seemingly more like the animal structures. They were observed in the blood in different phases of development, from small black points to large round cells with fringed margins and bright transparent centres. Investigators have at different times stated that the bacillus of cholera, of dysentery, and of a number of other diseases had been discovered, but nothing positively reliable has yet been made known regarding them.

Next to the marvellous propagating powers of bacilli is the great tenacity of life possessed by their spores. It is well known that in the higher organisms the seed will retain vitality sufficient for after germination and development in circumstances that would destroy the life of the plant itself. In like manner it is with these disease organisms; the parent rods are easily destroyed but the spores are possessed of wonderful vitality. It has been found that while living septic monads (the minutest organisms known) are killed by a temperature of 140° F., the spores of one variety, which are so minute that they cannot be seen except in groups by the highest powers of the microscope, will germinate after being subjected to a temperature of 300° F. for ten minutes. The spores of some of the bacilli however are, it appears, destroyed by a temperature much below this, and very fortunately so. Facts are wanting to prove what degree of heat the spores of the organisms of ordinary diseases can withstand without destruction. Here is a wide field for investigation.

As to the effect of frost on bacilli, Dr. Klein, F.R.S., in his recent experiments with the *bacillus anthracis* exposed in a capillary pipette fluid full of spores to the influence of ether spray, and having thus kept the fluid frozen for several minutes, he injected it into the guinea-pig and rabbit with fatal result. He then subjected spores in the same manner to repeated freezing, each time for several minutes; but these spores nevertheless retained their full virulence. Before forty-eight hours were over the inoculated animals were dead of anthrax. He placed a capillary tube filled with spores in a mixture of ice and salt, and kept it there for one hour exposed to a temperature of 21° to 27° F. below freezing point; after thawing, the material was injected into the subcutaneous tissue of a guinea-pig. This animal died of typical anthrax on the third day.

It is reported that the same living organism has been subjected to a temperature of—32° F., a temperature never reached in our climate, and yet the frozen liquid has, on being thawed, remained as potent for self-multiplication and for harm as before. It is also recorded in the same article that in Livingston Co., N. Y., animals