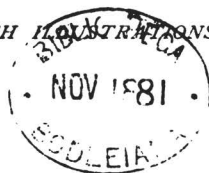


ANCIENT AND MODERN MAGIC

WITH EXPLANATIONS OF SOME OF THE BEST
KNOWN TRICKS PERFORMED BY MESSRS.
MASKELYNE AND COOKE

BY
ARPREY VERE

WITH ILLUSTRATIONS



LONDON
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ANCIENT AND MODERN MAGIC.

THE wonder excited by the marvellous automatons of Messrs. Maskelyne and Cooke has caused many inquiries into the art of mechanical conjuring. Although the productions of those gentlemen at the Egyptian Hall have been thought by the general public to be unprecedented, we shall see that their marvels have been produced in ages long gone by, and that the art of conjuring, or producing apparently unaccountable and magical results by means of mechanism, was an art brought to great perfection hundreds of years ago, and long before "Psycho" astonished the metropolis.

My readers will perceive that the automatic figures of these caterers of wonders are neither original nor novel. I hope that, as the art of magic is so very popular, a brief exposition of the subject will be found interesting to many readers.

It is my intention in this and the following chapters to give a brief summary of the history of mechanical magic in ancient and modern times, and then to furnish a full explanation of how the apparently marvellous results of sleight of hand, second sight, and the mysterious movements of automata of the present day, are attained; and my readers will no doubt reap a harvest of information on the subject, and will be able not only to perform many of the numerous tricks at which they have before been astonished, but will also be in a position to explain to the uninitiated "How it is done."

Passing over the ancient oracles which have been shown so frequently as being

worked by the simple law of mechanics, I would merely mention that Plato and Aristotle both speak of certain statues made by Dædalus which could not only walk, but which it was necessary to bind in order to prevent them from moving. The latter speaks of a wonderful Venus of this kind, and all we are told of the motive power is that Dædalus made it move by means of quicksilver. Aulus Gellius mentions a wooden pigeon which possessed the power of flying, but the only fault of this piece of mechanism was that when the pigeon once settled, it could not renew its aerial flight. Cassiodorus, who lived in the sixth century, gives a concise and graphic description of certain machines invented by Boethius. He says "the birds of Diomedes (a mechanician of that date) trumpet in brass, the brazen serpent hisses, counterfeit swallows chatter, and such as have no proper note send forth from brass harmonious music." Accounts of the heads said to have been constructed by Roger Bacon and Albertus

Magnus, are so mixed up with fables that we cannot rely upon their veracity ; and yet our experience has shown us that they could have been produced. They are said not only to have moved, but spoken, and their heads were used as oracles. Perhaps it will be remembered that some years ago a similar head, with the same power of imitating the human voice, was exhibited at the Egyptian Hall, London.

John Muller, known as Regiomontanus, was one of the cleverest mechanics of the fifteenth century—that is, if we can rely on the testimony of Peter Ramus, who did not flourish until a hundred years afterwards. We must take Peter's account *cum grano salis*. Regiomontanus is stated to have constructed an eagle which, upon the approach of the Emperor Maximilian to Nuremberg, in June, 1470, perched upon the town gate, stretched forth its wings, and saluted him by an inclination of the body. He is also said to have manufactured an iron fly. At dinner one day,

when surrounded by his friends, he produced it for their amusement, and caused the insect to fly from his hand, take a circle round the room, and return again to its maker.

Charles V. after his abdication entered with zest into the study of mechanism. He engaged the services of Torriano, said to be a very eminent artist, who accompanied him to the Monastery of Juste. Here they worked together. Strada tells us that his Majesty frequently introduced puppets upon the table, some of which beat drums, some blew trumpets, others charged each other with couched spears, and with a ferocity almost human. He made wooden sparrows, which, by their flight, terrified and scared the superstitious monks, who thought him a magician and an accomplice of his infernal majesty. He is said to have made a mill which moved of itself, and which was so small that a monk could put it up his sleeve, and yet we are told that it was powerful enough to grind

in a single day grain sufficient for the consumption of eight men !

Hans Bullman, a padlock-maker of Nuremberg, who lived in the middle of the sixteenth century, made figures of men and women which promenaded backwards and forwards, beat drums, and played upon the lute. The motive power in this case was known to be clockwork.

In the volume of "*Memoires de l'Académie des Sciences*," of 1729, we find an account of a most extraordinary piece of mechanism invented by one Père Truchet, made solely for the amusement of Louis XIV. when a child. It consisted of a number of moving pictures, representing an opera in five acts, which the little figures enacted—of course, in pantomime.

Camus constructed with the same object a small carriage, drawn by two horses, which contained a little lady, with her coachman driving, and a footman and page holding on behind. When placed upon the floor of the table, the horses

galloped along, and the coachman smacked his whip in quite a professional manner. When the carriage stopped, the page got down, opened the door, the lady stepped out, and with a curtsy bowed and presented a petition to the young King. She again bowed, entered the carriage, the page mounted, the coachman flogged his horses, the carriage glided on, while the footman ran behind, and at last jumped upon the box.

In 1738, there were exhibited in Paris, by M. Vaucanson, three automata, which have been reproduced in modern times : one represented a flute player in a sitting posture, which performed twelve distinct tunes ; the second was a standing figure, which discoursed harmony on a shepherd's flute, held in his left hand, while with his right he beat on a tabor ; the third was a life-size duck, which flapped its wings, quacked, drank water, ate corn, and even performed other functions of nature that made it more closely resemble its natural

prototype. Some idea may be formed of the *modus operandi* of the cornet player of Messrs. Maskelyne and Cooke, by the information afforded by Vaucanson himself, which was published in 1738, and which purports to give a full explanation of the method of working the automaton flute player. The figure was five feet and a-half high; it was seated upon a rock, which was supported by a pedestal four feet high, by three and a-half broad. Within the pedestal were eight pair of bellows, which were set in motion by clockwork. The wind was forced into these tubes, which ascended through its trunk, and terminated in a single reservoir connected with the cavity of the mouth. Another piece of clockwork within the pedestal was applied to execute the necessary motions of the fingers, lips, and tongue. A revolving cylinder, with various pegs inserted in it, raised or depressed several levers, on the principle of a barrel organ; and in this manner, it was said, music was produced

very little inferior, if not equal, to the performance of a skilful flute player of flesh and blood.

One of the most ingenious inventors of mechanical figures was Mons. Maillardet, a Swiss. He exhibited in London a beautiful figure which performed eighteen tunes on the piano, while imitating at the same time all the motions of the human player. From a description given we learn that the bosom heaved, the eyes followed the motions of the fingers, and at the commencement and conclusion of an air the figure turned to the audience and made a graceful salute. Mons. Maillardet also constructed the figure of a boy kneeling that held in the right hand a pencil with which he executed some capital drawings and pieces of writing.

Another marvel produced by the Swiss was a magician, who answered any question put to him from twenty different medals. The medal was placed in a drawer, and, after much cogitation and

reference to his books, he, with a solemn wave of his wand, touched the drawer, which opened and displayed the required answer.

The celebrated automaton Chess Player will be well remembered. The history of this wonderful piece of mechanism is as follows :—M. Wolfgang de Kempelen, a Hungarian gentleman, devoted himself from an early age to the study of mechanics. In 1769 he paid a visit to Vienna on business of his office of Aulic Counsellor to the Royal Chamber of the domains of the Emperor of Germany in Hungary. He received an invitation from the Empress Maria Theresa to be present at certain magnetical experiments exhibited by a French gentleman of the name of Pelletier. While in conversation with the Empress during its exhibition, Mons. Kempelen asserted that he felt himself competent to construct a piece of mechanism far more surprising than those which they were witnessing. The Empress took him at his

word, and bound him to keep or attempt to keep his promise. He kept it, and in six months he produced the famous Chess Player. When shown in Vienna, it caused the greatest excitement and admiration. It was the talk of society. The inventor, in spite of its success, persistently refused to exhibit it in public. He put it aside, and even took it to pieces, and for several years it was not used.

It was not until the visit of the Grand Duke Paul of Russia, and his consort, to the Court of Vienna, that the chess player was again brought to light, and exhibited by the wish of the Empress. The Royal visitors were so delighted with its marvellous performance that they urged Kempelen to permit its public exhibition. He complied, and it was shown in various parts of Germany and France, and in 1785 it was brought to England. When Kempele died, about 1803, the figure was sold by his son to Mons. Marzel, and in 1819 that gentleman brought it again to the

metropolis. That figure, exhibited some time ago in the Crystal Palace, was an improvement upon Kempelen's Chess Player.

The following is a description (with illustration), of the original Chess Player : The room in which it was exhibited had an inner apartment, within which appeared



the figure of a Turk of the natural size, sitting behind a chest $3\frac{1}{2}$ ft. 2 in. in breadth, and $2\frac{1}{2}$ ft. in height. To this was attached the wooden shelf on which the figure sat. The chest was moveable on castors, and could be moved to any part of the room. On its top, in the

centre of the chest, was an immoveable chessboard, upon which the eyes of the figure were always fixed. Its right hand and arm were extended on the chest, while the left, slightly raised, held a long pipe. Two doors in front and two doors in the back of the chest were opened, and a drawer in the bottom of it, containing the chess-men and a cushion whereon to place the arm of the automaton, was pulled out. Two smaller doors were also opened in the body of the figure, and a lighted candle was held within the openings thus displayed. This was repeated at the conclusion of the game, if the spectators so wished. The chest appeared divided by a partition into two unequal chambers, that on the right being the narrowest, and occupying one-third of the whole. It was full of small wheels, and cylinders and levers. That to the left contained wheels, barrels with springs, and two quadrants placed horizontally. The door and drawer having been closed, the exhibitor wound up the works

with a key inserted in a small opening in the side of the chest, placed a cushion beneath the arm of the figure, and then challenged any one of the company present to play a game with it. It was observed that in playing the automaton always selected the white pieces, and had the first move. Owing to a curious mistake of the inventor, the figure moved the men with his left hand. The error, when found out, could not afterwards be rectified. Its hands and fingers opened, and then grasped a piece, which it conveyed to the proper square. In taking a piece, the same motion was made by the arm and hand as before; it, however, conveyed the piece off the board, and then placed its own piece upon the vacant square. While and after his opponent made a move, the figure paused for a few moments as though contemplating its own. It intimated with a nod of the head when it gave check to the king. During the time the arm was in motion, a low sound of clockwork run-

ning down was distinctly heard. The works were wound up at intervals by the exhibitor, who otherwise did nothing but walk up and down the room. As we find that the automaton both lost and won—in Kempelen's time it very seldom lost—and that each game was different to the others, it necessarily follows that these phenomena are inconsistent with the sole effects of mechanism. Various conjectures have been offered as to the mode of communication between the figure and the intelligence which directed it. A plausible and probable explanation was given in 1821 in a pamphlet called, "*An Attempt to Analyse the Automaton Chess Player.*" In this brochure it is shown that in spite of the apparent display of the interior of the chest and the figure, there yet was ample space left unopened for the concealment of a person of ordinary size behind a false back to the narrowest division only. This is shown in the accompanying illustrations.

