

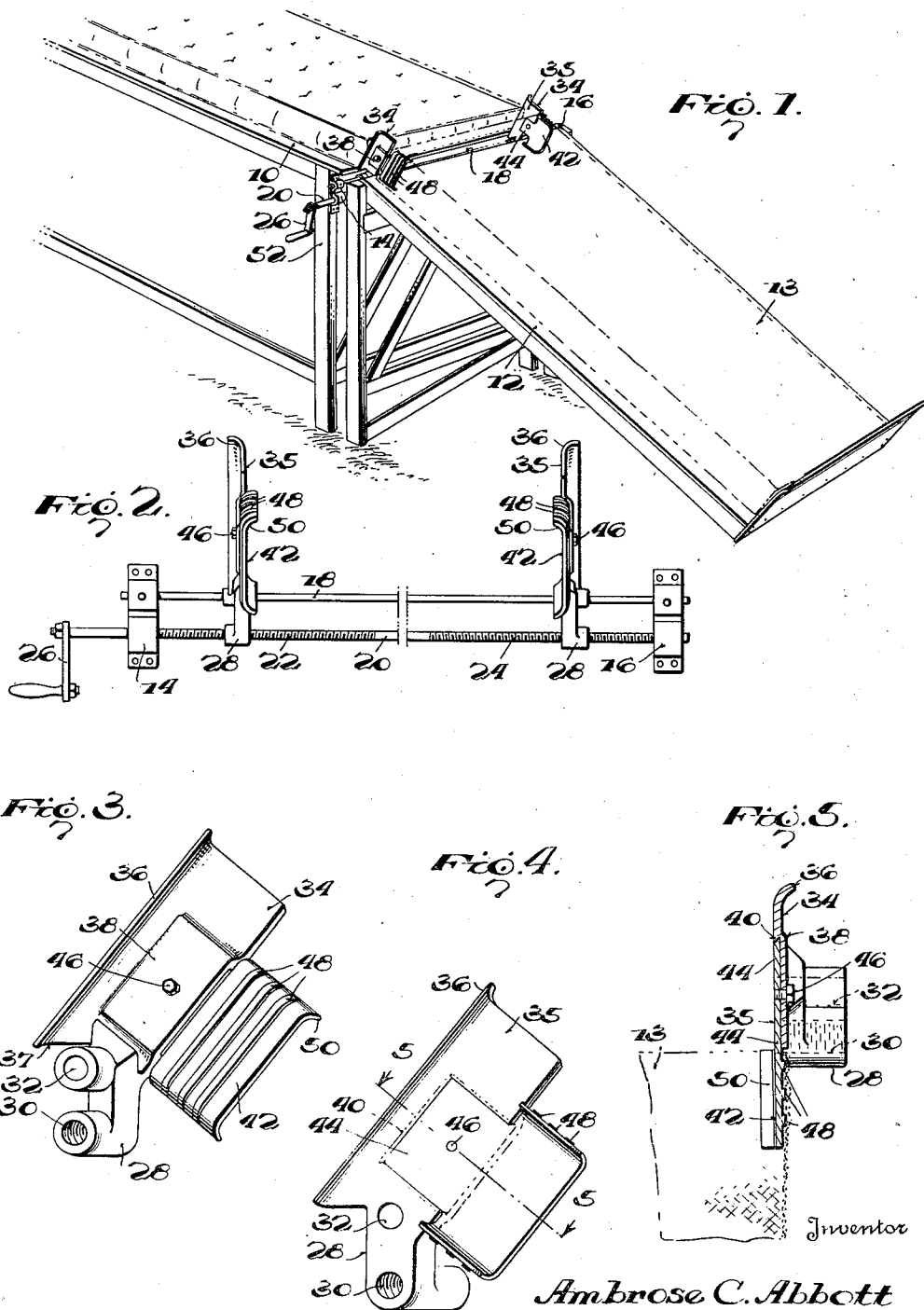
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BAG HOLDER

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BAG HOLDER

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2 Claims. (Cl. 226—18)

This invention relates to packaging mechanism and has particular reference to a device for facilitating the packaging of large, bulky objects such as mattresses, box springs, etc. The invention is not broadly novel, apparatus of this general type having been described and illustrated in a patent to S. L. Ginsberg No. 1,985,163.

The invention involves distinct improvements over the mechanism therein disclosed. One object of the invention is to render the package or bag opening members of greater utility by so constructing and arranging the parts thereof that interchangeable units may be used to handle bags with various sized openings. It is a particular object of the invention to render this interchangeability available with minimum effort and loss of time, thereby facilitating effective and economic use of the mechanism as a whole.

A further object of the invention is to so construct and arrange the cooperating units of the bag holding assembly that they not only function to guide the merchandise to be packaged into the mouth of the bag but also to grip the open bag during the loading operation without risk of tearing the same. Due to the large stresses and strains created during the loading of such large articles of merchandise, it is essential that the open mouth of the bag be gripped firmly over a substantial area.

A further object of the invention is to so construct the interchangeable parts comprising the bag holder mechanism that there is no risk of tearing the merchandise being loaded.

Various other objects and meritorious features of the invention will be apparent from the following description taken in conjunction with the drawing, wherein like numerals refer to like parts throughout the several figures, and wherein:

Figure 1 is a perspective of the entire loading mechanism;

Fig. 2 is an elevation of the bag opening mechanism;

Fig. 3 is an outside perspective of a bag holding member;

Fig. 4 is an inside perspective of a bag holding member, and

Fig. 5 is a section along 5—5 of Fig. 4.

