Jan. 23, 1968 F. W. KNAPP 3,364,900

INSECTICIDE DUST BAG

Filed May 25, 1966

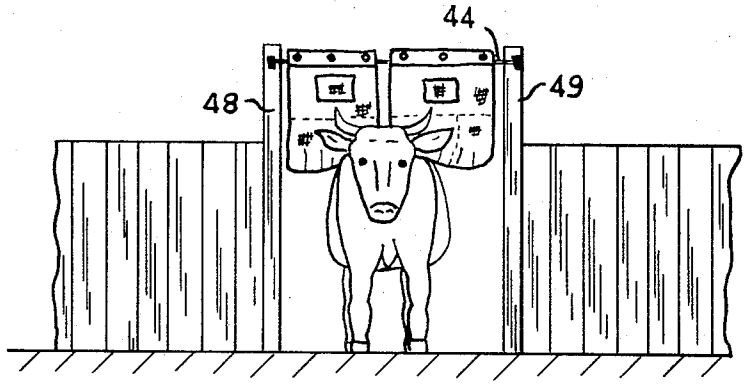



FIG. 1

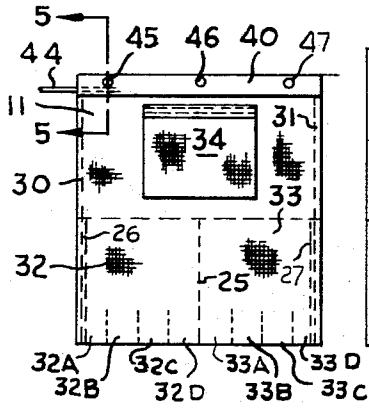



FIG. 4

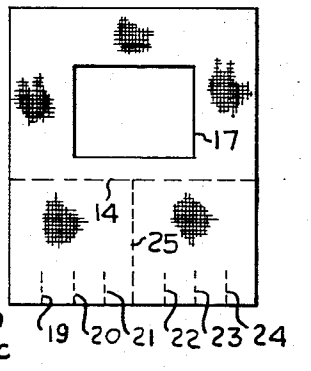



FIG. 3

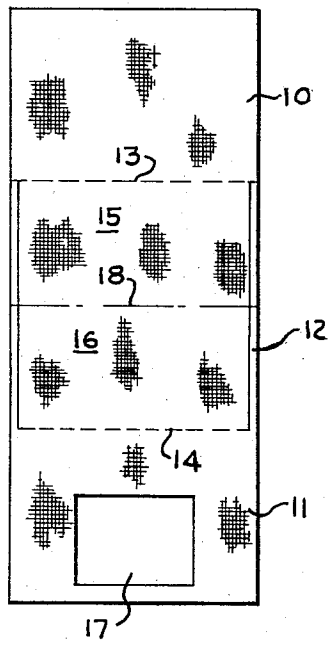



FIG. 2

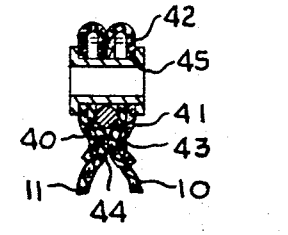



FIG. 5

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# INSECTICIDE DUST BAG

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This invention relates generally to animal husbandry and more particularly to a bag in which insecticide dust may be contained and efficiently dispensed therefrom by the animal being treated.

The use of porous bags for dispensing dust is, of course, well known. In general, such bags are susceptible to wastage of dust and since over the period of the useful life of the bag the value of the dust being handled is many times that of the value of the bag, a requirement exists for a bag in which such wastage can be reduced, if not entirely eliminated. Such wastage may occur during the depositing of the dust in the bag, or as a result of tearing of the bag by the animal, or due to weather conditions or otherwise, and it is a purpose of the present invention to overcome disadvantages of this nature as found in conventional dust dispensing devices.

An object of the invention is to provide a simple and inexpensive bag for dispensing insecticide dust and similar materials.

Another object is to provide a dust dispensing bag containing an inner lining having pockets therein acting to reduce loss of dust in the event of a tearing of the bag.

Another object is to provide a dust dispensing bag having a lining which is movable in part with respect to the outer cover of the bag in order to aid in a more uniform distribution of dust on the outer surface of the composite bag.

A further object is to provide a dust dispensing bag having an improved means for aiding in the introduction of dust into the bag.

Still a further object is to provide a dust dispensing bag adapted to be supported in an optimum position for agitation by an animal.

Other objects and advantages will become more apparent as the description proceeds and when considered in conjunction with the accompanying drawing in which:

FIG. 1 is a diagrammatic view showing the bag in use in the dusting of an animal.

FIG. 2 is a plan view illustrating relative positions of the inner and outer sheets of material at an initial stage of fabrication of the bag.

FIG. 3 is a front elevation view of the partially completed bag.

FIG. 4 is a front elevation view of the completed bag, and

FIG. 5 is a sectional view to a larger scale taken on line 5—5 of FIG. 4.

By way of illustration and not of limitation and now referring to FIG. 2, a rectangular sheet of flexible fabric material, such as conventional burlap, forms the outer covering for the bag and includes a back portion **10**, a front portion **11** and an intermediate portion **12** symmetrically joining the back and front portions. Overlying the intermediate portion and attached thereto as by parallel stitches **13**, **14** is a smaller sheet of fabric material such as muslin, having a back wall **15** and a front wall **16**, the function of which as an inner lining for the bag will later appear. A generous sized aperture **17** of any suitable shape is cut into the central region of the front portion **11** of the larger sheet outboard of stitch **14**.

