T. J. GORMAN.

SACK CLOSING DEVICE.

APPLICATION FILED APR. 22, 1920.

1,412,934. Patented Apr. 18, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

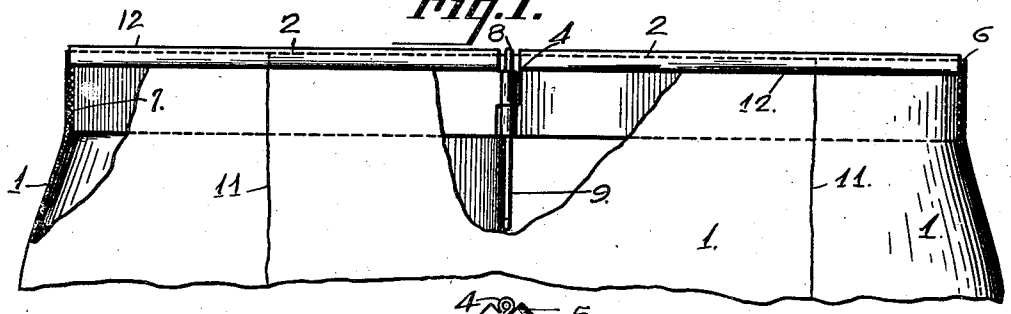


Fig. 2.

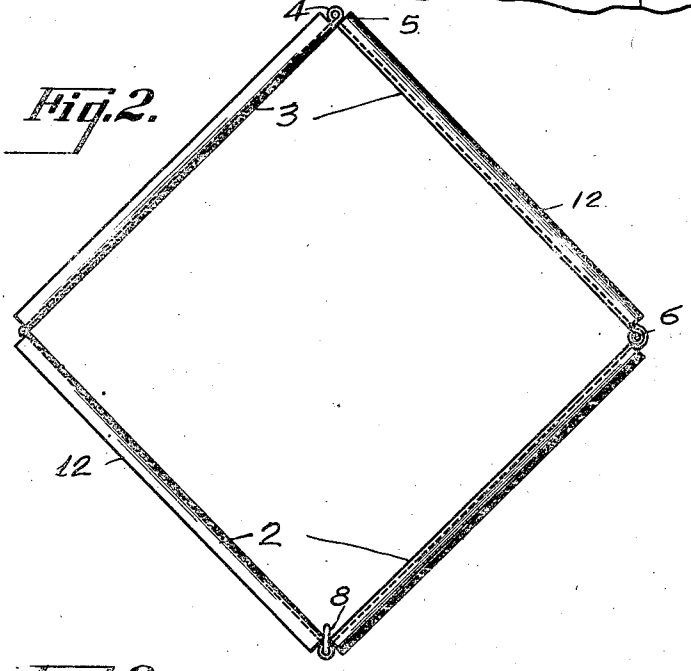


Fig. 3.

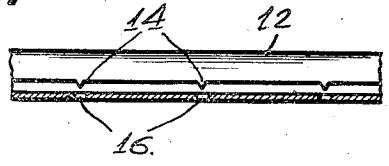


Fig. 4.

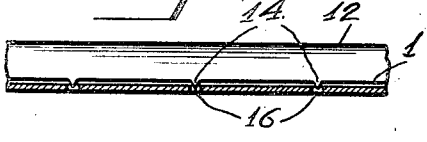
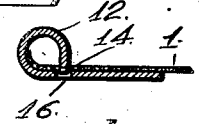


Fig. 5.



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SACK CLOSING DEVICE.

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2 SHEETS—SHEET 2.

Fig. 6.

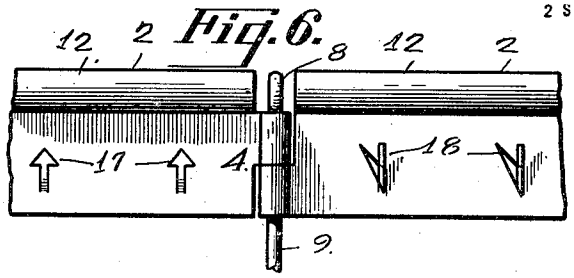


Fig. 7.

