SOLOMON'S SEAL.

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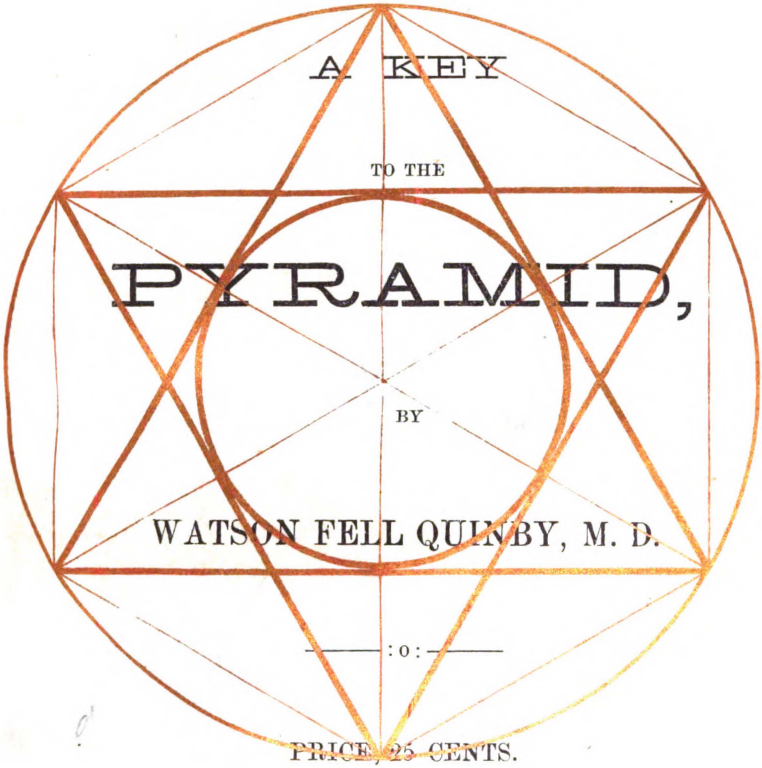

A KEY

TO THE

PYRAMID,

BY

WATSON FELL QUINBY, M. D.

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PRICE, 25 CENTS.

1880:
C. P. JOHNSON, BOOK AND JOB PRINTER,
WILMINGTON, DEL.

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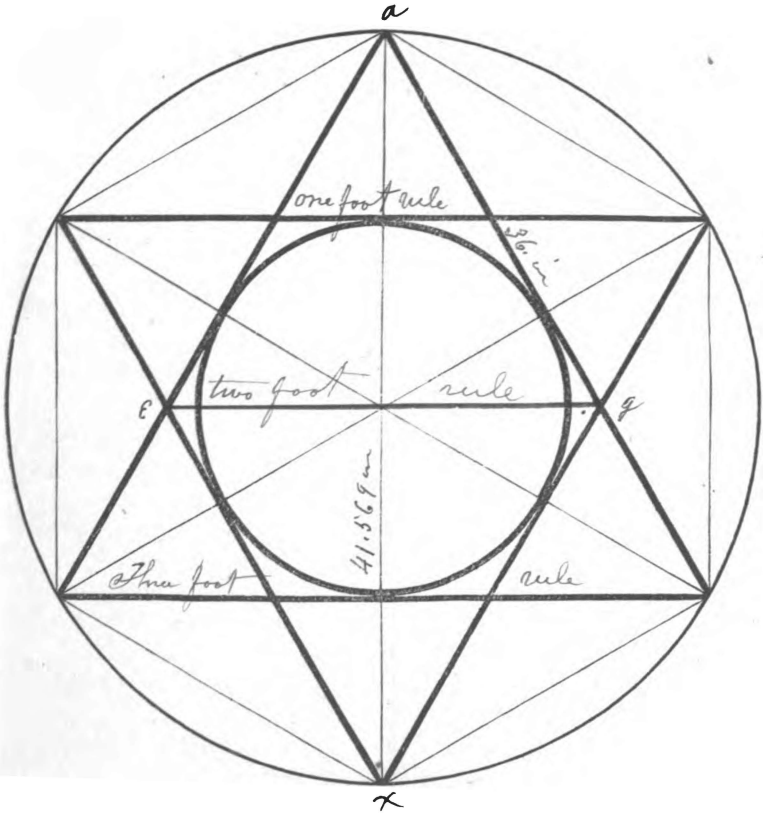

If the cubic foot be taken as the unit of both capacity measure and weight, and the ounce be made = 1.728 cub. in., and = 432 grains, then each grain will equal .004 cub. in., and the cubic inch of water will equal 250 grains.

The following tables will show how readily with this ounce and grain our different tables of weight and measure can be harmonized:

AVOIRDUPOIS.

PO.		OU.		DR.		GRS.
1	=	16	=	256	=	6912
		1	=	16	=	432
				1	=	27

TROY.

