being compelled to state the minimum germ-killing power of the preparation when tested under certain fixed conditions, and authorities being empowered to take proceedings against the manufacturers under the above amended Acts if the disinfectants are found to be below the guaranteed standard.

THE BACTERIOLOGY OF MEASLES.

IN the *Zeitschrift fuer Hygiene und Infektionskrankheiten* (volume 63, part I.) there is a paper by Dr. Alexander Lorey (Hamburg-Eppendorf) in which are discussed organisms that cause the chief complications in this disease. The subject has hitherto received very little, if any, attention from bacteriologists, as practically all previous inquiries were directed to finding out the actual cause of measles. The author thinks that while measles of itself is a comparatively harmless illness it can become a very dangerous one owing to complications.

The first part of the paper is taken up with a description of the *technique* employed, the latter part being devoted to the organisms found.

In all 93 cases were bacteriologically examined with positive results in 86 cases; the seven negative ones referring to a few cases in which only harmless organisms were found in tonsils or middle ear.

In 41 swabs from the tonsils the results showed the presence of streptococcus erysipalatosus in 21, and in 5 cases along with diphtheria bacilli. In 14 cases the pneumo-coccus was present.

In pus from the middle ear streptococcus erysipalatosus was found pure in 23, and mixed with other organisms in 6. On examination of the blood, organisms were found in 22 (only positive results are given), the principal organism being streptococcus erysipalatosus, which was found in 15 cases.

The conclusions arrived at are:—

1. Erysipelas streptococci are the commonest cause of complications.
2. The gravity of a measles epidemic depends on the frequency of invasion by this organism.
3. The discovery of a considerable number of these in the throat shows the presence of secondary infection, and increases the gravity of the prognosis. If found in the blood the disease is almost always fatal.
4. The point of attack is the upper air passages.
5. Pseudo-croup appears to be due to a pneumococcal infection.

In hospitals these organisms are mostly conveyed from patient to patient by the hands of nurses and other attendants on the sick, food utensils, playthings, etc., and also through cough-spray. The best preventative is proper isolation of complicated cases.

SOME ADVANTAGES OF THE COUNTRY SCHOOL.*

By GEORGE A. AUDEN, M.A., M.D., M.R.C.P.,
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IT will be universally admitted that, *ceteris paribus*, debilitated children are best away from crowded school-rooms, and in the open fields and, where any such provision exists for such a transference, to retain them in the city schools would be reprehensible. Practically, however, the child who is certified as unfit to attend school on account of tuberculosis or other debilitating disease is not infrequently found employed in household duties or, at any rate, without access to the fresh air which is the object of the absence certificate. There is, in addition, the real disadvantage that the child who is not attending school is readily lost sight of, while, at the same time, he misses the regulated order of daily life which school entails, together with all the social influences which are exercised by the school. School life for the majority of elementary school children ends so soon that the loss of a few months or a longer period at the latter part of their school life is a very great disadvantage to them in the keen struggle for existence, into which they must plunge at the end of their school career. This is more especially true of those children whose enfeebled bodily condition prevents them from taking up any form of physical work, the necessary educational endowments of which are not of a high order; but it is still more true of the tuberculous children, whose struggle against the disease necessarily extends over the greater part of their adolescent years. Thus, absence from school, so far from helping them to a finally successful issue in the struggle, actually militates against their chances by lowering their wage-earning efficiency, and thus forms a vicious circle from which the unfortunate sufferer cannot free himself. Education Authorities are, therefore, on the horns of a dilemma in this question, for it is plain that if these children are to be compulsorily educated at all (and both the interests of the State and the individual demand it), then the duty is imposed upon them of supplying such a form of school curriculum as will at once improve both their bodily and their mental condition. One form of educational institution alone satisfies these two demands. The open-air school, which is the result of the compromise between the State, the parent, and the physician, has now passed beyond the experimental stage, and is an attempt "to adapt the school organisation and the amount and methods of instruction to the physical and mental capacity of all types of elementary school children." The history of these

