E. J. BROOKS.

BAG SEAL.

APPLICATION FILED FEB. 13, 1911.

990,630. Patented Apr. 25, 1911.

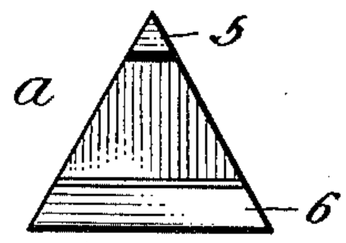

Fig. 1.

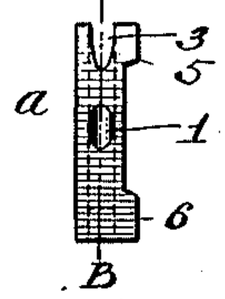

Fig. 2.

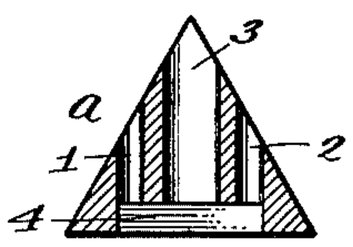

Fig. 3.

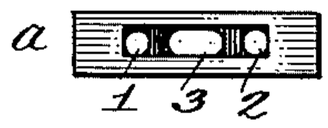

Fig. 4.

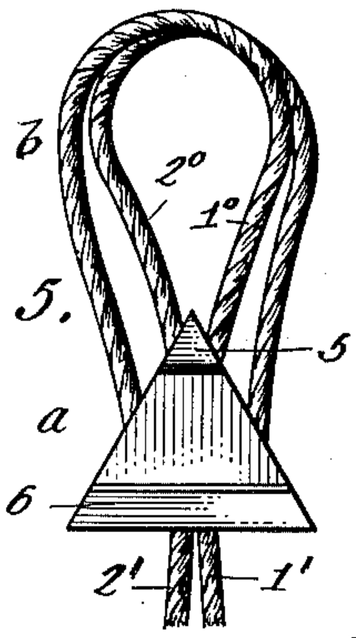

Fig. 5.

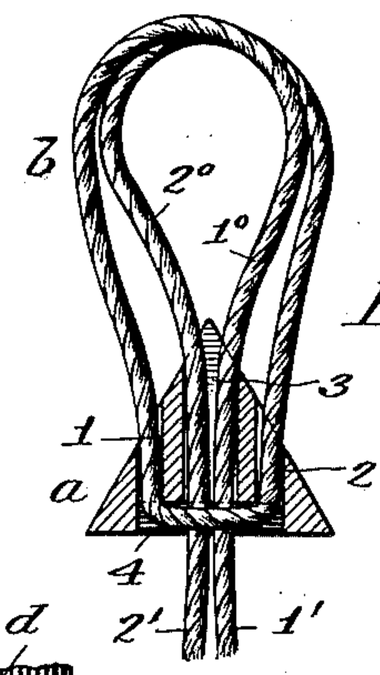

Fig. 6.

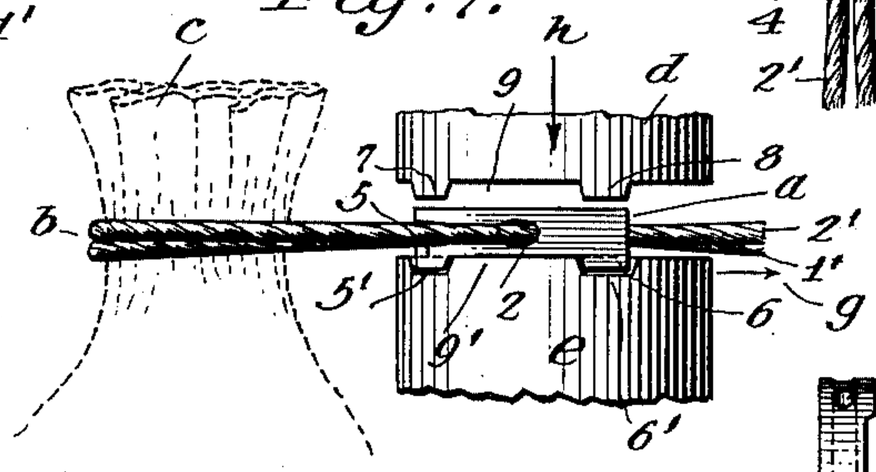

Fig. 7.

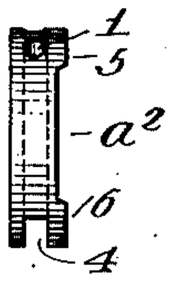

Fig. 11.

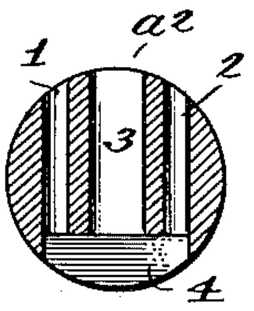

Fig. 12.

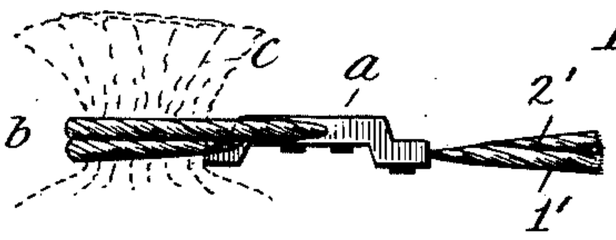

Fig. 9.

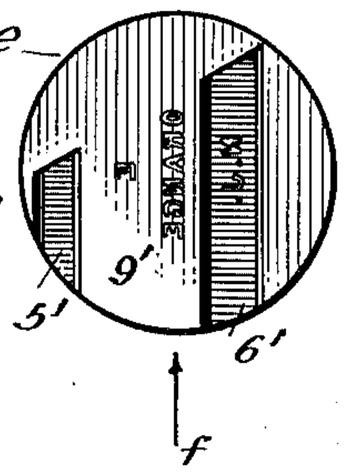

Fig. 8.

