

United States Patent Office.

MARTIN ZIEGLER, OF MULHOUSE, FRANCE.

Letters Patent No. 60,986, dated January 1, 1867.

IMPROVED IMPONDERABLE FLUID, AND MODE OF GENERATING THE SAME.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, MARTIN ZIEGLER, of Mulhouse, in the empire of France, have invented or discovered a new and imponderable Fluid, and Method of Generating the Same, of which I hereby declare the following to be a full, clear, and exact description.

I have observed that whenever azote and carbon, or an azotic body and a carbonized body, or a body strongly azotic and another but slightly so, are brought in contact, an imponderable fluid is disengaged, the presence of which is manifested by certain peculiar effects upon animal or vegetable organisms. This fluid, which I call "vital fluid," is a new physical agent, generated, like heat, light, and electricity, in the midst of chemical circumstances. It may be collected and transmitted in currents, like the electric fluid, as will presently be shown; but whilst the phenomena by which its presence is manifested bear a certain analogy to electric phenomena, this fluid is nevertheless autonomic, and has a separate and independent existence; and the best and most convincing proof of this is that currents of the fluid may be conducted through non-electric substances.

Having described the nature of the fluid, I will now proceed to describe the manner in which it may be generated and brought to a condition in which it can be practically used. At the same time it will be understood that although I refer to and describe but one or two apparatus fitted for my purpose, I do not limit myself to such apparatus, but hold myself at liberty to use all processes which operate on the same principle to induce like results.

Azotic bodies are the best conductors of the vital fluid, and among them I prefer silk, which has the advantage of intercepting or insulating electric currents, the intervention of which would be detrimental to the fluid. As insulators for the fluid, glass, enamels, and minerals in general may be used.

The apparatus for generating the fluid all resemble the voltaic pile to a certain degree. Thus, in each is found a generator of the fluid with two heterogeneous chemical substances—the one with a carbon base, and the other with an azotic base—and two conducting threads (kinds of reaphores) for conducting the current and completing its circuit.

The following is a good arrangement to adopt: A bladder or like porous receptacle is filled with caustic ammonia, and is immersed to the neck in molasses contained in an ordinary jar or suitable vessel. A thread of silk is attached to the neck of the bladder or porous diaphragm, and the end of a second silk thread is placed in the molasses. The two pieces of silk are then united, and the circuit is thus completed and closed, through which the current of the vital fluid passes. The effect of the fluid will be manifested on an organized being who is in the course of the current. If a certain number of these elements are brought together in pairs, a dozen, for instance, a current of great power may be obtained which will produce on an animate being much more noticeable effects. The elements in this case are connected by plunging the thread of the ammonia of the first element into the molasses of the following element, and so on; or better, by uniting on one side all the ammonia threads, and on the other all those of the molasses.

A still better arrangement may be effected by means of glass tubes. For this purpose a glass tube is taken whose length is from ten to fifteen times its diameter. It should be slightly spread at its ends, and two cork stoppers are prepared entirely enveloped in a gold-beater's skin, (baudruche,) which is wrapped three or four times around each cork, and bound near the upper end of each with a silk cord which forms one of the conductors. The silk cord can also be made to pass through the tube, and this is even preferable. The tube being corked at one of its ends, a charcoal disk of no great thickness is placed in it.—On this disk are spread a few grains of silicious sand to prevent its contact with a second disk of charcoal, and care should be taken each time the sand is introduced to cover it with ammonia, in such manner that the whole will be finally immersed in the liquid. The tube being thus filled is closed by the second cork, and the vital fluid is then produced, and forms two currents which flow through the conducting threads. By uniting several of these elements, either placed end to end or brought together in a bundle, very powerful currents may be obtained.

The above-described apparatus produce good results, but in my experiments I have employed in preference the following: it is composed of tubes, corked at both ends as just explained, but instead of carbon and silicious sand with ammonia, the tubes are filled with alternate layers of powdered sugar of lead and cyanide of potassium, not too dry.

It is not necessary that I should further explain the construction or arrangement of these apparatus, which may be subjected to infinite modification according to the nature of their application and use to and in physiology, agriculture, and the industrial arts. By azotic bodies, in the above specification, I mean all bodies composed or consisting of azote.

Having described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

1. Producing a new imponderable fluid in the manner and by the means herein set forth and described.
2. The combination of two substances, the one containing azote and the other containing carbon, in the manner substantially as herein described, so as to generate an imponderable fluid, and to excite or produce a current of the same, as and for the purposes set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

M. ZIEGLER.

Witnesses:

EL. FRIES,

F. F. RANDOLPH.