 1927. This likewise agrees with our standard "Walter" left thumb. Also in our possession.



it should be, and that its bifurcation opens in the proper direction, namely to the left as we look at the wax, but that the friction ridge pattern is of the ulnar loop type, and that the furrows, which of course represent the ridges on the real finger, form a staple at the core. Further if we should make a positive from any one of these negatives we would find that it agrees with our standard "Walter" right thumb.

Mr. Dudley, at some length,²⁹ goes into considerable detail with regard to these waxes, illustrating two of them by cuts. He classifies them as normal negatives, and calls particular attention to the fact that there is something peculiar about the upper end of the core. He says that the ridges do not join as they should, and that instead of forming a U-shaped ridge around the central core they simply bound this core on either side and run up to dead ends. He even makes the statement that the tip of the core looks as if it had been "routed out" at the top; but experts who have made a careful microscopic examination of this state that there is no evidence of any "routing" having been done.

We are showing, in Figure 53, wax No. 3 of this series, which we hope will reproduce with sufficient clearness to show its structure.

To show more clearly the structure of the tip of the core, we have made micro-photographs of it, one of which appears here, (Fig. 54), which clearly indicate that the thumb that made this impression had a staple at the core, for the furrows of the impressing member clearly show as disconnected ridges. Due to illusion the ridges may appear in this photograph as furrows.

Moreover, in the manuscript Proceedings which Mr. Dudley recently wrote, he again goes into detail with regard to the waxes of this date, calling them, as we do, normal negatives, without any particularly salient points except in so far as the intensity of the joint line is concerned, which does not alter the situation in the least; and so far as we can see he makes no

²⁹ *Psychic Research*, August, 1928, p. 453 *et seq.*

reference in this article to the "routing out" of the core which he so strongly stressed in the previous article.

All these negative waxes are very clear, and in the diagram (Fig. 55) it can be seen that the ridges in the center at *r* and *s* terminate smoothly and do not join as they must if they form a rod in the center of the positive as Mr. Dudley claims they do.

This is also true of a very much deformed wax, No. 78 of August 9, 1928 (Fig. 56). It is bent almost at right angles and that part of the impression that shows clearly, discloses a normal negative with a ridge at the core, again agreeing with our "Walter" standard thumb. An impression of July 9, 1929, which may be a "Walter" negative, is very much distorted on its surface. We believe this was produced at the suggestion of Mr. Fife who asked "Walter" to make a rough and irregular print of his finger. The impression looks as if the impressing member had been pulled away while the wax was too hot, which roughened the surface.

The last wax in this category which we shall mention is one of November 28, 1930. (Fig. 57) (A). This was prepared by Mr. Dudley, who embedded in the back (B) a circular piece of material that looks like shellacked cloth similar to that used for insulation purposes in electrical work. Several perforations had been made in this cloth before imbedding it in the wax. This particular wax is a normal negative and was marked N on the front by Mr. Dudley. Only part of the impression shows. The core distinctly and clearly carries a ridge in the center and the furrows in this negative would form a staple in a positive.

We have two waxes of May 27, 1932, which are quite well impressed although one is somewhat distorted and is pierced by a hole which was made when it was produced. Both of these are "Walter" normal negatives and agree with the standard.

There are also two normal negative waxes of June 13, 1932, which, while fairly legible, would not reproduce satisfactorily.

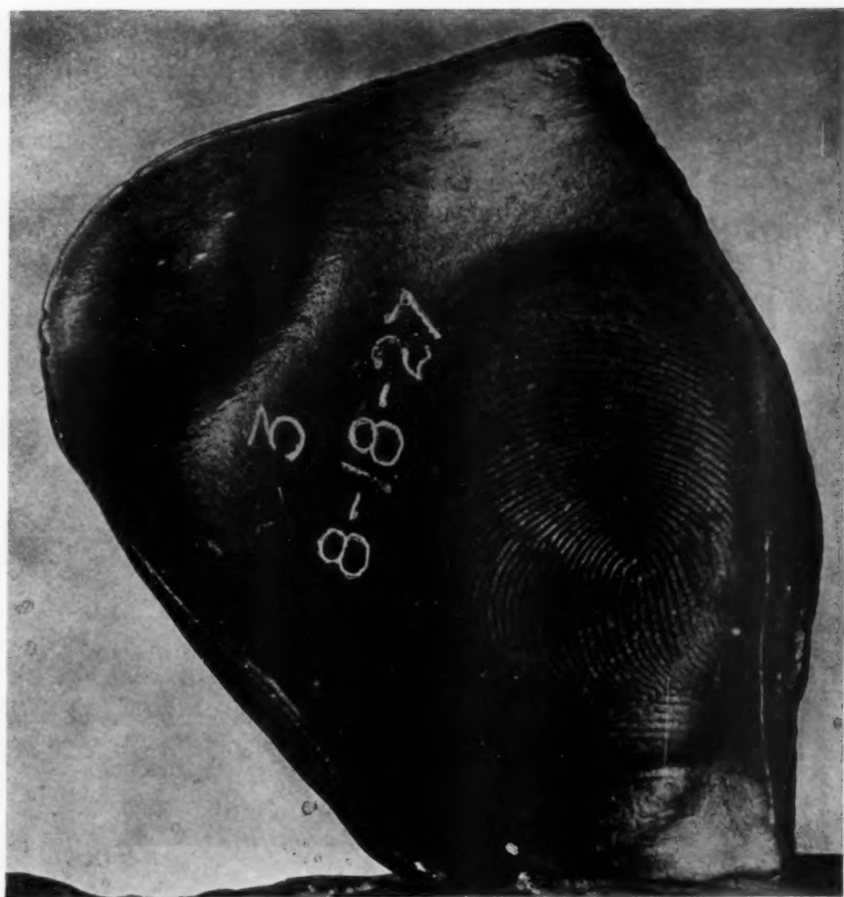


FIGURE 53.

One of a series of normal negative "Walter" right thumb impressions which agree with the thumb of our standard hand. A careful examination of the core shows that its center consists of a single ridge which would give a staple in a normal positive made from it.



FIGURE 54.

A micro-photograph of the tip of a "Walter" normal negative core, clearly showing a single ridge at the center and surrounded by a depression which, in the positive, becomes a staple. To some observers, the center may look depressed rather than raised, due to illusion.



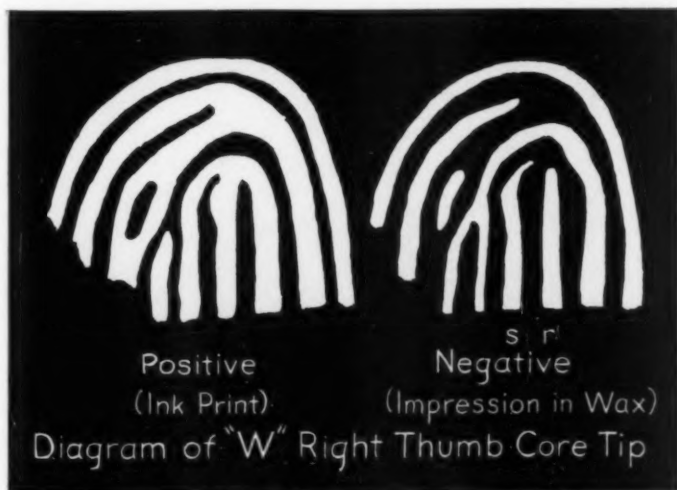


FIGURE 55.

A diagram made direct from a micro-photograph to show the staple at the core in the "Walter" positive and the smoothly ending ridges *r* and *s* in the negative. The white lines in the positive represent actual papillary ridges forming the staple, while in the negative they represent ridges caused by the furrows of the positive.





FIGURE 56.

A somewhat deformed wax, showing a "Walter" negative impression which, if examined with a reading glass, will be seen to have a single ridge at the core.





FIGURE 57A.

A wax dated November 28, 1930, carrying another "Walter" negative impression which, with slight magnification, is seen to have a single ridge at the center. This piece of wax was marked for identification by Mr. E. E. Dudley, as may be seen at B.



FIGURE 57B.

The back of wax shown at A and shows a piece of fabric inserted for purpose of identification.



They are much out of shape, but clearly show a ridge at the core and thereby agree with our standard.

It will be seen from a comparison of these negative impressions that in nearly all cases the waxes would, if used as dies, produce a staple at the core of the positive which would agree with our standard "Walter" right thumb.

There are no recent normal negatives of the "Walter" left thumb and there have been only a few in the past.

In examining these waxes one is likely to be lead astray if the lighting is not correct and if monocular vision is solely depended upon. In some cases we found it necessary to measure the depressions and ridges at the tip to determine at just what level a particular point was located.

C. MULTIPLE PRINTS

There have been numerous instances in which two impressions have been produced on a single wax, and a few cases in which three imprints have been made. We happen to have ten such waxes, most of which are so poor that it is difficult to determine their details.

One very poor double impression, dated August 5, 1926, is on a wax numbered 2. The impressions are roughly at right angles with each other and Mr. Dudley agrees that they are too poor to classify. He says, however, that the primary impression may be distinguished as a positive. To judge by what can be seen of the lines, their direction is correct for this inference, but the core cannot be determined.

One, dated January 18, 1927, bears two prints which Mr. Dudley classified in the manuscript Proceedings as a positive and a negative, as follows:

"It carries two concave prints, one a normal negative and the other a concave positive; but unlike the early positives, this one conforms to the size and shape of the average negative, quite lacking the elongation and the narrowed effect of Nos. 1, 2, 3, 6, 7. The concavity of the positive is, however, fully equal to that of the negative, and to this fact we must attribute much of the early confusion between normal and mirror types. By

the middle of July, 1927, a sufficient number of prints had been obtained so that the true nature of the concave positive became apparent. Nevertheless, this pair of prints of January 18th was so perfectly matched in contour and apparent reversal that it is not surprising that their relationship was not immediately understood. With the knowledge acquired from the analysis of numerous later prints came the realization that almost any conceivable or inconceivable modification might occur in finger prints that behaved as abnormally as do these."

Our examination of this wax, which is much worn, shows that the positive appears to have a rod at the core such as we have found in a few other instances, although there seems to be a decided tendency toward the formation of a staple, and it bears no sign of a scar. We shall discuss this later. The negative, on the other hand, has much better detail, and shows a ridge at the core. There is no indication of a scar in this, either, but it does show a poorly made negative joint line. This print seems to agree with our standard.

The question of the concavity or convexity of the surface in any positive imprint is probably of minor importance, if any. We have handled that point by considering these as reliefs which may vary in depth, as in sculpturing, from low to high.

Another wax bearing a double print is that of March 21, 1927. This is now too worn to be deciphered. The joint lines are raised as in a negative, and the general slant of the lines of the cores indicate that both may be negatives. Mr. Dudley classified them as such.

On July 9, 1927, another set of prints was obtained, but these also are quite worn and the details are practically obliterated, although both show indications of being negative impressions. One of them seems to show, however, that the core carries a ridge, which would produce a staple in a positive made from it, thus agreeing with our standard. These prints were likewise classified by Mr. Dudley as normal negatives.

Piece No. 27, dated July 15, 1927, carries two impressions of the central region of the ball of the thumb, superimposed one

upon the other and at right angles with each other. Mr. Dudley classified these as follows:³⁰

"On the one piece of wax there occur two prints, both normal negatives, and neither complete. The condition of the wax strongly suggests that after one print had been made the wax was folded approximately along the center of the print. As a result part of the print is lost and part is on the extremely convex edge of the fold. The other print then appears to have been laid down on a concave surface presented by the folded wax, but the original seems to have been too large for complete accommodation on that surface. Both prints show enough details for complete identification, beyond which, in view of their accidentally incomplete character, they are of no further interest."

To judge by the few lines of one of these which are not masked by the other and can be clearly seen, it looks as if it may be a normal negative, and as much as can be seen of the joint line substantiates this. The other impression, however, whether it was made first or last, is by no means a normal negative as Mr. Dudley has claimed. The core clearly shows a staple, and the outer lines, as well as the core, agree with our standard "Walter" right thumb, though its general inclination is different. We wish it were possible to show this satisfactorily in the photograph (Fig. 58).

We have a double impression, marked No. 44, made on July 22, 1927. Mr. Dudley calls both prints normal negatives and we are inclined to agree with this, for though on one the core cannot now be determined, the position of the delta and the general direction of the lines indicate it. The other impression, likewise poor, shows clearly, however, a ridge at the core which would produce a staple at the core of a positive made from it.

Another wax, made on September 9, 1929, bears two overlapping prints and a third one at one side. These are too worn and faint in design to permit anyone to say what they represent.

We have also two of the waxes imprinted on October 20,

³⁰ Manuscript proceedings.

1929. No. 1 was made in five minutes—according to the data it bears—and consists of two overlapping impressions. The general slant of the lines of these and the negative joint line of one indicate that they are both negatives.

Wax No. 2 of this date has two impressions, but only one is of any use, and that is a negative which shows a ridge at the core which, as a die, would produce the "Walter" normal positive right thumb with a staple at the core. There is a small area, however, directly below this impression, but not connected with it, which shows a joint line depressed as in the positive. This condition of a negative wax with a positive joint line is unique and will be discussed later in connection with a few other waxes having the same characteristic.

Another wax marked No. 2, which was made on November 5, 1929, carried three impressions, although they are now practically undecipherable.

According to Mr. Dudley's minutes of that séance—given by him to the writer who had been present—one was supposed to be a "Walter" print, but there was doubt as to the others, although there were intimations that one might be that of Lady Lodge. The other, which bore a twin loop and was unknown at that time, has since been identified by "Walter," but has not been checked, as we have not been able to obtain ink prints of the thumb it is supposed to represent.

On November 15, 1929, two impressions were obtained on a single piece of wax (Fig. 59), one a typical "Walter" right thumb negative impression agreeing with our standard, and with it a small impression which may be that of a child.

In reviewing the details of these duplicate prints, one point stands out very clearly, and that is that most of those which are "Walter" prints and have sufficient detail to allow of their classification, and which Mr. Dudley has classified as negatives, would, if used as dies, produce our standard positive right thumb with a staple at its core.



FIGURE 58.

This cut shows a small section, somewhat enlarged, of a wax containing two impressions, one superimposed upon the other, which was dated 7-15-'27. While much distorted, one impression is clearly a positive with a staple at the core.



THE
LIBRARY OF THE
MUSEUM OF NATURAL HISTORY
AND
ZOOLOGY
OF THE
CITY OF LONDON
1871

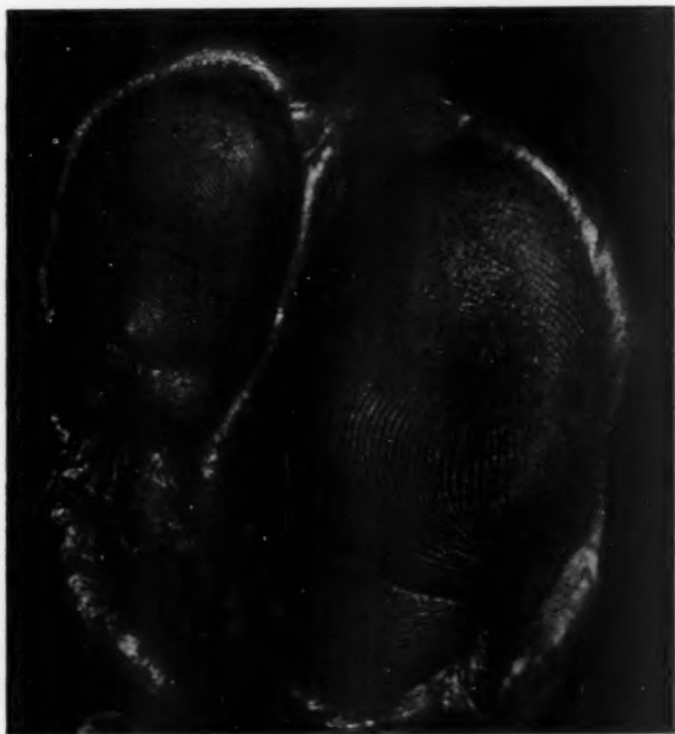


FIGURE 59.

A normal negative "Walter" impression, which in the actual wax has a single ridge at the center; and a small, unidentified impression beside it. This was produced for Mr. Walton at a séance at which he was present.



XI

PRINTS OBTAINED AT SOLUS SITTINGS

Usually, at the séances at which thumb impressions have been obtained, several persons have been present, but the following impressions were obtained at solus sittings. That is, only one person beside the medium was in the room, and that person had complete control of medium and equipment. This group of waxes is small, and we are going to mention only four of the typical cases, since they are the only ones of which we hold the waxes.

On August 26, 1927, Mr. J. W. Fife had a solus sitting at which two impressions were obtained. The details of this séance are given quite fully in the manuscript Proceedings prepared by Mr. Dudley, he having remained outside the séance room door and recorded the details at Mr. Fife's dictation. This record states that these two impressions are normal prints of the "Walter" thumb, but does not specify whether positive or negative.

One of these waxes, marked No. 58, which we hold, has a raised joint line. The delta and general position of the core indicate that it is a normal negative. While the top of the core is not clear, there are indications that the center is a ridge. If such be the case, it agrees with our standard.

Wax No. 59, the second of this date, is presumably a normal positive, but as this wax appears to have been subsequently changed in some way, we shall discuss it later.

Two others were made on August 7, 1928, when only Dr. Mark W. Richardson was present. Although these waxes are much bent, the impressed area is quite flat, and both imprints, although they are only partial, show the core and surrounding area very distinctly. They are both unquestionably "Walter" negative right thumb impressions agreeing with our standard. We are illustrating one of these in Figure 60.

On March 11, 1931, Mr. William H. Button, President of the American Society for Psychical Research, obtained a "Walter" thumb print when only he and the medium were present in the closed, locked séance room, the hands and feet of the medium being controlled by surgeon's tape.³¹

On July 13, 1931, the writer, at a solus sitting,³² obtained an impression of Sir Oliver Lodge's right thumb (Fig. 61) (3a). This was produced under controlled conditions and has been shown by Mr. Bell of Scotland Yard³³ to check with the ink-print of Sir Oliver's right thumb.

We would suggest here that anyone interested in solus sittings read the report of one held on August 10, 1928, by Dr. R. J. Tillyard of New Zealand.³⁴

The results obtained at these solus sittings show clearly that the accomplishment of these phenomena is not dependent upon the presence of any particular person other than the medium.

³¹ Appendix VI: Solus sitting of W. H. Button.

³² Journal A.S.P.R., Mar. 1932, Solus sitting of B. K. Thorogood.

³³ Journal A.S.P.R., Mar. 1932, p. 118, Bell's report on Lodge Prints.

³⁴ Appendix V: Dr. Tillyard's solus of August 10, 1928.



FIGURE 60.

A wax containing a "Walter" normal negative impression which has a single ridge which would produce a positive having a staple at the core. This was obtained by Dr. Richardson at a solus sitting. In the reproduction the ridge might easily be mistaken for a staple.





FIGURE 61.

Some of the Sir Oliver Lodge right thumb impressions. The wax marked 3a was obtained at a solus sitting by the writer.



XII

IMPRESSIONS OTHER THAN "WALTER'S"

From time to time, finger impressions in wax have been obtained, under the mediumship of "Margery," of persons other than "Walter."

On November 5, 1929, we obtained three impressions on a single piece of wax, as already mentioned,—one which was "Walter's", a second supposedly of Lady Lodge (although this has never been verified), and a third, the pattern of which is a twin loop. For a time, "Walter" refused to tell to whom it belonged, and he made several similar prints (Fig. 62) which he said belonged to the same person. We have not checked this, however, since we have not been able to get the person's ink print.

We obtained several prints of the thumb of C. S. Hill³⁵ (deceased), and we show in Figure 63 the ante-mortem ink-print of 1926 and post-mortem séance print of July 24, 1931.

In July, 1931, as we have already mentioned, we obtained numerous Lodge prints of both the right and left thumbs, a pair of which we show in Figure 64.

We also have two prints, one of which was produced on July 6, 1927 and the other on July 12, 1927, which "Walter" said were of fingers of Mark Richardson, deceased son of Dr. Richardson. One of these is shown in Figure 65. It has not been possible to check these, as no one has been able to locate any fingerprints known to have been made by this young man when alive.

Of the impressions mentioned under this heading, we have thus far been able to verify only those of Sir Oliver Lodge

³⁵ Journal A.S.P.R., Feb. 1932.

and the late C. S. Hill; but we have mentioned and illustrated the others to indicate the diversity of design it is possible to obtain in this supernormal manner. This, of itself, is very important, even though the patterns should never be shown to agree with the actual prints of the fingers they are supposed to represent.



FIGURE 62.

A small part of an impression which was unidentified for several years and upon which no report has yet been made. This shows a twin loop.





Ante-Mortem (1926)

Post-Mortem (1931)

FIGURE 63.

Comparison of the normal (ante-mortem 1926) thumb-print of C. S. Hill with a post-mortem print obtained July 24, 1931.



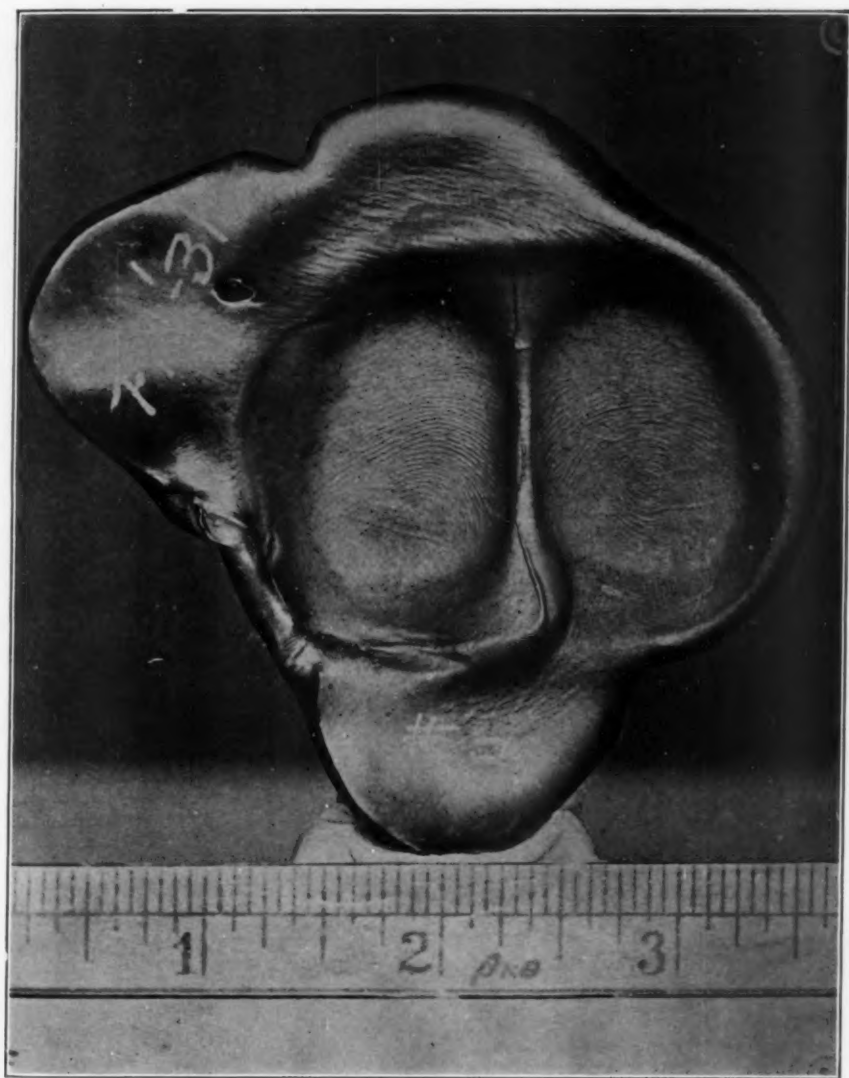


FIGURE 64.

Enlargement of one of the pairs of Sir Oliver Lodge's right and left thumb prints, showing a whorl and an ulnar loop, respectively.





FIGURE 65.

An impression obtained July 12, 1927, claimed by "Walter" to be that of Mark Richardson (deceased). This has never been checked, as no authentic finger-prints have ever been found with which to compare it.



XIII

IMPRESSIONS MADE UNDER UNUSUAL CONDITIONS

In addition to the impressions obtained at 10 Lime Street, several have been produced under "Margery's" mediumship at other places, such as Newton, Massachusetts; 353 Commonwealth Avenue, Boston; Niagara Falls, New York (through another medium, but within an hour or so of the time one was produced in Boston with "Margery"); and at the Laboratory of the British Society for Psychical Research in London.

Again, we are describing only those waxes which are now in our possession.

One, dated July 16, 1927, No. 39, is very much worn. This print was obtained at a séance held at Dr. Richardson's house in Newton. It is undoubtedly a normal negative. The joint line and delta quite clearly indicate this, but the core appears not to agree with our standard. This peculiarity of the core will be considered later. This particular wax has Mr. Bird's initials, "J. M. B.," and the date scratched on the back.

Another (Fig. 66) is marked "89 E 5" on the back, where there appears also a roman I. In the back of this wax are imbedded three gold seals bearing the monogram "TFP," which were imbedded personally by Theron F. Pierce (now deceased) and sealed with the end of his gold pencil.^{35a} The back of this wax may be seen in the group photograph (Fig. 44), numbered 62. The face has scratched on it "N.F. 4-29-29." This wax, and the impression it bears, will be discussed in connection with another group.

Finally, we would mention an impression obtained on a perfectly clean, smooth piece of plasticene in the closed, locked box which was shown in Figure 3, under perfect conditions of control, with only Adams, Fife, the official stenographer, and

^{35a} Journal A.S.P.R., Dec. 1929, p. 648.

the writer present. The hasp on this box could not be removed and replaced in an hour's time and the box could not have been opened by this or any other means without detection, although one critic, who has never seen the box, claims that it could have been opened in a few minutes by removing the screws from the hasp. This impression was shown in Figure 2, and while it is not particularly good, there are strong indications that it is a Sir Oliver Lodge right thumb.

From the foregoing, it is apparent that the production of these impressions is independent of location and the presence of any one person other than the medium; and even she was not at Niagara Falls—nor was she within the closed, locked box!



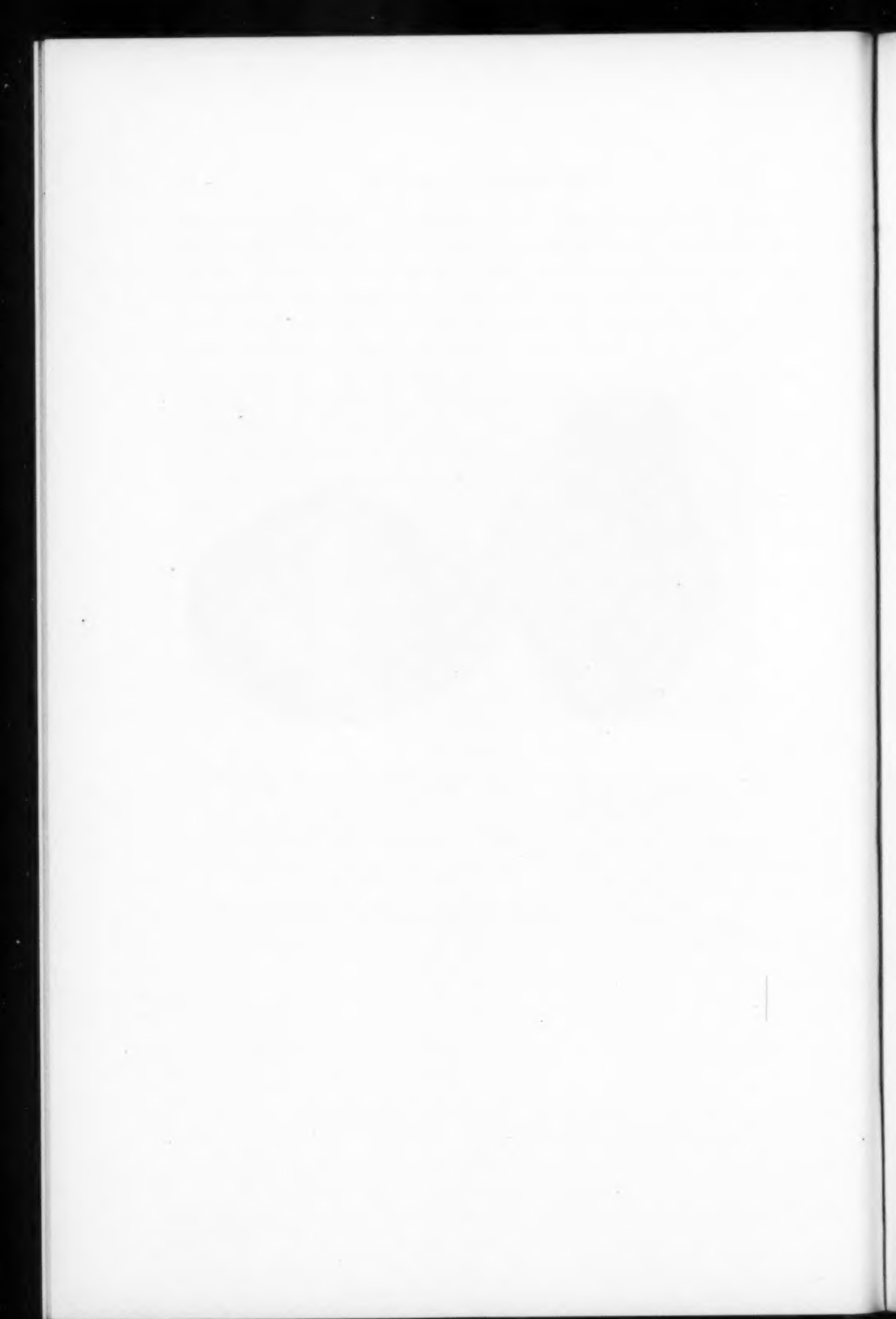
FIGURE 66.

Prints of April 29, 1929, made within about one hour of each other, one through "Margery" at Lime Street, and the other through a medium at Niagara Falls.

The one marked N.F. is claimed to have been made at Niagara Falls and is presumably a negative impression. The core appears to be a continuous looped ridge.

The other was made at Lime Street, and appears to be a negative with a ridge at the core.

While we have no good ink prints of the medium at Niagara Falls, those we have secured do not seem to resemble the impression shown above.



XIV

SPECIAL CASES

Among the impressions which in the past have been classified as of the "Walter" right thumb, there are five well made prints which do not agree with our "Walter" standard hands in so far as the core is concerned. How many more such waxes may exist we do not know, but among those which we have not had for examination there may be others.

We have no way of testing or judging the authenticity of these waxes, but the records of the séances in which they were produced have been published in the *Journal*³⁶ and are sufficiently complete and convincing to lead us to accept these impressions as having been produced supernormally. The latest of the waxes was obtained by Mr. Fife on November 26, 1931 and was identified by him at the time as a "Walter" print. Because it reproduced well in a photograph, the writer used it in his *Lodge* article³⁷ to illustrate a "Walter" print.

These five waxes may be divided into two groups, one of which is comprised of two partial normal negatives of the "Walter" right thumb—the print obtained by Mr. Fife and a print obtained on September 4, 1926.

The other group consists of three partial normal positive reliefs—one having been made on September 4, 1926, one on February 3, 1927, and one on July 13, 1927.

All of these waxes were well executed, and in most of them the joint line shows correctly and the details are quite sharp. Because of much handling they are now quite worn in parts, and three of them have been cracked and mended. The main difference between these prints and our standard is the indication of a rod at the core instead of a staple.

We have already shown that by far the greater number of

³⁶ *Psychic Research*, April, 1928, pp. 197, 209, and August, 1928, p. 461.

³⁷ *Journal A.S.P.R.*, Mar. 1932, p. 123.

the waxes which we have examined clearly show a staple at the core of the "Walter" right thumb.

The question which arises, therefore, is: How can there be at least five well executed waxes which apparently agree with the "Walter" right thumb in all respects except as to the core? From the contemporaneous records, it appears that "Walter" stated when these were made that they were his impressions.

Let us see, therefore, if there is any way by which we can reconcile these differences and bring these prints into line with all the others.

To begin with, a classification of all the other "Walter" prints of the right thumb shows that there is really but one general design, which, however, has four different phases. These may be indicated diagrammatically as in Figure 67, where A is a normal positive relief, and B a normal negative intaglio. A carries pore structure on its ridges, as shown in the diagram, while in B the pore structure appears as nodules in the furrows. In general, these two phases predominate among the "Walter" waxes and occur in about 95 per cent of the prints, and although the slant of the lines of one is mirrored with respect to the slant of the lines of the other, they are not true mirror prints.

If we deliberately remove a small section of the top of the staple shown in A we shall obtain the result indicated at C. This gives us what we call a partial positive relief. It is identical with A, except for this slight but important change, which results in a rod at the core bearing pores as indicated. If this in turn is pressed into wax, we shall obtain the partial negative intaglio shown at D, in which the pores will be found as nodules in the furrows.

These last two phases have occurred in perhaps 5 per cent of all the prints that have been made and occur in this group of special cases. They are mirrored with relation to each other just as are A and B, but of course are not true mirror prints.

Another important point is, that upon examination, A and D, one a positive and one a negative, will be seen to be mirrored

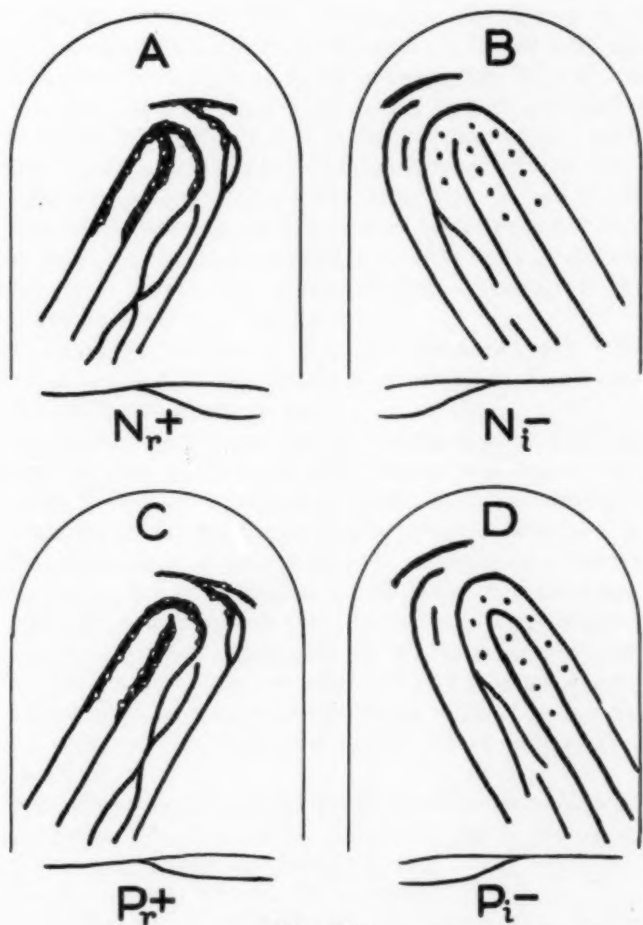
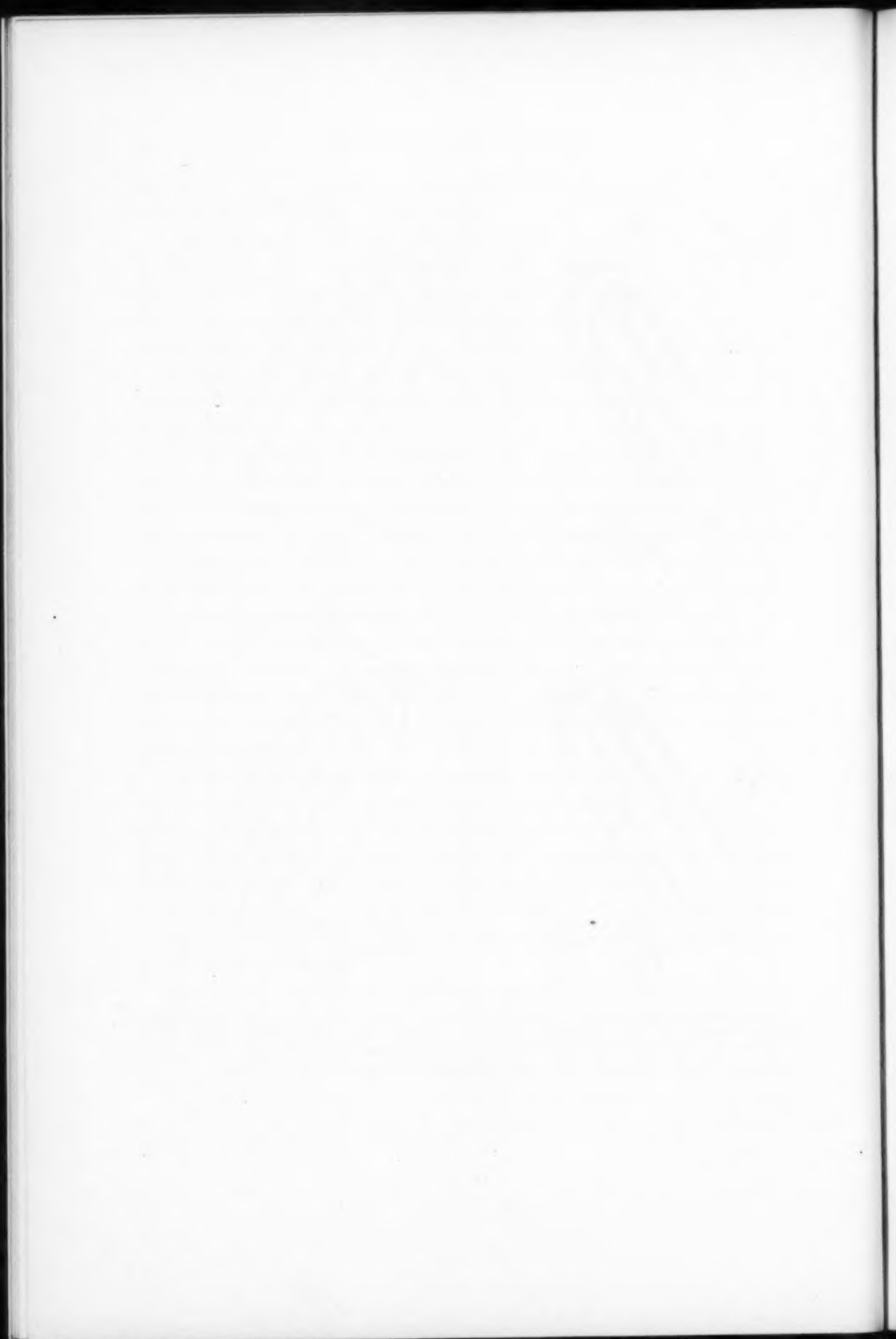


FIGURE 67.

Four typical phases of the "Walter" prints, *A* and *B* being a normal relief and intaglio respectively (the two most common); while *C* and *D* are partial relief and intaglio and occur in a very small number of cases, possibly made intentionally to show mirroring of pattern shape or unintentionally because of lack of energy.



in a similar way with relation to each other; and in a hasty inspection the cores might be thought to be actually mirrored because they both appear to be staples; but this of course is not possible, because the staple shown at A is genuine and has pores on it, while that of D is not. What would seem to be a staple at D is nothing but a ridge formed by the furrows of the impressing agent. The same thing may be said of C and B, for they also seem to be mirrored and both appear to have rods at the core. A casual examination might easily mistake a ridge caused by a furrow for a real staple, especially if the pore structure were not well marked.

If the above is true, it may well be asked why "Walter" should sometimes make a break in the staple and so form a rod, and at other times not do so.

We have already seen this in the case of a wax discussed on page 45, that of July 14, 1927, where one side of the staple had been deliberately left out or excised by the forming agent, so it would evidently be perfectly possible to excise a piece of this staple to a lesser extent than was done on the wax just mentioned. But what object could there be for doing this? It might be an attempt on "Walter's" part to produce a more completely mirrored impression, as we have already explained, for he has on numerous occasions stated that he should never have attempted to make mirror prints, since it is this that has caused most of the confusion in the waxes and some on his part as well.

If the above facts are true, the question quite naturally arises as to why we adopt a print having a staple at the core as our standard, rather than one having a rod.

There are three reasons for so doing.

First, the great majority of the waxes that are normal positive reliefs have a staple at the core.

Second, the great majority of normal negatives have a ridge at the core.

And third, all the complete right hands in relief, which we ourselves have obtained and which "Walter" has asserted are of his hand, show a staple at the core of the thumb.

Moreover, while the evidence may point to a deliberate intention on the part of the "Walter" intelligence to depress or excise the top of this staple in an attempt to make what he calls a mirror print, we feel that there may be still another cause, one which is at times beyond his control. But before going into this subject, we want to take up the case of a few odd prints which we have.

XV

MIXED PRINTS

This group of prints is comprised of those that have a positive impression at the ball of the thumb combined with a negative joint line, or vice versa. There are probably not many prints in this category. We ourselves have only two well impressed waxes that come under this heading. Both were made on July 22, 1927, at a séance at which five thumb prints were obtained.

According to the records, the handling and marking of all these waxes was done by Mr. Fife. By marking, we presume is meant marking for identification purposes, as the lettering of the dates was done by Mr. Dudley.

The first one of these prints that was obtained is numbered 45 C 6 on the back and is shown in Figure 68. The wax is somewhat distorted and there is some indication of a cloth mark on the upper right-hand edge, as mentioned in the Journal.³⁸

However, the surface which carries the thumb impression is quite level and the print, which covers so much area that it looks almost like a rolled print, is fairly sharp at the core and around the delta. It is very clearly a normal negative with a ridge at the core, which if used as a die would produce a "Walter" normal positive right thumb relief having a staple at the core.

Below the lower part of the ball of the thumb is a somewhat folded area, which contains a few skin markings, and in this fold may be clearly seen a *depressed* joint line with its bifurcation opening to the right, showing very definitely that the joint line is a normal *positive*. This in itself, of course, is another point in favor of the theory of supernormal production, for while a normal thumb would give us the negative ball impres-

³⁸ *Psychic Research*, August, 1928, p. 456.

sions the joint line also would be negative, whereas the joint line in this impression is positive.

The second wax, numbered 48 C 9, is of about the same length as the other, but considerably narrower. The impression of the ball of the thumb is not quite so well executed nor so complete as in the other wax. This lack of sharpness of the ridges may be due to wear, as the print appears to have been handled considerably.

The core of this print is very definite and shows clearly a staple, and that, with other characteristics, shows that it is a normal positive and as such agrees with our standard. The delta does not show in this wax.

The lower part of the wax, as may be seen in Figure 69, is not folded the way the first one is, and the skin markings are more or less continuous throughout the area of the joint line, which in this case is raised, with the bifurcation opening to the left, showing definitely that this part of the print is a normal negative.

Here are two prints—the first, a negative impression of the right thumb but with a positive joint line; and the second, a positive impression of the same thumb with a negative joint line.

It is interesting to note on these two waxes that there is no indication in the negative print of any scar at the right of the core, nor its reverse on the positive print.

In addition to these, we have four small waxes, three of them with no further mark of identification than the numbers 1, 2, 3, respectively, although one bears a small F on the back; and a fourth marked N+ and, on the back, March 21, but with no year. The cores of these four waxes seem in general to agree with our standard positive, although there are a few places in the furrows which appear to carry minute nodules like the pore structure of a negative. In addition to this peculiarity, we find that the joint lines of all four open as in a positive, that is, to the right, although they are raised as in a negative. In other words, the joint lines in these waxes seem to be mirror prints of normal negative joint lines.



FIGURE 68.

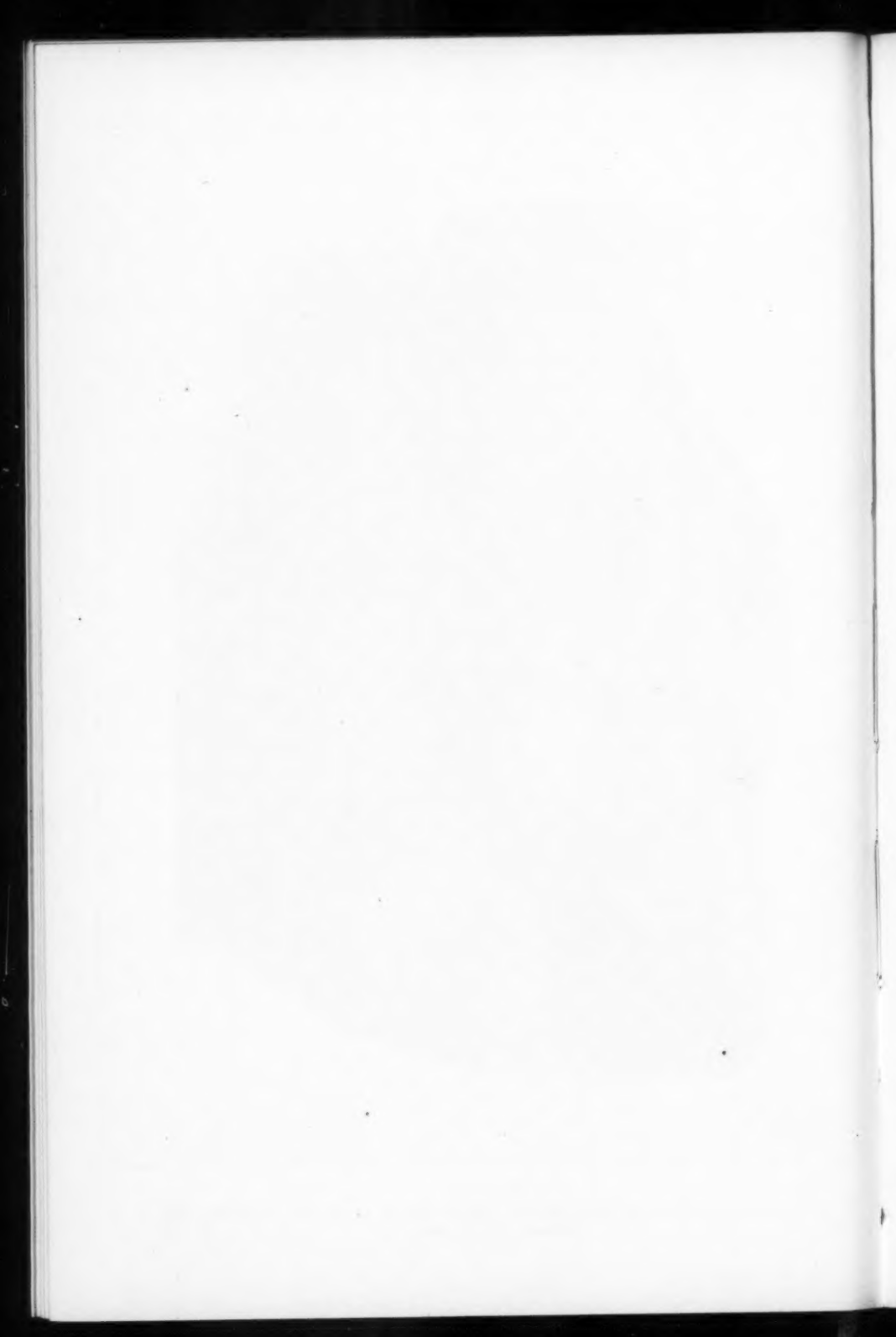
A very unusual normal negative impression, having a normal positive joint line as indicated at *J*. The *X* indicates an area about which this change may have been produced by rotation. This is an old cut, and the *X* and *J* were, we believe, placed by Mr. Dudley in calling attention to this peculiarity.





