Feb. 22, 1944. R. LATTA ET AL 2,342,406

FUMIGANT BAG

Filed Nov. 16, 1942

Fig. 2.

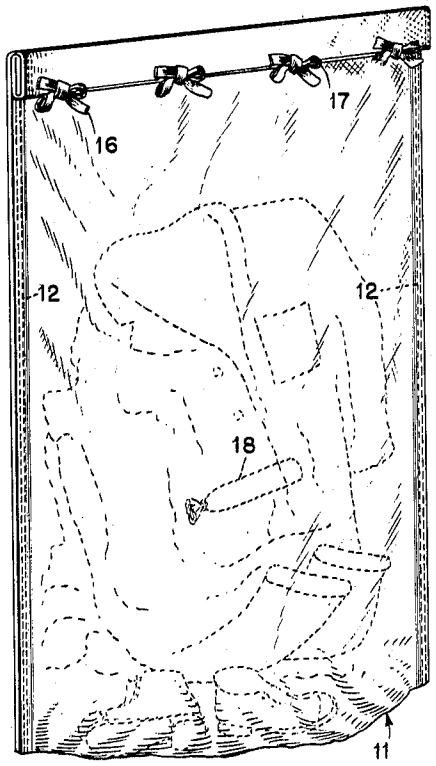


Fig. 1.

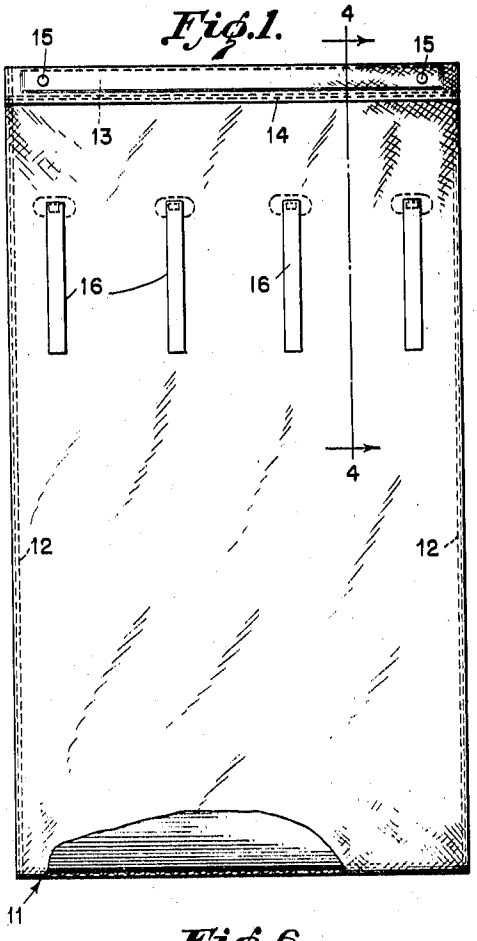


Fig. 4.

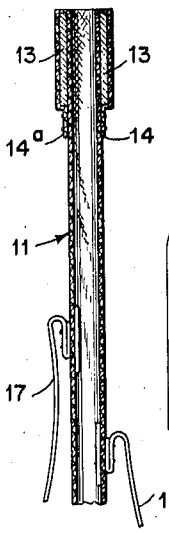


Fig. 5.

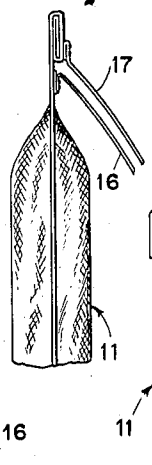


Fig. 6.

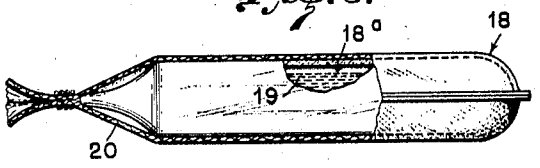
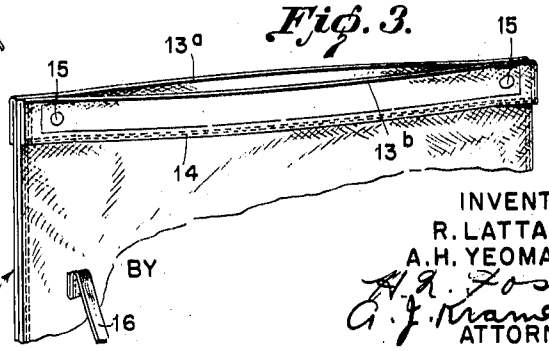


Fig. 3.