PO.		OU.		PENN.		GRS.
1	=	12	=	216	=	5184
		1	=	18	=	432
				1	=	24

APOTHECARIES'.

PO.		OU.		DR.		SCRUP.		GRS.
1	=	12	=	96	=	288	=	5184
		1	=	8	=	24	=	432
				1	=	3	=	54
						1	=	18

GAL.		PTS.		OU.		DR.		MIN.
1	=	8	=	128	=	1024	=	55296
		1	=	16	=	128	=	6912
				1	=	8	=	432
						1	=	54

The drachm avoirdupois might be made fifty-four grains also, and then eight of them would make an ounce.

There is a more natural method still for arranging our tables, in connection with the cubic foot.

Let the cubic inch represent the cubic ounce, and the grain

and weight are derived from those of length, they necessarily differ in each case.

be=.004 cubic inches. There will then be 250 grs. to the fluid ounce of water.

Let the cubic foot also stand for the bushel.

1728 cub. in.=cubic foot.
1728 " " =bushel=a cube 12 in. to the side.
432 " " =one peck.
216 " " =gallon=cube 6 in. to the side.
54 " " =quart.
27 " " =pint=cube 3 in. to the side.
9 " " =gill.
512 " pts.=quart=cube 24 in. to side.
1728 " " =chaldron=cube 36 in. to side.

The cubic foot thus stands for the unit of dry measure, liquid measure, and weight.

These numbers are even without remainders, and of ten measures, including the ounce, seven are cubes.

Now if the pint is made=one pound, then the pound is=27 cubic inches=6750 grs.

The tables will stand thus :

AVOIRDUPOIS.

PO.		OU.		DR.		GRS.
1	=	27	=	270	=	6750
		1	=	10	=	250
				1	=	25

But 24 grains to the pound will subdivide better, viz :

AVOIRDUPOIS.

PO.		OU.		DR.		GRS.
1	=	24	=	240	=	6000
		1	=	10	=	250
				1	=	25

APOTHECARIES'.

PO.		OU.		DR.		SCRUP.		GR.
1	=	24	=	240	=	1200	=	6000
		1	=	10	=	50	=	250
				1	=	5	=	25
						1	=	5

WINE MEASURE.

GAL.		PTS.		OU.		DR.		MIN.
1	=	8	=	216	=	2160	=	54000
		1	=	27	=	270	=	6750
				1	=	10	=	250
						1	=	25

Dry measure will be the same.

The ounce and the inch corresponding gives great simplicity to these tables, and make them superior to the French.

The increase and decrease by tens is not convenient in practice.

For instance, 10 pints make a quart—10 quarts one gallon.

Two pints to the quart, to 4 quarts to the gallon is much better.

DR. QUINBY.

Wilmington, Del., Feb. 23, 1886.

and weight are derived from those of length, they necessarily differ in each case.

WILMINGTON, DEL., August 22, 1889.

In the early days of the world, some one measured the earth, and found its diameter in round numbers to be 41,569,000 feet, or 498,828,000 inches.

This gives a circumference of 130,590,000 feet.

The one millioneth part of the diameter in feet, but calling an inch to the foot, 41,569 inches, appears to have been taken afterwards as a measuring rod. This rod corresponds to the cubit of Karnak.

The cubic of Memphis 20,784 inches was in a similar manner derived from the semi-diameter. The measure of the earth was taken in feet, but these cubits are not evenly divisible in feet and inches. So the Egyptians made use of a digit and thus managed to divide their measures into aliquot parts.

This diameter of the earth, possibly intended for the axis, would naturally seem to be the best and most unchanging line on which to base the measures of length.

But so did not those think who got up our measures of length. From whence then were they taken? They were derived from this same measurement of the earth.

If, in the figure called Solomon's Seal (see pamphlet) and which consists of a circle and two crossed equilateral triangles inscribed therein, you make the diameter of the circle —41,569 inches—cubit of Karnak; then the leg of the inscribed triangles will be equal to exactly 36 inches—one yard. The crossing of the triangles naturally divides these legs into three equal parts. Hence the foot of 12 inches. Here you have the origin of the foot, the inch, the yard, etc., so they have come down to us unchanged. And these measures are reiterated in whatever position you may turn the figure.

At the top you will find the one footrule, in the middle the two foot rule, and at the base the three foot rule.

But most conspicuous is the two footrule, which forms the transverse diameter of the diamond shaped figures a. e, x, g, as the cubit of Karnak forms the long diameter a, x.

The cubit has disappeared from use, but the two foot rule lives on and on an example of the survival of the fittest.

To select the straight diameter of the earth as the best basis of a measure of length was man's wisdom. But to take instead the evenly commensurable leg of the triangle may have been something more.

Neither of these lines of measure are seen in the usual delineations of this diagram, but they are the only two lines which it requires both of the triangles to make. And diagrams were often used to conceal as well reveal.

They are implied lines.