FIGURE 69.

A normal positive impression, showing clearly a staple at the core, combined with a normal negative joint line.



This same peculiarity seems to exist in a print of April 13, 1932 (Fig. 14), previously spoken of, which "Walter" stated was a mirror print of his right thumb, but which we feel is a normal negative, although it has a very faint indication of a joint line depressed like a positive, which opens to the left as it would in a negative. This particular print is so damaged by bubbles which formed in the wax because it was too hot that the exact tip of the core and other important features can not be determined. We believe, however, as we said above, that it is more like a negative than a mirror of the positive.

This brings up the subject of the method of production of these mirror prints, which, at one time or another, have been so strongly stressed.

We are of the opinion that the prints which have been labelled mirror prints are actually not such at all, although Mr. Dudley in the *Journal*³⁹ says that "Walter" deliberately made a mirror print which he (Mr. Dudley) could conscientiously list as a mirror-positive. This print, No. 41, made on August 30, 1927, we have never seen, and the photograph of it which we have and the illustration in *Psychic Research*, August 1928, p. 467, are not sufficiently clear to allow of its determination. We have already discussed the wax made on July 13, 1927, with which Mr. Dudley compared it in the *Journal*.

We do not say that "Walter" can not produce complete mirror-prints, but there do not seem to be any among the waxes we have examined.

Mr. Dudley, in the *Journal*, writes as follows: "He ('Walter') insisted, at a later date, that he never intended to make perfect mirror-prints at first, for, as he said: 'There are people who would say that it can be done by trickery. You don't want a perfect mirror-print. A partial mirror-print is harder to explain.'"³⁹

Now, to return to the statement we made to the effect that there might be another reason for the occasional appearance of partial reversal in some of these prints.

We would not suggest this possibility were it not for

³⁹ *Psychic Research*, August, 1928, p. 468.

the fact that there are many variants among these impressions which it seems to explain, and although it is obviously metaphysical in its import and cannot be proved, we think it is worthy of consideration as an analogy at any rate, despite the danger of using physical analogies in this type of investigation.

We have often questioned "Walter" with regard to these variations in the waxes and his statements, interpreted in the light of facts we have observed, seem to indicate that this Intelligence, whether it be the medium's or "Walter's," is acting, at least some of the time, in a space which is different from our own so-called three dimensional space or manifold. This may be on the order of the four-dimensional Space-time of Minkowski.⁴⁰ "Walter" persists in calling it a fourth *direction* rather than *dimension*.

The writer feels that there is much in connection with certain of these phenomena that comes very close to being evidence in support of our modern ideas concerning the Equivalence of Mass (Inertia) and Energy, and the variation of Mass with Velocity.

In the Journal for October, 1928, on page 562, an attempt is made by Bird and Dudley to explain the production of mirror prints by the use of a fourth dimension, but we doubt very much if mirror-images could be produced in the way suggested, even if a fourth dimension were available for the purpose.

This idea of higher space as a concomitant of psychic phenomena is not new, and has been discussed by numerous writers for many years.⁴¹

Our tactual, visual and photographic experiments have shown that there is a definite "exteriorization" from the medium's body of a unique substance, a quasi-material, which is sufficiently delicate of structure to carry a design, yet rigid enough to impress a plastic. In our experiments this substance has sometimes taken the shape of single or multiple terminals, and at other times of simulacrae of partially formed or well formed hands (Fig. 70). Investigators along this line have

⁴⁰ Minkowski's *Das Relativitätsprinzip*.

⁴¹ *Theory of the Mechanism of Survival*, by W. Whateley Smith, London, 1920.
Transcendental Physics, Zöllner, London, 1882.



FIGURE 70.

A terminal supporting a small stool. Notice that this apparently is bifurcated at the end to hold the rung. The whitish material seems to end near the medium's head, but surrounding it and continuing over to the head may be seen what appears as a shadow, although there is every indication that this is part of the terminal but in a state where it absorbs the light of the flash rather than reflects it. The writer was practically back of the curtain at the time this was taken and "Margery" was in a deep trance.



established beyond possibility of doubt the existence of such a substance, and we refer the reader who may be interested in the subject to the works of Crookes, Geley, Osty, Schrenck-Notzing, Richet, and others.

Denial that any such substance exists is usually made on *a priori* grounds and by persons who have had little or no experimental or observational experience with the phenomenon. Denials of that kind of course have no scientific value whatever.

Professor D. P. Fraser-Harris, M.D., D.Sc., F.R.S.E., in *The Hibbert Journal*, Vol. XXXI, page 24 (Oct., 1932), writes:

"No one, however exalted his position in the world of science, is entitled to pronounce either for or against the genuineness of these phenomena who has not himself witnessed them. He must testify only of that which he has seen and heard."

This substance, termed ectoplasm or teleplasm, seems to extrude from almost any part of the body of the medium, but principally from the natural orifices. It may possibly be a form of radiation which in some manner has its rate of vibration reduced, becoming analogous to a gas or vapor, in which form it is sometimes luminous, gradually condensing or solidifying into an elastic and tenacious material, sometimes visible, sometimes invisible. At times it may exert considerable force and move at high speed, and it is, without question, controlled, directed or manipulated by Intelligence.

Because it is controlled by Intelligence, it seems to take the form, sometimes crudely, sometimes with considerable perfection, which the controlling Intelligence directs, that is to say, it is ideoplastic.⁴² We are using this word in the sense in which Geley uses it, to mean the modelling of living matter by an idea. He says: "The creative and directing idea normally works in a given sense, that of the evolution of the species, and conforms to the manner of that evolution. Supernormal physiology, on the other hand, is the product of ideoplastic activity directed in a divergent manner by an abnormal effort of the directing idea."

Again Geley says: "Supernormal physiology presents

⁴² Gustave Geley, *From Unconscious to the Conscious*, p. 63.

exactly the same mystery as normal physiology; the normal formation of a living being is neither more nor less marvelous, neither more nor less comprehensible than the abnormal formations which mediumship presents to our view. It is, we repeat, the same ideoplastic miracle which forms the hands, the face, the tissues and the whole organism of the child at the expense of the maternal body; or the hands, face and organism of a materialization at the expense of the body of the medium."

If we assume that this Intelligence can transmit through this teleplasmic material, which it appears to control, the design or pattern of a thumb or finger, it seems as if it might make any finger print it desired, and in so doing the resulting impression would be more likely to take the form of a normal positive relief than any other for the simple reason that that is the normal form of the finger. If this Intelligence is that of an independent entity claiming to make its own print, it seems likely that it knows its own design. On the other hand, if this Intelligence lies in some subjective faculty of the medium which takes on the characteristics of a deceased brother whom she knew, it would naturally choose for reproduction the design of his fingers with which it would seem subjectively to be familiar.

That this Intelligence can supernormally reproduce any desired finger pattern seems evidenced by the results of our own experiments in which we have obtained finger prints of both living and deceased persons which have been found to agree with their actual finger prints. It seems reasonable, therefore, to suppose that the prints known as the "Walter" prints reproduce his papillary ridge design as accurately as the prints of Sir Oliver Lodge and the late C. S. Hill reproduce theirs. The medium has had personal acquaintance with both of the latter, yet none of their supernormally produced prints shows any unusual marks or unnatural characteristics. It is chiefly in connection with the "Walter" prints that we have found variations of pattern or mixed characteristics. This also appears logical, as it would be more likely for this Intelligence to experiment with its own prints than with those of someone else.

We have no evidence that "Walter" is able to *create* a design or pattern. Indications are that he can reproduce only those patterns which already exist or have existed.

In this connection there is another point to which we would call attention, namely that this teleplasm, which comes from and is apparently part of the medium, being re-absorbed into her body after supernormal use, must be vitally affected by her ego, and that unless a stronger idea than her own prevails, certain of her characteristics may be evident in the resulting phenomena. "Walter" has called our attention to this fact, and has frequently claimed that he could not accomplish what he wished until he had put the medium into a deeper trance. He apparently cannot demonstrate as freely as he wishes until her normal faculties are entirely in abeyance. The function of the medium appears literally to be to provide the medium through which the "Walter" intelligence may physically manifest itself. On the other hand, some phenomena apparently supernormal, but irrelevant to this discussion, take place without the presence of the medium.

The hypothesis which we are about to present is applicable to every phase of the "Walter" print which we have obtained, and gives credence to many statements made by the "Walter" voice to which little attention has hitherto been given. It seems to us to be much more reasonable than does the suggestion that the terminal carrying the design is taken into the fourth dimension, reversed, and brought back, as suggested in the Journal by Bird and Dudley.

"Walter" has attempted, at one time or another, to tell us how this phenomenon takes place. He has stated that his space is different from our three-dimensional space, and that in order to reproduce the design of his thumb in the teleplasmic terminal so that its orientation will be the same as it was when he was alive, he is obliged to *turn his consciousness* so that a complete reversal takes place and the materialized member becomes in our space a mirror image of what it is in his space. His success in accomplishing complete reversal apparently depends upon the energy available. Bearing this in mind, let us see how lack of sufficient energy may affect these impressions.

It does not seem reasonable to imagine that this teleplasm, when formed for making prints, for instance, is other than a physical material, although it may be possible that in some form not apparent to our senses it also pervades higher space and acts as the connecting vehicle which enables this Intelligence to manifest itself physically; but in its physical form it seems to be tenacious in its structure and its shape could not be changed without the application of considerable effort on the part of the controlling force (idea).

To illustrate this, let us imagine the finger of a glove of very thin material, the tip of which bears a staple at the core, as in A of Figure 71, and turn it inside out by turning it back on itself, as in B. In order to visualize more clearly a complete and detailed mirrored reversal of this we must realize that the reversal of every minute detail must be effected—that is, all furrows must be pushed completely out so that in reverse they will continue to appear as furrows and all ridges must be pushed completely in so that in reverse they will retain the appearance of ridges.

Now, if the material in this glove finger should be tenacious, it is conceivable that some bit of this detail might fail of complete reversal, with the result that what, for instance, was a staple in the original might in the reversed form appear to be a rod, since due to its stiffness the furrow in the staple might not have reversed when the glove was turned. This resulting rod, however, would not be a true ridge, since it is really only the back of the furrow which appears as a rod.

At C we show the glove turned inside out, and at D it has been rotated in order to enable us to compare it with A, with which we started. If there had been a complete reversal of ridges, furrows, and minutiae this tip would then look like E, which is a mirror-positive of A.

We must not lose sight of the fact that our analogy applies only to a surface reversal, whereas in the actual case, whatever the process may be, it probably involves a three-dimensional or volume change. Bearing this in mind let us now analyze some of the different "Walter" thumb prints.

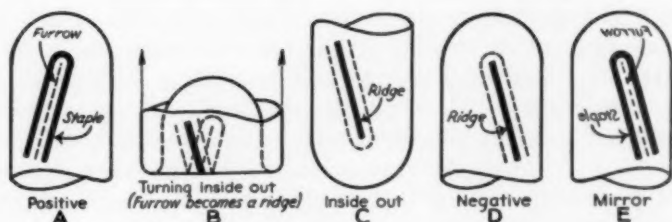


FIGURE 71.

A diagram which shows mechanically how when a glove tip *A* (positive) is turned partially inside-out it becomes a negative, as at *D*; and if completely turned in all details, a mirror positive *E*.



In the first place the higher space, or fourth *direction*, as "Walter" terms it, upon the existence of which this theory depends, probably includes both spatial and temporal dimensions. Since this higher space undoubtedly embraces our space, there seems to be no reason why "Walter" should be obliged to reverse his consciousness in order to make finger prints, except for the very important reason that if he were to materialize his thumb, for instance, without such reversing its design would naturally appear as it does in his space, so that to us it would be a mirror-image of what it was when he was alive. Therefore, impressions made from it would also, to us, be mirrored and unless we knew of this mirroring would be useless for purposes of identification, although they might be of value in showing supernormality. Since in most cases it seems to have been the intention of this Intelligence to make impressions which might be identifiable, it is reasonable to assume that for this purpose the reversing process has been consistently adhered to whenever energy allowed.

The following schematic diagram (Fig. 72) illustrates its possible mechanism. In it, B represents the materialized "Walter" thumb which, according to "Walter," is a reversal or mirrored form of his thumb as it is in his space, which we represent by A. The outer surface of each of these thumbs, A and B, bears the pattern in relief of the "Walter" thumb, but that of A is the mirror positive, while that of B is the normal positive. The inner surface of each bears an intaglio pattern, that of A being the mirror negative and that of B the normal negative.

If we press a piece of wax into the intaglio surface of A we shall obtain on the wax a mirror-positive relief of the "Walter" pattern, or a pattern which is exactly like that on the outer surface of A.

If, on the other hand, we press the outer surface of A into the wax we shall obtain on the wax an intaglio, or what we term a mirror-negative.

The two patterns produced by this method are indicated by *a* and *a'*, but, as we have already said, we have not seen any complete mirror prints, either positive or negative.

If there is sufficient energy to keep this ideoplastic thumb rigidly in shape, the resulting impression in the wax, whether positive or negative, should be clear; while if energy should be insufficient or lacking, the surface design would become more or less flexed and the impression in the wax correspondingly weak, or in places irregular or even obliterated. "Walter" has said that at times it is difficult for him to hold the pattern and, as a result, we sometimes get prints in which positive and negative characteristics are mixed; and very often we obtain only partial or incomplete prints.

We have mentioned elsewhere that "Walter" claims that in order to make a normal positive or normal negative impression he finds it necessary to turn his consciousness, in which case his thumb would appear as at B. Using this materialized thumb B, and pressing a piece of wax into its intaglio surface, we should obtain on the surface of the wax a normal positive impression, or a replica of the surface pattern of B. If, on the other hand, we press the thumb into the wax, we should obtain a normal negative.

The patterns produced on these two waxes are shown at *b* and *b'*.

Most of the "Walter" prints are included in these two types *b* and *b'*, and the completeness of their pattern would depend upon the completeness of the reversal of A into B, which is in turn dependent upon the energy available. Whatever demonstration occurs must require energy of some kind. No matter what physical phenomenon we consider, the use of energy is certainly involved, and this particular phenomenon which produces, even though supernormally, a physical change in the wax, requires energy for its consummation.

Of this reversing process there is evidence in some of the waxes we have, which bear impressions which are partly normal and partly mirrored or partially positive and partially negative. These have been classed as mixed prints. They may be explained, on the basis on which this reversal takes place, as having been thus produced either intentionally, because of lack of energy, or because of confusion in the forming Idea.

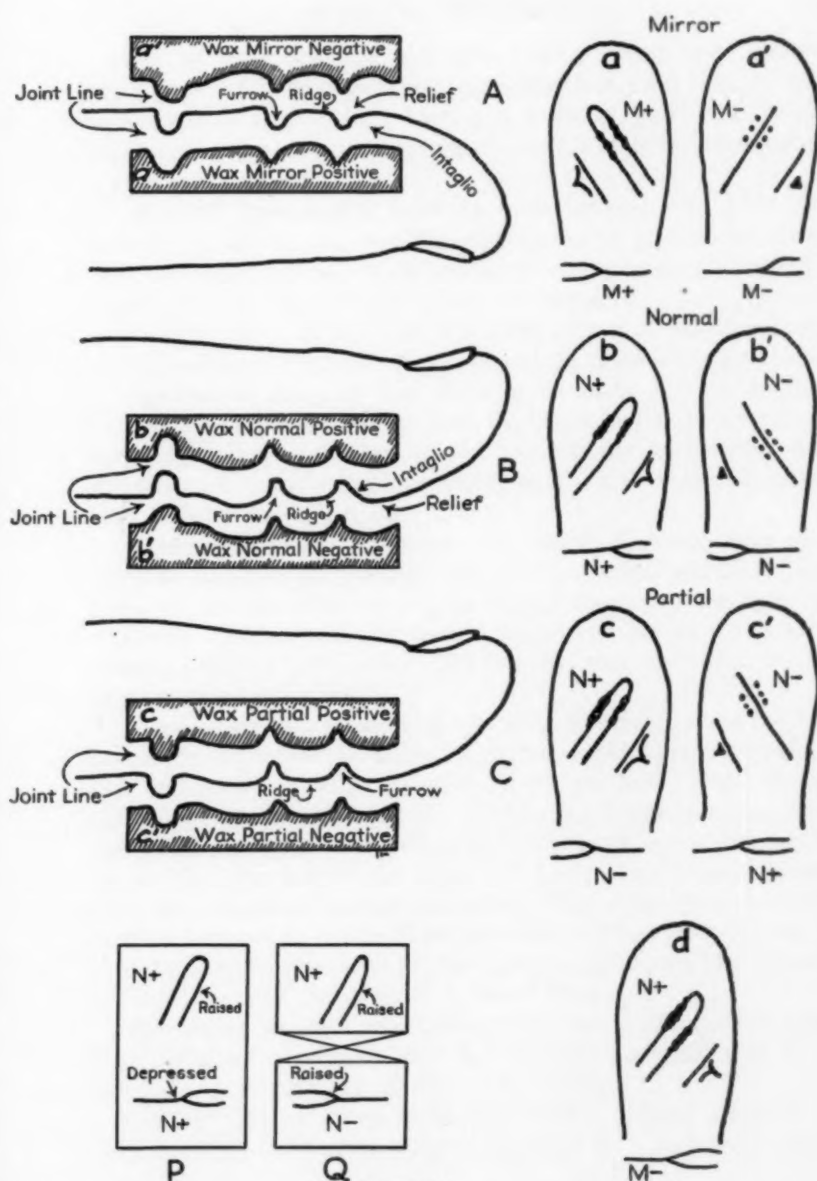


FIGURE 72.

This diagram illustrates on a purely hypothetical basis how all the phases and types of the "Walter" right thumb may occur, both in his space, as at A, and in our space, as at B and C.

1870

1871

1872

1873

1874

1875

1876

1877

1878

1879

1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

Let us now consider the few waxes which bear normal positive relief impressions having a negative joint line, or normal negative impressions having a positive joint line. Here the process may seem more complicated, but it is nevertheless perfectly reasonable.

Most of these waxes have an area between the joint line and the ball of the thumb which appears to be folded and shows very few skin marks. This condition was probably caused by the rotation of the joint line about this area.

This is more difficult to visualize, since in addition to a partial reversal of thumb A into thumb B, it involves a twisting or rotation of the joint line through an angle of 180° relative to the ball of the thumb, so that the joint line is reversed end for end but comes to rest in the same plane as before. The resulting ideoplastic form is shown at C, with a raised rather than a depressed joint line.

A piece of wax pressed into this thumb C would give us a print with a normal positive core and a normal negative joint line. If, on the other hand, the thumb were pressed into the wax, we should obtain a normal negative impression with a normal positive joint line. The two patterns obtained in this case are shown in *c* and *c'*.

A model of this rotation of the joint line relative to the ball of the thumb might be made by taking a thin piece of rubber and embossing it with the pattern of the ball of the thumb and joint line, as shown at P. By holding it firmly at the ends and rotating the lower half completely over, as shown at Q, we get the reversal of the joint line from a depressed normal positive to a raised normal negative. This analogy is probably inexact because in using it we are illustrating the twisting of a plane surface, whereas in the ideoplastic thumb the process is very likely the twisting of a closed envelope.

The waxes we have which show this type of change are some that "Walter" produced with the expressed intention of proving the supernormality of the phenomenon.

Another type of print, mentioned under "Mixed Prints", is that in which the thumb pattern appears as a normal positive

but has a mirrored negative joint line (Fig. 73). This can be explained on the same basis as that of C in Figure 72, as involving a partial reversal and a rotation of the joint line, as shown at *d*. There are no waxes which show the reverse of this form. The few we have of this type are fairly well made, and in some the joint line is not quite complete and there is a small blank area between the joint line and the ball of the thumb, but no folded or twisted area as in the previous case.

Incomplete reversal may have been the means by which the side of the staple in the wax of July 14, 1927, was excised, the teleplasmic ridge not having been actually removed, but allowed to flex relative to the other ridges, thereby leaving only traces of it in the wax. It may also explain how because of lack of energy, the tip of the staple in some of the "Walter" thumb prints may have been excised, for had it been formed in the teleplasmic material before A was changed to B, and the consciousness then reversed, the reversal of the ridges and furrows might have been only partial, due to the fact that the sides of the staple at the core of the "Walter" thumb could be reversed more easily than its upper end, thus in some cases leaving a depression which would cause the core to appear as a rod. This we have already shown in Figure 67. And it may account for the blob of wax, or plateau, such as may be observed at this point in some of the normal positive waxes, and which shows as a depressed area or sink in some of the normal negatives, as well as for areas in the ridges, especially of normal positives, where there appears to be a tendency toward discontinuity in the ridge alignment.

The ability of this ideoplastic thumb to envelop the wax in making positives need not seriously strain the imagination, even though the thumb appears continuous in its structure, for there is no reason why this teleplasmic material could not penetrate the plastic since the interpenetration of matter by matter under special conditions can be accomplished physically.

We do not wish to go into details of speculation concerning the possibility of the functioning of energy between three-dimensional space and higher space from a psychic view-point, but



FIGURE 73.

A positive "Walter" print, clearly showing a staple at the core, but with a mirror negative joint line, *i.e.*, the joint line is raised as in a negative, although it opens to the right as in a positive.



that we have some physical evidence pointing in this direction is shown by experiments which have been carried on at Lime Street in connection with the transmission of solid material through solid material, which tend to substantiate this statement. The writer has seen a sufficient number of such experiments to satisfy him as to their authenticity. They are similar to some of Zöllner's,⁴³ whose ideas on this subject have been ridiculed and criticised most severely.⁴⁴ Future experiments and the rapidly developing technique of psychic research, may finally elevate Zöllner to a great place as a pioneer in the realms of scientific truth and leave his critics in the category of obstructionists who lacked the capacity or the courage to recognize the work of a truly great man.

We are showing as an example of teleplasmic development a well-formed arm and hand enlarged from a section of a flash-light photograph taken at Lime Street on November 13, 1931 (Fig. 74). In fact, it is so well formed that some critics claim that it belongs to a living person. Notice that the photograph shows a left arm and hand, yet "Walter" insists, and has said from the first, that it is his right arm and hand. We would say that when this photograph was taken only "Margery," the writer, and Mr. Adams were in the room. The complete photograph (Fig. 75) shows the medium's feet and hands also, and it can plainly be seen that they are in no way connected with the materialized arm and hand.

Let us here briefly explain the apparent paradox of a right hand appearing as a left hand. Until recently this has been confusing to us as well as to critics of these phenomena, but if we consider the analysis we have just made of the procedure which is responsible for the various wax impressions, we may use the same hypothesis here.

This hand, of which we have just spoken, was materialized under the most rigid conditions of control. The cameras which were used belong to the writer, their optical glass lenses are

⁴³ *Transcendental Physics*, Zöllner, London, 1882.

⁴⁴ *The Physical Phenomena of Spiritualism*, by Carrington, p. 19.
Easy Lessons in Einstein, Slosson, p. 58.

of the best quality, the photographic plates were new and in perfect condition, and we certify as to the authenticity of the negative.

The picture was taken by the illumination of photo-flash lamps in about one fiftieth of a second, and shows unmistakably a left arm and hand of large proportion holding aloft a small stool. This materialized arm and hand was observed by Adams and the writer in good red light for a space of several seconds before the plates were exposed, the writer being within two feet of it. We naturally designated it a left arm and hand; "Walter" however insisted that it was his right arm and hand, but said that since what we saw was really a mirror image of it, it appeared to us like a left.

This same anomaly would of course be apparent in the "Walter" prints if for any reason the reversing process were not carried out, as we have already shown, and may account for some of the different phases of the "Walter" thumb pattern which have occurred. It seems hardly reasonable to suppose that "Walter" should not know which hand was his right, and presumably it would be the same one that had always been his right.

If "Walter" were to materialize his right hand, without reversing his consciousness, we, observing it without any further means of orientation, would see it as a left hand since the mirrored image of a right hand appears to us like a left hand, and if we photographed it it would appear in the photograph as a left hand.

A diagram may make this a little clearer, although the mirror analogy should not be considered as in any way explaining the actual process. We have already said that, according to "Walter", his right hand, as it is in his space, is a mirror image of what it was when he was in our space. Therefore in the diagram (Fig. 76) we are representing his right hand as it was when he was alive by B—while A represents it as it is now in his space. To us who have no other means of orientation, A would look like a left hand, so if "Walter" materializes this hand A without reversing it we see it as a left hand, and if he

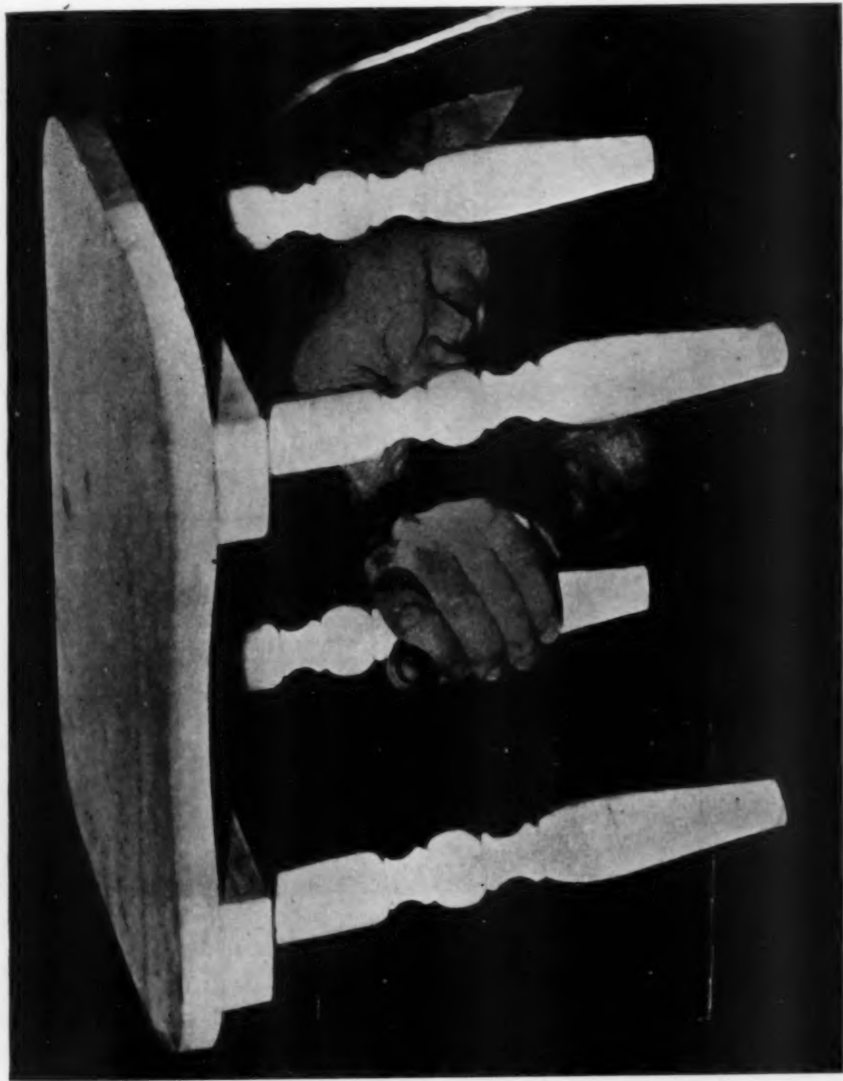


FIGURE 74.

A materialized arm supporting a small table. This, to all appearances, is a left arm, but "Walter" claims it is his right, as explained in the text. The complete picture is shown in Figure 75.





FIGURE 75.

This shows the writer holding the medium's hands. Her feet are on the floor and are obviously not being used to produce this left arm. It may naturally be claimed that someone was behind the curtain, but only Adams, who was at the camera, "Margery" and the writer were present in the locked and searched séance room. This was taken Nov. 13, 1931.



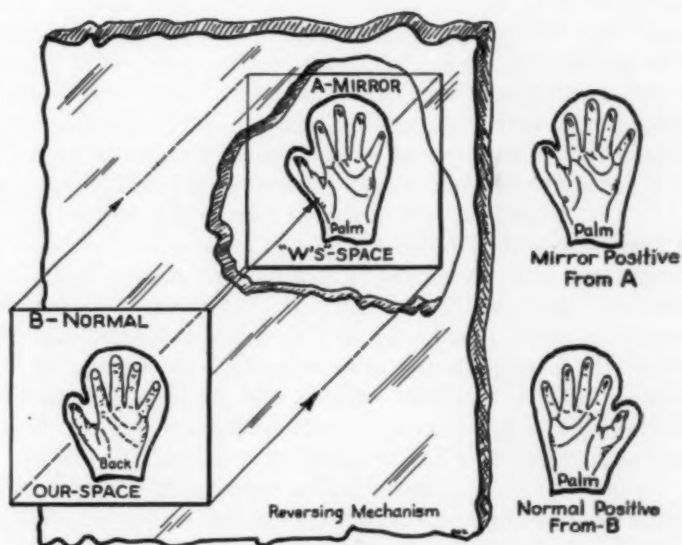


FIGURE 76.

Diagram illustrating possible manner of production of normal positive and mirror positive image and type of impression the inside surface of each would produce.



presses wax into the inner surface, the pattern produced would be a mirror-positive relief. If we accept his statement that the impressions which we are using as our standards represent his hands *as they were when he was alive* they must have been made after the reversing process was carried out, by the hand as shown at B. If wax is pressed into the inner surface of B the resulting impression would be a normal positive relief like our standard hand. These impressions would, of course, be subject to such variations as would result, not only from the physical imperfections of the wax, but in proportion to the extent of the reversal, which is sometimes incomplete as in one wax we have already discussed (Fig. 13), where the tips of the four fingers (but not of the thumb) are normal negative impressions.

"Walter" said in making this hand, which is a normal positive relief except as to the four fingertips, that the teleplasm "got away from him." In other words, the wax was pressed into the intaglio surface of this ideoplastic hand, but through lack of energy the fingertips were not completed. In order to correct this quickly, the outside surfaces of the ideoplastic fingers were pressed into the wax somewhat at an angle, thus producing the negative patterns at the tips, which bear every indication of having been added hastily.

With regard to the materialized arms which we have seen and photographed, they must have been, either arms of a living person or persons or artificial substitutes for them—that is, fraudulent; or they were teleplasmic arms—to which all the evidence points—and as such were ideoplastic.

In the first instance, it is perfectly obvious that if the left hand we saw was the left hand of a living person it could not have borne the papillary ridge design of a right hand.

If it was artificial, of course almost any kind of design might, theoretically, have been given it.

But under the conditions of our experimentation, it could not have been either the arm of a living person or an artificial arm.

If, on the other hand, it is, as we have claimed, a teleplasmic arm, it should be able almost instantly to take the design of the controlling idea.

There appears to be no reason why this idea might not form any combination of patterns on the fingers if the designs are available. In fact, "Walter" has said that sometime he would make for the writer a sort of composite hand with each finger bearing a papillary ridge design of a different person. He said he could produce on it the design of the writer's thumb while the writer was present at a séance and without his being conscious of it. We asked if he could also produce the medium's finger pattern, and he replied that he could. In view of this, the use of a left hand in the production of a right thumb impression need not provoke any special comment. Moreover, in this very fact lies further proof that the patterns which "Walter" says are those of his own fingers are what he claims them to be.

It seems unlikely, however, that our standard hands bear a composite design, for if such were the case variations might be expected, whereas they are always uniform in pattern, and correspond not only with all recent waxes but with the older ones and the plaster casts.

In the Journal ⁴⁵ there are shown, on pages 568 and 570, a series of views (Figs. 77, 78, 79 and 79a) of a somewhat poorly formed hand going through the process of taking a piece of Kerr out of a hot water dish, making a thumb impression in it, and handing the impression to someone. According to the records of this séance, which were written by Mr. Dudley and Mr. Bird, this took place on July 28, 1927, and they state that the print obtained at the time the photograph was made, while not very well-defined and showing no joint line, is nevertheless that of a "Walter" thumb.

In the manuscript Proceedings, prepared by Mr. Dudley, he has stated that this print is a normal negative, very little distorted, and that there are indications of a fingernail scratch on its surface. This latter mark does not seem to show in the photograph illustrated on page 459 in the Journal.

We happen to have this wax (Fig. 80), marked No. 49 C 10 on the back, and bearing the above date on the front, and while

⁴⁵ Psychic Research, October, 1928, p. 568.

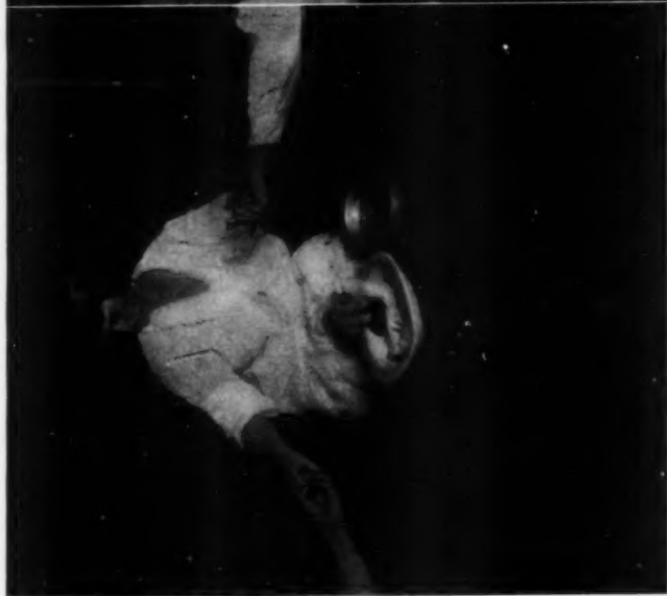


FIGURE 77.

The 'Walter,' hand removing a piece of Kerr from the hot water dish. The medium in deep trance.



FIGURE 78.

The 'Walter,' hand posed as in the act of making an impression in the Kerr.





FIGURE 79.
The "Walter" hand passing this impressed piece of Kerr to
Dr. Richardson.



FIGURE 79A.
Dr. Richardson holding the "Walter" hand.



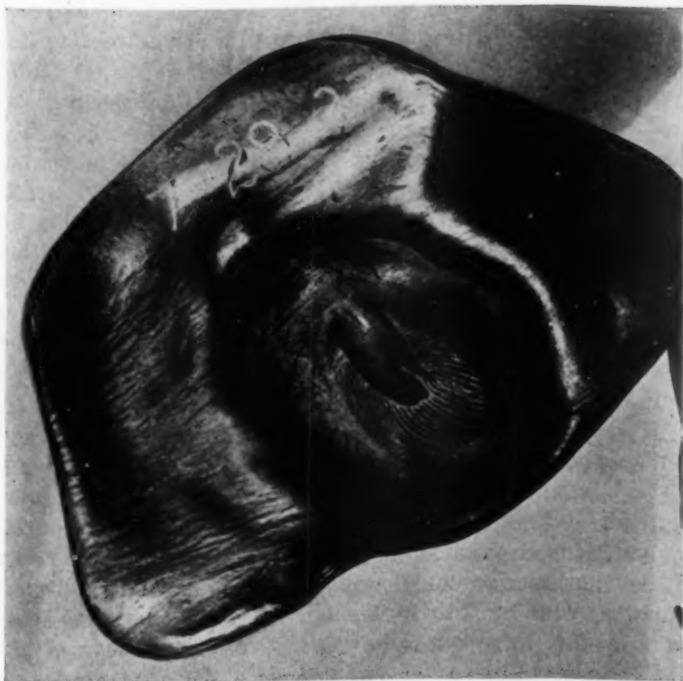


FIGURE 80.

The wax which was impressed with a "Walter" negative print on July 28, 1927, when the photographs shown in Figures 77, 78 and 79 were made. This negative wax has a single ridge at its core, clearly indicating a staple in the normal relief. The imperfection is claimed to have been made by "Walter's" nail, and seems to be more pronounced in this photograph than in the original photograph. Whether this has been changed, we can not say.



it is difficult to show the detail in a half-tone, we can state that it is a "Walter" normal negative right thumb, and that under magnification it shows clearly a raised ridge at the core. This, if used to produce a positive, would give us a staple at this point, and so agree with our normal positive right thumb.

With regard to this particular materialized hand, Mr. Dudley says, in describing the second photograph, which shows it impressing the wax, that: "One can distinguish five digits—none of which looks like a thumb, and none of which seems to be engaged in imprinting. It is possible that Walter posed the hand as though in the act of making the print, and that the actual imprinting was carried out a few moments later."

We quote the foregoing to show that there is no evidence that "Walter" materializes a perfectly formed right or left hand in order to make these prints. So long as the terminals are formed sufficiently to bear the pattern which is to be imprinted, there is no need of more perfect formation. There seems to be no reason for that matter why the pattern of the entire hand may not be borne by a single teleplasmic surface or terminal, having no resemblance otherwise to a hand.

However, since the pattern on the wax in this particular instance is a normal negative, it must have been made by a digit which bore on its outside surface the normal positive design, and the digit must have been pressed into the wax in order to produce it. And since only one print was produced, it may have been made by any one of the digits shown in the photograph, although it seems reasonable to suppose that the pattern was borne by that digit which held the normal position of the thumb. Further, if our hypothesis with regard to the reversing of the "Walter" consciousness is to hold, this particular pattern must have been the reverse of the pattern as it appears to him in his space.

When an arm and hand are materialized in order that they may be seen and photographed, the papillary design is not the important thing and it is, therefore, not necessary to reverse the idea; consequently, the arm and hand appear to us mirrored, as we have already shown.

It would be of great value when a materialized hand is formed—for instance the hand which appears to us as a left—if it were possible to obtain in the photograph its papillary ridge design so that we might check it against our standard “Walter” hands and establish conclusively whether it bears the design it should for the hand in question. We hope sometime to accomplish this.

In this particular instance, according to the hypothesis we have presented, this hand, which to us appears as a left hand, should bear a mirror image of the pattern carried by our standard “Walter” right hand.

XVI

CHANGED IMPRESSIONS

There are instances in which the earlier published accounts of the "Walter" thumb prints are not in accord with the records made after the séances involved, or in which there are statements which are contrary to fact, which have caused us to question the value of much of the older material which we have studied in connection with this report.

We found, for instance, that the dates and numbers in white ink which the prints carry do not in all instances correspond, and that the published descriptions do not always agree with the records made after the séance. As an example, and we shall give but one, we show in Figure 81, in A and B, the obverse and reverse surfaces of a wax which is dated October 20, 1929.⁴⁶ This happens to be a double or superposed print. On the back of this wax appears No. 104 F 3. We have the wax, as well as a photograph of it which was made for Mr. Dudley by Mr. Kuntz. But Mr. Dudley, in the manuscript Proceedings, states that wax No. 104 was made on October 4, 1929; that with wax No. 105 (which we also have) it was presented to Lord Charles Hope, and was never photographed.

Of itself, this is a matter of small importance, but it is proof of the possibility of inaccuracy in the records which might seriously impair their value.

Also, we have mentioned elsewhere that pores occur frequently on the papillary ridges of the living hand as small depressions. They are actually the openings or mouths of glands located deeper in the flesh. If we make ink prints of such an area the pores will appear as tiny white dots. If we press our finger into a plastic, making a negative impression, the ridges will appear as furrows in the wax, and scattered through the furrows will appear little nodules wherever pores occur in the

⁴⁶ Journal A.S.P.R., Dec. 1929 and manuscript proceedings.

original. If from this negative we should make a positive or relief these pores would appear as depressions in the ridges—as they do in the normal finger.

Now turning to page 204 of the Journal for April 1928, to an article by Mr. Dudley and Mr. Bird, we find the following statement:

“Pores of course occur freely in the prints. In the anatomical original these are little mounds in the depressed lines of the hand; on the negative impressions they are therefore depressions in the ridges. In print No. 7 (page 201 of the Journal for April, 1928, our Fig. 81C) the photograph shows particularly well two series of three pores each at the upper parts of the right hand ridges No. 4 and No. 5.”

If this were true, then the wax in question would have to be either a normal positive or a mirror positive for the statement indicates that these pores appear as holes in the ridge. Still further on it is said,^{46a} “though not always so well visible these are permanent features and their position is indicated on the diagram (our Fig. 81D) by a series of three X’s. In the positive print No. 4^{46b} (our Fig. 81E) of course, we see them as tiny mounds.” This is impossible, and shows that care was not taken in the preparation of this article, and is another indication of the inaccuracies of the early records.

Such inaccuracies as the foregoing, however, were undoubtedly accidental.

But no theory of accident can account for the fact that prints of historical and scientific importance have been so changed by some means or other as to render them valueless and lead us to the almost irresistible conclusion that someone must have deliberately tampered with them.

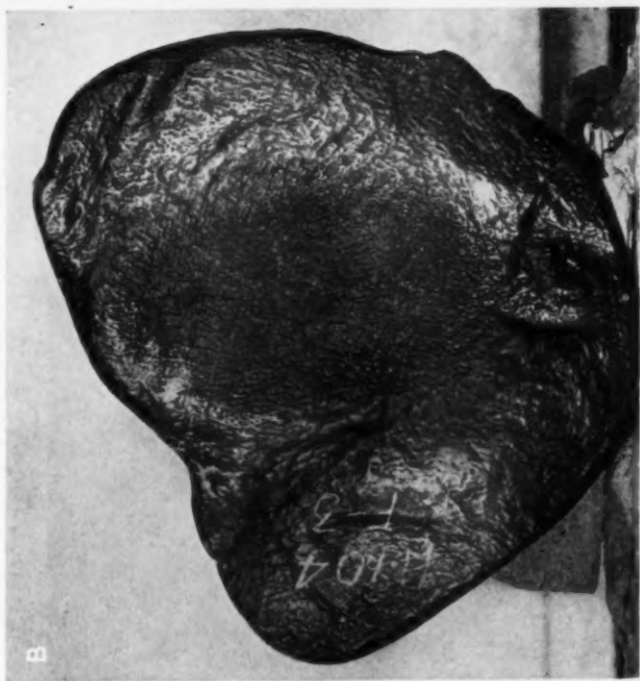
In looking over the photographs of the earlier waxes, and checking them against the waxes in our possession, we were surprised to discover a very anomalous situation. Some of the waxes which we have had for study, while still agreeing as to contour and general marks of identification, show now a

^{46a} Ms. Proceedings, E.E.D.; also Journal, April, 1928, p. 198.

^{46b} Journal, April, 1928, p. 209.



A



B

FIGURE 81.

A shows two superimposed impressions on a wax dated October 20, 1929; while *B* shows the back of this same wax, numbered 104 F 3. According to the records, the wax of this number was not of this date, was never photographed, and was given to Lord Charles Hope; nevertheless we have it,





FIGURE 81c.



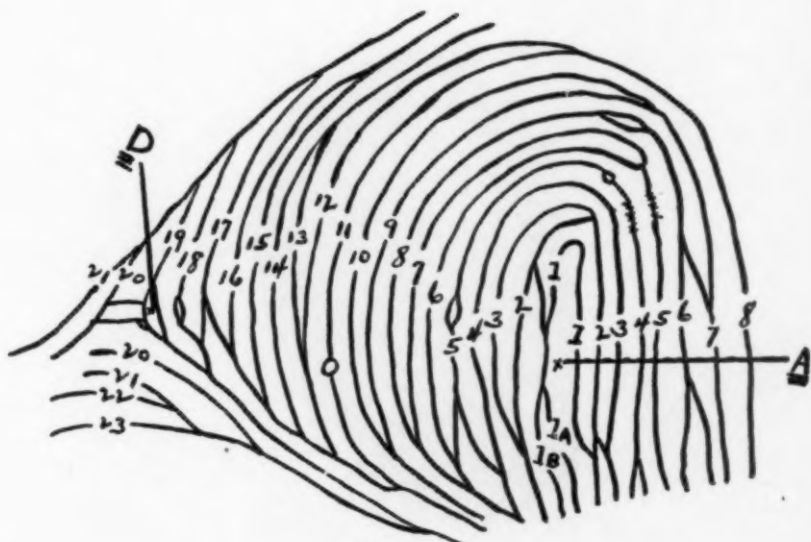


FIGURE 81D.





