Aug. 25, 1953 W. D. L. ANDERSON 2,650,011

TRANSFER MEANS FOR PILLOW FEATHERS AND THE LIKE

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FIG. 1

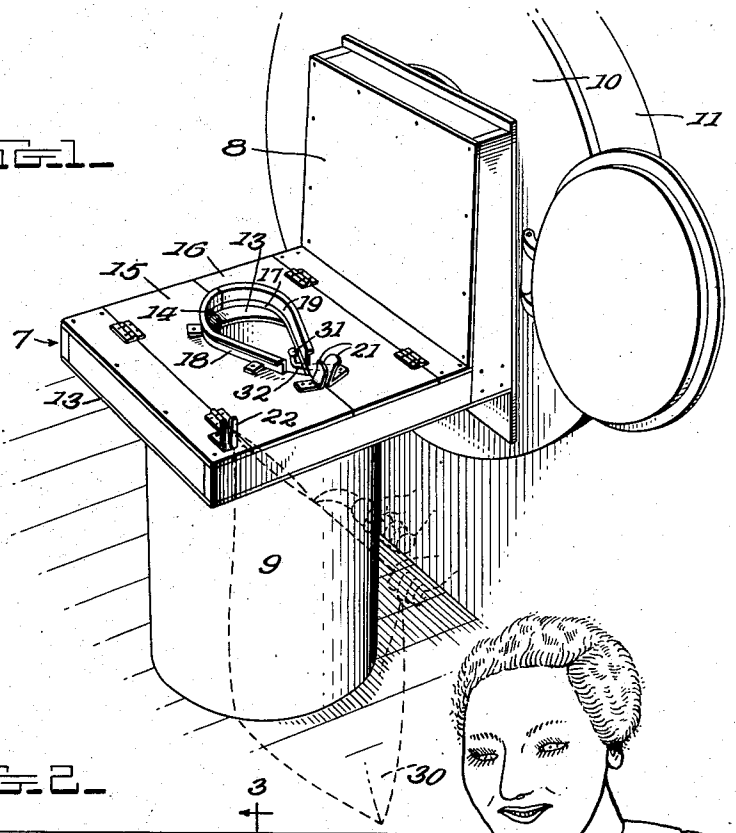
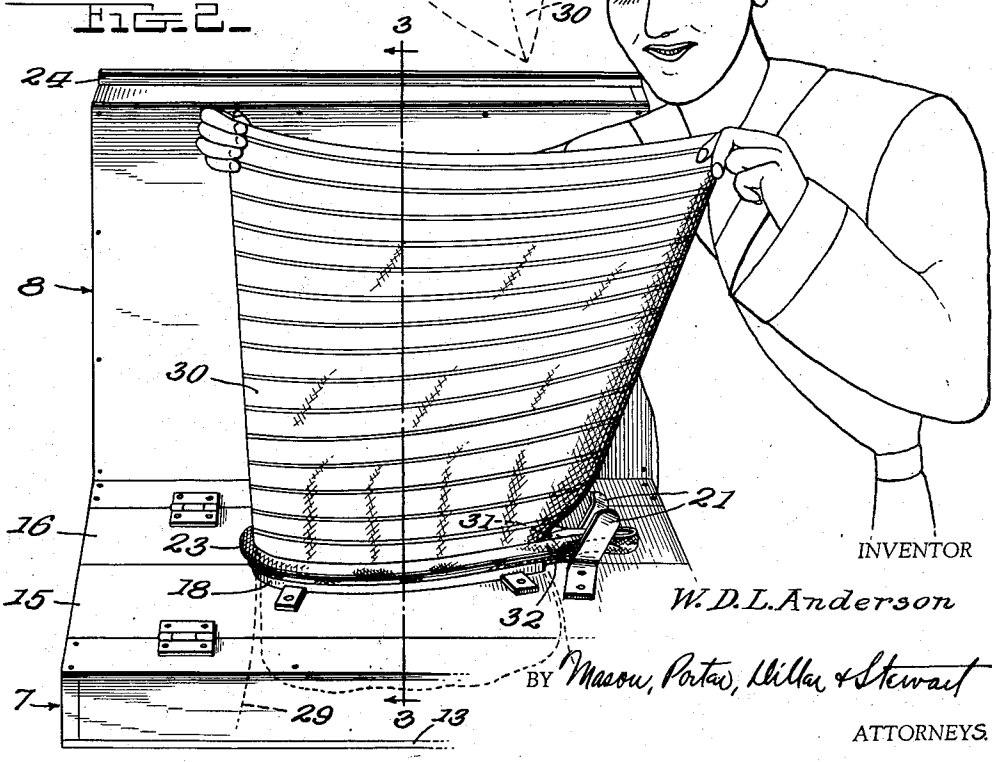