INVENTORS
R. LATTA
A. H. YEOMANS
A. R. Foss.
G. J. Kramer
ATTORNEYS

Patented Feb. 22, 1944 2,342,406

UNITED STATES PATENT OFFICE

2,342,406

FUMIGANT BAG

Randall Latta and Alfred H. Yeomans, Washington, D. C., assignors to Claude R. Wickard, as Secretary of Agriculture of the United States of America, and his successors in office

Application November 16, 1942, Serial No. 465,670

1 Claim. (Cl. 206—10)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This application is made under the act of March 3, 1883, as amended by the act of April 30, 1928, and the invention herein described and claimed, if patented, may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment to us of any royalty thereon.

This invention relates to fumigant bags, and one of its objects is the provision of a device which is simple and efficient and which can be used for the purpose of fumigating clothes by itinerants, such as travelers, men in the armed forces, and others.

The device of our invention is light in weight and can be folded into a small space, so that it can be easily carried on the person or packed in a suitcase or trunk.

This invention is especially useful for freeing clothing from lice, which are prevalent among soldiers in wartime. This insect is very difficult to exterminate by ordinary methods. It is ordinarily necessary to use dangerous fumigants, which are difficult to handle. The method of this invention has been found to be successful for this purpose because it permits the use of fumigants which are highly effective against lice, but which are dangerous and difficult to handle by other methods. Such fumigants can be used in the present invention without danger or without any special knowledge or technic.

Other objects and advantages of this invention will be apparent from the following description, considered together with the accompanying drawing, in which drawing:

Figure 1 is a front elevational view of an embodiment of the device of my invention unsealed and empty with a part broken away.

Figure 2 is a three-dimensional view illustrating the device of Figure 1 sealed and filled with clothes to be fumigated.

Figure 3 is a fragmentary, three-dimensional view showing the top of the device with the mouth partly open.

Figure 4 is a section along the line 4—4 of Figure 1.

Figure 5 is a side elevational view of the top portion of the device as it appears when it is folded down and ready to be tied.

Figure 6 is an elevational view of the ampoule used with the device illustrated in the other figures, with a portion thereof in section.

Referring with more particularity to the drawing, in which like numerals designate like parts, the embodiment illustrated comprises a bag 11 of a relatively gas-tight material. We have found light canvas duck coated or impregnated with ethyl cellulose to be particularly desirable for this purpose. We have also found laminated waterproof paper to be satisfactory.

The bag is preferably fabricated of one piece of material, as shown, so that only a few seams are necessary. Seams 12 are sewed on the sides and are sealed with adhesive. It is recommended that the bag be of a size to hold about 25 pounds of loosely packed woolen clothing, which would make its size about 28" by 56".

The inner surfaces of the bag are given a smooth finish, which may be accomplished by applying an extra coating of ethyl cellulose or other suitable material.

At the top of the bag, which is the open end or the mouth, each side is folded down outwardly over a stiff, but bendable, strip 13, such as, belting material, to form lips 13*a* and 13*b*, and secured to the outside of the bag by stitchings 14 and 14*a*, which stitchings are also sealed with an adhesive. The ends of the strips 13 are secured together with rivets 15. With these means a gas-tight closure can be effected by pressing the lips together, which brings the smooth surfaces on the inside of the bag together at this point, and folding down several times both strips together in this position, as shown in Figure 5. This pressure seal is maintained by holding the folded portion down with tie straps 16 and 17, suitably disposed on the sides of the bag.

The bag is preferably used with an ampoule 18, comprising a container 18*a* of breakable material, such as glass, containing a liquified gaseous fumigant 19 under pressure, such as methyl bromide, and covered with a protective cloth 20, so that when the container is broken, the liquid is released in the form of a vapor through the cloth 20, while the broken pieces are retained without harming any clothing in the bag.

To use the device, the bag is opened, and due to the construction at the mouth or open end, it may be held in an open position by resting one end of the mouth against the body of the user or against a fixed object, such as a wall, and pushing against the other end with one hand, leaving the other hand free to place the clothing to be fumigated in the bag. The ampoule containing the fumigant is also placed in the bag with the clothing, no special precaution being necessary. The bag is then closed at the top and sealed as explained above. The ampoule is then located and broken by stamping on it or by hitting it through the

bag with a heavy object. The bag may then be put aside in any convenient place and the fumigation process permitted to go on. When the ampoule is broken, the liquified fumigant escapes and vaporizes, and permeates the clothing in the bag. At the end of the fumigation period, say one-half hour, the bag may be opened and the clothing removed and aired, or the clothing may be permitted to remain in the bag indefinitely.

Having thus described our invention, we claim:

A fumigant bag comprising a foldable container of gas-proof material and construction having an open end through which clothing may be inserted, said open end having a strip of stiff flexible material on either side secured to the container, the ends of said strips being permanently and rigidly secured together, the inner surfaces of the container at the open end being smooth, whereby they can be pressed together to form substantially a gas-tight seal by applying pressure against said strips, and when so pressed together can be folded down with a portion of the bag to maintain the seal, and means for releasably securing the folded portion in position.

RANDALL LATTA.
ALFRED H. YEOMANS.