The basis for this elucidation of what was a profound mystery to the many was as follows :—

The machinery was ostentatiously displayed when at rest ; but carefully secluded from view while in motion. By this



means the spectator could not form any judgment as to whether the machinery was in any way connected with the automaton. There never was any variation in the method of opening the several doors. When winding up the clockwork, the key always made a certain number of revolu-

tions, whether the motions of the figure, owing to the exigencies of the game, were more varied or protracted than usual. It was noticed that sixty-three moves were at one time made without the machinery



being wound up, while at another time the machinery was wound up with the intervention of a single move. Whether or not the action of the automaton was produced by the agency of a concealed person I do not care to pronounce, but the illustrations

given prove clearly, I think, that it might have been so produced. Mons. Kempe-
len is said to have invented a still more
extraordinary exhibition of his great me-
chanical genius—namely, a speaking auto-
maton. How this figure became possessed
of a voice, I will show in another chapter.

II.

KEMPELEN'S SPEAKING FIGURE -- ITS CONSTRUCTION — HOUDIN — HIS TALKING FIGURE — THE MAGIC HARLEQUIN AND ITS CONSTRUCTION—THE MAGIC CLOCK —THE PERFORMING CLOWNS—THE COOK OF THE PALAIS ROYAL—THE ORANGE AND ROSE TREES — ELECTRIC BELL AND DRUM—SUSPENSION IN THE AIR.

KEMPELEN'S Speaking Machine has been thus described. It was of simple structure, and consisted only of five parts—viz., the reed, representing the human glottis; an air-chest, with internal valves; the bellows or lungs; a mouth with its apertures, and nostrils formed to resemble those of the human body. The reed was not cylindrical, but formed to imitate the reed of a bagpipe drone. The hollow portion, however, was square, and

the tongue of the reed, which vibrated, consisted of a thin ivory slip resting upon it horizontally. This hollow tube was inserted into the chest, and the discharge of air occasioning a vibration of the ivory, the requisite sound was produced. To soften its vibration, the part supporting the slip was covered with leather, and a moveable spring shifting along the upper side of the slip brought the sound of the reed to the proper pitch. The sound was more acute as the spring was moved forward to the outer extremity, because the vibrations then became quicker, and when shifted further from the anterior extremity, the sound became more grave, as the vibrations were then slower. A slight curvature of the ivory slip arose from the pressure of the spring, which was enough for the object desired. One end of the air-chest, which was of an oblong figure, received this voice-pipe containing the reed; and into the opposite end was inserted the mouth of the bellows. Both the aper-

tures were guarded by leather, to prevent unnecessary waste of air : two smaller air-chests were then put into it, each having a valve above closed by the pressure of a spring, and each having a round aperture adapted to receive through the side of the large air-chest a tin funnel, and a round wooden tube for producing hissing sounds—as *s*, *z*, *sch*, *j*. The voice-pipe was placed in the large air-chest, so as to be between the smaller air-chests. When all these parts were fitted to the air-chest, the operation of one lever raising the valve of the first smaller chest connected with the tin funnel produced the sound *s* ; while the operation of another, raising the valve of the second smaller chest connected with the wooden tube, produced the sound of *sch*. But it is proper further to explain that instead of being a simple funnel, it was, in fact, a tin box, with a square hole in the outer end, nearly covered by a slip of pasteboard ; and the wooden tube was merely the mouth-piece of a common flute,

closed at the lower extremity, and with the air-hole modified and contracted: the letter *r* was produced by the rapid vibration of the ivory slip, owing to a strong discharge of air.

Mons. Kempelen's bellows, which were formed to supply the place of lungs, had no peculiarities. He found that his machine required six times the quantity of air used by a man in speaking. The muzzle, as I have observed, was inserted into the large air-chest, and the air which it discharged was also received by the small air-chest. With regard to the mouth, it consisted of a funnel, or rather bell-shaped piece of elastic gum, applied to the air-chest, and so adapted that the sound of the reed issued from it. Elastic gum was selected for this purpose as more nearly approaching to the natural softness and flexibility of the human organs. Independent of its communications with the reed producing the sound required, a tin tube connected it with the air-chest, by means of which it

might be kept constantly full of air. This Mons. Kempelen considered a very essential, and even an indispensable part of the machine. Besides these there were small additional bellows, for the purpose of aiding the production of such sounds as *p*, *k*, *t*, which needed a greater emission of air. The nose consisted of two tin tubes, communicating with the mouth. When the mouth-piece was closed, and both tubes remained open, a perfect *m* was heard; when one was closed, but the other open, *n* was sounded. By the combined means of all these contrivances Mons. Kempelen could make his figure repeat such sentences as *Vous etes mon ami*, *Je vous aime*, etc. Upon Kempelen's machinery all succeeding talking figures have been based.

The most noted person who succeeded Kempelen in the art of magical automata was Robert Houdin. He not only improved upon the production of his predecessors, but applied the basis of their materials to works comparatively original

and unique. His automata certainly place him in the highest rank of modern illusionists, and in giving in detail the principal of his inventions, I shall at the same time be affording a solution of the working of many surprising and ingenious automatic tricks, which have been exhibited in recent days. One of his best productions was a Talking Figure, similar, but in many respects far superior, to that of Kempelen, the mechanism of which I have described above.

It has been asserted that Houdin first turned his attention to the construction of automata through the following trivial circumstance:—

Being in company one day with a travelling showman, his assistance was asked to repair one of the figures the showman had accidentally broken. Having seen the performance of the figure, which was none other than the well-known Dancing Harlequin, he was struck with the marvellous and apparently magical effects which could be produced by the simplest laws of

mechanism. He became so infatuated with the discovery the showman permitted him to make in the construction of the box and figure, that he, from that time, devoted all his thoughts and energies to the construction of automata.

The magic harlequin is worth descrip-



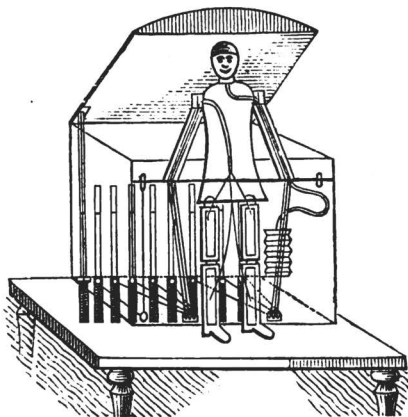
tion, not only because it takes so prominent a place among mechanical figures, but more because, in disclosing its mechanism, I shall be explaining the construction of a whole class of automata, which have been constructed on the same principle. As will be seen by the illustration given above, a box was placed upon a table, and at

word of command the box opened and a harlequin was discovered therein. At a sign from the conjuror the figure leaped from the box, and then, apparently without being attached in any way to the box, it performed a variety of movements, imitating the action of the human pantomimist. It further smoked a pipe or cigar, and blew a whistle.

Such was the figure which opened the eyes of Houdin to the marvels which the application of the simple laws of mechanics might produce; and his great mechanical genius enabled him to succeed even better than he hoped when first he began his investigations of the automata that had already been exhibited.

The mechanism of the Magic Harlequin is extremely simple; in fact, it will be found that the most marvellous and astounding effects are produced by the simplest contrivances. The box containing the figure was grooved in the back in nine places, each groove terminating in a

hole pierced through the bottom of the box. Corresponding exactly with these holes were nine holes in the table upon which the figure performed. Below these holes at the back of the table, which was always placed close up to the curtains at



the back of the stage, and behind which the person who manœuvred the figure was concealed, were nine spring pistons worked by nine different strings passing over pulleys, each of which performed a different function, and were attached to

that point in the figure which each was designed to move.

The figure of the harlequin, as the reader will perceive by the annexed illustration, was attached by means of two rods to a revolving bar fixed from side to side of the box, and so near the front that it was concealed from the eyes of the audience. When the harlequin was out of the box, the rods connecting it with the bar were hidden by the drapery of the figure. The first string worked the opening and shutting of the lid of the box. The second string, passing under a pulley immediately beneath the bar, passed over the shoulders of the figure, and by a sharp movement turned the bar and jerked the figure—which was reversed when in the box—out on to the table, the figure, of course, maintaining a standing posture, and being held up by means of the rods attached to the revolving bar. The shoulders were made to revolve on the two rods, so that the jerking motion would

be easily produced. The third string passed through the body, and was attached to the legs, and produced a motion to imitate the stretching of the legs, known as the "splits." Another string closed the legs and simultaneously turned the head right and left. Another string lifted the legs and imitated the movements of a dance. Another string turned the figure back again into the box. In the corner of the box was a bellows, through the medium of which, and by means of a tube passing through the arm, and ending in the mouth, the concealed person, by manipulating the nine pistons which worked the bellows, was enabled to produce the effects of smoking and whistling.

It is upon this system of mechanism that very many modern tricks have been based—notably, the great rope acrobatic figure of Theodin. In this case, what was thought by the audience to be a rope was really a tube made to imitate a rope, and the strings passed through this tube

and worked from the side of the stage, the rope serving the same purpose as the bar stretched across the box in the harlequin automaton.

Houdin was said to be the inventor of the well-known Magic Clock. This was a glass dial plate with hands, but with no visible works. This clever invention has within the last year or two been reproduced, and exhibited in many jewellers' windows. His chief automatic figures, besides the talking one I have already mentioned, were two performing French Clowns and the Cook of the Palais Royal. The clowns were shown one sitting on a chair, and the other standing beside it. At the request of the exhibitor, the standing clown raised the chair, with its occupant, above his head, while the latter went through a number of acrobatic performances that would have done honour to a living gymnast.

These capital figures were worked precisely on the same system as the Magic

Harlequin, the strings, pistons, and machinery being necessarily of stronger make, and worked from beneath, instead of behind the stage. This was considered by the public, and Houdin himself looked upon it, as his *chef d'œuvre*, and a masterpiece in automatic figures it certainly was.