FIG. 2



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FIG. 3

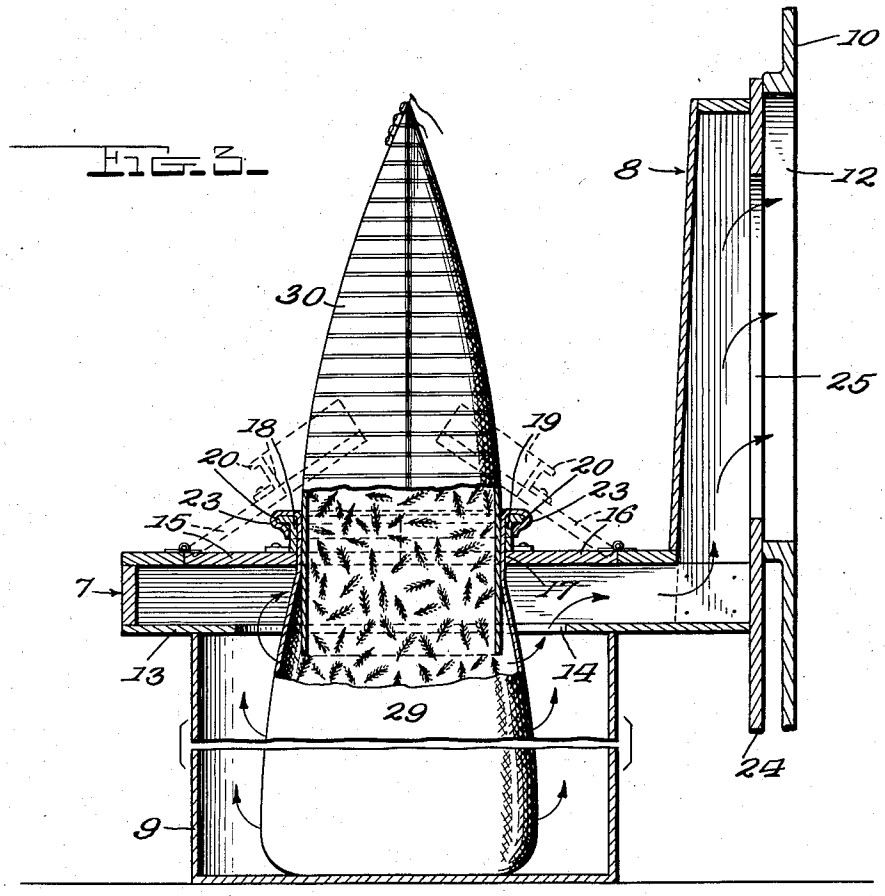


FIG. 4

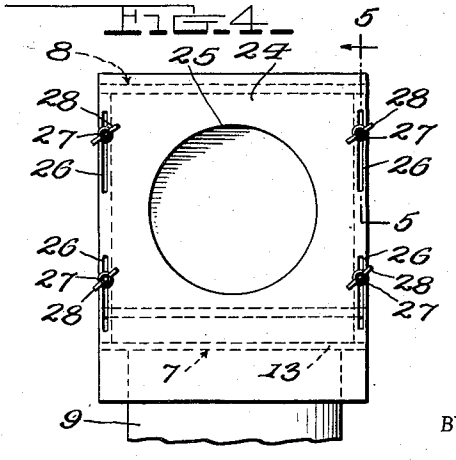
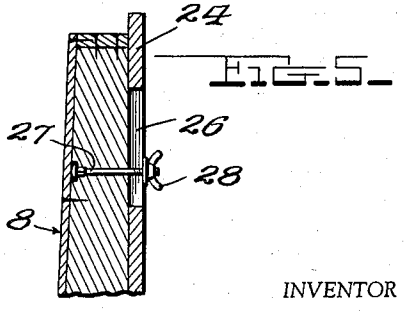


