Aug. 18, 1959 P. BEEBE, JR 2,899,788

BAG LOADING DEVICE

Filed June 3, 1955 2 Sheets-Sheet 1

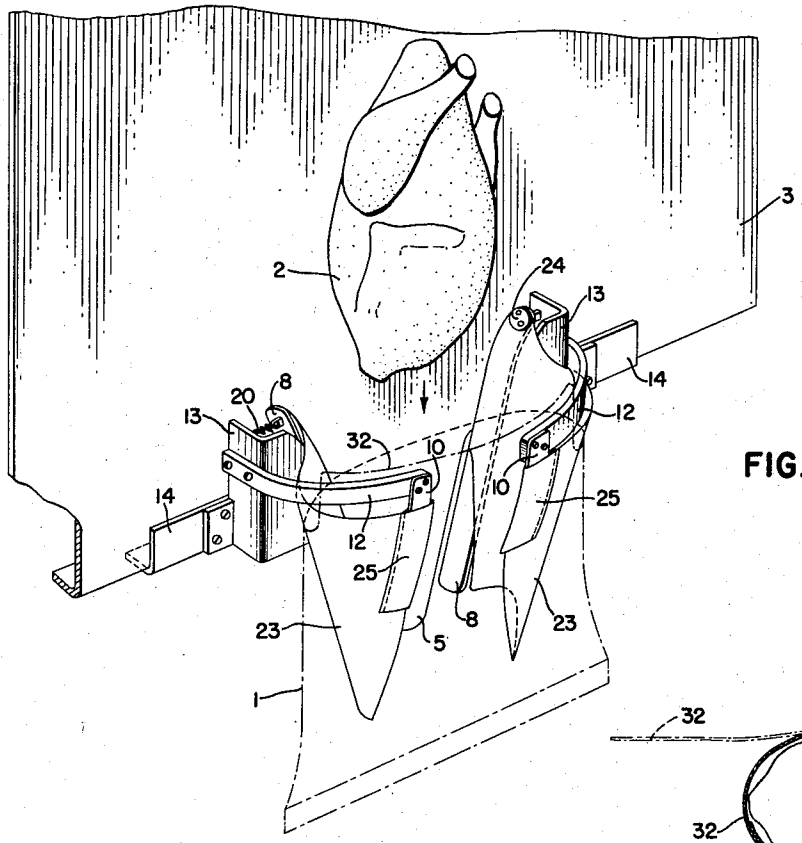


FIG. 1

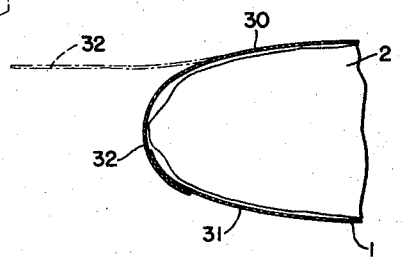


FIG. 5

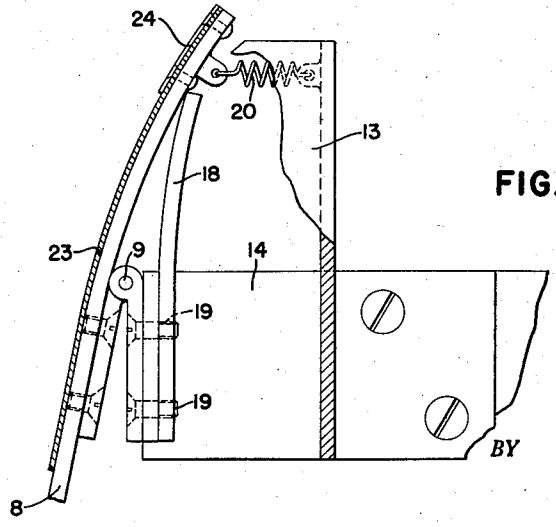


FIG. 4

INVENTOR.
PAUL BEEBE, JR.

