

Dr. Grimshaw and Sir C. Cameron on the occasion of their inquiry into the state of these barracks in 1887? Is it possible that they neglected to apply any of the usual tests to the drains? For it is inconceivable that had they been used such grievous defects as are now stated to have existed would have escaped detection. Or is it possible that such a condition of the drains could have been pointed out and no steps taken to remedy it? In 1888 a sum of about £1400 was expended by the War Department on these barracks, and we cannot believe that the requisite funds would have been withheld had the disgraceful state of the drains been brought to notice. There appears to be one practical lesson at least to be learned from this exposure of the condition of the Royal Barracks—viz., the imperative necessity for an examination, by competent persons, of the condition of the drains and sewers of all the barracks. Most of these barracks were built before any attention was paid to this important subject; many of them have been altered to suit more modern notions, but often, we fear, without competent knowledge on the part of those entrusted with the alterations, and before many of the precautions now deemed essential to ensure a good sanitary condition were understood. We have reason to believe that in some, perhaps many, instances, where new drains were introduced the old ones were left instead of being removed, and have since been an unsuspected cause of sickness among the troops, and that in laying the new drains precautions necessary to keep them in a satisfactory working condition, such as laying them on a bed of concrete, ventilating them, and carefully cementing the joints, were not taken. We fear also that too often there has not been an efficient practical supervision of the work done under contract. These are points which demand, and we trust will receive, the careful consideration of the branch of the War Department entrusted with the duty of housing our troops.

FISH-EATING AND LEPROSY.

MR. JONATHAN HUTCHINSON contributes to the *Friends' Quarterly Examiner* (No. 93) an interesting article upon the "Problem of Leprosy," in which he adheres as strongly as ever to the view that the disease is of dietetic origin, and that it is not contagious. He considers it proved by Hansen's researches that a bacillus is invariably present in the disease; but what, he asks, is the cause of the bacillus, and how does it gain access? In a few pages he sketches the history of leprosy, pointing out, by the way, that the leprosy of the Bible probably included many forms of curable chronic skin disease, and that the mediæval leper houses contained many who were not lepers. It is a mistake, he holds, to believe that the Crusaders introduced leprosy into Europe, for many leper-houses existed prior to the first Crusade. The disease began to decline in Europe in the fourteenth century, but it was not till 1742 that it disappeared from Shetland and the Faroe islands or from Cornwall. At the present day in England there are only a few imported cases, and no special precautions are taken against contagion; yet the disease never spreads. The United States are remarkably immune, and this in spite of the fact that emigration from the leprosy districts of Norway to the States has been very free. Noting the parts of the globe where it is still indigenous, Mr. Hutchinson points out that these are either on the sea coast or in proximity to rivers or lakes, whilst the climatic and racial conditions are extremely varied. He considers the evidence certain that the poison producing the disease gains access to the body in the form of food, and that this must be through "fish," including "edible molluscs, crustaceans, and all living denizens of water, both salt and fresh." "It may be," he adds, "that the poison is wholly absent from fish under most conditions, and

present only under exceptional ones. It seems very probable that fish caught in the warm waters of the tropics is more dangerous than those from northern seas, and that all kinds of preserved or salted fish, or fish in a state of partial decomposition, are more risky than that which is fresh and sound. Lastly, it is possible that raw fish may contain a poison which is destroyed by cooking." Evidence in support of this "fish hypothesis" is cited from the reports embodied in the inquiry undertaken by the Royal College of Physicians in 1867. In spite of the arguments so ably marshaled by Mr. Hutchinson, it must be confessed that the reference of this disease to a purely dietetic cause—and he says, "it is well nigh certain that leprosy is due to some kind of unwholesome food"—entirely disregards the accumulating evidence of its transmission by contagion. Of course, it may be said it is not to contagion, but to the environment, or Mr. Hutchinson would say the diet common to all its members, that the diffusion of leprosy in a community is to be attributed. We wish we could think so, for the view is one which is far more hopeful for the extinction of the disease than any other. In the three-and-twenty years that have elapsed since the College Report was issued, on which much of Mr. Hutchinson's conclusions are based, the subject of leprosy has been more deeply studied; and we venture to think that such an inquiry as will be set on foot by the Father Damien Committee is calculated to overturn many a cherished notion regarding the origin of this remarkable and terrible affection.

THE PHYSIOLOGY OF TASTE.

THE localisation of the different forms of taste sensations is a subject which is usually cursorily passed over in textbooks, with the statements that the posterior third, the tip, and sides of the tongue only are sensitive, that sweet substances are best perceived by the tip, bitter ones at the back, and so on. In the *Centralblatt für Med. Wissen.* is an abstract of extremely interesting observations by Oehrwall, who, by the aid of a lens, stimulated the individual papillæ by means of a fine brush dipped in a solution of sugar, quinine, acetic acid, and salt. He found that, as had before been observed, the circumvallate papillæ were particularly sensitive, but that on the sides and tip the fungiform papillæ only were sensitive. He estimated that in the whole tongue there were 350 to 400 of these papillæ, of which he found 125 only to respond to stimuli. Many of them appeared to be excited by all four of the substances employed, but in other cases papillæ were found to respond to one form of stimulus but not to another. Thus 19 per cent. responded to acetic acid, but not to sugar; 24 per cent. which were sensitive to acid were unaffected by quinine, while 15 per cent. which recognised sugar did not respond at all to the application of quinine. All of the papillæ were sensitive to touch, pain, heat, and cold. When stimulated by a mild faradaic current, an acid taste only was excited. He confirmed the observations of older authors that most of the anterior two-thirds of the dorsum of the tongue was devoid of gustatory papillæ.

THE DANGERS OF HYPNOTISM.

AT Nuremberg a case of some public interest has recently been tried in the police-court. A commercial traveller while in a restaurant told the waitress to look steadily at the white of his eye, and hypnotised her. On a second occasion he repeated the experiment, but this time the sleep produced was so profound that a medical man had to be called, who had the utmost difficulty in rousing the girl. The commercial traveller was accordingly summoned to appear before the magistrates, and the severe sentence of eight days' imprisonment was passed on him, which will probably be efficient in checking similar performances in that