

After some further argument, and an offer of a compromise, which Mr. Taylor refused, the Bench decided to issue an order enabling the medical officer of health to inspect the building as required by the Local Board.

POISONING BY COPPERED PEAS.

By Dr. W. OGILVIE.

OWING to the contradictory nature of the evidence given in the recent case of copper poisoning by tinned peas at Glasgow, Mr. Wynter Blyth suggested that I should investigate the solubility of the organic salts of copper in the alimentary canal, and I accordingly made in his laboratory the following experiments.

(1) *Preparation of the Organic Salts of Copper.*—One pound of pea-flour was macerated in cold water for 24 hours, the supernatant fluid decanted off and treated with a solution of copper sulphate, which caused a dense, flocculent precipitate of an apple-green colour; this was allowed to settle, the supernatant fluid decanted off and the remainder filtered. The precipitate on the filter was well washed with cold water, removed whilst moist, dried, and powdered; it probably consisted of albuminate, leguminate, tannate, and other salts of copper.

(2) *Composition.*—0.032 grm. of the powder was incinerated in a porcelain dish till the weight became constant, the ash was moistened with strong H Cl., and evaporated to dryness (to render the silica insoluble), and then dissolved in hot aqua regia. H Cl., even when hot and strong, did not dissolve it; again evaporated to dryness, dissolved in very dilute cold H Cl., poured into a weighed platinum dish, and a stick of zinc immersed for some hours. The copper was deposited on the platinum and the dish was well rinsed with water, dried, and weighed; the deposited copper weighed 0.002 grms.—6.25 per cent.

(3) *Action on Mice.*—Three adult male mice, A, B, and C were used. A and B got the powder mixed with their food in rather large quantities—about one-fiftieth of the body weight daily—but it was impossible to ascertain how much they actually consumed—certainly less than a half. They lost weight constantly. A died on the eighth day, and on post-mortem examination showed the intestinal walls much injected, and the lumen filled with mucus-like fluid; the liver and kidneys showed patches of congestion. The latter organs were incinerated and treated as in section 2, the liver yielded a deposit of copper, the kidneys did not. B died on the sixth day, and on post-mortem examination showed the stomach and intestines collapsed and pale, death apparently from starvation; the liver yielded a deposit of copper, the kidneys did not. C was used as a control, and gained weight during the experiment.

(4) *Action on Man.*—The writer took 0.5 grm.

of copper albuminate (0.031 grm. metallic copper) mixed with food; half an hour after there was nausea, which lasted for two hours, but did not lead to vomiting. A distinct metallic taste was noticed in the mouth one hour after taking the powder. About 70 c.c. of urine, passed seven hours after the dose was concentrated, acidulated with H Cl., and submitted to electrolysis as in section 2; a slight but distinct film of copper was deposited.

All the reagents used were mixed together and electrolysed, and proved to be free from copper.

From these experiments (which were not attempted quantitatively) it will be seen that the organic salts of copper formed by the combination of the soluble matters of peas with a soluble salt of copper are absorbed by the alimentary canal of man and mice, tend to accumulate in the liver, and though excreted by the kidneys do not accumulate there. They are, perhaps, also excreted by the salivary glands.

LOCAL JOTTINGS.

CARLISLE.—Twelve cases of typhus fever were removed to the fever hospital during the fortnight ending May 6th.

TYPHUS FEVER.—CORK.—Dr. Donovan, the Medical Superintendent Officer of Health, reports that typhus fever is on the increase in Cork, there having been up to the 10th of May twenty-seven cases since the beginning of the year. The outbreak is ascribed to the overcrowding in small houses.

DUNDEE.—At a recent meeting of the Sanitary Committee of the Dundee Police-Commission the medical officer reported the occurrence of eleven cases of typhus fever. At the same time forcible attention was drawn to the fact that small-pox is prevalent at no greater distance from Dundee than Fife, and yet there was no suitable place for the isolation of small-pox patients in Dundee. The treatment of typhus and small-pox in the same building opens up possibilities the contemplation of which is not pleasant. It may be hoped that this serious gap in the sanitary provisions of the city will speedily be filled up.

BACK-TO-BACK HOUSES.—The effect of the evil example set by Leeds in respect of such houses is clearly shown by a recent discussion in the Osset Town Council. The building bye-laws in force in Osset practically prohibit new back-to-back houses by requiring that every new house shall have in its rear a minimum open space exclusively belonging to it. For some time past attempts have been made in the Council to prevent the enforcement of this requirement, Leeds being quoted as permitting back-to-back houses. A recommendation of the Building Committee that plans of this obnoxious description should be passed was only referred back to the committee by a majority of two.