FIGURE 81E.



different orientation of the actual thumb impression from that shown on the original photographs, the photographic negatives of which, in the five cases we are about to mention, are and always have been in the custody of Mr. William H. Kuntz, specialist in photography. How these impressions became changed, we do not know.

We are aware that if the lamp used for illuminating these waxes when photographing them were placed too close the heat from it might cause them to soften, and if great care were not taken the contour might be changed.

But some of the five waxes which we are illustrating, now bear characteristics that can not be accounted for by a change due to such a cause. Moreover, if these changes in shape occurred accidentally while the prints were in Mr. Dudley's possession, he should certainly have called attention to the fact, either on the waxes themselves or in a memorandum to Dr. Crandon, since he placed these very waxes in the collection for the preservation and display of which he made a special cabinet which is now at Lime Street.

We present these altered waxes in their chronological order. The first is dated July 16, 1927, and is shown in Figure 82, A being the original photograph and B showing the wax as it now is. On this date, according to the records, six prints were produced at a séance held at Dr. Richardson's house in Newton. Mr. Dudley, Mr. Bird, and Mr. Fife were in charge of this sitting. We have two of these waxes, and have already mentioned one of them, No. 39, which bears Mr. Bird's initials. Scratched on the upper surface of the other one are the initials A. H. and the figure 4, and there is also an H which appears to have been branded into the edge since the change was made. On the back of it is scratched the date, presumably in Mr. Bird's printing.

Mr. Dudley, in the manuscript Proceedings, makes the following statement: "They are all normal negatives, all on wax that shows little distortion or other evidence of handling, all fairly good but none brilliant impressions."

Now this particular wax in its present condition does show

considerable distortion. The broken edge at the top, and the date agree fully with the original photograph; but there the resemblance stops. The pattern is not a normal negative and its orientation is quite different in all respects from that of the impression shown in the original photograph. On the back of the wax there is an indentation in which something resembling a letter B has been scratched.

The second of these altered prints is dated July 22, 1927, and is one of a group of five waxes which were made on that date. The writer has four of them in his possession, as well as photographs of all five made from the original negatives which Mr. Kuntz holds.

In Figure 83, A shows the print as it originally appeared and B (on the same scale) shows it as it now is. It may be noted that the general shape of the right side of the wax is the same in both photographs, and that there is a criss-cross pattern at the extreme right and at the top made from its contact with cloth. A scratch may be seen running from the right-hand edge into the figures 22 of the printed date. These marks, as well as others that may be seen in both illustrations, show clearly that the wax in each case is the same, but in A, the original photograph, the lines may be seen to slant in a direction different from those in B. This is shown diagrammatically in Figure 84. It may also be noted that there is considerable difference in the inclination of their axes, as shown by the angles *a* and *b*.

If these were the only changes, they might be accounted for by a softening of the wax from excessive heat, as above mentioned, but if the patterns are carefully scrutinized, especially as shown in the diagram, it may be seen that one looks like a mirror print of the other. Now this can *not* be accounted for by a mere change in the angle of the axis of the core. Neither can it be accounted for by a reversal of the photographic negative when the original print was made, for in that case the date also would be reversed, but such is not the case. And as the photographic negative has never been retouched, the possibility of these changes being due to that process is eliminated.



FIGURE 82A.
A shows the wax of July 16, 1927, enlarged from the group.
Shown as No. 33 in Figure 43.



FIGURE 82B.
B shows this same wax much distorted and the impression
as it now appears.



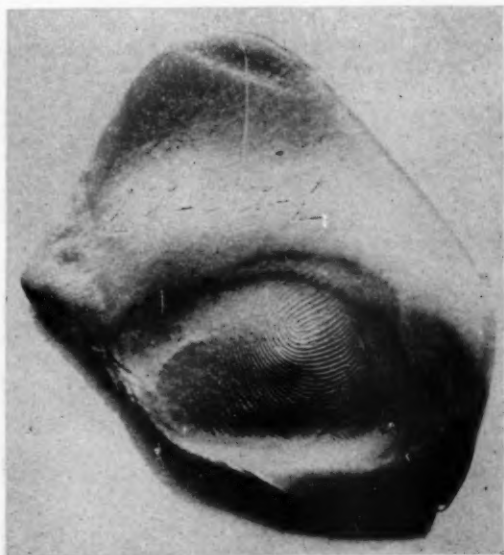


FIGURE 83A.
A is a view of a wax of wax of July 22, 1927, made from the original negative of that time.



FIGURE 83B.
B is a view of wax shown in A, with the impression quite changed. Notice the scratch running into the 22 on both.



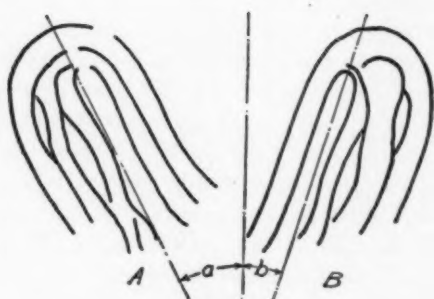


FIGURE 84.

Diagram of the impression of July 22, 1927, indicating the difference of angle between the original and the present form, and their tendency to mirror in design.



We are not attempting to explain how these changes were made, for we do not know. The argument that the wax shown in B is not the same as that shown in A will not hold, in view of the fact that all the points of identification on other parts of the wax still agree with the original photograph. Moreover, the printing in white ink is in Mr. Dudley's hand; and on the back is quite clearly marked in the same writing "C7, # 46," which are the numbers Mr. Dudley uses in presenting the details of this wax in the *Journal*.⁴⁷ There is some indication on the back of the use of a smoothing iron. The impression which the wax now bears is much less complete than the original.

The third of these altered prints is one dated August 26, 1927, and marked J. W. F. in white ink. This is the second wax which was impressed at Mr. Fife's solus sitting, the first having already been discussed under that heading.

The face of this wax shows what appears to be a normal positive relief, the delta being at the right. It is difficult to say just what the joint line is. In the manuscript *Proceedings*, this was called merely a normal print by Mr. Dudley, so we have no way of knowing which type it originally represented.

Figure 85, A, shows its original form, while B shows its present appearance. On the back of this wax is printed # 59 and a D with a number which can not now be made out. These are in Mr. Dudley's writing.

The fourth wax under this heading is dated April 29, 1929. Figure 86, A, shows its original pattern, while its present form appears in B. It may be noticed that in both illustrations the upper left-hand edge of this wax shows the cloth markings; that this edge, the top, and the right-hand side agree in contour, and that the four little nicks, probably cut for identification purposes, show distinctly. The lettering also is the same in both, the middle line of the N and the lower horizontal line of the F, the periods, and even the minute hole above the period after the N show in both photographs, and there are many other points of similarity which are obvious.

⁴⁷ *Psychic Research*, August, 1928, p. 457.

This wax is supposed to be one of two impressed at Niagara Falls through another mediumship, at about the time that a similar print was being produced at Lime Street under "Margery." It bears Mr. Dudley's number 89 E 5 on the back and the three gold seals placed there by the late Theron F. Pierce. The shape of the impression which the wax now carries would indicate a normal positive relief, quite distinctly marked except at the core where the lines are somewhat confused. The joint line shows quite clearly as a positive at the lower edge, although in our photograph (B)—through illusion—it appears raised. Here again we have a reversal which can not be accounted for by any simple explanation.

The fifth wax under this classification is one which was made on September 9, 1929, and is numbered 2 on the face, no number appearing on the back. In Figure 87, A shows its original and B its present appearance. The wax is now so much deformed that it is hardly recognizable as the original. Its contour is quite different, although there is a fold above the date which looks much the same in both, but the date itself and the number 2 on the face seem to tell the story. There is some indication that the change in this wax occurred after the above date was placed on it, for the figure 2, especially, seems to have been slightly warped. Here again we have the reversal of the impression, the print now apparently being a positive.

Regardless of when these metamorphoses may have taken place, it is certainly evident that these waxes were in Mr. Dudley's possession after the changes had been made, for with practically no exception the numbers in white ink, which it has always been Mr. Dudley's custom to mark on the back and front, are so placed that they would have been greatly distorted had they been on the waxes before the prints were altered.

That the present dimensions of the waxes differ from their earlier dimensions is shown by a comparison with the earlier photographs, as well as with the photographs (Figs. 43 and 45) which the writer took of the large group long ago.



FIGURE 85.

Two views of a wax of August 26, 1927, initialed, presumably, by Mr. Fife. *A* shows the impression as it appeared at that time, and *B* as it now appears.





FIGURE 86A.

A shows the impression on a wax obtained at Niagara Falls on April 29, 1929, through another medium, "Margery" being in Boston at the time.





FIGURE 86B.

B shows this same wax, but as it now is, bearing an entirely different impression. There are many points of identity on the waxes shown in these two photographs.



THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS 60607-7090
U.S.A. AND CANADA
0022-2967(199801)50:1;1-12



FIGURE 87A.

A shows a wax of September 9, 1929, marked No. 2, and was made from the original negative.



FIGURE 87B.

B shows this wax as it now appears, much deformed, and with the orientation of its design changed.



In some way these five prints have been substituted for the prints which these waxes originally bore. This, of course, could have been accomplished only by first softening the wax, which would account for such changes as are noticeable in the contour and shape of each piece, unless indeed, the entire waxes and impressions have been artificially made and substituted for those whose number and date they bear. This, however, could hardly have happened in the case of the wax imprinted at Niagara Falls.

We do not know how, or when, or why these changes were made. We merely know that these waxes do not now carry the impressions they bore at the time they were originally photographed; and that they are sufficiently well executed so that had we not been comparing our material carefully with the earlier records and photographs, we might have accepted them as supernormally produced prints.

In view of this circumstance, it is an inescapable hypothesis that the other waxes which we have considered in our study and which, for one reason or another, we have not been able to check with previous records, may have been similarly changed.

Experimentation on original waxes may at times, be necessary and legitimate, but to obliterate or change markings on waxes of importance for any reason whatsoever without definite disclosure and record of changes is certainly indefensible and compels suspicion if not conviction that whoever was responsible for these changes had a fraudulent purpose to serve.

Of the five waxes under consideration, three were produced under unusual conditions, one having been imprinted in Newton, away from Lime Street, with only Bird, Fife, and Dudley present; another at a solus sitting for Fife a few days later; and the third being one of those produced at Niagara Falls at a time when "Margery" was at her home in Lime Street. Since these were all secured under exceptional conditions, for that reason if for no other they should not have been used for experimentation.

In his account of the séance of October 20, 1929, in the manu-

script Proceedings, Mr. Dudley has the following to say concerning two overlapping normal negatives of the "Walter" right thumb obtained on one of the waxes: "If the reader will experiment with this wax (Kerr) he will find it a simple matter to make one print, and (after reheating the wax) to superpose a second print on the first, but he will doubtless discover, *as did the writer*, that it is exceedingly difficult to retain more than the faintest trace of the first print." (Our italics.)

We quote this to show that Mr. Dudley had carried on experiments of this sort, and we have elsewhere referred to some artificial prints which he made and which were submitted to a finger print expert to see if they could be detected.

As evidence that these waxes were changed before being marked on the back for indexing, let us look at the back of the wax supposed to have been made at Niagara Falls on April 29, 1929, as it appeared before Mr. Dudley put his index number 89 E 5 on the back. This is shown in Figure 88. It will be noted that almost the entire surface of the back is well indented by cloth markings. The letters KER, and especially the K, are very sharply cut. The three gold seals show no sign of distortion, and there is what appears to be a roman numeral I close to the two end seals, although this does not show very clearly in the photograph.

Then let us look at Figure 89, which shows the back of this wax as it now appears. It may be seen that the seal on the end that has been changed is blurred and spread and that the roman I is farther away from the seal than it was originally. Furthermore, nearly half the surface of the wax on this end is fairly smooth, the cloth marks, as well as part of the K, having been obliterated. This, of course, is what would be expected if the wax were heated and stretched out more than a quarter of an inch as it has been.

But the important point is that the lettering # 89 E 5 is not distorted in the least, as it must have been had it been on the wax before this change occurred. Moreover, it is on the now smooth surface and it was not on that surface when



FIGURE 88.

The backs of two impressions made on April 9, 1929; the one with the letters KER showing being the one produced at Niagara Falls, while the other was made at Lime Street within an hour or so. This photograph shows them as they appeared at the time of their production.





FIGURE 89.

Shows the back of the wax imprinted at Niagara Falls as it now appears.



7

the latter bore the imprint of the cloth, as is shown by the photograph.

Also the wax of July 16, 1927, which we are not illustrating, showed originally a relatively flat surface, as may be seen by looking at No. 35 in Figure 44; but now it carries a considerable depression which shows coarser cloth markings than did the original, indicating that a cloth was used which prevented the hand which altered the impression from leaving an imprint; and into this area has been scratched, since the change was made, what appears to be a letter B that seems to agree in appearance with that letter on other waxes which have been marked by Mr. Dudley.

The other waxes bear equally convincing evidence of having been marked after their impressions were changed.

These waxes were certainly not altered supernormally, and we do not know of any simple method by which mirror prints of existing patterns can be made, yet a casual comparison of the photographs might lead one to think that these five impressions are mirror prints of the designs which these waxes originally carried.

We have never heard "Walter" suggest the re-use of an old wax or the possibility of making an impression over for the purpose of improving it, and nothing in the records indicates that this was ever attempted or even thought of by anyone interested in these experiments. When poor results have been obtained "Walter" has often insisted upon having another piece of wax, in order to try again, and naturally a fresh piece of Kerr was always provided.

A most regrettable circumstance in connection with these changed prints is that several of them were included in the group which the writer sent to Dr. Harold Cummins of Tulane University for comparison with photographs of Dr. "X's" impressions. It was not until some time after Dr. Cummins' report was received that the fact that some of these waxes were of questionable origin was discovered.

Dr. Cummins very kindly gave a great deal of time to the

careful study of the data which we sent him, and submitted two reports, both of which appear in full in the appendix, and we wish to make this acknowledgment of our appreciation of his meticulous study and our regret that the character of much of the material sent to him necessarily disqualifies it for use as evidence in this matter.

XVII

COMPARISON OF THE HANDS OF "MARGERY," "WALTER" AND DR. "X"

Having classified the "Walter" standard hands, and shown that in general the old casts and waxes agree with them in pattern, let us now make a comparison of the various characteristics of the hands, fingers and thumbs of "Margery" "Walter" and Dr. "X," since the refusal to accept the "Walter" prints as unique is for the most part based on the claim that they are in fact replicas of the normal prints of either "Margery" or Dr. "X," produced normally or by means of dies.

We think we have satisfactorily demonstrated that dies could not have been used and were not used in the séances which were held under our control and at which the complete "Walter" hands were produced, and since most of the "Walter" thumb impressions made during the earlier years of this mediumship agree with those of our more recent experiments, we may assume that dies were not used in the production of the earlier impressions.

We have also, we believe, satisfactorily established the fact that these standard hands were supernormally produced, so that if their markings should correspond in any degree with those on the hands of either "Margery" or Dr. "X," explanation of the parallelism must be found in some other direction than conscious fraud.

In order to determine whether our "Walter" hands do carry the same characteristics as those of "Margery" or of Dr. "X," let us make a complete analysis and comparison of all three pairs of hands. (Figs. 90, 32 and 91.)

PALMS

We have already shown photographs of what we term the "Walter" standard hands (Figs. 5 and 6), and also these same hands on a smaller scale with some of the main lines of the

palm emphasized (Fig. 32). Now let us compare the palms of "Margery," "Walter" and Dr. "X," as shown in Figs. 92 and 93, based on prints made by Mr. Bert Wentworth.

The main palm lines and the deltas at the roots of the fingers show quite clearly the differences in orientation.

The palms of "Margery's" hands are small in comparison with those of "Walter" and Dr. "X." "Walter's" palms and hands are large. He was a large man as indicated by photographs of him and confirmed by family statements, and we should naturally expect large hands. He was a locomotive fireman and it is reasonable to assume that his work had made his hands more than ordinarily muscular.

On the other hand, while Dr. "X" is a good sized man, weighing approximately 175 pounds and being 5 feet 8 $\frac{3}{4}$ inches in height, his left hand is not nearly as large as his right, a difference which can probably be accounted for by his constant manipulation of tools as a dentist, which would naturally develop his right hand to a greater extent than his left.

If we consider the outlines of these palms without reference to their size, we see that in general shape these six hands present considerable variation, although this would also depend slightly upon the amount of pressure used in making the prints.

If we note the position of the deltas a, b, c and d in each palm at the roots of the fingers and trace the main lines A, B, C, and D that go from these deltas across the palm, we shall see that no two of them are exactly alike, and that the inclination and termination of the lines at the edge of the palm are different in all cases.

One very special characteristic is to be seen in the left palm of Dr. "X," where there is a well marked loop near the outer edge. This occurs in none of the other five palms.

The classification of these palms, which will mean little to the lay reader, as given by Mr. Wentworth, using his own method, is indicated by the figures in each palm diagram (Figs. 92 and 93). In the case of some of these there are two classifications given, since Mr. Wentworth could not determine where some of the lines ended in the particular print he had.



11-7-7-5

28

11-7-7-3

28

Left Hand



11-9-7-5

30

Right Hand

FIGURE 90.

Palm and finger impressions of the right and left hands of "Margery", showing at s on the right hand, the scar in the palm.

1870
1871
1872
1873
1874
1875
1876
1877
1878
1879
1880
1881
1882
1883
1884
1885
1886
1887
1888
1889
1890
1891
1892
1893
1894
1895
1896
1897
1898
1899
1900



9-7-5-3

12

Left Hand

7-5-5-3

28

Right Hand

FIGURE 91.

Palm and finger prints of Dr. "X". Note the loop in the left palm formed by ridges.



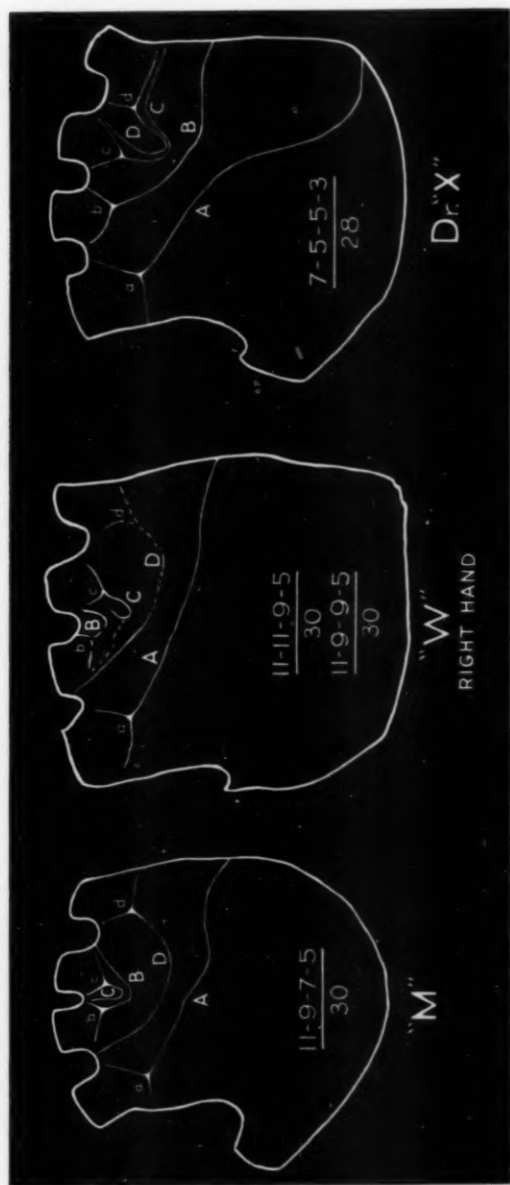


FIGURE 92.
The right palm impressions of "Margery", "Walter", and Dr. "X", reduced to the same scale and showing some of the characteristic palm lines.



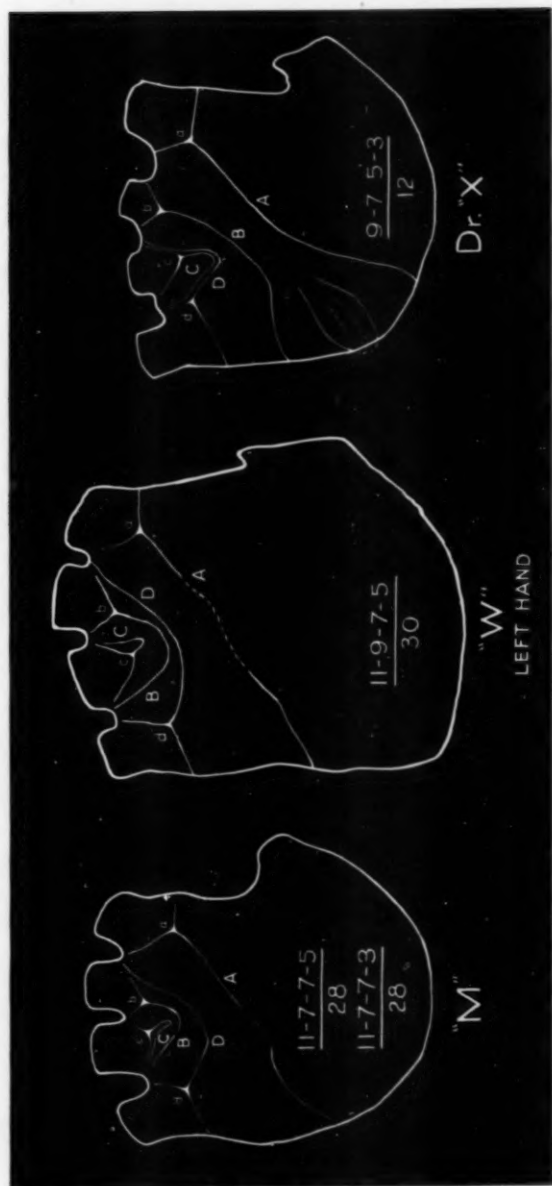


FIGURE 93.

The left palm impressions of "Margery", "Walter", and Dr. "X", reduced to the same scale and showing characteristic lines.



Dr. Harold Cummins in his report,⁴⁸ using his formulation of the palmer features, says that this formulation of the major dermatoglyphic characters is expressive of the existence of *outstanding unlikenesses* (our italics) and that it may be stated with assurance that the impressions were not made by the same person. His analysis is as follows:

Right Palm

"Dr. X" 7 (8).5"(6).5".3-t-A^u.O.O.O.L.

"Walter" 11.9.7.5'-t-A^u.O.O.L.M.

Left Palm

"Dr. X" 7 (8).5"(6).5'.3(2)-t-L^r.O.O.O.L.

"Walter" 11.9.7.4-t-A^u.O.O.L.O.

Thus, it is quite apparent that these are the palms of six different hands.

In the case of the "Walter" palms, since there was no way by which we could make direct ink prints from the waxes without damaging them, we relied on photography, the area being too large to permit of the use of any of the methods of reproduction which we used in connection with the study of the fingers.

FINGER TIPS

Next let us examine the finger tip pattern of each of the thirty fingers.

These were obtained by several methods. Figure 94 shows a copy of the official record made by Mr. Bert Wentworth of "Margery's" fingerprints, with the designation of the type of design, the ridge count, and the classification.

The fingerprints of Dr. "X," likewise classified by Mr. Wentworth, are shown in Figure 95.

"Walter's" prints taken from our standard hands and arranged in a manner similar to the ink prints, we give in Figure 30.

As we have never obtained supernormal ink prints^{49a} of the

⁴⁸ Appendix XV.

^{49a} *Psychic Research*, February, 1928, pp. 99-100. Ink prints produced supernormally.

"Walter" fingers, it was necessary to devise various methods for obtaining prints for the purpose of this comparison, and for this classification made by Mr. Wentworth we took photographs of the tips of the fingers of the standard "Walter" hands in relief, reversed the negatives, and then made a set of prints as shown on the chart, although Mr. Wentworth had already made a similar classification with regard to the fingers and palms from the standard hands shown in Figure 32.

It may be seen that in most of the cases the ridge counts of the different fingers vary widely, and the classifications show clearly that no two homologous fingers are identical.

There are, however, some points of similarity, especially on the right thumbs, which will be considered later.

Examining the right forefinger of each, we note that "Margery's" has a radial loop with a count of five; "Walter's" an ulnar loop with a count of four; and Dr. "X's" a radial loop with a count of five, the same as "Margery's"; but that the designs themselves are different may be seen by a study of the photographs.

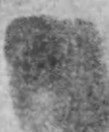
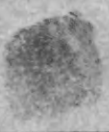

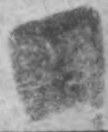

We would mention here that the radial loop is found more frequently on this finger than on any other, occurring in approximately 25 per cent of all right index fingers,⁴⁰ while the ulnar loop occurs in 27 per cent of them.


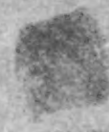



The middle finger of "Margery's" right hand has an arch; that of "Walter" an ulnar loop with a count of eight; and that of Dr. "X" an ulnar loop with a count of fourteen. The ridge count here would definitely differentiate the latter from "Walter's" without respect to the ridge design; while "Margery's" arch is in an entirely different class from either. Arches occur on this finger in only 10 per cent of all cases, while ulnar loops occur in about 71 per cent.



The ring finger of "Margery's" right hand has an ulnar loop with a count of six; that of "Walter" an ulnar loop with a count of eighteen (again no similarity on this basis alone); and Dr. "X's" has an ulnar loop with a count of thirteen. There is too great a difference in the count between these last

⁴⁰ Appendix XVII: Bonnevie Distribution of Patterns on Different Fingers.

NAME <i>M</i>		CLASSIFICATION		MALE	
F. P. No.		BER. No.		<i>1 RAU 6 (5)</i> <i>1 UUU 4</i>	
PRISON.					

RIGHT HAND				
1. RIGHT THUMB <i>21</i>	2. R. FORE FINGER <i>5</i>	3. R. MIDDLE FINGER	4. R. RING FINGER <i>6</i>	5. R. LITTLE FINGER <i>6</i>
				

LEFT HAND				
6. LEFT THUMB <i>15</i>	7. L. FORE FINGER <i>3</i>	8. L. MIDDLE FINGER <i>3</i>	9. L. RING FINGER <i>5</i>	10. L. LITTLE FINGER <i>4</i>
				

LEFT HAND	RIGHT HAND
PLAIN IMPRESSIONS OF THE FOUR FINGERS TAKEN SIMULTANEOUSLY	PLAIN IMPRESSIONS OF THE FOUR FINGERS TAKEN SIMULTANEOUSLY
	

IMPRESSIONS TAKEN BY <i>Bert Wentworth</i> <i>Doris, V.H.</i> <i>Jan. 22, 1933</i>	PRISON DATE
--	----------------

10,000-1000 No. 5925

FIGURE 94.
Mr. Bert Wentworth's classification of "Margery's" fingers.



NAME Dr. X		CLASSIFICATION 1 RZU 14 (1/9)		
F. P. No. BER. No		1 TUZ 15		
PRISON.				
RIGHT HAND				
1. RIGHT THUMB 23	2. R. FORE FINGER 5	3. R. MIDDLE FINGER 14	4. R. RING FINGER 13	5. R. LITTLE FINGER 14
LEFT HAND				
6. LEFT THUMB 16	7. L. FORE FINGER	8. L. MIDDLE FINGER 8	9. L. RING FINGER 19	10. L. LITTLE FINGER 15
LEFT HAND		RIGHT HAND		
PLAIN IMPRESSIONS OF THE FOUR FINGERS TAKEN SIMULTANEOUSLY		PLAIN IMPRESSIONS OF THE FOUR FINGERS TAKEN SIMULTANEOUSLY		
IMPRESSION TAKEN BY Burkhardt		PRISON		
CORRECTIONAL INSTITUTION Dorset H.		DATE		
TAKEN AT Jan 27 1933		DATE		

FIGURE 95.
Mr. Bert Wentworth's classification of Dr. "X's" fingers.



two to be due to any difficulty in making out the ridges. Ulnar loops occur on the ring finger of the right hand in about 51 per cent of all cases.

The little finger of "Margery's" right hand has an ulnar loop with a count of six; "Walter's" an eyelet ulnar loop with a count of nine; and that of Dr. "X" an ulnar loop with a count of fourteen. Here again the ridge count, without further consideration, would prove that these fingers were not identical. Ulnar loops on this finger form about 84 per cent of the total.

Taking now the left hand, "Margery's" index finger has an ulnar loop with a count of three, while "Walter's" has a radial loop with a count of four, and Dr. "X's" has a tented arch. Radial loops on this finger of the left hand are found in 22 per cent of all cases, while ulnar loops comprise about 34 per cent and arches 16 per cent. Arches are found more frequently on the forefinger than any other, but to a greater extent on the right hand than on the left.

The middle finger of "Margery's" left hand has an ulnar loop with a count of three; "Walter's" an ulnar loop with a count of nine; and Dr. "X's" an ulnar loop with a count of eight. On this finger ulnar loops occur to the extent of about 70 per cent. The ridge count difference between the "Walter" finger and Dr. "X's" is only slight but the designs are quite different.

"Margery's" ring finger has an ulnar loop with a count of five; "Walter's" a central pocket ulnar loop with a count of sixteen; and Dr. "X's" an ulnar loop with a count of nineteen. On this finger of the left hand about 67 per cent of the patterns are ulnar loops.

Coming now to the little finger, "Margery's" has an ulnar loop with a count of four; "Walter's" an ulnar loop with a count of seven; and Dr. "X's" an ulnar loop with a count of fifteen. Their designs, however, are not alike and the angles of the core are different.

Ulnar loops are found more frequently on this finger than on any other, and on the left hand especially they may occur in as high as 86 per cent of all cases.

From this study of the finger-tips of these thirty digits, and their papillary design and ridge counts, and a comparison of each not only with the homologous fingers but individually with each of the other digits, it is apparent that each contains characteristics which show not only that it is not identical with any of the others, but, in most cases, that each is quite different from any of the others.

THUMBS

Taking now the right thumbs, "Margery's" has an ulnar loop with a count of twenty-one; "Walter's" an ulnar loop with a count of twenty-two; and Dr. "X's" an ulnar loop with a count of twenty-three. Fifty-five per cent of right thumbs carry ulnar loops. On the basis of ridge count alone these right thumbs do not differ widely. There is a greater difference between the design on "Margery's" thumb and that on "Walter's" than there is between the latter's and Dr. "X's." The angle of inclination of the core on "Margery's" is much less than on the others, being about forty-five degrees, while "Walter's" is about sixty degrees and Dr. "X's" about seventy-five degrees. The core of "Margery's" thumb and that of "Walter" are staples, a similarity which might be expected because of their relationship. The core of Dr. "X's" right thumb, however, is a rod.

As to the left thumbs, "Margery's" has an ulnar loop with a count of fifteen; "Walter's" an ulnar loop with a count of twelve; and Dr. "X's" an ulnar loop with a count of sixteen. In the case of left thumbs about 66 per cent have an ulnar loop.

We might add here that the ulnar loops are found to a greater extent on the fingers of members of the English race than on those of any other.⁵⁰

Now let us compare the pattern areas of these six thumbs. By the pattern area we mean that section bounded by the ridges originating at the delta and more or less enveloping the part immediately surrounding the core, as shown in Figure 96.

⁵⁰ Appendix XVIII: Bonnevie: *Distribution of Patterns in Different Human Races*.

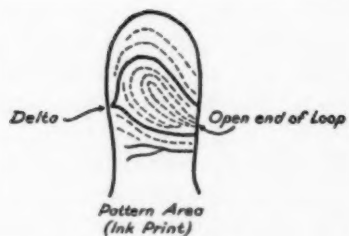


FIGURE 96.

Diagram interpreting the pattern area of an ulnar loop.



These pattern areas of the six thumbs, shown in Figure 97, have been enlarged to the same scale and oriented so that their joint lines are approximately horizontal.

The ball of the right thumb is naturally larger than that of the left because of the greater use of the right hand. "Margery" and Dr. "X" are both right handed; and we understand that Walter Stinson was likewise right handed.

"Margery's" thumbs since she is a woman, are naturally smaller than the others, while the pattern areas of the right thumbs of "Walter" and Dr. "X" are not of the same shape, "Walter's" being somewhat larger and higher than Dr. "X's," although not greatly different from it. The pattern area of Dr. "X's" right thumb is larger in comparison with his left thumb than is either of the others. This again is doubtless due to the constant pressure on his thumb in handling his instruments.

The fine lines in the center of these diagrams show the general position of the cores relative to the whole area and their angle of inclination with the joint lines. No two are alike in either of these respects, as may be seen.

No creases or severe scars show on "Margery's" right thumb or on "Walter's" in these impressions; but there is decided evidence of one on Dr. "X's," as shown at the right of the core by the dotted line, and also one near the delta not shown here.

Taking now the pattern areas of the left thumbs, the difference in the inclination of the cores is perhaps not quite so marked as in the right thumbs, and each one shows definite indication of creases or scars, there being two on "Margery's" and a very deep one diagonally across the core of "Walter's." This has appeared in every left-thumb imprint we have had, both positive and negative, and appears in those of 1927 that we hold.

Dr. "X's" left thumb also has a very noticeable crease near the top of the core running to the left and sloping slightly downward. There is also a short crease partially within the core and to its right; and still more important, there is an area

near the boundary line of the pattern which is scarred by an old suppuration. None of these occurs in any "Walter" thumb print. "Walter" claims to remember having cut his left thumb, but neither "Margery" nor Dr. "X" can state when their scars or creases developed, although appearances indicate that they are not recent.

We shall now consider a study of these six thumb impressions made by a method similar to the ordinary ink process, but covering only the area about the core.

Having no ink print of the "Walter" thumb, we felt that a fairer comparison as to general form might be made by using for this purpose normal negative thumb impressions in wax of "Margery," and Dr. "X," also, thus producing them all by the same method.

Care was used in taking these impressions to select waxes that were smooth and even, in order to avoid distortion, and transfers were made from these negatives to a paper surface by means of special wax. These transfers were somewhat latent, and in order to bring out the ridges for photographic purposes they were dusted carefully with a very fine carbon black.

The six impressions are shown in Figure 98, all enlarged to the same scale. They are not particularly good in places, as it is difficult to make as completely detailed a print by this method as could be obtained by the ink methods.

The three sets of finger prints signed by Mr. Wentworth, which we have already shown (Figs. 94, 30 and 95), give a much clearer idea of the details than does this figure, but for this purpose Mr. Wentworth's prints could not very well be used, since those of "Walter" were made from decidedly convex waxes and would therefore be considerably foreshortened.

A comparison of "Margery's" right thumb with those of "Walter" and Dr. "X" reveals that it is entirely different from either, although it has some of the general characteristics of "Walter's," and we need not spend any time on these points of difference since they are so apparent.

Between "Walter's" right thumb and that of Dr. "X" we

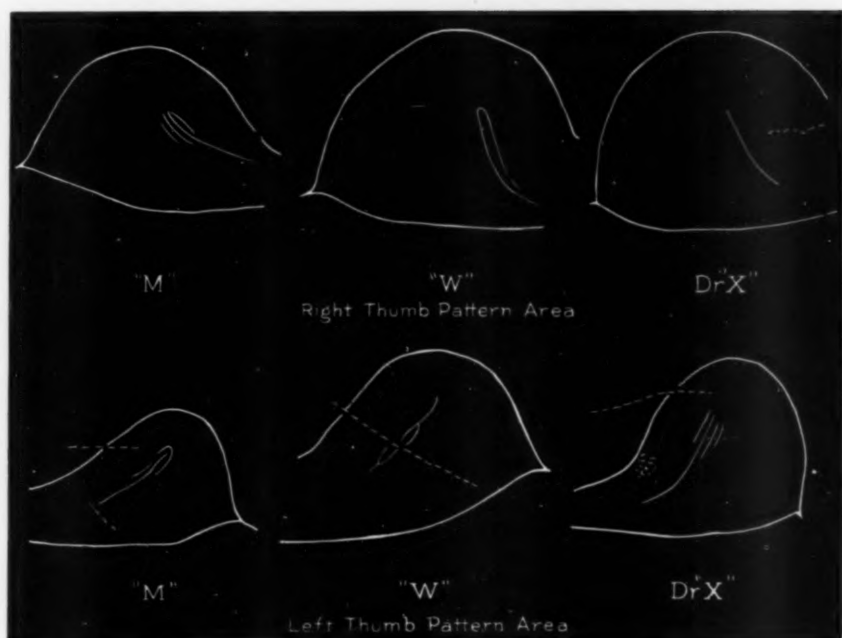


FIGURE 97.

Diagram showing pattern area of right and left thumbs of "Margery", "Walter" and Dr. "X". Fine full lines indicate position of the core; dotted lines indicate scars, cuts or creases.





FIGURE 98.

Central areas of the six thumbs, made in a manner similar to ink-prints, and showing structure at the cores. There are many imperfections in these, due to the process used.



shall find many points of similarity. In fact, these thumbs are extraordinarily alike. Mr. Dudley, in his exhibit, indicates some twenty-seven points of similarity, and one expert indicated more than forty points. But in our opinion there is one major difference, at least, and that is in the core, for in "Walter's" thumb the core is a staple, while in Dr. "X's" it is a rod. We are well aware that almost any police bureau of identification, finding eight to twelve points of similarity on two prints, and no marked differences would feel convinced that they were of one and the same digit. But here, we believe, is one great difference. And there are other slighter differences, such as the character and weight of the lines, and the shape and location of the deltas.

So far as the study of the pore structure is concerned, while it is possible to make enlargements of the ink prints of both "Margery" and Dr. "X" showing clearly the location and shape of many pores, we have not been able to find any method by which we could satisfactorily do this with either the positive or negative impressions in wax of the "Walter" thumb, nor have we been able to find anyone else who could do so.

We have already stated that many waxes show indications of pore structure, but satisfactorily to transfer these to an ink print or photograph them seems quite impossible.

There is little need to do more than glance at the left thumbs of the group because their designs are so radically different. There is one point of similarity on "Margery's" and Dr. "X's" which is of interest, and that is the crease to the left and near the top of the core. Here is a case in which two living people have a crease on the left thumb, similarly located although by no means identical. While there is no similarity between "Margery's" left thumb and that of Dr. "X," there is even greater difference between that of "Walter" and that of Dr. "X," in pattern as well as in the quality and character of the lines.

CLASSIFICATION OF RIDGE COUNT

If we classify the thirty fingers of "Margery," "Walter," and Dr. "X" on the basis of ridge counts,⁵¹ using the method

⁵¹ Wentworth and Wilder, *Personal Identification*, 1932 Edition.

of H. H. Newman⁵² of Hull Zoölogical Laboratory, University of Chicago, we shall obtain the values shown in the following table.

	"M"	"W"	Dr. "X"
Right thumb	12	12	13
Left thumb	9	7	9
Right index	4	3	4
Left index	3	3	1
Right middle	1	5	8
Left middle	3	6	5
Right ring	4	10	8
Left ring	4	9	11
Right little	4	6	8
Left little	3	5	9

This method of comparison apparently gives a fairer distribution of the quantitative values and is less arbitrary, especially where a ridge count runs high, than that of Professor Bonnevie,⁵³ and while, undoubtedly, when the ridge counts of two fingers are relatively close its value may be questionable, it does give an idea of the variation from this point of view, and is quite enlightening in the case of the fingers of these six hands as showing differences of value which might not otherwise be apparent. There is no case in which the homologous fingers of all these three have the same value. There are two cases in which homologous fingers of "Margery" and "Walter" have the same value, namely, in right thumbs and left index fingers; and there are two cases in which homologous fingers of "Margery" and Dr. "X" have the same value—the left thumbs and right index fingers. Four of "Margery's" fingers have the same value; three of them have another; and the remaining three are all different.

⁵² H. H. Newman, "The Finger Prints of Twins", *Journal of Genetics*, Vol. XXIII, No. 3, Dec. 1930.

⁵³ Kristine Bonnevie, "Studies on Papillary Patterns of Human Fingers", *Journal of Genetics*, Vol. XV.

In the case of "Walter" there are three pairs, each pair having a different value; each of the remaining four fingers is different.

In Dr. "X's" case three fingers have one value; two have another; and each of the remaining five is different.

What is perhaps even more interesting is that the homologous fingers of "Walter" and Dr. "X" are in different classes in every case, although in some cases this difference is slight. Their only similarity occurs between "Walter's" right middle finger and Dr. "X's" left middle finger, which have the same value, but a glance at the actual designs on the classification sheets shows them to be quite different.

It is also interesting to note that the values tend to be smallest in "Margery's" case and highest in that of Dr. "X," although this fact may have little, if any, significance.

A point which the finger-print expert would not have to take into consideration is the possibility of two fingers which are not homologous being of identical pattern, but in this investigation, because of the supernormal character of the "Walter" prints, it was necessary to check each finger of the "Walter" hands with each and every finger of Dr. "X's" hands to make certain that there were no possible duplications of any of the prints. In fact, this comparison has been made with all the finger prints which we have on file.

RIDGES AND FURROWS

Microscopic examination of the negative impressions of the right and left thumbs of "Margery," "Walter," and Dr. "X," using for this purpose waxes having a relatively flat surface, shows by actual measurement that the ridges on the "Walter" thumbs are very much wider than those of either "Margery" or Dr. "X," and that the ridge intervals of both thumbs are considerably greater than those of Dr. "X." The following table gives the average measurements of these six thumbs, both as to ridge width (R) and furrow width (F). We have also tabulated the average ridge interval ($R + F$) and the ridge and

furrow difference ($R - F$), as well as the ratio of ridge to furrow ($\frac{R}{F}$).

RIGHT THUMBS

	R	F	R + F	R - F	$\frac{R}{F}$
"Margery"	0.324	0.084	0.408	0.241	3.9
"Walter"	0.384	0.171	0.555	0.213	2.25
Dr. "X"	0.360	0.087	0.447	0.273	4.86

LEFT THUMBS

	R	F	R + F	R - F	$\frac{R}{F}$
"Margery"	0.347	0.165	0.512	0.182	2.1
"Walter"	0.359	0.217	0.576	0.143	1.66
Dr. "X"	0.370	0.171	0.542	0.199	2.16

There are very few data available on the actual dimensions of ridges and furrows, and we have not considered a sufficient number of cases to warrant drawing any conclusions, but we wonder whether the ratio of ridge to furrow may not perhaps indicate a constitutional difference. These measurements were made near the center of the ball of the thumb between the core and the delta, and are expressed in millimeters. We used the negative waxes, as we felt they would give a fairer comparison than either ink prints, which we did not have of "Walter," or relief waxes, which of course we did not have of "Margery" or Dr. "X," and while there are great irregularities in the ridges of all the waxes, we believe that a sufficient number of measurements was made to warrant use of the above averages. (Professor Walsted made independent measurements on six or eight waxes and arrived at similar conclusions.) But as we have already mentioned, on some of the "Walter" prints there is no appreciable difference between the width of ridge and that of furrow. We have made measurements of other thumbs and find that they are comparable to those under consideration.

While we can not draw conclusions with regard to these various relationships, it does seem quite significant that the

dimensions of the ridges and furrows of the "Walter" thumb are decidedly different from those of Dr. "X's"

We were also interested to find that in all cases the ridge intervals of the left thumb are greater than those of the right.

CORES

Microphotographs of the tips of the cores of the right thumbs of "Walter" and Dr. "X" (Fig. 99) show quite clearly the differences in their structure, the width of their ridges and their furrows. The texture of the surfaces is quite different, and this can not be accounted for by difference of illumination, for both were illuminated in exactly the same way, both enlarged to the same diameter, and both made from negative impressions in wax. "Walter's" is shown in A—from an impression made some time ago; and B shows Dr. "X's"—from an impression which he made for us of his right thumb.

Many readers may have difficulty in seeing the structure, due to illusion, but sometimes this may be overcome by turning the cut so that the light will strike it at a different angle. Furthermore, it should be kept in mind that these are negatives and that what appear to be ridges are really the furrows of the actual thumbs. We have numbered these ridges to help identify them.

It will be noticed that in "Walter's" case ridge five has a definite end, while in Dr. "X's" case ridge five continues around into ridge four, although it is thin at the top; also that ridges two and three on Dr. "X's" join, and that their junction is about on a line with ridge five; and that between ridges one and two of "Walter's" thumb the furrow curves toward the top very perceptibly, while in Dr. "X's" the furrow does not curve although it is bent very slightly. Ridge four in "Walter's" is also a dead end; the upper end has a very small bifurcation and then stops; it does not actually merge with any of the others. There are many other points of dissimilarity apparent to the eye with a little study.

There is nothing unusual about the design of the tip of the core of the "Walter" right thumb, for Galton in his *Finger*

Prints,⁵⁴ under the subject of Cores, illustrates the various types of staples as shown in Figure 100. No. 39 is the one of which "Walter's" is typical.

In making a careful study of the design of the core of the "Walter" right thumb in various impressions, we find slight differences, as would be expected, but it would be quite difficult to photograph and reproduce these in illustrations. We have, therefore, made a conventionalized diagrammatic study of this part of the thumb (Fig. 101). These five diagrams—A, B, C, D, E—are normal positives in relief which show the design as it would appear to one looking at the actual thumb. The joint line, also, is diagrammatically shown, with the bifurcation opening to the right, not with the idea of showing variations in the joint but in order to show schematically how it looks in relation to the thumb in relief.

The joint lines, since these represent positives, would be depressed, while the ridges, also indicated by black lines, would be raised.

It will be noted that about the only variation in these five diagrams is the relative position of the tips of the two ridges *p* and *y*. In some cases these are virtually in contact with the top of the staple while in others they are in intermediate positions, as may be seen. This may be due to difference in pressure, or to the condition of the wax at the time of making the impression, or to some factor in the impressing mechanism. Similar differences are often found in ordinary ink prints. While we have a number of prints of each of these types, most of them seem to fall into the group shown as B. The important point is that in all these cases the core is a staple.