Now here are two conflicting standards of measure, and they lead to different results. For as measures of capacity and weight are derived from those of length, they necessarily differ in each case.

The avoirdupois ounce of 1,732 cub. in. was probably taken from the memphite cubit 1.732, being its twelfth part. 20,784 cub. in. then represents a 12 ounce pound of water.

In this system a cubic inch of water contained 250 grs. 20,784x250=5,196 grs. Now this was the small Roman pound and was divided into 12 oz. of 433 grs. to the ounce.

The grain was equal to .004 cub. in, because 433x.004=1.732 cub. in. Now to be consistent and to make everything harmonize, our measurement of capacity and weight should be derived from our measures of length. The ounce of 1.728 cub. in., which differs from the ounce of 1,732 cub. in. by one grain of .004, is contained in the cubic foot 1000 times. It is also a cube of 1.2 in. to the side.

This grain of .004 cub. in. is evidently the original and correct one; for it suits both systems. It, and it alone, will bring harmony into either of them.

I think it would be well to have a joint English and American commission to make this correction; for then all of our weights and measures would fall into harmony, like the timbers of a building.

The grain of .004 cub. in. gives and ounce of 432 grains; .004÷1.728=432. There are then just 432,000 grs. in a cubic foot of water. This again shows the difference of one grain between the ounce of 432 grains and of 433 grains; the grain itself being the same in both. The ounce of 432 grains is capable of bringing all of our weights and measures into common harmony, as shown in the annexed pamphlet.

In this system the drachm is a cube of .6 in. to the side. The half pint is a cube of 8 ounces; the half gallon is a cube of 64 ounces.

The pint weighs a pound and the gallon weighs eight pounds. A cubic inch of water is also=250 grains. An Avoirdupois gallon weighs ten pounds.

It needs no comment to show that this is a very perfect system, and eminently practicable, and it looks as though it had once been in vogue; but has been twisted off through the influence of the Egyptian cubits.

The tetractys appears to have been divided to preserve a knowledge of this measurement of the Earth, and also of the origin of metrology.

From ancient times the circumference of the circle has been divided in to 360 degree, or 21,600 minutes, or 1,296,000 seconds The diameter of the circle is divided into 412,529 seconds Here we trace the origin of the silver dollar, which weighs 412.5 grains, or the one thousandth part of the diameter of the circle of degrees.

Some have traced the weight of the gold dollar to the first three figures of the circumference of the circle, which when doubled is=258.

But the quantity of gold in our coins is derived from the number of day parts in the diameter of the Earth's orbit,

116.26. That is the number of the grains of gold in a half eagle. This should be considered fixed and unchangeable.

If the circumference of a circle, whose diameter is unity, be divided into 21,600 parts or minutes, then each part will be equal to .000145445.

This number multiplied by the diameter of any circle and 21,600 will give the circumference of the circle. Also .00003636125 multiplied by the square of the diameter and 21,600, will give the area of the circle. The time circle of 24 hours may have been taken from the two foot rule; the inches answering to the hours.

When the inch is divided into tenths, each tenth answers to a degree of the circle, as there are 360 of them in a yard. If the inch is divided into twelfths, each division answers to a grain of the ounce, as there 432 of them in one yard. When it is said that a grain of water is equal to .004 cub. in., it means that if a cubic inch be divided into 1,000 equal parts, it takes 4 of them to make a grain. This makes the cub. in. consist of 250 grains.

As it takes 4 of these parts to make a grain, they are the real basis of our system, and they might for a name be called monas. They are little cubes of one-tenth of an inch to the side.

Eight of them would be a cube two tenths to the side, and equal to two grains.

The next cube would be 64 of them, four-tenths to the side and equal 16 grains.

The next cube is one in practical use called the drachm, It is six-tenths of an inch to the side, and contains 216 monas and weighs 54 grains. The next cube would be eight-tenths to the side, 512 monas, equal to 128 grains.

The next is the cubic inch containing 1,000 monas and 250 grains. Then comes the cubic ounce, twelve-tenths to the side, 1,728 monas and 432 grains.

Finally a cubic foot contains 1,728,000 monas, 432,000 grains and 1,000 ounces. This is going upward. On going downward, a mona might be divided into 1,000 mites and so on. Even then a mite would have a hundredth of an inch to its side. They might be found useful too. Instead of saying one-eighth of a grain, say 500 mites; instead of the hundredth of a grain, say 40 mites and so on. There would be a million of the little cubes in a cubic inch. It will be observed that in carrying out these tables the binary, the octory, the decimal and duodecimal acales have been all used; a mixture of them appearing to be better than either singly. For though the decimal division does well among small measures, when you come to larger ones the jumps are too big and you want halves, quarters and eighths.

The two foot rule and the cubic of Karnak, form a cross in the figure, which may have a meaning.

What has been said refers chiefly to liquid measures and weights. But in the English tables is incorporated a system of dry measures.

