

a jointed fishing rod, and supposing the cane, or a length of the rod, is just three feet, set it in the ground, vertically, and if the sun shines, it will cast a shadow, now with a pocket-square, you measure the length of the shadow, and find it, say two feet. Here then we have a right angle, of two feet and three feet. Now you take the vertical beam of the tree to the end of its shadow, and we will suppose it to be twenty feet. The problem is, to find the height of the tree. If a cane three feet high casts a shadow of two feet, how high must a tree be to cast the shadow of twenty feet? Or, in other words, if two gives three, how much will twenty give? By the same rule, you will find the answer to be thirty feet. Thus, by similar triangles, we have 2:3::20:X - 30 feet - the tree's height.

There is another method which has the advantage of being still more simple and convenient, by which the height of a tree may really be determined by its shadow. Any person may easily measure the exact height of a tree when the sun shines, or during bright moonlight by measuring the shadow on the ground, three feet apart, and then placing in the ground, on the line nearest the sun, a pebble or other light stand exactly three feet out of the soil. When the end of the shadow of the stick exactly touches the pebble, then also the shadow of the tree will be exactly in length the same measurement as the distance between you and the pebble. In such a case, the sun will be at an exact angle of 45°, or just midway between the sun and the tree.

But the reader may now ask: Suppose the sun doesn't shine what then? Why, then set up the cane or staff, say eighteen feet from the base of the tree. Now place your head on the ground, with the cane between you and the tree, moving nearer to or farther from it until you can just see the top of the tree over the top of the cane, then place a pebble or mark on the ground at the point where you obtain this view. The cane is now set feet high, the distance from the pebble to it will be two feet, and from the pebble to the base of the tree, and hence by the same rule, we find the height of the tree to be twenty feet, as explained above.

The following method, with a little practice, will enable any person to measure the height of trees or other objects with approximate accuracy when the sun is not shining, and the method has given reference to the simplest and quickest way to measure heights, though the results are not absolutely correct.

First make a mark on the tree or other object, say six feet from the ground, or place a pole six feet upright against it. Then walk away to such a distance that the breadth of the hand, held out at full arm's length, will just cover the six feet. Mark with the eye a point on the tree at the upper end of the six feet, and move the hand upwards and another breadth, and thus proceed until the whole height is measured. It may now be held up by the eye for an assistant to stand at the foot of the tree, and if with his hat on he will be at feet high, then you may commence to begin with, instead of the rod. If it will stand at some distance from the tree in making these measurements or otherwise the upper-measured persons will be larger than the lower on account of the "long leg" or on the imaginary triangle. If the distance be too great for the breadth of the hand, one or two steps only may be necessary to shorten the pole. Or if the pole will be used, it separates the measurements into inches may be made to indicate the portion measured, and the whole complicated affair rendered banks of lines or other projections, at the foot of a wooden staff, or the latter may be used for the want of some means of measurement as those described above. If the water of a lake flows in winter, the level is the best and easiest base-line for the measurement of any of its shores. A mark, and the tops of trees which grow upon them.

COPPER RESERVES.

Norway even now uses corn for the salt. The skins of animals were the earliest forms of money. In India and in the place currency, called "Chin" pieces of silk.

Sheep and oxen among the old Romans took the place of money. Oxen form the principal medium among the Zulus and Kaffirs. Tin is the standard of value at the great fair at Nishni Novgorod.

In the retired districts of New Guinea, female slaves form the standard of value. Among some of the native Australian greenstones (Jules) and red ochre form the currency.

Chocolate is still used in the interior of South America for currency, as are cowshells and eggs. Iron spikes, six being a drachm or handful, are still employed in certain parts of Central Africa.

(Insects and tobacco receipts were legal tender in coin and beans and coconuts were also employed. The small, hard shell, known as the cowrie, is still used in India, the Indian Islands, and Africa, in the place of subsidiary coin.

According to Prescott, the money of the Aztecs and the nations in kin, consisted of quills filled with gold dust and bags of chocolate grains.

Before the introduction of colonial money into Greece, shekels or splices of iron and copper were a currency, six being a drachm or handful. The Carthaginians had better money than Barbara, during his fight with Milan in 1188, saved his leather socks, and so did John the Good of France.

