

Correspondence.

Rattlesnakes and Prairie Dogs.

To the Editor of the Scientific American:

It is often remarked that owls, prairie dogs, and rattlesnakes live amicably together in one hole, which the prairie dog is supposed to have prepared. In order to test the question of the peaceful relations between the dog and snake, an old army officer tells me that he once turned a rattler loose in his room. Opening the cage of the prairie dog, the little fellow at once came out and ran back and forth immediately in front of the reptile, which was coiled with its head poised ready to strike the dog. The snake followed the dog's movements with its head. The dog's eyes were constantly directed toward the snake's eyes. After a time, the movement of the snake's head from side to side grew slower. It seemed to have become confused or dizzy from the continued exercise. With a quick spring the dog seized the snake's neck close to the head and bit it viciously. He continued biting the snake along the spinal cord from neck to tail, the first bite having practically ended the snake's life. When the dead reptile was swung to and fro from the bars of the dog's cage, the animal tried to ward it off with his fore feet. These actions convinced the officer that the dog appreciated the dangerous qualities of the snake. This observer also thought that snakes did not strike adult dogs when living with them because the holes were too small to maneuver in.

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History of Table Utensils.

How many persons there are who do not know, or at least know but vaguely, that the manner of taking meals has not always been the same as it is at the present time, and that most of our table utensils are of quite recent origin. We shall briefly discuss this subject in speaking successively of all the objects that in our day constitute the equipment of a well-served table.

Let us, in the first place, speak of the table. Every one knows that the Romans took their meals in lying upon very low couches that somewhat resembled what we call a lounge. When we say that they lay down, our statement is not exactly accurate, since cushions permitted them to change position frequently, for it would have been very difficult for them to abandon themselves to the pleasures of the table in constantly occupying a horizontal position.

When Gaul was conquered by the Romans, the latter introduced their habits into the provinces subdued by them, and it was not till about the time of Charlemagne that the guests at a repast seated themselves upon cushions around a stand in order to take their meals. At the homes of the great, these cushions and stands were relatively elegant as regards decoration. The table made its appearance later on, in the middle ages, accompanied with benches provided with backs, which were placed all around the board. At first, the table was not covered with a cloth, and napkins likewise were unknown. The first that mention is made of were manufactured at Reims, and offered to Charles VII. at the time that he was crowned there, thanks to Joan of Arc. They became quite common under Charles V. and Francis I.

The Greeks and Romans were acquainted with plates, or rather with a sort of porringer, and yet, during a portion of the middle ages, people made use of slices of bread cut round, which took the place of plates. This practice is again spoken of in the coronation ceremonies of Louis XII., at the beginning of the sixteenth century. After the repast this bread was given to the poor.

The spoon must date back to a very ancient epoch, for, although it is always possible to eat solid food with the fingers—a very ancient and very natural practice—the same is not the case with a liquid or semi-solid aliment, and it is not possible that the famous Lacedemonian black broth was consumed otherwise than with a sort of spoon. Moreover, spoons have been found at Pompeii and in several excavations and notably in the famous treasury of Hildesheim. In a much remoter antiquity, the Egyptians, in the seventeenth century before the Christian era, used spoons for mixing certain powders with beverages. These spoons, of which quite a large number are in existence, were remarkable for their generally fine and very rich ornamentation. The Museum of the Louvre possesses several of them.