BY

R. L. Miller
ATTORNEY

Aug. 18, 1959 P. BEEBE, JR 2,899,788

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Filed June 3, 1955 2 Sheets-Sheet 2

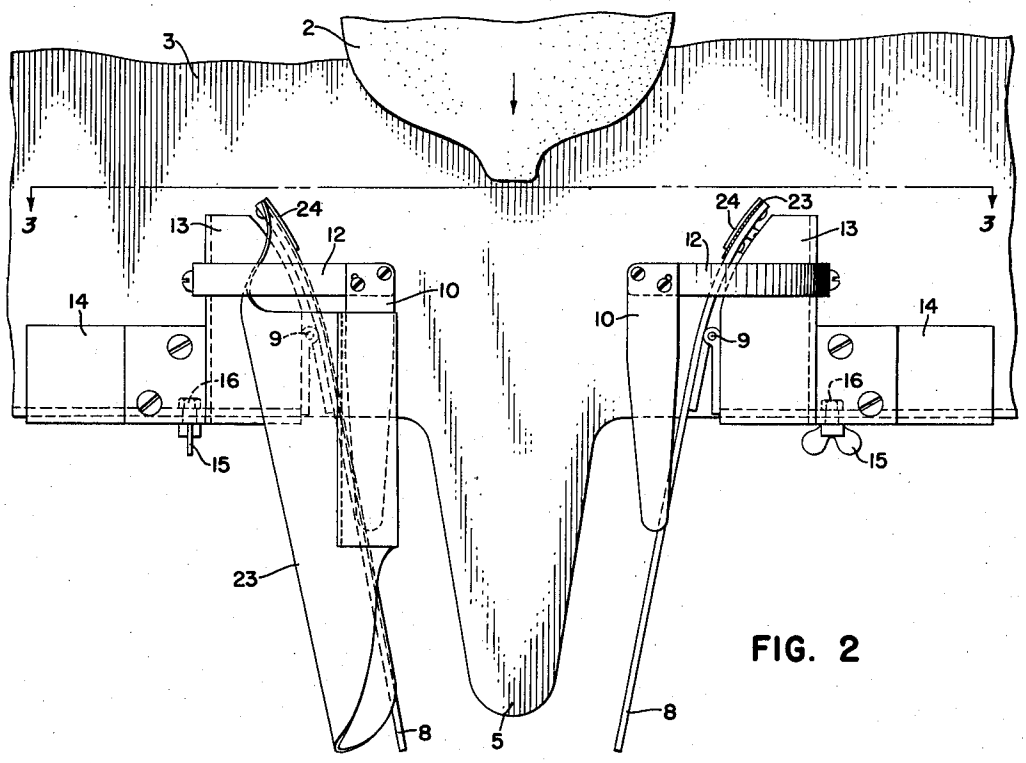


FIG. 2

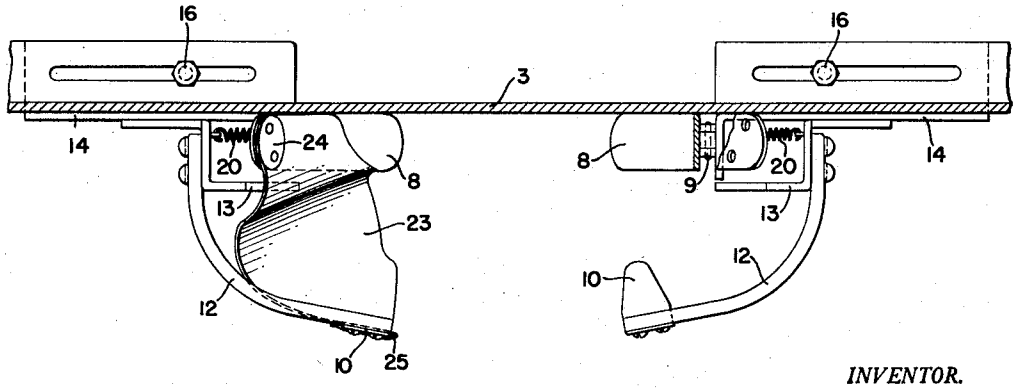


FIG. 3

INVENTOR.
PAUL BEEBE, JR.