The Cook of the Palais Royal was a very amusing piece of mechanical application. It consisted of a faithful representation of a detached villa. Houdin handed round a list of wines and liquors, requesting his audience to select which they liked best on the bill of fare. When one was mentioned, a figure of a young maid emerged from the doorway, descended the steps, and brought forward on a tray a glass of the desired wine. When the person at whose order the wine was brought removed the glass from the tray, the figure turned and glided back into the house, again emerging with another glass of wine, and so on until the list was ex-

hausted or the bibulous propensities of the audience were fully satisfied.

The same basis of machinery used in the Magic Harlequin was also employed in the Cook of the Palais Royal, each piston working a tap containing one kind of wine. The operator at the back of the stage could hear the wine asked for, and thus knew which string to pull, and which tap to open, when the figure, which was made to pass under every tap, re-entered the house.

Houdin's Orange Tree was a capital trick, and, although exceedingly simple in its mechanism, produced the most startling effects. Houdin borrowed a handkerchief, which he burnt, or rather which he led the audience to think he burnt, at the sacrifice of a duplicate, in front of a plant placed in a box upon a table, which, at word of command, gradually began to bloom. White blossoms were seen to emerge from four or five different shoots. These disappeared, giving place to oranges,

which Houdin removed from the tree and distributed among his audience, with the exception of one, which he left on. This one opened, and out from it sprang two butterflies, and in the middle of the orange was found the burnt handkerchief.

In this trick also the spring pistons of the Magic Harlequin were used. The real oranges were fixed on pins and hidden by the leaves. A string or wire opened the leaves, gradually disclosing the oranges, which appeared at a distance to grow in size as the leaves spread wider. Another set of wires, worked by another string, pushed the blossoms up fine tubes, and as the paper emerged from the tube the separate parts spread out, giving the appearance of growing blossoms. As soon as the two halves of the sham orange in the centre were released, the butterflies, attached by wires to the stalk, and fixed upon delicate spiral springs, sprang out of their own accord, and presented the appearance of fluttering on the wing. The *bona fide*

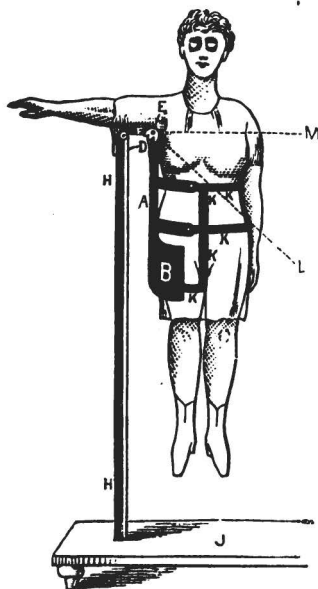
handkerchief was pushed into the halves of the orange through a hole in the back while Houdin was taking off the real oranges. A rose-tree, similar in its effects, was also exhibited by Houdin.

This clever mechanician was, I believe, the inventor of the Electric Bell, or, to be more precise, he produced it as a magical trick, long before the electric bell came into use.

The Magic Drum, swung from the ceiling by means of wires looking like cords, of which Houdin was the first exhibitor, was constructed on precisely the same principles as the modern continuous electric bell, only worked with a much stronger battery and a more powerfully made electro-magnet.

Mr. Houdin was the first person to introduce the famous "Suspension in the Air" trick, centuries ago made so famous by the Fakir of Oolu, performed by the Hindoos. The lady selected for the trick is generally slight in figure. Previous to

coming on the stage she binds close to her body a framework specially made to fit her. This frame consists of an iron bar, with front and back plate fitting on the



hip by means of straps fastened round the body. The iron bar reaches as far as the armpit, where it is joined to another bar reaching from the armpit to the elbow by

a moveable circular plate indented in three places. At the end of the arm bar and immediately below the elbow is a pin of iron, which is made to fit into the hollow iron bar upon which the exhibitor rests the lady. At the top of the body bar is a spring stop, made to glide into the indentations of the moveable circular hinge, and thus keep the whole framework in the position it is placed. The annexed illustration will more clearly show this single piece of machinery.

A is the iron bar, and B the hip plate. D is a spring stop fitting into the teeth of the joint F. F is the arm bar, and G is the pin fitting into the hollow tube H, which is fixed into a socket in the platform. The frame is fastened to the body by means of the leather straps K. When the body is raised to the position of L, the spring stop D slips into the middle indentation, and thus keeps the frame and the lady borne upon the frame in that position. When the body is raised to a horizontal

position, M, the spring stop catches in the first indentation, and keeps the body perfectly straight. In commencing the trick the performer rests the figure upon two poles and then knocks one away. This is done to make the audience believe that the two poles are similar. I need scarcely say that the putting of the lady into a mesmeric trance is only a piece of acting; it, however, adds very much to the effect of the trick, as the reader no doubt has thought up till now. It will be remembered, notably in the case of the Fakir of Oolu, that sometimes when the trick was performed *both* poles were taken away. What, then, you will ask, becomes of all my machinery? The two poles were *seemingly* taken away. The poles used consisted of brass bars. The limelight beamed upon the figure of the sleeping lady, while the rest of the stage was comparatively dark. Thus, when the conjuror apparently took away the only support the figure had, the audience did not and could not perceive

that he really took away the brass *case* of the second pole, leaving another, the actual pole on which the framework was fixed, and which was of the same colour as the drapery of the stage. It was for the purpose of deceiving the eyes of the audience that the pole was encased in a *brass* shell in the first instance. He refixed the case before the stage was relit, and the lady woke up from her sham mesmeric trance.

III.

THEODIN — ROBIN AND ANDERSON — THE
MAGIC WINDMILL—ANDERSON'S OLD
MAN—COL. STODARE'S LIVING HEAD—
PEPPER AND TOBIN—PROTEUS; OR, WE'RE
HERE AND NOT HERE—FATIMA.

CONTEMPORARY with Houdin were Theodin, Robin, Professor Anderson, and a whole host of minor stars, at whom I shall just take a passing glance, and then I will enter at once into the subject of modern automata, second sight or clairvoyance, optical illusions, and the other branches of the art of magic and conjuring. The principal production of Mons. Theodin was the rope acrobat, which I have fully explained in a preceding chapter. Mons. Robin also exhibited a very ingenious and interesting piece of automata, well-known

as the Magic Windmill. Upon a table a large sized windmill was placed. The exhibitor tapped at the door, when the miller's head was seen at the window for a moment, as if he desired to know who was knocking, and then a few seconds after the door opened, and the miller appeared in full person, candle in hand and pipe in mouth.

Mons. Robin desired the miller to kindly grind a small sack of corn which he gave him ; the miller nodded assent, took the corn and entered the mill, the door closing upon him. Shortly afterwards the sails of the mill went gaily round, and after a brief interval the miller opened his door and handed Mons. Robin the sack back, with the ground bran and corn mixed. This he was desired to separate, when he again entered the mill, and after a brief interval returned with the task duly performed. The door of the mill being closed, and the miller supposed to have retired to bed after his labours, Mons.

Robin selected five cards, or, rather, made his audience believe *they* selected them ; he tore them up, and loaded a pistol with the pieces. He then fired at the windmill, when *lo ! presto !* one of the torn cards was perceived upon each sail of the mill, and one upon the door ! But this was not all. The firing of the pistol set the mill on fire, and the blaze was seen emerging from the top. I need scarcely say that Mons. Robin's Windmill was highly successful. The whole of the effects obtained by this clever conjuror from this one piece of automata was caused by precisely the same means as those of the Magic Harlequin and the Cook of the Palais Royal. The same system of levers, valves, and pulleys was employed, and the whole was worked by a person off the stage.

The only automaton of Professor Anderson was, compared with that of his predecessors, extremely weak, and scarcely deserving of notice. It consisted of an old man, who nodded, shook his

head, and raised his arm to ring a bell. The reader of these articles will know exactly how this was done. The head was worked beneath the stage; one string causing the head to nod, another to turn from side to side, and a third raising its arm and letting its hand fall upon a bell. By these three simple movements it answered various questions put to it.

Before proceeding further, I may as well state that I have necessarily passed by a large number of automata which were exhibited by numerous other professors of the "black art" whom I have not even named. This was absolutely unavoidable, inasmuch as the space and time that would be required to give a full history of automatic conjuring is not at my disposal. But I have endeavoured to give the principal wonders of mechanical art as applied to conjuring, those which I have omitted to mention being weak imitations of the great masterpieces, and therefore of no note. But, following up the sequence of

events in the history of conjuring, I must make mention of Colonel Stodare's Living Head, especially as this will open up quite a new subject. Stodare placed upon a table, supported by legs, and beneath which the audience apparently saw the back of the stage, an empty box with folding doors in front. Having closed the doors of the box for a few minutes, he reopened them, when a living head, dressed to represent the head of a sphinx, was seen within the box. To all appearance there could not possibly be any connection of that head with a body. There was the head in a box of such a size as only to be capable of admitting a head. The audience saw that the body could not be placed beneath the table, for they perceived the curtains at the back of the stage, between the legs, while the table itself was at some distance from the curtains at the back, and the space between could plainly be seen. The audience, however, could *not* see through the legs of the table, but what

they saw was a reflection of the sides of the stage, which were made to correspond exactly with the back. This was effected by means of two plate-glass mirrors fixed so as to closely fit into the space between the

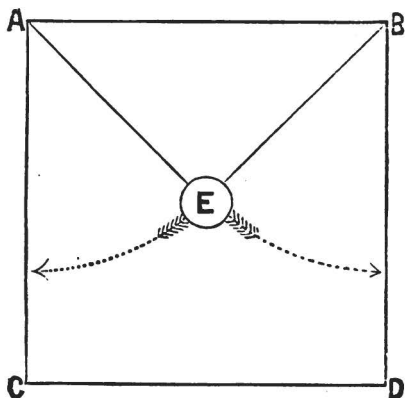


three legs facing the audience. The floor was covered with green baize, which was reflected in the glasses, and seemed to be a continuation of the floor. The living body belonging to the animate head was in

reality beneath the table, concealed from view by the mirrors. The preceding illustration will show the position of the body during the performance.