There are also variations, as might be expected, in the prints which are normal negatives, and some of these are shown at F, G, H, I, and J. Most of them, however, seem to fall in group F, a positive of which would be approximately like A.

Most of the differences in the negative designs are not actual but are due to imperfections or entire lack of detail.

⁵⁴ Sir Francis Galton, *Finger Prints*, 1892 Edition, p. 75.



FIGURE 90.

A micro-photograph of the tip of the core of the right thumbs of "Walker" and Dr. "X". These represent negative impressions and the ridges of the negative—which in the real finger are the furrows—are numbered. Notice that in *A* the "Walker" print, ridge 5 is surrounded by a depression which would form a staple in the positive; while in *B*, Dr. "X's", ridge 4 is continuous with ridge 5, leaving a depression between them which would form a rod in the positive. These were both made on the same kind of wax and with identical illumination, yet notice the difference in texture and structure.



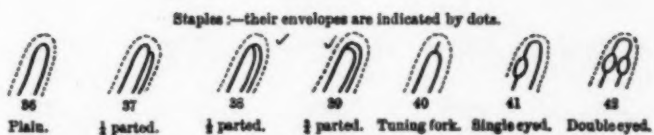
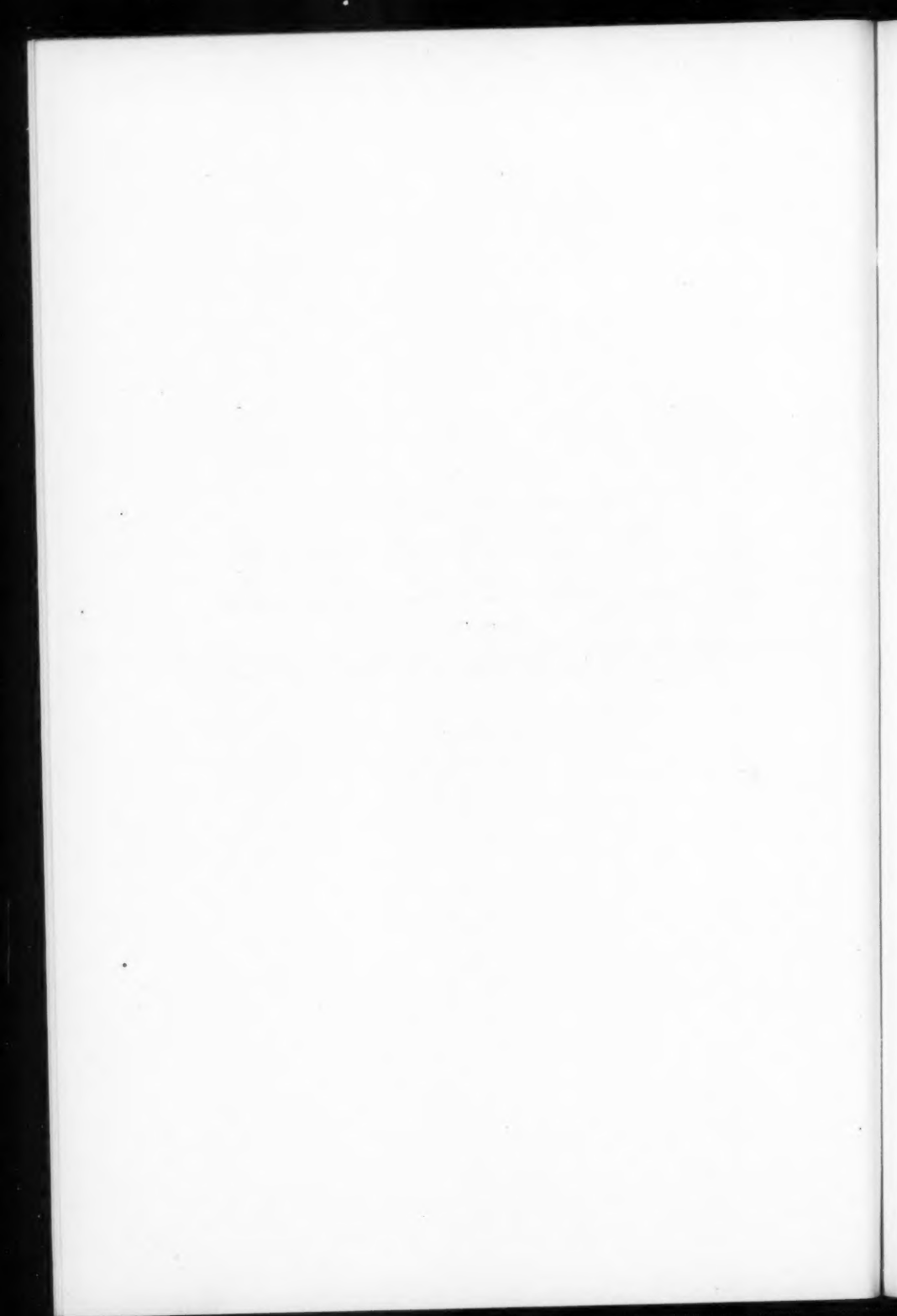


FIGURE 100.

Diagram taken from Galton's "Fingerprints" which shows various forms of staples, Nos. 38 and 39 being somewhat like that on the "Walter" right thumb.



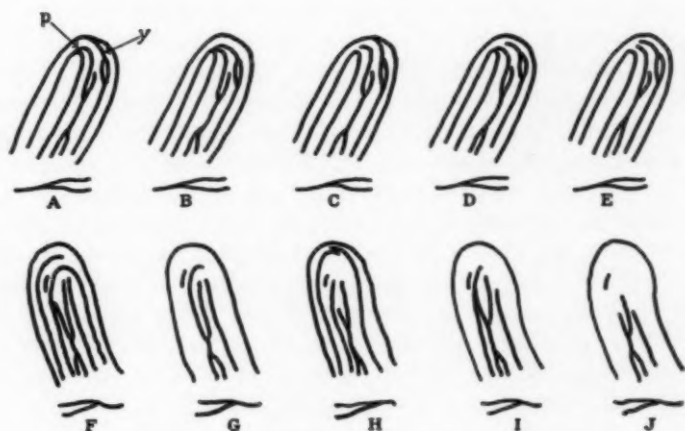


FIGURE 101.

Diagram showing some of the variations in the positive and negative impressions of the "Walter" right thumb.



Faint, illegible text, possibly bleed-through from the reverse side of the page.

DELTA

A careful examination of the deltas on the right thumbs of "Walter" and Dr. "X," under quite high magnification, (Fig. 102), shows that the angles of the ridges forming the delta are somewhat different from each other and that the deltas themselves are structurally different.

It may also be noticed that the core of the delta of the Dr "X" thumb forms a Y, while that of "Walter" does not; and that there are other unlikenesses which are apparent in the illustration. These may seem to be points of minor importance, but it is in the smaller details that the differences in these two thumbs are found. Mr. Wentworth, in his book on Personal Identification,⁵⁵ in order to illustrate slight differences that are not apparent to the eye, calls attention by diagram to two deltas which under low magnification appear to be alike, but which under high magnification are seen to show slighter differences than do similar areas on the thumbs of "Walter" and Dr. "X," but which Mr. Wentworth considers sufficient proof that they are different. To be sure, in his case he knew that the thumbs were of different persons, but he was trying to show to the layman how difficult it might have been to convince anyone unfamiliar with the subject that they were different.

It might be argued by some that by slight changes the ridges of the delta in "Walter's" thumb could be made to agree with those of Dr. "X," but that is no more true of these than it is of any two similar patterns of different thumbs, such as those shown by Mr. Wentworth, for instance. Furthermore, numerous prints of the delta of Dr. "X's" right thumb, when enlarged, show that these characteristics are always present, and the "Walter" characteristics consistently appear in such impressions as include distinct deltas. Therefore, it is perfectly reasonable to say that the deltas of these two thumbs are not identical.

SCARS AND CREASES

In discussions of this matter much has been made of scars, especially of one which it is claimed shows on the upper right

⁵⁵ *Personal Identification*, by Wentworth and Wilder, 1932 Edition, p. 325.

of the "Walter" positive reliefs, and one at the lower left of these same reliefs. The variability of these has been mentioned in the Journal. Sometimes they are present and at other times they are not visible.

On the other hand, such scars and creases as are on "Margery's" thumb or Dr. "X's" would show on any ink print that is well made. In other words, they are persistent, and, therefore, it could be taken for granted that they really exist even if it were not possible to see the actual thumbs.

In the "Walter" prints, however, they are so variable that it is not logical to use them in comparisons.

The only exception to this is in the case of the "Walter" left thumb, where a scar seems to show in all waxes. And while both Dr. "X" and "Margery" also have scars or creases on their left thumbs, they are radically different in location and orientation from that of "Walter's."

Further, as has already been pointed out, Dr. "X" has an old scar due to suppuration on his left thumb, which does not appear in any "Walter" thumbs which we hold.

Therefore, not much is to be gained from a study of these scars except in the case of the one on the "Walter" left thumb.

"Walter" claims that there are no scars on his right thumb, but that there is one on his left.

JOINT LINES

It may seem of little value to show a comparison of the joint lines of these thumbs, and apparently few data are available to show whether joint lines are permanent or not, but it seems probable that they do not change greatly during life. In this study one thing seems to be quite definite, and that is that the joint line of the "Walter" right thumb appears to have retained the same character and shape during all the years of these phenomena, having one large bifurcation and a smaller one on the upper branch. Dr. "X's" is quite different in shape as well as in size and character and has a small bifurcation on the upper line but no large bifurcation, although it might seem to have a large one since it is made up of two lines which almost blend, each one being somewhat tangent to the



(A) "Walter"



(B) Dr. "X"

FIGURE 102.

Micro-photograph, showing differences of structure between the delta of the "Walter" right thumb and the delta of the Dr. "X" right thumb.



THE
LIBRARY OF THE
CONGRESS
WASHINGTON, D. C. 20540

other but separating from it again. These are shown in Figure 103 at *A* and *B*. The diagram shows very clearly the differences in the two patterns. In the lowest figure one is superimposed upon the other in order to show the degree of their difference, the dotted line representing "Walter's" and the solid line Dr. "X's".

WRIST MARKINGS

One of the wax impressions (Fig. 9) that was made when "Walter" was attempting to reproduce his complete right hand shows, in the lower left-hand corner, skin marks which appear to have been produced by contact with the under side of the wrist near the tip of the ulnar bone. These seem to be quite characteristic, and as we have another instance of the same phenomenon in one of the Lodge prints,⁵⁶ we compared the two waxes and found that the texture was quite different, showing that while these two prints were both made supernormally and through the same mediumship, yet these skin markings show differences. Whether those on the Lodge waxes actually agree with Sir Oliver's skin markings, we do not know.

In order to make further comparison, we took wax impressions of the right and left wrists of both "Margery" and Dr. "X" and have examined all of these carefully under the microscope, and they all show decidedly different characteristics.

We are showing photographs (Fig. 104) of an area from the right wrists of "Margery" and Dr. "X" and the wrist marks (presumably of the right hands) on the prints of Sir Oliver Lodge and "Walter." The free surface of the epidermis is marked by a network of linear furrows of variable size dividing it into a number of polygonal areas.⁵⁷

These may be seen to show distinct differences of structure and none of them is the same as any other. This is another indication that the pattern of the "Walter" skin is not like that of any of the others.

The impressions due to the hairs are clearly shown and microscopic examination and measurement indicate consider-

⁵⁶ Journal A.S.P.R., March 1932.

⁵⁷ Gray's Anatomy, 21st Edition.

able difference in the width of these in the three cases studied, namely, those of Sir Oliver Lodge, "Walter" and Dr. "X."

This detailed comparison of the hands of "Margery," Dr. "X" and "Walter," which has quite completely covered both major and minor differences in palms and fingers and which, in the case of cores, deltas, scars, creases and joint lines, related only to "Walter" and Dr. "X," ("Margery's" characteristics being so markedly different that such comparisons are superfluous), quite clearly indicates dissimilarities which can not be explained on any reasonable basis other than that the impressions are those of entirely different hands.

There is one point which should not be lost sight of in connection with these waxes, and that is that under high magnification the surface texture of all the supernormally produced prints is of a distinctly different appearance from that of the normally made impressions. This is apparent to some extent in the microphotograph (Fig. 99) which appears on page 109.

In order to be able to note these surface differences the waxes should be freshly impressed, so that they may be examined before oxidation has had a chance to take place or the surfaces to dry out to any great degree, and they should be very carefully handled to avoid the soiling and wearing down of these surfaces. Almost all the older waxes have suffered from these conditions.

In investigation of psychic phenomena the utmost effort should be directed toward a sufficient repetition of the phenomena to afford a basis for a qualitative analysis, if not for a quantitative one.

In the case of these waxes we have done something approaching this, and a careful examination of all the waxes involved establishes the fact that the surface texture of the "Walter" prints is decidedly different from that of the waxes normally impressed by "Margery" and by Dr. "X."

Often, to the unaided eye, differences in sharpness of detail are noticeable between the impressions supernormally made and the others. While this is only a minor point, it lends additional weight to other evidence that tends to substantiate the claim that the "Walter" waxes were supernormally produced.

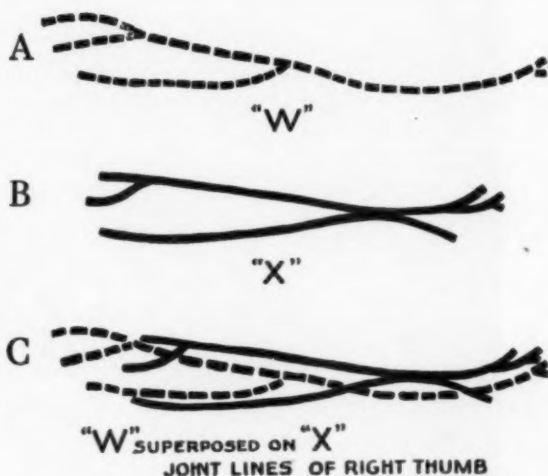


FIGURE 103.

Diagrams showing main differences in the joint lines of the right thumbs of "Walter" and Dr. "X". Notice that the "Walter" joint line is bifurcated, while that of Dr. "X" consists of two lines which are tangent. There is also considerable difference in size, which may be noted in the lower diagram.



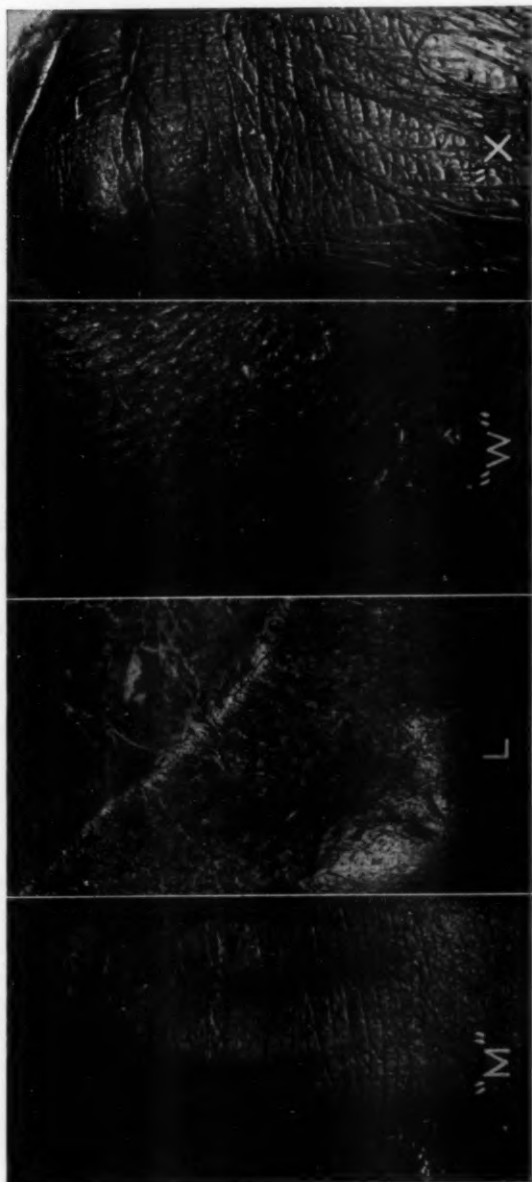


FIGURE 104.

A somewhat enlarged photograph of the skin markings on the wrists of "Margery" and Dr. "X". The two central views show what are supposed to be the same areas of Sir Oliver Lodge's wrist and "Walter's," both obtained supernormally. Notice that the structure is quite different in all four, as well as the size of the hair and the quantity of it.



XVIII

CERTAIN CRITICISMS

Briefly reviewing our discussion, we have presented in detail the "Walter" standard hands and shown the extent of their agreement with the old paraffin gloves and the wax impressions, and have considered points of similarity and difference in the hands of "Margery," "Walter" and Dr. "X."⁵⁸

Before we present our summary and conclusions we wish to consider the major points raised by the critics of these phenomena. As we have already said, these have related chiefly to the similarity of the papillary ridge design of the "Walter" thumb impressions to those of "Margery" and Dr. "X," and especially their close resemblance to those of the latter.

It seems hardly necessary to go into much further detail to show that in most cases the critics have been ignorant of the facts, or if they were acquainted with them, appear to have been quite arbitrary in their interpretations, to say nothing of the contradictory statements which have in some instances been made.

First in this connection we shall take up the report submitted by Mr. Bell on the thumb of the plaster cast.

During the fall of 1931 Mr. Bell, former finger print expert of Scotland Yard, sent a report ^{58a} to Lime Street "on the identity of the alleged supernormal 'Walter' print on the plaster cast of May 17, 1924" (Fig. 105) to the effect that this print is, in fact, identical with the imprint of "Margery's" right thumb and does not agree with the "well-known 'Walter' print." In this connection, special reference was made to a photographic copy of the latter bearing the date of February 3, 1927, appearing on page 700 of the Journal for December, 1928.

This criticism of Mr. Bell's was presented in connection

⁵⁸ Appendix XIX: Wentworth's statement on hands.

^{58a} Appendix XX: Bell's report on cast of thumb.

with the Sir Oliver Lodge prints, upon the identity of which he had already affirmatively reported, although just why he at this time brought up the subject of the plaster cast, which had no bearing on the Lodge prints, is not apparent, unless he wished to intimate that since (according to his opinion) the plaster cast was not what it was represented to be, there was no reason to suppose that the Lodge prints were any more genuine. However, at the time little attention was paid to this criticism, although Mr. Dudley intended to reply to it, and consequently took this cast and the photographs prepared by Mr. Bell, none of which the writer had ever seen, to use in connection with his proposed reply, leaving a signed memorandum to that effect, dated December 29, 1931, as has already been mentioned, page 33.

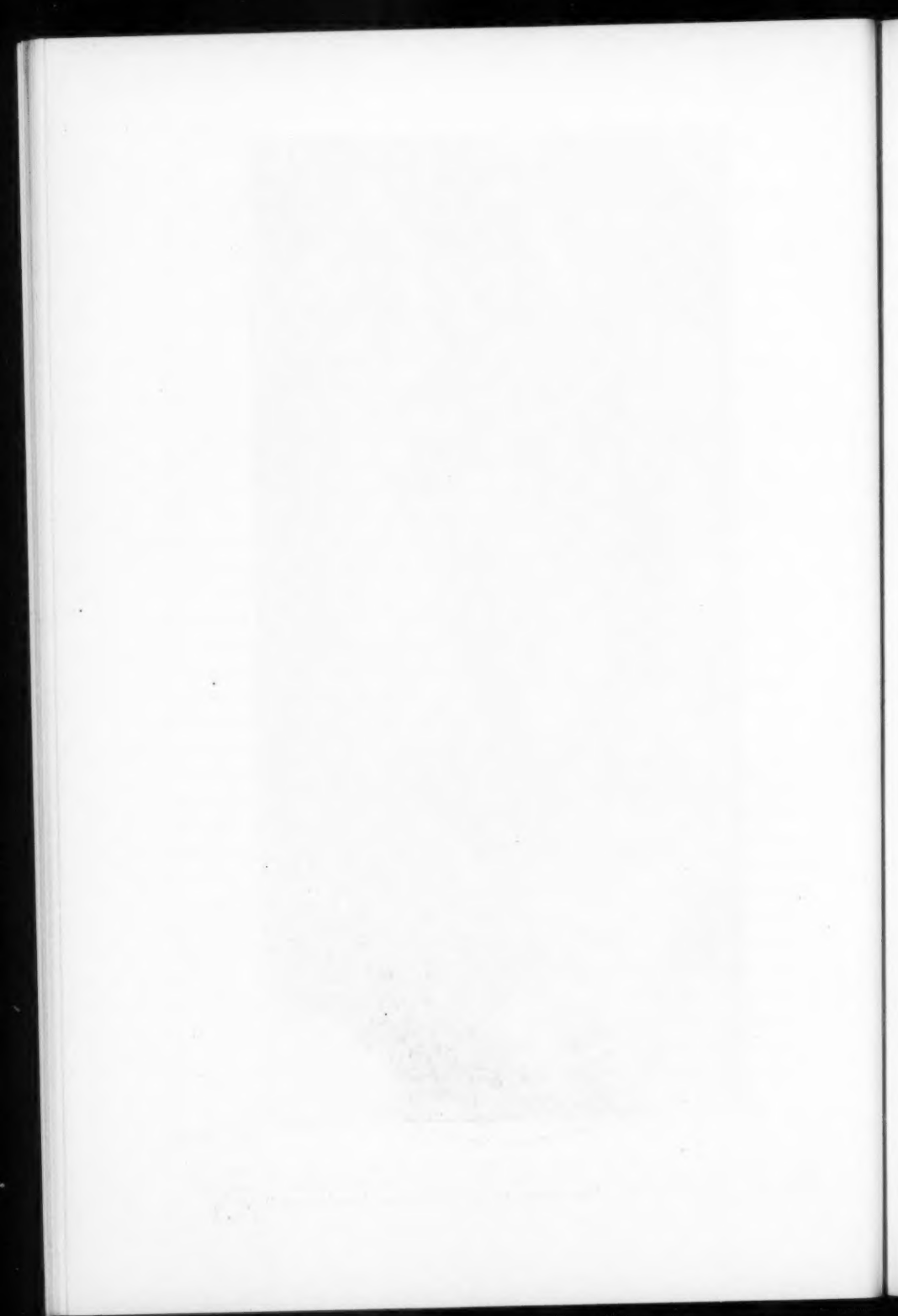
Some years ago Mr. Dudley wrote an article on this plaster cast of May 17, 1924, which appeared in the *Journal of the Society*⁵⁹ with a photograph of the thumb only, which showed the pattern more or less well. In this article he says, speaking of the persistence of finger-print patterns: "While on the subject of the persistence of these patterns let us not overlook the fact that this 'Walter' finger-print pattern is also persistent in its supernormal aspects. It has persisted as a unique pattern through more than two years, meanwhile undergoing all the vicissitudes of changes from negative to positive and through partial reversals into the mirror negative and mirror positive categories until, if it were not an ideoplastic structure it would seem that it must certainly have been changed beyond the possibility of recognition. But the pattern has persisted much longer than this, for, as noted in our February installment and in Mr. Fife's general report, above, it is this same pattern which is found on the thumb of the plaster cast of the paraffin glove of May 17, 1924. We present herewith a photograph of the bulb of this thumb sufficiently enlarged so as to make it an easy matter to recognize the essential similarity of the characteristic core and its surrounding ridges to the

⁵⁹ *Psychic Research*, December, 1928, p. 704, Dudley and Bird's article on plaster cast.



FIGURE 105.

The palmar surface of the plaster cast made from the paraffin glove of May 17, 1924. This was made by Mr. Kuntz from the original negative which he took and shows some fine detail. The ridge design of the thumb has since been obliterated.



corresponding pattern of the Walter positive prints in wax. An examination of the photograph in question and of the original plaster reveals much of interest.

"The print on the plaster is very complete down to a certain point, where paraffin appears to have flowed into the thumb; but below this main print another print has taken form. This lower print is apparently of an earlier period than the complete print, but it, too, is a normal positive. The lines of this second print are deformed at the right, as one looks at the photograph, and in this area a more careful study of the photograph and of the original plaster reveals a third partial thumb print. This last is of the same general pattern; and in so far as its lines can be followed it appears to be a mirror-reversed print. These subsidiary prints do not show as clearly on the photograph as on the plaster original, and we fear that they may be even less evident on the engraving. In such event, the plaster cast remains as evidence of the validity of what we have just said.

"In any case, the presence of these prints lends extreme renewed interest to an aspect of the Margery mediumship which, as Mr. Bird has said in print, has heretofore been made much of by the hostile critics and in behalf of which the medium's defenders have been unable to present much more than an apology. The plaster cast of this hand has been in Dr. Crandon's custody since it was obtained, but its anatomical imperfections and those introduced into it by the ineffective casting certainly so mark it as to make substitution theories ridiculous; and no one who examines the print now found on the thumb will suggest that it has been added since 1924. Accordingly it now becomes necessary to add, to the hypothesis of fraud covering the Margery mediumship, the very quaint notion that the present thumb-print sequence has in all its details been present in the medium's mind since May, 1924, and that she has waited until the middle of 1926 to start it on its way. This, of course, in addition to all the physical evidence of genuineness which this sequence presents when viewed on physical grounds alone.

"The discovery of these prints on the 1924 hand confirms the ideoplastic process in a remarkable manner. It also indicated, in view of the details just now catalogued, that the hand was the product of a trial-and-error method, and that some of the errors left their traces in the wax. That we have here a very respectable degree of evidence that we are now able to get, on demand, through the Margery mediumship, finger prints of a man who died in 1911, seems a conservative enough summary of the present paper. Galton, with true scientific caution, . . . limited the life of finger prints to the period of existence of the flesh in which they were formed. The evidence now being collected, a portion of which has been presented in this article, indicates that the true measure of persistence may lie in the period through which the mind or personality persists and maintains its ability to function ideoplastically in the three-dimensional world of our present physical existence."

As may be seen from the foregoing, this cast was recognized by Mr. Dudley and others as belonging to the "Walter" series, but to the best of the writer's knowledge Mr. Dudley has never made reply to Mr. Bell's criticism, although the conclusions of the latter were quite different from his own.

Since, as we have previously stated in this report, it is unmistakably evident that some of the ridges on this cast, including the core, have been obliterated at some time since the original photograph was made and before it came into our possession, we were unable to make a careful microscopic examination of its structure and markings, and we can not, therefore, state definitely whether it bore a "Walter" or a "Margery" print, but that it was of the ulnar loop type there is little doubt and on this point all seem to agree.

Furthermore, since Mr. Bell's report was to the effect that the plaster cast imprint and the right thumb of "Margery" show great similarity, and since we know that the "Margery" right thumb is not only of the ulnar loop type but also has a staple at the core, it would indicate quite clearly, as our examination of the photograph does, that the cast also originally had a staple at its core.

And we know, moreover, that if this were actually a "Walter" print it might quite naturally be similar to "Margery's" because of their relationship as brother and sister. That such relationship is shown by finger markings is evident from the statements of such authorities as H. H. Newman⁶⁰ of Hull Zoological Laboratory, University of Chicago; Kristine Bonnevie,⁶¹ University of Oslo; H. H. Wilder⁶² of Smith College; Francis Galton⁶³ and others.

But while we have imprints of the right thumb of the medium "Margery" and know its various characteristics, we have had nothing but a photograph of the cast, which was poor at best, for comparison, so we can not decide this point.

Moreover, since we are considering a supernormal phenomenon, we must take into consideration a curious situation which has arisen and is likely to arise again in the production of waxes and casts, one which could not possibly occur if they were made by normal human contact. That is the fact that there are times when some characteristic or characteristics of the medium's fingers are found in these wax impressions. We have already made mention of this. We are not offering any explanation as to the process by which it happens, but that it does happen is evident, and we feel that this fact should be called to the reader's attention because of the supernormality involved, since this tendency might easily account for the similarity of which Mr. Bell makes so great a point.

We have already indicated in this report, in our study of the photograph of this plaster cast, that the thumb still shows some indications of being a "Walter" right. It is of the ulnar loop type and the core is much nearer to the angle of the "Walter" core, relative to the joint line, than it is to "Margery's."

In order to try to obtain unprejudiced consideration of this point we took the matter up with Mr. Bert Wentworth, the

⁶⁰ H. H. Newman, "Studies in Human Twins", *Biol. Bull.*, LV.

⁶¹ Kristine Bonnevie, "Studies on the Papillary Pattern of Human Fingers", *Journal of Genetics*, XV.

⁶² H. H. Wilder, "Duplicate Twins and Doublet Monsters", *Amer. Journal Anat.*, III.

⁶³ "Palm and Sole Studies", *Biol. Bull.*, XXX.

⁶³ Francis Galton, *Finger Prints*, London, 1892.

Dean of finger-print experts in this country, to obtain his opinion. In his report⁶⁴ Mr. Wentworth states very definitely that this cast does not belong to either "Margery," "Walter," or Dr. "X," basing his conclusions on prints which he himself took of the thumbs of "Margery" and Dr. "X" and an examination of the impressions in wax of the "Walter" hands.

Mr. Wentworth states that this photograph of the cast is a miserable thing to work with, and we agree with him. However, here are the opinions of three qualified experts, no two of whom agree, for Mr. Fife says in his report,⁶⁵ as published in the Journal in Mr. Dudley's article, that this particular thumb agrees with a typical "Walter" wax impression.

Mr. Bell, in his report, stated very definitely that the thumb of this plaster cast agrees with "Margery's" right thumb and, in proof of this, furnished photographs of both showing eighteen skin ridge characteristics which are in agreement (Fig. 106).

Mr. Wentworth, on the other hand, states that this pattern is unlike that of either "Margery," "Walter" or Dr. "X." Therefore, with the evidence which the cast bore destroyed and three-finger-print experts differing in their opinions, we can not arrive at any definite conclusion. All we may do is to point out some of the features which seem to indicate that it was at least an attempt at a "Walter" thumb, viz: It is of the ulnar loop type with considerable indication that it had a staple at the core; the ridge count is high (as it is in the cases of all three, "Margery," "Walter" and Dr. "X"); the shape of the tip of the core is very close to that of the "Walter" right thumb and much like that of "Margery's," while the slant of the core is steeper than hers and more like "Walter's." The general shape of the pattern area of the thumb is more like that of "Walter" than that of "Margery," although smaller than either. In fact, the thumb, as well as the entire cast of which it is a part, appears somewhat smaller than our standard "Walter" hand although the finger lengths are about the same.

⁶⁴ Appendix XXI: Wentworth's report on cast of thumb.

⁶⁵ Appendix XXII: Fife's report on cast of thumb.

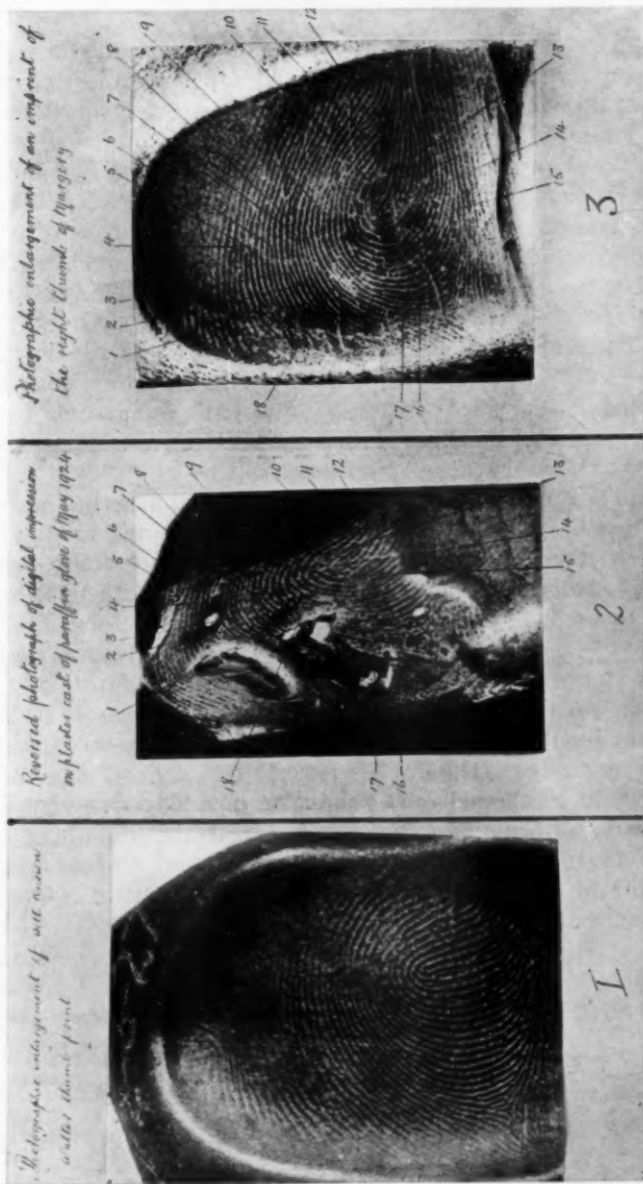


FIGURE 106.

Three photographs used by Mr. Bell in his report on the plastercast. Note that he has reversed the photograph of the cast (No. 2) in order to make the comparison easier.



This may be due to shrinkage of the paraffin, as well as to the partial collapse of the glove before the casting was made. Mr. Bell found eighteen characteristics in agreement with the "Margery" right thumb, which is not surprising when we keep in mind that this is a supernormal phenomenon and is, therefore, much more flexible than might be evident without close study. Dr. Bonnevie shows that in the cases of thirty pairs of hands of brothers and sisters the correlation was quite indicative,⁶⁶ although not nearly so high as in cases of identical twins.^{66a}

Mr. Bell appeared to appreciate the fact that this photograph was of a cast in relief, whereas Mr. Wentworth seemed to question its orientation.

Furthermore, Mr. Bell presumably used for comparison the photograph of the "Walter" print made on February 3, 1927.⁶⁷ This appears to be the same impression which Mr. Dudley is using and claiming to be that of Dr. "X," as we shall later see. We claim that this is not a true "Walter" negative print, and that it may be either a "Walter" partial negative, such as we have already discussed, or one of the impressions which were made by Dr. "X." In either case Mr. Bell would be quite right in saying the cast did not agree with it.

In March, 1932, in a letter to the American Society for Psychological Research, Mr. E. E. Dudley claimed to have discovered that the so-called "Walter" thumb prints were none other than those of Dr. "X," "Margery's" dentist, to whom we have already referred, and attempted to substantiate this claim by an exhibit in which are shown two photographs of what are purported to be wax prints of the "Walter" right and left thumbs, arranged for comparison beside those of ink prints of Dr. "X's" right and left thumbs (Fig. 107). In other words, Mr. Dudley, who until recently has had opportunity to examine all the "Walter" finger prints that have been produced, who was present when a large number of them were produced and

⁶⁶ Bonnevie "Studies on Papillary Patterns of Human Fingers", *Journal of Genetics*, 1924-25.

^{66a} H. H. Newman, "Finger Prints of Twins", *Journal of Genetics*, Vol. XXXIII, No. 3, Dec. 1930.

⁶⁷ *Psychic Research*, April, 1928, p. 201 and December, 1928, p. 700. Wax of 2-3-27.

in a sense acted as curator of the collection, and who had supposedly made a careful study of all of them, and wrote extensively about them, has come to the conclusion that these prints are those of this dentist.*

It seems rather strange, in view of all his years of close connection with the case, that this supposed identity should not have been discovered sooner, especially since on very good evidence Mr. Dudley had in his possession the very impressions which Dr. "X" made of his own thumbs previous to the appearance of any "Walter" waxes.

The question raised by this claim at the time it was made, if we understood it, was merely one of identity and in no way related to the genuineness of the phenomena, but some recent articles interpret the Dudley claim as proving fraudulent production. A most important preliminary inquiry in this investigation is, of course, as to the authenticity of the impressions used in the comparison.

The photographs of the "Walter" thumbs which have been used by Mr. Dudley in his exhibit to support his contention have been given very careful study, but the waxes from which these photographs were made have not been available for our examination. They have completely disappeared so far as we know. In the photographs the wax bearing the print of the right thumb, Fig. 81c, is dated February 3, 1927, and the wax carrying the left thumb impression (Fig. 107a) bears the date of August 23, 1927, and has a "2" marked on it. These two photographs are apparently those from which illustrations were made for use in the *Journal of the American Society for Psychical Research*.⁶⁸ They will be discussed later.

* The extent to which Mr. Dudley was involved in the experiments which produced the finger impressions is indicated in the following extract from an article written by Mr. Dudley himself in collaboration with J. Malcolm Bird in the *Journal of the A.S.P.R.* for December, 1928, p. 693:

"and particularly he (Mr. Fife) has been very patient and helpful with Mr. Dudley in connection with the latter's efforts to attain some degree of mastery of the dactylographic problems of the case. Since approximately the date mentioned just above (i.e. March 1927) these two have been regarded as having complete charge from the normal side of the thumb-print sequence and the work done thereon."—Editor.

⁶⁸ *Psychic Research*, April, 1928, p. 201, and October, 1928, p. 564. Wax of 2-3-27 and 8-23-27.

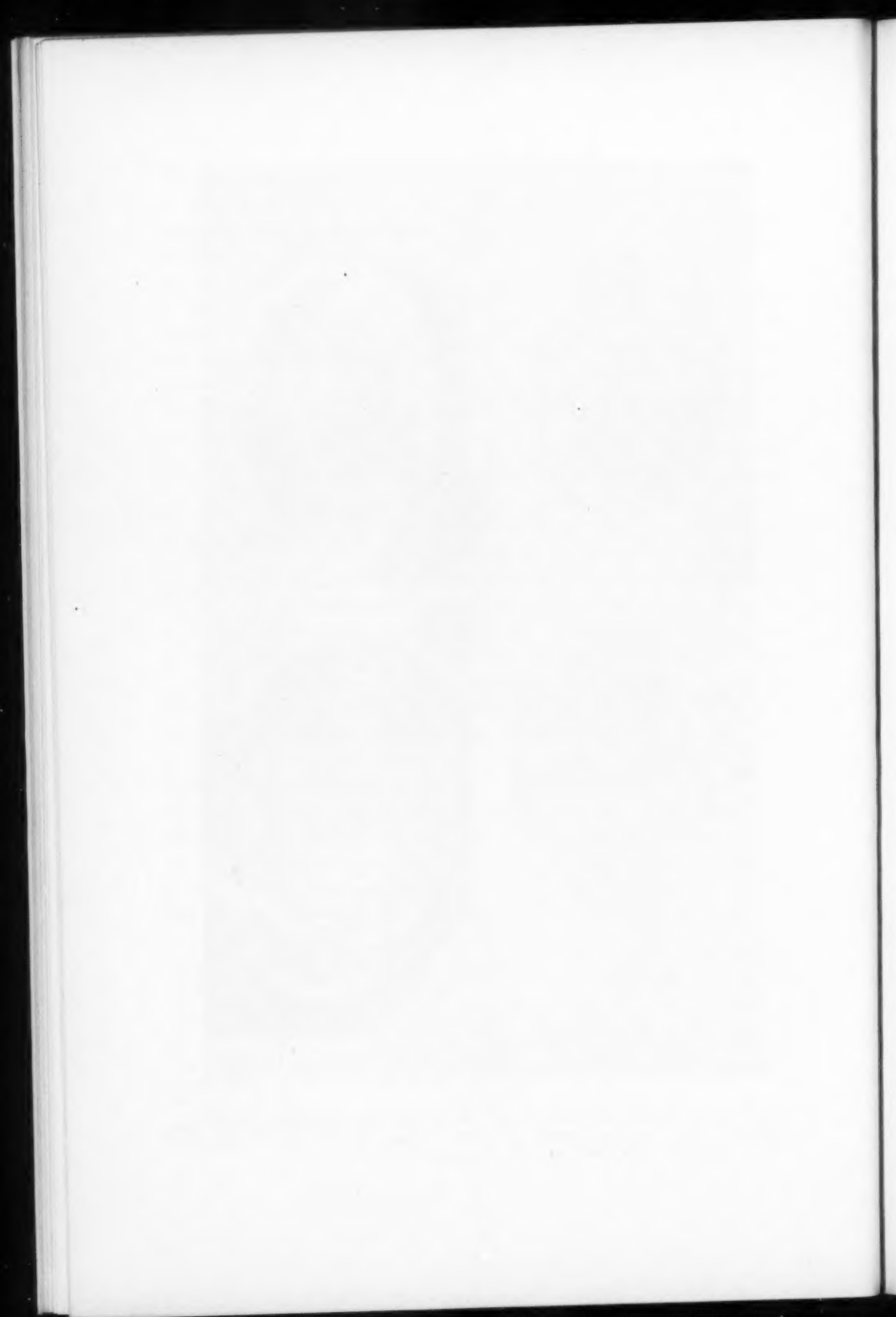




FIGURE 107A.
Left thumb of Mr. Dudley's exhibit.



It is interesting to note that most of the literature describing, classifying and discussing these wax finger impressions of "Walter," appears to have been prepared and written by Mr. E. E. Dudley himself, who, judging from his articles and signature on numerous sets of finger prints which he has made in the usual manner, considers himself a finger print expert.

At this point let us emphasize the fact that neither Dr. Crandon nor Dr. Richardson claims to know anything at all about the art of the finger-print expert. We are certain, after long contact with them, that neither one would attempt to identify a "Walter" print from any other, having in the past left this matter entirely to Mr. Dudley. While Mr. Fife has examined many of the waxes, it was always Mr. Dudley who was in charge of preparations for the séances and of the prints which were obtained, and it was he who made the ultimate identifications and prepared the reports for publication.

An investigation of a matter such as this requires more than the mere identification of two or more thumb print patterns by the methods of classification ordinarily employed.

We know that there are many qualified persons who are thoroughly familiar with the taking of finger prints and with the interpretation and classification of ink (or similar) prints such as are used in criminal and other identification systems. These experts, if shown two ordinary normal finger prints and asked whether or not they are identical, would give a definite answer, one way or the other, almost immediately; and if they were shown photographs of prints that were three-dimensional they would undoubtedly still be willing to express an opinion, naturally assuming that such prints had been made by pressing a thumb or finger into some plastic, thereby producing a negative. But if they were told that some of the three-dimensional prints were positive impressions (in other words, were in relief) they would naturally become suspicious and probably skeptical and begin to question the procedure; and if in addition they were told that some were mirror prints, either positive or negative, they would certainly be puzzled, if not incredulous, and want to know how they were made before expressing an opinion

on identity. Mr. Dudley, writing in the manuscript *Proceedings*, indicates the finger-print expert's attitude as follows:

"Normal finger prints are substantially constant as to pattern and the relationships of their minutiae; hence an identification can be established if comparatively few of the minutiae in the print under examination are related in exactly the same manner as in the record print. . . . It has also been stated that some of the Walter prints already described, and others of later date, show marked variations from the norm in one or another part of the imprinted area, variations which are not, apparently, a function of differences in pressure or the angle at which the digit contacts the wax, nor of changes in the plasticity of the imprinted substance.

"The invariability of normal finger prints is so firmly established that *it is only natural that the practical finger-print expert, trained to deal with such prints, should tend to look askance at any exhibits which behave in such an unorthodox fashion as do some of these Walter prints, assuming, no doubt, that the variations had been introduced mechanically.*" However, in these variant forms of a basic pattern there is recorded one of the chief characteristics of the structures which produce them: the extreme mobility of a substance that is apparently of organic origin, and, even in its larger aspects, seems to possess the power to change its form as rapidly as do some of the lowest forms of life—the single-cell animalculæ."

Elsewhere in the same manuscript Mr. Dudley writes:

"So invariable are these patterns as to their minutiae that the finger-print expert would be loth to believe that a print could have ten or twelve perfectly definite characteristics which correspond exactly with another print and yet have as many as two equally well-defined elements which did not so correspond. If faced with such a problem he might either refuse to make an identification or else insist that the latter minutiae *must* be accidents of impression. This attitude on the part of the experts is a perfectly logical one, and is based on the careful study of normal finger-print records for more than fifty years. Just

* Italics are the writer's.

how it may affect the evidence derived from a study of supernormal prints is yet to be determined."

We appreciate the skill and competence of the finger-print experts in the ordinary field of their work, but to practically all of them problems arising out of the supernormal production of prints would come as something entirely new and beyond the limits of their training and experience. As to such problems they can have no claim to be experts.

Indeed, it is not too much to say that to all but a very limited number of persons who happen to have had the occasion or opportunity to study the phenomena of supernormal prints, the subject is a veritable *terra incognita*. There are no experts in it. Quite obviously, therefore, the opinion of conventional finger-print experts in this subject cannot be given weight or authority beyond that of others, and certainly cannot be accepted as final or conclusive. Mr. Dudley, however, seems now to think otherwise.

There are, however, quite a number of persons of the highest standing on the faculties of our universities working along biological and anthropological lines who have given much time to the study of finger and palm prints in connection with the study of the characteristics of identical twins and similar human and animal relationships, who thoroughly understand dermatoglyphics, or the subject of skin markings, not merely for the purpose of classification but for use in biological research, and who are very familiar with skin structure. Moreover, they have developed scientific methods of measurement and of making impressions superior, for their purpose, to those generally in use in police practice.

But even this group of scientists who have made dermatoglyphics a specialty, have confined their researches to normal skin, both human and animal, and we know of no one among them whose experience has included the study of teleplasmic structures. Any student undertaking work in this field of supernormal manifestations must face and if possible overcome the handicap that he is under as a pioneer breaking new ground, with little of value in the work of others to guide him. Skill

in the field of normal dermatoglyphics is certainly of great value to the student of the dermatoglyphics of supernormal structures, but knowledge and skill in the former cannot be blindly transferred and applied to problems in the latter field. To do this would be to assure, not avoid, error. Variable factors of almost wholly unknown nature, range and effect enter into the production of these teleplasms and affect or condition their use and operation by the directing intelligence in ways that we as yet but dimly sense, much less understand. These factors must be taken into account by any serious investigator of the subject and until a scientist, whether in the field of biology, dermatoglyphics or police identification work, has, by actual study of the teleplasms and their manifestations, become somewhat familiar with, if not master of the pertinent facts, his opinion on particular problems is rather irrelevant.