Nevertheless, the wet and dry measures are definitely proportioned to each other. This proportion is founded on the different volumes of a given weight of water and wheat. If a volume of a certain weight of water is 4, the volume of an equal weight of wheat will be 5. So if a pound of water—a pint occupies 27.648 cub. in; a pound of wheat will occupy 34.56 cub. in. This implies also that, as the wet grain is = .004 cub. in., there is a dry grain = .005 cub. in.

The dry tables will run thus:

	cub. in.,	dry grs.
one gill =	8.64 =	1728
one pint = =	34.56 = =	6912
one quart =	69.12 = =	13824
one gallon = =	276.48 =	55296
one peck =	552.96 = =	110592
one bushel = =	2211.84 =	442368

Now every one of these measures has the same number of dry grains in it as the corresponding liquid measure has of wet grains in it. If a dry gill has 1728 dry grains in it, a wet gill has 1728 wet grains; if a dry pint contains 6912 grains of .005 cub. in., a wet pint contains 6912 grains of .004 cub. in.

And as these two grs. weigh the same, the corresponding wet and dry measures weigh the same. A pint weighs a pound, a quart two pounds, and a gallon eight pounds.

Also a dry gallon will just hold 10 liquid pints = 10 pounds of water; and a bushel will hold 10 liquid gallons = to 80 pounds of water.

A bushel of wheat will weigh 64 pounds.

A cubic inch contains 200 dry grs.

An ounce contains 345.6 dry grs.

A cubic foot contains 345600 dry grs.

As a wet grain is equal 4 monas, a dry grain is equal 5 monas.

There are the same number of grs. in a gill, as there *are* cubic inches in a cubic foot.

In regard to the pounds, 12 Troy pounds of 5760 grains are equal to 10 of these Avoirdupois pounds of 6912 grs.

The pound of 5184 grs. is to the pound of 6912 grs., as 12 to 16.

In the foregoing tables, the weight is constant, while volumes are various.

But there has been a system in use where the volumes were constant and the weights varied.

This is shown in the Troy pound of 5760 grs. and the Avoirdupois of 7200 grs. 5760x.005 = 28.800 cub. in., and 7200x .004 = 28.800 cub. in.

So the Troy pound was originally a wheat pound.

DR. QUINBY.

SOLOMON'S SEAL.

A KEY TO THE PYRAMID,

BY WATSON FELL QUINBY, M. D.

The figure here shown originated in the early days of civilized man. In the old legends of India it is styled the emblem of Vishnu and Prithevi. I suspect that Vishnu means Fish-Nuh, Noah the fish, in allusion to his sojourn in the ark.

The ark was built in the mountains north of India, and Nuh (Noah) is called in the figurative language of that country "Mach, hodar-Nath, or the Sovereign Prince in the belly of the fish." (Wilford.)

The same meaning is implied in the story of the fish Avatara. Vishnu is also pictured with a man's head and a fish's tail.

The Institutes of Manu, from which all the ancient religions and codes of law were derived, I believe, were written by Noah; Manu being a contraction for Maha-Nuh, the (Great Noah).

Again, Vaishnavas (Vaish-Nauas) is a title applied to the worshippers of Vishnu.

This emblem was emblazoned on the Shield of David, and engraved on the Seal of Solomon; hence it is frequently called Solomon's Seal, though dating back far beyond his time.

The heavy lines indicate the usual form; the fine lines I have added for illustration.

One legend is that the central circle represents Adam's apple, and that the crossed triangles indicate the remedy for eating it.

But, whatever allegorical meanings may be attached to it, it seems to have been taken for the basis of Metrology.

The figure consists of two reversed equilateral triangles inscribed in a circle, the centre forming a hexagon, and a smaller circle inscribed in the hexagon. The diameter of the large circle is naturally divided into four equal parts, each equal to the radius of the small circle.

In what follows, when speaking of areas, square inches are meant; linear measure when speaking of lines, and cubic inches when referring to measures of capacity.

Now, if we take the radius of the small circle as unity, say:

One inch,	= 1.000—a
Then the diameter	= 2.000—b
The circumference	= 6.283—c
The area	= 3.141—d
Height of large triangle	= 3.000—e
Perimeter of	=10.392—f
Area of	= 5.196—g
Perimeter of both triangles	=20.784—h
Leg. of triangle	= 3.464—k
Perimeter of small hexagon	= 6.928—l
Area of	= 3.464—n
Perimeter of large hexagon	=12.000—o
Area of	=10.392—p
Perimeter of 12 sided figure	—13.856—q
Area of	= 6.928—r
Circumference of large circle	=12.566—t
Diameter of	= 4.000—v

Each of the large equilateral triangles is divided by the fine lines into six small right-angled triangles. By means of these triangles the areas of any of the angular forms of the emblem can be readily computed.

The area of each of these triangles=.866—x.

