

of the disease that the complications were almost nil, although it did not lessen the course of the disease at all. Those cases that were well advanced before they came in under treatment showed no effect at all.

This year we have not as yet received all the reports so can only give an incomplete report to you. So far the total number vaccinated is 2,771 with one case developing fever and against this there are reported 70 cases amongst the non-vaccinated. When all the reports are in these figures will probably be between eight and ten thousand.

The conclusions that we draw from this work are:

We have a very valuable aid for the prevention of typhoid fever in the use of vaccine.

That the name of vaccination should be abolished and inoculation should be used in its place.

When cases of typhoid come under observation early enough that most of the complications can be lessened.

That its use should be advocated in all places where men are to be in camp and under doubtful sanitary conditions for any period of time.

That the period of immunity is apparently indefinite, probably equal to that produced by a single attack of typhoid.

Since this report was read the various lists have come in to complete the work for 1913. The total number vaccinated being 8,400, with only the one case developing.

There is an article in the National Geographic Magazine, entitled "Our Army versus a Bacillus," by Alton G. Grinnell which has an important bearing on the subject which reads as follows:—

In all the history of human endeavour nothing compels greater admiration than the devotion of a lifetime to the conquest of a world-wide disease. It is seldom, if ever given to one individual to search out single-handed the cause of the disease, demonstrate to humanity how it is communicated, and show how it may be prevented. In such a monumental achievement the ultimate success is usually due to the researches and experiments of many men, all of whom have been actuated by an ambition to relieve human beings of unnecessary suffering.

The details of the first act of such a drama are usually obscure, and even if known to the public are uninteresting at the time because of their technical character and apparent lack of connection with human ills.

But when the years of experimentation have passed and the marvelous thing is demonstrated, with all the world, the stage, men wonder at the transformation.

Typhoid fever, which before 1908 had been fought with every weapon known to modern science and still lurked in every community, is now put to rout in open combat by the aid of its own dead bacteria. The illuminating light of discovery makes possible the immunization of an army of 85,000 men against a disease which is more prevalent in this country than in most civilized countries and causes a yearly loss of something like \$350,000,000 and untold suffering—a disease which has been the scourge of our army and has killed and maimed more than powder and shot. This same disease was directly responsible for an outlay of \$20,000,000 in the British South African War, and has been the cause of great suffering and financial loss for many years among all peoples in every climate, in peace and in war.

#### A SERIES OF DISCOVERIES.

Scientists of many nations have contributed to the campaign for the eradication of typhoid, but to the United States Army belongs the credit for the first practical demonstration on a large scale. From the discovery of the germ to this remarkable demonstration was a span of 31 years, wherein the following important contributions were made:

(1) Eberth, a German bacteriologist and anatomist, discovered the typhoid germ in the year 1880. It belongs to that group of bacteria which live on live animal and