Aug. 11, 1942. D. J. RENFROE 2,292,660

BAGGING DEVICE

Filed July 22, 1940

Fig. 1.

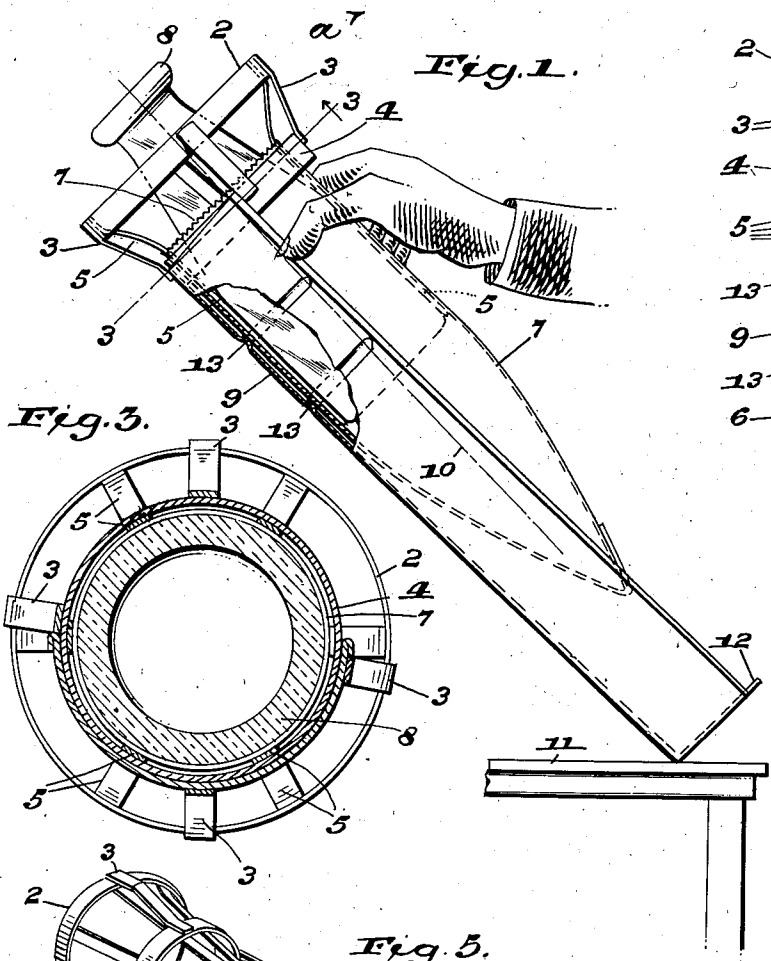



Fig. 2.

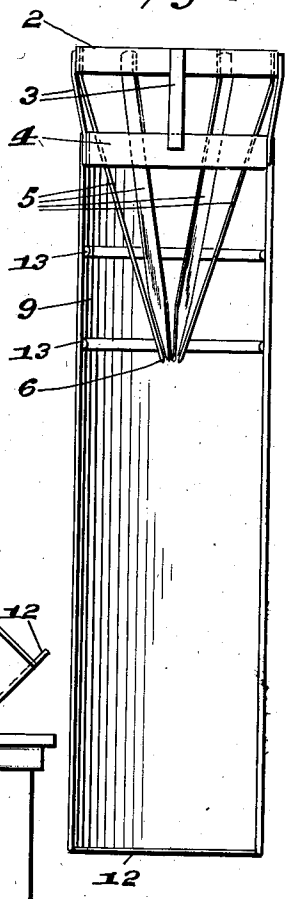



Fig. 3.




Fig. 5.

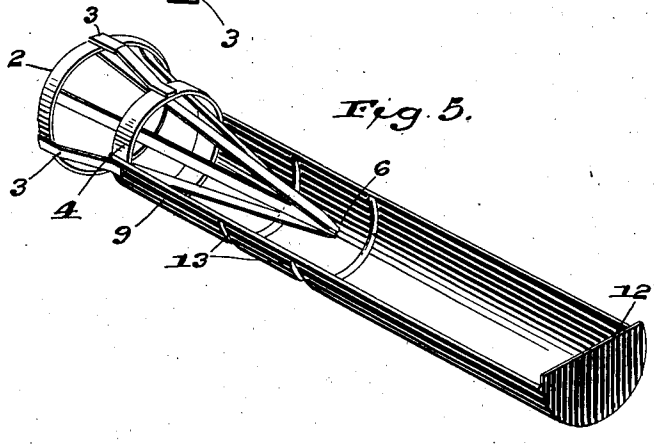
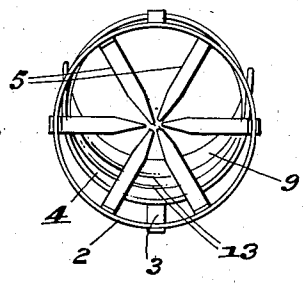



Fig. 4.




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# UNITED STATES PATENT OFFICE

2,292,660

## BAGGING DEVICE

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Application July 22, 1940, Serial No. 346,820

2 Claims. (Cl. 226—18)

This invention relates to improvements in bagging devices, especially of the machine for inserting bottles disclosed in the patent to D. J. Renfroe, 2,031,005, of Feb. 18, 1936. That machine was contrived to facilitate the insertion of bottles, wrapped articles and things of a kindred nature into closely or tightly fitting bags, thus avoiding the commonly experienced difficulty and loss of time of completing a sales service to a customer. The objects of the instant improvement are briefly summarized as follows:

First, to provide a bagging device of the type facilitating the insertion of bottles, goods and the like into tight-fitting bags, said device consisting of a flexible funnel equipped with a cylindrical or partially cylindrical hood that insures a very satisfactory and efficient handling of the articles.