Obviously, furthermore, the opinion of one who denies the existence of teleplasmic structures can hardly be valuable upon a problem that arises in respect to the physical effects produced by the supernormal structure, *e.g.*, impressions in plastic wax. Such a person will, of course, attribute the phenomena to normal production and will quite readily classify the claim of teleplasmic production as fraud. Science cannot pause for the laggards. It must go forward and leave them to debate among themselves.

We are satisfied that any reliable finger-print expert, if given the exhibit prepared by Mr. Dudley of the Dr. "X" and the two so-called "Walter" prints, would reach the opinion expressed by Sergeant J. Warren Toelken of the State Police of Massachusetts and Frederick E. Zwirz, Acting Captain in charge of Criminal Identification in the New York City Police Department, namely: that they are identical. We agree that the two left thumbs shown in Mr. Dudley's exhibit are identical and see no reason why they should not be, for since the photograph of the alleged "Walter" print is not in agreement with what we have shown to be the standard "Walter" left thumb, it naturally does not belong to the authentic "Walter" group, and may well be that of Dr. "X." As to the right thumb prints

shown in Mr. Dudley's exhibit, we agree that they are extraordinarily alike, but the reader who has followed our analysis of these impressions, especially our comparison of the "Walter" and Dr. "X" right thumbs, will probably see that this similarity may be only apparent—not real. To be sure, we have not had a chance to study the actual impressions shown in Mr. Dudley's exhibit and photographs are a poor substitute for the waxes and actual impression for such purpose, but we have presented the details of similar impressions in our own possession and have indicated a degree of major and minor difference which is sufficient to show that they are not identical.

Insofar as Mr. Dudley's photographic exhibit is concerned, we would call attention in the first place to the fact that he is comparing ink prints with impressions in wax, a proceeding which ordinarily would not be difficult, but which in the case of supernormal impressions is far from satisfactory, since these contain not only normal irregularities but supernormal differences which can not easily be accounted for and involve consideration of the variable factors above referred to. Such variations in these prints have frequently been commented upon by Mr. Dudley and others in the Journal.

Further, the ink prints which Mr. Dudley uses to illustrate the patterns of Dr. "X's" thumbs are not particularly well made and do not include a sufficient area around the delta; and as for the developed latent prints, they are quite unnecessary in this instance and add no value to the argument, although later we shall call attention to one feature of interest which they contain.

It will be apparent to anyone familiar with the genesis and development of the finger-print phenomena in this case, that producing in the séances prints of a living person has in fact been part of the program of experimentation. The production of the Sir Oliver Lodge prints followed an inquiry by the writer to "Walter" as to whether he could produce prints of living persons who were unknown to the medium or any of her circle, and experiments to test that possibility were under way when Mr. Dudley announced his alleged discovery. It must be con-

ceded, therefore, on the basis of past experience that the supernatural production of Dr. "X's" prints as part of a definite experiment having that result in mind, is not a novel idea.

Of course, "Walter" might have produced these Dr. "X" impressions, for he has made many thumb prints of living persons as has been stated, and has not always said at the time to whom they belonged. In one instance it was several months before we were informed by "Walter" whose print it was that appeared on a certain wax. And there are still prints, obviously not of the "Walter" fingers, as to the identity of which we are ignorant. However, there does not seem to be any evidence in the records which are available⁶⁹ that "Walter" made any unidentified prints on the dates which these waxes that Mr. Dudley uses bear, and, moreover, he is emphatic in his statement that he has never made Dr. "X's" prints, and that the prints he calls his *are* his.

Another possibility is that these disputed waxes may have been artificially made. The hypothesis that the medium or her friends made or procured a few artificial duplicates of a normal impression, is wholly unsupported by any evidence and contrary to all the probabilities. No understandable motive for such an erratic procedure can be reasonably imagined, and if these disputed waxes are artificially made duplicates of Dr. "X's" print, their source must be sought elsewhere than at Lime Street.

While it is not the purpose of this report to deal with the artificial duplication of waxes, we would say that enough investigation has been carried on by us in this line to convince us that it is quite possible to make artificially both two-dimensional and three-dimensional impressions exact enough so that, in some cases at least, they might be taken for genuine finger prints.

Mr. Dudley has a technique by which he can make duplicate wax prints in three dimensions. In fact at one time he prepared a number of such prints and submitted them together with a number of genuine ones to Mr. Button with the request that he

⁶⁹ Appendix XXIII: Minutes of meetings of 2-3-27 and 8-23-27.

should submit them to a fingerprint expert to determine whether such expert could distinguish the duplicates from the originals. Mr. Button submitted them to Mr. Fife who, in this instance, was able to detect the genuine waxes from the counterfeits within a few moments. In Bulletin XIX of the B. S. P. R.^{69a} mention is made of impressions so made.

Many finger-print experts claim that it is not possible to make artificial prints which could not be detected; but, on the other hand, we have letters from a number of well known persons who claim that it is, or may be, possible to so make them. We refer below to several printed articles on the subject.⁷⁰ Some of the waxes shown in Figure 4 were artificially made.

Finally, if these disputed waxes are normal negatives as is claimed, may they in fact not be those which were made by Dr. "X" long ago when he was showing "Margery" how Kerr could be used in her séances?

We wish to reiterate that Dr. "X," "Margery's" dentist, who had been a frequent observer of the phenomena at Lime Street although he had not attended the séances for some years, was the first person to suggest the use of Kerr and that he demonstrated to "Margery," on July 30, 1926, the manner in which thumb impressions might be made in it by making some of his own,* which "Margery" took with her when she left his office.⁷¹ Upon returning home enthusiastic over the possibilities of this new material, she talked the matter over with Dr. E. W. Brown, whom she found at the house attending her

^{69a} Bulletin XIX, Boston S.P.R., p. 44.

⁷⁰ Albert Wehde and John N. Bessel, *Finger Prints Can Be Forged*.

Ames on Forgery.

Osborn on Questioned Documents.

Osborn, The Problem of Proof in Disputed Document Trials.

Hagan on Disputed Handwriting.

* We have a signed statement from Dr. "X" to the effect that the only wax impressions ever made of his thumbs or fingers were those he made on the above-mentioned date and those made for the writer within the last few months.

Further, in an attempt to determine whether waxes made on or near the dates on which "Margery" had appointments at her dentist's differed in any degree from those made at other times, the writer checked the dates of the dental appointments with the séance dates and found that there were no differences in the impressions which could be interpreted as being due to any special mental influence on the part of the medium at such times.

⁷¹ Dr. "X's" dental appointment book shows "Margery" at his office on July 30, 1926.

mother who was ill, and his wife. Since he was familiar with the phenomena, "Margery" showed him the waxes and discussed the matter with him, and with Mr. Dudley who was also at the house. These normal negative wax impressions of Dr. "X" were given to Mr. Dudley. When it was time to leave, Mr. Wendell P. Murray, a lawyer, who was also present, and Dr. Brown drove Mr. Dudley to his home, and both men distinctly recall that Mr. Dudley took the waxes with him. Of what became of them after this, there is no record, but apparently they were never returned to Lime Street. Since Mr. Dudley had these Dr. "X" waxes in his possession before any "Walter" prints appeared, we fail to see why he should not long ago have noticed the similarity to which he is calling attention as a discovery made in March 1932, and consider that there is abundant reason to believe that the original Dr. "X" impressions may have been confused with authentic séance room waxes.

Let us consider a moment the wax Mr. Dudley is using to show the print of the right thumb, that bearing the date of February 3, 1927. This wax was evidently one of those he brought to the writer to be photographed in the group previously mentioned. In the group (Fig. 43) it is marked No. 11 and may be seen in the upper row, the only difference being that the date appears twice on our illustration, once at the top as shown in Mr. Dudley's photograph, and also again below the joint line, the writer having added the latter at the time he made the group photograph for the purpose of better identification. The outline of this wax, as shown in this group picture, appears to check with that shown in Mr. Dudley's exhibit.

In this group there are two other waxes which bear the same date (February 3, 1927) namely No. 9 and No. 10, so that there were at least three waxes marked with that date. In the manuscript Proceedings Mr. Dudley specifies that three waxes were obtained on this evening. The first (No. 9 in the group) is, according to him, a positive; this wax we have already discussed. The third and last made on this date (No. 10 in this

group) is listed as a normal negative, and in the manuscript Proceedings Mr. Dudley spends considerable time on a discussion of its peculiarities, as the writer also has done in this report (see page 50) showing that as a normal negative it would give a normal positive with a staple at the core. Just why Mr. Dudley should have picked out No. 11 for use as a standard negative when this other wax, No. 10, produced on the same evening, showed a different core pattern, we fail to see. We realize that his photograph of No. 11 shows very fine detail, but the upper part of the core of No. 10 likewise shows excellent detail. There is, of course, a possibility that this wax (No. 11) might come under the classification of a partial negative intaglio, a type of which we have already spoken in discussing "Walter's" difficulty in making mirror prints (see p. 67). This, however, can not be determined merely by examination of the photograph. It is possible that one of the original impressions of Dr. "X's" right thumb may have become confused with other prints and erroneously classed as a séance room production.

Taking now Mr. Dudley's exhibit of left thumb impressions, we do not know where the waxes he is using originated, but we are led to believe that they are either some of the originals that Dr. "X" made for "Margery" or else replicas made from them. There is in our mind very little doubt that in some way Dr. "X's" impressions have become mixed with those produced at the séance of August 23, 1927. In the Journal⁷² Mr. Dudley specifically states that only three waxes were made on this date and that all of these carried the same design, a fact attested at the time by Mr. Fife, who was present, and that since they were different from the usual "Walter" right thumb impression they were assumed to be impressions of "Walter's" left thumb for which Mr. Fife had asked.

In the manuscript Proceedings which Mr. Dudley likewise prepared, it is again stated that *three* waxes, bearing identical impressions, were made on this date, and the one illustrated in the Journal, which is the one he is now using in his comparison,

⁷² *Psychic Research*, February, 1928, p. 112.

could not have been one of these, if his statement made at the time, that all three were identical, is true.

A scrutiny of the picture of the print which he is using and which we assume he is calling a normal negative shows that it does not agree with our standard "Walter" left thumb. It happens, moreover, that we have in our possession two "Walter" negative left-thumb impressions, one marked 1 (Fig. 51) and the other 3 (Fig. 52), both of which bear this same date, August 23, 1927. The patterns on these are similar to each other and agree also with our standard "Walter" left thumb, but they do *not* agree with the impression Mr. Dudley is exhibiting which also bears this date and which is clearly marked 2. If these were the only waxes so dated, and numbered consecutively from 1 to 3, even though 2 is dissimilar from the others, the difference might be explained by the possibility of one of Dr. "X's" original impressions having become mixed in, but such is not the case. Mr. Dudley exhibits a broken wax showing an impression apparently similar to his No. 2, which he and his collaborators claim to have received from Mr. W. T. Hutchinson of Louisville, Ky., and which is said by them to have been given to Mr. Hutchinson at his request ^{73a} at the close of the séance at which it was produced. In the photograph this shows no date and we do not know whether or not it actually bears one. However, it does show the characteristic crease of Dr. "X's" left thumb and also the round scar due to suppuration. This, therefore, makes a *fourth* wax ascribed to this date, in contradiction of the contemporaneous record.

But now let us glance again at Figure 43, which shows the group of seventy-five waxes. In this group we find two waxes, numbers 47 and 48, both of which bear this same date, August 23, 1927. One of these carries a No. 2 and has all the other characteristics which go to prove that it is the one which Mr. Dudley is using for his comparison. So here are five waxes ascribed to this date, although, as we have said, on the one furnished by Mr. Hutchinson no date is indicated.

^{73a} B.S.P.R. Bull. XVIII.

How is it that there are four waxes bearing this date, three of them marked consecutively 1, 2 and 3, the fourth one apparently unnumbered? Our photograph of the latter is not sufficiently clear in detail to show the pattern, although there are indications that it is of Dr. "X's" thumb. Whether Mr. Dudley has this particular wax, we do not know, but we assume that he has it in order to be able to account for three.

It certainly seems strange that the wax furnished by Mr. Hutchinson should bear no date, while the one Mr. Dudley is using and the other, which we assume he has, are dated. We suppose this might be accounted for by the fact that he took only two home with him (we presume he always did his marking in white ink or chalk at home, as he did not do it at Lime Street), and that the third was not marked because Dr. Crandon, as is claimed, had given it to Mr. Hutchinson. Or perhaps the date was accidentally broken off, when the wax shown in the illustration in the Bulletin was broken.^{72a}

However, it seems very curious that Dr. Crandon should have given away to a practical stranger a new and unusual print, supposedly the first one made of "Walter's" left thumb. It seems much more likely that he would have given away an old one of the right thumb. Dr. Crandon wrote to Mr. Hutchinson asking him to relate what he could remember of this circumstance, and in his reply Mr. Hutchinson stated that he thought it likely that Mr. Dudley gave him the wax.⁷³

This is all very difficult to understand but, as we have said, we have in our possession two waxes, shown in Figures 51 and 52, both of the "Walter" left thumb, which are identical with our recently obtained left thumbs and both of which bear the date in question, August 23, 1927. We do not know where the third one is. It can not be claimed that the two waxes we hold are not the originals, for the dates they bear were placed on them by Mr. Dudley. In the course of time they were given to Mr. Fife for further study and were kept by him in his safe until he turned them over to the writer.

^{72a} Bulletin XVIII, Boston S.P.R.

⁷³ Appendix XXIV: Hutchinson letter to Dr. Crandon.

How is Mr. Dudley going to account for these four waxes, possibly five, two of which we hold, four of which bear the same date and three of which are numbered consecutively in addition, date and numbers having been scratched into the surfaces of all four by Mr. Dudley himself, when in his own signed articles he claims, in agreement with the contemporaneous record, that only three were produced on this date?

That these dates and numbers were all printed by Mr. Dudley there is no doubt, since we have many samples of his work; but in proof of this we are appending a signed statement by Mr. W. F. Turner,⁷⁴ an expert examiner and photographer of questioned documents, who attests that the printing is in Mr. Dudley's hand.

Mr. Turner checked the figures in the dates on the two left-thumb impressions which we hold, shown in Figures 51 and 52, against the same figures similarly used on the two waxes which appear in the group photograph (Fig. 43), and which have been enlarged and shown in Figure 108; as well as figures on numerous other waxes which his report indicates.

After Mr. Dudley's presentation to the American Society for Psychical Research of his alleged discovery that the so-called "Walter" thumb prints were actually those of "Margery's" dentist, whom we have called Dr. "X," and before there had been time to investigate the matter thoroughly,^{74a} he, in collaboration with several others, published his finding in Bulletin XVIII of the Boston Society for Psychical Research. The editorial preface to this Bulletin contained an excellent comment, as follows: "Psychical research is scientific in so far only as it is governed by the recognized principles of all other species of scientific inquiry. One of these recognized principles is that every fact pertinent to an investigation must be taken into account and given its due weight. To ignore demonstrated facts or to gloss them over because of advocacy of a particular theory is to commit treason against psychical research and subject it to contempt."

⁷⁴ Appendix XXV: Turner's report on lettering of dates.

^{74a} Appendix XXVI: Preliminary report. Thorogood-Fife-Adams.

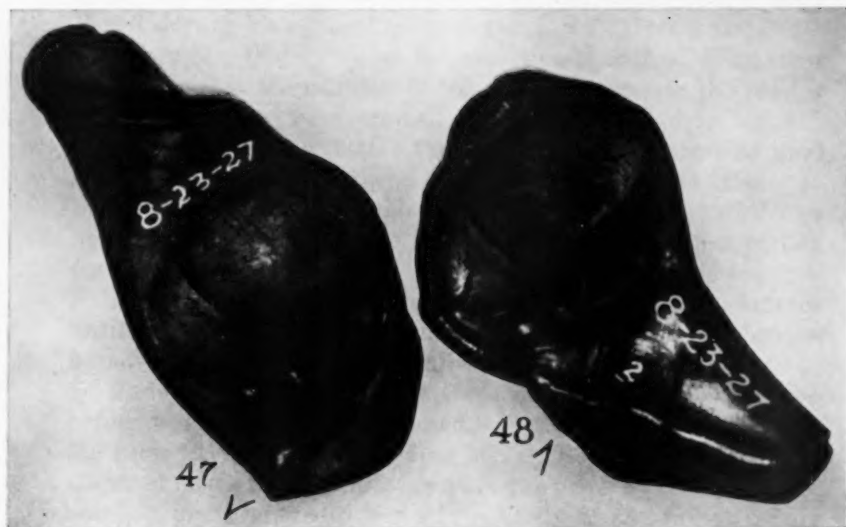


FIGURE 108.

Enlarged view of waxes No. 47 and No. 48 shown in group photograph, Figure 43, which were dated 8-23-'27 by Mr. Dudley. The two check marks were placed by Mr. Turner, handwriting expert, to indicate that the figures were made by the same person who dated the waxes shown in Figures 51 and 52.



[Faint, illegible text, possibly a caption or description.]

Had Mr. Dudley's collaborators been governed by this spirit, they might not have made the mistake of accepting unfounded allegations for results of scientific investigation. And if they had been familiar with Mr. Dudley's writings on this subject, they would have been aware that some statements in the Bulletin were contrary to facts claimed by him to have been established during his connection with the Lime Street group.

When Mr. Dudley makes the assertion that there is no clear indication that the minutiae of the ridge patterns in the plaster casts and waxes were studied he is criticising only himself. No one should know better than he what procedure was used in the examination of these casts and waxes, since it was to him that these details of the investigation were committed and he it was who prepared the greater part of the subject matter for publication.

However, these minutiae do not assume any great importance until some need of careful analysis arises such as has arisen because of the claim as to identity.

Undoubtedly, in the early days of these phenomena, the prints were not carefully studied. In the beginning no one of the Lime Street group, including Mr. Dudley, had anything but the most elementary knowledge of finger-print science, and they scarcely knew where to begin in a study of the prints. This obvious lack of skill and knowledge is in itself a fact that must weigh heavily against any theory that the group was engaged in a confederacy of fraud to produce artificial prints. But by the time enough of the prints had been obtained to form a basis for comparison, Mr. Dudley had acquired a fairly ample knowledge and skill in the subject and certainly devoted many hours to a careful consideration of their details, a fact of which he has often spoken to the writer, claiming that he alone knew anything about this subject and that no ordinary finger-print expert was competent to express an opinion. In view of this, we fail to see why he should now be so willing to urge the opinion of these experts as conclusive.

That he had not met Dr. "X" before the spring of 1932 is of no consequence since, as we have already shown, he had in

his possession on the very day they were made the wax impressions which Dr. "X" had made in demonstrating the adaptability of Kerr for séance experiments.

Referring to Dr. "X's" surprise and perturbation when he learned that "approximate replicas of his right thumb print had been well-distributed over the world as the prints of a ghost's thumb," and that his reply to the question of what he had done with the prints he had made in wax had been: "You had better ask 'Margery'," Mr. Dudley parenthetically remarks:⁷⁵ "(An entry in the writer's record of the séance of July 30, 1926—in the light of the above conversation—leads him to believe that the wax prints may have been made about that time, but the reason for this assumption cannot be given without disclosing the maker's name. *Had there been any previous intimation to the above effect these ink prints would have been sought years ago.*")"

It seems to us that actual possession of these very wax impressions of Dr. "X" was sufficient intimation, and that there was little excuse for not immediately checking the newly obtained "Walter" prints against them. And it is difficult to believe that Mr. Dudley failed to compare them. Moreover, Mr. Dudley, in the manuscript Proceedings, has recorded the fact that Dr. "X" was the person who first suggested the use of Kerr and provided "Margery" with several pieces of it. And when on that same evening the first "Walter" right thumb impressions were obtained they were found to be not *negatives* but *positives*, which no living person could produce directly. Because of the fact that Mr. Dudley had these negative impressions of Dr. "X's" thumb, must we claim that by his technique he made these positives from them? Certainly not! For while the core of the very first supernormal impressions can not be accurately determined, those of later date can in general be made out and the greater number of them have a *staple* at the core, while a true Dr. "X" negative impression would produce a positive with a *rod* at the core.

⁷⁵ Bulletin XVIII, Boston S.P.R., p. 3.

* Italics by the writer.

Mr. Dudley says, further, that the examination of Dr. "X's" ink prints in March, 1932, produced unexpected evidence of the fact that they are identical with the séance room right and left thumb prints of "Walter."

We have shown conclusively that, while there are many points of similarity in the right thumbs which tend to make them appear identical, especially if viewed in the photographs, the dissimilarity of the left thumbs is apparent to the most superficial observation.

That the right thumbs and the left thumbs which Mr. Dudley shows in his exhibits seem to check is of no particular moment, for they may all be normal or artificially produced prints of Dr. "X's" thumbs.

A statement is made that this comparative exhibit was shown to Mr. Fife on March 30, 1932, and that he agreed that the identification was complete. There is no argument in this. As we have already pointed out, any finger print expert would agree. We, ourselves, agree in the case of the left thumbs shown, and if we had only this exhibit for examination and knew nothing of the details, we should probably agree as to the right thumbs too.

In this exhibit Mr. Dudley shows for the right thumbs a poor and incomplete ink impression of Dr. "X's" thumb against a wax impression dated February 3, 1927, and has marked some twenty-seven points of similarity. We have indicated that this wax may be the product of any one of several processes, but not having the wax, and giving Mr. Dudley the benefit of the doubt, we would tend to class it, on the assumption that it was supernormally produced by "Walter," as one of the special phases of the "Walter" negative impression shown in Figure 67 at page 66, and marked D. This, we believe, is what "Walter" often refers to as a "mirror-print." We are not claiming that it is a true mirror-print, but simply that it is mirrored with regard to the slant of the lines.

We are showing an enlargement of the central part of a negative print (Fig. 109) similar to this wax of February 3, 1927, and it may be seen that in this the ridge forms a loop

in the center but that the upper part of it is very narrow, being actually somewhat lower in elevation, and showing a tendency toward separation. This is a very good illustration of possible incomplete reversal.

There are other points near the top of this core which differ from those in Mr. Dudley's illustration.

In no case, so far as we know, has he made a comparison of the deltas of the "Walter" and the Dr. "X" thumbs; in fact, the area of the delta of Dr. "X's" thumb is not shown in the print.

In the case of the left thumb exhibit, here again the ink-print of Dr. "X's" thumb is no more complete than is that of the right thumb, and it is compared with an undated negative impression in wax, although in the original exhibit, which we have already discussed, this wax carried the date of August 23, 1927.

Between these two left thumbs are shown some twenty-four points of agreement, and some of the creases and scars are identical.

There is, however, one crease or scar across Dr. "X's" thumb at the core, a little below the tip, which does not show in this ink print or in any of these wax impressions, so far as we can determine, but which does show in all the impressions we have made directly from Dr. "X's" thumb both in wax and in ink. This shows fairly well in Figure 110; and more clearly at C in the enlargement Figure 111; and for better comparison, we are showing in Figure 112 an enlargement of the photograph of the wax Mr. Dudley is using in representing this left thumb.

The absence of this mark in the prints presented by Mr. Dudley seems rather strange and is still further indication that the wax impression which is shown in the Dudley exhibit of left thumbs may indeed be one of the old impressions Dr. "X" made for "Margery," and that at that time it did not exist.

There is an additional exhibit of two left thumb impressions, one of which was furnished by Mr. Hutchinson, both of which likewise fail to show this characteristic mark across the upper



FIGURE 109.

Enlarged view of the core of a "Walter" partial-negative impression.
Note the difference between this and Figures 54 and 99.





FIGURE 110.

Negative impressions in wax of the right and left thumbs of Dr. "X". Note the small cut or crease near the tip of the core of the left thumb.





FIGURE 111.

Enlarged view of the core of Dr. "X's" left thumb, showing the cut or crease (c) near the tip.





FIGURE 112.

Enlarged view of core of left thumb of Dr. "X" which Mr. Dudley is using and which does not seem to show cut or crease shown in Figure 111.



part of the core. And since Mr. Hutchinson says in the letter which we have mentioned that he did not ask for a wax and thinks this one was given to him by Mr. Dudley, it looks as if this, too, might be one of the original Dr. "X" impressions.

The other left print illustrated in the Bulletin shows part of a wax of December 3, 1927,* and has Mr. Fife's initials scratched into it. As much of this left print as shows is similar to the others and there is no indication of this mark at the core.

The ridge counts in these do not seem to agree with Dr. "X's," although that may be due to poor reproduction in the photograph.

Whether or not this impression was made supernormally, of course we do not know, but, if so, it might easily have been changed, as have other waxes we have enumerated, by making replicas from one of the original Dr. "X" wax impressions which Mr. Dudley had in the first place. As he has had no recent waxes, these would naturally show the condition of the thumb as it was in 1926, rather than as it is now.

The joint line in this wax does not seem to be just like that shown in the other wax Mr. Dudley is using, dated August 23, 1927. No failure in reversal, such as we have shown as a possibility in the case of the right thumbs, would account for these differences in the left thumbs.

Thus, we may say of the left thumb shown in Mr. Dudley's exhibit that it does not agree with the standard "Walter" left thumb in any way; that there is no conclusive evidence that it was made supernormally; and that there is very good reason to conclude that these left-thumb impressions in wax are either original Dr. "X" impressions or replicas made from them.

We do not know upon what evidence Mr. Dudley bases his statement that there are one hundred and thirty-one prints of

* We have not had an opportunity to examine this wax, but we have a photograph which we think is of the complete wax (Fig. 113), and although, as we have said, it is not safe to analyze these impressions from a photograph only, the impression shown at the right in the illustration appears to be that of a negative of a right thumb, and the core appears to carry a ridge, so that if this impression were used as a die it would produce a positive with a staple at the core.

the "Walter" right thumb which are identical with that of Dr. "X." To us this means little, since we know that the greater number of the waxes which we hold—both old and new—are not like Dr. "X's" in all details. As to those that have been distributed in England, on the continent, and in Japan, we can say nothing, but we have already pointed out that in general photographs of these waxes are of little value.

Neither do we know why Mr. Dudley should have picked out the particular wax he did for his comparison, when there are others just as sharp and clear and distinct, but showing a different core.

As for the negative of August 18, 1927, we have shown conclusively that this and many others would produce a positive with a staple at the core of the thumb.

It may be true that a wax dated August 23, 1927 was marked by Dr. Twachtman, but Mr. Dudley wrote the record, and Dr. Twachtman does not seem to remember anything about it. The back of one of our waxes bearing a "Walter" left thumb impression shows some very poor and much deformed marks, one of which resembles an R. While the letter E which Mr. Dudley mentions and which shows in the illustration of his wax may be the one that Dr. Twachtman scratched on it, it has many of the characteristics of the E in KERR which was impressed by the manufacturer.

Mr. Dudley claims that he is accepting as a basis for his conclusions as to this identity ten or more clearly defined characteristics with no clearly defined differences.

We claim, and have shown, that there *are* differences, one of the most pronounced being at the core, where Dr. "X's" print shows a rod and the "Walter" print a staple.

So far as the photograph of the two waxes is concerned—one supposedly received from Mr. Hutchinson and one of December 3, 1927 said to carry an impression of the "Walter" left thumb, we conclude that while both may be photographs of Dr. "X's" thumb prints, they are certainly not photographs of "Walter" left thumbs in any respect. Whether the impressions they represent were artificially made we, of course, do



FIGURE 113.
Impressions of 12-3-1927.
(See footnote on p. 139.)

The first of these is the fact that the
the second is the fact that the
the third is the fact that the



The fourth is the fact that the
the fifth is the fact that the
the sixth is the fact that the
the seventh is the fact that the
the eighth is the fact that the
the ninth is the fact that the
the tenth is the fact that the

not know. In fact, the authenticity of so much of the evidence is questionable that, did we not have impressions which were obtained under our own supervision, we should not feel competent to express an opinion in the matter.

One thing which impresses us in this article in the Bulletin, and a fact which is most significant, is that Mr. Dudley, after the severing of his connection with the work at Lime Street, should have been moved to continue on his own responsibility further investigation of the identity of the "Walter" prints with the thought in mind that they might be those of one of the early sitters; and it seems more than a coincidence that he should so quickly have turned to Dr. "X," who was one of the earliest sitters, and who had discontinued his attendance at the séances even before the production of the paraffin gloves.

When we were considering individually the various positive and negative impressions of the "Walter" right thumb we mentioned now and then the appearance of some peculiarity, such as the excrescence which occurs on a few of the old and new positive waxes, which is always found in the same position, somewhat above the core, and which appears in at least one old negative print as a depression; or the variation of the position of the ridges, as of p and y in Figure 101 or the ridge disjunction which occurs occasionally, as in Figure 114 at B.

These variations are quite apparent to any one who studies these prints at all critically, and might by persons⁴ unfamiliar with psychic phenomena of this nature and who are convinced that the "Walter" finger-print is artificially made, be considered as evidence of imperfect manipulation of the impressing agent or die or of mechanical imperfections in it, since there seems to be no known physical condition of the skin which could account for the excrescence to which we have alluded. This may be true, but if so, the replica was of living organic matter, neither normal nor artificial, but supernormal.

The variation of the position of the ridges p and y shown in Figure 101 might be claimed to be due to a technical defect in the impression. Perhaps it is, but if so it is a supernormal defect, whatever its cause.

The ridge disjunction and difference in ridge count noticeable in some waxes may have been caused by a re-impression due to rolling which produced a repeat; but if such be the case it was the teleplastic terminal which did the rolling.

That these "Walter" waxes are variable among themselves has been frequently commented upon. The very fact that these variations do occur in these supernormally produced impressions, seems to us, however, added proof of their supernormal origin. With Geley,⁷⁶ we think that "the defects in some materializations do not imply fraud, but quite otherwise."

Since these supernormal impressions are made by ectoplasmic material they naturally record any imperfections contained in that material at the time the impressions were made.

If one raises a question as to how finger-print theory is going to account for thumbs on two different hands bearing the same design, the retort will very likely be made that the thumb must have been added separately anyway since it is impossible to make a negative impression of a whole hand with its five digits all at one time. This is partially true in a normal case although there are a few people who seem to be able to turn the thumb over into almost the same plane with the fingers. Artificially, of course, it can be done. But that is beside the point. Our standard "Walter" hands are in relief, not intaglio, and were not made by normal means, but directly by a teleplasmic structure which appears to be flexible.

Of course, there is no reason to suppose that separate fingers or thumbs could not be added supernormally, and not only has "Walter" stated that they can be so added, but in fact, from appearances and from his statements this actually occurred in the case of the finger tips added to the hand shown in Figure 13; but on our standard hands there is no indication of discontinuity of skin markings; and if this right thumb was a substitution then the substitution was accomplished supernormally and in consequence the whole subject becomes more complex.

Another noticeable feature, and one which some observers may question, is the finer and more natural appearance of the

⁷⁶ Geley, *Clairvoyance and Materialisation*, p. 239.

"Walter" left thumb in comparison with the right. It is quite apparent. We might perhaps account for this difference in structural quality on the basis that Walter Stinson, as a locomotive fireman, handled a shovel a great deal of the time and his right thumb naturally had harder use and greater wear than his left, in consequence of which the ridges would tend to be worn down and spread out.⁷⁷ It may be too much to ask anyone to accept this as an explanation of this difference but if the prints were normal it would undoubtedly be satisfactory.

Still another point and one which we have already stressed, is the fact that in the art of finger-print technique ten or more points of identity in two prints, if there are no marked differences, are considered to be sufficient evidence that the two were made by the same digit. In the case of normal or supernormal prints, if there were no differences worth considering, this might be true, but in this particular case we feel that the differences which are apparent in the "Walter" prints are too likely to be masked by the finger-print expert when he finds so many points of similarity because he will not—or cannot on account of inexperience evaluate the supernormal factor.

It seems as though the statistics relating to the probability of two different prints being of the same digit if they have eight or ten points of identity, and no marked differences make it impossible in finger-print practice to consider that these two impressions could have been made by different digits.

While the theory of probability may tell us much regarding the behavior of large groups which are subject to its laws it tells very little about any single member of such a group.

According to Galton⁷⁸ there is less than one chance in sixty-four billion that two finger prints alike in *all their minutiae* were not made by the same digit.

M. Balthazard of France expresses the ratio as many times that of Galton; while Seymour states: "If any two prints are alike in ten particulars the chances are one million five hundred

⁷⁷ Galton, *Finger Prints*, 1892 Edition, p. 59.

Wentworth, Wilder, *Personal Identification*, 1932 Edition, p. 309.

⁷⁸ Galton, *Finger Prints*, 1892 Edition, p. 100.

Kuhne, *The Finger-print Instructor*, p. 7.

sixty-two thousand to one that they were made by the same finger."

This is not the place to theorize on the doubtful value of some of these figures; but we believe that if the actual data pertaining to the minutiae of a large number of *extraordinarily alike* impressions were carefully examined, and the probability of likeness accurately determined, these figures would be radically changed.

Moreover, when we figure the probability of the time of occurrence of some particular happening it does not necessarily imply that the event cannot take place the very next instant, for it may—or the next—or the next.

Let us take, for example, the radioactive element, uranium—the heaviest element we have. It is estimated that of any large collection of uranium atoms one-half will have ceased to be uranium at the end of five billion years, due to the expulsion of the alpha-particles. If, however, we consider any one particular atom of uranium we cannot speak so accurately. We merely know that according to the laws of probability the chances are even that one-half of the entire amount of uranium will have disintegrated by the end of that period of time; but any given atom may expel its alpha-particle the very next second and so cease to exist; or it may not expel it for twenty billion times the above-mentioned length of time.

In the few calculations that have been made on the probability of duplication of finger prints the conclusions are based on quite meagre data when we consider all the people in the world, and if we understand correctly the finger-print experts' point of view—all those that have been*—or ever will be on this earth.

Of the few thousands of cases that have been investigated, study has been largely on the percentage of types rather than on the probability of identity of detail, yet the literature on finger-print theory in general strongly emphasizes the impor-

* It has been estimated that in the United States alone, during the last three hundred years, seventy or more million people have been buried. According to the statistics available some thirty-eight millions of these must have had ulnar loops on their right thumb.

tance of minutiae as the place in which to look for difference when any question of identity arises. However, it is probably true that the average fingerprint expert puts more weight on points of similarity than on points of dissimilarity.

That the impressions of two different fingers may have many points of identity there is no question. Balthazard in a report to the Academy of Sciences in Paris stated that one of the Bertillons found a case in which there were more than thirty identical markings in the imprints of twin brothers. Of course this is probably the best condition under which to obtain such similarity.

There is little doubt that more actual and accurate work with regard to the similarity of finger prints has been done in connection with the biological study of identical and fraternal twins than of non-related groups, and we have already shown through the courtesy of Professor H. H. Newman, a reproduction of a cut (Fig. 31a) showing the close approach to identity between patterns of homologous fingers of three pairs of twins. These are not the more frequent ulnar loops but they represent the way in which the centre or cores of patterns may show close resemblances even when the pattern is unusual or unique in character.

It is not surprising that anyone who is impressed by the similarity of the "Walter" right thumb impression to that of "Dr. X", should attempt to explain their differences of detail in terms of the artificial or fraudulent production of the former, especially if he is unfamiliar with the supernormal origin of the "Walter" impression or refuses to accept it is a possibility.

Dr. Harold Cummins does so. Although stating that the left thumb impressions of "Walter" and "Dr. X" were distinctly those of different digits, as also were those of all other fingers except the right thumbs, and despite noting minor differences of detail in the right thumb patterns, he nevertheless concluded because of their many points of similarity that the "Walter" prints must be poorly made mechanical replicas of "Dr. X's" right thumb, added separately to the hands since the thumb print could not be made simultaneously with the print of

the rest of the hand, and that the differences were due to faulty execution. We have shown that in these supernormally produced impressions of the "Walter" hands the thumbs were not made separately, but were made supernormally and at the same time.

Unfortunately, as we have noted elsewhere, several of the "Walter" waxes which were sent Dr. Cummins for comparison were later found to bear changed impressions and the discrepancies which these altered prints show undoubtedly strengthened his opinion.

This attitude on the part of anyone who has no first-hand knowledge of the supernormal production of these impressions is a perfectly natural one.

It is easy to understand how, in making an impression artificially, differences might occur in the plastic imprint—but in these supernormal prints this possibility would be ruled out, and the variations might be accounted for, as we have suggested, by lack of energy resulting in incomplete formation of the teleplasmic pattern or possibly its incomplete reversal when formed.

We, on the other hand, have shown that large numbers of "Walter" right thumb impressions have marked differences from those of any one else we have studied, not only at the core, but at the delta, and, therefore, irrespective of many other points of similarity these are basic differences of supernormal origin, which cannot be explained away by mechanistic theories.

CONCLUSIONS

In conducting our investigation of these phenomena, and particularly of the alleged identity of the "Walter" prints with those of Dr. "X," we have been concerned primarily with the waxes and casts as to which there is no question of authenticity as séance room productions. By this latter phrase we mean waxes claimed by the control "Walter" to be the productions of his own activity. We mean further to exclude by the phrase any waxes which there is reason to believe on the evidence may have been improperly classed as authentic through error, confusion, substitution or the like. Data which are suspect as to

origin or subsequent history or both, must be disregarded as valid evidence on the issue of identity, except as such data and the surrounding circumstances relating thereto have a bearing on the weight of the case in support of the claimed identity.

We have considered the arguments advanced by adverse critics of the case, but there seems little need for particular comment on them because they have been based upon Mr. Dudley's presentation of the subject and in general assume the validity of his evidence and the soundness of his conclusions. It is, furthermore, no part of the proper function of an inquiry into the facts to discuss, analyze or evaluate the arguments of controversialists who assume the truth and validity of the facts under inquiry.

We have approached the matter impersonally. Where our own investigation has involved personalities and facts not directly connected with séance-room activities but relevant to the investigation, the obligation to report fully and fairly on the facts as we found them made such a course inevitable.

In stating our conclusions we do not presume to offer any philosophical interpretation of the facts or advocate any hypothesis that would explain them or correlate them with the general body of scientific knowledge. In intention our report is exclusively factual. Where for convenience we have spoken of "Walter" as of a real person, we were adopting an almost necessary convention. That the phenomena are strange and unrecognized in any of the conventional categories of science should stimulate interest in them rather than excite derision for the attempt to examine them scientifically. The evidence for their reality is compelling and cannot be disposed of by the formula of denial, or be met by the assertion of hypothetical fraud. Skepticism is an indispensable attitude of mind for any researcher in this field; but reason and logic and intellectual integrity cannot be abandoned because the facts involved transcend ordinary experience. Scientific knowledge is not advanced by making gratuitously a blanket charge of fraud because no other conventional explanation is available. The most rigorous proof is and should be required to establish the reality of

mediumistic phenomena, but asserting the existence of fraudulent manipulations where there is no evidence to sustain the charge, is not only a violation of logical theory and rational method, but a species of dishonesty that betrays prejudice, incapacity and a moral unwillingness to face realities that may threaten the cherished beliefs of a lifetime. The reality of the finger-print phenomena as a genuine supernormal manifestation in the "Margery" mediumship is to our mind established by overwhelming and rigorous proof. Their interpretation and philosophic implications are beyond the scope of this Report.

The evidence which we have set forth, referred to and discussed in this Report establishes the following facts, and justifies the conclusions which we draw:

1. That the "Walter" voice is supernormal and is governed by Intelligence of no mean quality.
2. That this Intelligence usually attains its declared objective, and without serious error or variation from the announced program.
3. That having no lifetime record of the finger patterns of Walter Stinson, deceased, we accept *ex necessitate* as *prima facie* proof the statements of the "Walter" voice as to the identity of the "Walter" prints, since we have found over a period of years that the statements of the "Walter" voice are to be relied on.
4. That identifiable finger impressions, in a plastic, of known persons, both living and deceased, have been supernormally produced by the aid of this Intelligence.
5. That there seems to be no logical reason why this Intelligence, if it be the independent entity it claims to be, should not be able in like manner to reproduce the designs of its own lifetime fingers.
6. That even though this Intelligence reside in the medium, masquerading as her deceased brother, there still seems to be no logical reason why it should not be able to reproduce his lifetime finger prints.
7. That we have obtained under severe condition of control many "Walter" impressions.

8. That the standard "Walter" hands (Figs. 5 and 6) were supernormally produced.
9. That the friction ridge designs of these "Walter" hands are unlike those of the hands of any person present when they were made, or of any persons who have attended séances at Lime Street and whose prints are on file.
10. That finger impressions of persons specified by the investigators have been supernormally produced through the agency of this Intelligence and later found to agree with the normal ink prints of the persons specified.
11. That the wax and other plastic material used by us in our experiments was furnished by us and was identifiable, and that many impressions of fingers and hands were supernormally obtained on these original plastics through the agency of this Intelligence.
12. That there was no possibility of the use of molds, dies, or other artificial devices or normal physical mechanisms in their production, nor of their production by a confederate or by natural human fingers.
13. That the "standard hands" were supernormally produced through the agency of said Intelligence at the request of the writer as a step in an experimental procedure to establish the orientation of the thumbs.
14. That plaster casts from early paraffin gloves show many points of agreement in ridge design with the standard hands, and no significant differences.
15. That in particular the plaster cast of the earliest recorded paraffin glove—that of May 17, 1924—shows many indications of having been an attempt to produce a "Walter" right hand, and probably included some characteristics of the medium's own hand.
16. That an index finger of the right hand, obtained in a séance held more than seven years ago, agrees with the homologous finger of the standard right hand; and that there are numerous points of agreement between a little finger produced at that time and our recently obtained homologous finger.

17. That old wax impressions, as well as more recent ones, which were classed as "Walter" prints, whether negative or positive, have in general been shown to agree with our recently obtained hands. Some of the impressions were obtained at solus sittings; others away from Lime Street and without the presence of Dr. Crandon; and still others in another location under another mediumship without the presence of "Margery."
18. That among these waxes are some containing both positive and negative characteristics; others that appear to be partially mirrored; and still others which seem to have "Walter" characteristics in general but show apparent differences at the core or in other parts.
19. That these different forms and variations of impressions are all phases of the "Walter" impression, some having been produced in immediate response to requests for such variations preferred as part of an experimental procedure.
20. That we have correlated statements made by "Walter" with regard to the difficulty of making various types of impressions, both positive and negative; his attempts at the production of partial mirror prints; and the reason why a right-hand impression may appear to be made by a left hand, and have based a working hypothesis upon them.
21. That the actual mechanism by means of which impressions are made on waxes during a séance is some kind of a teleplasmic pseudopod or exteriorization from the medium, physically manifested during trance and under the control of the Intelligence governing the voice; that such mechanism assumes various shapes and may appear as a rod, terminal or simulacrum, more or less complete, of a human hand; and that it is apparently re-absorbed by or into the body of the medium. That such teleplasmic structures are not embraced within any category of biological or anatomical knowledge, and are definitely supernormal.
22. That the hypothesis which we have presented, on a purely metaphysical basis, at least serves the purpose of giving a picture of a mechanism which might produce the varia-

tions and different phases of the phenomenon, and may be used as a tentative working hypothesis.

23. That a complete teleplasmic hand or finger is not necessary for the reproduction of the design of any of the "Walter" hands or fingers, but that these designs may be impressed by a teleplasmic rod or terminal.
24. That at least some of the early waxes now bear impressions unlike those shown in the original photographs of these same waxes, and that these changes were not supernormally produced.
25. That the palms of the hands of "Margery," "Walter" and Dr. "X" are all different.
26. That the ridge patterns of these six hands are distinctly different one from another.
27. That the core of the "Walter" right thumb is a staple, whereas that of Dr. "X" is a rod.
28. That there are impressions in which the core pattern is clear and distinct, and others in which there seems to be a plateau in the positive or a sink in the negative at the tip.
29. That the delta of the "Walter" right thumb is different from the delta of the Dr. "X" right thumb.
30. That there is a definite difference between the ridge interval of the "Walter" right thumb and the ridge interval of the Dr. "X" right thumb.
31. That whatever scars and creases may at times appear on the "Walter" right-thumb impression cannot be used as points of identity or difference as they seem to be variable and are not always present, while those on the right thumb of Dr. "X" are constant.
32. That the joint line of the "Walter" right thumb is distinctly different in form and size from that of Dr. "X."
33. That what appear to be skin markings of the wrist in the "Walter" impressions are quite different from the skin markings of Dr. "X's" wrist, and those of the supernormal impressions of Sir Oliver Lodge, as well as "Margery's" normal wrist impressions.