FIG. 5



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UNITED STATES PATENT OFFICE

2,650,011

TRANSFER MEANS FOR PILLOW FEATHERS AND THE LIKE

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Application February 13, 1951, Serial No. 210,769

3 Claims. (Cl. 226—43)

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The specification which follows deals with an improvement in transfer means for pillow feathers and the like. In particular, the invention is in means for emptying the feathers or other filling from a pillow tick, so that the tick may be laundered while the filling material is cleaned and renovated separately.

In carrying out the operation, it is important to provide facilities for rapidly emptying the pillow of its contents and collecting such contents without dissipation or loss.

Broadly speaking, the invention provides means by which moderate suction can be applied to a pillow tick, and the contents discharged by the combined effect of gravity and suction into a porous receiver, while the dust and all small particles are drawn off by the suction and discharged.

One of the objects of my invention is to provide improved means for holding a receiver, such as a porous bag, during the operation of transferring to it the contents of a pillow or the like.

Another object of my invention is to hold the receiving bag so that it may be readily removed at the completion of the transfer operation.

A still further object of my invention is to provide associated means for holding the pillow while it is being ripped open for subsequent emptying.

The invention is applicable primarily to pillows containing feathers, kapok, flock and similar natural or synthetic fibres, but may also be utilized in emptying bags containing other materials, for example seeds, grain, flour and the like.

In order to illustrate my invention, as applied to the transfer of feathers from a feather pillow, I have shown it in the accompanying drawings in which:

Fig. 1 is a perspective view of the improved transfer means;

Fig. 2 is a similar view, enlarged, showing removal of feathers from a pillow tick;

Fig. 3 is a vertical section of the device in operation.

Fig. 4 is an elevation of the adjustable discharge vent and

Fig. 5 is an enlarged fragmentary vertical section taken on line 5—5 of Fig. 4, of the vent adjustment.

As pointed out above, the invention, while illustrated for the purpose of example to show the transfer of feathers and the like from pillows, may also be used wherever it is desired to empty a similar bag of material.

The invention is embodied in a housing 7, made

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of boards or similar material and adapted to be supported in a manner consistent with the intended use. One part of the housing is extended vertically to form a flue 8 by which a low draft or gentle suction can be applied to the housing.

The housing is removably mounted on an open-ended drum or barrel 9. The drum and housing are placed adjacent a partition 10 which may form part of a tumbler 11, or the like, equipped to provide suction through an opening 12.

The housing 7 is in the form of a flat box which has a bottom 13 with an opening 14. This bottom opening is smaller than the open end of the drum 9 upon which the housing rests.

The top of the box has two hinged covers 15, 16, which meet on a line across the middle of the box. The meeting edges of the covers are cut away to form an opening 17. This opening is in the form of a horse-shoe or tear-drop, the smaller end of which merges into the meeting edges of the covers.

The covers 15 and 16 support an ovate bag-holder or rack. This is formed of two flanged collars 18, 19. These collars conform to the outline of the opening 17 and have outwardly extending flanges 20. The collars meet at the broader end of the opening 17 and are slightly spaced at the narrower end.

At the narrow end of the opening 17, each edge of the covers 15, 16 is provided with a finger 21. These fingers are angle bars having upwardly diverging free portions, but quite close together at the base, so that they provide a clamping or wedging action against inserted fabric which may thus be held securely.

One corner of the housing top carries a spring clip 22 in the form of a slotted plate.