In order that the reader may more clearly understand how this great optical illusion was produced, I will give a full explanation of an improvement upon this apparently wonderful phenomenon—the Fatima illusion—when the reader will more clearly comprehend the solution of what must have hitherto been to him or her a profound mystery. But before doing so I may mention that simultaneously with the appearance of Colonel Stodare's Talking Head there was produced by Messrs. Pepper and Tobin an optical illusion founded upon precisely the same mechanical arrangement. It was called "Proteus ; or, We're here and not here." A cabinet 3ft. 6in. wide by 6ft. high, standing upon four small feet so that the audience could see beneath it, was brought upon the stage. It was then opened, and inside

was seen a pillar in the centre from floor to top, on the point of which was hung a lamp. The cabinet was seen to be empty. A person entered it, closing the door after him. In a few seconds, when the door was reopened, it was found to be empty. This was repeated with three different



persons. A fourth went in, and on the door being opened the four persons were seen inside, and emerged from the cabinet. Of course, where these men concealed themselves was the cause of a great deal of surmise and conjecture ; but the reader

who has seen this trick, after I have explained the mystery, will marvel at the ease with which he was deceived and hoodwinked.

From the preceding ground plan of the cabinet, it will at once be seen by the simple laws of optics how our very eyes may be made to cheat the other senses:— A B, C D, is the floor plan of the cabinet. A B, B D, D C, and C A, representing the four sides. E is the pillar from floor to roof. Attached to the sides A C and B D, are two plate-glass sides fitting exactly, so as to form two sides to the cabinet, A E, B E, terminating in the pillar E. These plate glasses are moveable on hinges in the direction indicated by the arrows, and could be moved close to the sides of the cabinet. The backs of the plate-glass doors are painted or papered to resemble exactly the sides of the cabinet, so that when closed the plate-glass sides appear to be *bona fide* sides of the cabinet. Thus, when a man stepped into the cabinet

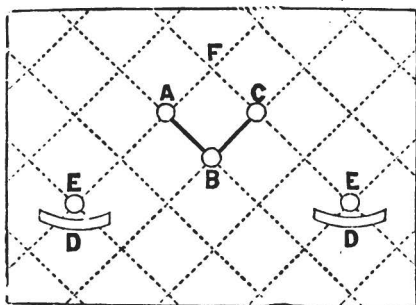
he merely opened the plate-glass sides, and stood behind them when the cabinet was opened. The glass reflecting the sides of the cabinet, which were exactly like the back, made it appear that the box was empty, the lamp being so placed that it was not reflected by the glass sides. From this it will be seen that as many persons as the space enclosed by the folding glass sides could hold, might easily enter the cabinet, and yet not seem to be in it.

This and the Living Head of Stodare were such good optical illusions, and so safe for the exhibitor to work upon, that succeeding conjurors have improved upon the trick, and produced one of the prettiest and most marvellous effects, that of a lady being seen on the table, without any lower limbs whatever, and yet able to talk and sing. No doubt many of my readers will remember to have seen Fatima when exhibited some little time ago in Lime-street, Liverpool. A description o

this optical illusion, as seen by the public, will be scarcely necessary.

It will be remembered that to all appearance a half body was resting upon a small table standing on legs, which again rested upon a larger table likewise upon four legs, and that the space beneath the table was seen. In point of fact, the space beneath the table was *not* seen, for the remaining portion of the visible body actually stood in the space beneath the table. The table was really upon three legs placed at right angles. Between the middle and two other legs were two plate-glass mirrors, fitted closely to the legs and the top of the table. The pattern of the carpet was always of a square character, and the table was so placed that the reflection in the glass formed a continuation of the pattern, thus giving an appearance of space and a continuity of surroundings. The fourth leg of the table was produced by a very simple contrivance. A single leg, carved similarly to the legs

of the table, was concealed behind each of the small screens which bore a lamp, and on each leg was a placard bearing the letters composing the name of Fatima, but written thus—AMITAF, so that, as seen in the glass, they appeared FATIMA. These legs were so placed that they threw



their reflections in such a way as to continue and form one leg, the fourth leg of the table. The ground plan, as given here, will at once show the position of the table and the separate legs.

A B C are the three legs of table, A B and B C being the two plates of glass. D D are the two screens concealing the

single legs E E. According to the laws of reflection the legs E E will be reflected in the point F, and thus present the appearance of four legs. Upon each of the legs is placed the placard bearing the name written backwards, and the reflection so deceives the spectator that he fully believes he is looking at a fourth substantial leg. Of course the upper table upon which the visible portion of the body appears to rest is likewise made of three legs with looking-glass in between. The invisible portion of the body is concealed by the looking-glasses. The pattern of the floorcloth being of a cubic shape, the reflection in the glasses seems to be a continuation of the pattern. It was by these simple combinations of mechanics and optical contrivances that thousands upon thousands of persons were mystified and completely cheated of their senses.

IV.

AUTOMATA OF MESSRS. MASKELYNE AND COOKE—PSYCHO AND ITS IMITATORS— ZOE—FANFARE.

WE now come to our own time, and to a description of the various automatic exhibitions of the present day. The most notable and successful, because the most original, exhibitors and inventors of automatic figures at the present day are Messrs. Maskelyne and Cooke, now located at that old "home of mystery," the Egyptian Hall, London.

Their first and, in my opinion, their best piece of mechanism was Psycho, the celebrated Whist Player, which they produced in 1865. A description of this interesting figure is scarcely needed. For years they contrived to keep the motive

power and mechanical arrangements of this automaton an entire secret, while the public, the press, and the scientific world, saw, wondered, and were puzzled. Many and various were the solutions offered to account for the working of the Whist Player; but the secret of the sinews and muscles, so to speak, of Psycho mystified every one. So thoroughly successful was the figure that, as a natural consequence, mechanics set about producing something similar.

One of these imitations was exhibited under the name of Hankey. This was but a poor and clumsy representation of the original. It consisted of a rudely-constructed figure of a man seated on an octagonally shaped box, in which a boy was concealed, who worked the arms and head. The exhibitor was compelled to indicate the cards to be played by certain signs and motions, which often led to complications and mistakes. This revival of Psycho eventually came into the possession

of Signor Boz, and was exhibited in Liverpool and various other towns under the new name of Yorick.

Professor Pepper likewise constructed an imitation of Psycho, under the *nom de théâtre* of Scynthia. This figure, though very ingeniously contrived, did not confessedly fulfil all the conditions of Psycho.

Cremer also introduced a whist player, which was a huge, complicated mass of wheels, levers, and elaborate mechanical contrivances, and necessitated a most careful supervision for a successful exhibition. It could never be relied on for a smooth and uninterrupted performance.

A French firm also constructed a whist player for Mr. Everett, and this eventually went to America. In this figure the boy was much better concealed than in the one I mentioned before.

One very ingenious solution of the construction of Psycho was offered in November, 1877. I partly reproduce it—not because it is a solution, but because it

will enable the practical and ingenious reader to construct a figure something similar, although not at all equal, to the

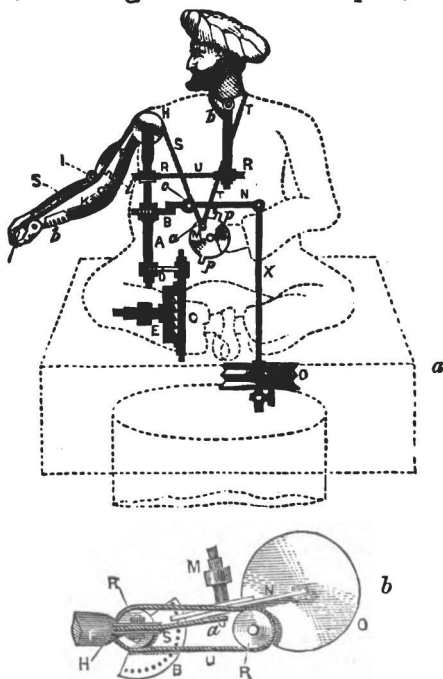


FIG. 1.

Whist Player of Messrs. Maskelyne and Cooke.

In Figs. 1a and 1b (elevation and plan),

the wheels E and M have each a train of clockwork (left out for the sake of clearness), which would cause them to spin round if unchecked. M, however, has two pins, *p p*, which catch on a projection on the lever, N. E is a crown-wheel escapement—like that in a bottle roasting-jack—which turns A alternately to the left and right, thus causing the hand to traverse the thirteen cards. A little higher up on A will be seen a quadrant, B (see plan), near the edge of which are set thirteen little pins. The end of the lever, N, drops between any two of them, thus causing the hand to stop at any desired card. The lever being pivoted at *c*, it is obvious that by depressing the end, N, B will be set at liberty, and the hand will move along the cards; by slightly raising it this motion will be arrested; by raising it still more the pin, *p*, is released, and M commences to revolve, and by again depressing N this wheel will, in its turn, be stopped. Near the bottom of the apparatus is a bellows,

O, which contains a spring tending to keep the lever, N, with which it is connected by a rod, X, in the position shown. This is connected with the tubular support, which may be connected by a tube through leg of stool, and another tube beneath

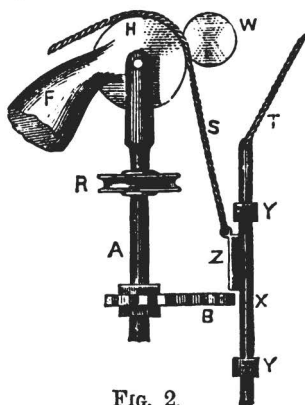


FIG. 2.

stage, with an assistant behind the scenes. By compressing or exhausting air through this tube it is obvious that the lever, N, will be raised or depressed, and the clock-work set going accordingly. *a* is a crank-pin set in M, and connected with the head by catgut, T, and with the thumb by S.

At R and R are two pulleys connected by gut. Thus if the hand moves round, the head appears to follow its motions, and when raised by pulling S, the head rises also by means of T. Further explanation seems almost unnecessary; *l* is a stop to prevent elbow moving too far, and *b b* spiral springs, to keep thumb open and head forward respectively. When N is

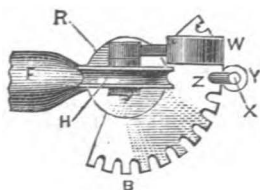


FIG. 3.

raised, M pulls T and S, the latter closing thumb, and then raising arm by pulley H. If the lever is allowed to drop, *p* will catch and keep arm up. On again raising N, the arm will descend.

In addition to the above contrivance, we have in figures 2 and 3 another and simpler arrangement, in which only one train of clockwork is used. On the same

axle as H is fixed a lever and weight, W, to balance the arm. A vertical rod, X, having a projection, Z, slides up and down in guides, Y Y, and carries the catgut, S and T. The quadrant, B, has cogs cut, between which Z slides and stops the motion of A, which is moved, as before, by clockwork. The lower part of X is connected direct with O. When X is slightly raised, as shown, A is free to move, but

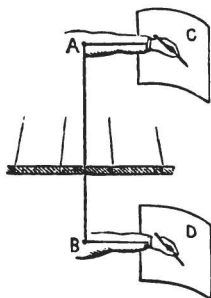


FIG. 4.

on exhausting air and drawing X down, Z enters the cogs and stops the hand over a card; continuing to exhaust, the thumb closes and the card is lifted up. The details of the clockwork the originator of this solution omits to give. He says there should be a fan on each train to regulate the speed. The figure should be so placed that an assistant can see the cards in the semi-circular rack fig. 4.

