

UNITED STATES PATENT OFFICE.

MATHIEU SOUVIELLE, OF PARIS, FRANCE.

DISINFECTANT.

SPECIFICATION forming part of Letters Patent No. 342,231, dated May 18, 1886.

Application filed April 16, 1885. Serial No. 162,475. (Specimens.)

To all whom it may concern:

Be it known that I, MATHIEU SOUVIELLE, a citizen of France, residing at Paris, France, temporarily residing at Washington, in the District of Columbia, have invented new and useful Improvements in Methods and Means for Preventing the Spread of Epidemic Diseases, of which the following is a specification.

My invention relates to improvements in compounds for destroying the germs of contagious and infectious diseases.

All epidemic diseases are either contagious, infectious, or zymotic, and may be transmitted in various manners, so that it is very desirable that some agent should be provided whereby the spread of such diseases should be prevented. I have discovered that by the employment of the agents or compounds hereinafter described, either by burning in infected places or by taking into the system in any suitable manner, the causes of contagious and other like diseases are eradicated or their effects rendered harmless.

The object of this invention, therefore, is to combine and arrange suitable prophylactic disinfecting and therapeutic agents that they may be readily burned in suitable quantities to give off in vapor the agents active and desired for the ends sought, or by immersion in water to impregnate the water therewith, so that it becomes when drunk an individual and preventive agent. In accomplishing this I use as a base for the composition the pure essence of vegetable tar—that is, vegetable tar purified and deprived of its acrid or noxious constituents or oils. With this is combined, as circumstances may require, dialyzed iron, carbolic acid, and sulphur, in the proportions about as follows: pure essence of tar, eight ounces; sulphur, one-half ounce; dialyzed iron, one-half ounce. Such composition, when burned, will yield vapors beneficial to the already affected, while sulphurous-acid gas will be given off, which is highly destructive to, in fact totally incompatible with, germ life, either animal or vegetable.

For the destruction of floating germ life and the prevention of the spread of disease due to the dissemination of such germs, it is better that the vapors of such composition arising

from its combustion should be used and the combustion extend over some period of time to insure for such time the impregnation of the atmosphere with such germ-destroying vapors. To accomplish this, a roll or plate of a suitable base is impregnated or covered with such a composition. The roll or plate may be of any desired size—quite small for use in a room or building, and of sufficient size to furnish a base for a large amount of the material for combustion in the open air. While this base may be metallic with a coating of the composition thereon, or mineral, as an asbestos cloth or fiber saturated therewith, a cheap and preferable form is a strip or shaving of porous or bibulous wood, thoroughly impregnated with the composition, so that all may burn for some moments of time and thoroughly fill the apartment or building with the germ-destroying vapors. Such a roll may also be used to prepare a medicated water, having properties imparted to it thereby which are destructive of germ life and the effects of germ life in individual cases. In this instance the roll is thrown into a portion of water and allowed to remain there for a while. By its action the water is purified and it becomes impregnated with the preventive and prophylactic properties of the composition, and then used as a beverage aids in the curing of germ diseases when they have already occurred and in the prevention of infection and contagion. In addition to its uses in a limited space, such as an apartment or building, it may be used in larger quantities throughout an entire district, village, or city. In such cases it need not be put up in the rolls and packages, which constitute it a new article of manufacture for domestic or household use, but may be put up in bulk with some base which insures slow combustion. If for some hours at the first and then for brief periods for several successive days it be burned at frequent points in an infected city or district, the vapors mingling with the atmosphere will destroy the life of the germs therein mingled and floating, and prevent the further infection. In such case it may be advantageous to use gunpowder with which an additional percentage of free sulphur has been mixed, the sulphur retarding the combustion of the gunpowder, while the gun-

powder insures the combustion of the added sulphur and the consequent liberation and elimination of a larger percentage of sulphurous-acid gas.

5 Frequent burnings at many points over an area or district will, it is now well known, cause a movement in the overlying atmosphere, producing currents of air, tending to produce rain. It is a fact that the movement
10 of air tends to produce an ozonification of the oxygen of the air—transforms or turns, so to speak, the oxygen into ozone, or that state of action which in oxygen is called "ozone." Ozone, or oxygen in this nascent, active state, is itself
15 destructive to germ life, and hence, so far as germ life and other atmospheric impurities are concerned, is a powerful disinfecting and prophylactic agent itself. This result accom-
20 panies air movements, whether they are produced by rarefaction at particular points, causing the movements called wind, or by the frictional move of solids, as hail, rain, &c., passing therethrough. Hence such use of my invention aids or tends to aid in producing such

movements of the air as cause ozonification, 25 whose effect supplements that of the liberated vapors.

Having thus described my invention, what I claim is—

1. The composition of matter for prophylactic, disinfecting, and therapeutic purposes, 30 consisting of the pure essence of tar, dialyzed iron, and sulphur, combined in about the proportions specified, and adapted to be used as described and for the purpose set forth.

2. A composition of matter for prophylactic, disinfecting, and therapeutic purposes, 35 consisting of the pure essence of tar, dialyzed iron, and sulphur, in about the proportions specified, spread upon or combined with a
40 suitable supporting-strip, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

MATHIEU SOUVIELLE.

Witnesses:

JOS. L. COOMBS,
J. A. RUTHERFORD.