The vertical flue 8 forming the back edge of the box is also made of wood or similar sheet material and has fixed front, side walls and top.

The rear wall 24 of the flue is formed as a movable panel, having a central opening 25. The panel has a series of slots 26 in line with the side walls of the flue. These side walls carry outwardly extended bolts 27 which pass through the slots 26. Wing nuts 28 are provided on the free ends of the bolts 27 and serve to hold the panel 24 in adjusted position, so that the opening 25 may be brought suitably opposite the opening 12 of the suction partition.

A collector-bag 29 of foraminous or otherwise porous fabric is dropped through the opening 17 into the drum 9, with the open end of the bag opposite the collars 18, 19. Wrapping the open end of the bag at 23 around the flanges 20 of

the collars, the slack of the bag opening is drawn through the fingers 21 and clamped therebetween.

The pillow tick 30 which is to be emptied is attached by one corner to the slotted plate clip 22, as indicated in dotted lines at Fig. 1. This permits the stitching at the end of the pillow tick to be ripped open. The open end of the pillow is then dropped through the open end of the collector-bag, and a considerable portion of the filling of the pillow will drop by gravity into the bag. This operation is facilitated by suction applied through the flue 8 to both the box and the supporting drum. By this means, the pillow is entirely emptied of any contents. The feathers or the like are caught in the bag, while small dust and other fine material is drawn through the bag and out of the flue 8.

The suction applied through the pillow will serve to completely empty it of the contents. The pillow tick is then ready for cleaning separately.

While grasping the loose portion of the open end of the collector-bag, as clamped between the wedged fingers 21, the upper end of the bag may be closed, and the upper end of the bag may be gathered together at the top and pulled up through the cover.

An important feature of the device at this point is that the gathering of the upper end of the bag frees the collars 18, 19 and permits independent movement of the cover sections 15, 16. The loose material contained in the collector-bag gives the latter a width greater than the opening through which the material was received. As the bag is lifted, the cover sections 15, 16 are pushed up into inclined positions, as shown in dotted lines in Fig. 3. The removal of the loaded bag is therefore facilitated.

The bag and its contents are then in condition for renovation of the feathers and any required treatment.

To prevent the receiving bag from being caught between the covers 15 and 16 at the narrower end of the opening, or between the fingers 21, I provide a guard or stop 31 mounted on a rod 32. Rod 32 is held beneath the covers by the same fastenings as one finger 21.

When it is desired to replace the filling of feathers or the like into the pillow, the pillow tick itself is dropped through the opening 17 and the open-end edges wrapped around the flanges 20 with any looseness held between the wedging

fingers 21. The renovated feathers are then dropped from the bag or other container through the opening 17, aided by suction through the flue 8.

I have illustrated the invention as applied to the transfer of feathers from a pillow. However, it will be obvious that other filling material, such as kapok, flock and natural and synthetic fibres can also be handled in this fashion. Also, the device is well suited for the transfer and cleaning of seeds, grain and similar material.

The preferred form of the invention has been illustrated by way of example, but variation is feasible in the use of other materials and proportions within the scope of the invention, as defined in the following claims.

What I claim is:

1. Transfer means for pillow feathers and the like comprising an open-top container and a box thereon, said box having an opening in the bottom, a pair of hinged covers in the box top, said covers providing a central opening, a split collar around the opening in the covers, a pair of opposed clamp members mounted on the covers, and a flue for exhausting the box.

2. Transfer means for pillow feathers and the like comprising an open-top container and a box thereon, said box having an opening in the bottom, a pair of hinged covers in the box top, said covers providing an ovate central opening, a split collar around the opening in the covers, a pair of opposed clamp members mounted one on the edge of each cover, and a flue for exhausting the box.

3. Transfer means for pillow feathers and the like comprising an open-top container and a box thereon, said box having an opening in the bottom, a pair of hinged covers in the box top, said covers providing an ovate central opening, a split collar around the opening in the covers, an outstanding flange on the collar, a pair of opposed clamp members mounted one on the edge of each cover, at the smaller end of the opening, and a flue for exhausting the box.

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