This number, which is the unit of the diagram, is also the unit of ancient measures, viz:

.866=ancient degit	=x
3.464=handbreadth	=k
10.392=one span	=f
20.784=Cubit of Memphis	=h
41.568=Cubit of Karnak	=z

13.856=Royal foot of Karnak=q
1.000=English inch —a
12.000=English foot =o

Many important geometrical problems can be demonstrated from this figure. It is remarkable for equal areas and proportionate ratios.

6.2832	:	10.392	: :	3.1416	:	5.196
6.928	:	6.2832	: :	3.464	:	3.1416
6.928	:	10.392	: :	3.464	:	5.196
3	:	4	: :	10.392	:	13.856
3	:	4	: :	5.196	:	6.928
3	:	2	: :	10 392	:	6.928
3	:	2	: :	5.196	:	3.464
3	:	1	: :	10.392	:	3.464
2	:	1	: :	6.2832	:	3.1416
2	:	1	: :	10.392	:	5.196
2	:	1	: :	6.928	:	3.464
2	:	1	: :	13.856	:	6.928

3 : 3.464 : : 3.464 : 4. That is a mean proportional between the height of the triangle and the diameter of the large circle.

The large hexagon is divided by the fine lines into three diamond-shaped figures, each of which is equal to 3.464 inches.

The area of the two parallelograms, one on either side of the diameter, are each equal to 3.464 inches.

The combined areas of the six small equilatoral triangles are equal to the area of the small hexagon=3.464,

The periphery of each of these triangles is=3.464.

The small triangles may be typical of the days of the week, and the small hexagon ef the Sabbath.

The angles included by the points of the figure=360 deg.

The number 3.464 is a little short of the square root of 12.

Allowing for this, the square of the cubit of Memphis 20.784=432; a number much used in old calculations.

4+3+2=9=square feet in a square yard.

432÷48=9=square feet in a square yard.
432×3=1296=square inches in a square yard.
432×4=1728=cubic inches in a cubic foot.
432×108=46656=cubic inches in a cubic yard.
432÷3=144=square inch in square foot.
432÷16=27=cubic feet in cubic yard.
432÷12=36=linear inches in one yard.
432÷36=12= " " " " foot.

The number .866 seems to stand in the same relation to the hexagons of this figure as .785 does to the circles.

The diameter of the small hexagon is 2, and 2×2×.866=3.464.

THE HEBREW TABERNACLE.

John Taylor, from the measure of the cubit of Karnak, now in the British Museum, makes it=3.456 English feet. The true length of the ancient cubit, as taken from the diagram, is 3.464.

When thus corrected the measures of the Tabernacle in English feet are:

Mercy seat in pure gold—in length=8.660—numbers in x. In breadth 5.196—g.

Table of the shew bread, in length=6.928—l. In breadth=3.464—n. In height=5.196—g.

Five curtains coupled together=69.28—l.

Eleven curtains of goats' hair, in breadth=13.85—q. Each board in length=34.64—k. In breadth=5.196—g.

Eight boards for the four corners=41.56—z.

Altar of Burnt Offering in length=17.32=34.64÷2. In breadth=17.32.

Breast plate of Judgment, in length=10.39—p. In breadth=10.39—p.

Altar of Incense, in length=3.464—k. In breadth=3.464—k. In height 6.928—l.

SOLOMON'S TEMPLE,

In length was=207.84—h. In breadth=103.92—p. In height=103.92—p.

The porch was in length=69.28—l. In breadth=34.64—k.

Oracle was in length=69.28—l. In breadth=69.28—l. In height=69.28—l.

Cherubim each in height=34.64—k.

Altar of Brass, in length was=69 28—l. In breadth=69.28. In height=34.64—k.

Pillars in compass, each=41.56—z.

SOLOMON'S PALACE.

John Taylor gives the measures of the King's house in the cubit of Memphis.

In length it was=173.2=numbers in 86.6×2. In breadth=86.2=x. In height=51 96=g.

The porch of pillars in length was=86.6=x. In breadth=51.96=g.

Foundation stones=13.856=q.

Molten sea in height was=8.66=x.

In compass=51.96=g

Bases of brass, each, in length=6.928=l. In breadth=6.928=l. In height=5.196=g.

The lavers of brass each=6.928=r.

THE MEASURES IN EZEKIEL

Represent the cubit of Karnak in English feet.

One cubit=3.464=k. One and a half cubits=5.196=g. Two cubits=6.928=l. Three cubits=10.392=p. Four cubits=13.856=q, and so on.

It is quite evident from the foregoing examples that the measures derived from this diagram were the guide to Solomon in building. And

it is quite important to remember that he was instructed by David, his father, in regard to these patterns and measures.

"All this, said David, the Lord made me to understand in writing by his hand upon me, even all the works of this pattern."

The patterns and measures are consequently superhuman. And so I suppose this diagram and its attendant science may have been revealed to man in the early days of Adam's race

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These numbers correspond with our English measures of capacity. By moving the decimal point

English gill	=	8.66	cubic	inches	=	x.
" pint	=	34.64	"	"	=	n.
" quart	=	69.28	"	"	=	r.