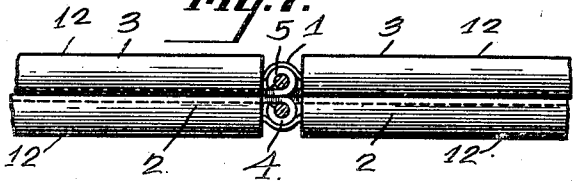


Fig. 8.

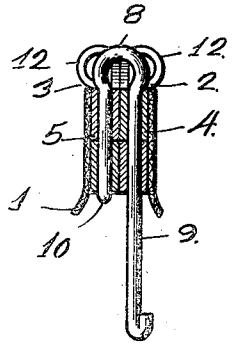


Fig. 9.

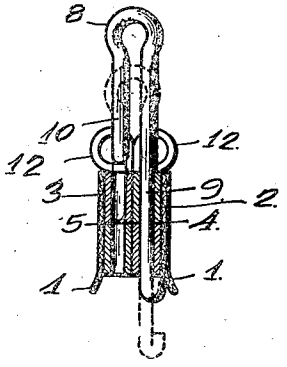
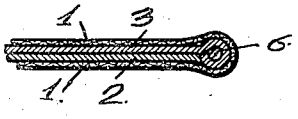


Fig. 10.



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UNITED STATES PATENT OFFICE.

THOMAS J. GORMAN, OF BIGGS, CALIFORNIA.

SACK-CLOSING DEVICE.

1,412,934. Specification of Letters Patent. Patented Apr. 18, 1922.

Application filed April 22, 1920. Serial No. 375,896.

To all whom it may concern:

Be it known that I, THOMAS J. GORMAN, a citizen of the United States, residing at Biggs, in the county of Butte and State of California, have invented a new and useful Improvement in a Sack-Closing Device, of which the following is a specification.

My invention relates to improvements in a sack closing device wherein a pair of hinged members operate in conjunction with a slidable pintle to secure said members together by means of said hinges.

The primary object of the present invention is to provide an improved sack closing device adapted to retain the mouth of a sack in a distended position while being filled and to prevent opening of said mouth during transportation and storage of said sack.

A further object of the present invention is to provide a pair of hinged metallic members adapted for engagement with the mouth of a sack wherein the pintle of the hinge of one member is adapted for engagement with the hinge of the other member to rigidly secure said members in an aligned or closed position to prevent passage of the contents of said sack.

I accomplish these and other objects by means of the improved device disclosed in the drawings forming a part of the present specification wherein like characters of reference are used to designate similar parts throughout the said specification and drawings, and in which—

Fig. 1 is a broken view of the top portion of a sack disclosing my invention applied thereto;

Fig. 2 is a plan view of the device in a distended position to retain the mouth of the sack in an open position;

Figs. 3 and 4 are enlarged broken sectional views disclosing one method of securing the device to a sack;

Fig. 5 is a transverse sectional view, on an enlarged scale, disclosing the method of securing the members to a sack;

Fig. 6 is an enlarged broken side elevation of the hinged portion of the device; disclosing modified forms of sack securing or engaging means;

Fig. 7 is a plan view of Fig. 6;

Fig. 8 is a vertical sectional view through the hinges with the pintle in the position for closing the members;

Fig. 9 is a similar view with the full lines indicating the position of the pintle for engaging three of the members, and the dotted lines indicating the fully closed position.

Fig. 10 is a sectional view disclosing a modified form wherein the ends of the members are hingedly connected.

Referring to the drawings the numeral 1 is used to designate a sack in the mouth of which are located a pair of metallic members 2 and 3 each hinged at their approximate centers as at 4 and 5 respectively. The ends of the members 2 and 3 are enclosed by the sack 1 and said sack is drawn tightly and secured in a manner hereinafter more fully set forth whereby said sack may function as a hinge in enclosing said ends. The ends may be hinged as shown at 6 or serrated as shown at 7 to prevent removal of the sack 1 from the ends of the members 2 and 3.

