T. L. DE LAND.

SEAL FOR BAGS.

APPLICATION FILED NOV. 30, 1914.

1,234,640. Patented July 24, 1917.

Fig. 1

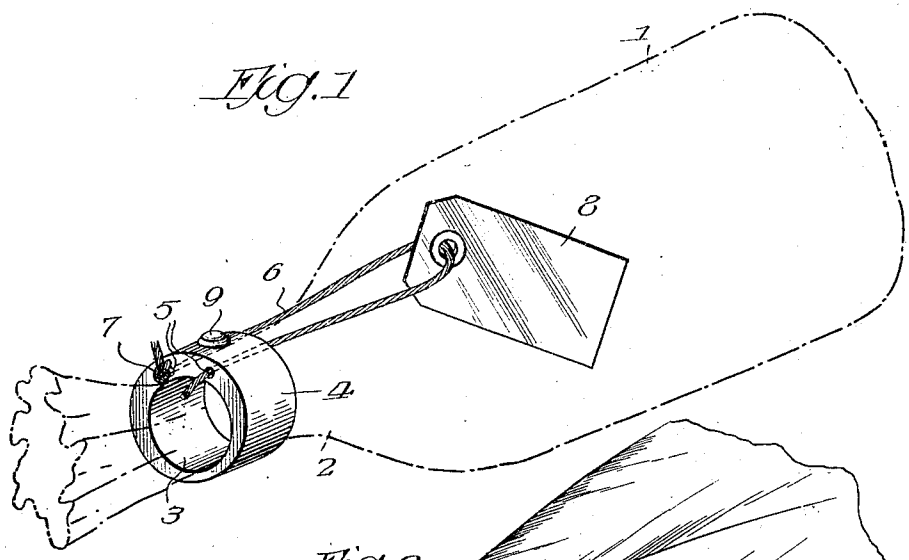


Fig. 2

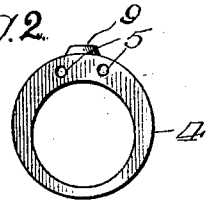
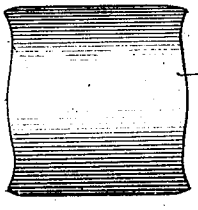


Fig. 3

Fig. 4

Fig. 5

Fig. 6



Witnesses:—
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UNITED STATES PATENT OFFICE.

THEODORE L. DE LAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO PORTER SAFETY SEAL COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SEAL FOR BAGS.

1,234,640. Specification of Letters Patent. Patented July 24, 1917.

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To all whom it may concern:

Be it known that I, THEODORE L. DE LAND, citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Seals for Bags, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention resides in seals for encompassing the necks of bags, it being the object of my invention to dispense with the string which was hitherto tightened about the necks of bags to close their openings. In order to guard against unauthorized opening of bags it was hitherto customary to apply soft metal seals to the tightened strings in order to maintain them in their contracted adjustment about the bag necks, it having been necessary either to cut the strings or break or mar the seals in order to open the bags.

Bags provided with neck closing strings and seals for holding the strings in adjusted positions have found large use in the packaging of coin with the result that bag contents would frequently be scattered upon accidental breakage of the strings.

The seals of my invention are of endless tubular formation and are constructed and applied so as forcibly to press against the portions of the bags facing the same, the soft metal of the seals adapting itself to the various irregularities of the bunched bag fabric effectively to close the bag openings. I thus enable the seal to perform a bag closing function in addition to its guarding function.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof and in which Fig. 1 is a perspective view showing a seal (in full lines) before it is pressed into engagement with a bag (shown by dot and dash lines) whose neck is illustrated as being passed through the bore of the seal; Fig. 2 is a cross sectional view of the seal; Fig. 3 is a view illustrating a complete embodiment of the invention, the seal being here shown as having been pressed into firm engagement with the bag neck passing through its bore; Fig. 4 is an edge view of the sealed bag illustrated in Fig. 3; Fig. 5 is a plan view illustrating one side of the seal shown in Fig. 3; and Fig. 6 is a bottom view showing the other side of the seal.

Like parts are indicated by similar characters of reference throughout the different figures.

The bag 1 is formed of canvas or other sufficiently strong and serviceable textile fabric, the material of the bag at the entrance opening thereof being gathered together to form a neck 2 after the contents have been supplied to the bag. The gathered fabric thus constituting the neck 2 is passed through the cylindrical bore 3 of an endless soft ductile metal tubular seal 4 which is yet sufficiently hard to maintain the shape which it is caused to assume by a seal press in order to close the bag. I preferably employ lead out of which to make the seal and desirably shape the seal with the axis of its interior and exterior cylindrical surfaces non-co-incident whereby the seal is made sufficiently thick upon one side for the passage of holes or channels 5 longitudinally therethrough. These holes are provided for the reception of string 6, one end of which is knotted at 7 to prevent it from being drawn through its receiving hole 5 and the other end of which is passed through its receiving hole after having been threaded through the eyelet provided in a shipping or other tag 8. To protect the tag, the tag string is desirably projected from the seal toward the bottom of the bag. The ends of the loop thus formed by the string 6 pass through the thickest part of the seal where there is the most metal in order to compensate for the absence of metal at the holes 5. Further metal may be supplied to the tube where longitudinally apertured and between the sides of the string loop by leaving the base portion 9 of the stem which is formed at the gate of a mold in the casting operation. After the tag string has been adjusted as indicated in Fig. 1 the fabric at the receiving end of the bag is gathered to form the neck 2 and is there passed through the bore of the seal whereafter a suitable seal press is applied to effect some such modification of the shape of the seal as is illustrated in Figs. 3, 4 and 5. The lead of the seal is sufficiently soft to permit the seal press to effect the most intimate contact between the inner bag en-

gaging surface of the seal and the neck of the bag encompassed thereby, the bag neck being so effectively contracted in the zone of the endless seal as to be materially reduced in cross section in comparison with the portions of the bag neck which are immediately adjacent the ends of the seal, as illustrated clearly in Fig. 4. The seal is thus not only in thorough gripping engagement with the bag neck but the bag neck is compressed so tightly and compactly in the zone of the seal that the portions of the bag neck adjacent the seal are bulged to be of cross sectional area in excess of the cross sectional area of the applied seal, and particularly the bore thereof. It is therefore impossible to withdraw the neck of the bag through the bore of the applied seal, making it necessary to mutilate the seal in order to dissociate it from the bag. Where sealed bags are shipped to consignees it is preferable to have the bags opened at their bottoms in order that the seals may remain intact in case a claim is made for shortage. In order further to guard against the withdrawal of the seal one of its broad faces may be pressed into flute-like form to produce a central insetting bag engaging ridge 10.

While I have herein shown and particularly described the preferred embodiment of my invention I do not wish to be limited to the precise details of construction shown as changes may readily be made without departing from the spirit of my invention, but having thus described my invention I claim as new and desire to secure by Letters Patent the following:—

A seal for bags which is in the form of an endless tubular member that is thickened at one portion and is apertured longitudinally thereof where thickened for the reception of string, the bore of this tubular member being adapted to receive the neck of a bag and which member is formed of ductile metal that is sufficiently soft to permit a seal press to effect intimate contact between the inner bag engaging surface of the seal and the neck of the bag and which metal is sufficiently hard to maintain the shape which it is caused to assume by the seal press.

In witness whereof I hereunto subscribe my name this 21st day of November, A. D. 1914.

THEODORE L. DE LAND.

Witnesses:
JOHN J. DOUGHERTY,
HARRY FILLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."