The next remarkable automatic figure exhibited by the dual mystifiers at the Egyptian Hall is that called Zoe. It represents a female figure seated upon a stand. Before her is placed a semi-circular drawing board, which is attached to the seat upon which the figure rests. Zoe writes figures and draws portraits of popular characters. To all appearance there is no motive power off the stage, and the exhibitor has no physical connection with the figure, whose movements and skill are apparently spontaneous. This is one of the most simple mechanical contrivances of the kind that has ever been produced. A thin steel rod runs through the seat in which the figure is fixed. The body and the arms of Zoe are above the stage, beneath which another arm and drawing-board are placed exactly in the same position as those above the platform. The mechanism is made to work so that the hand above is moved precisely as the hand below is guided by the artist. Thus, when

Zoe is told to draw a portrait, say, of the Earl of Beaconsfield, the artist below guides the unseen hand, while the hand above follows the movements of its guide below. The reader may see from the annexed plan at a glance the principles of the movement ; but it must be understood that this



is not the only mechanism employed. It will, however, fully explain the principles of its motion.

It will be seen that whatever movement be given to the arm at B, the arm at A must have the same movement simultaneously. As the figure is brought on to the stage, and then fixed on to the seat, all

suspicion of complicity with persons below the stage is removed ; but a rod is pushed through the pedestal and secured through the upper half while the exhibitor is seating the figure.

Another, and I think the latest production of note—no pun is here intended—brought before the public by Messrs. Maskelyne and Cooke is Fanfare, the cornet player. This is the figure of a gentleman dressed in modern costume, holding in his hand a cornet, which he places to his mouth and plays in a most professional manner. The whole performance of this mechanical marvel, however bewildering it may appear to the observer, consists of nothing more or less than remarkable clever “lipping” on the part of a living musician, who really plays the instrument in the lonely solitude of the regions beneath the stage. The sound emitted from a brass instrument is altered in tone and pitch, according to the length and breadth of the tubes through which the wind is blown.

For a bass tone wide and long tubes must be used, while for a treble tone much shorter and narrower tubes must be employed. The principles of construction are exactly similar in the cornet as in the euphonium and saxehorn, the difference of tone being produced merely by the different dimensions of the tubes. The direction of the tubes—that is, whether they be twisted or straight, or in different folds—makes very slight, if any, difference in the tone of the instrument. A cornet could be so constructed as to admit a much longer and straighter tube immediately in front of the piston tubes, and still have the tone of an ordinary cornet. It must have been this principle which first suggested to the minds of Messrs. Maskelyne and Cooke the construction of an automaton cornet player. The extra long tube of which I have made mention passes through the body of the figure into its mouth, where it meets the mouth of the cornet when it is placed against the lips. This tube is passed

through one of the legs of the chair on which the cornet player is seated, and thence beneath the stage, where a living cornet player manipulates the instrument in the hands of the figure by means of three strings or wires attached to the fingers of the figure. Thus while he is blowing through the tube he has the string of the first piston on his forefinger, that of the middle piston on the middle finger, and that of the third piston on the third finger. As he mouths his instrument he moves his fingers in precisely the same manner as he would had he an instrument instead of only a tube to play upon ; and as he moves his fingers so he pulls the wires joined to the three fingers of the figure, and thus produces the change of notes which the exigencies of the tune require.

V.

THE CELEBRATED INDIAN BASKET TRICK— HOW IT IS DONE — TAKING A MAN TO PIECES—THE LIVING MARIONETTES.

IN perusing these articles the reader must have observed, ere this, that a great deal of the success of mechanical, and, in fact, all kinds of conjuring, consists as much in the credulity and ignorance of the audience as in the perfection of the trick itself.

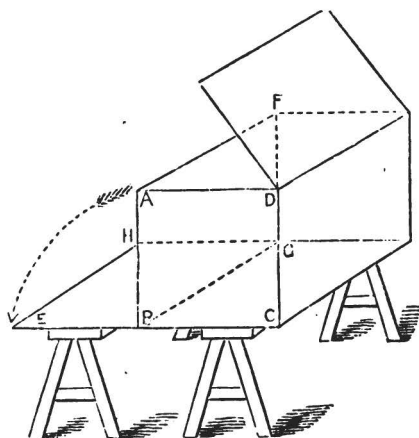
It is not at all surprising that, centuries ago, the performer of a few juggling tricks, or the man slightly in advance of his age in science, should have been looked upon by the vulgar crowd as a person having dealings with another world, and that his Infernal Majesty himself should have been called in to father all his supernatural

tricks and wonders. Happily we have reached an age when enlightenment has driven superstition almost entirely away ; and while we marvel and wonder at the cleverness of such men as Maskelyne and Cooke, Dr. Lynn, and many others, even the most ignorant of persons would never think that these gentlemen had any diabolical contract with such an uncanny gentleman as Mephistopheles. I make these remarks because the tricks I shall shortly describe have been performed, perhaps in a slightly different manner to what they are now, centuries ago, in the distant ages of Egyptian might, the earlier days of the Hindoos, and long before civilization had reached the West of Europe.

One of the most famous tricks of the Hindoos, and one which is now not too frequently exhibited to become monotonous, is, the celebrated Indian Basket Trick, performed with great success by Colonel Stodare, Professor Anderson, and others. A wicker basket is brought on the stage

and shown to the audience to be perfectly empty. It is then placed upon trestles, the lid opened, and a young lady made to enter the basket and lie down in it. The lid is then closed, and the exhibitor thrusts through the interstices of the wicker-work a sharp long sword in all directions. The lid is then opened, and the basket is found as empty as when first exhibited. The basket is again closed and once more reopened, when the lady steps out smiling demurely, and evidently unconscious of and unhurt by the murderous action on the part of the exhibitor. The solution of this great mystery is, like that of all others, exceedingly simple, and consists entirely in the peculiar construction of the basket. As seen below, there are actually two sides, fixed at right angles to each other, to the back of the basket, E H G B and A F G B hinged at B and G. When the basket is brought upon the stage, the side E H is fixed into the back of the basket, while its double, A F G B, is in the basket. When

placed on the trestles, the conjuror always takes care to have the lid uppermost. The lady, on entering the basket, always reposes in a certain position, so that the exhibitor knows exactly in which way to



make the sword thrusts. When he again opens the basket he first turns it upon its side, as shown in the illustration, and then opens the lid. In the meantime the lady is reclining upon the false side *E H*, while its double becomes the side of the basket,

thus giving it the appearance of being empty. The lid is again closed and turned on its bottom in the direction of the arrow, when, of course, the lady is seen in the basket, from which she emerges.

Another and better way of performing this trick is by causing the lady, instead of again appearing in the basket, to appear at the other end of the hall and walk to the stage. This always causes great excitement and marvel among the audience, who cannot imagine how she escaped from her concealment. To achieve this, *two* ladies of similar height and figure, and dressed precisely the same, are engaged. One of them is brought upon the stage and blindfolded, and while the professor is apparently seeing whether the sword is sharp, the lady rushes off the stage in great trepidation, when he brings the other lady back, and she enters the basket. The first lady rushes round by a private doorway to the back of the hall, and at the moment when the professor shows the basket to be

empty, she cries out, "I am here!" much to the astonishment of the audience, whose attention has been riveted to the stage. The sole object of blindfolding the first lady is that the folds of the handkerchief may better conceal the difference of features in the second lady.

This trick may also be performed with one lady, if a table similar to that used for the Fatima delusion be employed.

Another venerable and oft-repeated magical delusion is that of dismembering a living person. Dr. Lynn relies upon this worn-out pantomime trick for the staple of his performance; but it must be confessed that his method of manipulation and neatness of execution saves, what would be in a clumsy person's hand, a very sorry exhibition.

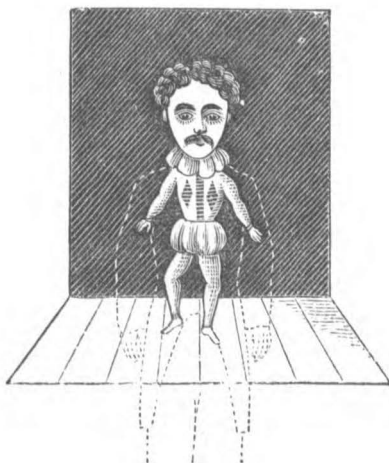
A man is brought upon the stage, and is told that his limbs are going to be amputated. The victim makes a rush behind the curtains, no doubt frightened that the threat would be duly executed, but is

brought out and made to stand still while the exhibitor coolly cuts off an arm and then a leg. The frightened, trembling subject of the professor's carving operations is an assistant, who takes good care to be the first on the stage when a person among the audience is requested to step up and be carved. When he rushes off behind the curtains, it is to affix to one shoulder and thigh a dummy arm and leg, while his real limbs remain behind the curtains reclining upon rests. So quickly is this done that the audience cannot but believe that the arm and leg are the real flesh and blood contingents to the human frame. The professor carefully amputates the false arm and leg. Of course he can as readily replace the limbs by simply gliding the false limbs through the curtains, and releasing the *bona fide* leg and arm from their constrained and awkward position.

Another exhibition offered by Dr. Lynn to his patrons is that known as the Living Marionettes. This novel and amusing illu-

sion was first introduced by a Frenchman, and was shown in the metropolis long before the British public had heard of Dr. Lynn, and before he brought it out as a novelty at the London Aquarium. On a small stage, a real living head, attached to a miniature body, sings, talks, and acts; and it is plainly evident to the audience that while the head is really a human one, the mannikin body is but a toy. Apparently the curious figures are not connected by any means with anybody, either at the back, sides, or beneath the stage. It will be noticed that the drapery is entirely of black, and that the eye is deceived, by the absence of any break in the colour of the drapery, as to distance. The person appearing as the Living Marionette, fixes beneath his chin the framework of the body. The back drapery is so arranged that he brings on the stage with him the curtains forming the background to his head, while with wires fixed to the legs and arms, he produces a motion in the toy,

giving it the appearance of walking on the stage; so that while the Living Marionette is in the centre of the stage, the body of the man is behind it. Thus there are two backgrounds to the stage—one of



black, fixed; the other also of black brought on with the head; but being black, is not seen by the audience, who imagine the head passes before the black curtain. Any number of heads can be shown, and two could perform at the same

time by coming on the stage from each side, with each half a curtain or background fixed to their heads. The annexed illustration will show the head, to which is fixed a moveable black frame, and the position of the real and the dummy body. There is sufficient space between the extremity of the stage and the fixed curtain at the back for the performer to stand and pass along. As I said before, the arms and legs of the toy are worked by means of wires passed through the counterfeit curtain. A very pleasing and startling entertainment may be obtained if the persons selected to perform are vocalists and comedians.