* Annual Report, 1908.

open-air schools dates back to the inauguration of the Charlottenburg School in 1904. The first school on these lines to be started in England was that at Woolwich, opened in 1907. The success of this experiment was so remarkable that in 1908 the London County Council had three open-air schools, and in 1909 there will be five schools worked upon these lines. Bradford and Halifax have made a move in the same direction, while Manchester has also a "Country School for Town Children," where a fortnight's education in the country, with board and lodging, is given to selected groups of children from the elementary schools during the summer months. These schools are not primarily intended for the child suffering from pulmonary tuberculosis; in fact, great care is necessary in the selection of children thus suffering, and the children are as a rule drafted back into ordinary schools after three months. The greatest improvement is seen in those who are suffering from anæmia or enlarged glands, while concomitant with the physical improvement, the general moral improvement which is shown is extraordinary. The removal from the influence of the street and the placid attitude of mind induced by the post-prandial sleep and the quiet open-air life amongst the trees, together with the cultivating influence of the teacher, with whom the personal contact is so much closer and more prolonged than in an ordinary school, all conspire towards an improvement in the mental stability of the children.

SCHOOL ATTENDANCE.*

BY H. COOPER PATTIN, M.A., M.D., D.P.H. AND
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FROM the point of view of economy, this part of the work of the medical officer is of special importance. Parents frequently either take no trouble to see that their children attend school or keep them at home to do work, run errands, etc. An indefinite plea of "illness," past or present, is advanced, and in a few cases a medical certificate is produced of such distant date as to be of questionable significance.

It is often impossible for an attendance officer to decide where absence is or is not justified on medical grounds. On the one hand, there are the fraudulent cases; on the other, there are children who are physically unfit to attend school, but whose condition can be adequately ascertained only by a medical examination.

As the loss of grant every year for feigned cases of illness is considerable, it is necessary that, where illness is professed, children who are not already under medical care, and certified accordingly, should be examined carefully, the genuine

cases of disability being directed to secure medical advice, the others being certified fit for school.

The arrangements made with the chief attendance officer for dealing with these cases are as follows:—

The children selected by the attendance officers week by week are sent up to the Municipal Buildings, accompanied by some responsible person, with brief particulars entered on a printed form (Form 4). The case is considered, where necessary the child is examined, the particulars are entered on the form, and the latter is filed for future reference.

(1) If the case appears on consideration to be one where the child is malingering, or has been unjustifiably kept from school by the parents, a certificate (Form 5) is filled up. This certificate is used subsequently where prosecution is thought desirable by the School Attendance Committee.

(2) If the child is found to be in some way medically unfit, the parent is told to secure adequate medical attention for it, and a certificate sent accordingly (Form 6). These cases are not certified "unfit" for an indefinite period, but are asked to return on a fixed date: in order firstly that the certificate granted may not be abused, and secondly that the date of returning to school as decided by their medical attendant may be adhered to, and that any special suggestion relative to the child's school work, etc., may be communicated to the teacher.

Over 600 examinations were made in connection with this department in 1908. It is unnecessary to go into detail with regard to the cases seen; the genuine cases included children suffering from heart and lung disease, defective hearing, eyesight, etc. But mention may be made of a class of case, unimportant in itself, which gives much trouble—that of children suffering from infectious skin diseases. These children cannot be permitted to mix with their fellows in school until they are free from infection. Parents who recognise this, and who wish for some reason to have the child at home, take care to forget to carry out treatment, so that a disease which, if properly attended to, could be cleared up in a few days, is allowed to run on for weeks and months.

ACCOMMODATION FOR MEDICAL INSPECTION.

For the room in which medical inspection is to be conducted the following are the desirable qualifications:—

- 1.—Suitable size.
- 2.—Good lighting and ventilation. (For the examination of the throat, for example, the light should come from the side and not from above.)
- 3.—Privacy. (Besides the parent of the child and the nurse or health visitors appointed for the purpose no other person should be in the room or in a position to overlook the room.)

* Annual Report, 1908.