

free from moisture by the heat supplied from within, and is therefore always in a suitable state for producing electricity by friction against metals or other substance. It is obvious that the corpuscles shot off from the glowing filament and sticking to the inside of the bulb can have little or no part in the production of such high potentials, for the very greatest speed they could acquire would be that corresponding to the voltage of the supply mains. A glass tube filled with hot mercury can, in fact, be used as successfully as the lamp.

This lamp method of producing electricity by friction is so easy to employ, and, moreover, so certain in action (the degree of electrification can be regulated to a nicety), that it is bound to be of interest to users of electroscopes.

R. WHIDDINGTON.

Naid or Tubificid?

IN NATURE for November 16, 1911 (p. 78), I directed attention to the fact that a tiny annelid known as *Rhyacodrilus* had been found in England, and that it differed in some respects from the specimens recorded for Switzerland. Some difficulty was experienced by the Continental authorities in assigning it a place. Ditlevsen contended that it belonged rather to the Naididæ than to the Tubificidæ, but Michaelsen in his various publications refers it to the latter. In his "Süsswasserfauna Deutschlands" he specially distinguishes those annelids which reproduce by fission from those which form cocoons, and places the Naididæ in the former group, while the Tubificidæ are relegated to the latter. Then he places *Rhyacodrilus* (= *Taupodrilus*) among the Tubificidæ, because it is possessed of sexual organs.

Aided by a Government grant for the study of annelid bionomics and economics, I have just been able to make an interesting discovery. *Rhyacodrilus* is found in our midland streams, and in the summer is possessed of all the organs belonging to the Tubificids. In the winter and spring, however, it adopts the Naid method of reproduction, and forms a chain (Tierkette). It is therefore a link between the two families, and the question arises: To which does it most certainly belong? I favour the Naid association.

Swadlincote, May 16.

HILDERIC FRIEND.

WORK OF THE EUGENICS RECORD OFFICE.

PROF. DAVENPORT and his staff of collaborators and "field" workers have shown great activity in the collection of family histories. The two first of a series of quarto memoirs, beautifully printed at the expense of Mr. Rockefeller, and published by the Eugenics Record Office, contain elaborate accounts of the members of two particular stocks whose claim to fame resembles and rivals that of the Jukes. The "Hill Folk," whose relationships with one another and with their common ancestry were investigated by Miss Danielson, comprise more than 700 persons all descended from two particular individuals who settled near a New England town in about the year 1800. Elaborate calculations as to their cost to the town and State for aid as paupers and for maintenance in prisons and institutions reveal the fact that these charges are constantly and rapidly increasing. Feeble-mindedness, alcoholism and the evils which spring from each or both in combination are terribly

prevalent among them, and their distribution within the families is clearly shown in the extensive pedigree charts which embellish the memoir.

Although Prof. Davenport does not claim that the material here collected is of a kind suitable for the study of inheritance, it is of interest to note that from it he propounds a theory on the transmission of feeble-mindedness of a kind very different from that suggested by himself and Dr. Weeks in their paper "A First Study in Inheritance of Epilepsy" (Eugenics Record Office, Bulletin No. 4, 1911).

According to his earlier view, feeble-mindedness and epilepsy are both due to the absence of a gametic factor the presence of which is necessary for normal development. They are thus transmitted as a simple recessive character which might appear in either or both of these forms.

The material collected in the memoir under review, when analysed, gives results quite incompatible with this theory, and another and more complex one is consequently suggested. In the latter, which is propounded not as a dogma, but as a tentative hypothesis, different types of feeble-mindedness are taken into consideration, and it is supposed that each depends on the absence of a separate factor. Thus when two feeble-minded persons whose defect is of the same type are mated together, all their children will reproduce it, but where the type of mental defect of one parent is different from that of the other, none of their children need necessarily be feeble-minded at all.

The second memoir deals with a family to which the fictitious name of Nams has been attributed. The origin of the Nams is described as follows:—"In 1760 there lived in the mountains of Western Massachusetts a set of people called Nam, descended from the union of a roving Dutchman, who had wandered there from the Hudson Valley, and an Indian princess. These people were wealthy in land, having inherited it from their Indian ancestors." The family in more recent times is said to be characterised by alcoholism and lack of ambition. As in the case of the Hill Folk, Dr. Davenport has prepared a bill of what they have cost the State. We do not, however, agree with his system of accounting, in which everything is entered on the debit side and nothing on the credit. Even the most valuable of citizens would show up badly in this system. Thus the largest item of the Nams' account, forming two-thirds of the total, is their drink bill of rather more than a million dollars, distributed among 700 of them. If we were to take 700 prosperous professional men in England it would not be an overestimate to suppose that each would have a drink bill of something like 5000 dollars in fifty years, or, combined, their total bill for drink would be more than double the total bill of the Nams for all items. Thus, if nothing is reckoned on the credit side, we could come to the surprising conclusion that the Nams were the less unprofitable of the two.