THE ANALYST.

SEPTEMBER, 1893.

ON THE RESULTS OF THE WORKING OF THE ADULTERATION ACTS IN DUBLIN.

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(Read at the Meeting, July 18th, 1893.)

ON August 6, 1860, the first general statute for preventing the adulteration of articles of food and drink was passed by Parliament. It provided for the appointment of public analysts, but not for inspectors of food.

The first public analyst appointed under this Act was the late Dr. Henry Letheby; he was elected to that office by the Corporation of London. The next appointment was made by the Corporation of Birmingham, and the gentleman selected by them, Dr. Alfred Hill, is still in office. I was the third public analyst appointed, having been elected by the Corporation of Dublin, on October 3, 1862.

The Act of 1862 was practically inoperative in every place save Dublin. Some years ago, having made inquiries on this subject, I found that there were no prosecutions instituted under its provisions, except in this city. Shortly after I was appointed I suggested that the inspectors of the markets should purchase articles of food on their own behalf, and submit portions of them to me for analysis. For several years they purchased various kinds of food, and when they were found to be adulterated the vendors were prosecuted. The procedure was simple enough. The purchaser informed the vendor that he was about to submit the article purchased to the public analyst, and that the vendor might, if he chose, accompany the purchaser to the public analyst, in order to witness its delivery. On hearing a case under the Act, the justice might cause a portion of the article purchased to be analyzed by a skilful person, for in those days there was no appeal to Somerset House.

On looking into the records of the Corporation of Dublin, I find that in the first year after my appointment there were 46 articles of food and 11 drugs analyzed. Out of 19 specimens of milk examined there was only 1 pure; the others were adulterated with from 20 to 60 per cent. of water. Eight samples of flour were analyzed, and 1 of them was found to be adulterated with potato flour. Out of 9 specimens of bread, 4 were adulterated with potatoes, rice flour, and alum. One

of two specimens of Bermuda arrowroot consisted wholly of potato starch. The only specimen of coffee tested contained 30 per cent. of chicory. Three of the drugs were adulterated. Thus it will be seen that 50 per cent. of the articles examined were adulterated.

In 1870 the fines inflicted on food adulterators amounted to £158 10s. Amongst the persons convicted were ten confectioners. They had sold confections containing poisonous pigments, and terra alba, or white clay. Some of the lozenges sold by these confectioners contained nearly half their weight of clay. One specimen of sugar-stick contained 1 per cent. of red sulphide of mercury. All the yellow confections were coloured with chromate of lead. Since the year 1871 I have never met with adulterated confections in Dublin.

In 1872, the last year the Act of 1860 remained unamended, the number of convictions for the sale of adulterated food was 67, and the amount of fines imposed was £306 10s. During the ten years that the first food adulteration Act was in force in Dublin, there were hundreds of convictions obtained under it, notwithstanding its defects. The articles found to be adulterated were milk, butter, tea, coffee, cocoa, mustard, flour, bread, arrowroot, confections, sugar, rum and wine. The milk was nearly always adulterated, not only with water, but occasionally, though rarely, with other substances, namely, sugar, starchy matter, and salt. The butter contained excessive quantities of water and salt. On one occasion a sample was examined which contained the pulp of swedish turnip; and on another occasion a roll of butter was found to contain a snowball as its core. On several occasions tea was found to be adulterated with exhausted tea-leaves, the want of substance in it being to some extent disguised by the addition of some astringent body, such as catechu. As a rule coffee was mixed with chicory, burnt sugar, roasted grain, ground toast of bread, etc. In 1874 16 persons were convicted for selling adulterated coffee. In two instances the coffee was mixed with 90 per cent. of chicory, and in four other cases with 70 per cent. and upwards. Cocoa was chiefly composed of starch and sugar. Mustard was never found to be pure. It was always found mixed with large percentages of flour or starch, and even sulphate of lime was used to adulterate it. Flour was adulterated with rice and alum, and bread with rice, potatoes and alum. Confections were adulterated with white clay and coloured with chromate of lead, vermilion, Prussian blue, and, though rarely, with arsenical green. On only two occasions was sugar found to be adulterated, and then it was with flour. Rum was bought which, in reality, was whisky mixed with treacle. I frequently met with the spurious wine termed Hambro' sherry. What was sold as French brandy sometimes proved to be corn spirit, flavoured with various essences.

One good clause in the Acts of 1860 and 1872 was repealed by the Act of 1875, namely, that which enabled the justices to advertise a second conviction in the newspapers, or otherwise, and at the expense of the offender. Advertisements of this kind frequently appeared in the Dublin newspapers. In the front page of the *Irish Times* for February 27, 1872, the following advertisement appears, much "displayed" and in large type: