

904,733.

C. STODDART.
SULFUR CANDLE.
APPLICATION FILED OCT. 12, 1906.

Patented Nov. 24, 1908.

Fig. 1.

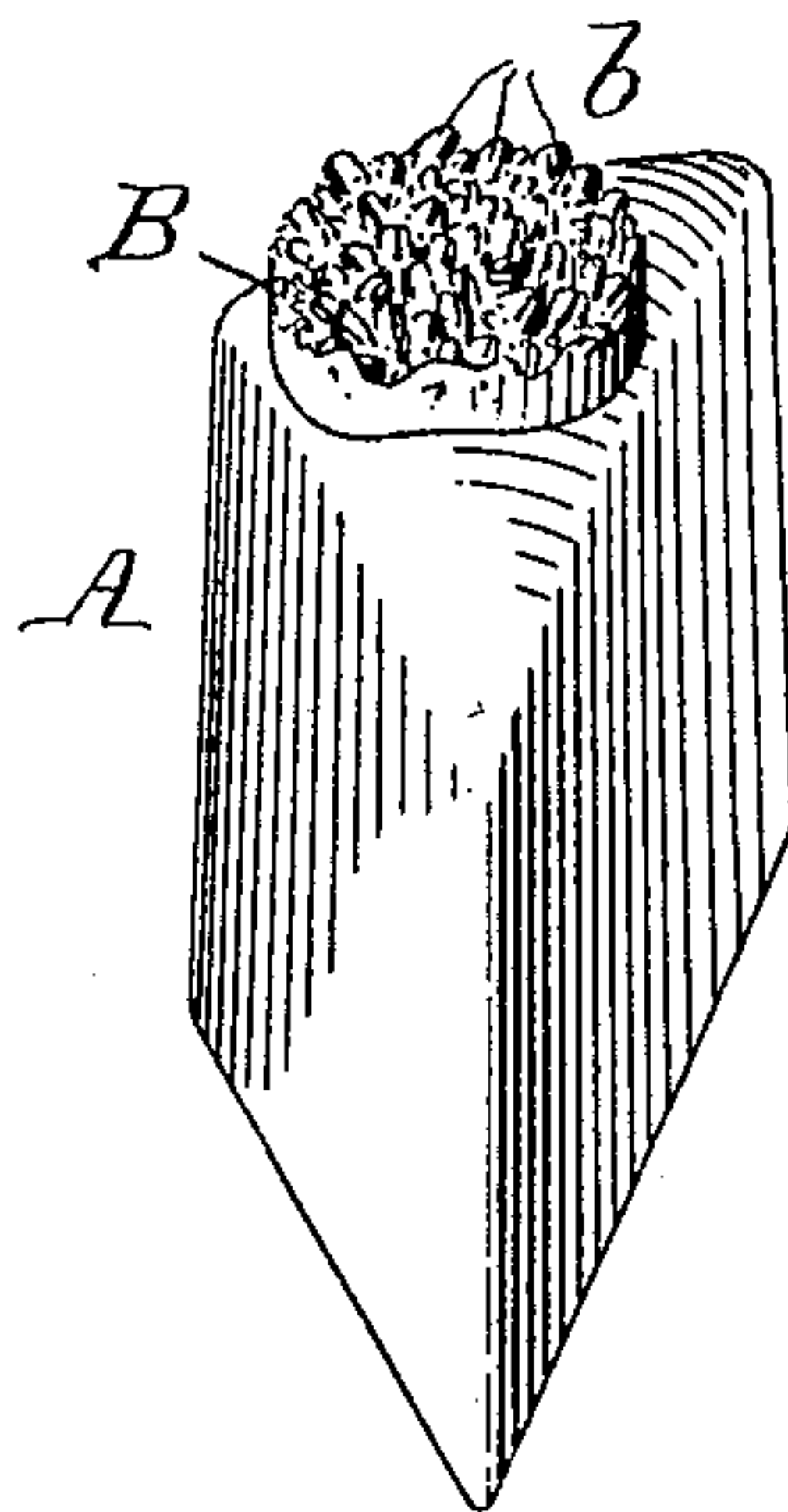
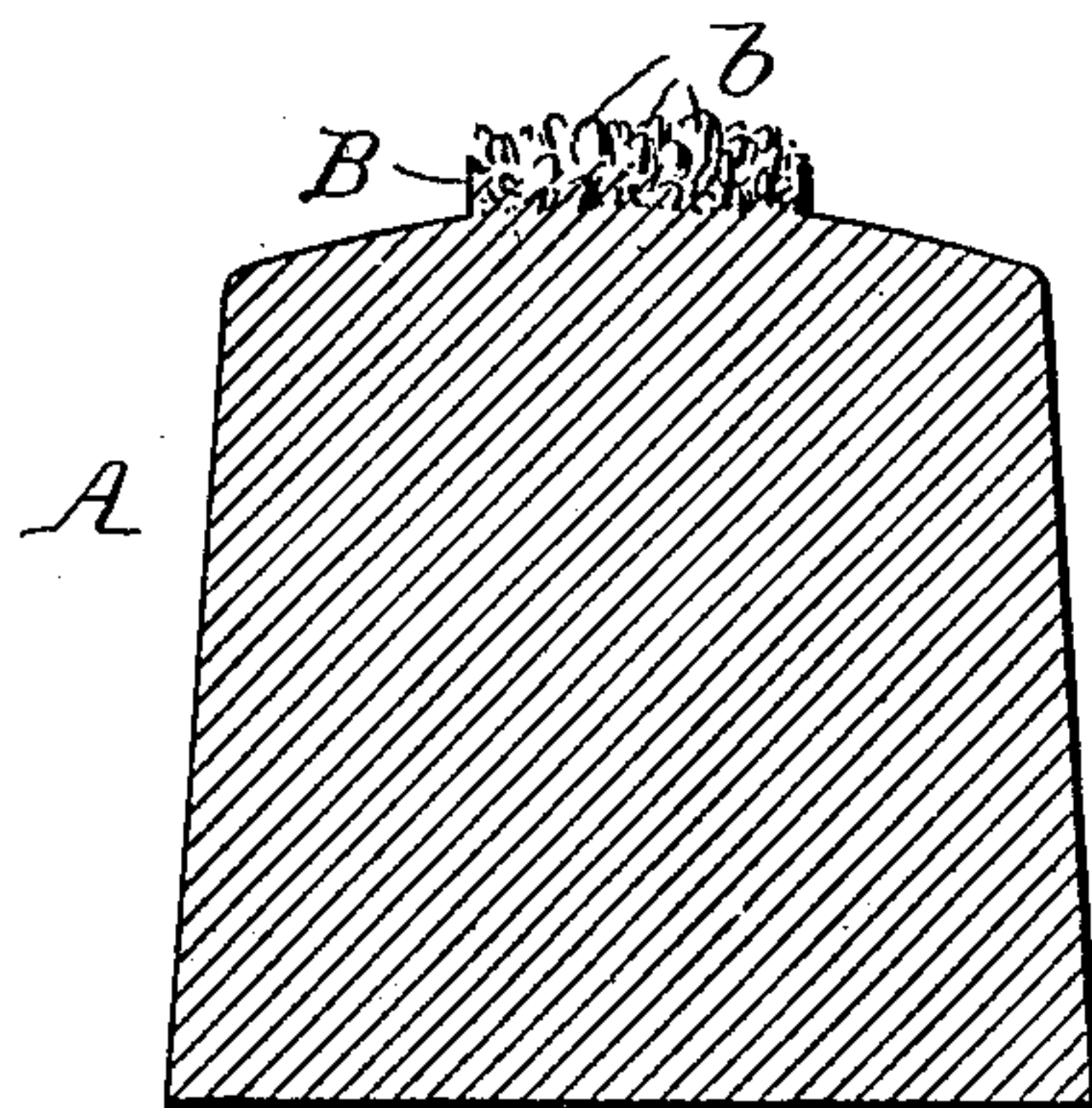