Second, to provide a flexible funnel and hood combination permitting using the bagging device in either an erect or inclined position, the latter converting the hood into a guide or runway for the bottle and bag, insuring the slipping of the one into the other and the final flattening of the bottom of the bag by weight of the bottle so as to make a snug fit.

Third, to provide a bagging device wherein the hood is equipped with one or more internal beads or equivalent retarding means to coact with the inserted bottle or other article to exercise some degree of pressure against the bag, thus holding the bag sufficiently firm to enable the bottle to slide to the bottom of the bag before both start sliding down the runway.

Other objects and advantages will appear in the following specification, reference being had to the accompanying drawing, in which:

Figure 1 is a side elevation, partially in section, of the improved bagging device.

Figure 2 is a plan view thereof.

Figure 3 is a cross section taken on the line 3—3 of Fig. 1.

Figure 4 is an end elevation of the device illustrating its appearance from the top end.

Fig. 5 is a perspective view of the bagging device.

Insofar as is concerned the similarity of the instant device with the machine of the foregoing patent, the former comprises a circular end frame or ring 2 which has a number of rods 3 affixed thereto and depending from it, the otherwise free ends of said rods being collectively secured to a guiding ring 4. The ring 2 also carries a plurality of depending flexible fingers 5 which are spring tensioned to come together at a substantial point 6 (Fig. 2) and thus define a funnel-shaped receptacle of which the fingers 5 are the side portions.

In accordance with the patent, as well as the instant disclosure, a bag 7 is intended to be slipped up the receptacle 5 from the point 6 to a place approximately on a line with the ring 4. This act spreads the mouth of the bag in readiness to receive the bottle 8 or other wrapped article which is then inserted at the rings 2, 4, and dropped into the bag.

It has been discovered in the use of the device that the effectiveness thereof is materially increased by supplementing it with two improvements. The first of these comprises the affixation of a hood 9 to the ring and flexible finger assemblage. This is done by spot welding or otherwise securing the hood 9 to the ring 4. This is done at a slight pitch, that is to say, the ring assemblage stands at less than a right angle to the floor of the hood 9, thus directing the axis 10 of said assemblage at a slightly downward slant as is readily observed in Fig. 1.

The purpose of the hood 9 is to define a guide or runway for the bottle and bag, largely relieving the user of the necessity of exercising more than ordinary care to defend the bottle against breakage. The hood also serves the purpose of a base for the ring and finger assemblage, and in practice will be initially held at an angle of approximately 45 degrees, and the advantage of this inclination is that the downward sliding of the bag and bottle is accomplished at not too great a speed. This particular operation is readily controlled by the act of the operator in holding the device at the most desirable angle, shifting it up or down as may be needed, then finally up-ending it (arrow a, Fig. 1) to complete the bagging of the bottle. The hood is desirably semi-circular in cross section (Fig. 5), about three and a half feet long, and much on the order of a section of gutter. The bottom end is closed at 12, the purpose of the closure being to provide a foundation against which the bottle and bag may strike, serving to flatten out the bottom of the bag and thus pack the bottle firmly in place.

The second one of the two improvements consists of the retarding means 13. Said means comprises one or more beads or their equivalents located on the inside of the hood 9 adjacent to the ring and finger assemblage. These beads are for the purpose of holding the bag 7 up on the funnel 5 until the bottle or other package goes completely into the bag. The function of

the retarding means is this: when the bottle or other package is placed in the flexible funnel 5 it automatically expands the spring fingers outwardly against the hood 9, exercising a pressure against the beads and thus holding the bag sufficiently firm to allow the bottle or package to slide well into the bag.

Then when the latter is let go the package and bag slide down the hood 9, and when the bottle strikes the closure 12 it serves to smooth out the bottom of the bag. Since the hood 9 is not excessively long there is no danger of any breakage, this being in a large measure prevented by the specific angle at which the hood is initially supported in reference to the table.

I claim:

1. A bagging device comprising a funnel-shaped receptacle adapted to receive the article to be bagged and having spring-tensioned fingers adapted to spread apart under the pressure of said article to discharge the article into a bag at the small end of the receptacle, a hood disposed around at least part of the periphery of said receptacle and being in the form of a gutter to provide a run-way for the assembled bag and article, and retarding means on the hood adjacent to the receptacle, against which retarding means the bag is adapted to be pressed by the spread fingers to drag on the bag and insure the slipping in of the article full-depth of the bag.

2. A bagging device comprising a funnel-shaped receptacle adapted to receive the article to be bagged and having a series of spring-tensioned fingers over which a bag is adapted to be fitted, a gutter shaped hood coacting with the receptacle in supporting the bagged article when departing from the receptacle, a ring assemblage included in the receptacle, to one of the rings of which the hood is attached to comprise a unit, and retarding means raised up from the internal surface of the hood, coacting with the fingers when expanded by the article to grip the bag and insure the full-length insertion of the article.

DANIEL J. RENFROE.