

A NEW POISON FOR RATS AND MICE.—At the Zootechnical Institute, in connection with the Royal Agricultural Academy at Prokau, a series of experiments has been carried out upon the comparative activity or inactivity of the various poisons most commonly employed for the destruction of rats, mice, and other rodents. The result of these are now published by the director of the Institute, Dr. Crampe. Of all the materials experimented with, the most efficacious proved to be precipitated carbonate of baryta. This occurs as a heavy, fine, white powder, devoid of taste or smell, and can be purchased at any ordinary drug store. In the experiments of Proskau, a portion of it was mixed with four times its weight of sound barley meal, and made into stiff paste with water, and small pellets of the soft cake introduced into the holes of rats, house mice and field mice. One great advantage of this preparation is that the smallest quantity of it proves fatal. Further, it appears to cause immediate and complete paralysis of the hind extremities, so that it may be assumed that mice eating of it in their holes will die within them, and so not prove destructive in their turn to domesticated animals that might otherwise devour the carcasses. It was found in practice that neither fowls nor pigeons would touch the paste, either in its soft state or when hardened with the sun, so that its employment is probably free from danger to the occupants of the poultry yard. Some rabbits, on the other hand, that got access to the paste, ate heartily of it, and paid the penalty with their lives.

[The remedy is as bad as the disease. As the probability appears to be that the rats or mice become so soon paralyzed, they would be just able to creep into their holes and there die, and cause putrid smells in the house.—Ed. S. C. & M. M.]

SCIENTIFIC RELIANCE ON SOAP.—Dr. Richardson lectured recently in this city on the germ theory of disease. He acknowledged his obligation to Tyndall for his microscopic investigation on air dust, spores and other comforting and salutary topics. It is worth while for common people to learn that 50,000 typhus germs will thrive in the circumference of a pin head or a visible globule. It is worth while for them to note that these germs may be desiccated and be borne, like thistle seeds, everywhere, and, like demoniacal possessions, may jump noiselessly down any throat. But there are certain things spores cannot stand, according to the latest ascertained results of science. A water temperature of 120° boils them to death, and soap chemically poisons them. Here sanitary and microscopic science come together. Spores thrive in low ground and under low conditions of life. For redemption, fly to hot water and soap, ye who live in danger of malarial poisoning. Hot water is sanitary. Soap is more sanitary. Fight typhus, small-pox, yellow fever, and ague with soap. Soap is a board of health.—*Philadelphia Press.*

THE SPINAL CORD.—One of the most remarkable cases in the history of surgery is that of ex-Sheriff Van Blascom, Hackensack, N. J. He was thrown from a buggy and had his neck dislocated. Few, if any, cases are on record where such an accident did not result in instant death. The spinal cord is the main channel of vital force, and in dislocations of the neck is either ruptured or so injured that all organs cease to act immediately. In Van Blascom's case the spinal cord may have been disarranged sufficiently to have produced unconsciousness, which, had it continued, would have resulted in death. The dislocated bone, however, was set, when the patient immediately returned to consciousness. In other words the spinal cord, not having been materially injured by displacement, continued its functions as soon as returned to its normal position. The case is not only a curiosity in surgery, but also a suggestive element in the problem of life.

DEEP-SEA SOUNDINGS.—Commander W. S. Schley, of the United States steamer "Essex," has recently reported to the secretary of the American navy that he has successfully run a line of soundings from St. Paul de Loanda, Africa, to Cape Frio, Brazil, *via* St. Helena. The greatest depth found between Africa and St. Helena was 3,063 fathoms, or 18,376 feet; and between St. Helena and Brazil the greatest depth was 3,284 fathoms, or 19,704 feet (nearly 3½ miles). The soundings taken eastward and westward of St. Helena exhibit in profile that that island stands almost perpendicular in nearly 12,000 feet of water. After leaving the coast of Africa there is an abrupt descent of 900 fathoms in the first sixty miles from the coast, deepening up to 3,000 fathoms in a distance of about 700 miles, whence to St. Helena gradual reductions in depth occur, and an entire change takes place in the character of the bottom from mud to coral, rock, and sand.