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES STODDART, OF BUFFALO, NEW YORK.

SULFUR CANDLE.

No. 904,733.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed October 12, 1906. Serial No. 338,547.

To all whom it may concern:

Be it known that I, CHARLES STODDART, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Sulfur Candles, of which the following is a specification.

This invention relates to improvements in sulfur candles used for disinfecting purposes and has for its object to construct a candle that can be readily lighted and will burn with great rapidity, thereby giving off a large amount of gas in a comparatively short time. It has been found necessary in candles of this character to provide some means for sustaining the combustion of the candle as the burning sulfur tends to smother itself in its own fumes. This has heretofore been accomplished by the use of wicks which extend down through the candle or are arranged in the upper portion thereof with their ends extending above the candle so that they can be readily lighted. Candles constructed in this manner, although generally easy to light, burn very slowly owing to the fact that these wicks are embedded in the sulfur and the air cannot reach the wick to support its combustion until the surrounding sulfur becomes melted by the heat. Since the combustion of these candles is slow, it necessarily follows that but a small amount of gas is given off at any time, and when used for fumigating rooms in which there is any opportunity for the gradual escape of the gas, the full strength of the gas cannot be obtained and the efficiency of the candle is greatly impaired. It has also been attempted to construct candles having fine threads of wicking distributed throughout the entire mass of the candle or the entire upper portion thereof. In practice, however, it has been found impracticable to manufacture candles of this character for the reason that, in mixing the threads of wicking with the melted sulfur preparatory to forming the candles, these threads become tangled together and form clumps or bunches so that it is impossible to secure their even distribution through the body of the candle. Unless these threads are evenly distributed, the candle will burn unevenly and slowly, the flame tending to follow the wicking leaving the other portions of the candle unconsumed. These candles are also subject to the same disadvantage as all other wicking candles in that the threads of wick-

ing are so buried in the sulfur that their combustion is very slow and uncertain. These difficulties are overcome in this invention by providing a means for supporting the combustion of the candle which is not embedded in the sulfur of the candle but rests on the top thereof, and as the sulfur becomes melted while burning, this combustion means floats on the melted mass. In this way it has access to the air and is free from the danger of being smothered by the melted sulfur or the gas arising therefrom. The combustion of the candle is thus kept active and constant. As no wicks or wicking are employed in this construction, these candles can be manufactured very cheaply and economically.

In the accompanying drawings: Figure 1 is a perspective view of a candle embodying the invention. Fig. 2 is a vertical section of the same.

Like letters of reference refer to like parts in both figures.

A represents the body of a sulfur candle and B represents the top or igniting part thereof containing the combustible material *b*. This combustible material consists of small granular particles of some combustible substance, preferably wood or wood pulp. The body of the candle is formed by pouring hot melted sulfur into a suitably shaped mold, where it is allowed to cool. The granular particles of the combustible material to be used are mixed with melted sulfur in a separate vessel, and when the sulfur in the candle mold has begun to cool, a small portion of this mixture is placed on the top thereof to form the ignition portion B. As the granular particles are considerably lighter than the liquid sulfur, they do not mix readily with the same but tend to float on the top thereof. For this reason, when these granular particles are dipped or poured out of the vessel in which they have been mixed with the melted sulfur, and are placed on the candle, only a small amount of sulfur will be found to adhere to these particles. When this cools, it serves to hold these particles in position on the top of the candle to form the ignition portion B but does not entirely cover or surround them, portions thereof being more or less exposed to the air. This permits of these granular particles being easily lighted and burning readily until the sulfur of the candle proper is ignited. As the heat produced causes the sulfur of the candle to

melt and run, these burning particles of combustible material will float upon the melted sulfur and will keep the combustion of the same active, the gas escaping from the burning sulfur serving to prevent these particles from being entirely consumed until the sulfur has been completely burned. It is obvious that any other suitable means might be employed for distributing the granular particles of combustible material upon the top of the candle and securing the same in place thereon. I prefer, however, to use melted sulfur for this purpose for the reason that its presence among the particles of combustible matter in the ignition portion of the candles serves to prevent a too rapid combustion of these particles when the candle is first lighted before the sulfur has begun to burn. Unless some such means is thus employed for preventing too rapid combustion, it is necessary to employ a much larger amount of combustible material in the ignition portion of the candle.

I claim as my invention:

- 25 1. A sulfur candle comprising a solid block of sulfur having arranged on the top thereof

a thin layer of granular particles of combustible non-explosive material, substantially as set forth.

2. A sulfur candle comprising a solid block of sulfur having arranged on the top thereof a thin layer of granular particles of combustible non-explosive material which are of less specific gravity than the sulfur of the candle, which particles will float on the surface of the sulfur when melted and project above the same, substantially as set forth.

3. A sulfur candle comprising a solid block of sulfur having arranged on the top thereof a thin layer of granular particles of ligneous material which will float upon the surface of the sulfur when melted and project above the same, thereby preventing said particles when burning from becoming extinguished by the melted sulfur, substantially as set forth.

Witness my hand, this 9th day of October, 1906.

CHARLES STODDART.

Witnesses:

EDWARD C. HARD,
A. L. MCGEE.