VI.

CLAIRVOYANCE OR SECOND SIGHT — THE
CLAIRVOYANCE OF THE SUPERSTITIOUS
AGES AND THE CLAIRVOYANCE OF THE
DAY — QUESTIONS AND ANSWERS — THE
READING OF CONCEALED WRITING — THE
ADDITION OF UNSEEN FIGURES.

It is surprising with what avidity our forefathers, when they perceived some effect arising from an unknown cause, flew to the aid of *diablerie* and the supernatural for an elucidation of the mystery. Without seeking at once to work out a cause from the known laws of nature and natural phenomena, they stopped all pursuit in the paths of inquiry by at once bringing forward his Satanic Majesty as the cause of everything and every occurrence for the origin of

which they could not give an immediate explanation.

We have happily reached an age which is distinguished for its matter-of-fact treatment of all that appears mysterious and unusual. Thus we have, by our rigid inquiries into the truth, banished, or almost banished, those dread preventives of progress and civilization—superstition, and belief in the supernatural.

But even at the present day, with all its enlightenment and education, we find the weakness of our ancestors palpably predominating in the minds of the ignorant multitude, and spiritualism and magic looked upon by a certain number of persons as things existing and beyond the ken of men. Scientific inquiry—that broom that has swept away so many superstitions—has done its work well, and it cannot be long before the bigoted believers in the so-called “manifestation” of beings in another and unknown world will be looked upon, even by those whose belief in them is

strongest, as the mechanical hanky-panky tricks of clever and astute conjurors, who feed upon the credulity and simplicity of their tools and followers.

Among the many subjects which were classed with the supernatural phenomena arising from the agency of unseen and spiritual powers, clairvoyance, or second sight, ranks conspicuous. It has been asserted, and by no mean authority, that second sight, or the belief in a secondary and unnatural sight, took its origin in the Scottish Highlands and Isles, where it was known by the name of *taisch*—a spectral or shadowy appearance; but from the time when the Oracle at Delphi was sought by the populace, and when thousands were deluded by the mere mechanical tricks of a clever and crafty priesthood, even to this day, second sight has been looked upon as a spiritual visitation bestowed for some design upon persons who are made the instruments of Providence.

That at times men have had a prescience

of what was to come cannot be denied, since murders and murderers have been undoubtedly discovered by means of visions which have been seen of the murderer, and the spot where the murder was committed.

Even Dr. Johnson, in his *Journal in the Hebrides*, where the belief in second sight prevailed to a great extent, hesitates whether to believe or deny ; and he asserts that he “came away at last only willing to believe.” It is not my intention, nor have I the time or space, to enter fully into the subject of second sight of the past, but it is my intention to fully explain second sight, as it is understood now, and the reader will at once see how the old fabric of the superstitious ages melts into the most commonplace, and he will be perhaps vexed and annoyed to think that when witnessing a performance of second sight his mind misgave him, and he really was willing to believe.

The power, when blindfold, to discriminate things unseen, and promiscuously

pick from a crowd of persons, and name miscellaneous and out-of-the-way articles, has been performed so cleverly that the greatest surprise and wonder has been created in the minds of even the most intelligent spectators. But like everything else to which the term magic has been and is applied, the wonderful and mysterious are only the simple and the common-place, and the credulity of the audience leads to the merest trickery, to that marvel and wonder which surrounds a feat of *legerdemain* or *clairvoyance*; but, as my readers will have already seen, as soon as second sight is explained, it will cause wonder no more.

There are always two persons engaged in an exhibition of *clairvoyance*—the person who asks what the article is and the person who answers. The whole secret of second sight lies in the method of asking what the article is. A sort of dictionary has to be learned by both, and this lesson is certainly not more difficult than that of the tragedian

in learning his part; but the audience are deceived by the simplicity of the questions asked. Although the words used by the questioner are nearly always the same, the position of the words is different. Hence, a different answer can be applied for every varying construction of the sentence.

When these different questions and their answers are thoroughly understood by the two accomplices, they can give an exhibition which to the uninitiated will appear marvellous and unaccountable. When the interrogator asks the question, "Is this picture coloured or plain?" the answer is "Plain;" or if the question is, "Is this picture plain or coloured?" the answer is "Coloured." This is the whole groundwork of second sight, and in order more fully to illustrate this matter I will give a series of answers and questions which have been adopted by a number of English and American professors. In asking the colour of an article, the question can be so differently constructed that each

construction can bear the answer for every ordinary colour.

What colour is this ?—Black.

What is the colour ?—Blue.

Tell me the colour ?—Green.

Has it a colour ?—White.

Any colour ?—Orange, yellow.

Name the colour ?—Brown.

Please name the colour ?—Red.

These have only to be learned by two persons in combination, when they will be able to tell the colour of any article. Should the exhibitor have an article of a mixed colour, say, mauve, he first asks the question having red for the answer; and then, before the reply can be given, again puts the query for blue. The clairvoyant thereby knowing it is a mixture of red and blue, he is able to know that mauve is the answer required. Again, in asking the nature of a stone set in a jewel the question may be thus arranged—

What is the stone ?—T'opaz.

What stone is it?—Jet.

Tell me the stone?—Emerald.

Name the stone?—Diamond.

Do you know the stone?—Cornelian.

Any stone?—Amethyst.

And so on *ad infinitum*. In ascertaining the nature of a piece of jewellery the questions may be put thus—

What is the metal?—Gold.

What metal is it?—Brass.

What metal?—Silver.

Tell me the metal?—Copper.

Name the metal?—Iron; steel.

Please name the metal?—Bronze.

Can you tell me the metal?—Tin.

The following questions, having replies for the usual articles found upon persons assembled to witness a performance, may easily be learned by a person gifted with a good memory, or by a person with an ordinary memory by repeated application :—

Name this?—A pocket comb.

What have I here ?—A purse.

What is this ?—A toothpick.

This will puzzle you ?—Court plaster.

Speak loud ?—A letter.

Answer quickly ?—A handkerchief.

Has it a colour ?—White.

Is it perfumed ?—Yes.

Tell me now ?—Keys.

Is this of any use ?—An almanac.

What is this for ?—To burn a cigar.

Do ladies use this ?—Yes ; a pincushion,
needlecase.

Do you know this ?—A walking-stick.

Now, can you tell this ?—A pocket-
book.

Would you like this ?—Yes ; a watch.

Do you admire this ?—A brooch.

Who gave me this ?—A lady—a
bracelet.

What is in my hand ?—A pin.

Now, who gave me this ?—A gentle-
man—a chain.

What have I now ?—Money.

Now, what have I got ?—A sovereign.

Can you tell me again ?—A shilling.

Is this the same ?—Sixpence.

You say I have money ; but you don't say the kind ?—A florin.

You say I have money ; but you don't say its value ?—A half-crown.

You say I have money ; but tell me its value ?—Ten shillings.

What is the value of the money ?—A penny.

I cannot hear you ?—A halfpenny.

I think I have given sufficient queries and answers to indicate the simplicity and the secret of second sight. When all the particulars of the articles are required, although the questions may seem perplexing to the spectator, yet they are extremely simple to the person who knows each question and its reply by heart.

Here is an illustration of a complicated series of questions, and the reader will see at once that the answering is very simple :—

What is in my hand ?—A pin.

What is the metal ?—Gold.

Any stone ?—Amethyst.

What have I now ?—Money.

You say I have money ; but you don't say the kind ?—A florin.

Can you tell me again ?—A shilling.

From the illustrations I have given above, the reader will perceive that, provided a large and well-selected assortment of questions, corresponding with replies, be agreed upon, and well known by the two confederates, almost any question may be answered and any article known, together with its properties, colour, contents, etc.

Another exhibition of clairvoyance—the reading of writing sealed up and unopened—adds greatly to the mystery of the performance ; but how this is done can be easily explained. Previous to going on the stage, a sentence is selected, and written in blacklead on a piece of paper.

During the performance similar pieces of paper are handed round to several of the audience, who are requested to write a sentence thereon. These papers are sealed similarly to the prepared one, and placed in a hat. The professor then pretends to select one at random, after having shaken up the papers; but he really takes up the one he had already in his hand. The lady clairvoyant is then requested to read a sentence, which, of course, she can easily do. The paper is then handed to one of the audience and to their astonishment it is found to have been the actual sentence written. It will be understood that each writer of a sentence is ignorant of what another has written, and the given sentence is therefore thought to have been written by one of the audience. This suspicion may be heightened by the queer method of spelling, or the character of the caligraphy; it may still be made more astounding by writing the sentence in a foreign language with a slight mistake in spelling, or gram-

mar, upon which the clairvoyant can comment in her reply, and thus acquire a reputation for scholarly and linguistic attainments. The same means are resorted to in the adding up of a sum. The figures are all prepared behind the stage, and the *bona fide* sums given by the audience are never the ones answered by the clairvoyant. I think I have given, or I hope I have, a clear and full explanation of clairvoyance or second sight, and the reader may, by a little practice, become as perfect in this special branch of magic as the mysterious lady—Heller—Miss Anderson, Dr. Lynn, and a host of others, who have mystified and bewildered thousands of wondering spectators.

VII.

SPIRITUALISM—MEDIUMS AND THEIR PRETENCES—THEIR TESTS—VARIOUS TYING TESTS—THE SEALED ACCORDION—FLOATING IN THE AIR—FLOATING TAMBOURINES, GUITARS, ETC.—THE SPIRITUAL MUSICAL BOX—WRITING ON THE CEILING—INVISIBLE WRITING—THE FLOATING TABLE, ETC.

THE belief in the materialization of spirits, and the visits of spiritual inhabitants of another world to the scene of their mortal sojourn for the sole object of giving specimens of their caligraphy on slates and ceilings, rapping and playing upon tambourines, sealed accordions, guitars, and so forth, affords another proof that there are no bounds to human credulity and stupidity.