BY

R. L. Miller
ATTORNEY

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BAG LOADING DEVICE

Paul Beebe, Jr., Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application June 3, 1955, Serial No. 513,055

3 Claims. (Cl. 53—262)

This invention relates to a bag-loading device.

The bag which is used is a flat or gusseted bag of elastoplastic material which is closed on three sides. At the open side or end of the bag one wall of the bag is longer than the other, forming a lip, and this lip is designed to be folded over the top of the material packaged within the bag, and sealed to the top of the opposite wall.

The loading device is intended to hold the bag open for the packaging of irregular objects, such as fowl, cuts of meat, etc., and the package is intended to make a tight fit over the object.

Suitable elastoplastic wrapping materials include film of rubber hydrochloride, polyethylene, etc. The bag may be stretched little, if at all, as it is slipped over the loading device; but in the combined operation of slipping it over the device and slipping the object into the bag, the bag is slightly stretched, and when the package is completed, the bag is stretched and fits tightly over the object.

In the drawings which accompany this application the loading device is shown as being mounted for vertical loading. It is equally suited to horizontal loading. Guides which direct the object into the bag are spring pressed. They may be narrow fingers, but are preferably guides of considerable width, as will be explained in connection with the accompanying drawings.

In the drawings:

Fig. 1 is a view in perspective of the loading device and shows the position a bag will take when being filled and shows a chicken to be packaged;

Fig. 2 is a front view of the same, a portion of one of the guides being omitted to more clearly show the construction;

Fig. 3 is a plan view on the line 3—3 of Fig. 2, one of the guide pieces being broken away to more clearly show the construction;

Fig. 4 is a detail showing how the guides are mounted; and

Fig. 5 is a detail showing the top of the bag and how it is closed.

The bagging device is designed more particularly for use with bags such as the bag **1**, and for packaging objects such as the chicken **2**. The device is constructed on a bed plate **3** which is preferably made of metal. The bottom of the bed plate is cut so as to provide the tongue **5** which is elongated and somewhat triangular in shape. It extends below the bed plate if the bed plate is vertical, or extends horizontally out from the edge of the bed plate if it is supported horizontally.

Flat, gently curved fingers or guide pieces **8**, hinged at **9**, form with the tongue **5** of the bed plate a tapering trough of variable width to hold the bag and keep its side edges extended as the chicken is fed into it. In addition to these guide pieces **8** are the front guides **10** which separate the front and back walls of the bag. They are mounted on the rounded sheet metal springs **12** which are supported on the brackets **13** which are slidable

on the angle bars **14** to accommodate bags of different widths, and are tightened at any location by the wing bolts **15** and the nuts **16**.

The guide pieces **8** are mounted on hinges which pivot at **9** and are attached to the brackets **13**. On the opposite wall of the bracket is the spring member **18** which is held to the bracket by the same bolts **19** that fasten the guide pieces to it. The top of each guide piece **8** is drawn open by the spring **20**. The action of this spring **20** is deadened by the spring member **18**.

The stiff fabric shield-guides **23** are optional. One of these has been omitted from both Figs. 2 and 3 to clearly illustrate the construction. These fabric guides are fastened to the guide pieces **8** at one edge by the circular plates **24**. Pockets **25** in their opposite edges enclose the front guides **10** which are stiff and may be made of sheet metal or plywood, etc. In this way the shield-guides **23** are bulgingly supported between the guide pieces **8** and the front guides **10**. They may be composed of Holland or similar stiff fabric which has a slick non-tacky surface. Chickens and other damp objects do not slide easily over most plastic surfaces such as the surfaces of bags made of rubber hydrochloride film, etc. A chief function of the shields **23** is to facilitate the slipping of a chicken or other damp object into such a bag. The fabric is flexible and moves with the guide plates and the front guides.

The loading device may be used with a bag of the usual construction, in which both walls terminate at the open mouth of the bag. In this preferred bag construction for use with the loading device, the top wall **30** (which is the front wall when the device is mounted perpendicularly as in Fig. 1) is somewhat longer than the bottom wall **31** by the length of the lip **32**. The lip facilitates grasping the bag, opening it, and guiding it over the tongue **5** and guide pieces **23** as illustrated in Fig. 1. When the device is mounted perpendicularly, the bag is held by the lip and this keeps the bag mouth open while the chicken is being inserted.