An inverted U-shaped pintle 8, having one leg extended as at 9, has said extended end slidably mounted within the hinge 4 of the member 2 while the shorter leg 10 is adapted for engagement with the hinge members of the metallic member 3.

The total length of either member is slightly less than the width of the inside of the sack as sacks vary in width, and when placing said members 2 and 3 the sack 1 is drawn tightly around the ends of said member, plaits being formed as at 11 to take up any excess material.

Several methods of rigidly securing the members to the sack are disclosed.

The preferred form consists of a bead 12 formed on the top or outer edges of each member 2 and 3 the edge of said bead being provided with a plurality of points 14 arranged directly opposite apertures 16 in the body of the members. When manufactured the edges of the beads 12 will be spaced apart from the body of the members and the edge of the sack 1 will be placed between said edge and said body and the said edge is then pressed down to force the points 14 into the registering apertures 16 as disclosed in Figs. 4 and 5 of the drawings.

A modified form of securing means is shown in the form of arrow heads 17 or inclined points 18 struck up out of the body of the members, over which the material of the sack edge is pressed and then the points 18 and 17 are forced, as much as possible, into

the apertures from which they were struck thereby receding the points so as to prevent damage to the hands of operators handling the sacks.

In operation the pintle 8 is moved outwardly until the shorter leg 10 thereof is disengaged from the hinge 5 of the member 3. The members are then distended as disclosed in Fig. 2 of the drawings to retain the mouth of the sack in an open position while being filled.

After being filled the sack is effectively and easily closed by aligning the sections of each member until the members 2 and 3 lie parallel and adjacent to each other.

One hinged portion of the member 3 is then aligned with the shorter leg 10 of the pintle 8 and said leg 10 is inserted therein, the remaining member is then aligned with said shorter leg 10 of the pintle 8 and said shorter leg 10 is inserted therein as disclosed in Fig. 8 of the drawings.

By means of this novel arrangement the members 2 and 3 are securely fastened together, the beads 12 provide sufficient rigidity to the members to keep them from spreading under pressure of the contents of the sack while the ends of the sack 1 surrounding the ends of the members 2 and 3 perform a like office for the ends of the members.

To open the sack it is only necessary to pull the pintle 8 outwardly until the shorter leg 10 thereof is disengaged from the hinged portion of the member 3 when the device may be distended as in Fig. 2 of the drawings and the contents of the sack readily dispensed.

To prevent entire removal and possible loss of the pintle 8 the longer leg 9 thereof has the end bent upon itself to provide an obstruction to prevent withdrawal of said pintle from the hinge of the member 2.

It is obvious from the foregoing that I have provided an improved and simple device for closing sacks as well as an effective device for retaining the mouth of a sack in an open position while being filled.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is—

1. A sack closing device comprising a pair of metallic members adapted for engagement with the mouth of a sack, each of said members being hinged at their approximate centers, and the pintle of one hinge being slidably mounted therein to engage and disengage the hinge bearings of the adjacent member whereby said members may be locked together to close the mouth of the sack.

2. A sack closing device comprising a pair of members adapted for engagement with the mouth of a sack, each member being hinged at its approximate center and said sack enclosing the ends of said members to form a hinge at said ends whereby said members may be distended to form a rectangle to hold the mouth of the sack open; and a pintle engaging the bearings of one hinge and adapted to engage and disengage the bearings of the other hinge to retain said hinges and members together to close the mouth of the sack.

3. A sack closing device comprising a pair of hinged members adapted for engagement with the mouth of a sack, said sack enclosing the ends of said members to form hinges for said ends, each of said members being provided at one edge thereof with a bead to engage the sack and press the same against the body of said member, and likewise being provided with hinges at their approximate centers; and a pintle slidably mounted in the bearings of one hinge and arranged for engagement with the bearings of the other hinge to rigidly secure said members together to close the mouth of said sack.

In witness whereof I hereunto set my signature.

THOMAS J. GORMAN.