A worthy doctor of philosophy, only

recently deceased, said in my hearing, whilst speaking of the gross ignorance that prevailed amongst believers in spiritualism, that if a man stood in the middle of the road with a crowd of people round him, and asserted, with well-worded sentences and an apparent earnestness and belief on his own part, that two and two were five, he would find some among the crowd to believe him. Perhaps the doctor went a little too far in his observation, but it is, nevertheless, almost incredible that a large number of persons can be so bigoted and thick-headed as to persist in their belief in spiritualism when medium after medium has been most unequivocally found to be conjuror, trickster, and swindler. These conjurors and tricksters are not men who practise their art of deceiving on the stage in a legitimate manner, but they are men who pander to the credulity, bigotry, and fanaticism of the imbecile, obtuse, and weak-minded persons who believe in spirit land, by

claiming the power of recalling from that unknown region to which the soul is supposed to take its flight when it has shuffled off its mortal coil, those beings who have gone from earth never to return again, except by the agency of these mediums. In asserting their power of "calling up the spirits from the vasty deep," or from the sky, they offer as proof of their claim to be believed certain tests, which have been, and which I will show are, simply the hanky-panky tricks of the prestidigitateur and magician. The credulous followers of these mediums cannot or will not see the absurdity of bringing souls from the "world of spirits" merely to answer idiotic questions, and to perform such antics as even a wild and unrestrained boy would not be mad enough to do ; but they believe the assertions of the mediums simply because the tests which are applied to them consist of something more material and tangible than aërial nothings, and appear to be marvellous and beyond the

power of the human mind to understand.

Have these spiritualists never witnessed the performance of a clever conjuror who confesses that all his tricks are worked by mechanical means and sleight of hand? or have they never seen apparent wonders performed, the mystery of which they could not unravel? They must have done so, and yet we have never once heard such men as Heller, Houdin, Professor Anderson, Maskelyne and Cooke, assert that their performances or manifestations were the works of materialized spirits.

One of the tests offered by the mediums is the rope-tying trick, made so famous by the Davenport Brothers. It has been clearly demonstrated that it was merely a trick. The medium has in his hand a coil of rope about twelve yards long. The lights are extinguished, and a few seconds afterwards, when the gas is lighted, he is seen securely fastened to a chair, his hands tied, and the rope made fast between his

wrists. One of the company is requested to examine the rope and seal the ends of the knot. The gas is again extinguished, and a tambourine is heard bounding about the room. A hand—and a very material hand—claps the faces of the nearest persons, hats are knocked off, a bell is rung, arms are pinched, and various other manifestations occur which fully convince the astonished devotees that some one—spirit or otherwise—is evidently giving free vent to a playful and mischievous disposition. The medium, of course, claims that these manifestations are performed by spirits summoned by him; and he is believed, not because the spectators suppose that spirits could be so summoned and be made to manifest their presence, but that, because the medium is tied with a rope, the ends of which are so sealed as to prevent his getting free from the bondage into which the spirits have placed him, *he* cannot possibly be the one that played the tambourine, rung the bell, gave

the blows, etc.—*ergo*, it must have been the spirits.

Now, had these faithful believers looked very carefully at the rope and the method of the tying, they would have discovered that the rope had previously been cut in halves, and then knotted with a fast knot in the middle. This knot is concealed by the medium before he binds himself, by holding it in his hand. The rope then, of course, looks like one continuous whole. When the gas was lowered, he places the two ends of the rope beneath him on the chair, and, in a manner which I can scarcely explain in writing or even by illustration, so binds himself, that by making a double running knot, and placing this double noose twice round his wrist, he can slip it, and thus free his hand at will. The knot may be concealed, because it is never touched or disturbed. When the room is again darkened, it is found to be a very easy matter for the medium to perform any of the usual manifestations.

Another test offered by a medium, and which was considered as convincing proof of the right of his claim of connection with the world of spirits, was the well-known sealed accordion test. The instrument was fast bound by tapes, and the tapes sealed at every note so as to prevent it being played in the ordinary way. As soon as the lights were out the accordion was heard to play, not too sweetly, but sufficiently well to show that the instrument was being manipulated. When the lights were again produced, the accordion was found just as it had been placed, fast bound by tapes, each note sealed, and the seals immaculate.

This trick may be performed by any of our readers without having the slightest introduction to the beings of another world. He has only to procure a small tube, place it in the valve-hole of the accordion, breath and blow into it alternately, and then by fingering the keys he will be able to produce precisely the same effect as our friends

the mediums. In order to touch distant persons, or to make such things as guitars and tambourines play at different parts of the room, he has to conceal about him, or have hidden in some recess in the table or chair, a telescopic rod, extending several feet. To the end of this he fixes the tambourine or guitar, on the surface of which has been placed some phosphorus, and by waving the stick he makes it appear as if persons were floating over the heads of the company. The invisible hand is formed by a glove being fastened to the end of the tube. The glove is inflated or blown out through the tube, and when slapped on to the cheek of a person it has all the sensations of a cold hand striking the face. The glove covered with phosphorus and waved about is the mysterious hand, without any body, which caused so many to believe that a spirit was present.

At the end of this useful tube may also be fixed a reed trumpet or whistle, and by blowing through the tube sound can be

evolved, and when the instrument is worked about in different directions a large but discordant band of spiritual musicians appear, to the materially and physically benighted listeners, to be in the room. To play the guitar, while floating in the air, seems a more difficult problem, but the reader will easily see how this is achieved. In the guitar is a musical box with a small piece of writing paper so placed as to touch the steel or vibrating tongues of the box, and this closely imitates the peculiar twang of the guitar.

When a medium, after having been caught in one or two of his performances, announces his intention of floating over the heads of the little world of spiritualists, they at once hold up their hands in silent admiration, and their belief in the invisible world becomes more vigorous. They then hasten to pay their guinea or two guineas to share in this manifestation of the spirit. The medium having called up the spirit from the "vasty deep," the room is

darkened and a bull's-eye lantern is held at such a distance from the medium as to make his face appear vague and indistinct. He is then seen suddenly to rise, and in his ærial flight performs a beautiful curve. His face is sufficiently masked as to make the features indistinguishable; but, at the same time, to make the audience fully assured that it is his face. The lantern is made to follow him, and in a moment the face is lost in darkness, but for one instant only, and then as the gas is lit the medium is seen with his toes just touching the platform, and his form descending to its ordinary upright position. Messrs. Maskelyne and Cooke and others have well shown that this floating in the air is one of the grossest deceptions ever offered to the most gullible of audiences. First, there is ready to hand a lay figure, got up to resemble the medium or professor. Hanging from the top of the stage are two cords, concealed from the audience. When the medium prepares for his flight the

bull's-eye lantern is turned upon him, but the person holding the lantern, pretending that the focus is not altogether right, turns it away to arrange it, as it were. While this is being done, the medium quickly substitutes the lay figure. The ends of these cords are furnished with hooks, which are fastened on to the shoulders of the lay figure, and then the exhibitor by means of a pulley hauls the figure upwards, the light being kept at such a distance as to just make the figure of the dummy visible, but totally unrecognizable. During one of the intervals of the lantern's wanderings the dummy is removed, and the medium is seen descending, by merely raising himself on his toes and lowering himself, and when the full light is upon him sinking on his knees.

In spite of the exposure of the tricks played by mediums, there are still persons to be found who really believe that the tambourines, accordions, guitars, etc., are played by spirit hands, and that beings

from the invisible world make a special journey at every spiritual seance.

Messrs. Maskelyne and Cooke have, in their popular entertainment, done a great deal to destroy the belief in the spiritual world founded upon the tests offered by mediums, and have clearly shown that the tricks which the mediums assert can only be done by spiritual agency might be performed by any ingenious person.

Another trick which has been performed by Messrs. Maskelyne and Cooke is that known as the spiritual musical-box. An oblong piece of glass is suspended by means of four cords hanging from the ceiling, and upon this glass is placed a musical box. At the word of command the box begins to play, and when desired by the exhibitor or one of the audience, it suddenly ceases. The effect is really marvellous, but the secret of the trick is very simple. In the box there is placed a balance lever, which, when the glass is in the slightest degree tilted, arrests the fly

fan, and thus prevents the machinery from moving. When the performer gives the word of command, the glass is made level, and, the fly fan being released, the machinery moves, and a tune is played. When commanded to stop, the cord on either side is slightly pulled, the balance lever drops, the fly fan is arrested, and the music ceases.

The writing by "spirits" on the ceiling is done in this way. The medium is bound, and when the room is lighted a written answer to a question asked is put upon the ceiling. The reader will have already guessed that this is performed by the medium by means of the telescopic tube, at the end of which he places a piece of chalk. He rubs the chalk on his head, to "show" that the spirits had raised him to the ceiling, as if he had performed the feat with his head. Another "crucial" test which these mediums offer is known as the invisible writing. One of the company is asked to write a sentence or a

number of figures upon a piece of paper. This paper is carefully folded, the lights are extinguished. In a few seconds they are again relighted, when the medium declares that the spirits have told him the contents of the paper, and he reads the sentences or tells the figures.

Again, the medium asks a gentleman to put the hands of a watch to any hour he chooses, and, when again the lights are lowered, he calls out the exact time to the exact minute. This all seems very mysterious and unaccountable, but I shall again show that we do not require spirit aid to perform these marvels. The medium has in his pocket a small phial containing phosphorus and oil; and when this test is performed there is invariably a long cloth on the table. When the papers upon which the sentence or figures are written, or the watch, are placed on the table, the lights are lowered, and the performer stoops beneath the table, takes the paper or watch, opens the phial, from which a

blue flame is emitted, and by this light he reads the sentence, or figures, or sees the time. He replaces the articles, and can, of course, readily tell what he has read or seen.



The floating table has often been performed; but I have never attempted to do this spiritual manifestation. The medium generally has with him an accomplice, and they bind to their arms a flat iron rod, which terminates towards the wrist in a kind of hook concealed from the company

by the cuffs of the shirt. The medium contrives to slip this hook under the edge of the table, as does also his confederate who sits opposite, while the dupe is sitting between. The annexed illustration will show the iron rod, and the method of fitting it beneath the table.

The reader will readily perceive that with the aid of these hooks the two persons can play all kinds of tricks with the table, making it go from side to side and glide from one part of the room to another.

There are other methods of tying besides those which I have already mentioned. Some mediums permit themselves to be tied by one of the audience. In this case the medium inflates his body and sits in such a position that all his muscles and limbs are distended. When he resumes his normal position the ropes become loose and he releases himself.

