

commendations\* given of it by Professor Sharpey, Mr. Partridge, Mr. Bowman, and Mr. Pettigrew, of London, Sir James Murray, of Dublin, and others concerned in the teaching of anatomy. In Quebec the fluid was employed by Dr. Racey, while making post-mortem preparations, and I showed to several medical men there the difference between a portion of subject treated with the fluid and another part left untouched.

## II.—Of the Deodorizing properties of the Burnett Fluid.

I. With regard to its action on feculent odours, we may observe that feculent matter contains—1, ammonia; 2, sulphuretted hydrogen; 3, decomposing animal matter, combined with ammonia; 4, occasionally fresh animal matter (as in some diseases where there is a motion soon after taking food). When the fluid is added to the above matter, the chloride of zinc acts on the fresh animal matter, prevents decomposition, and the consequent evolution of disodour; also, on the decomposing animal matter, presenting further decomposition: part of the chloride of zinc gives its chlorine, and the sulphuretted hydrogen gives its hydrogen to the ammonia to form odorless muriate of ammonia; the sulphur combining with the zinc to form sulphuret of zinc. As the ammonia is the vehicle of the feculent odour, feculent matter ceases to have any effluvia as soon as the ammonia becomes muriate of ammonia.

2. With respect to the action of the fluid on urinous odours; among the ingredients of the urine are—1, ammonia; 2, decomposing animal matter (mucus); 3, according to Prout, phosphuretted hydrogen is occasionally present; 4, water.

The solution instantly and permanently removes the odour of fetid urine by their being formed muriate of ammonia and phosphuret of zinc; while part of the chloride of zinc, or oxid of zinc, acts on the decomposing animal matter.

3. The odour of bilge-water depends on sulphuretted hydrogen; and this gas is produced on board ship from the wood decomposing and resolving itself into carbon, hydrogen, and oxygen, and these acting on the sulphates of lime and magnesia, in sea-water. I find that the fluid instantly destroys the odour of bilge-water; there being formed sulphuret of zinc and muriatic acid. Any remaining chloride of zinc which has no sulphuretted hydrogen on which to act, has a preservative effect on the wood, and contributes to prevent the further formation of sulphuretted hydrogen.

4. In crowded transports and emigrant ships, and especially in bad weather, the air becomes very foul; also in crowded barracks, badly constructed as regards ventilation, the use of the diluted fluid (1 to 40) is highly conducive to comfort and health.

5. The plan of many jails is so faulty, that there are many cells which it is nearly impossible to ventilate, and which (even after removing all the bedding, &c. in them) retain a peculiar and disagreeable odour. I found that this odour was removed by waving, for a minute or two,

a flannel cloth wet with the diluted fluid; as in the case of ships and barracks, or any other crowded places, there may also be some of the fluid sprinkled over the floor.\*

6. When the diluted fluid (one part to sixty parts of water) is applied by sponging to the persons of typhus-patients, it removes the peculiar odour emitted by them. Except where cold sponging is indicated, the fluid ought to be used of the temperature of the patient.

7. In hospital-wards full of typhus and dysentery cases, the air becomes exceedingly impure, and in cold weather, and at night, ventilation often cannot be had recourse to. In such cases the disagreeable odour is removed by waving flannel cloths wet with the diluted fluid (1 to 40) two or three times a day for a few minutes at a time, and by sprinkling some fluid on the floor. Where there is dysentery, a small quantity of fluid may be poured into the utensils over night. The odour emitted from the surface of the body of a dysentery patient is much lessened by sponging him with tepid diluted fluid (1 to 60). I found that having the fluid used in the way of waving and sprinkling once a day, when the same process was repeated next morning, there was no disagreeable odour, or almost none, perceptible; this, too, was in badly ventilated wards crowded with fever and dysentery patients. I found that the proportion of one ounce of the strong fluid (making 41 ounces of the diluted fluid) was sufficient for every ten persons: the price of the fluid, (as at present advertised,) is three shillings sterling a quart, or about a penny an ounce; so that, to give the sick the daily benefit of having the fluid used, it would cost an hospital tenpence a day for a hundred sick, and eight shillings and fourpence for a thousand sick. The expense of any article for hospital use on the large scale is an important consideration, and besides the great superiority of the Burnett fluid in other respects, it is much cheaper than chloride of lime, and other agents used for similar purposes, as these are usually sold, and considering the comparative quantities of them that are requisite. As for the Ledoyen fluid, (not to speak at present of the radical error its proposer made in taking such a poisonous substance as lead for a base,) I believe it is advertised for sale at sixpence sterling for a bottle containing about 18 ounces, while the same sum will purchase about 246 ounces of the diluted Burnett fluid.

Nearly all the medical practitioners of Montreal and Quebec have made trial of, and are completely satisfied with, the antiseptic powers of the Burnett fluid.

## III.—Of the Disinfecting Properties of the Burnett Fluid.

Some of our best medical authorities† do not agree in the meaning they appear to attach to the word *disinfect*, some restricting it to an action on infectious miasm, and others, apparently extending it to an action on offensive odours not in any way connected with infectious miasmata. By a disinfecting substance, I mean one which

\* Where the fluid is applied to wood work, the use of soap, soda, or potash, should be avoided immediately before or after its application.

† See Copland's Dictionary of Medicine; Brown in Cyclopædia of Medicine; Dunglison's General Therapeutics.

\* In a publication entitled "Reports on the Solution of Chloride of Zinc, (Sir Wm. Burnett's Disinfecting Fluid.) London: Printed for her Majesty Stationery Office, 1847." Reviewed in Dr. Hall's Journal for March, 1848.