34. That the size of the imprints on "Walter" waxes that would correspond to the hair on the "Walter" arm is quite different from the size of the imprints made by hair on Dr. "X's" arm.
35. That in the relief impressions of the "Walter" right thumb the ridges appear somewhat worn, flattened and spread out in comparison with those of the "Walter" left thumb; while the ridges on both of Dr. "X's" thumbs are quite well defined and leave clear cut impressions in the wax.
36. That the "Walter" wax impressions viewed under a microscope present a different surface appearance from normal impressions in wax similarly observed.
37. That Dr. "X" demonstrated to "Margery" the possibility of using Kerr in these experiments by making impressions of his own thumbs and that these were given to Mr. Dudley.
38. That the right thumb which Mr. Dudley has used in his exhibit as a "Walter" thumb, if it was supernormally produced through the agency of the "Walter" Intelligence, may possibly be classed as a "Walter" partial negative.
39. That if it is not of supernormal production it is probably either one of Dr. "X's" original impressions or a replica from one of them.
40. That the wax which Mr. Dudley is exhibiting as that of the "Walter" left thumb is entirely different from the thumb of the standard left hand and the earlier waxes, but that it is very much like, if not identical with, that of Dr. "X."
41. That our recent wax and ink impressions of Dr. "X's" left thumb in all cases show a crease or light cut through the core and a little below its tip, whereas those of Mr. Dudley's exhibit with perhaps one exception do not show this.
42. That two of the three "Walter" negative left-thumb impressions obtained on August 23, 1927, agree with that of our standard "Walter" left hand, and are free from all question as to origin and subsequent history.
43. That the impression which Mr. Dudley is showing as having been made on August 23, 1927, could not be one of the three impressions produced at that time if all three were alike,

- as the contemporaneous records assert, since it does not agree with the two mentioned in the preceding paragraph.
44. That although all the contemporaneous and relevant records distinctly state that only three impressions were produced on August 23, 1927, there are in fact five impressions attributed to that date. Obviously if the records are correct some of the impressions are spurious and must be eliminated as incompetent data on the issue of identity.

From our presentation of this subject it seems evident that our standard hands must fall into one or another of the following categories:

- First. That the impressions they bear are composite (*i.e.*, made up of parts of the hands of different individuals).
- Second. That they are impressions or models of the hands of some one unknown person.
- Third. That they are impressions of the hands of one Walter Stinson, deceased, and as such are unique.

Let us consider these three possibilities in the order in which they are presented:

- First. The demonstrated supernormal powers of the "Walter" intelligence (1) to produce finger impressions coinciding with the recorded normal impressions of persons both living and dead, and (2) to produce impressions compounded of both positive and negative characteristics, make it quite impossible to say that such powers are unequal to the production of a positive model of hands displaying skin patterns that correspond in their different parts with patterns found on the homologous parts of the hands of different persons—a composite hand, in other words. To postulate limits to the field of the possible exercise of a power or faculty so strange and so little understood would be perhaps presumptuous and certainly unwarranted by the evidence. The persistence, however, of many detailed characteristics and minutiae for so many years in scores of impressions purporting to be of the same digits, would rather indicate a fixed, definite original hand and not a

mere assembly of patterns from different hands. The evidence, including the statements of the "Walter" voice as a legitimate part of the data, seems to us to justify the conclusion that the impressions of the "Walter" hands are not composites but correspond to unique originals. The occurrence in the standard "Walter" hand (Fig. 6) of an impression of a scar corresponding to a scar actually existing on the hand of the medium is a fact for which no explanation can, in the present state of our knowledge, be offered; but we do not consider that it requires the hand to be classed as a composite.

Second. If the patterns on these hands are those of some living person or of a deceased person other than Walter Stinson we do not know who that person is, for these impressions are not identical with the recorded ink prints of anyone who has attended the séances, or of any other person, in so far as we have been able to determine. The right thumb impressions are not identical with those of Dr. "X" although they are very much like them. Moreover, the impressions of the other fingers of this hand are wholly different from Dr. "X's." As to the left hand there is no doubt that in detail and as a whole it is different from Dr. "X's." If, however, we assume that the right "Walter" thumb is identical with Dr. "X's" right thumb, we should then have an anatomical paradox—the hands of two different individuals, showing distinctly different characteristics as to the remaining fingers and palms, but with identical thumbs. This according to finger-print theory is impossible.

Third. Since, during our entire investigation of the "Walter" phenomena, the statements of the "Walter" voice have been found to be accurate, there seems to be no reason why we should not accept its statements with regard to these particular phenomena. It seems reasonable to accept these prints as unique, especially in view of the fact that they have consistently shown the same characteristics from the beginning. We feel justified, therefore, in accepting them tentatively as the prints of the hands of Walter Stinson

as they were in life. Whether "Walter" the controlling intelligence be a distinct entity or a subjective manifestation of the medium "Margery" is a question beyond the scope of this report and seems to us to be of less importance at the present time than the demonstrated fact that these *phenomena are supernormal* and the *prints apparently unique*.

Our conclusions, therefore, are as follows:

1. There is no evidence of fraud, trickery or the use of any normal mechanism in connection with the séance production of the "Walter" finger-print phenomena.
2. These "Walter" phenomena are definitely proved by the evidence to be supernormal.
3. Neither of the "Walter" hands as a whole nor as to any of the component parts, is identical with that of any known person or persons.

We herewith make appreciative acknowledgment of the assistance rendered by many experts in different lines of research, among them being Mr. Bert Wentworth, and Mr. John W. Fife, finger print experts; Dr. Harold Cummins, Professor of Anatomy at Tulane University; Dr. Walsted, Professor of Metallography and Dr. Bunker, Professor of Bio-Chemistry, both of the Massachusetts Institute of Technology; Mr. Charles Wells, expert microscopist; Mr. Wm. H. Kuntz and Mr. Lee Bowman, experts in photography; Mr. Hayes of the Bausch and Lomb Optical Company; and the Folsom Engraving Company.

The writer is especially indebted to Dr. and Mrs. L. R. G. Crandon, for their willingness to allow a study of the phenomena under rigidly imposed restrictions; to Mr. Wm. H. Button, President of the American Society for Psychical Research, and to Mr. Daniel D. Walton, Chairman of its Research Committee, for their patient consideration, in the face of no little criticism, in allowing time for an unhurried examination of the data; and to Professor Ralph G. Adams, of the Department of Mechanical Engineering of the Massachusetts Institute of Technology for his valued assistance in the séance room.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME
BY
JOHN HUTCHINGS
OF THE BOSTON BAR
IN TWO VOLUMES
VOL. II.
BOSTON: PUBLISHED BY
J. B. ALLEN, 1827.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME
BY
JOHN HUTCHINGS
OF THE BOSTON BAR
IN TWO VOLUMES
VOL. II.
BOSTON: PUBLISHED BY
J. B. ALLEN, 1827.

APPENDIX

I.

Boston, Mass., March 11, 1932.

Mr. W. H. Button,
27 Cedar Street,
New York City.

Dear Mr. Button:

I enclose Chapter LVI together with the photographs belonging thereto. I sent Bird some of these pictures a long time ago, and when I was in New York I tried to find them. Without any success! The prints had to be remade; hence the delay.

I have held out Chapter LXXVI, Outline of Finger-Print Evidence, because I have additional evidence which will necessitate some changes in the preceding chapters; not extensive but involving a paragraph here and there in several of those chapters which have suffered one revision. This applies only to the finger prints.

I believe that the first page of Chapter LV "Problems of Control," can be improved, as well as a few sentences in some of the subsequent pages. I am anxious to make it as strong as possible.

Sincerely yours,

E. E. DUDLEY.

II.

Boston, March 18, 1932.

Mr. W. H. Button,
27 Cedar Street,
New York City.

Dear Mr. Button:

I enclose additional data on the reproduction of normal three-dimensional finger prints by means of dies.

In my letter of March 11th, I stated that I had obtained additional evidence in connection with the finger-print matter

which would necessitate certain textual changes. This consists of the identification of the right and left thumb prints known as "the Walter Prints," with the thumb prints of a living person, one of the early sitters in Lime Street séances. After these had been enlarged and analyzed I took them to competent experts who agreed that the identification was unusually complete.

Naturally this evidence will alter certain parts of some chapters, and will call for a careful checking of all the material for possible inconsistencies. I trust that you will return the galley proof as soon as possible so that I can clean this up with the least possible delay.

Fortunately most of the material deals only with facts and has been conservatively stated. Nevertheless, I wish I had known of this before I put in so much time on some of the chapters. It could have been finished by now.

Two things are proved: three-dimensional prints of normal form can be successfully duplicated; and the "Walter" prints are not those of Walter Stinson, deceased. Therefore, the prints of a living person have been made since the beginning of the experiments.

I learned from Margery, this afternoon, that you have been successful in obtaining a "Walter" print in a closed box. Congratulations.

Sincerely yours,
E. E. DUDLEY.

III.

THE MARGERY MEDIUMSHIP¹

AN INTERESTING DEVELOPMENT IN THE FINGER-PRINT SERIES STATEMENT ON BEHALF OF THE RESEARCH COMMITTEE

In the summer of 1931 the Society engaged Mr. E. E. Dudley to assist in the preparation of material for the forthcoming volume of the Proceedings on the Margery mediumship. The subjects involved were largely confined to telekinesis and the

¹ Journal A.S.P.R., Vol. XXVI, No. 7, July 1932, pp. 266-268.

series of finger-print experiments. By the middle of March, 1932, the work had been practically completed when Mr. Dudley wrote Mr. Button that he had just discovered that a certain right and a certain left thumb print attributed to "Walter" were identical with the right and left thumb prints of a living man, Mr. X, who had been a frequent sitter at Lime Street prior to sometime in 1925, long before the beginning of the finger-print series. Mr. Dudley exhibited at Lime Street photographs of the prints involved with indices showing the similarities alleged by him to exist. These photographs were later delivered to members of the Research Committee and showed superficially striking resemblances. Mr. Dudley claimed that the similarities were so clear that there was no need of any further inquiry; that he had settled the matter and that any layman would concede the identity. This attitude, however, in view of the circumstances surrounding this sudden and belated discovery of the alleged similarities, did not commend itself to the Research Committee. Mr. Dudley was advised that when a proper investigation of all the facts and circumstances had been made by the Society, the results would be published either in the Proceedings or the Journal, and he was asked to prepare in publishable form a statement of the facts as he thought them to be and of his claims in respect thereto. On April 4th he promised to do this, saying it would take but a day or two to prepare his paper. His statement, however, was not received from him by the Society until June 13th, over two months later.

In the meantime the Society immediately began an active investigation of the matter. During the past six years there have been obtained in the Margery séances, under conditions of strict control and laboratory technique, about two hundred three-dimensional impressions, cameos or models in plastic wax of thumbs, fingers and entire hands. Most of these waxes are claimed by "Walter" to be impressions or models of his own thumbs, fingers and hands. These "Walter" impressions are of different kinds: according to articles heretofore published by Mr. Dudley (see this Journal Vol. XXII, pp. 99, 191, 453) they comprise at least positives, negatives, mirror positives and mirror negatives, and a number of variations.

It will possibly not be easily realized that variations of this sort in impressions of an apparently identical pattern or thumb are entirely unfamiliar to the ordinary finger-print expert, are not covered by the technical literature expounding finger-print science and are not within the ordinary experience of the finger-print criminologist. These phenomena present to finger-print science an entirely new and unique problem and are thought by some to challenge the very foundations upon which such science is claimed to be an infallible system of personal identification.

Our Research Department first looked into the question of the technical classification theretofore made by Dudley, of the particular right thumb print of "Walter" used by him as part of the basis of the claim, and it became quite apparent from the evidence that instead of being a negative print, as Dudley maintains, the print is a positive print. If this be true the supposed identity of the print with the right thumb of the living man, Mr. X, falls entirely. In regard to the left thumbs there is a great similarity between the photograph of the "Walter" print used by Mr. Dudley and the print of Mr. X, but the left print of "Walter" used by Mr. Dudley seems to be unique in the series of left thumb prints produced by "Walter," the other contemporaneous left thumb prints of "Walter" bearing no resemblance to Mr. X's left thumb print. The authenticity of the wax print of the left thumb shown in the photograph used by Mr. Dudley is, therefore, open to question.

The above situation will indicate to our readers that it has become necessary for the Society to review all of Mr. Dudley's work in the classification of the many thumb prints obtained in this mediumship, as there are evident errors in it, errors which may be natural enough in a very complicated and difficult subject. With only a print of a single thumb or a single finger to go by, without reference to the rest of the hand, it is sometimes very difficult, if not impossible, to determine whether the print is from the right hand or from the left hand, and on account of optical illusions it is sometimes difficult to tell from a photograph whether a print is a positive or a negative.

Realizing these difficulties of classification our Research De-

partment undertook and is still conducting an exhaustive series of new experiments which throw much light on this interesting situation. The problem was presented to "Walter" and he immediately ridiculed the idea that his prints were identical with Mr. X's.

Our Research Department procured the full prints, both in ink and in wax, of the hands of Mr. X. They then requested "Walter" to produce prints in wax of his full hands, both right and left. In a series of sittings as remarkable as any that have ever occurred in psychical research, "Walter" produced in wax furnished by the investigators, a large number of partial and complete hands, both right and left. Most of these waxes were produced in the presence only of the two mediums, Margery and Mrs. Litzelmann and some of the following: our Research Engineer, Mr. Thorogood, Professor Adams and Captain Fife. Although both hands so produced carried thumb prints of the same sort as those that have always been attributed to "Walter," the hands in every regard including the thumbs are entirely different from the hands and thumbs of Mr. X. The Society has thus initiated a thorough and exhaustive investigation of the matter which will be pressed with all possible speed to a conclusion and the entire subject presented to our readers when the work is completed.

It is an unfortunate fact, however, that the claim of Mr. Dudley, and the alleged facts upon which it is based, have been widely disseminated through his activities, and have come to the attention of people not connected with the Society who have the story for publication. We deprecate such publication before an investigation of the facts is complete, but the matter having got beyond our control, due to the above facts, we have thought it wise to make this statement, and despite any discussion that may be indulged in by others in the meantime, we shall make no further statement in regard thereto until the investigation is completed and all the facts covered in an adequate scientific report.

In regard to Mr. Dudley's statement received by us on June 13th, we have refused to publish it for the reason, among others,

that the identity of the prints discussed by him is open to question and his statements seem to us unwarranted.

The problem of the source or origin of these séance room prints is of course quite different from the question as to whether the prints themselves are identical with those of any known person, living or dead. Data on the latter question may have a bearing as evidence relevant to the solution of the first problem, but it is not claimed by Mr. Dudley that his supposed discovery is indicative of fraud in the making of the prints. It remains to be seen whether any such inference will be drawn by others.

We are gratified to state that our Research Department reports to us unqualifiedly that the recent experiments have been such that there can be no question whatsoever in regard to the supernormality of the phenomena involved, all of which will be disclosed in due course.

IV.

THE MARGERY MEDIUMSHIP¹

BULLETIN XVIII OF THE BOSTON S.P.R.

Readers of The Journal will recall a statement published in the July, 1932, number (vol. XXVI, pp. 266-268) regarding an alleged discovery by Mr. E. E. Dudley that some of the thumb prints in wax, alleged to have been produced as his own by "Walter" through the Margery mediumship, were in fact identical with those of a living man. In that statement it was announced that upon the disclosure by Mr. Dudley of his alleged discovery (which was in March, 1932) the Society *immediately* began an active investigation of the matter and that the results of such investigation would be fully reported when the work was complete. The investigation of the whole matter has been pressed with as much expedition as possible and in due time the subject will be fully presented to our readers.

As stated in the July number, the Society had declined to

¹ Journal A.S.P.R., Vol. XXVI, No. 11, November 1932, pp. 403-405.

publish an article by Mr. Dudley offered on June 13th, setting forth his claims. Although the traditional and announced position of the Society has always been that responsibility for material accepted for publication rests entirely with the writers of the articles published, the Society does not thereby escape from the duty of using responsible discretion and judgment in respect to what it shall or shall not publish and the time for publication. Its decision in such matters may, of course, be sound or unsound in any given particular instance, but it is certain that in every case its action will be criticised and condemned by some persons or some group of persons who happen, disinterestedly or otherwise, to disagree with the decision. Mr. Dudley's alleged discovery may be of great importance in the history and interpretation of the Margery mediumship, or it may be mistaken or insignificant and of no permanent value. Mr. Dudley himself naturally attaches extreme importance to the matter and his eagerness to publish his views and the evidence he feels supports them, has found accommodation in Bulletin XVIII of the Boston S.P.R. recently issued. Mr. Arthur Goadby and Mr. Hereward Carrington also contribute to the Bulletin articles discussing the matter.

It is not our intention at this time to discuss the merits of the question raised by Mr. Dudley or to review the contents of this brochure, but rather to reiterate the purpose announced in July to publish the results of our investigation with all relevant and material evidence, when the work has been completed. Our readers may meanwhile expect a barrage of hostile criticism of the Margery mediumship to break out shortly in various public prints, as though set off by the appearance of this Bulletin. This was forecast in our July statement. Rumors of a veritable deluge of hostile criticism are afloat and evidence is at hand that the channels of private correspondence have been used to spread libelous versions of the alleged facts. Psychological research has many friends, but more enemies, and no mediumship that ever attracted public attention has escaped determined attack. The launching of a new attack upon the Margery mediumship, therefore, is not surprising; but all con-

cerned can well await the outcome with confidence that the truth will ultimately be made plain.

Mr. Goadby's contribution to the Bulletin discloses apparently complete satisfaction on his part with Mr. Dudley's evidence and agreement with his conclusions as to what this evidence proves. We do not question Mr. Goadby's right to be so satisfied and convinced, and to announce his views through any available channel. Whether the contribution is in fact calm and impersonal, as the editor of the Bulletin suggests, is not over-important; but Mr. Goadby's enthusiasm leads him to some extravagance and inaccuracy of statement that may suggest a doubt as to his soundness in argument and deduction. Mr. Goadby says, for instance, in speaking of Mr. Dudley's claim, that the Research Committee has taken

"over three months to decide a matter which could easily have been disposed of in a few hours."

The Research Committee has not decided anything except the wisdom and necessity of a careful and thoroughgoing investigation of all the facts before publishing anything on the merits of the claim, and so announced in the July issue of The Journal. Furthermore, neither the Society nor the Committee will "decide" the issue raised or any part of it; but no possible effort will be spared to assemble, analyze and present to the Society and the readers of its publications all the material evidence bearing on the question raised. That the question can be easily disposed of to Mr. Goadby's satisfaction in a few hours may do credit to his intellectual power and scientific accomplishments; but those carrying official responsibility in the matter may be pardoned for differing from an amateur student of the subject as to the difficulties presented and the proper method of ascertaining the truth. Critics, and especially amateur researchers in psychical matters, who appeal early and late to "devotion to scientific truth" to support or justify their views, may occasionally overlook facts that lie nearer to reality than their own emotional allegiance to a vague ideal

or abstraction. True science never jumps to hasty conclusions or attempts to dispose of any question on incomplete data.

The Editorial Preface to the Bulletin, written, we assume, by Dr. W. F. Prince, though bearing no name, compels a comment of general character that ought to be made in the interest of fairness and good faith.

The Preface says that the material is published by the Boston Society,

"both because of the extreme importance of the evidence displayed and because this evidence would otherwise apparently be, to all intents and purposes, suppressed."

Mr. Goadby's article discloses the fact that a statement regarding the matter was published in the July number of The Journal, but Mr. Goadby carefully refrains from informing his readers that the Society had announced in that statement that the entire matter was being thoroughly investigated and that a full report would be published when the work was concluded. Nowhere in this Bulletin, however, is there any hint that such was the announced policy and purpose of the Society. One reading the Bulletin and its Preface is left with the inevitable impression that this Society has embarked upon a suppression of evidence relevant to the Margery Mediumship. The charge is false. Dr. Prince is too careful and experienced as a controversialist to be unaware that such an impression would be created and it is a fair inference that the creation of such an impression was within the definite purpose of the editorial mind.

As a clergyman turned scientist, or pseudo-scientist, Dr. Prince, when seeking to expound to others the canons of science and protect psychical research from unscientific Philistines might be expected to recall some canons of the moral law that are immutable even in the scientific field. "Thou shalt not bear false witness against thy neighbor" is valid for scientists and psychical researchers as well as ordinary people.

V.

THE MARGERY MEDIUMSHIP¹

A SOLUS SITTING AUGUST 10, 1928

BY R. J. TILLYARD, M.A., Sc.D., F.R.S.

PRELIMINARY RECORD OF EVENTS

In 1926, Dr. Tillyard,* passing across America on his way to London, had certain psychic experiences in the presence of the medium Margery. On reaching London he made in the columns of "Nature," a leading scientific periodical in England, a plea for a wider and more generous outlook on the part of science towards psychical research.

Sir Richard Gregory, The Editor of "Nature" published in that Journal (Aug. 18, 1928, No. 3068, Vol. 122, p. 229 *et seq.*) editorial comment on a paper by Dr. Tillyard in the same number (p. 243-246).

Sir Richard said: "One of the reasons why scientific investigators hesitated to undertake research into these problems was the uncertainty that, however faithfully they might follow up clues, they were unlikely to be able to reach precise conclusions." He then went on, in his amiable way, to dissect Dr. Tillyard's report of sittings and concluded: "We believe that Dr. Tillyard will have to bring much more convincing evidence of the actual existence of Walter's spiritual personality than that presented by him in his article before it can pass the critical bar of science."

In May and June, 1928, Dr. Tillyard found himself again in Boston en route from New Zealand to London. There and then he had the sittings with Margery which were published in "Nature" August 18, 1928. In England he was made Honorary Fellow of Queen's College, Cambridge. He had several conferences with Sir Oliver Lodge on psychopsychic phenomena in general and the Margery experiments in particular.

¹ Journal A.S.P.R., Vol. XXV, No. 4, April, pp. 136-145.

* See page 170ff for biographical note on Dr. Tillyard.

Just prior to Dr. Tillyard's return to New Zealand by way of Boston, Sir Oliver Lodge wrote the following letter to Dr. Crandon, dated July 13, 1928:

SIR OLIVER LODGE'S LETTER

Dear Dr. Crandon:

I hear from Tillyard that he is returning to Australia *via* America. He is, I believe, writing about his experiences with "Margery" in "Nature." If his article is admitted, it will be an important step towards challenging the attention of the scientific world.

He has an idea that it would diminish the opportunities for accusation of collusion if he were allowed a solitary sitting with "Margery" in a room arranged by himself, of course with your approval; and thinks that if he got results under those conditions, the sceptics would be reduced to accuse him of collusion—which, considering his position as a scientific man, would be too absurd. I know that he is much impressed with "Margery," appreciating her highly from every point of view, and you might have confidence that he would treat her fairly.

More than that I cannot say, since you know what is reasonable and permissible far better than I do. It is not a privilege that I would recommend you to grant to many people; though if it were feasible I should value it myself.

I trust that she keeps in good health, and that you neither of you have been bothered with any recent controversies.

Yours sincerely,

(Signed) OLIVER LODGE.

Dr. Tillyard arrived in Boston about August 1st, and was present at several sittings, and on August 10, 1928, he had his long-desired sitting alone with the medium in a place strange to them both.

Mr. E. E. Dudley, who assisted in the preparations for the séance and was outside the door during its course, made the following notes:

MR. DUDLEY'S NOTES

August 10, 1928.

At 353 Commonwealth Ave., Boston.

(Office of J. J. Skirball, M.D.)

Psyche searched before and after sitting by Miss Landstrom (Miss Y). Dr. R. J. Tillyard and Mr. E. E. Dudley searched by Dr. Skirball (Dr. X). No one else in the room at any time.

Preparations for finger prints and Voice-Cut-Out machine brought from Lime Street. Psyche wore only bathrobe, stockings and shoes. Was under control of Miss Y from time that she was searched until tied in chair and from close of sitting until again searched. Psyche's wrists taped to arms of windsor chair with one inch surgeon's tape. Ankles taped to chair, legs in same way. Approximately 24 inches of tape in each piece. Ties cross-marked to wrists and to stockings by Dr. Tillyard. E. E. D. left the room as soon as taping was finished and did not re-enter until Psyche had left at close of sitting. R. J. T. alone with Psyche throughout sitting. Margery so secured to chair as to be unable to move feet or wrists and hands could not touch table.

Séance opened at 9:12 P.M. Dr. Crandon, Miss Y, E. E. Dudley, in hall with door closed and locked by R. J. T., did not enter room at any time. Walter came in at 9:15 P.M. Called out to Dr. Skirball (oculist) "Hello, Eyeball, who's the blonde?" (Nurse is blonde.)

Walter whistled a great deal, talked more or less with R. J. T. who put hot water in dish and a piece of marked wax as requested by Walter. The approximate times of completing the three finger prints were 9:22, 9:25, and 9:29 P.M.

At 9:30 R. J. T. said that he was putting on the Voice-Cut-Out.* Just before this, I think it was, Walter said that he

* Dr. M. W. Richardson's Voice-Cut-Out (V-C-O) apparatus was devised by him to prevent entirely any normal use of the medium's voice-producing anatomy and physiology. It was described at length in Jour. A.S.P.R., December, 1925, pp. 673-689.

It consists of a U-tube 36 inches high, diameter $\frac{3}{4}$ inch, space between arms

might not have enough energy and R. J. T. said, "If you haven't enough why not take some from me?" Walter, "Because you haven't any."

With the V-C-O unbalanced by Margery, Walter said, "Hello, Skirball, skittish Skirball."

9:37 R. J. T. announces that V-C-O test is finished, that he has removed tapes and that marks were intact. Said, "Walter says that he is going to work on my back." Sitting finished at 9:42 P.M. Psyche searched by nurse. Nothing suspicious was found at any of the examinations.

At close of sitting Psyche's back, over the 12th dorsal and first lumbar vertebrae, showed red and swollen and she said it was painful. This condition was not there before the séance and her back had been protected by a small and very soft pillow. All discomfort from this cause had practically disappeared one hour later.

Note: On return to 10 Lime Street the phonograph was supernormally started as we entered lower hall. Three normal negative prints of the Walter thumb were obtained at this sitting. One shows a well-marked joint line.

(Signed) E. E. DUDLEY.

3 inches. This tube, supported on an iron stand, is filled half full of water. On the water surface in each arm, (always at the same level, of course,) is floated a cork of convenient size. In the top of this is inserted a wooden match, two inches high, painted with luminous paint. These luminous matches serve to indicate, in the darkness of the séance room, the relative water-levels in each branch of the U-tube.

One free end of the U-tube is connected by a flexible metal gas tube to a glass tip in the medium's mouth. This glass tip is kept, by a flange, from slipping into the mouth. It has a hole, top and bottom, which must be covered by the lips tightly. The medium then blows until one luminous indicator is at least a foot higher than the other, and she then covers the hole in end of tip with her tongue. Thus, to maintain the luminous indicators at unequal levels, she must hold the glass-tip with her teeth and cover closely the three holes with her lips and tongue. In short, all her speaking organism is mechanically controlled. This experiment with only one observer, and he holding the medium's hands, has been repeated unnumbered times. Under these conditions of non-equilibrium of the floats, Walter's voice continues to talk and pronounce the most difficult labials and sibilants, showing, apparently, the independence of the Walter voice from that of the medium, in any normal way.

DR. ROBIN J. TILLYARD

A BIOGRAPHICAL NOTE BY THE EDITOR, INTRODUCTORY TO HIS
RECORD OF A SÉANCE FOR OBSERVATION OF THE PHENOMENA
OF THE "MARGERIE" MEDIUMSHIP

Readers will recall the fact that it was Sir William Crookes who, as a chemist and physicist of distinction, first made a breach in the walls of the stronghold of official science. The controversy stirred by his proclamation of faith in the mediumistic phenomena he had witnessed was deepened and rendered more acute by the fact that he was a member of the Royal Society of England. The Fellowship of this historic Society is a privilege accorded to few, and only to those who have well earned the right to be listened to when speaking *ex cathedra*.

Once again and with no uncertain voice, a Fellow of the Royal Society gives his considered verdict in favor of the reality of certain of the physical phenomena of mediumship. And the time being now ripe for a more general understanding and acceptance of these phenomena as a part, and an integral part, of the scheme of nature and the evolutionary processes of life, we do not doubt that what Dr. Tillyard has to say will be pondered by all serious thinkers.

It is as an entomologist that Dr. Robin J. Tillyard has chiefly earned distinction. Zoology has been his study. For eight years (1920-1928) he was head of the Biological Department of the Cawthorn Institute, later becoming its Assistant-Director. He has since been appointed Chief Entomologist to the Commonwealth of Australia. The study of insect life with its strange permutations and metamorphoses would not improbably predispose their student to a view of the phenomenon of physical death as but another metamorphosis of greater significance to man, implying the release of the matured ethereal psyche from the outworn chrysalis of the physical body. At least it may be said that an entomologist can of all men most logically and with least strain upon his philosophical principles accept and

give endorsement to the concept of the 'subtle body' and its continued vitality and power as suggested in the phenomenon of the thumbprints of the discarnate human entity.

DR. R. J. TILLYARD'S NOTES

OF HIS SÉANCE WITH "MARGERY"

Held by him *Solus* in the Consulting Room of Dr. J. J. Skirball of Boston, Mass. (This being his seventh sitting with this Medium)

Object of the Séance: Previous séances held in May and June had proved conclusively the genuineness of the phenomena under conditions in which both Dr. Crandon and the Séance Room at 10 Lime Street had been eliminated. In the séance of June 1st, 1928, seven Walter thumb prints had been obtained under strict test conditions in a small room in Dr. Richardson's house, with only Dr. Tillyard and Captain Fife, the finger-print expert, present.

It was, therefore, obvious that any attack on the accuracy of these results must be directed against the bona fides of either Dr. Richardson or Captain Fife, or both. Sir Oliver Lodge, foreseeing this, had strongly urged Dr. Tillyard to press Dr. Crandon for a sitting alone with Margery in a strange room, to see whether the phenomena could be repeated under such conditions. Dr. Tillyard foresaw obvious objections to this procedure, but was willing that Sir Oliver should write to Dr. Crandon and state the case, and also agreed to write to Dr. Crandon himself, putting himself unreservedly in his hands, and promising to agree to any conditions he might make. He suggested asking Professor Brues for the use of a room in the Bussey Institution, and to have Mrs. Brues search the medium and report the results; but this was turned down, as it was feared that opposition of Harvard University to the experiments might prejudice Professor Brues. The idea of getting a private suite of rooms in a hotel was rejected, partly because of the necessity of protecting the name of the medium, and

partly because of the difficulty of getting a bare room with plain wooden furniture that could not be damaged, and a supply of hot water. Finally it was decided to approach Dr. X* an eye specialist, not associated with the Crandon group, who has a fine suite of suitable rooms in a leading street in Boston. Dr. X gave his consent. The room was shut up for some hours before the séance began, with double blinds drawn, and nobody allowed to enter it.

Dr. Crandon imposed no conditions whatever, and undertook not to enter the room nor to let anyone else enter it except Mr. E. E. Dudley, who was selected to help Dr. Tillyard affix the surgeon's tape to the medium and to carry in some of the apparatus.

Preparation: At 8:45 P.M. Mr. Dudley arrived at 10 Lime Street, and took charge of the large Richardson Voice-Cut-Out machine which was to be taken to Dr. X's. Dr. Tillyard took charge of Margery's séance garments, which he had previously searched, also two small, soft, white pillows, a medium-sized, rather flattish dish for the hot water, a small round dish for cold water, a white cloth folded longitudinally for the dental wax to rest upon, a small towel to protect the medium from scalding when the hot water was poured out, and a large kettle for hot water. Dr. Tillyard had also prepared, an hour previously, a set of plates of the dental wax, called "Kerr," marking six pieces with the numbers 5, 6, 7, 8, 9, 10 respectively, and making an equivalent number of notches along the edge of each piece. The bottom left-hand corner of each piece, turned upside down, was also broken off and similarly marked for identification. The pieces of wax were put into a box and carried in Dr. Tillyard's pocket.

Margery, Dr. Crandon, Mr. Dudley and Dr. Tillyard drove thus in Dr. Crandon's car through Boston to Dr. X's rooms, where they were received by Dr. X and his lady assistant Miss Y. Miss Y took Margery into a back room and disrobed her, searched her very thoroughly, including her mouth, teeth and hair, robed her in her séance garments, and led her back into

* Dr. J. J. Skirball.

the consulting room. Her statement is attached herewith. Dr. X then proceeded to search Dr. Tillyard, taking his coat off and putting it away, examining everything in his waistcoat and trousers pockets, including the inside of his two spectacle cases and a small box of pills, and feeling him carefully all over right down to and including his shoes. His statement is also appended.

Dr. Tillyard and Mr. Dudley arranged the séance in a suitable part of the very large consulting room. A dark, three-sided screen was set up with its back to the large windows, through which a certain amount of light percolated even when both sets of blinds were drawn. A plain wooden chair was placed in position for the medium, inside the screen, and a small plain deal wooden table was put in front of it. A second plain chair was put to the left of the medium's for Dr. T., and a standing electric light, with red globe and bendable arm was arranged to left of and a little back from the side of the screen, in such a position that Dr. T. could manipulate it with his right hand, and throw the light on the table without lighting up the medium's face too strongly. Dr. T. carefully examined the table and chairs, and noted that they were of the plainest make, without any secret hollows or drawers in them.

Mr. Dudley placed the Richardson voice machine on a side table, and alongside of it he put an electric torch, for Dr. T.'s use to activate the luminous paint on the floats and top of the U-tube. Dr. T. arranged the two dishes on the table, folded the cloth longitudinally and put it into the larger dish, arranged the small towel so as to protect the medium from scalding, and put the unopened box of Kerr on the table. Miss Y brought in the kettle of hot water which had been heated to boiling, and Dr. T. placed it on a large pail to the left of his chair. Mr. Dudley then withdrew to the door, outside of which Dr. Crandon, Dr. X and Mr. Dudley stayed during the séance. Miss Y led Margery in, reported a negative result of her search, handed Margery to Dr. T. and withdrew also. Door was shut and locked. Strong red light on. Dr. T. led Margery to her chair, sat her down in it, and arranged a soft pillow for her

back. He then placed a second pillow for his own back, as Walter had said he would try to do something for the arthritis in his back, and that he would have to try to recline in his chair.

Dr. T. next called Mr. Dudley back into the room to help him to fix Margery in the chair with adhesive tape bandages. The four of these were cut off about two feet long each, and were placed tightly around bare wrists, binding these to the two arms of the chair, and around her stockinged ankles, binding these closely to the legs of the chair. Dr. T. then took a thick blue marking pencil and cross-marked each bandage in two places so that the lines ran well out on both sides on to the skin of M's wrists and also across on her white stockings. It was quite impossible for M. to move either her hands or her feet from the strapping without betraying the fact by the changed positions of these blue pencil lines.

When binding M.'s left arm to chair, she complained that it hurt her. T. examined it and found a large bluish red bruise on it, a little above the wrist. M. said it had come during the previous séance while DeWyckoff was alone with her, and that W. had stated that he had drawn teleplasm out from the skin there and that it would be sore for a day or two. T. was careful not to put the tape too close to the bruise.

Mr. Dudley now withdrew, and the large heavy door was shut and locked. Inside the room were only M., bound in her chair, and Dr. T. Outside the door were Dr. Crandon, Dr. X, Mr. Dudley and Miss Y.

Red light out. M. lay back in her chair and sighed. T. sat in his chair holding her left hand. She was very restless. Shafts of light were coming in from the windows, and as M. did not seem comfortable T. addressed her and asked whether there was too much light. She was half awake and complained of a particular bright shaft on the wall to her right. T. located this as due to one blind being not fully drawn down; he went to the window and drew the blinds well down and fixed the edges so that only a slight line of light came through. Nevertheless the room was never really dark and T. could dimly see the door and various objects throughout the séance.

Red light out again. M. appeared more comfortable, and went to sleep holding T.'s right hand in her left.

With M. asleep, Walter soon came through with a "Hello, Tillyard" and a loud and piercing whistle. He called out loud greetings to the people outside the door, and made a pun on Dr. X's name, which caused laughter. He also called out "Who's the charming blonde?", referring to Miss Y. T. explained that she was Dr. X's assistant, and he said "Whew, he seems to specialize in blondes." He then began whistling most vigorously and beautifully an old Canadian hymn tune (not known to Dr. T.), and went right through an eight line verse of it with beautiful modulations from piano to forte. T. asked him what it was, and he replied "God Save the King, of course," which made T. laugh. Later on, W. whistled the Wedding March from Lohengrin equally beautifully. T. said "That's no good now, Walter, as J. D.'s girl has chucked him." W. said "Too bad, too bad; tell him from me that he'll get over it." Right through this séance W. whistled almost continuously and with tremendous power and effect, and his voice clearer and stronger than T. had ever heard it before.

After about five minutes, W. told T. to put on the light and put in the first piece of Kerr. T. did so, and W. said "Whew, that water's hot; I've scorched myself." T. reported this to Dudley, who asked whether it was his hand that was scorched. "No" said W., "It's the tip of my tail. That water is as hot as . . . !" After a minute or so, T. heard slight splashing in the water, and then movements indicating the handling of the cloth, followed by movement of the wax in the further basin containing the cold water. Soon W. said "Put on the light and take the print out, and put another piece of wax in." T. did so, and W. said "You'd better make sure that there is something on it," so T. examined the wax in good red light and saw a thumb print on it. He asked W. whether he should put the light out, and W. said "No, go ahead, put it in right away." T. looked at M. who was asleep, with her head slightly inclined to the right. He could not see any luminous teleplasm owing to the red light being so strong, but noticed

that the outline of her face was quite blurred. W. talked not once, but many times during this séance, in bright red light, his voice mostly coming from inside the cabinet to the right of M. and a little above her head, but sometimes lower down and near the table.

T. put in a second piece of wax and put out the light. W. said the water was getting a bit too cool, so T. put on the light and poured in a little more hot water, protecting the medium from possible scalding by holding the towel between her and the table. W. worked away in the dark on this piece and soon had a fine print done, which T. took out of the cool water and examined. Light out again. W. said he guessed the cloth wanted arranging and a lot more hot water put in, so T. put on the light, straightened the cloth, poured in a lot more hot water, protecting the medium with the towel, and then put in a third piece of wax. W. said this was all right, and got to work on it right away. When he took the cloth out, he said, "I guess this cloth wants squeezing out," and T. could hear him doing it and the water tinkling about on the table. W. said "I guess you've got enough thumb prints, Tillyard; take this one out and put on the voice machine." T. put on red light, retrieved the third print, and almost at once M. was awake and complained that some water had poured into her lap. T. mopped up some of it. The cloth was lying quite squeezed up on the edge of the table. T. put away the three thumb prints,* and went across to the side table to get the voice machine. He turned on the electric torch, with his back to M. and strongly activated the two luminous floats and the luminous band around the top of the tube. He then brought the voice machine to the table and placed it in position. M. said that if anything went wrong with it she would "M-m-m" three times, and that T. must then put on the light again and rearrange the mouth-piece. T. then placed the mouth-piece in M.'s mouth and put the light out. M. blew up the floats and they sagged back; she did this five or six times, but could not hold the floats up. She then said "M-m-m" and T. put on the light

* See note at end of record. Ed.

and found that the junction of the glass mouth-piece and the armored tube was leaking slightly. Pushing the glass portion a little further in, T. replaced the mouth-piece in M's mouth and put the light out. This time M. blew the floats up and kept them poised for over half a minute. W. at once spoke and said to T., "Well, here I am, what do you want me to say," T. taken aback said, "Say anything you like, Walter," and W. at once said, mockingly, "Say anything you like, Walter." W. then spoke a sentence addressed to Dr. X, choosing words full of sibilants, which sibilants need lip work. T. then asked W. to whistle, which he did very clearly and loudly for some seconds. W. then made a few more remarks and T. said he was satisfied. M. let the float fall back and T. put on the light and took the mouth-piece out of her mouth. T. noted her hands still tightly affixed to the chair.

Light out again. W. said he now wanted to try to do something for T.'s back, but it was essential that he should try to lie back in his chair relaxed, just as if he were going to sleep. T. said he would do so, and that W. could put him into a trance if he wished. W. said "No fear, you won't go into a trance, just lie back and relax." T. arranged his pillow comfortably, saw that M. was all right and asleep again, and put out the light. W. said several times, "Relax, you must relax" and T. did so, so successfully that he began to feel drowsy and told W. he thought he could go to sleep. W. said, "No, just keep as you are; I'm doing something to your back. Now I want you to remember this; when the medium wakes up, you are to examine her back, and you will see that I have done something." T. all this time remained drowsy but could feel some indefinable change in his back, giving a slight suggestion of straightening up and the removal of a dull sort of pain which he had felt in his vertebrae for two or three weeks. After about five minutes, W. said, "Well, that's done; don't forget to look at her back. Goodbye, Tillyard, good-night all." T. turned up the red light and called out that the sitting was finished. M. woke up slowly and asked T. not to put the bright light on for a little while. T. waited and then put on the full white light.

M. said her back was hurting her a lot. T. tried to open the big door, which had got stuck, and finally he managed to open it with some difficulty. T. proceeded to examine M's strap controls, with the others standing around, and found them all intact. The blue pencil marks were all exactly in position and it was clear that she had not moved hand or foot during the séance. M. complained of the pain in her back and also in her left arm, and implored T. to remove the left arm bandage first. T. did this with difficulty, as the warm weather had made the strapping very sticky and it was wound twice round her and thoroughly glued together. T. had to pull it quickly across the skin to avoid causing M. too much pain. An examination of the left arm showed that the bruised area had spread a lot, and was now about an inch and a half long. T. next removed the other wrist-strap, and then the two leg straps, noting the positions of the blue pencil markings on the white stockings. T. then reported to Dr. Crandon Walter's request about examining M.'s back, and suggested that Miss Y should search her and disrobe her in the room while all the rest withdrew, and then Miss Y could report if she found anything. All withdrew from the room except Margery and Miss Y, and the door was shut. Miss Y called out shortly afterwards, and the door was slightly opened; she stated that there was a huge bluish red bruise on M's back covering two vertebrae. Dr. Crandon was willing that T. should examine it, but T. said he would be satisfied to see it from the doorway. Miss Y then draped Margery and placed her half leaning over a chair, back to the door, with the strong white electric light from the ceiling shining down on her. The men all could see quite plainly a large dark blue-red bruise covering the two vertebrae, which Miss Y reported were the twelfth dorsal and first lumbar. During the séance, these had been protected by the pillow. T. remarked that these were the two vertebrae in his back which had been most badly damaged by arthritis; his own back was feeling immensely better, but he naturally felt upset at Margery's vicarious suffering.

The door being again closed, Miss Y robed Margery, and

the séance closed with thanks and farewells by all to Dr. X and Miss Y. T. gathered up the four adhesive straps and got Dr. X to put each into a separate envelope with U. S. stamp on it as an exhibit.

Total time of séance about forty minutes.

Weather hot and sultry, very unsuitable for a good séance. Soon after our return to Lime Street, rain began to fall, and there was considerable lightning and thunder. M. and Dudley both appeared completely worn out. Walter says that he gets a good deal of power out of him, and that he can only get it out of heavy, well-fleshed men. When T. said to W. during the séance, "Walter, you can take some teleplasm out of me if you wish," W. retorted, "No, I can't; you haven't got any." T. is very thin, without any spare flesh.

On our return to Lime Street Walter started the Victrola playing before anybody got beyond the hall.

(Signed) R. J. TILLYARD.

Aug. 11th, 1928.

Boston, Mass., U. S. A.

A NOTE OF OTHER "SOLUS" SITTINGS

It is furthermore, pertinent to report in this place the fact that similar strictly-controlled "solus" sittings, with the production of typical Walter thumbprints, have been accorded to Dr. F. C. S. Schiller of Oxford (9/10/28), Dr. M. W. Richardson (8/7/28), Captain John J. Fife (8/26/27), and Mr. Joseph DeWyckoff (8/9/28).

TESTIMONY OF DR. JOSEPH J. SKIRBALL, M.D., AND HIS ASSISTANT
(Dr. X and Miss Y)

Addressed to Sir Oliver Lodge

August eleventh, 1928.

Dear Sir Oliver Lodge:

Mrs. Crandon (Margery), Dr. R. J. Tillyard and Mr. E. E. Dudley came to my office in Boston, Massachusetts, on August tenth at nine P.M. They brought with them dental wax and two shallow crockery dishes for making finger prints.

I examined Dr. Tillyard and Mr. Dudley and found that they had nothing in their pockets or on their persons except keys, chains, spectacles. My nurse, Miss A. Landstrom, examined Margery (clad only in bathrobe, stockings and shoes) and found nothing. These examinations were at 9:05 P.M.

Margery and Dr. Tillyard were alone in my office, with door closed and guarded by me. After the sitting, a second examination was made at 9:40 P.M. in my office and disclosed nothing. Margery showed, however, an area of denuded epithelium together with subcuticular hemorrhage one and three-quarter inches by one-half inch on the anterior aspect of the left forearm extending to a point about two inches above the upper end of the taping. Further examination showed the skin from the twelfth dorsal and first lumbar spine was red and tender, despite the fact that Mrs. Crandon used a soft pillow (previously examined) between her back and the chair during the séance.

Very truly yours,

(Signed) JOSEPH J. SKIRBALL, M.D.

(Signed) AMY E. LANDSTROM, R.N.

LETTER OF DR. R. J. TILLYARD TO SIR OLIVER LODGE
Boston, Mass.

August 11, 1928.

My dear Lodge,

The TILLYARD *Solus* séance took place last night, between 9 and 10 P.M., in hot muggy weather, not suitable for good séance work, with a thunderstorm brewing which broke shortly after our return home. It was by far the most wonderful séance I have ever attended, and as far as I am concerned now I should not worry if I never had another sitting in my life. Dr. Crandon made no conditions and placed Margery unreservedly in my hands. I think the arrangements which we made were scientifically severe and at the same time put on record the most marvelous result in the whole history of psychical research. I am sending you my full report (first writing) of this séance, and wish you to consider the following suggestions:

(1) I would like a short account of the séance to appear in "NATURE," but only after the criticisms of my previous article have been completed.

(2) I would also like to publish the complete account, with a photograph of one of the thumb prints and also photos of Margery's and my own right thumb prints, in the S.P.R. I will attach to the account Dr. X's statements as to his searching of myself; Miss Y's statement about her two searchings of Margery; and the statement about the damage to her back; also the full names and address of Dr. X and Miss Y for you to file and keep.

It seems to me quite impossible to find a single flaw in this wonderful result.