To package a chicken, for example, the bag is held by the lip and slid over the tongue **5**. As the chicken is pushed along the surfaces of the guide pieces **8**, their lower ends spread apart and spread the walls of the bag to receive the chicken. The use of a bag with a lip and the pivoted guide pieces enables the chicken to be fitted into a bag of small dimensions. The bag is held with one hand and the chicken is introduced into the bag with the other hand. The same motion used to push the chicken into the bag, spreads the bottoms of the guide pieces **8** and opens the bag, and the continuation of this movement pushes the packaged chicken off the tongue **5**. The operator lifts the bag by the lip onto a table where the packaging operation is completed. It is laid on the table with the wall **30** and lip **32** at the top side of the bag. The lip is then pulled tightly down over the open end of the bag as illustrated in Fig. 5. It is sealed to the opposite wall **31** of the bag by glue, or by taping, or by heat sealing, or by any other suitable means.

In addition to facilitating the handling and closing of the bag and package, the lip has various advantages. Its length is governed by the distance across the top of the bag when filled. Such a bag requires less film than a bag without a lip because when the bag is closed, the mouth of the bag is covered with a single ply of film rather than a double ply. This not only lessens the amount of material required, but also improves the looks of the package and its sales appeal. The two-walled portion of the bag is shortened by the length of the lip and this reduces the distance an object has to travel within a bag in order to reach the bottom and this in turn reduces the time required to insert the chicken or

other object into the bag. These savings in material and time are appreciable factors in mass production.

The mechanism shown is illustrative. The bag device may be mounted in any position. Other spring means than that shown and other mounting for the guide pieces may be employed. The shape of the guide pieces and the front guides may be altered. The stiff fabric 23 may be omitted. The invention is covered in the claims which follow.

What I claim is:

1. A bag-loading device which includes a bed plate with an elongated tongue extending from one edge thereof, brackets mounted adjacent said edge of the bed plate and slidable toward one another and the tongue, and also slidable away from each other and the tongue, with means for fastening them when spaced apart any desired distance, guide pieces pivotally mounted on the sides of the brackets nearest the tongue with springs holding the upper ends thereof above said mountings toward the respective brackets, a spring member mounted on each bracket and substantially perpendicular to the bed plate with the outer ends of the respective spring members approaching one another, a front guide mounted on each of said spring members and extending therefrom in a generally parallel position and parallel to the bed plate, and fabric with a slick inner surface fastened to the guide pieces and the front guides and bulging outwardly therebetween and forming guideshields for the insertion of objects moved away from the bed plate and along the tongue into the space between the shields and pushed against the bottom portions of the guide members against the action of the aforesaid springs.

2. A bag-loading device which includes a bed plate with a tongue extending from one edge thereof, two elongated guide pieces pivotally mounted on the bed plate and extending along opposite sides of the tongue forming three wall portions of a trough to guide an object to be packaged, and front guide pieces located approximately opposite said guide pieces, the portions of the first-mentioned guide pieces extending along the sides of the tongue being spring-pressed toward the tongue whereby they are adapted to be spread apart when the object to be packaged is moved away from the bed plate in the direction of the tongue, between the guide posts; said front guides being mounted on spring members which extend outwardly from the bed plate.

3. A bag-loading device which includes a bed plate with a tongue extending from one edge thereof, two elongated guide pieces pivotally mounted on the bed plate and extending along opposite sides of the tongue forming three wall portions of a trough to guide an object to be packaged, and front guide pieces located approximately opposite said guide pieces, the portions of the first-mentioned guide pieces extending along the sides of the tongue being spring-pressed toward the tongue whereby they are adapted to be spread apart when the object to be packaged is moved away from the bed plate in the direction of the tongue, between the guide posts; said front guides being yieldably supported away from the bed plate and tongue with shield guides having a slick inner surface extending bulgingly from the guide pieces to the front guides.

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