

or three tubes in this fashion, the infecting material at first abundant and producing a continuous dense growth, will in the second or third tube only implant a very few bacteria, so that the colonies can be studied separately. The tubes are to be kept at about body temperature for twenty-four hours, when minute white points appear on the surface of the serum, attaining about the size of pin-heads or of split peas. These, if found under the microscope to consist of bacilli, are probably the diphtheria bacilli, as the other forms would not have attained such size in so short a time.

The other colonies which attain such proportions in twenty-four hours are almost invariably found to be micrococci, usually the *staphylococcus pyogenes*.

I will not go further into the culture experiences with the bacillus than to say that I have been able, in all my cases, to confirm the statement first made by Welch and Abbott, of the Hygienic Institute, that the bacilli form an abundant invisible growth on potatoes, a medium stated by previous observers to be unsuitable for its cultivation. I also can substantiate the statement of Beck, that the agar cultures do not show the characteristic involution forms.

The method, however, has a serious defect, since an organism exists which is identical in size and appearance with the Loeffler bacillus, and grows on serum in a similar manner, though totally devoid of pathogenic properties. This is called the pseudo-diphtheria bacillus, and has been frequently found in the throats of healthy persons, as well as in follicular tonsillitis. The proof, therefore, is not absolute until substantiated by the inoculation of some susceptible animal. How far this pseudo-diphtheria bacillus would interfere with the method in practical work is not yet certain. Personally I have so far only met with the virulent or true bacillus.

The results of my examinations are as follows:—

Of nine cases examined in which the diagnosis of diphtheria could be made without much difficulty from the symptoms and the appearance of the throat, the Klebs-Loeffler bacillus was found in eight. In the case where it was not found, the con-