In the form illustrated the bag holding mechanism is mounted adjacent one extremity of a horizontal support 10 adapted to receive the merchandise to be loaded. This support may be in the form of a table or an endless conveyor. Adjacent the end of the horizontal support is an inclined support 12 for seating a bag 13 into which merchandise is to be loaded.

The bag holding mechanism is secured adjacent the end of horizontal support 10 by means of brackets 14 and 16. Guide rod 18 is fixedly positioned by the two brackets and operating rod 20 is rotatably journaled therein. The operating rod is reversely threaded at its respective ends as indicated at 22 and 24, the thread at each end extending rather close to the center of the rod to permit maximum lateral travel of the bag holders. An operating handle 26 is attached to one end of rod 20.

The bag holding members per se each comprise an arm 28 having a threaded bore 30 as well as a smooth bore 32 spaced somewhat from the former. This arm supports a wing-shaped bracket 34, the inner face at least of which is smooth as indicated at 35. The outer longitudinal edge of the bracket is flared as at 36 to facilitate guiding the merchandise into the open mouth of the bag. The metal of bracket 34 adjacent the edge opposite the flared edge is thickened as indicated at 38 to permit a countersink provided with a groove 40 extending around its outer periphery.

A bag engaging member 42 is detachably secured to bracket 34 by means of an extension 44 provided with a tongue extending around its periphery adapted to be slidably received within the groove 40. The bag engaging member may be retained in place after being properly positioned with reference to bracket 34 by any suitable means such as a screw 46. It is important that the extremity of such retaining means as screw 46 does not extend inwardly beyond the inner smooth face of extension 44, which, together with the inside face of the bag engaging member, is substantially coplanar with the inside face of bracket 34, thereby forming a smooth surface which will not engage or tear the merchandise as it slides transversely thereacross when being pushed into the bag.

The outer face of bag engaging member 42 is ribbed as indicated at 48 and the upper and lower extremities thereof are flared inwardly as indicated at 50. In the particular form illustrated the bracket 34 is positioned at an angle to supporting arm 28. The smooth bore 32 in said arm is adapted to receive guide rod 18 and threaded bore 30 moves inwardly and outwardly along operating rod 22 as the latter is rotated by means of handle 26. Due to the angularity pointed out, the brackets 14 and 16 may be positioned upon a substantially vertical support, as for instance the vertical legs 52 of supporting member 10, and the bag engaging members will

extend substantially parallel to the inclined bag seating member 12.

It is also to be noted that the bracket 34, which constitutes a guide member, overlies the horizontal support 10 whereas the other element of the composite assembly, the bag engaging member 42, extends therebeyond and overlies the inclined bag supporting seat 12 in substantially parallel relationship. The lower edge 37 of wing-shaped bracket 34 is adapted to lie in close proximity with the upper surface of horizontal support 10 to thus effectuate an efficient guide into the open mouth of the bag. The smooth inner faces of bracket 34 and bag engaging member 42, the said surfaces being substantially coplanar, prevent the merchandise from being damaged as it slides from its supporting surface into the open mouth of the bag. The bag mouth is subjected to considerable tension in order to hold it open during the loading of such heavy, cumbersome merchandise. Ribs 48 prevent slippage of the bag with reference to the bag engaging member, maintaining a firm grip without tearing the bag and thereby weakening the structure.

The detachability of bag engaging members 42 from brackets 34 permits use of different sized members, adapting the mechanism to bags of various sizes dependent on varying dimensions of the merchandise to be loaded. By reason of the flares 50 on bag engaging member 42 no sharp surfaces are presented to the bag while opening stress is being exerted thereon, while the longitudinal flare 36 on the bracket 34 assists materially in guiding the merchandise into the open mouth of the bag. The combination renders the loading of cumbersome and bulky articles a very simple procedure, speeds up the loading operation without risk of damage to the merchandise or bag, and provides a wide range of adaptability to various types of merchandise of different sizes.

Having thus described the invention, various modifications thereof will be apparent to those skilled in the art and for that reason I wish to limit myself only within the scope of the appended claims.

What I claim is:

1. Mechanism of the class described comprising a substantially horizontal support, an inclined support terminating adjacent the end of the horizontal support, brackets secured intermediate the two supports, a guide rod supported in substantially horizontal position by said brackets, an operating rod reversely threaded adjacent its extremities rotatably journaled by said brackets in substantially parallel relation to said guide rod, supporting arms positioned by said guide and operating rods for movement therealong, and a bag holding assembly supported by each of said arms, said assembly including a guide member overlapping at its base the horizontal support and a bag engaging member extending in overlying relation with said inclined support and detachably secured to said guide member.

2. Mechanism of the class described comprising a substantially horizontal support, brackets secured adjacent the edge of said support, a guide rod supported in substantially horizontal position by said brackets, an operating rod reversely threaded adjacent its extremities rotatably journaled by said brackets in substantially parallel relation to said guide rod, a supporting arm having unthreaded and threaded apertures mounted on said guide and operating rods at opposite ends thereof, and a bag holding assembly supported by each of said arms, each assembly comprising a guide bracket for contacting merchandise integral with and extending away from the arm, said bracket including a flared longitudinal edge overlying at its base the horizontal support and extending upwardly and away therefrom, an offset on the inside face of said bracket extending in the direction of said flare, and a bag engaging member including a bag engaging portion and an extension detachably seated in the offset portion of said bracket to thereby provide the assembly with a continuous smooth inner surface, said bag engaging portion being flared at opposite ends in a direction opposite to the flare on said guide bracket.

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