The Roman measures must have been derived from the same source.

Roman quartarius	=	8.66	=	x.
" Sextarius	=	34.66	=	n.

And the Greek also—

Grecian Xestes	=	34.66	=	n.
" Chœnix	=	69.32	=	r.

Grecian Cochlearion=.288=half the area of one of the small equilateral triangles.

Grecian Cyathus=2.88.

The rest of the English measures are simple multiples of these quantities.

The Greeks and Romans, though starting right, varied much more from the standards.

Professor Greaves, the Oxford Astronomer, says: "The last and best way to discover the true weight of the Roman pound is by the Congius Romanus, whereof, by a special Providence, as Paetus and Villalpandus have well observed, the original standard of Vespasian is still extant at Rome."

From a careful measurement of this vessel Professor Greaves found the weight of the Roman pound to be 5196 grs., of 433 grs, to the ounce.

433 grs. is the weight of the ounce of this diagram, being $866 \div 2$ and $5196 = g$. This was the small pound of 12 ounces. But there was a larger pound of 16 ounces $= 433 \times 16 = 6928$ grs. $= r =$ area of 12 sided figure $\times$ by 1000.

The perimeter of the 12 sided figure $= 13.856 =$ foot of the Karnak cubit.

The perimeter of large hexagon is $= 12 =$ English foot.

The circumference of large circle $= 12.566 =$ foot of sacred cubit; a measure used chiefly by Hebrews.

I give this last measure only from analogy. It is considered by Professor Smyth to be $= 25$ inches; though by others slightly more.

The cubit of the Talmudists was 25.92 inches.

It may have been then that the sacred cubit was 25.98 inches $=$ one half of $g = 8.66 \times 3$.

In that case the periphery of the twelve sided figure 13.856 would represent Ezekiel's reed in English feet, allowing one inch to the foot.

The quadrature of the circle was a famous problem of ancient times.

It might be expected then that this figure would contain some of the elements thereof.

The circumference of a circle one inch in diameter is 3.1416; its area is .7854; and the side of a square of equal area is .88623.

By multiplying the diameter of any circle by 3.1416 the product will be the circumference.

By multiplying the square of the diameter by .7854 it will give the area; and by multiplying the diameter by .88623 it will give the side of a square of equal area.

The side of a square of equal area with the four inch circle then is 3.54492.

The circumference of any circle divided by this number will give the side of the square of equal area.

Thus a circle 116.26 in diameter, and the circumference 365.2440–96143016÷3.54492=103.0330998.

The perimeter of the large hexagon is=12=4×3. The circumference of the large circle is, therefore, more than 3 times the diameter; hence—12 : 12.5664578064 : : 3 : 3.1416144516 the true π number.

Also, 4 : 3.54492 : : 3.54492 : 3.1416144516.

That is, the diameter of a circle is to the side of a square of equal area, as the side of the square is to one-fourth of the circumference.

I think that the circumference of the small circle 6.2832289032, expresses the original number of inches in an English mile, when multiplied by 10.000=62832.289032=5236.024086 feet, because, taking the circumference of the earth at 130900602.15 feet there are just 25000 miles in the circumference. 22

That 130900602.15 feet is the correct number, I judge, because it makes 1570807225.8 inches; which is one-half of 31416144516=the figures in π, and because it gives just 500,000,000 inches for the diameter of the earth.

Tue great Pyramid of Egypt is an embodiment of the science contained in this diagram.

The shape of the triangle may have suggested the form of the Pyramid, and the small hexagon represents the King's chamber, and the enclosed circle the coffer contained therein.

The lines of the diagram are suggestive of the passage ways of that great monument.

Professor Greaves, who is famous for his exact measurements, gives the size of the square entrance passages in the Great Pyramid as 3.463 English feet; which is the length of the cubit of Karnak expressed in English feet.

The English foot is the only measure that will express the cubit of Karnak, and the size of these entrance passages in the diagram number of 3.464.

It is, therefore, a most ancient measure, preserved in a most wonderful manner by the English people.

It is possible that the inch used by Professor Greaves, in 1637, was slightly larger than the inch of the present day, as there was a change made in some of the standards during the eighteenth century.

It may be only incidental, but the level of the King's chamber was found, by Col. Vyse and Mr. Perring, to be 138 feet 9 inches above the base of the Pyramid; and the base of the Pyramid was found to be 138 feet 9 inches above high Nile. And Col. Coutelle made the whole depth of the well 207.75 English feet. These numbers correspond to 13.85=q, and 20.78=h.

The cubit of Karnak is a stick of larch wood, found recently in Egypt, and now preserved in the British Museum.

It measures 41.47 English inches, whereas the cubit of the diagram is 41.56 inches. It is not surprising that a stick of wood more than a yard long should have shrunk one tenth of an inch in length in 3,000 years.

