

carbolic acid by a sufficient quantity of nitric acid Result, as the last.

20th. Cyanuret of potass; aqueous solution at 4 per cent. Result.—All living and more excited than ordinary. On the eighth day they continued in the same state.

21st. Potassic picro-cyanuret; aqueous solution at 4 per cent. Result, as the preceding; all the microbes swimming lively between beautiful crystallizations in the form of a double brush, characteristic of the reaction of picric acid on the cyanuret of potass.

22nd. Picrate of ammonia, pure. Result.—Large clusters or layers; but all the microbes alive and free.

23rd. Permanganate of potass; aqueous solution at 5 per cent. Result.—All alive, and in addition, the permanganate decomposed from being robbed by the microbes of one equivalent of oxygen.

24th. Arsenious acid; aqueous solution, cold, at 1 per 1000, that is to say, almost saturated. Result.—At 24 hours (when writing these lines), all alive, as if nothing had happened.

25th. Iodide of bromine. Application useless in practice, because the alkaline salts of common or natural waters form with the iodides or bromides combinations inoffensive to the microbes.

26th. Sulphuric, nitric, and hydrochloric acids; aqueous, 1 per cent. solutions. Result.—All indefinitely alive.

27th. Aqua regia, pure (nitro-muriatic acid), equal parts. Result.—All alive on the fifteenth day (!!!). Such is the effect of aqua regia, a liquid that dissolves everything, from gold and platinum down to liver and brain.

28th. Nitrate of silver; saturated solution, cold, with excess of crystals and exposure to light for a whole day. Result.—The silver, reduced by the light, has combined with the substance of the cuticle of the microphytes, but it has not penetrated them; since, though as black as charcoal, they continue alive, swimming with marvellous agility, in spite of so much metallic silver which each of them carries. Only those entangled in the meshes of the coagulum are motionless, in the state of real microderms, or bacterial pellicles, as well in layers as in islands. Though this is the most powerful reagent, that is, from rendering a greater number of the microbes motionless, besides altering their

integument, yet, in preparations of some days' standing, living *cocci* and *bacilli* were seen swimming. In a specimen of the *bacteridia carbunculosa*, treated by this process for the purpose of better photographing it, I saw, on the twentieth day after sealing the preparation, a multitude of bacteria still in motion, with remarkable activity, in spite of their coat of metallic silver (!!!).

And now I ask, in view of these facts, in face of the quality of the substances employed, and the enormity of the doses, what have the storm waters left behind them? Will any physician be so simple as to believe, that among the substances prized as disinfectants, there is one capable of killing the *contagium vivum*, either *inside* or *outside*, either in individuals, by cutting short the process of an infectious disease, or in retentive articles, by hindering the development of an epidemic? Will there be any association, council, minister or governor, who will rest tranquil after having assented to proceedings of disinfection, which experimental facts, carried to the extremes shown in those herein related, declare to be absolutely useless, besides being offensive, expensive, and injurious? If the strong doses (some horribly mortal to individuals) which I have signalized, have proved useless, in what doses shall we employ them with success? And even supposing—and it is no little to suppose—that such doses were really disinfectant, what utility could they offer in practice, either *internally* or *externally*? If, for example, we should administer carbolic acid in the impossible solution of 10 per cent., on reaching the current of the blood in the quantity of a few drops, or when scattered by an atomiser on the bottom of an ulcer, or on retentive wares, from which it rapidly evaporates, it will not represent then even $\frac{1}{2}$ per 1,000. Let it be tried, and it will be seen that this deduction is inevitable.

Finally, we have to renounce curative or individual disinfection by means of the death of the *contagium vivum*, and as respects preventive or public disinfection by the death of the *contagium vivum* in retentive objects, we have to abandon, as absolutely impotent, chemical means; the entire abortive police of an infectious epidemic is reduced to these two elements, WATER and FIRE; supreme cleanness, and intelligent and methodical cremation up to complete calcination of articles impregnated with the excreta of the sick. I say "intel-