V. In Surgery, chloride of zinc is occasionally used. I lately saw a case of lupus, where the Burnett fluid (undiluted) was found to be as effectual and a more convenient form than the solid chloride of zinc.

The Burnett fluid, diluted, (1 to 130 parts of water) has been found very beneficial as an application to chronic and scrofulous ulcers, (by Mr. Erasmus Wilson, Dr. Allan, and others)'; and in mercurial sore mouth, (by Mr. Flynn.) The fluid diluted (1 to 60 or 80) is useful as a lotion in erysipelas, and as a bath in psora, prurigo, pruritus, and other cutaneous diseases. It has also been used as an injection in gonorrhæa. I have no doubt it will be found an excellent remedy, much diluted (as 1 to 120) as an injection in fætid otorrhæa, and as a gargle in some throat diseases. Diluted, 1 to 140, it removes the fator from mortification taking place as after frost-bite. The fluid undiluted, or with an equal part of water, and introduced on the point of a pen into the cavity of a tooth, is a good application in some cases of tooth-ache. The action of the diluted fluid on ulcers is two-fold-it removes the fætor, and also it improves the action of the sore in some alterative manner.

## VI.—Of the Burnett Fluid, as compared with some other Agents employed or recommended for similar purposes.

1. Burning sulphur in the air, and so producing sulphurous acid, has been employed for purifying the atmosphere, but the odour is unpleasant, and the vapour is sometimes irritant to the air-passages.

2. Dr. Johnstone proposed, and Dr. Carmichael Smith obtained  $\pounds$ 5000 from Parliament, for suggesting the employment of nitrous gas, (made with nitrate of potass and sulphuric acid); but this gas is disagreeable to most persons, and in some diseases its inhalation is injurious.

3. Producing chlorine gas with common salt, n.anganese, and sulphuric acid, is troublesome and disagreeable, and making it with oxymuriate of potass is the same.

The use of the chloride of lime is attended with the inconvenience of making white spots on floors, carpets, furniture, or any other surfaces to which it is applied; it likewise changes colours, and is corrosive. The inhalation of chlorine gas is disagreeable to most persons, and in some chest diseases it is injurious, so that among the mixed cases in a large hospital, its general employment is inadmissable.

The diluted Burnett fluid is preferable to the above agents, as while it destroys odours, it is itself odorless, and it does not injure the colour or texture of cloth; on the contrary, it is largely used for the preservation from decay of cloth and wood. In Her Majesty's dockyards, canvass and timber are immersed in it, and these articles are found to last much longer than others.

## 4. Of the Burnett Fluid as compared with Ledoyen's Disinfecting Fluid.

As the Ledoyen fluid is a solution of the nitrate of lead, it is, like the other preparations of lead, liable to produce some one or other of their long-known bad

effects,\* such as colic, palsy, pain in the course of the spine, giddiness, coma, apoplexy, constipation, indigestion, wasting of the muscles and of the body generally, and permanent decrepitude: likewise, employed in typhus, according to the Ledoyen method (by means of wet cloths over the person), it is apt to produce a sedative and depressing effect, which is exactly the opposite of what is required in that disease. In Dr. Hall's British American Medical Journal, for March, 1848, there are two cases mentioned of lead-colic arising from Ledoyen's fluid being applied to ulcers. In a case lately, near Montreal, of sloughing of the hands after frostbite, Ledoyen's fluid was applied to the hands on account of the fator, and this was followed by frequent, painful, and nearly ineffectual efforts to have a stool, and by other signs of intestinal disorder. At Quebec there were three cases of typhus, in which the proprietors of Ledoyen's fluid used it largely, cloths wet with it were kept applied to nearly the whole surface of the body, and other wet cloths were hung over the bed, and in the room; these three cases were, I believe, the only instances in Canada, where the fluid was much applied to individual patients ill of typhus, and in them it was considered that the lead had a depressing effect: the three cases terminated fatally.

The two proprietors of Ledoyen's fluid asserted, that their fluid prevented one from taking typhus, and also, that it certainly cured one already ill of that disease. The fact of both of them being seized with typhus is, so far, a contradiction of their first assertion; and the fact of one of them unfortunately dying of typhus is, so far, a contradiction of the second assertion. This last case is one of the three alluded to above, where the Ledoyen fluid not only did no good, but where it probably contributed not a little to the fatal event. Some may say that this case ended fatally because the patient was 70 years of age, but this could not be the reason of the death of the other two patients treated with Ledoyen's fluid, as their ages were, I believe, 35 and 38.

The Ledoyen fluid acts as a corrosive of metals, and I heard of two instances where water closets were injured, and made leaky, in consequence of a quantity of it having been thrown down there. I saw some tinvessels full of holes, in consequence of the fluid having been left in them for some time. It was found also to injure the texture of cloth, so that sheets, pillow-cases, and towels that had been wet with it, were rendered nearly useless.

I witnessed several comparative trials of the two fluids with regard to their power over feculent odours, and in all of them, I considered, that the Burnett fluid had much more effect than Ledoyen's. In Montreal, some of each fluid was added to a quantity of feculent matter in a couple of vessels: a few minutes after, feculent odour had a good deal disappeared from the L. vessel, and almost entirely from the B. vessel. The vessels were kept, and, a week after, I looked at them: on the B. vessel being stirred, there was no odour; on the L. vessel being stirred, the odour was nearly the same as it was before the fluid was added.

\* Reports on the Solution of Chloride of Zine, London, 1847.

\* Alluded to by me, in a paper on Emigration, in Dr. Hall's British American Medical Journal, for April, 1848,