DR. AGNES C. VIETOR.—Mr. President, I have been very much interested in the discussion on typhoid and paratyphoid fever, particularly because I have, in common with other practitioners, had cases of typhoid fever, clinical typhoid, that did not give the laboratory reaction. In reading a number of articles on this subject, within recent times, I was impressed with the resemblance of the problem to the problem of the streptococcus, on which I did a little work some time ago. To summarize what you are probably all familiar with, the streptococcus is open to question as to its identity and as to its behavior; that is, apparently the same streptococcus will, under differing conditions of culture, give different results, even in regard to the action of the antitoxine developed in the serum. In the study of the varying typhoid reactions, it has occurred to me that perhaps the typhoid bacillus resembles the streptococcus in these laboratory variations, and that the two varieties of paratyphoid bacilli, at present isolated, may be cultural variations of the typhoid bacillus.

THE ACTION OF VAPORIZED FORMALDEHYDE AND VAPORIZED CARBOLIC ACID AS GASEOUS DISINFECTANTS.

BY HIBBERT WINSLOW HILL, M.D., DIRECTOR BOSTON BOARD OF HEALTH LABORATORY.

Mr. President and Gentlemen,—By the kindness of your Programme Committee, I am allowed to make a brief statement of some recent results we have obtained in the Boston Board of Health Laboratory in testing formalin gas.

The points which are of especial importance are these: —

First, that, if the humidity of the air be low, in the room which is to be disinfected, very much more gas is required than if the humidity be at the saturation point. Formalin gas thus resembles sulphur, and high humidity is important in one case just as it is in the other.

Second, that a given amount of formalin gas, which in air of high humidity kills promptly, would, if placed in an equal quantity of
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water, be practically inert. For instance, three ounces of formalin in one thousand cubic feet of air saturated with moisture will kill; but it would require from one to three thousand times as much formalin to kill in the same time if it were placed, not in one thousand cubic feet of air, but in one thousand cubic feet of water. Neither of these points is strictly new, but so far they have attracted little attention.

These considerations suggested to the writer that perhaps both of these principles might apply to disinfectants in general, and it was determined to try carbolic acid and other disinfectants on these lines. Carbolic acid solutions require about the same amounts of carbolic acid, in order to be effective, that formalin solutions must contain of formaldehyde to achieve the same results; and it seemed not unlikely that perhaps approximately equal amounts of their vapors might also be equally effective.

A series of experiments was begun. They are very far from completion yet; but we have got so far as to justify the statement that carbolic acid vaporized will kill the diphtheria bacillus in about the same time, and, roughly speaking, in about the same amount as will formaldehyde. Every one knows the disadvantages of formalin as well as its advantages. The use of carbolic acid vapor seems to get rid of the one, while preserving the other. High humidity is necessary in both cases; and the cost of carbolic acid is not greater practically, strength for strength, than that of formaldehyde.

Going somewhat further, we tried bichloride of mercury, which is volatile, and found that at saturation point its vapor also killed, so far as we have gone, somewhat better than formaldehyde. Whether bichloride is a practical thing to use for municipal disinfection we shall have to consider further, but in France it has been used in the form of a spray for some considerable time.

This work is only in the experimental stage as yet, but so far it seems to promise results of considerable advantage in the future.
Report of Committee on Diphtheria Bacilli in Well Persons.

The President.—Has the Committee on Diphtheria Bacilli in well persons anything to report in the way of a conclusion?

Dr. Hill.—Mr. President, this committee has reported already some nine months ago; and our conclusions have been in the hands of all the members for that period of time. I think it is hardly necessary to read them again now, but I will do so if you wish.

The President.—There is nothing additional to what has been already reported?

Dr. Hill.—Nothing additional, no. We consider that we have said about all that we could say in this report.

On motion of Mr. Coffey the report of the committee was accepted, and the committee was discharged from further consideration of the subject.
Adjourned.