The stone of the Pyramid has not shrunk, however, and it gives it to the one thousandth of an inch.

The unit of the Pyramid measures of capacity was the ounce of the diagram=1.732 cubic inches, the Apothecary's ounce of the present day=in square inches one-third of g=one-fourth of r=one-sixth of p =area of an equilateral triangle whose side=2 and whose height is expressed in the same numbers as its area.

The coffer in the King's chamber contains 41568 of these ounces= the numbers of the Karnak cubit.

It will contain 3464 pounds of water of 5196 grs.=g of 12 ounces to the pound=17998944 grs.; or 2598 pounds=one half of g, of 6928 grs.=r, of 16 ounces to the pound. $41568 \times 1.732 = 71995$; and 20.784=cubic inches in a pound of water, multiplied by 3464=71995= cubic inches in coffer.

The number 3464 is not exactly correct, but it is as near as the square root of 12 can be expressed in whole numbers. I, therefore, suppose that the true number of grains contained in the coffer is 18,000,000, as estimated by John Taylor.

The weight of a cubic inch of water in this estimate is 250 grs., because $1.732 \times 250 = 433 =$ the ounce of the diagram.

$18000000 \div 250 = 72000$; and that this is the content of the coffer in cubic inches, I am justified in supposing by Professor *Piazzi* Smyth's middle measures, $78.08 \times 34.41 \times 26.80$ inches $= 72004$, a very close measurement.

These grains were doubtless large grains of wheat.

The coffer contains then 2078.4 pints=h, and 1039.2 quarts=*f*.

Now, though the pound 5196 grs. is Roman, and the pound of 6928 grs. is Greek, yet the pints and quarts are English exactly.

Thus the Pyramid coffer serves as a link to connect the weights and measures of all nations.

$3464 \times 12 = 41568$, and $2598 \times 16 = 41568$ which is the content of the coffer in Apothecary ounces of water.

The weight of a cubic inch of water by the Pyramid and the diagram is 250 grs.; whereas our English tables give it as 252.4. I suppose the grains of wheat used by the ancients were larger than those of England.

Again, a vessel which will contain 3464 pounds of water will hold 3141.6 pounds of oil, of sp. gravity 90.69=area of small circle multiplied by 1000.

Thus the diagram, by means of areas, illustrates the relative weights of water and oil, and also the weight in grains of pounds and ounces, and the cubic content of pints and quarts; and shows also the measures of the most ancient times to be in accord with those of England.

If the large triangle in the diagram represented the right section of a Pyramid, the cubic content would be just twelve inches; and if these inches were ounces it would weigh one pound.

The cube of the base of the triangle is 41.568 inches, or the numbers in the Karnak cubit and is a miniature of the coffer in the great

Pyramid, and is contained in that coffer 1732 times. The miniature Pyramid is contained in the coffer 6000 times.

The cubic content of a sphere of the diameter of the small circle would be 4.1568 nearly, or the same figures as in the cubic of the base of the triangle.

The cubit of Karnak 41.568 divided into 3141.6144516, gives the weight of a cubic foot of water in troy pounds very nearly=75.57.

1.732 cubic inches=one ounce of water×12=20.784 cubic inches=one pound of water=number of linear inches in the cubit of Memphis.

The cube of the 12 sided figure=6.928×3=20.784 cubic inches=one pound of water.

The cube of the small hexagon=3.464×2=6.928=one quart when multiplied by 10.

The large diamond-shaped figure, formed by the intersection of the large triangles is equal in area to 4.618; and the King's chamber in the great Pyramid is=461.8 cubic yards, provided that its length is 34 64 feet, its breadth=17.32 feet, and its height 20.78 feet.

The content of the coffer in ounces, 41568×3÷10=12470.4=cubic feet in King's chamber.

The area of the four inch circle is to the area of a one inch circle as 16 to 1, which are the relative values of silver and gold.

I have said that the form of the Pyramid may have been suggested by the shape of the triangle.

But the angles of a right section of the Pyramid do not conform to those of the triangle.

The peculiar form of the Pyramid may have been adopted to embody other truths.

In drafting the Pyramid the designers described a circle, and inscribed therein a triangle, two legs of which were each made equal to one-fourth of the circumference of the circle.

This gave the true form of a right section of the great Pyramid.

These two legs then were equal to one-half of the circumference.

If another similar triangle be inscribed in the same circle so as to form crossed triangles, the four equal legs will be equal to the circumference of the circle.

The measured heights of the four sloping sides of the great Pyramid will also be equal to the circumference of the circle.

This suggests a hemisphere.

In a four inch circle these legs will each be equal to 3.1416.

It is a property of that triangle that its height is to twice its base, as the diameter is to the circumference of a circle.

Now the sloping height of the Pyramid, as given by Professor Piazzi Smyth, is 7391.5 inches; which would make a circle of 29,566 inches as the one in which the Pyramid was laid down.

I do not know what properties that number may have.