Montezuma as being found in certain parts of Africa. It is an ivory sign, and is used as a petty sign of value without a unit.

APHORISMS.

It is surely a most in vain of another's patience who has none of his own.

—Lafayette. To endeavor to work upon the vulgar with fine sense is like attempting to blow hawks with rattles. It is a self-sufficiency naturally proceed from insensibility of the world, and ignorance of mankind.

—Aristotle. One of the greatest of all mental pleasures is to have our thoughts often directed, even exercised into with sympathy.

—Landon. Never be discouraged by trifles. If a spider breaks his thread twenty times he will mend it as many. Perseverance and patience will accomplish wonders.

—Hillier. Our desires always increase with our possessions. The knowledge that something is yours does not increase our enjoyment of the good before us.

—Johnson.

QUEER TRADES IN PARIS.

There are many queer trades in Paris. One of the oddest is that of "poultry of the leg." The turkey has been only to the poultry dealer fraternity and is a highly valued number of the community. The turkey is so valuable that it enables the trader to palm off a bird of patriarchal age, with a certain vague notion of its value, for a sixty francs color. Old turkeys too, have long claws and horny looking beaks, which the ignorant average of the people see. The artist goes round to his customers three or four times a week, to see the feet of the birds with his solution (which was sold as a trade secret to the present owner for £10) carefully pass the nails and beak, and there you have a turkey that will fetch half as much again. It is only during the desperate struggle with the anarchist that ensue at dinner time that you realize how fraudulent are its pretensions.

"Cat killers" are not numerous, but the few who monopolize the trade make a great deal of money out of it. They walk through Paris about midnight with a sack and a couple of ferrets, and when they catch sight of a stray puss go the dogs, who seldom return to their master without their prize. Their skins are sold to furriers and their flesh to the keepers of eating houses in the suburbs, where "rabbit soup" is a favorite dish. But for sturgeon, rabbit and like to be satisfied that a bunny has been sacrificed, so the workmen who have to eat rabbit require the rabbit's head as a proof of the bona fides of the dish. This would puzzle an ordinary individual to see, but the killer is a genius and a Frenchman, and is not so easily disposed of.

He is a Frenchman and has an arrangement with the cooks in the neighborhood to let him have the heads of the chickens and rabbits required for his penny or two daily. The ingenious method he is adopting is to cut his customers two or three centimes minus the tails, with each rabbit's head, and one more dainty dish to add to the Parisian menu, and so to sell to him the tail of the feline race. The French cook has to give a certain number of cats of any city in the world in proportion to its size. Whole selections of cats are sent to the feline vicinity of the markets, where they feed on broken victuals and make themselves useful to the Parisian market by their killing to the well filled purse of the exterminator of the feline race. The French cook has to give a certain number of cats of any city in the world in proportion to its size. Whole selections of cats are sent to the feline vicinity of the markets, where they feed on broken victuals and make themselves useful to the Parisian market by their killing to the well filled purse of the exterminator of the feline race.

At the Italian Centennial exhibition there has been a rapid increase in the number of cats of any city in the world in proportion to its size. Whole selections of cats are sent to the feline vicinity of the markets, where they feed on broken victuals and make themselves useful to the Parisian market by their killing to the well filled purse of the exterminator of the feline race.

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BARRIE.

The earliest Greek money was in the form of silver, round pieces of metal stamped with the given value.

According to Adam Smith it was not very long ago that cattle were used as subsidiary coin in Scotland. Whole lots are used by the Chinese, red feathers by some of the South Sea Islanders, and shells in Abyssinia.

Old Chinese gold coins were in the form of cubes, while the most common shape of all is that of shell. The money of the Indians, and was secured by the collectors as a convenient token. The strongest coin of all, though was the metal money spoken of by the

1850. In the British West Indies, pigs, a silver head or a piece of gum had all a purchasing power, while in the African coast, axes, are accepted currency.

In 1652, during the reign, several kinds of paper, printed bank-issued for change at a fixed price, and were a legal tender for some time.

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