Whether Science, under its present limitations, can ever hope to offer any explanation, philosophic or otherwise, of these extraordinary phenomena I very much doubt myself. But my object is to record scientifically that they *do occur*, that they are part of the phenomena of Nature, and that Science, which is the search for Truth and for Knowledge, can only ignore them at the deadly peril of its own future existence as a guiding force for the world. This séance is, for me, the culminating point of all my psychical research; I can now say, if I so desire, *Nunc Dimittis*, and go on with my own legitimate entomological work. For you, my very dear friend, who have never seen anything like this, I can only ask that you and your whole family, will accept my statement as absolute truth, knowing me as you do, and that it may bring added comfort and certainty to you all, if such are needed to you who already believe with your whole hearts.

As for Margery and her husband, not one man in ten thousand could have handed over his wife trustingly to a comparative stranger as Dr. Crandon did last night, and not one woman in ten thousand could have faced such a situation bravely, as Margery did. The privilege granted me by them I shall always hold to be one of the greatest events in my life, and they are now bound closely to me by spiritual bonds which can never be broken, and which, I am fully persuaded, will last over into

that wonderful life of which Death is only the Entrance Gate.

Farewell, and God bless you, and many thanks for your splendid aid and advice which helped me to gain this great result. My love to you all and very best wishes for your continued welfare.

Your affectionate friend,

(Signed) ROBIN TILLYARD.

P.S.—I must not omit paying tribute to Walter—the finest “ghost” I know of.

VI.

THE MARGERIE MEDIUMSHIP¹

A SOLUS SITTING FOR THUMB PRINT, MARCH 11, 1931

UNDER ADDITIONAL TECHNIQUE OF CONTROL

BY WILLIAM H. BUTTON, A.M.,

PRESIDENT OF THE A.S.P.R.

The readers of the Journal are for the most part familiar with the long series of finger-print phenomena which have characterized the Margery Mediumship. They also undoubtedly know that these phenomena have occurred under very drastic control of the medium in the séances that have been intended to be critical. Such notably was the case in the Tillyard sitting reported in this issue of the Journal and in the sittings held at the S.P.R. rooms in London in December, 1929 (Psychic Research, June, 1930). The control of the medium on those occasions consisted among other things of securely tying her body to the back of her chair and securing her wrists to the arms of her chair and her ankles to the legs of her chair by wrapping surgeon's tape about them and drawing the tape tight around the arms and legs of the chair and for extra precaution marking the tape by pencil lines across the tape and extending to the skin of the wrists and ankles. This control if properly exercised seems to leave the medium helpless as

¹ Journal A.S.P.R., Vol. XXV, No. 4, April 1931, pp. 146-150.

to any normal participation in the manipulation of objects on a table in front of her, although she might be able to reach the table with her knees. It might, however, be suggested that despite the wrist control the medium could still move her hands and fingers and possibly handle objects on the table brought within reach by raising or tilting the table by her knees. In fact such a suggestion has been made.*

To those familiar with the circumstances surrounding the sittings that have been thus controlled this suggestion might well seem disingenuous. I have been trussed up at Lime Street according to this method with my knees in contact with the table, and was able to tilt the table slightly at the risk of having anything on it slide off the far side but found myself not so gifted in dexterity as to be able to reach any article on the table, let alone manipulate it afterwards. Possibly others are more skillful. I, however, remain convinced that the suggested use of the fingers cannot be resorted to if the control is properly applied.

Nevertheless the careful attention of many sitters has been given and much discomfort of the medium has been incurred in this series of experiments which form an important chapter in psychical research. It therefore seemed to me that if a little additional effort and discomfort could result in the elimination of any real or fancied deficiency in the control such effort and discomfort were well worth while. Any general and non-specific criticism of technique or control is without value and only irritating and possibly intended to be so. When some prestidigitator says that everything can be reproduced normally without specifying how, one is simply wasting time in trying to prove the contrary. Such criticism has been indulged in on this subject in the last fifty years and much ineffectual argument has resulted. If, however, a specific criticism of technique or of control is made, it should receive attention when it is reasonable and sometimes when it is not.

The sensible way to meet such a criticism would seem to be to reproduce the phenomena if possible, under circumstances

* (Proceedings S.P.R., February, 1931.)

eliminating the real or fancied objection. With these ideas in mind at a Lime Street sitting on the evening of March 10, 1931, I asked Margery's control, Walter, if he would not produce a print when the medium was controlled as above indicated with the additional control of her hands *and fingers* by surgeon's tape. Walter immediately announced that he never used the medium's hands or fingers in producing prints and that if desired would attempt to produce a print under such additional control. There the matter rested for that evening and I supposed that some such thing might be attempted in the future and asked Dr. Richardson to look out for it. Walter, however, is a prompt individual and evidently does not believe in procrastination. During the sitting of the next evening he remarked to me that if anything was to be done it might as well be done quickly and be gotten rid of.

At a sitting on the next evening, March 11th, Walter was in exuberant spirits. After numerous interesting phenomena he asked for suggestions as to the next thing to be done. No satisfactory suggestion being made he announced he would do something on his own notion but would not tell what it was to be. There were nine sitters present beside the medium. Walter peremptorily directed them all to leave except Dr. Richardson, Captain Fife, Mr. Dudley and myself. The others reluctantly left the room and went downstairs. Walter then directed Dr. Richardson to leave the room and guard the door. He then directed Dudley to secure the medium who was in deep trance. This was done in red light by tying her in her chair with a rope passing around her chest and under her arm-pits and knotting it tightly to the chair back: then with half-inch surgeon's tape strapping her wrists, hands *and fingers* to the arms of her chair, taping her ankles to the legs of my chair which had been moved to a position directly in front of the medium's chair. When the lashing was completed Walter requested Dudley to depart. Fife was then directed by Walter to search the room which he did in the red light with the aid of an electric flashlight and reported no one present except the

medium, himself and me. He was then directed by Walter to put hot water in the proper dish on the table, put in wax which he had marked for identification, put out the light and depart. Walter had directed me to place my hands in contact with the medium's. I also kept my knees and feet in contact with hers throughout. I had previously ascertained that the hot and cold water dishes were in proper condition. For Fife's connection with the finger-print experiments I would refer to "Psychic Research," December, 1928, page 693. On Fife's departure I found myself alone with the medium, she being so secured that she could not possibly move hand or foot to any effect. An interesting conversation with Walter ensued, which is not pertinent to this record except as indicated in the report appended. In a few moments I heard sounds of movement on the table, a slight splashing in the water and then Walter said the job was done. The wax impressed with a fine Walter print was duly retrieved and identified as being Fife's wax. The impression was one of the best Walter prints yet obtained. The controls were found intact. A detailed report of the sitting is appended with a reproduction of the thumb print obtained.¹

I cannot refrain from commenting upon the sagacity and efficiency of Walter in the above occurrences. He devised every precaution and directed it to be carried out. I might have thought of locking the door but I probably would not have thought of posting Richardson outside it as a guard nor having the room searched as I was so confident no unexpected person was there. Walter directed what should be done with the print and ordered the entire sequence of events. I have concluded that Walter himself is the one to answer any criticisms that are made of him or of his methods.

SITTING WITH MARGERY AT 10 LIME STREET, BOSTON, MASS.,
EVENING OF MARCH 11, 1931, IN SÉANCE ROOM

Present: Captain Fife, Mr. Button, Dr. Crandon, Mr. and
Mrs. Litzelmann, Dr. and Mrs. Richardson, Miss . . . Rich-

¹ This reproduction is omitted from this Appendix.

ardson, Mr. Dudley and Medium. Captain Fife at right of medium controlling her right hand, Mr. Button at left of the medium controlling her left hand. Mrs. Richardson searched medium with negative results before sitting. Sitting began about 9 o'clock and medium promptly went into deep trance and remained in trance throughout sitting. Walter soon came through and for something over half an hour exhibited various phenomena of interesting character not here reported. At about 9:45 or 9:50 Walter announced that he had had enough of that but added that conditions were good and the power strong and wanted suggestions as to what he should do next. Dudley stated he had something he would like to have done whereupon Walter said he did not care to do that. Button produced a box of plasticine which Dudley had given him for the purpose of attempting a fingerprint test and stated to Walter that he had that box and asked Walter whether he would try that. Walter said that was what he had been talking about to Dudley and he would not use it. Walter then said he had something that he would attempt to do. When asked what it was he said "I will show you." Thereupon he directed that everyone should leave the room and go downstairs except Captain Fife, Mr. Button, Dr. Richardson and Mr. Dudley. The medium was still in deep trance, the red light was turned on and everybody departed except the four mentioned. The light was turned out and Walter directed Dr. Richardson to leave and stay outside the door to the séance room. Richardson did so. Button, Fife, Dudley and the medium were then left in the room alone. Walter then announced "Button, this is your sitting, what do you want to have done?" Button said he would like Walter's suggestions. Walter said "All right" and directed Dudley to go downstairs and get a large quantity of tape and a large amount of strong rope. Dudley did so and returned in a few moments with a quantity of one-half inch surgeon's tape and a length of rope. Walter then said "Button, how will you have the medium lashed up?" Button asked "Who is to be here?" Walter said "Only you." Walter asked Button whether he would have the

medium lashed to him or to the chairs. Button said "Lash her feet to the legs of my chair and her arms and hands to the arms of her own chair." Then Walter directed that the table which had been directly in front of the medium be moved and placed diagonally to Button's left with one corner near the chair of the medium. Button was directed by Walter to place his chair directly in front of the medium's chair and as close to it as possible which was done, Button still occupying the chair. Dudley was then directed to secure the medium still in trance. In red light he passed the rope around the chest of the medium high up under the arms and tied one end tightly to the top of the center back spindle of the medium's chair with two half hitches and the rope passing under each arm. The other end was wound around the same spindle and tied with three knots, the rope having been drawn tight around the medium's chest. Each hand of the medium was strapped to an arm of her chair with surgeon's tape. This tape was passed several times around medium's wrist, drawn tight, and her wrists drawn tightly to the arms of the chair by passing the tape around the chair arms and drawing it tight. The fingers of each hand were then lashed with the surgeon's tape by a turn of the tape just below the first phalanx including the thumb and two more turns over the four fingers just below the second phalanx, tape being drawn tight and passed around the arm of the chair. These wrist and finger lashings were marked with pencil by Button, the markings extending across the lashings and on to the skin. Both hands were secured in the same way. Medium's ankles were strapped respectively to the legs of Button's chair by several turns of surgeon's tape drawn tight about the bare ankles of the medium and then tight around the lower ends of the legs of Button's chair. Button's left knee was between the medium's two knees and his right knee was pressing the outside of the medium's left knee and Button's feet were in contact with the feet of the medium secured as above, and all this contact continued throughout the sitting. The hot and cold water dishes were on the table, the nearest point of any dish to the tips of

medium's right hand fingers being about sixteen inches. Button examined the dishes. There was a little lukewarm water in the hot water dish with the cloth for drawing the wax out in place and there was considerable cold water in the cold water dish. Nothing else in either dish. Walter then directed Dudley to leave the room which Dudley did leaving only Fife, Button and the medium in the room, Walter then directed Fife to search the room. Fife did this at some length, using an electric flashlight, and reported there was no one in the room except Button, the medium and himself. Walter then directed Button to place his hands over the medium's hands and in contact therewith continuously from this time until the end of the sitting which Button did with no variations except in one instance as below indicated. Walter then directed Fife to pour hot water in the hot water dish and put a piece of dental wax ("Kerr") in the hot water and leave the room. Button saw Fife pour in the hot water and put in the dental wax, said Kerr having been previously marked by Fife for identification. Fife then put out the red light and left the room leaving nobody in the room except Button and the medium.

Walter and Button engaged in conversation on various subjects for three or four minutes, Button hearing slight movements on the table and splashes in the water. Presently, about $3\frac{1}{2}$ or 4 minutes after Fife's departure, Walter directed Button to take the wax out of the water. Thereupon Button put his right elbow on the left hand of the medium lashed as above and his right finger tips on medium's right hand and with his left hand removed the wax from the cold water dish and then resumed the hand control above described holding the wax in his left hand. Button asked Walter whose print had been produced. Walter said it was his own. Button requested Walter to whistle for him, which Walter did. Walter then directed Button to call Richardson and Richardson came in and with the aid of the flashlight Button and Richardson examined the lashings finding them intact and the markings on the wrist and finger lashings as originally. Richardson turned on red light and

shortly thereafter the overhead light. Dudley and Fife then came in and they also examined the lashings and pronounced them to be intact. The medium came out of trance and expressed surprise to find herself lashed as described saying that she had not been so secured when the sitting began. The medium was released, it being necessary to cut the tape and rope with a knife. Button then led her to the door of the room and turned her over to Mrs. Richardson who searched her with negative results. Button put the wax print in an envelope having continuously held it in his left hand since taking it out of water and took it downstairs and there put his initials and the date on the back having observed that the wax bore the imprint of a thumb, showed it to Fife who identified it as his wax by three notches which he had put on it prior to the sitting. Fife and Dudley examined it and said it was impressed with a Walter thumbprint. Button then took possession of the wax and took it with him to New York City as Walter directed him to do. All séance occurrences were in dark except as indicated.

Richardson, Dudley and Fife reported that no one entered or left the room during the sitting except as above indicated. Dudley reported that he left the room at 10:08 and that Richardson was called in at 10:18. Dudley and Fife came into the room at 10:22. The loosing of the medium was completed at 10:25. The above notes are made by Mr. Button at his office in New York on the morning of March 12th, 1931, from rough notes made by him shortly after midnight of the night of March 11th-12th, on the train from Boston to New York and are signed by the following, each one of whom certifies, however, only to the occurrences that are indicated to have happened in his or her presence.

WILLIAM H. BUTTON

JOSEPHINE L. RICHARDSON

JOHN W. FIFE

E. E. DUDLEY

MARK W. RICHARDSON

VII.

ANALYSIS OF THE FINGERPRINT PROBLEM ON THE BASIS THAT A MOLD OR MOLDS ARE USED IN THEIR PRODUCTION¹

1. It is claimed that duplication is a photographic process.
2. That a dead finger is used to make the negative prints.
3. That the original is a dead finger from which casts are made.
4. That casts are made from a living finger and from these casts flexible molds are made.

1. The hypothesis of photographic reproduction of three-dimensional prints, if advanced, cannot be seriously entertained. Photographs are conventional means of presenting by light and shade effects an image which is interpreted by the observer. The latter's interpretation is a function of the lighting effects used in photographing as well as of his imaginative powers. Chemical or mechanical processes which must be used in producing a three-dimensional mold based on a photograph are unimaginative hence are incapable of reproducing the observer's mental picture.

2. The second assumption is untenable because of the variations in the pattern and the marked changes in form as shown by the wax prints. There is no information in fingerprint science which permits the assumption that many thumbs are practically identical as to the greater part of their minutiae and yet vary in a certain few details. It has been noted that these details which vary are not the same in every case.

3. If it is assumed that a mold is made from a dead or living original the proponent of that hypothesis should be able to account for all the facts presented by the wax imprints as well as by the conditions under which they were received.

The varying forms of these imprints imply a flexible original. For, if the original (whether mold or otherwise) were not flexible there must of necessity be such a multiplicity of rigid molds as to make the assumption palpably absurd.

¹ From article by E. E. Dudley, Journal A.S.P.R., Vol. XXIV, pp. 32-34, Jan. 1930.

If it is assumed that a flexible mold is used the original may have been a dead thumb or a living thumb—if the critic elects to deny the statements of the experts that these prints are such as would be made by contact with living flesh. For the sake of the argument we will assume that a flexible mold may be made from a dead thumb and that the results are so perfect that the experts can be deceived (no one has shown that this is the case). Then, if there are alterations in the pattern these changes must be made in the original or in the molds. But the original can be altered only if it is a dead thumb. Once altered every mold made therefrom must carry the same alterations even though additional changes have been made. The wax prints prove that this is not the case. Therefore, it must be the mold that is altered. These facts apply equally to the hypothesis that a living thumb is the original.

We are now reduced to the assumption that a multiplicity of flexible molds have been produced from a thumb, either living or dead, and that these molds have been mechanically altered in such a manner as to simulate structures of living flesh. The form and texture of the papillary ridges must be preserved wherever alterations are made. These minutiae are microscopic dimensions, as one will appreciate by studying his own finger-prints under a powerful magnifying glass. The photographic enlargements of these prints do not disclose any traces of mechanical operations. The variations are not merely the excision of certain details but in many cases they involve the substitution of other details not normally found in prints of the category under consideration.

Keeping in mind the fact that the variants which are found in these prints appear to have been made by contact with living flesh we present the following list of some of the major differences which must be accounted for on the hypothesis of normal production by the use of molds or the products of molds.

a. A terminal ridge in a positive print becomes a bifurcation as in the normal negative but retains its width as in a positive.

b. An inclosure as shown in ridge No. 5 (Fig. 6, p. 198, April, 1928), may be open at one end in one print, open at the

other in another or open at both ends in still another print. Somewhat the same modifications may be found as regards the inclosure in ridge 8, loc. cit.

c. Ridge No. 1 may be open or closed.

d. Ridge 2 may connect with ridge 3, as in the majority of prints or it may be disconnected.

e. Ridge 6 may branch to ridge 7, or this bifurcation may be open. The first is evidently the normal condition.

f. A scar may be present at the upper left portion of the negative or it may be absent.

g. A ridge which is normally bifurcated in the negative may also be bifurcated in some positives.

h. Pores which are clearly impressed in some positives and shown in the normal negatives may be absent in another positive which is otherwise clearly impressed.

i. A joint line changes its form or its position in relation to the remainder of the print.

j. The joint line may be of positive form while the remainder of the print indicates that it is of negative form.

k. The joint line may be that of a normal negative while a considerable fraction of the print is a normal positive and the balance a mirror-reversed negative.

l. A portion of the print may be in the normal negative category with the core section of mirror-reversed positive form with the corresponding joint line.

m. The central ridge of the positive may be completely excised without showing any evidence of mechanical operations.

n. A wrinkle or wrinkles may be incorporated into the print with every indication that they are made by contact with wrinkles in normal flesh.

o. These wrinkles may vary in number in different prints.

p. Wrinkles may appear in one print and not appear in another print made a few minutes later.

q. A normal negative print may be markedly convex, instead of concave, without any corresponding distortion of the ridge interval such as should result from the bending of a flexible mold.

r. A normal positive print may be made deeply concave without showing any indication of the above mentioned distortion.

s. Or, finally, a radically distorted print is produced on demand and without previous intimation and this distortion is so extensive and comprises so many variations from the norm that a distinctly different mold would be required for its production.

After having given all these variations the careful consideration which they merit it is necessary to consider certain other factors.

The concave positive has been made on the same piece of wax as a normal negative.

A print with wrinkles is made within a few minutes of a print which shows no wrinkles.

The print with the maximum distortion (Fig. 2) is repeated on the same piece of wax with a normal negative.

A print claimed by Walter to be of his left thumb is made on the same piece of wax as a normal negative print of the right thumb.

A print of a child's digit is made on the same piece of wax as a print of the Walter right thumb.

A print of another and younger child's digit is made alongside of a normal Walter print.

A distorted positive is made within a few minutes of several normal negatives.

Returning to the fourth hypothesis we see that all of the above statements apply with practically the same force. No alteration in a living original is possible and since a multiplicity of molds would be needed to make normal production possible the same strictures apply.

The results obtained at the séance of Sept. 9, 1929, show that three different molds would be needed to produce the prints of this one séance.

Setting at one side for the present all questions of control and the testimony of independent and reliable witnesses, the technical difficulties in the way of normally producing the large

collection of wax prints with their many variant details are so great as to make it extremely improbable that any such means were or could be used. (None of these prints present any indication that normal mechanical operations were performed either on the print or the structure which made the print.)

On the other hand, the evidence of the wax prints points to the hypothesis that they are ideoplastic productions and that the variations in the Walter prints are engineered by an individual whose normal thumbprint is the basis on which these variant forms are modeled.

Sir Francis Galton has likened the pattern of a fingerprint to that of lace. It may be stretched or warped in many ways but the pattern remains the same. But many of the changes in the Walter prints are of a different order. They involve local changes in the pattern but without invalidating the essential identity of the basic print. They exceed the known limits of mechanical operations since they appear to have been made in living flesh. They are strongly indicative of the operations of an independent intelligence. But this is exactly what Walter has claimed. He has said that he makes these changes in order that he may prove that these prints were not made by normal means. There is, we believe, ample evidence that these prints are not the physical prints of anyone who was present at the séances at which they were made.

VIII.

BAUSCH & LOMB OPTICAL CO.
Established 1853

ROCHESTER, NEW YORK

March 6, 1933.

Dr. B. K. Thorogood
Department of Mathematics
Franklin Union
Berkeley & Appleton Streets
Boston, Massachusetts

Dear Sir:

We acknowledge your letter of March 3 stating that you desire a statement from our Company in regard to the question raised in your first letter of February 28 about stereoscopic vision.

The statement you made in first letter in the use of a Monocular Microscope is correct, that a ridge in any surface may appear as such, or as a furrow, depending upon the position of the illuminant. Such is not the case, however, with the Binocular Microscope used for opaque substances. This gives true stereoscopic vision irrespective of the position of the illuminant.

In order that you may have cut and description of Binocular Microscopes we are sending in separate mail two of our latest folders describing the Greenough and Wide Field Binocular Microscopes. The latter are now obtainable with new drum nosepiece device, also with the tilted arrangement of the binocular body.

Trusting the foregoing will give you the desired information, we remain

Very truly yours,

BAUSCH & LOMB OPTICAL CO.

(Signed) M. Schmitt

Educational Sales Division.

MSchmitt:MMH
E.C. D-15

IX.

Sitting at 10 Lime Street, May 10, 1932. 9:10 P.M.

Present to left: Mr. Thorogood, Mr. Adams, Sary, Capt. Fife and Psyche. Miss Barry, stenographer, outside circle.

The mediums were searched before and after the sitting very carefully by Miss Barry. They did not leave Miss Barry's side until they entered the séance room.

Trance came on shortly and "Walter" appeared in a few minutes and seemed to be full of business.

"Walter": "I haven't much time to-night so I must work fast. Adams, you take Capt. Fife's place and Thorogood take Mr. Adams' place." The circle now was as follows: To left, Capt. Fife, Sara, Mr. Adams and Psyche. Thorogood inside of circle in front of "Sara."

Walter: "Relax everybody. That doesn't mean be dumb! I don't want water as hot as it was last night. Mix it with a little cold water and put it in the dish. Put the red light on Adams." The medium was snoring very loudly. Mr. Adams put the light out after the hot water was put in the dish and Walter instructed him to leave it on. Walter then asked for a small piece of wax (hand size) to be put in the dish. He told Adams to put the light out.

9:18: Wax was put in the hot water in the dish on the table in front of medium.

Walter: "What are those little pieces of wire? I get them stuck in my fingers."

Thorogood: "That is just to identify the wax." For the next few minutes Psyche was very restless and snoring very deeply. She had a very tight grip on Capt. Fife's right and Mr. Adams' left hand. Sary also had a tight grip on Capt. Fife's left hand and Mr. Adams' right hand.

9:22: Walter said, "You have a very fine left hand there. It is a perfect hand. Take it out of the cold water and examine it."

Mr. Thorogood removed the wax from the cold water and on examination found it to be a very good left hand in relief.

Walter: "That is all for to-night. Friday night at 9 P.M. for a perfect right hand. Goodnight."

Red light put on and then Walter said, "Just a minute. Notice how I polished the back of that hand with my heel. Look at it."

Sitting closed at 9:30 P.M.

X.

Sitting at 10 Lime Street, May 23, 1932. 9:10 P.M.

Present at left: Mr. Thorogood, Capt. Fife, Sary, Mr. Adams and Psyche. Miss Barry, stenographer, outside circle.

Medium searched before and after the sitting by Miss Barry as described in notes.

Trance came on in a few minutes, and at 9:20 "Walter" came through saying, "Cheer up, this is going to be a perfect evening."

Mr. Thorogood: "I got a couple of dandy Dr. 'X'* prints to-day."

"Walter": "You will get a pretty good one of me to-night."

Thorogood: "What do you think of those prints in the book?"

"Walter": "They aren't mine."

Thorogood: "Whose are they?"

"Walter": "Ask me no questions and I'll tell you no lies. You aren't so dumb Fife."

Sary was very restless and at 9:25 "Walter" told Adams to take her outside the circle. This was done and then the circle formed as follows: Capt. Fife controlled the medium's right hand and Thorogood's left hand, and Thorogood controlled medium's left hand and Fife's right hand.

"Walter": "That is better, there was too much power."

9:26: "Walter" asked for hot water and ordered a dry towel to be put on the table between the cold and hot water dishes.

9:28: Wax was put in the hot water dish by Mr. Thorogood.

"Walter": "You are all right Thorogood. 1933 will be a good year for psychics. Now watch the wax go into the cold water." (The wax was heard to splash in the cold water.)

9:29: "Walter" told Thorogood to take the wax out of the water and examine it. This was done and the wax was found to have a print of the right hand in relief. Of this hand "Walter" said: "The ectoplasm was taken from the medium. You have a perfect exhibit of the scar on her right hand exactly where the scar is and yet it is not her hand. The ectoplasm got mixed. That is why people not understanding psychics ought to be very careful about what they say about psychics. Be careful how you word that and how you point it out in your description. There is a scar of her right thumb."

"Walter": "Friday night I will make a negative of right and

* "Dr. X" substituted for true name.

left hands and there will be no mistake. That is a positive as you call it (meaning the hand received to-night). To make the story complete I will make a right and left negative Friday night. They are the easiest. Have two waxes the same size as you had to-night. You will find your comparisons with Dr. 'X' prints easier if they are negatives. My negatives will be beautiful. Friday we will sit between 8 and 8:30 P.M."

Sitting closed at 9:45 P.M.

XI.

Pattern-types of 1st to 5th Fingers in Percentage of the Number of Fingers *
Loops

Fingers	Hands	Whorls	Loops			Arches
			Rad.	Uln.	Total	
All	Both	25.65	5.81	61.14	66.95	7.40
	Right	29.38	5.94	57.76	63.70	6.92
	Left	21.92	5.68	64.52	70.20	7.88
1	Both	35.04	0.34	60.71	61.05	3.91
	Right	41.66	0.36	55.37	55.73	2.61
	Left	28.42	0.31	66.05	66.36	5.22
2	Both	28.89	23.98	30.66	54.64	16.47
	Right	29.67	25.73	27.51	53.24	17.09
	Left	28.10	22.24	33.81	56.05	15.85
3	Both	16.22	2.31	70.44	72.75	11.03
	Right	16.88	2.22	70.91	73.13	9.99
	Left	15.55	2.40	69.98	72.38	12.07
4	Both	37.10	0.78	58.71	59.49	3.41
	Right	44.98	1.21	50.74	51.95	3.07
	Left	29.22	0.35	66.68	67.03	3.75
5	Both	11.01	1.64	85.18	86.82	2.17
	Right	13.72	0.17	84.26	84.43	1.85
	Left	8.30	3.10	86.10	89.20	2.50

* Data from study made by Prof. Kristine Bonnevie, Institut Arvehighutsforskning, Oslo, Norway.

XII.

10 Lime Street

Boston

Have taken Plaster Cast, and Photos sent by Bell, for further study.

Dudley, 3:30 P.M., Dec. 29, 1931.

XIII.

May 10, 1933.

Relative to the casts of thumb and index be advised as follows:

1. The casts were given me in the summer of 1926 by Dr. Crandon, personally, from a box of casts in the library.

2. They were given as incomplete examples of the paraffin glove agenda, then in course of experimentation.

3. I was not present at their production: they were given me to exemplify the morphology, presence of nails, cutaneous line, etc.

4. They were paraffin encased, the "paraffin glove fingers" having been filled with plaster of Paris.

5. I dissolved the paraffin from the index cast to exhibit the cutaneous markings: retained the thumb with paraffin casting intact, and in such state returned it to you.

6. The digit forms were retained throughout the intervening period of approximately six years in a box, along with picture wire which I had personally applied as a control of Margery in the glass cabinet, in a sitting of which you have a record.

(Signed) ERIC TWATCHMAN.

XIV.

Friday, November 14, 1930.

Meeting at 8:30. Circle—Medium, Dr. R., Col., Mrs. Coolidge, Mr. Coolidge, B. K. T., Miss Richardson, Miss Richardson, Mrs. Richardson, Mr. Litz, Dr. C., Mrs. Litz, Capt. Fife, in back Mr. S., Mr. E., who came late, B. K. T. was between Coolidge and Miss R.

The apparatus and dishes for the finger prints were placed on the table and lights out at 8:30, but Walter said he wanted the voice box first so the dishes were taken off and the voice box put on the table and adjusted by Mr. E. After that Walter whistled and talked, whistling, at times, two tunes at the same time, making considerable noise and what sounded like feed-back although this, in the ordinary sense, was impossible in the microphone. He then called for the dishes and Captain Fife put them on the table and when ready several asked what he was going to make and Captain Fife suggested making enlarged finger print of his right thumb. Walter said he would not do this but did not say he could not. Dr. C. thought perhaps that was stretching the matter a little too much, to ask something new under the conditions, but Captain Fife kept persisting and Dr. R. suggested making anything he wanted and after several suggestions, Capt. Fife still holding his ground, Walter suggested putting in the wax which Fife did. After about a minute and a half he said "take it out" although no sound had been heard. Fife took it out of the cold water and put it in his pocket. Then the dishes were put away and the voice box was again put on the table. On top of it was put Dr. R's voice cut-out mechanism and while the medium blew that up Walter talked through the "mike." He also levitated a piece of cardboard about $2\frac{1}{2} \times 1$ ft., which had been illuminated on one side, three or four feet above the table and around in various oscillations and then turned it upside down and left it on the table. He made a few luminous lights but not anything very bright. The meeting was over at about 9:20 P.M.

The wax had an impression which had all the appearance of having been stretched out thus giving an enlarged print as F. suggested.

XV.

December 15, 1932.

To: Mr. B. K. Thorogood,
41 Berkeley St.,
Boston, Mass.

Report: On the dermatoglyphics of "X" and "Y".

The material received comprises: (a) palm- and finger-prints, both hands, prepared by the usual ink method, of an individual marked X; (b) photographs of detail casts, both hands, of an individual marked Y; (c) photographs of thumb prints (labeled A and C), enlarged about X4, stated to be from the individual X, and photographs of thumb casts (labeled B and D) correspondingly enlarged, stated to be from Y.

This material has been submitted to the undersigned with the explanation that it concerns an "investigation of the possibility of artificial reproduction and the so-called supernormal production of finger-prints", the only further information supplied being that the subject Y, to whom the casts so marked "are supposed to belong" is no longer living. The request is for comparison of the impressions of X and Y, to determine whether the two sets are "identical". With reference to the statement of this request, it may be pointed out that the word "identical" is not exactly fitting, in that two prints from the same digit may present differences, owing to unlike pressures in printing, variation in amount of ink, etc. Such differences, though only slightly lessening the number of points of actual identity and not invalidating the correspondences between the two prints, disqualify the reference of "identical". In the present instance, it will be noted, the comparison concerns *prints* and *casts*. It would be preferable to revise the query to read: Do the prints labeled X and the casts labeled Y present correspondences indicating that they were made by the same individual—or, to invert it, are they so unlike that they could have come only from two persons?

Consideration of this query will be divided under two headings: (a) the whole hands, exclusive of the thumbs, and (b) the enlarged thumb prints and casts, A, B, C, and D.

THE WHOLE HANDS, EXCLUSIVE OF THE THUMBS.

The impressions of X and Y present many conspicuous differences in their major features. It may be stated with assurance that the impressions were not made by the same person. The following formulated

statement of the major dermatoglyphic characters is expressive of the existence of outstanding unlikenesses, so that it seems unnecessary to add more detailed analyses, ridge counts and the like. The formulation of palmar features follows Cummins *et al.* (Revised methods of interpreting and formulating palmar dermatoglyphics, *American Journal of Physical Anthropology*, vol. 12, 1929), while the finger-prints are indicated by the initial letters of the familiar standard pattern forms.

		X				
		Palm	Fingers			
			II	III	IV	V
Right	7(8).5"(6).5".3-t-A ^u .O.O.O.L		R	U	U	U
Left	7(8).5"(6).5'.3(2)-t-L ^r .O.O.O.L		T	U	U	U
		Y				
Right	11.9.7.5'-t-A ^u .O.O.L.M		U	U	U	U
Left	11.9.7.4-t-A ^u .O.O.L.O		R	U	U	U

The Enlarged Thumb Impressions: A, B, C, D.

All four impressions present the same pattern configuration, ulnar loop. In comparing them it is therefore necessary to resort to a more detailed analysis, including ridge count and the inspection of minutiae (forks of ridges, abrupt terminations of ridges, etc.). In the latter procedure I have made tracings on cellophane, indicating such features as shown on the attached sample. The desired comparisons may be readily made by superimposing such tracings, both over other tracings and the prints or casts. In doing this it is essential, of course, to keep in mind that a perfect correspondence is not to be expected even if two impressions originated from the same digit, not only for the reasons stated above but on account of the fact that the natural rounded contour of a cast is compared with the same or a similar contour reduced to a plane surface in printing.

In referring to these thumbs I designated them by the letters with which they are labeled, considering that the finding in A and B is sufficient reason to negate their respective origins from the two persons X and Y.

A and B present a correspondence indicating that they may be attributed to one and the same digit. C and D are from different digits.

Harold Cummins.

XVI.

January 25, 1933

To: Mr. B. K. Thorogood,
41 Berkeley St.,
Boston, Mass.

Second Report on the Right Thumb Impressions: Marked A, B',
B and A'.

After careful examination of the new material and restudy of the photographs originally submitted, I am still of the opinion that these right thumb impressions "may be attributed to one and the same digit", as stated in my report dated December 15, 1932. The evidence supporting this conclusion is now presented in some detail, in view of your apparent conviction that the impressions in question originate from two different digits. I must ask you to publish this report in full and to include in your account cuts of the prints as I have marked them for demonstration of the correspondences.

Please understand that my comments concerning "possibilities of fraudulent practice are made with no intention to question the sincerity of any individual. I am considering the situation wholly impersonally, as an outsider to whom you have presented the problem. I wish to make it clear, therefore, that the references to fraud represent merely my hypothetical reconstruction, and are in no sense to be interpreted as accusations. The comments merely indicate, for your benefit in study of the report, the deductions which may be drawn from these findings by one who examines the materials alone, as I have done.

With regard to the new photographs labeled A, B, C and D (to which I shall refer as A', B', C' and D', for distinction from the original examples bearing the same letters) you state that they show "both these right and left thumbs similar to those mounted on the yellow cardboard and lettered in the same way, A and B being the right thumbs and C and D the left thumbs". From the correspondences of these prints I take it that the wax transfer process described in your letter of January 13, 1933, yields prints which reproduce the essential features of the three-dimensional waxes. It is thus possible to determine that the new photographs are not lettered exactly "in the same way" as the original ones, for $A'=B$ ("right thumb of Y") and $B'=A$ ("right

thumb of X"). The signs identifying the "X" and "Y" imprints are discussed below. You will recall my pointing out that two impressions from the same digit are not identical in the strict sense of the word, though they are "identical" in the meaning of one who employs the term to signify origin from the same digit.

I have made no re-examination of C and D, nor have I studied the detail in the companion prints D' and C', since it is clear that they originate from two different digits, as before reported. The results of restudy of A and B (Fig. 114), together with the findings in B' and A' (Fig. 115) are presented below.

Lacking sufficient experience with plastic, three-dimensional imprints, I have carried out some trials with several media to secure a working knowledge of the operations and results in material such as yours. Kerr's "Perfection Impression Compound" and another dental preparation of similar qualities are among the media which I have employed. My observations pertinent to the issue at hand are: (1) Impressions made by a positive replica cast from a direct imprint of the natural finger may be indistinguishable from direct negative imprints of the finger itself. (2) Similarly, positive replicas cast from indirect negative imprints (impressions of an original positive replica) may be indistinguishable from original positives (cast from direct negative imprints of the natural finger). (3) Taking into account the variability in direct negative imprints of the actual finger, arising from unlike conditions of impression, it seems likely that successive transfers (direct natural negative to positive replica—that positive to negative, etc.), may be continued repeatedly, still without signs positively differentiating these increasingly more indirect imprints from originals—because some originals are less faithful reproductions than others. (4) Various forms of artifact may occur in plastic imprints, including not only the more obviously unnatural expressions, such as battered ridges and pitted surfaces, but also distortions of ridge relation. In the light of these observations, as well as other findings to be considered later, it is quite possible that the right thumb imprints of "Y" are indirect impressions rather than direct imprints of the natural thumb, those rendered in positive form at the sances being necessarily imprints of a negative replica, or replicas.

First making note of your data recorded on the backs of the photographs A' and B', I pasted them on white board for demonstration of the points of correspondence. You will note that some forty points are indicated, far in excess of the generally accepted requirement to estab-

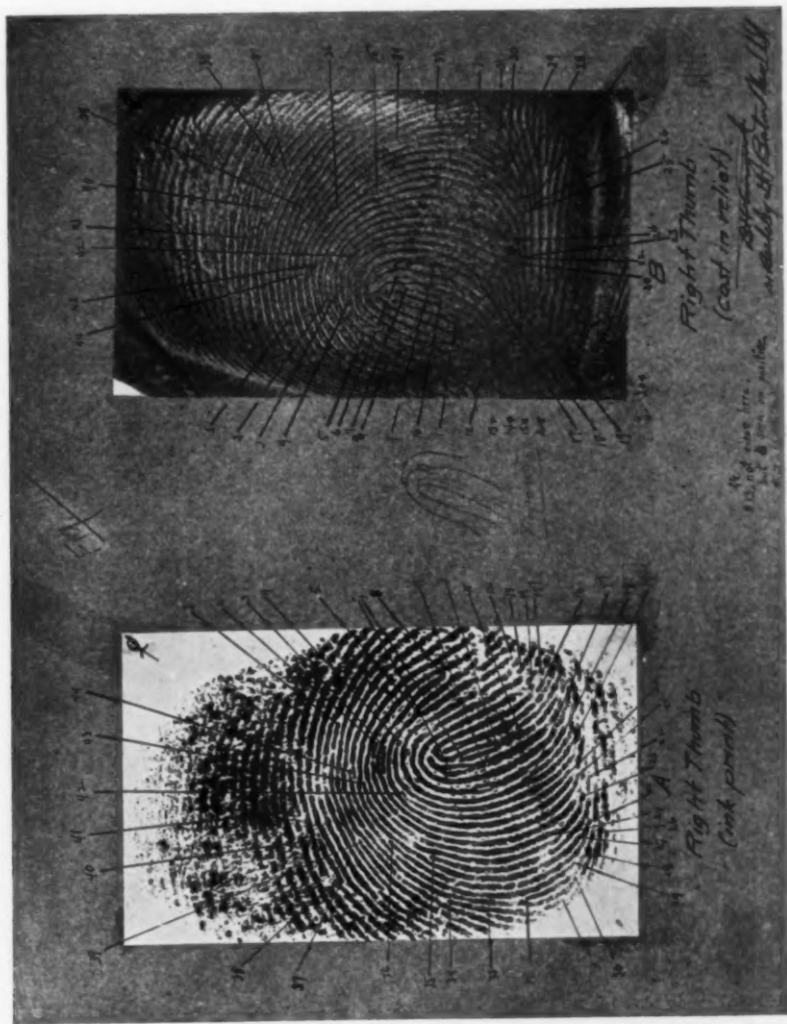


FIGURE 114.

Photograph of the right thumb prints of Dr. "X" and "Walter," indexed by Dr. Cummins, in which he shows forty-four points of identity. The ridge disjunction which he mentions is indicated by the letters in B,



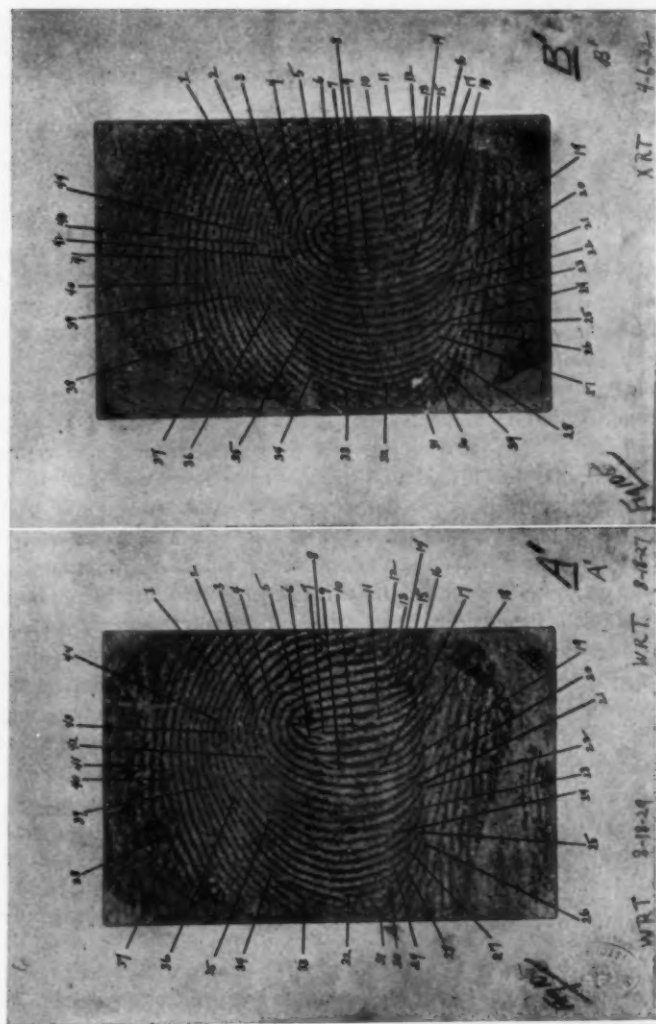


FIGURE 115.

Photograph of the right thumb prints of "Walter" and Dr. "X", similar to ink prints, both made by a transfer process from negative impressions, and indexed by Dr. Cummins.



lish positively that two prints originate from the same digit. A' and B' are therefore from the same digit (the right thumb of X, I assume from the circumstances), and since A and B check with these wax transfer prints all four photographs afford evidence of origin from the one digit.

With respect to your query concerning the core: (1) The core appears as a definite rod, or spike, in both A and B'. (2) There is a suggestion of the same detail in the print A'. (3) In B, the two core microphotographs, negative 5 (8/18/27) and positive 2 (6/14/32) there is an area at the core head which is certainly not natural, but in this area a rod core may be restored without inconsistency. (4) The wax 3/21/27 is vague, the ridges being battered and smoothed; with suitable light and angle of view, however, the core is interpreted acceptably as a rod. (5) In waxes 7/16/27; 8/26/27 and 9/9/29* the core does seem to be a staple in direct view, and though the sulci agree in this same view it is to be noticed that with changed angle and illumination the core may be converted to a rod. The various waxes of "Y" are accordingly variable among themselves, and it is significant that they may be arranged in a series forming a transition to the rod state more clearly shown in A and B'. You may be surprised that I refer to varying view and illumination, placing stress on appearances thus displayed. My warrant for the procedure is that it serves, though roughly, to check the heights of ridges and depths of sulci. I may direct your attention to the equivalent mechanical check which is provided in the wax transfer impression, and that by this means also a rod core is suggested in a "Y" thumb, as shown in the print A'. Before receiving the second consignment of waxes I had considered the remote possibility that the core variations are due to a lesion in this region, ridges having puckered in the healing process. It was for this reason that I requested a series of dated imprints of "X" and "Y" extending over a period of years, to determine whether a history of such ridge conversion could be established. Your waxes indicate that the explanation lies elsewhere, namely, in technical defect of the impressions.

In the region of the core head there is another ridge which is variable among the several imprints of the "Y" thumb. It is the ridge coursing distally from the bifurcation numbered 6 in the photographs. In some cases this ridge fuses with ridge n, as indicated on A'), while in others

* These three impressions (Figs. 82b, 83b, and 87b) were later found to have been changed.

it terminates as in B'. This variant, like the core discrepancy, is thus to be regarded as an *artifact* of impression.

There are certain other negligible unlikenesses between A' and B' (paralleled in B and A, respectively). I shall use the natural ridge relationships shown in A and B' (right thumb of "X") as the foundation of discussion. On each of the photographs, A and B', it is to be noted that a line joining points numbered 6 and 32 crosses fourteen ridges, while the corresponding line in B and A' transects fifteen ridges. The sequence of ridge details in A' and B' (and of course A and B) is perfect except for those points involved in the courses of the ridges lettered c, d, e, f, g and h, and for these six ridges the sequence is completed properly with interpretation of the impression artifact in the two waxes, 8/18/27 and 6/14/32.

In the waxes specified it is quite evident that the plastic was reimpresed by a rolling or other irregular movement, producing a "repeat" of the ridge b and cross-union of the six ridges succeeding it ulnarwards. The restoration of the ridges to their true relationships may be followed by comparing the correspondingly lettered ridges in the "X" and "Y" imprints. The repetition of like artifact in two waxes made at an interval of about six years may suggest their origin from the same replica, in which the artifact was originally introduced. It is important to observe that the described ridge disjunctions do not occur in other "Y" waxes, though one example (9/9/29) displays ridge aberrations of like origin in another region (outlined on the wax with crayon).

On four "Y" waxes (7/16/27, 8/26/27, 9/9/29 and 6/9/32) there is to be found a conrescence which is open, so far as I can see, to but one interpretation. The feature is located about in line with the core axis, distal to the head of the core at a distance of some twenty ridges. It is apparently the imprint of a defect of a replica employed for making these impressions, for there is certainly no normal feature of the skin which can account for the presence of this blob of wax, and I know of no lesion having its characteristics. The production of the same defect over a period of several years suggests the employment of a replica, either on replica or transfers which reproduce the defect.