The hemisphere which it represents is very close to the 300,000,000,000,000th of the size of the earth.

Had the number been 29541, it would have indicated an exact knowledge of the size of the earth; for .29541 is one-third of .88623.

The circumference of the earth in inches 1,570,807,225.8÷3.54492= 443,115,000=the side of a square of a circle encompassing the Earth.

29,541 is the 15,000th of that side, and the sloping height of the Pyramid, or one-fourth of the number, would have been the 60,000th of that side.

8333, which is the side of the square of a circle 29,541 in circumference, is the 60,000th of the diameter of the Earth, 60,000÷500,000,000=8333.

We do not know what the top of the Pyramid was like; but if four inches of the point were cut off, and a small globe placed on top, it would give the required side without destroying the Π shape of the monument.

Again—3.54492 : 12.5664 : : 103.033 : 365.242.

That is, the side of the square of a circle is to its circumference, as 103.033 is to the number of days in a year.

Both of these last numbers 103.033 and 365.242 are well marked on and built into the Pyramid, as is also the number 116.26, which is the diameter of the circle 365.242.

The architects of this ancient building then, which dates back beyond the time of authentic history, both squared the circle and cubed the Earth.

The theories then that make exact science a creation of recent date are of no value.

In the face of this evidence, also, it is useless to say that English weights and measures had no scientific origin.

For it is here clearly shown that they are based on a true Geometry.

They have also proved by long experience to be admirably adapted to the circumstances and conditions under which we live.

There is, therefore, no need to exchange them for the new Metric system, a project which is now being urged by many persons whose zeal and persistence is difficult to account for when the relative merits of the two systems are fairly considered.

The Metre was derived from a *single* measurement of an arc of a meridian, instead of from many, as it should have been, and does not conform to later measurements.

The basis of the system, then, may be erroneous.

Again, the Metric system is decimal, and nature cannot be made to harmonize with decimal weights and mensurations.

It is frequently stated that the American coinage is decimal; but if the ten cent piece be eliminated from it, there is nothing decimal about it; five being a much better divisional number.

It is true there is the hypothetical mill, but none of them are ever coined.

We shall always divide things into halves and quarters.

The crossed triangles of the diagram may be considered to represent a crucifix enclosing the Ark of the Covenant.

For it has been shown by Professor Piazzi Smyth that the Ark of the Covenant was equal in cubical content to the Pyramid coffer.

The Ark of the Covenant contained the law. The emblem is, therefore, Messianic; which might have been surmised from its being on the Shield of David and the Seal of Solomon.

It may be only a coincidence, but the entrance passage of the Pyramid, commencing at the ruled lines, down to the ascending gallery, measures 628 inches, and that the circumference of the small circle is 6.2832; and that the ascending passage, together with the grand gallery, measure 3423 inches, or lacking 41 inches of 3464.

41.5 is the breadth of the ante-chamber=the cubit of Karnak.

3423+628.32=4051.32—1881 the length of the grand gallery= 2170.32.

Professor Smyth gives the length of the entrance passages, from the ruled lines to the commencement of the grand gallery on one side, as 2170.14, and on the other as 2170.50.

The average of these measures is 2170.32.

The leg of an equilateral triangle inscribed in a one inch-circle is= .866.

By multiplying this number .866 by the diameter of any circle it will give the leg of such a triangle inscribed in the circle.

The leg of a pyramid triangle inscribed in a one-inch circle is= .7854.

By multiplying this number by the diameter of any circle it will give the leg of a pyramid triangle inscribed in such a circle.

Thus take a circle in diameter 11626×.7854=9131=base side of Pyramid.

Hence, 9131 is the leg of a pyramid triangle inscribed in a circle 11626 in diameter, because 9131×4=36524=circumference of the circle.

The large diamond-shaped figure also represents the square base of the Pyramid. For if it were made into a square each of the sides would be=2.3092 inches. Now if two of these sides be considered as legs of a pyramid triangle, the circle in which it would be inscribed would have a diameter of 2.94 inches.

And as the circle, which would contain the pyramid triangle, of which the base side length of the Pyramid is the leg, has a diameter of 11626 inches, hence 2.94 : 2.3092 : : 11626 : 9131=the base side length in English inches.

This emblem is widely spread, and may be seen on Chinese tea chests, and is common on pottery and glassware. But what is remarkable it is sculptured on the ruins of Central America.

This indicates that the builders of those ancient cities were an enlightened race and of a lineage and civilization akin to our own.

It shows that the sons of Noah once dominated in Eastern Asia and Western America.

It is a pertinent question as to what has become of their descendants. There is but one plausible answer to this question.

They mingled with the previously existing red race of men, whose instincts were entirely for a forest life, and who never builded with stone.

In the course of many generations of this mingling of blood, the white race became absorbed in the red.

They then left their cities and went back to their forest life.

This is the true history of the ancient world. Shall it be ours?

The whole emblem represents the six pointed star—the Star of the East.