PRIZE FOR A MILKING MACHINE.—The Royal Agricultural Society of England has offered this year a prize of \$250 for an "efficient milking machine," an implement of which Prof. Sheldon, of the Agricultural College of Cirencester, thinks dairy farmers at the present time stand most in need. He considers a milking machine one of the knottiest problems which inventive genius has got to solve, the difficulty being to combine motive power with the adaptability of the machine to all kinds of teats and udders, and which to be really valuable, must enable a man to milk 15 cows within the hour—milk them cleanly and thoroughly, and without injury to the udder or teat of the cow. The *American Dairyman* thinks the inventive genius of our Yankee nation will be found equal to the problem, and as so much has already been accomplished in this direction, its solution is not likely to be very far in the future.

ESTIMATION OF IRON AS FERRIC OXIDE.—Mr. Sergius Kern, M. E., writes to the *Chemical News* touching the collection of the hydrated ferric oxide, and gives notice of the method used by himself, as it has been remarked that in certain laboratories this flocky precipitate is collected on paper filters—a very tiresome operation. In order to collect this precipitate, a thin platinum funnel is used. The tube of the funnel is closed by asbestos wool, previously ignited and weighed. The solution is next filtered, the precipitate washed. The funnel is then placed on a sand-bath, and when the precipitate is dry the bottom part of the funnel tube is closed by means of a platinum stopper, and the whole is next ignited and weighed. Knowing the weight of the asbestos and of the funnel, the weight of the ferric oxide may be calculated. In this way the weight of many flocky precipitates in a dry state may be estimated in a quick and convenient manner.

UNPROFITABLE AGENTS.—A late Commissioner of Patents calls attention to a prolific source of disappointment and loss to inventors from incompetent patent attorneys, as follows: "A large percentage of the cases filed in the office are prepared by men who have little knowledge beyond mere forms. These are often subordinates dismissed from the office or from private firms for incompetency, or draughtsmen, or model makers. Specifications filed by these attorneys are frequently so imperfect and obscure as to be unintelligible and utterly unfit for publication, and the preparation of these cases increases the labor of the examiners, and are a fraud upon the inventors. Inventors are particularly cautioned against men who claim to have special facility in the office, or who intimate that money may be used to hasten or assure the allowance of their cases."

PHLEGM IN THROAT.—I have suffered from this for years, and have never found any relief in medicine. The only method I have found of service has been to gargle the throat every night and morning with cold water. This loosens the tough tenacious phlegm, and enables one to spit it up. The practice has now become a habit with me, and I could not go to bed comfortably without doing it. Sometimes it is necessary to get up in the night to gargle, sometimes, also, in the course of the day—in fact, whenever the accumulation becomes troublesome. The plan has never failed to give me ease, and I recommend it with confidence. Perseverance and regular living, of course, are necessary.

LINING FOR BOILERS.—Mr. Franz Buettgenback gives the following recipe for the preparation of a coating for the inner surface of boilers to prevent the formation of scale. Gradually dissolve 5 pounds of a mixture of 25 parts of colophonium, 2½ parts of graphite, and 2½ parts of lampblack in 40 pounds of boiling gas tar, adding about one pound of tallow. The solution is diluted with about 50 per cent. of the petroleum and applied in a warm state. It has a pungent smell and should be put on rapidly, the precaution of using closed lanterns being necessary. Its effect is to cause the scale to come off in large flakes when picked.

Mr. A. S. WILSON presents the following facts to show the marvellous industry of bees. Approximately 100 heads of clover yield 0.8 gram of sugar, or 125 heads give 1 gram of sugar, and, therefore, 125,000 heads 1 kilogram of sugar. As each head contains 60 florets (125,000 × 60), not less than 7,500,000 flower tubes must be emptied of their honey to obtain 1 kilogram of sugar. The honey may roughly be estimated to contain 75 per cent. of sugar, and hence we have 1 kilogram, equal to 5,600,000 flowers in round numbers, or 2,500,000 visits for one pound of honey.