In your letter of December 31, 1932, you write: "As this right thumb is the same as that which occurs on the right hand, and as the design of the right hand is different from either the right or left of the other individual, it seems almost conclusive proof that this thumb,

although much like the other, does differ in this respect (referring to core unlikenesses in the "X" and "Y" right thumb imprints)."

It does not follow, from the occurrence of a certain thumb in a hand imprint, such as that of the right hand of "Y", that the digit and hand belong to the same individual. Since the thumb imprint must be added separately it would be simple to make a substitution, as indeed it would be also, judging from the state of the "Y" hand casts as photographed, to incorporate other digits not belonging to that hand. I can lay no claim to ability to detect such substitutions from a cast alone, but with the observed correspondence of the right thumb imprints and your labels identifying them as from "X" and "Y" respectively, the inevitable conclusion is that a thumb imprint had been so substituted. It was this situation which prompted me to divide the previous report into two sections, one dealing with "The whole hands, *exclusive of the thumbs*", the other with the "Enlarged thumb impressions: A, B, C, D". I refrained from stating the obvious implication of the findings, because the definition of the thumb imprints in the photographs of the right hand casts of "Y" is not sufficiently clear to make reliable determinations of the ridge details, and I had only your labels identifying A and B. Now, however, the paragraph quoted from your letter insistentlly reaffirms the origin of the right thumb imprints, and it is only fair that the matter should be discussed frankly. I may explain that the speculation naturally aroused by this curious situation, the right hand imprint of one individual bearing the thumb of another, led me to consider two possibilities: (1) It occurred to me that you might be responsible for the substitution, desiring to subject the thumb identification to this specific test, combining it with a strange hand. (2) But it seemed more likely that an imprint which had previously gained recognition as the thumb of "Y" had been combined with the hand of an "unknown", with the fraudulent intent of lending a quasi-identity to that hand. If I am correct in my inference that those who have examined the "Y" imprints do not agree in their judgments on identity (though why there should be disagreement I do not understand, if others have given the same careful attention to like materials), the conflict might offer an advantage to one planning a spectacular demonstration of whole hand imprints. Other evidences of the employment of a replica are enumerated above, and the same operation may have been applied in the "Y" hand imprints. There are significant differences in the finer texture of the ridges in the right and left thumbs of "Y", as shown in

B and D), the details being much more true to nature in the left thumb than in the right. The difference suggests unlike processes, or unlike conditions of impression, in the making of the right and left thumb imprints.

Summary:

- (1) The right thumb imprints of "X" and "Y" originate from one and the same digit.
- (2) The right hand imprint labeled "Y" thus bears a thumb which does not belong to that hand, the hand otherwise being unlike that of "X".
- (3) In certain of the "Y" thumb imprints there is evidence indicating they are produced by a replica rather than the actual thumb.

Harold Cummins.

XVII.

Whorls in Percentage of Fingers in the Various Human Races

Dig. Hands	I		II		III		IV		V	
	r	l	r	l	r	l	r	l	r	l
Korea	64.6	54.4	43.4	40.8	33.8	35.0	63.4	56.8	32.0	22.8
Korea	61.5	56.5	47.5	47.5	33.5	45.5	60.0	57.5	22.5	24.5
Japan:										
Tschigaya	61.1	48.8	45.0	43.2	34.0	34.8	66.1	57.9	35.2	25.5
Sugano	57.3	49.7	47.2	40.4	33.3	37.8	66.2	58.1	36.0	25.8
Sumatra	63.3	52.5	48.3	45.7	30.6	31.0	65.0	54.0	35.2	25.9
Nias	46.6	38.1	42.75	40.7	23.4	25.6	49.3	24.0	24.0	16.5
Italy	56.46	43.68	41.52	38.23	22.27	23.16	56.90	42.79	22.66	17.71
England	44.0	30.0	30.0	28.0	15.0	16.0	45.0	31.0	13.0	8.0
Norway	41.66	28.42	29.67	28.10	16.85	15.55	44.98	29.92	13.72	8.30

Loops in Percentage of Fingers in the Various Human Races

Dig. Hands	I		II		III		IV		V	
	r	l	r	l	r	l	r	l	r	l
Korea	33.4	42.8	49.6	54.0	63.2	61.4	35.6	42.0	67.0	76.2
Korea	33.0	38.5	45.4	46.0	64.5	50.5	39.5	42.0	77.5	75.0
Japan:										
Tschigaya	37.8	49.0	50.4	50.7	63.5	62.6	33.7	41.5	64.6	73.8
Sugano	41.4	47.8	45.4	52.4	63.3	58.4	32.8	41.2	63.2	72.9
Sumatra	36.20	45.80	46.70	50.30	67.4	67.0	34.4	45.0	64.6	73.9
Nias	52.2	59.4	52.5	53.9	73.5	69.9	49.7	58.5	75.9	83.3
Italy	42.26	53.56	46.83	50.43	70.39	68.12	41.02	55.33	76.24	81.37
England	53.0	65.0	53.0	53.0	78.0	76.0	53.0	66.0	86.0	90.0
Norway	55.73	66.36	53.24	56.05	73.13	72.38	51.95	67.03	84.93	89.20

Radial Loops in Percentage of Fingers

Dig. Hands	I		II		III		IV		V	
	r	l	r	l	r	l	r	l	r	l
Korea	1.0	0.6	16.8	11.6	2.4	2.6	1.0	0.4	0.4	0.2
Korea	0	2.5	7.5	13.5	0	1.5	1.0	0	0	0
Japan:										
Tschigaya	0.2	0.7	17.2	14.9	2.4	1.8	0.4	0.3	0.3	0.2
Sugano	0.8	0.9	12.6	13.2	3.1	3.7	2.1	1.4	1.8	2.4
Italy	0.37	1.13	20.0	18.4	2.27	2.40	0.63	0.19	0	0
Norway	0.36	0.31	25.73	22.24	2.22	2.40	1.21	0.35	0.17	3.10

XVII—Continued

Ulnar Loops in Percentage of Fingers in the Various Human Races

Dig.	I		II		III		IV		V	
	r	l	r	l	r	l	r	l	r	l
Hands										
Korea	32.4	42.2	32.8	42.4	60.8	58.8	34.6	41.6	66.6	76.0
Korea	33.0	36.0	38.0	32.5	64.5	49.0	38.5	42.0	77.5	75.0
Japan:										
Techigaya	37.6	48.3	33.2	35.8	61.1	60.8	33.3	41.2	64.3	73.6
Sugano	40.6	46.9	32.8	39.2	60.02	54.7	30.7	39.8	61.4	70.5
Italy	41.89	52.43	26.83	32.03	68.12	65.72	40.39	55.14	76.24	81.37
Norway	55.37	66.05	27.51	33.81	70.91	69.98	50.74	66.68	84.26	86.10

Arches in Percentage of Fingers in the Various Human Races

Dig.	I		II		III		IV		V	
	r	l	r	l	r	l	r	l	r	l
Hands										
Korea	1.4	2.2	6.2	4.4	2.2	3.0	0.8	0.8	1.0	0.8
Korea	5.0	3.0	7.0	5.5	2.0	4.0	0.5	0.5	0	0
Japan:										
Techigaya	1.1	2.2	4.2	5.6	2.1	2.3	0.2	0.3	0.1	0
Sugano	0.9	2.5	7.1	6.9	3.0	3.5	0.7	0.6	0.4	0.6
Sumatra	0.5	1.7	5.0	4.0	2.0	2.0	0.6	1.0	0.2	0.2
Nias	1.2	2.5	4.7	5.4	3.1	4.5	1.0	1.2	0.1	0.2
Italy	1.26	3.10	11.65	10.7	7.02	7.97	1.83	1.45	0.76	1.45
England	3.0	5.0	17.0	17.0	7.0	8.0	2.0	3.0	1.0	2.0
Norway	2.61	5.22	17.09	15.85	9.99	12.07	3.07	3.75	1.85	2.50

2.28
2.75
1.81
2.62
1.72
2.39
4.72
6.50
7.40

XVIII.

Statistical Occurrence of Pattern-Types in Different Human Races					Author
Races	Whorls	Rad	Uln	Total Arches	
Korea	45.18	3.15	48.71	51.86	Kubo 1918
Estoho	45.70	3.43	48.60	52.03	Kubo 1918
Japan:					
Techigaya	45.16	3.84	48.92	52.76	Kubo 1918
Sugano	45.18	4.2	47.65	51.85	Furuse 1913
Nigata	43.6	3.2	50.4	53.6	
Sumatra	45.14	...	...	53.13	
India	36.1	2.7	59.2	61.9	KL de Zwaan 1911
Nias	34.73	...	...	62.88	Schlaginhaufen 1906
Aino	31.8	3.8	61.4	65.2	KL de Zwaan 1911
Italy	36.46	4.44	54.00	58.44	Hasebe 1918
Italy	39.0	3.9	53.0	56.90	Falco 1908
Italy	39.3	3.7	53.7	57.40	
" (German race) .	29.2	5.1	57.9	63.0	Gasti 1907
England	26.00	...	...	67.3	"Stranieri"
Norway	25.65	5.81	61.14	66.95	2
				7.40	Criminals

Statistics of Pattern-Types, Combined by Collins (1913) with the Occurrence of Brachy- and Dolichocephals

Statistics of Pattern-Types, Combined by Collins (1913) with the Occurrence of Brachy- and Dolichocephals					Investigated
Races	Whorls	Total Arches	Indiv.	Arches	
China	38.7	57.1	5000	4.2	Brachycephals
India	36	61	3	3	Dolichocephals
India	30.5	65	2000	4.5	{ Brachycephals
England	20.15	74.85	5	5	{ Dolichocephals

XIX.**TO WHOM IT MAY CONCERN:**

This is to certify that I have made ink prints of the finger tips and palm patterns of both "M" and "C" and have classified these as well as two photographs of the wax impressions including the finger tips and the palms said to be "W" and state they are of the hands of different individuals.

(Signed) BERT WENTWORTH

March 24, 1933.

Note:

"M"="Margery"

"C"=Dr. "X"

"W"="Walter"

XX.*Report by W. T. Bell*

On the identity of the alleged supernormal "Walter" prints on plaster cast of May 17, 1924.

In view of the request made to me to report as to the identity in regard to certain séance imprints obtained in Boston, which were sent to me by Sir Oliver Lodge on October 10, 1931, after making my report upon these imprints I thought it advisable to refer back to some previous published thumb prints, alleged to have been obtained in a similar manner.

In 1929 a book "The Thumbprint and Cross-Correspondence Experiments Made with the Medium 'Margery' During 1927 and 1928" was sent to me by Dr. L. R. G. Crandon.

This book is reprinted from the Journal of the American Society for Psychical Research. At the séance sittings under Margery's Mediumship during 1927-1928 many alleged supernormal digital impressions were produced.

These imprints are in most cases identical and are referred to as the "well known Walter print." A photographic copy of a supernormal "Walter print" shown on page 91, and marked 2-3-27 appears in exhibit and marked 1. (Our Figure 106).

On page 96, a photograph of a digital impression appears, which

is described as "Thumb of the paraffin glove of May, 1924, showing the Walter print; photographed direct from the plaster cast of the glove made at the time." This print is reported on by Mr. John W. Fife, who is described as a civilian finger print expert and Chief of Police of Charlestown (Boston) Navy Yard. Mr. Fife's report appears on page 87, and reads:

Capt. J. W. Fife's Report

(Quoted in Mr. Bell's Report—Exhibit 11)

"I then examined the plaster cast of a hand, marked May 17, 1924, and find that the ridges and depressions are clearly marked over most of the area of the thumb, but that the thumb, like the rest of the hand is distorted. The ball of the thumb seems to have been pinched up into a ridge above the core and this gives a different appearance to the pattern in that region as compared to the wax prints. In spite of this distortion, the pattern is in general identical with that of the wax prints in the corresponding area. The ridge count from the core to the delta is the same and the relationship of numerous bifurcations is consistent with those of the wax prints. In spite of the peculiar distortion of this thumb I am convinced that it is the same finger print pattern as the other prints and that it proves that the convex prints above referred to are actually models of a normal thumb.

I have compared Margery's thumb print with the ones produced by 'Walter,' and found her thumb prints to be of the ulnar type, and that they revealed some characteristics in the vicinity of the core that are almost identical with the ones found in the 'Walter' prints. Although their prints resemble each other so far as characteristics are concerned, they are not the same identical prints. The resemblance is sufficiently close to show blood relationship.

In comparing Margery's and Walter's prints with those of their mother, Mrs. Stinson, I found that the patterns and characteristics contained in the prints of all three resemble each other closely enough to indicate blood relationship. In families there is usually noted a correspondence of special characteristics amounting, in the case of a mother and son, to as much as 75 per cent, and between brother and sister to 50 per cent.

It is my opinion, based on a most careful examination of the wax prints originally submitted to me by Dr. Crandon and the prints obtained at the séance of March 21, 1927, that these prints have been made by a living thumb, that the patterns are the same in all the

prints except that some are reversed from the others, that the convex prints were not made from any of the concave prints which I have seen, that the prints of March 21st were not made by the thumb of any person in the room, and that the thumb of the plaster cast carried the same pattern as the thumb which made the normal wax impression."

(Signed) JOHN W. FIFE,
19 Chestnut St., Somerville, Mass.

Mr. Bell's Report (continued)

On page 95 it is quoted "An examination of the photograph in question (i.e., 'Walter print') and of the original plaster cast reveals much of interest."

It does, for after careful scrutiny of these photographs, I declare emphatically that these impressions apart from similarity of type or pattern do not disclose any ridge characteristic data in agreement, are not identical with each other, and therefore must be imprints or replicas of different digits. See reversed photographs of digital mark on Plaster Cast 11.

It should be pointed out that the reason for reversing the photographs of the cast is that the cast must show a reversal of the print in the paraffin. A photographic reversal of the plaster print produces a copy of the original print in the paraffin.

Having satisfied myself beyond doubt that the claim regarding the identity of the alleged supernormal "Walter" and plaster-cast prints must fail, I realized the importance of tracing, if possible, a normally made duplicate impression of one or the other of these impressions. Knowing that imprints of the fingers and thumbs of Margery were on record in London I proceeded to examine them.

On examination I was at once struck with the similarity between the plaster cast imprint and the right thumb impression of Margery.

A photographic enlargement of Margery's right thumb print appears on exhibit as number III.

I have carefully scrutinized the photograph of the plaster cast impression together with the photograph of the normal imprint of Margery's right thumb, and have marked 18 skin ridge characteristics on each photograph which are in agreement. I have no hesitation in saying that the coincident sequence of ridge characteristic data found in agreement in the plaster cast and Margery's right thumb print determine definitely the identity of these imprints.

Mr. Fife in his report draws attention to the very distorted appearance of the plaster print. This is true, but finger print experts are not easily deceived by the distorted appearance of finger impressions.

Identity of finger prints is fixed by the type of ridge characteristics disclosed and their appearance in correct sequence.

So far as I am concerned the origin of the so-called "well known Walter print" remains a mystery for the present.

Of this I am certain, that the alleged supernormal imprint on the paraffin glove of May, 1924 is not identical with the frequently produced and alleged supernormal Walter print, as it is claimed to be, but is identical with a normal impression of the right thumb of the medium Margery.

(Signed) W. T. BELL.

XXI.

BERT WENTWORTH

Personal Identification

44 Fourth St., Dover, N. H.

Feb. 1, 1933.

B. K. Thorogood, Esq.,
Boston, Mass.

Dear Sir:

On careful examination I find that the plaster of Paris thumb does not belong to "M" or "C" whose prints I took Jan. 22, 1933, and it does not belong to the ones where the impressions of the whole palm and digits were impressed in wax, i.e., "W". That is it does not belong to any of the three that I have and must belong to a fourth individual.

Sincerely yours,

(Signed) BERT WENTWORTH.

XXII.

Report of John W. Fife on Plaster Cast Marked May 17, 1924.

(Reprinted from *Psychic Research*, Dec., 1928, pp. 694-695.)

On February 6th, 1927, I received from Dr. L. R. G. Crandon, a number of finger print impressions made on dental wax. There were ten pieces of wax, two of which carried two prints. Examination of

each individual print revealed them to be of the same pattern. In my opinion they were impressions of a right thumb. They were of the loop pattern. In some of these prints the lines from the core flowed out toward the little finger of a right hand. To all persons familiar with finger print impressions, this type of pattern is known as an ulnar loop.

All but one of these prints were concave as though a living thumb had been pressed into the soft wax but most of them were not wholly legible. Among these prints I found one that was identical with two other clear prints with the exception that the lines of the core flowed out to the opposite side of the thumb, as though the print had been inverted. This print was convex and, because of the slope of the core, would be known as a radial loop type if it was from a right thumb.

As a finger print student, I realized that never had two prints been found to be identical in pattern but the one reversed from right to left. I also knew that if this second or convex print had been made from one of the others by pressing them together, then the second would be merely the impression of the original print, the ridges of one fitting into the grooves of the other. But none of the prints which appeared to have been made by pressing a thumb into the wax were exactly the same in form or curvature as this single print in which the pattern was reversed. I became sceptical and curious to know how such a print had been produced.

I treated these prints with white powder, in order to make it easier to photograph them, and had them photographed. A careful study of the photographs confirmed the previous examination, that one pattern was the reverse of two of the others.

On March 21st, 1927, I was present at the home of Dr. Crandon, 10 Lime St., Boston, Mass., and attended a séance during which five prints were produced on dental wax. This wax I had previously removed from a box and examined carefully. After marking the wax for later identification, I placed one piece at a time in a shallow dish containing hot water. In approximately five-minute periods, each piece of wax was out of the dish and lying on the table in front of me with a distinct print on each, which prints I later identified as being of the same pattern and having the same characteristics as the prints I had previously examined subsequent to February 6th, 1927.

One of the above prints I found to be like the convex print which I have referred to above. This print had the same pattern as the others

but reversed from left to right and, like the other convex print, could not have been made by impression from any of the prints.

Although these prints were produced in darkness, in my opinion they were not made by any living person in the room as I later examined the prints of each individual present. I was satisfied that the convex prints had not been made from any of the concave prints and yet the pattern was the same even to minute details. Microscopic examination revealed details which were entirely consistent with those of a living thumb.

My first impression of the convex print, which is incomplete in its upper portion, was that it might be a mirror image of the normal print and the photographs of the prints, taken after they had been powdered, tended to confirm this idea, but upon further study it appeared that this was a rather imperfect positive model of a thumb having the same ridge pattern and characteristics as one from which the normal negative prints had been taken. I do not attempt to supply any explanation of how this could have been done.

I then examined the plaster cast of a hand, marked May 17th, 1924, and find that the ridges and depressions are clearly marked over most of the area of the thumb but that the thumb, like the rest of the hand, is distorted. The ball of the thumb seems to have been pinched up into a ridge above the core and this gives a different appearance to the pattern in that region as compared to the wax prints. In spite of the distortion, the pattern is, in general, identical with that of the wax prints in the corresponding area. The ridge count from the core to the delta is the same and the relationship of numerous bifurcations is consistent with those of the wax prints. In spite of the peculiar distortion of this thumb I am convinced that it is the same finger print pattern as the other prints and that it proves that the convex prints above referred to are actually models of a normal thumb.

I have compared Margery's thumb prints with the ones produced by "Walter," and found her thumb prints to be of the ulnar type, and that they revealed some characteristics in the vicinity of the core that are almost identical with the ones found in the "Walter" prints. Although their prints resemble each other so far as characteristics are concerned, they are not the same identical prints. The resemblance is sufficiently close to show blood relationship.

In comparing both Margery's and "Walter's" prints with those of their mother, Mrs. Stinson, I found that the patterns and characteristics

contained in the prints of all three resemble each other closely enough to indicate blood relationship. In families there is usually noted a correspondence of special characteristics amounting, in the case of a mother and son, to as much as seventy-five per cent, and between brother and sister to fifty per cent.

It is my opinion, based on a most careful examination of the wax prints originally submitted to me by Dr. Crandon and the prints obtained at the séance of March 21st, 1927, that these prints have been made by a living thumb, that the patterns are the same in all the prints except that some are reversed from the others, that the convex prints were not made from any of the concave prints which I have seen, that the prints of March 21st were not made by the thumb of any person in the room, and that the thumb of the plaster cast carries the same pattern as the thumb which made the normal wax impressions.

(Signed) JOHN W. FIFE.

19 Chestnut St., Somerville, Mass.

XXIII.

Sitting at 10 Lime Street, February 3, 1927, 8:30 P.M. in the old cabinet.

Present: Psyche, Dr. R., Mr. Dudley, Mr. B. Bond, Mrs. R., Dr. C. (Mrs. Stinson), (Outside the circle).

Trance came on at once. "Walter" whistled and then asked to have the green light turned off. Question about sequence of evening before. He said, "You're a poor lot of researchers if you can't remember what happened last night. I am not going to solve your problems for you."

Dr. C.: "Have you got your gang with you tonight?"

"Walter": "Yes, I've got four with me."

Dr. C.: "The boys here?"

"Walter": "Yes, and two others."

Dr. C.: "Who, if I may ask?"

"Walter": "You wouldn't know them. I've got to move this chair back to get more room for the gang to work. It's not so easy making these finger prints. I have to have someone to hold them while I press down on the wax. You don't think I hold it with my nose do you?"

While "Walter" talked, Psyche snored at least once. "Walter" called for water in pan. Done by Dr. C. "Walter" wanted "Kerr"

left on table so that he could put it in water when he was ready for it. Some talk about the monks and the odor of sanctity. "Walter" advised us not to get him started on the subject. Considerable discussion as to Prince and Worcester and their attitude toward this work.

"Walter": "Put in more hot water!" Done by Dr. C. Shortly about 9:00 P.M., "Walter" said, "There is the first one. I've made two on one piece. Fine!" Mr. D., "I hoped you would do that!" "Walter," "That's right, I never can get ahead of you. You're always beating me to it!" Denied!

"Walter": "Empty the water and fill it again." Done. Another Kerr on the table by Dr. R. "Walter" was asked what he used to support the paper when he was writing on the cross word puzzle Monday evening. "Walter": "I leaned it against the brimstone." "Walter" asked to have water emptied. Done. Dr. C. refilled. While doing so "Margery" moaned. When light went out "Walter" said, "You nearly broke my back that time. You hit me with the kettle. Didn't you hear the kid react?"

Shortly, he said, "This is great." Long, loud whistle. Question, "Is this the one with elephantiasis?" "Yes, that's it." He pushed it against Dr. R.'s thumb. Asked him if he felt it. Dr. R. said he did. Said it was hard. "Walter" said it was hot. "Here feel this, isn't it hot?" Dr. R., "Warm, perhaps, but not hot." "Walter": "I've got your finger-print on that one. Got you identified. I identified the mold too." (No clear trace of this on wax.) "Walter": "Cloth is stuck to wax. No, it's not on the prints. No harm done." "Walter": "Empty the water and fill it up. I'll do one more." Done. "Fix cloth in the pan, and be careful of those other prints." Done by Dr. C. "Walter": "What's the matter? You've folded those other molds into the cloth. It's lucky you didn't put them in the hot water and spoil them. You've pulled the cloth clear over to the end. Oh, well, I'll fix it. Wax is stuck to cloth, but they'll come off all right." Later he said, "It is perfect. Well I'm going now. I'm exhausted." (Voice sounded tired.)

Agreed to Saturday night test of lights. Sitting closed at 9:50 P.M.

"MARGERY" SÉANCE OF TUESDAY, AUGUST 23, 1927, AT LIME STREET.

The circle proper ran, clockwise: "Margery", Bird, Pierce, Mrs. Pierce, Hutchinson (of Cincinnati), Crandon, Fife and "Margery" again. There were present in the room fourteen other persons who are fully listed in Crandon's memorandum of the séance.

Throughout the séance, save at moments when he was obliged to manipulate the water vessels, Fife had the psychic's right hand without interruption. Bird had her left throughout the séance without interruption except once when he gave it to Pierce while manipulating the scales and once when he left the room in search of apparatus. Fife throughout and Bird except one short interval, had their grips on the psychic's hands upon her corresponding knee, thereby affording a large measure of foot control.

The first act was given with the luminous basket with all control of the psychic as described. This was freely levitated and rocked on the table. Amongst other gyrations it was hung around Bird's neck and removed. After quite a lot of this, at "Walter's" suggestion Pierce got on the floor under the table and controlled the psychic's two feet directly. Bird transferred her hand to his left and with his right reached into the cabinet to control her head. Under this absolute control of her five extremities the action of the basket continued. Bird's hand, however, having found the top of the psychic's head rather than her mouth, "Walter" insisted upon giving a repetition with Bird's hand directly over the psychic's mouth. In both these episodes levitation was excellent.

During the basket levitation the doughnut was on the table right side down. On two or three occasions it was held in a vertical position and moved freely about over a considerable area.

Articles were called for, for identification. Bird supplied two of the wooden block letters which were successfully named. Pierce supplied a handkerchief of such size as to constitute a family joke; "Walter" with unusual promptness said "Some folks might call this a handkerchief, but I would call it a tablecloth". One or two other features less identification were effected and finally Hutchinson contributed an object, making a remark or two which made it plain that it was a very tough proposition. It made a metallic sound as it was dropped into the basket. "Walter" handled it for a while and agreed that it was a tough one; presently he said that it was not one object, it was two objects together and Hutchinson agreed; and then he said after another interval that one of the objects was a match-box. He fussed for quite a while but could only say that the other was like a coin but was not a coin. The object was then passed first to Bird and later to Pierce to see what they could do with it with one hand in the dark. Bird was very confident that he would not have been able to decide that one-half

of the assembly was a match-box; but this was in fact correct according to Hutchinson. Pierce agreed with Bird here and neither of them had the remotest idea what the rest of the assembly was. In point of fact it was a safe deposit key, so assembled into the match-box that only the circular handle of the key could be found unless a very difficult task of disengagement were performed.

The voice machine was used successfully under the usual conditions, plus the fact that Pierce stood up and held his hand immediately above the open top of the U. "Walter" followed this by a series of rapid eclipses to the various sitters of the two luminous floats. Somebody rather defied him to eclipse the luminous top of the tube and he did this although no sitter could reach it without standing up.

Pierce, Twatchmann and Fife each had a piece of marked Kerr. "Walter" announced his readiness to go on to the thumb-print episode and this was done, Fife doing all the manipulations with the water and Bird recovering each finished print from the cold bowl. Before the thing got under way Fife asked "Walter" if he could not produce a left thumb by way of variety. During his work on the three prints and after they had been delivered "Walter" repeatedly made remarks to the general effect that Fife and Dudley were going to have their eyes knocked out by the results. After the séance when the three prints were examined Fife pronounced them identical; different from the print known as "Walter's" right thumb; and consistent in form with the theory that they represented a left thumb. All sitters within reach of the table whose prints were not on file had their thumb-prints taken and none of these corresponded with the séance prints.

The last act consisted of the scales. Pierce was instructed to put four weights on one pan and one on the other, at his own pleasure. He put the four on the west pan. There was excellent dynamic levitation in several periods of red light and finally while Bird lifted the scales unit off the table to a height of about two feet the white flash was used freely together with exploration by the hands of the sitters.

Bird and Fife reported cold breezes to an unusual degree. The psychic was in trance during the levitation, identification, and thumb-print episodes. She came out for the V. C. O. and remained out for the scales. The trance was unusually quiet as regards both voice and movement.

(Signed) BIRD.

XXIV.

Louisville, Ky.,
February 16, 1933.

My Dear Dr. Crandon:

Your letter dated February 2d just reached me today it having been addressed to Cincinnati, and remailed from there.

Referring to the question asked I will give you as complete a resumé of the sitting in question as I remember.

On the night in question you handed to me a piece of wax, asking me to mark with a private mark, which I did. On going upstairs to the séance room, I was seated with others in the middle of the front row, opposite the table and cabinet. On the table two pans were placed with a water bottle. At my right at the table was seated Captain Fife, at my left Mr. Bird, you being seated behind Captain Fife. In one pan cold water, in the other hot water from a Thermos bottle I believe.

At the commencement Captain Fife requested "Walter" that as all thumb prints previously made were of the right thumb, could he give us the left thumb. "Walter" answered that he would see or try. I do not recollect who placed the first wax in the hot water bath, but when called upon to put mine in I reached for the pan and placed the wax in the water slightly scalding my fingers in the operation. After listening to the movements seemingly of wax in the pans, I was handed the wax by Mr. Bird and he suggested wrapping a handkerchief around it until the séance was over, which I did.

Dr. Twachtman, who was also given a wax was called upon and he, squeezing through the front row, placed his in the pan, and when told it was ready, could not get through, and it was handed to me, and I gave it to him.

On going downstairs our finger prints were taken, and the three waxes were examined by Captain Fife, Bird and Dudley. Captain Fife exclaimed, "Why these are all left thumb prints!" On examining the prints I think it was Fife said that these two are the best for photographing, and one was handed to me, by, I think, Mr. Dudley. I was very glad to have it given to me. I did not make any request for it, in fact not expecting it at all. I compared the mark, a letter H, and saw that it was the one I marked. There was no remarks of the kind suggested made to me or by me, and the one shipped to Mr. Carrington

is the same one I received the night in question, it never having left my possession at any time until now.

Knowing nothing of finger prints I could not say if it is right or left, except as said by others who know.

My report to the Curtis Society, if in existence, I know will cover the same story, as also the one I wrote to Mr. Carrington when requested.

Trusting that this will cover the matter, and anxiously awaiting the fuller details of the matter, of which I, as yet, know comparatively nothing, having seen only the Boston Bulletin.

My highest regards to yourself and Mrs. Crandon, I am

Yours truly,

(Signed) W. L. Hutchinson.

XXV.

WILBUR F. TURNER

Expert Examiner and Photographer of Questioned Documents
61 Hanover Street, Boston

Feb. 15, 1933.

Mr. B. K. Thorogood,
41 Berkeley St.,
Boston, Mass.

Dear Sir:

I have made an examination of the figures on eight photographs. My opinion is that the figures on waxes numbered #47—#48—#10 and other figures marked in blue pencil were written by the same person that wrote the figures 8-23-27, #1 and #3. In fact all the figures I have marked with a blue pencil were written by the same person.

Very truly yours,

(Signed) W. F. TURNER.

W.F.T./M.T.P.

Numbers refer to individual waxes in the group of waxes shown in Fig. 43. Also to waxes shown in Figures 51, 52, 107a and 108.

XXVI.

Preliminary Report

The undersigned at the request of the American Society for Psychical Research are making a systematic study of a recent unsigned exhibit consisting of four photographs with brief description purporting to show that the thumb impressions (made in dental compound Kerr) of the so-called "Walter" prints are identical with the ordinary ink prints of the thumb of Dr. "X".

After comparing this photographic exhibit with the actual wax impression of the "Walter" thumbs in our possession, some of which were made coincident with the wax which this photograph is purported to represent, as well as those of earlier and later dates, we find:

That all evidence at this time tends to show that the actual ink prints of the thumbs of Dr. "X" do not correspond with the authentic wax impressions in our files of the "Walter" thumbs.

Further, the classification of the hands of Dr. "X" and those of "Walter" are far from identical both as regards finger print pattern and palm pattern.

A formal report will be presented covering the complete details as soon as all facts accumulated over the long period of years can be scientifically analyzed.

Respectfully submitted,

BRACKETT K. THOROGOOD
(Signed) JOHN W. FIFE
RALPH G. ADAMS

June 8, 1932.

BIBLIOGRAPHY

Listed below are some of the references used by the writer in the preparation of this report as well as some publications which contain data pertinent to the subject. The list by no means forms a complete bibliography.

- Alix. "Recherches sur la disposition des lignes papillaires de la main et du pied." *Ann. Sc. Nat. Zoöl. T.*, IX, 1868.
- Bonnevie, K. "Main Results of a Statistical Investigation of Finger Prints from 24,518 individuals." *Eugenics, Genetics, and Family*, Vol. 1, 1923a.
- Bramwell, J. Mill. "Hypnotism." Rider & Co., London.
- Bulletin of the Museum of Fine Arts. "Photography in Ultra-Violet Light." Boston, June, 1933. Vol. XXXI, No. 185.
- Carr, H. A. "Visual Illusion of Depth." *Psychological Review*, 1909.
- Carr, Wildon. "The Metaphysical Implications of the Theory of Relativity." *Philosophical Review*, Jan., 1915.
- Ceviddalli, A. "Sulle linee papillari delle dita della mano." *Atti della Soc. Nat. e Mat. di Modena*, Ser. IV, Vol. VIII, 1906.
 "Nuovo ricerche per lo studio antropologico della mano. P. I. Le linee papillari della dita." *Arch. di Biol. norm. e patol.* 1908. *Contr. all. stud. della linee papillari in rapporto delle ereditarieta.* *Boll. della Soc. Med. Chir. di Modena.* Ann. 13, 1911.
- Clark and Lhamon. *Anatomical Record*, 1917, Vol. XII.
- Comstock, D. F. "The Principle of Relativity." *Science*, May 20, 1910, Vol. 31, p. 767.
- Cooke, T. G. "Finger Prints, Secret Service, Crime Detection." *Finger Print Pub. Ass'n*, Chicago, 4th Ed.
- Cummins, H. 1930. "Dermatoglyphics in Negroes of West Africa (Liberia and Sierra Leone)." *Am. J. Phys. Anthropol.*, Vol. 14.
 1930. "Dermatoglyphics in Indians of Southern Mexico and Central America." *Am. J. Phys. Anthropol.*, Vol. 15.
- Cummins, H., and C. Midlo. 1926. "Palmar and Plantar Epidermal Ridge Configurations (Dermatoglyphics) in European-Americans." *Am. J. Phys. Anthropol.*, Vol. 9.
- Cummins, H., and C. Midlo. 1927. "Dermatoglyphics in Jews." *Am. J. Phys. Anthropol.*, Vol. 10.
- Cummins, H., H. H. Keith, C. Midlo, R. B. Montgomery, H. H. Wilder and I. W. Wilder. 1928. "Study of Error in Interpretation and Formulation of Palmar Dermatoglyphics." *Am. J. Phys. Anthropol.*, Vol. 11.
 1929. "Revised Methods of Interpreting and Formulating Palmar Dermatoglyphics." *Am. J. Phys. Anthropol.*, Vol. 12.
- Cummins and McClure. "Bimanual Variation in Palmar Dermatoglyphics." *The Amer. Jour. of Anat.*, Vol. 48, No. 1, May, 1931.
- Daae, Anders. "Über Fingerabdrücke u deren Verwendung zur Identitätsfeststellung." *Zeitschr. schweiz Strafrecht*, Jahrg. VII, 1904.
- D'Abundo. "Contr. all. stud. delle impronte digitali." *Arch. di Psichiatri*, Pisa, 1891.
 "Le impronte digitale in 140 criminali." *Riforma Medica*, 1894.
- De Vesme, Caesar. "Experimental Spiritualism." (Vol. I.) Translated by Stanley de Brath. Rider & Son, London, 1931.
 "Experimental Spiritualism." (Vol. II.) Translated by Fred Rothwell. Rider & Son, London, 1931.

- Eddington, A. S. "Nature of the Physical World." Macmillan, New York, 1929.
 "Space, Time and Gravitation." Univ. Press, Cambridge, 1921.
- Eddington, A. S., and others. "The Deflection of Light by Gravitation and the Einstein Theory of Relativity." The Report of the British Eclipse Expedition to the Royal Society. Scientific Monthly, Jan., 1920.
- Einstein, A. "Time, Space and Gravitation." Science, Garrison, 1920, Jan. 3, n.s., Vol. 51, pp. 8-10.
- Flammarion, Camille. "Lumen." New York: Dodd, Mead and Co., 1897.
- Fosdick, Raymond B. "European Police Systems." Century Co., New York, 1915.
- Freeman, Frank N. "The Handwriting Movement." Univ. Press, Chicago, 1918.
- Galton, Fr. "The Patterns in Thumb- and Finger-Marks." Proc. Royal Soc., London, Vol. XLVIII, 1890. Finger-Prints, London, 1892.
 "The Patterns in Thumb- and Finger-Marks." Phil. Trans. Roy. Soc., London, Vol. CLXXXII, 1892.
 "Personal Identification." Journal Royal Institute, May 25, 1888.
 "Finger-Print Directories." London, 1895.
 "Prints of Scars." Nature, Vol. LIII, 1896.
 "Finger-Prints of Young Children." Rep. Brit. Assoc., Dover, 1899, 1900.
- Gast, G. "Sui disegni papillari." Att. del. Soc. Rom. Anthropol., Vol. XIII, 1907.
- Geley, Gustave. "From the Unconscious to the Conscious." Translated by Stanley de Brath. William Collins & Son, London, 1920.
 "Clairvoyance and Materialisation." Translated by Stanley de Brath. T. Fisher Unwin Co., London, 1927.
- Gray's Anatomy. XXI Ed., 1924. Revised by W. H. Lewis. Lea & Febiger.
- Greeley, A. W. "Experiments on the Physical Structure of Protoplasm of Paramoecium; and Its Reaction to Thermal and Electrical Stimuli." Biol. Bull., Vol. 7, p. 3.
- Hardy, W. B. "Differences of Electrical Potential Within the Living Cell." Journ. Physiol., Vol. 47, p. 108.
- Hasebe, K. "Über das Hautleistensystem der Vola u. Planta der Japaner u. Aino." Arb. Anat. Inst. d. Kais, Japan, Univ. Sendai H, 1, 1918.
- Heilbrunn, L. V. "Colloid Chemistry of Protoplasms." Borntraeger, Berlin, 1928.
 "Physical Effects of Anesthetics on Living Protoplasm." Biol. Bull., Vol. 39, p. 317.
- Heindl, Robert. 1927. "System und Praxis der Daktyloskopie." 3rd Ed. W. de Gruyter & Co., Berlin and Leipzig.
- Henry, E. R. "Classification and Uses of Finger Prints." T. Fisher Unwin, London, 1913.
- Herschel, Wm. J. "Origin of Finger-Printing." London, Oxford Univ., 1916.
- Holt, James. "Finger-Prints Simplified." Frederick J. Drake & Co., Chicago, 1920.
- Huntington, Edward V. "A New Approach to the Theory of Relativity." Festschrift Heinrich Weber, Leipzig, 1912, pp. 147-169.
- Jacollot, Louis. "Occult Science in India." Translated by Wm. L. Felt. Rider & Son, London, 1919.
- James, William. "Principles of Psychology." Henry Holt & Co., 1904.
- Jastrow, Joseph. "A Study of the Zöllner Figures." Am. Journ. Psychol., 1891.
- Johnson, A. H. "Pads on the Palm and Sole of the Human Fetus." Amer. Nat., Vol. XXXIII, 1899.
- Jorgensen, Hakon. "Distant Identification in One-Finger Registration." Publications of International Police Conference, New York, 1923.
- Keith, H. H. 1924. "Racial Differences in the Papillary Lines of the Palm." Am. J. Phys. Anthropol., Vol. 7.

- Keyser, C. J. "Concerning the Figure and the Dimensions of the Universe of Space." *Science*, June 13, 1913.
- Kidd, W. "The Papillary Ridges and Papillary Layer of the Corium in the Mammalian Hand and Foot." *Journ. Anat. Phys.*, Vol. XLI, 1907.
- "The Sense of Touch in Mammals and Birds with Especial Reference to Papillary Ridges." London, 1907 (known from a review in *Science*, 1908).
- Kuhne, Frederick. "Finger Print Instructor." Mann & Co., 1917.
- Kollmann, Arthur. "Der Tastapparat der Hand." Hamburg u. Leipzig, 1883.
- "Der Tastapparat des Fusses von Affe u. Mensch." *Arch. Anat. u. Entw., Anat. Jahrg.* 1885.
- LaChard, L. W. "Finger-Print Characteristics." *Journal Am. Institute Criminal Law & Criminology*, Chicago, August, 1919.
- Ladd-Franklin. "Colour and Colour Theories." Harcourt, Brace & Co.
- Lauffer, Berthold. "History of the Finger-Print System." Smithsonian Institution, Washington, D. C. Annual Report for 1912, pp. 631-652.
- Lee, C. D. "Finger Print Forgeries." *Finger Print Magazine*, Vol. VI, No. 12, June, 1925.
- Lodge, Sir Oliver. "The New Theory of Gravity." *Nineteenth Century*, Dec., 1919.
- "The Ether versus Relativity." *Fortnightly Review*, Jan., 1920.
- Lorentz, H. A. "Considerations elementaires sur le principe de relativite." *Revue generale des sciences*, Paris, 1914, Tome 25, pp. 179-186.
- Luciani, Luigi. "Human Physiology." Macmillan, 1913.
- Luckiesh, M. "Visual Illusions and Their Application." D. Van Nostrand, 1922.
- "Ultraviolet Radiation." D. Van Nostrand, 1927.
- McDougall, Wm. "Physical Basis of Mental Dissociation." *British Medical Journal*, Oct. 24, 1908.
- "Outlines of Abnormal Psychology." Charles Scribner, 1926.
- Michelson, A. A., and Morley, E. W. "The Relative Motion of the Earth and the Luminiferous Ether." *American Journal of Science*, 1887, Vol. 34, p. 333.
- Minkowski, Hermann; Lorentz, H. A.; Einstein, A. "Des Relativitätsprinzip." *Fortschritte der Mathematiker Wissenschaften*. Druch und Verlag von B. G. Teubner, Leipzig, 1913.
- Mitchell, T. W. "Medical Psychology and Psychic Research."
- Montgomery, R. B. 1925. "Sole Prints of Newborn Babies." *Am. Jour. Med. Sci.*, CLXIX.
- Mühl, Anita M. "Automatic Writing." Steinkopff, Dresden and Leipzig, 1930.
- Münsterberg, Hugo. "Symposium on the Subconscious." *Journ. of Abnormal Psychology*, Vol. 2, 1917.
- Myers, F. W. H. "Human Personality and Its Survival of Personal Death." Longmans, London.
- Newman, H. H. 1913. "The Modes of Inheritance of Aggregates of Meristic (Integral) Variates in the Polyembryonic Offspring of the Nine-Banded Armadillo." *Journ. Exp. Zool.*, XV.
1916. "Heredity and Organic Symmetry in Armadillo Quadruplets. I. Modes of Inheritance of Band Anomalies. II. Modes of Inheritance of Double Seutes and a Discussion of Organic Symmetry." *Biol. Bull.*, XXX.
1917. "The Biology of Twins." Chicago.
1923. "The Physiology of Twinning." Chicago.
1928. "Studies of Human Twins. I. Methods of Diagnosing Monozygotic and Dizygotic Twins. II. Asymmetry Reversal, or Mirror-Imaging in Identical Twins." *Ibid.*, LV.
- Nutting, P. G. "Retinal Sensibilities." *Transactions I.E.S.*, 1916.
- Osty, Eugène and Marcel. "Les Pouvoirs Inconnus de l'Esprit sur la Matière." Librairie Felix Alcan, Paris, 1932.

- Osty, Eugène. "Supernormal Faculties in Man." Translated by Stanley de Brath. Methuen & Co., London, 1923.
- Planck, Dr. Max. "Universe in the Light of Modern Physics." W. W. Norton & Co., New York, 1931.
- Poincaré, Henri. "Science and Method." New York, The Science Press, 1913.
- Priest, I. G. "Spectro-Distribution of Energy Required to Evoke the Gray Sensation." Scientific Paper 417, Bureau of Standards.
- Ribeiro, L., and Salles, M. "Arquivos do Instituto Medico-Legal e do Gabinete de Identificação." Rio de Janeiro, 1932. The same for 1933.
- Rosanoff, Aaron J. "Manual of Psychiatry." J. Wiley & Sons, 1927.
- Russell, Bertrand. "The Relativity Theory of Gravitation." English Review, Dec., 1919.
- Seymour, Lee. "Finger Print Classification." Los Angeles, privately published, 1913.
- de Sitter, W. "On Einstein's Theory of Gravitation, and Its Astronomical Consequences." Royal Astronomical Society, Monthly Notices, London, 1915-1918.
- Smith, W. W. "A Theory and Mechanism of Survival." Dutton, New York, 1920.
- Southall. "Mirrors, Prisms, Lenses." Macmillan Co.
- Steggerda, M. D. 1929. "Palmar Dermatoglyphics in Negro-White Crosses." Carnegie Inst. of Washington, pub. p. 395.
- Strong, A. McL. 1929. "An Improved Method of Palm-Printing." Science, Vol. 69, No. 1783.
- Verhoeff and Bell. "Pathological Effects of Radiation Energy on the Eye." Proceedings American Academy Arts and Sciences, 1916.
- Wehde, Albert, and Beffel, John N. "Finger-Prints Can Be Forged." Tremonia Pub. Co., Chicago, 1924.
- Wentworth, Bert, and Wilder, H. H. "Personal Identification." Finger Print Publishing Assoc., Chicago, 1932.
- Wilder, H. H. 1904. "Duplicate Twins and Double Monsters." Amer. Journ. Anat., III.
1904. "Racial Differences in Palm and Sole Configuration." Amer. Anthropol., Vol. 6.
1916. "Palm and Sole Studies." Biol. Bull., Vol. 30.
1922. "Racial Differences in Palm and Sole Configuration. Palm and Sole Prints of Japanese and Chinese." Am. J. Phys. Anthropol., Vol. 5.
- Wilder, Harris Hawthorne, and Wentworth, Bert. "Personal Identification." Richard Badger, Boston, 1918.
- Wilson and Lewis. "The Time-Space Manifold." Proceedings of the American Academy of Arts and Sciences, Nov., 1912, Vol. 48, pp. 389-506.
- Young, P. C. "A General Review of the Literature of Hypnotism." Psychol. Bulletin, Vol. XXIV, p. 540, Sept., 1927.
- Zöllner, J. C. F. "Transcendental Physics." Translated by C. C. Massey. W. H. Harrison, London, 1882.

