

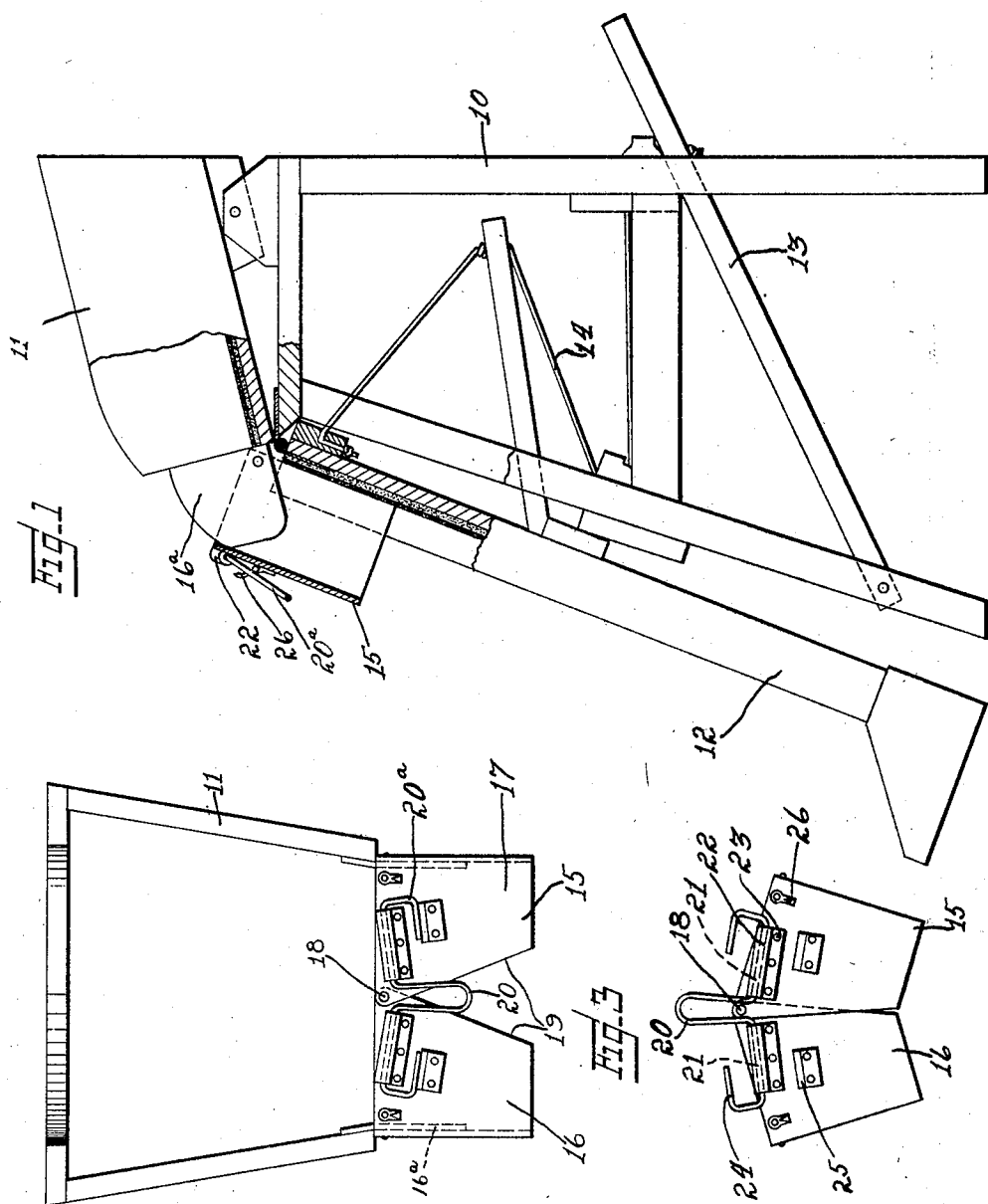
Nov. 3, 1931.

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1,830,645

GUIDE FOR BAG FILLING APPARATUS

Filed Nov. 22, 1930



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UNITED STATES PATENT OFFICE

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GUIDE FOR BAG FILLING APPARATUS

Application filed November 22, 1930. Serial No. 497,428.

This invention relates to bag filling apparatus, but more particularly to apparatus for filling paper bags with articles, such as apples, which may be bruised easily.

An object of the invention is to produce a simple and efficient guide for a bag filling apparatus, which is adapted to open the bag mouth and retain the same in open position in order that the bag may be readily filled.

Another object is to produce a simple and efficient guide for a bag filling apparatus having the new and improved features of construction, arrangement and operation hereinafter described.

For purposes of illustration, but not of limitation, an embodiment of the invention is shown on the accompanying drawings, in which:

Fig. 1 is a side elevation partly in section of a bag filling apparatus;

Fig. 2 is an enlarged top plan view of the receiver and guide therefor; and

Fig. 3 is a top plan view of the guide showing the same in bag-releasing position.

