

the Medical Health Officer confirmed this, and further, that the first houses invaded were widely scattered, and had no connection in common other than this. As usual, however, his statements were disputed; some attributing the cause to water, others to sewers, etc. Under these circumstances the Local Government Board undertook a thorough investigation of the whole question, Dr. Power conducting it.

The whole dairy arrangements had to be investigated, and a similarly minute examination of all the houses wherein cases had occurred, as also houses adjoining these. In all 176 houses were dealt with. Enquiry was made of the number of cases occurring each day during October, and it was found that the outbreak was remarkably sudden, there being but two houses on the 9th having cases, and on the 10th there were fourteen houses invaded, with seventeen cases; on the 11th there were nine houses, with nineteen cases; and on the 12th there were eleven houses, with seventeen cases. From this the number of new outbreaks decreased daily until the 18th, when no new houses were invaded, and only one afterward during the month. Thus, of the fifty-seven houses and one hundred and forty persons invaded, 90% suffered attack in the eleven days, 8th to 18th of the month.

Minute enquiry showed that there was no relation whatever between the outbreak and house sewage; as 31% had drain connections with the public sewer system; 20% with the military college system; and 36% had private cesspool drainage.

Similarly it was shown to have no connection with the public water supply, as of the houses supplied from wells, 33 per cent. were invaded; 28 per cent. who got water from college water-works; and 55 per cent. of those who got water from springs and rain tanks.

Mud recently dredged from the Blackwater, and thrown out on the banks, was by some asserted as a cause of the outbreak; but while Dr. Power admitted this to be a possible cause, yet the fact remained that the incidence was not specially upon those contiguous to the deposits.

The 176 households divided into 94 taking a particular milk, and 82 not taking it. It must be remembered that these houses were such as not only contained cases of diphtheria, but such others as were likely to be subject to conditions similar to those in which the disease was.

It happens that all the houses (94 in number) receiving milk from the particular dairy were comprised in the 176 under investigation; but the 82 others investigated are by no means all which do not take this particular milk.

The following are the totals of the tabulated results of the enquiry:

Of the 176 houses enquired about (these including all in which cases were known to have occurred) 57 were invaded in October; now 48 (54.2 per cent) of the 57 were houses getting their milk from the suspected dairy, and every one of them became invaded in the 10 days, 8th to 17th of October. So, too, as regards persons attacked; of 140 persons suffering from throat illness during October, no less than 124 (88.5 per cent) were members of families taking this milk, and 116 of these (93.6 of the 124) were attacked in the 10 days, 8th to 17th of October. What makes this incidence yet more remarkable is that the 82 remaining houses enquired about are a part of some hundreds of houses, which derived milk from sources other than the suspected dairy; so that although the disease occurred in 9 of these yet it ought to be said that the 9 occurred in these several hundred houses; in other words that the incidence of the disease on houses not taking from this dairy was not more than a twentieth part of that on houses taking from this particular dairy.

Other interesting questions attached to the enquiry, as, why did not all drinking the milk take diphtheria? While the theory of resistance to disease becomes a factor, yet Power notes that it depended somewhat on the *quantity* of milk consumed. The consumers divided roughly into two classes, the so-called better class, and the class of cottagers and trades-folk. It was found the two classes had suffered very differently. Thus, in the 1st class 44 families took milk, and 37 were invaded or eighty-four per cent. Of the 2nd class 50 took milk, and 11 were invaded or twenty-two per cent. The same incidence extended to the individuals of the families. Thus of the 1st class with 317 individuals thirty-three per cent were attacked, while of the second class with 287 persons only six per cent. were attacked. But still more noticeably of the 1st class of the total children, 48, fifty-four per cent. were attacked, while in the other class with 94 children, but 6 or 6.4 per cent. were attacked. It was found that the milk was of uniform quality, it being the product of six cows, and had been