The use of spoons in France was not generally adopted until toward the end of the fourteenth century, but there is a question of this in the will of Saint Remi, who baptized Clovis in 496. The use of the knife is very ancient, and the first that we know of were of hard stone. Herodotus tells us that the knives used by the Egyptian surgeons were likewise of stone. Yet the use of the knife among us as a table utensil does not date back to a very ancient epoch. Although there was a famous cutlery works at Beauvais in the tenth century, it does not appear that the knife was much used upon the table. At this epoch, and for

a very long time, the blade was fixed and inclosed in a sheath. It is not two centuries since the use of clasp knives became common. The tables were not provided with them, and each person carried his own. This custom has been preserved even in our day in some distant provinces, by old men, who, when they go to dine out, take their knife from their pocket and use it skillfully during the whole course of the meal. Such are evidently exceptions, which are daily tending to disappear, yet they serve to show the rarity of the knife, to within a short period, upon the tables of persons belonging to the lower classes. The fork was absolutely unknown to the Greeks and Romans, who, for taking their solid food, used their fingers, which they washed in basins. The meats were served cut in pieces of varying size, and each one divided the piece that he had before him as best he could with his fingers.

In the middle ages, the fork appeared only as a curiosity, and the use of it was not as yet the same as that to which it is now put. It was employed for eating fruit or slices of bread and cheese.

We find a few forks figuring in the treasury of John II., Duke of Burgundy; and Galveston, a favorite of Edward II., of England, owned, says a historian of the time, sixty-nine silver spoons and three forks for eating pears with. Again, we find quite numerous traces of the existence of forks in the middle ages, but they were never used for eating meat. At this epoch they had but two tines, and it is from that circumstance that is derived their name of *fork*.

Henry III. was the first to use forks upon the table. He had a certain number of silver ones made, and the use of the article spread very quickly at court. It must be added that such use was regarded as quite ridiculous by the public, as may be seen from the following passage from a satire upon the court of Henry III.: "Firstly, they never touched meat with their hands, but with forks, and they carried it to their mouth in bending forward the neck and body upon their seat. They took salad with forks, for it is forbidden in that country to touch meat with the hands, however difficult it may be to take, and they prefer that this little forked instrument, rather than their fingers, shall touch their mouth."

Despite the morose criticism that we have just cited, the use of the fork rapidly extended, and the fact must be recognized that it was not without good reason.

Since the remotest antiquity, cups have been employed at banquets for the beverages drank thereat. They were of metal, more or less precious, according to the wealth of the amphitryon.

In the middle ages, drinking glasses and cups were very rare. They were generally mounted upon a foot or stem, of gold or silver, enriched with precious stones. It was not till the fifteenth century, the epoch at which Venice began to spread abroad her products, that the use of glasses became more general, yet, in ordinary life, people continued for a long time to use tin drinking vessels, which were often of beautiful workmanship, and which figured with other utensils, likewise of tin, upon the dressers and buffets of the lords.

The custom of setting several glasses before each person, for the different wines that are to be served, belongs to the nineteenth century. In the eighteenth century the glass was dipped, at each new wine, into small earthenware vessels filled with water, and which were placed upon the table within reach of the guests.

The salt cellar dates back to remote times, and that is natural, since the use of salt is lost in the night of time. Homer qualifies it as divine. Among the Greeks and Romans, it occupied the place of honor at banquets. Among the wealthy, it was of silver or gold, and was handed down from father to son. Benvenuto Cellini chased some for Francis I. that were of the most exquisite workmanship. There are likewise some beautiful specimens in faience, and at the Louvre may be seen those made at Orion for the celebrated set called the service of Diana of Poitiers or of Henry II.

Although salt cellars were likewise made of very common earthenware, Olivier de la Marche tells us that, at ordinary repasts, the salt cellar was often a piece of bread hollowed out to receive the salt, and which was placed near each guest.

As for the caster or cruet stand, which was unknown to the ancients, it has been impossible for us to find out to what epoch it dates back. It is probable, however, that it is not older than the sixteenth century.

Such is the origin of the utensils that are now to be found upon the humblest tables, and it will be acknowledged that a notable progress has been made in the manner of taking one's daily food.—*La Science en Famille*.

Basic Steel.