If there be any of my readers who have hitherto been inclined to believe in

the professions of the medium, I hope that what I have said will open their eyes, and show them that the so-called materialization of spirits is purely and simply a myth, and that the mediums are nothing more nor less than clever but unprincipled conjurors.

VIII.

PARLOUR MAGIC — A SURPRISE — INDIAN
SAND TRICK — THE “Q” TRICK — THE
BLEEDING THUMB — THE MARKED FLORIN
IN ORANGES — THE CHINESE PICTURES —
BAUTIER’S GREAT INK-AND-WATER TRICK
— CARRYING FIRE IN THE HANDS.

THE art of magic, as it is now understood, is no longer a secret and mystic profession ; it is a written art, and may be easily acquired by the clever mechanician, or any person having dexterous hands and a large amount of self-possession and impudence. I say “impudence,” because most of the best tricks are really so extremely simple that many persons of a timid or self-conscious disposition would feel ashamed to venture to perform them, in case of what

they think must be inevitable detection and exposure. But so blind is poor human nature that the clever conjuror can always select his man for "forcing a card upon him," even though he makes his dupe believe he has selected one at his own will and choice. At the request of a large number of friends, I will conclude this volume by giving a few tricks which may be performed after a very little practice by anybody who will take a little trouble, and for the execution of which no, or very little, apparatus will be required—at any rate, only such as can be obtained either in any ordinary house, or at a very trifling expense. The task which I have set myself is not, as the reader might imagine, an easy one, for in endeavouring to give some tricks which have not before been already fully explained in books published on the subject, I find that there is scarcely a parlour trick which has not already been explained. Therefore, to give some tricks that have never yet been

exposed is really a very difficult and almost impossible task. However, I have done my best, and the following little deceptions which the amateur conjuror may safely perform, will enable him to give a capital evening's entertainment to his friends or family circle. I would just add one word before quitting the subject of magic and conjuring. My object in the foregoing chapters was to show the reader, first, that the art of magic is merely the art of a very clever illusionist, who, by swiftness of execution and a thorough knowledge of the laws of mechanics and optics, can make his audience *deceive themselves*; secondly, to afford some entertainment to my readers; and, thirdly, to set the ingenious at work to solve the mysteries of the art upon the basis I have given in these chapters. I venture to think, from the observations I have heard, that all these objects have been attained. And now for a few parlour tricks.

I.—A SURPRISE.

You produce a bottle, which you ask a person to hold, inviting him to partake of a glass of the fluid contents. You give him a glass, and when he attempts to pour it out, lo! he finds that in a few seconds the contents has frozen! To perform this you must previously make a saturated solution of sulphate of soda and hot water, and fill therewith a clean white bottle, taking care to cork the bottle while the liquid is hot. The liquid remains in a fluid state so long as the bottle is corked. You show that the bottle contains a liquid, and in handing it to the person be careful to take out the cork. In order to give the preparation time to solidify, pretend to be looking about for a tumbler, and make some remarks about a sudden chill; or you can feel the hand holding the glass, and suggest that it is very cold. In the meantime, the air acting upon the solution has caused it to become fixed and immove-

able, and when the person attempts to pour it out, he finds it impossible to do so.

II.—INDIAN SAND TRICK.

This trick has been made famous by the Hindoos, who for many centuries contrived to retain the secret. It consists of placing ordinary sand in a basin full of water, stirring the water and taking out the sand in handfuls, perfectly dry. It need scarcely be said that without previous preparation it is impossible to effect this. Take 2lbs. of fine silver sand, place it in a frying-pan, and heat well over a clear fire. When the sand is thoroughly heated place a small piece of grease—the composition of a paraffin candle preferred—among the sand, stirring it well up to get it thoroughly mixed. Then let the sand get cold. You place into a basin of cold water two or three handfuls, then stir the water well. It will be found that the sand repels the water, and can be drawn out perfectly dry. It is very important that only a small

portion of grease be used, so that when you hand round the sand for examination its presence may not be observed.

III.—THE “Q” TRICK.

This is a very simple and a very telling trick for the parlour. You take a number of coins or counters, and form them into a



circle with a tail to represent a Q, as shown in the sketch annexed. You then ask a person to think of a number, and to count that number, commencing from the tail of the Q at B, and counting round the circle. When he has finished he is to count the number back again, but instead of counting the tail of the Q to go round the circle, and you promise to tell

him every time at which counter or coin he left off counting. In order that you shall not see him count, you leave the room while he does so. Supposing he selects the number 6; he commences to count from B, and leaves off at C; he then counts again, and leaves off at A. Now, while there are three counters in the tail of the Q, whatever number he thinks of, he will always stop at A; so all you have to do is to count the number of counters or coins there are in the tail, and the same number in the circle will always be the coin last counted. You must be careful, when repeating the trick, to add one or two, or take one away from the tail, as always fixing upon the same counter would perhaps expose the trick.

IV.—THE BLEEDING THUMB.

This is a very effective trick, but I am afraid, unless my pupil has some little self-sacrifice, and does not mind enduring a trifling pain in order to amuse his audience, this trick will never be performed. Pre-

vious to doing it, you puncture your thumb with a needle in one or two places, near the nail. You then assert that you will cut open your thumb and instantly heal it. You take a handkerchief and tightly bind the thumb therewith, keeping the thumb perfectly straight. You ask for a knife—the sharper the better—and, having obtained one, you pretend to cut the thumb, which you bend. This causes the blood to flow from the punctures. The blood spreads along the knife, which looks as though it had cut almost through the thumb. You then wipe the blood away, straightening the thumb, and show that there is no sign of wound or blood.

V.—THE MARKED FLORIN IN ORANGES.

Previous to performing this trick, get two florins exactly alike, and mark them both similarly. Then get two oranges and cut a slit in each. Place them on the table after you have put one of the marked florins inside one of them. Then borrow

from the audience a florin, and request the owner of the florin to mark it. You then ask a person in another part of the room to hold it, but giving him *your* marked florin instead of the borrowed one. Then you go to the table and slip into the other orange the borrowed florin. You ask your audience in which orange they would like the marked coin to be found, remembering that as you face the audience it does not matter which they say—right or left—as your right is their left, and their left your right. Whichever orange they ask for, take the one containing *your* marked florin. You then ask the party holding the florin if he would be sure to know it again. Then give him the orange to hold on the point of the knife; and in taking the florin from him conceal it in your hand, and say that you will cause it to pass into the orange which he holds. On cutting the orange open he, of course, finds your marked florin, which, on examination, he asserts to be the one held

by him. Then say that it would have been totally indifferent which orange was selected; and give the other orange to the person who lent the florin to hold. You then take *your* marked florin and say that you will cause it to pass in the orange he holds in his hand; and request him to cut it open. He does so, and then perceives his own marked coin in the centre.

VI.—THE CHINESE PICTURES.

This is a very curious and surprising trick. You prepare a number of plain white sheets of paper, intermixed with which are several sheets on which are drawn various Chinese pictures. In showing these sheets to the audience, you take care not to draw out any of the pictures, but only the blank sheets. You then take a jug, having an even top, filled with water, placing the sheets on the top. You then state that the water in the jug has the peculiar quality of drawing, but having been brought from China, can only draw Chinese

- . sketches. You then dexterously reverse the jug, the sheets preventing the water from flowing out. After a few moments you draw out the sketches, and scattering them among the audience, you cause them to think that they have been drawn on the blank sheets. This is a very old trick of the Chinese, who first performed it. You can easily learn to tell which are blank sheets and which are the pictures by a simple mark placed on the top or in the corner of the latter.

VII.—BAUTIER'S GREAT INK-AND-WATER TRICK.

This trick, first introduced by Bautier, at the Egyptian Hall, London, has, to the best of my belief, never before been explained. It is a remarkably clever deception, and, when dexterously performed, defies detection. It consists in showing a decanter filled with ink and another with water, and while each decanter is held by one of the audience, making the contents of each change places, the ink going into

the one containing water, while the pure liquid is found in the one in which the ink was seen. Take two water bottles or decanters, and in one place a tassel of black fleecy wool, just long enough to touch the bottom of the bottle. The tassel must be tied by a knot at the top, and a small piece of string just hanging over the mouth of the bottle, attached to the knot. Then fill the glass with water. The bottle thus prepared looks at a short distance like a bottle of ink, and you have only to tell your audience that it is so to make them believe it. This, I am afraid, is inculcating in the mind of the reader the principle of falsehood—at least Mrs. Grundy might say so; but a professor of magic is doing nothing but telling “crammers” from the commencement to the conclusion of his entertainment. Perhaps this is the reason why it is called the “black art,” and was the cause of so much persecution in the “good old days,” when all was so pure and so virtuous, as

the lovers of the *beaux temps* would have us believe. But pardon this digression. In the other bottle place a weak solution of the proto-sulphate of iron, about $\frac{1}{2}$ oz. to about a pint and a half of water. Have ready a bit of pyrogallic acid—about two-thirds of a tea-spoonful wrapped in a small piece of blotting-paper that has been blacked with ink. Having completed these arrangements, and asserted that you have on the table a bottle containing water and another ink, you borrow a handkerchief, with which you cover the bottle containing the clear solution, and in doing so you slip into it the pyrogallic acid; and in handing the bottle to one of the audience to hold you give the contents a little imperceptible shaking. You then take another handkerchief and place it over the other bottle, which you hand to a person to hold. You then command the contents of each bottle to change places. Then, in removing the handkerchief from the ink bottle, you clutch the piece of string and quickly pull

out the black wool and throw the handkerchief out of sight, showing the bottle to contain only water. You then ask the person holding the other bottle to remove the covering, when the fluid will be found to be "as black as night." This trick always causes the greatest astonishment.

VIII.-----CARRYING FIRE IN THE HANDS.

In performing this extremely simple trick, the audience must not be informed of what it is your intention to do, but it should be done when there is any delay in your other tricks, or some hitch occurs in getting anything you require, and which happens not to be at hand. For filling up a gap in a performance, it will be found extremely useful. In giving an entertainment of magic, always have on your table two burning candles; they are both useful and ornamental, and serve to dispel any idea of the spectators that you cannot perform your tricks in a full light. You

go to the table, having previously concealed a piece of paper in your hand between the two middle fingers, and place your hands around the flame, saying it is perfectly possible to retain the heat in the hand, and even carry the flame from one candle to another. You then blow out one of the candles, and quickly place your hands round the other, set fire to the paper in your hand, blow out the candle, quickly light the first and then the second, smothering the flame of the paper in your hand. This trick, when well done, causes great astonishment and surprise.

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