

(No Model.)

R. W. JOHNSON.
SULPHUR CANDLE OR FUMIGATOR.

No. 499,324.

Patented June 13, 1893.

Fig. 1.

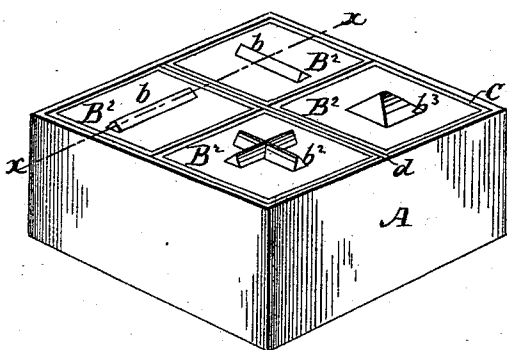


Fig. 2.

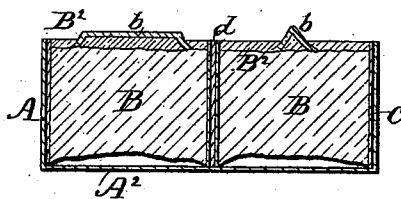


Fig. 3.

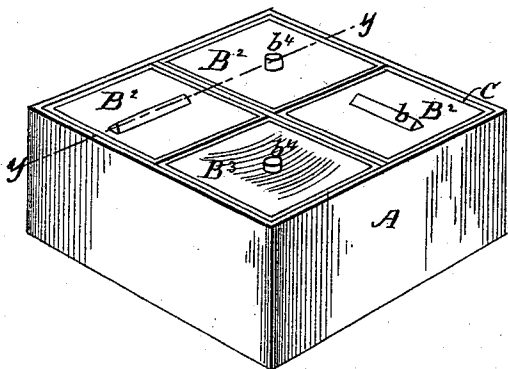
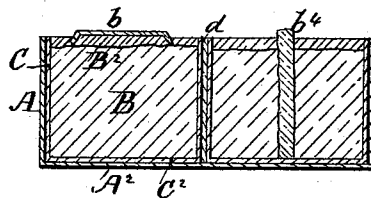


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT W. JOHNSON, OF NEW BRUNSWICK, NEW JERSEY.

SULPHUR CANDLE OR FUMIGATOR.

SPECIFICATION forming part of Letters Patent No. 499,324, dated June 13, 1893.

Application filed October 15, 1892. Serial No. 448,972. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. JOHNSON, a citizen of the United States, residing at New Brunswick, in the county of Middlesex, State of New Jersey, have invented certain new and useful Improvements in Sulphur Candles or Fumigators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sulphur candles or fumigators used for disinfecting various localities, and for the destruction of insects; and the objects of my improvement are to produce fumigators of convenient form and weight, and suitably packed in series, to facilitate their storage and sale by druggists.

Another object is to produce a fumigator having incorporated in one of its faces a compound of sulphur and of a chemical salt more inflammable than sulphur and a wick of textile material, to easily light and vaporize said fumigator.

I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a series of fumigators constructed in accordance with my invention. Fig. 2 is a vertical section of the same on line *xx* of Fig. 1. Fig. 3 is another series of fumigators constructed in accordance with my invention and placed in a closed bottom box. Fig. 4 is a vertical section of the same on line *yy* of Fig. 3.

In said drawings A represents a rectangular box of non-inflammable material, preferably of cardboard impregnated or coated with alum or silicate of soda. Said box is provided with a bottom A² of non-inflammable material. The top of said box is generally coverless. When the fumigators are packed in large boxes for shipment, the layers of boxes are separated by sheets of pasteboard.

Within the boxes A are placed the series of preferably four, small fumigators B, each weighing about a quarter of a pound. Said fumigators are preferably in the form of cubes, to permit a closer packing thereof although they may be cylindrical or of other form.

The fundamental principle of this invention consists in producing a sulphur fumigator of a molded block of sulphur having its sides inclosed in a box, and also having attached to

or incorporated into, its upper face, a chemical compound more readily inflammable than sulphur, and a wick in said compound. Various forms may be given to the top of this compound as will be hereinafter described.

In Fig. 1 the sulphur blocks B have incorporated in their upper face a chemical compound B² of sulphur and chlorate or nitrate of potash, or other well known chemical combustible, and within said compound is embedded a wick of textile material or of asbestos paper *b* folded to form a ridge, a pyramid or a projection of any desired form generally projecting slightly above the flat or concave top of the chemical compound. The blocks are preferably molded within their inclosure C, which is formed of a suitably creased and bent strip of either thin pasteboard or cardboard, either plain or treated with non-inflammable material as alum or silicate of soda or it may be asbestos board. The blocks are generally molded with their intended upper face down upon a suitably recessed surface and in the recess is placed the wick, or at least a portion of the upper end of the wick. Said wick consists preferably of a narrow strip of cotton cloth as shown at *b* in the drawings. It is creased and partly folded lengthwise and placed in that recess of the mold and the strip or box C placed around it. A small amount of the melted chemical igniting compound B² is then poured upon and around the wick *b* in the bottom of the box C; and immediately after, the melted sulphur is poured therein within the box C until it is nearly, or entirely filled. When the sulphur has congealed the fumigator becomes completed. The wick may be the form of a cross as shown at *b*² by having strips of cloth crossing each other in the mold or may be in the form of a pyramid as shown at *b*³. The wick may also be of cotton wicking slightly impregnated with the igniting compound as shown at *b*⁴ and be made to extend through the sulphur block and the compound B² adhering to said block. The igniting end of the wick projects slightly above the top surface of the fumigator, and said surface may be flat, or concaved as shown at B³ in Fig. 3.

Although the fumigators are preferably molded upside down they can also be molded within a box provided with a bottom as shown

at C² in Fig. 4 by pouring the plain melted sulphur, first within said box until nearly full and on top thereof the igniting compound B², and on top of said compound the wick *b*, or any one of the wicks above described. The surface of the block is then smoothed with a suitable tool and well compacted around the wick. To keep the burning sulphur from overflowing the box A the latter is made slightly larger than the volumes of the boxes C, but the latter are kept immovable within the box A, during transportation by a strip of pasteboard *d* inserted between the boxes C; but said strip can be easily removed before firing the fumigator.

Having now fully described my invention, I claim—

1. A sulphur fumigator consisting of a molded block of sulphur, inclosed in a box of non flammable material and having incorporated in one of its faces and in contact with said block a compound of sulphur and of a chemical salt more inflammable than sulphur and a wick of textile material.
2. A sulphur fumigator consisting of a molded block of sulphur inclosed in a box of non flammable material, and having incorporated in one of its faces, a compound of sulphur and of a chemical salt more inflammable

than sulphur, and a wick of textile material coated with said compound of sulphur and chemical salt.

3. A sulphur fumigator consisting of a molded block of sulphur inclosed in a box of non flammable material and having incorporated in one of its faces a compound of sulphur and of a chemical salt more inflammable than sulphur, and a wick of textile material impregnated with said compound of said sulphur and chemical salt projecting as a ridge from said face of the block.

4. A sulphur fumigator consisting of a series of molded blocks of sulphur, each inclosed in a non flammable box and having incorporated in one of its faces a wick of textile material coated with a compound of sulphur and of a chemical salt more inflammable than sulphur, and a non flammable box of greater internal area than the volume of all the boxed blocks of sulphur placed therein, substantially as and for the purpose described.

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

ROBERT W. JOHNSON.

Witnesses:

THOS. G. PHINNY,
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