Either before or after the thus described joined sheets are folded upon themselves along the line diagrammatically indicated at **18**, the front and rear walls of the lining sheet are joined to each other, but not to the outer sheet,



as by a series of generally vertical stitches **19** to **24**, which, for example, may be about three inches in length and extend upwardly from the fold line **18**. In addition, the front and rear walls of the lining sheet are joined to each other, but not to the outer sheet, by means of longer end stitches **26** and **27**. Moreover, the front and rear walls of the lining sheet are joined to each other and to the outer sheet by a longer stitch **25** terminating at its upper end adjacent stitch **14** and at its lower end adjacent the bottom edge of the bag.

Referring now to FIG. 4, side stitches **30** and **31** are provided in the folded bag material thus to join the front and back wall portions **10**, **11** of the outer sheet to each other, but not to the inner sheet. As thus constructed, the bag comprises two major lined pockets **32**, **33** separated by the long stitch **25** and with minor pockets **32A** to **32D** and **33A** to **33D**, respectively, separated by the short stitches **19** to **24**.

As will further be noted, the opening **17** is above the adjacent parts of the two major pockets and when the user adds dust to the bag, as by means of a scoop, the front outer wall **11** of the bag can be pulled away from the rear outer wall **10** by hand and dust can fall directly into each of the major pockets without spilling outside the bag. Upon falling into the major pockets, such dust also falls into each of the minor pockets. The upper edges of short stitches **19** to **24** also act as weirs over which dust can shift from one minor pocket to another when the bag is disturbed by the animal. This feature aids in distributing dust more uniformly to the outside of the bag.

The bag further includes a flap **34** of flexible material, such as burlap, stitched to the front wall **11** above the upper edge of the aperture **17** and having a size sufficiently large to cover that aperture completely. This flap not only protects the interior of the bag against weather conditions, but also prevents dust from escaping as a cloud into the atmosphere when the bag is agitated.

In fabricating the thus-described bag, means are provided for supporting the bag and its contents and as shown in FIGS. 4 and 5, one useful arrangement comprises the folding downwardly of the extreme edge portions **40**, **41** of the back and front portions of the outer sheet, it being understood that the side stitches **30**, **31** do not extend into those edge portions. The resulting four-ply structure is held together by strong reinforcing stitches **42**, **43** extending completely across the top of the bag. As will be seen, a space is available between the confronting surface of sheet portions **10** and **11** between the reinforcing stitches for reception of a rod, wire, or the like **44**. In addition, metal grommets as shown at **45**, **46**, **47** may be mounted in the four-ply structure to provide an alternative mode of supporting the bag and to give further reinforcement.

Having thus described the preferred bag construction, reference is made to FIG. 1 showing one arrangement for utilizing the same. By means of a rod or wire **44** attached to elevated structure such as gate posts **48**, **49** one or more of the bags containing dust are suspended in position to be jostled by an animal. The dust employed may be of any conventional nature, such as the organic phosphate dust commercially available under the trademark Ciodrin, from Shell Chemical Company. When first deposited in a new bag such dust, after agitation, gradually works its way through the pores of the inner lining and as the lining shifts with respect to the outer sheet, that outer sheet becomes coated with dust in a substantial uniform manner as dust shifts from one minor pocket to another. Further agitation causes the dust to deposit upon the animal.

In the event the horns of an animal tear a portion of

the outer sheet no significant loss of dust occurs. If the tear should extend into the lining, only that dust in the major pocket of the torn lining would be lost and unless the tear of the inner lining should intercept all of the minor pockets of a particular major pocket, some dust would still be available in that major pocket.

Although the present invention has been illustrated in connection with a preferred embodiment, it is to be understood that modifications and variations may be resorted to without departing from the spirit of the invention. Such modifications and variations are considered to be within the scope of the invention as defined by the following claims.

What is claimed is:

1. Means for dispensing a dust material upon animals and comprising a bag adapted to contain said dust, means for supporting said bag in position to be agitated by an animal, said bag including a flexible outer sheet of fabric material and a smaller flexible sheet of fabric material serving as an inner lining, said smaller sheet having a porosity sufficient to pass dust therethrough upon agitation of the bag but with a porosity less than that of said outer sheet, and means for introducing dust into said bag and including an aperture located above said smaller sheet, said smaller sheet being attached to said outer sheet along seams generally parallel to and above the bottom edge of said bag and being adapted to shift its position throughout a substantial area with respect to the adjacent portion of said outer sheet beneath said seams, whereby upon introduction of dust into said bag said inner lining serves to contain the same and upon agitation of the bag by said animal said dust may work its way through said inner lining and be distributed over the exposed surface of the lower portion of said outer sheet.



2. A bag as described in claim 1 including a plurality of pockets in said lining located beneath said aperture.

3. A bag as described in claim 2 wherein said pockets include a plurality of larger sized pockets each of which includes a plurality of smaller sized pockets.

4. A bag as described in claim 1 including a flexible cover for said aperture.

5. A bag as described in claim 1 wherein the upper edge of said bag includes folded layers of said outer sheet fastened to each other and forming a reinforced, closed upper edge for said bag.

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