



FANGS OF SERPENTS.

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The venomous serpents are divided into two groups, namely, *Solenoglyphæ*, including the rattlesnakes, vipers, &c., and *Proteroglyphæ*, embracing the cobras, coral or bead snakes (*Elops*), and venomous water snakes of the East (*Hydrophidæ*). Fortunately, harmless serpents are, throughout the world, by far the most numerous. In the States north of Maryland, there are only two species of poison-fanged serpents (the rattlesnake and copperhead), while the non-venomous number eighteen species.

The fangs of serpents vary in number, shape and size. In the viper, *Pelias berus*, the only venomous one of the three species of serpents found in Great Britain, the fangs are two in number, and are situated in the superior maxillary bones. There are no other teeth in the maxillæ, but there is a row of small teeth in the palatine bone on each side. The bite of the viper is often extremely painful, but rarely if ever fatal. The viper is not found in the United States. I remember on one occasion in Maryland, a gentleman conducted me to a wood to show me a "viper" he had a short time before killed, and gravely informed me it was an "extremely poisonous species." It, however, proved to be a harmless hognose snake, *Heterodon platyrhinus*.

Fig. 1 shows the head of a viper, with fangs thrown forward in a position to strike.

The fangs of the rattlesnake (*Crotalus*) are also two in number, situated as in the viper. They are curved backward, and hollow save at the tips, where they are solid, and turned slightly forward. The minute opening through which the venom is ejected is in front, about one twelfth of an inch from the needle-like point. The glands in which the venom is secreted are oval or almond-shaped, two in number, situated one on either side of the upper jaw, behind the eye. Each gland has a duct connecting with the base of its fang. These poison ducts are kept closed by an arrangement of muscular fibers when the fangs are not in use, but at the moment when the snake strikes these ducts are forced open by certain muscles of the head, and the poison shoots through the ducts and out of the openings near the points of the fangs into the wound. When not in use the fangs lie upon the gums in the roof of the mouth, buried in the folds of mucous membrane.

Fig. 3 represents half of the skull of a rattlesnake, viewed from the side, with the fang thrown outward and forward, ready for action.

The deadly machuca, of Nicaragua (*Bothrops atrox*, Wagler), has four great fangs in the upper jaw, two on each side. Fig. 4 is the head of the machuca, two-thirds natural size, drawn from a large specimen in the Academy of Natural Sciences, Philadelphia. Fig. 2 is a front view of the head, showing

the mucous folds covering the basal portions of the fangs. On the right side of the jaw of the specimen examined, one fang is drawn back against the roof of the mouth, while the other is thrown forward. This seems to show that the fangs are capable of independent motion, but we have no proof of this fact. It may be they were thus forced apart when the serpent was killed.

A SURE CURE FOR POULTRY LICE.—Lice are the great pest of the poultry house. Hens left to range about the farm or garden will keep clean by swallowing in the dry dust. But for a good part of the year villagers have to keep their hens in confinement, and very soon, without constant watchfulness, lice appear, and if the poultry house is near the barn, or within it, the vermin spread to the cow and horse-stables, and make trouble there. White-washing, if it were attended to every month, would be effectual, if the wash penetrated all the cracks. But this involves a great deal of labour, and it is difficult to reach all the crevices. There is the same objection to sulphur and tobacco smoke. A few of the lice are generally left for seed after every smoking. The best remedy we have ever applied is crude petroleum, or, if more convenient, the common kerosene oil used for lamps. This is always at hand, and a few minutes' labour at the oil-can will rout the enemy. Generally one application is enough to destroy them. We apply it directly to the perches, pouring a continuous stream from the spout. The hens get this oil upon their feet and legs, and it is rubbed all over the feathers. It is penetrating, and the odor seems to be exceedingly offensive to all insects. We have no lousy hens since the application of this remedy.—*Scientific American*.

TO BRIGHTEN IRON.—The following method of brightening iron, which appears suitable for some of the less important parts of large clocks, is recommended by Boden. The articles to be brightened are, when taken from the forge or rolls, in the case of such articles as planes, wire, etc., placed in diluted sulphuric acid (1 to 20), where they remain for about an hour. This has the effect of cleansing them and they are washed clean with water and dried with sawdust. They are then dipped for about a second in commercial nitrous acid, washed carefully, dried in sawdust, and rubbed clean. It is said that iron goods thus treated acquire, without undergoing any of the usual polishing operations, a bright surface having a white glance. Care should be taken by any one using the nitrous acid not to inhale its fumes.

THE DESTRUCTION OF MICE.—The Prague authorities invite earnest attention to the very serious proportions the plague of mice throughout Bohemia has assumed, and recommend the adoption of a number of measures whereby they hope to stay its progress. Among these are the protection of animals destructive to mice, such as fitchets, owls, hawks, jackdaws, and crows; suffocation by the introduction of smoke, or sulphur fumes, or water in the holes; deep plowing in autumn; the distribution of pills of iron filings and yeast made up with fat, or of wheat, barley, or other grain that has been soaked for 24 hours in a solution of oak ashes, or of little balls of meal and powdered glass, or, lastly, of small bits of sponge broiled in bacon-fat. They further gave warning that all this formidable arsenal will be of little service unless it be brought to bear before the mice have gained any considerable ascendancy, for their natural fecundity is so uncomfortably great that under favorable circumstances, a single pair may reckon on some 25,000 direct lineal descendants in the course of a twelve month.

AROMA OF BUTTER.—A Silesian farmer suspends in his empty churn a calico bag, filled with fragrant herbs, keeping the churn carefully closed. At churning time he substitutes four smaller bags, attaching one to each of the beaters of the churn. He thus communicates to the butter an aroma as delicate as if the cows had pastured in meadows most highly favored by nature.

PAINTING VENETIAN BLIND.—Six pounds of white lead, two pounds of zinc white, one pound of mineral green, ground in turpentine. Add resin varnish till it is pretty stiff, and thin with turpentine till it works easy. These are the ingredients used in many of the best shops.

THE Eames process at the steel works of Anderson & Passavant, Pittsburgh, is giving gratifying results. An 8-foot furnace is now in operation, and a 24-foot furnace is to be built. Strong iron has been puddled with 38 gallons of benzine, and "frozen" pots melted in a coke hole in 2 hours and 10 minutes with 17 gallons. The process is to be tried at some of the iron mills.

TOBACCO smoking has doubled in Great Britain during the last 30 years.