

the *diplococcus cadavericus*, the *bacteridium carbunculosum* (in attenuated culture), the *diplococcus* of roseola and of hogs, the *bacillus phymatogenus* or that of *plithisis*, the *bacterium of urea*, and others of less importance.

The agents and the results of reactions were as follows :—

1st. Phenyl, or carbolic acid pure, crystallized ; watery solution of 2 per cent. Result.—All the microphytes continuously in life.

2nd. Idem, incomplete cold solutions or emulsions, from 5 to 10 per cent. Result.—Between the layers of microphytes imprisoned in the coagulum of the albuminous substances of the putrilage and the liquid of the culture, numerous free *cocci*, living, and swimming about in a sea of microscopic drops of emulsified phenyl, moving with the impulses and in the style of microbes, up to the seventh day.

3rd. Considering the trivial solubility of pure phenyl, the same solutions as the previous were aided and completed by means of some drops of alcohol. Consequent disappearance in them of free phenyl was noted. Result.—An immediate augmentation of the activity of the microbes. The alcohol, by debilitating extraordinarily the action of the phenyl or pure carbolic acid, caused practically the obtainment of a carbolised water of over 3 per cent. This fact, which I had observed in 1865, has been verified by Koch in relation to divers species of *bacilli*.

4th. Liquid carbolic acid (by natural deliquescence, with alteration of its chemical constitution). Enormous doses ; 10 grains of pure reactive to 2 grains of putrid urine or the putrilage of flesh, that is to say, 100 to 20. Result.—Large islands or clusters of bacteria imprisoned in the coagulated albuminoid substance ; intermediate lakes peopled with free bacteria in their greatest activity. Observed two days. On the 8th day the liquid appeared turbid, and when again subjected to microscopic examination, it gave a notable increase of free bacteria.

5th. Thymol, or thymic acid, pure, amorphous. Experiments and results similar to those by phenyl.

6th. Salicylic acid ; solution of 1 per 2,000 ; microphytes living *ad maximum*.—Solution of 1 per 1,000, microphytes living, but rather remiss in

their movements. Observed to the fifth day ; they continue living and agile.

8th. Lime. Action nil ; all living.

9th. Mixture of caustic soda, and barilla, without definite dosage, but not under 10 per cent., and the same as is used by me in my own laboratory for perfectly cleaning in twenty-four hours, the glasses of varnished plates. In one drop of this mixture I found a good number of *bacilli* and *cocci* of various species in full activity, which had proceeded from micrographic preparations of the same sorts, previously worn out and put into the same mixture in order to clear them of mastich.

10th. Pyrogallic acid ; solution at 10 per cent. Result.—Nil ; all the bacteria alive and in motion, free from the meshes of the coagulum. The observation was followed up to the twentieth day, when all were living *ad maximum*. This explains why hides, either whole or cut, may infect with carbuncle.

11th. Ammonia, pure. Result.—All alive continuously.

12th. Sulphohydrate of ammonia, pure. Result.—All alive in 24 hours, though torpid in movements, and the field turbid, without doubt, from the reduction of the sulphur.

13th. Sulphate of iron at 30 per cent. ; solution slightly acid. Result.—All the microbes living.

14th. Sulphate of copper ; saturated cold solution. Result after 24 hours :—All living, but with one singular circumstance ; many of the bacteria show a sharp twisting, over half their length ; but on returning to observe them on the fifteenth day, they all continued in life and in notable motion.

15th. Essence of turpentine, pure. On the fourth day all continued in life ; and on the eighth day the same.

16th. Chloride of mercury (corrosive sublimate). Result.—All living. Observation followed till the third day ; all the microbes living free from the coagulum and very active.

17th. Boracic acid. Saturated aqueous solution, cold (4 per cent). Result.—All alive. Observation continued until the fifteenth day.

18th. Picric acid. Saturated aqueous solution, cold (1 per cent.) Result.—All living, swimming about, free from the meshes of coagulum. Observed again on the fifteenth day, still living.

19th. Picric acid, obtained by transformation of