Speaking at the meeting of the Iron and Steel Institute, at London, Mr. Andrew Carnegie said that an exhaustive series of tests just undertaken by the Pennsylvania Railway had placed basic steel alongside of acid steel for boilers and fire boxes, and he had been informed that the question was being seriously entertained whether they would not specify that nothing

but basic steel should be used for those purposes. He considered that so far as the United States had proceeded in armor it was merely experimental. They had not made enough material. So far it was true that they thought that the admixture of the nickel in certain proportions did give one quality to the steel, viz., tenacity, so that shots passing through it did not crack it, but were held in. With regard to the harveyizing, they had harveyized a few plates, but the result was a matter to be decided in the future. They had gone to this extent in America. A few experimental plates had been made, and while one part of the plate had shown extraordinary results, the other part of the plate had not. He, therefore, wished to disclaim for America any share of extraordinary credit for anything it had done in armor. What it might do the future would show.

Items of Interest.

The streets of London, if put end to end, would reach from that city to St. Petersburg.

The lighthouse tower at Cape Hatteras is 189 feet high from its base to the center of the lantern. It is the tallest lighthouse tower in existence.

A new telegraph cable has been laid between Ellis Island and the Barge Office in this city. It is 8,000 feet long and contains four working wires. It was made in Paterson, N. J., and is covered with an imported insulating material.

In a recently invented watch for the blind, a small peg is set in the middle of each figure. When the hour hand reaches a given hour, the peg for that hour drops. The owner, when he wants to know the time, finds which peg is down and then counts back to XII.

The Swedish government has adopted a new smokeless powder which is said to have the following advantages: it is easy of manufacture, produces no flame, and does not heat the rifle. It gives the ball an initial velocity of 2,100 feet with a pressure of 2,260 atmospheres.

According to M. Flammarion, the French astronomer, the mean temperature of Paris during the past six years has been about two degrees below the normal. It is also stated that Great Britain, Belgium, Spain, Italy, Austria and Germany have also been growing cold.

Some attention has been directed to a paper read by Dr. Leo Bergenstein, of Vienna, before the late hygienic congress, on "The Working Curve of an Hour." To demonstrate the fluctuation of brain power in children, he collected two classes of little girls and two of little boys, the children's ages being eleven and twelve years, and set them to work on easy sums in arithmetic for successive periods of ten minutes, with five minute intervals of rest; then the results of the work, the calculations and the errors were carefully tabulated and compared. The total number of calculations made by all the children increased, roughly speaking, 4,000, 3,000 and 4,000 in the second, third and fourth periods, respectively. During the third period of ten minutes the increase of work done was not so great as at other periods; the number of mistakes also increased, say 450, 700, 350 in the different periods—here, again, during the third period, the quality of the work was at its lowest. It would thus appear that children of the ages mentioned become fatigued in three-quarters of an hour; that the organic material is gradually exhausted; and that the power of work gradually diminishes to a certain point during the third quarter of the hour, returning with renewed force in the fourth quarter. This experiment is regarded as demonstrating that continuous work for school children of these ages, even though the tasks are not difficult, ought not to last longer than three-quarters of an hour.

The Drift of Lake Currents.

During the next few months a great many bottles will be cast upon the shores of Lake Michigan. They are to be thrown into the water for experimental purposes by lake captains, who will undertake the service at the request of the United States government. The experiments are to be conducted for the purpose of determining the set and drift of lake currents, and will be under the direction of the weather bureau. The bottles are to be given out to vessel captains, who will agree to throw them overboard and enter certain data on blanks furnished for that purpose. In order to do the work systematically, the great lakes have been mapped out in numbered sections, commencing at Duluth and numbering eastward. There are 410 sections in all, each containing about 180 square miles. When the captain throws one of the bottles in the water, he will place in it, before so doing, a slip of paper, upon which the data and the position of the vessel is entered. On each slip is the request that the finder send it to the chief of the weather bureau at Washington or hand it to the nearest government observer, lighthouse keeper or postmaster, to be forwarded. By noting where the bottles go ashore, data will be obtained from which the movement of the lake currents can be calculated.