The illustrated embodiment of the invention comprises a bag filling apparatus having a standard 10 on which is pivotally mounted a receiver 11, which is charged with the material, and a bag supporting cradle 12 which is hingedly connected to the standard 10 adjacent the upper portion thereof. The cradle 12 is adapted to be swung outwardly substantially in line with the inclined bottom wall of the receiver 11 by a treadle 13 through a cable 14. The above general description of the construction and operation of the bag filling apparatus is deemed sufficient, but detail description thereof may be found in my co-pending application Serial No. 492,671, filed November 1, 1930, entitled "Apparatus for filling containers."

Pivotally connected to the front end of the receiver 11 is a guide 15, it being apparent that wings 16^a project outwardly from the receiver, and to these wings are pivoted the opposite sides of the guide 15. The guide 15 is of general tubular form, and serves to guide the flow of material from the receiver 11 into a bag on the cradle 12. The guide is adapted to extend into the mouth of the bag

and may be extended outwardly in order snugly to engage the bag mouth for holding the same open. This is particularly important in connection with paper bags, although the apparatus may be used to advantage with other kinds of bags and containers.

As shown, the guide 15 is made up of a pair of substantially U-shaped members 16 and 17 which are pivotally connected at 18 adjacent the receiver 11. The adjacent side edges 19 of the members 16 and 17 are cut away at an angle, as shown on Fig. 2, in order to reduce the surface of the members overlapping each other when the members are moved laterally toward each other, as will hereinafter appear.

An operating connection is provided between the members 16 and 17 for laterally moving them in one direction or the other. When the members are extended or moved away from each other it will be manifest that the bag mouth is retained in open position, and the guide may snugly fit the bag to insure the flow or passage of material from the receiver to the inside of the bag. In accordance with the embodiment of the invention a single operating element in the form of a handle 20 is provided for this purpose. When the handle is moved in one direction the guide members 16 and 17 are moved outwardly or into bag engaging position, and when moved in the opposite direction are moved to bag releasing position, thereby readily to remove the guide from the bag.

A somewhat resilient rod 20^a is bent upon itself intermediate its ends to provide a handle 20, and adjacent portions 21 on opposite sides are bent at an angle in a direction away from the handle. The guide 15 is preferably of sheet metal, and secured as by rivets 23 to the members 16 and 17 are inclined hinge elements 22 through which the portions 21 extend. The advantage of having the guide members of sheet metal is that a slight amount of yielding can be obtained in order to accommodate bags of varying sizes. It will be apparent that the handle 20 is also adapted to yield when subjected to strain.

Since the sides of the guide members 16 and 17 adjacent the receiver 11 are held

against lateral movement by the pivotal connections above described, it is apparent that when the handle 20 is swung in a direction away from the receiver, the guide members 16 and 17 are moved or cammed in a lateral direction away from each other, thereby extending the outer end portions of the guide members to open the mouth of the bag and retain the same in position. When the handle 20 is swung in the opposite direction toward the receiver the guide members 16 and 17 are cammed toward each other in order to release the bag.

In practice, this movement is the natural movement in releasing the bag since the guide is swung away from the bag after the same has been filled. This is accomplished by swinging the receiver 11 upwardly to remove the guide from the bag. The handle 20 enables this to be readily accomplished, since the same movement of swinging the receiver away from the bag-supporting cradle also functions to release the bag since the guide members or jaws are moved inwardly upon upward movement of the handle.

Reversely bent portions 24 of the rod above described are adapted to cooperate with plates 25 riveted or otherwise secured to the guide members 16 and 17 for clamping the bag mouth in position. When the handle 20 is swung in a direction away from the receiver 11 for extending the guide members 16 and 17, the clamping portions 24 are accordingly moved toward the clamping plates 25, and when the guide members are in full extended position the clamping members 24 are substantially in engagement with the plates 25. It is, therefore, desirable that the guide 15 extend into the bag to such a distance that the marginal edge is properly positioned to be engaged by the clamping members 24.

When filling gunny sacks, or the like, hooks 26 secured to the guide members 16 and 17 may be used. The sacks may be hooked over the hooks to prevent them from dropping away during the extending movement of the guide members.

It is to be understood that numerous changes in details of construction, arrangement and operation may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What I claim is:

1. In a bag filling apparatus having a receiver, means for guiding material from said receiver, said means comprising a pair of sections arranged in overlapping relationship, a pivotal connection between the overlapping portions of said sections, means for moving said sections toward or away from each other, said means comprising a length of wire bent upon itself intermediate the ends thereof to provide a handle, inclined por-

tions of said wire disposed on opposite sides of said handle, bearing elements on said sections respectively for said inclined portions whereby actuation of said handle in one direction imparts outward movement of said sections, and when swung in the opposite direction imparts inward movement to said section.

2. In a bag filling apparatus having a receiver, means for guiding material from said receiver, said means comprising a pair of sections arranged in overlapping relationship, a pivotal connection between the overlapping portions of said sections, means for moving said sections toward or away from each other, said means comprising a length of wire bent upon itself intermediate the ends thereof to provide a handle, inclined portions of said wire disposed on opposite sides of said handle, bearing elements on said sections respectively for said inclined portions whereby actuation of said handle in one direction imparts outward movement of said sections, and when swung in the opposite direction imparts inward movement to said section, and inwardly bent end portions on said wire adapted to engage a bag slipped over said sections for retaining same in place when said sections are in outward position.

In testimony whereof I have hereunto signed my name to this specification.

LEO H. DIETSCH.