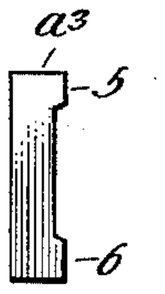

Fig. 13.

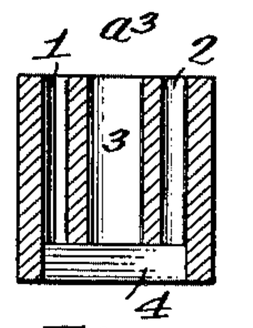

Fig. 14.

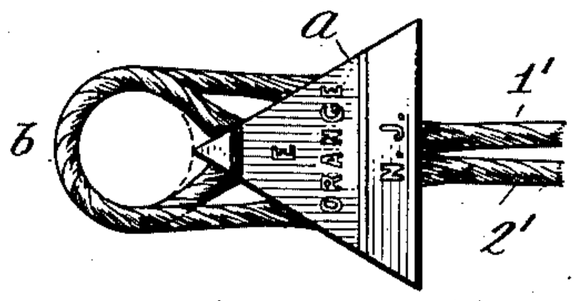

Fig. 10.

WITNESSES

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Attorney

UNITED STATES PATENT OFFICE.

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BAG-SEAL.

990,630. Specification of Letters Patent. Patented Apr. 25, 1911.

Application filed February 13, 1911. Serial No. 608,197.

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States of America, and a resident of East Orange, in the State of New Jersey, have invented a new and useful Improvement in Bag-Seals, of which the following is a specification.

This invention relates to means for securely fastening and sealing the necks of bags of textile fabric containing gold or silver coin or other valuables, or articles of merchandise, so as to insure the detection of any tampering therewith, and thus to prevent the abstraction of the contents.

The present invention consists in an improved press-fastenable lead and cord seal for such use; and in its lead seal part as a new article of manufacture.

The leading objects of the present invention are to facilitate threading and securely fastening the cord; and to provide for tightening the cord around the neck of the bag, with the aid of the seal part and seal press, before the press-fastening operation.

Other objects will be set forth in the general description, which follows.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 are respectively face and edge views of a triangular seal part of the improved construction; Fig. 3 represents a section on the line A—B, Fig. 2; Fig. 4 is a view of the recessed edge of the seal part; Fig. 5 is a face view of an improved bag seal embodying said triangular seal part as it leaves the factory; Fig. 6 is a like view with the seal part in section showing how the cord is threaded; Fig. 7 is an edge view of the same seal in juxtaposition to the neck of a bag and the dies of a seal press, illustrating the operation of tightening the cord; Fig. 8 is a top view of the bed die shown in Fig. 7; Fig. 9 is an edge view of the press-fastened seal; Fig. 10 is a face view of the same projected from Fig. 8; Figs. 11 and 12 are respectively an edge view and a section of a round seal part of the same functional construction as said triangular seal part; Figs. 13 and 14 are like views of a square seal part, representing another like modification of the same invention.

Like reference characters refer to like parts in all the figures.

The improved bag seal consists of a lead seal part, a or a^2 or a^3, of novel construction, in combination with a double-loop cord, b, adapted to embrace and secure the neck of a textile bag, c, in customary manner, and to be tightened and permanently fastened by the coöperation therewith of such seal part and a seal press; which latter is represented by its pair of dies, d and e, in Figs. 7 and 8.

In each species of the invention the seal part a or a^2 or a^3, has three threading holes, 1, 2 and 3, preferably and conveniently parallel with each other, and a supplemental edge recess, 4; the latter crossing and communicating with all the threading holes at one edge of the seal part, as shown in Figs. 3 and 4, Fig. 6, Fig. 12 and Fig. 14, especially Fig. 4, which see. Before the seal leaves the factory, or afterward if preferred, it is threaded by inserting the cord ends 1′ and 2′, at the recessed edge of the seal part, through the respective side holes 1 and 2, and returning them through the middle hole 3, which is of double width, so as to form two neck-embracing loops 1° and 2°, Figs. 5 and 6.

In each species the seal part a or a^2 or a^3 is further constructed with a pair of projections, 5 and 6, on one side, at right angles to the threading holes 1, 2 and 3, and preferably and conveniently so constructed and arranged as to locate the edge recess 4 partly within that one of the projections marked 6. These projections are loosely fitted to counterpart depressions 5′ and 6′ in the face of one of the seal-press dies d and e, preferably the bed die e; the pair of dies when the seal press is opened being so spaced apart, as represented in Fig. 7, as to only admit the seal part when said projections are within said depressions. The die depressions 5′ and 6′ are conveniently arranged perpendicular to the open front of the seal press. The dies d and e, or either of them, may be further provided with the customary stamping characters so as to provide the pressed seal part, represented in Figs. 9 and 10, with any desired distinguishing marks. Compare Figs. 8 and 10. Also with any desired additional projections and depressions 7, 8 and 9 to effectively compress the seal part between the dies; said depressions 5′ and 6′ and the intermediate die portion or land 9′ between them being adapted to coöperate therewith. Compare Figs. 7 and 9.

After slipping the cord loops 1° and 2°

over the neck of the bag *c*, the cord ends 1′ and 2′ are pulled through the seal part *a* or a^2 or a^3 to preliminarily tighten the cord around the bag neck, and the seal part is then inserted edgewise between the seal press dies *d* and *e* as represented by the arrow *f*, Fig. 8. In this operation the projections 5 and 6 and depressions 5′ and 6′ form alining guides which insure the proper relation of the projections, depressions and lettering of the dies to the respective portions of the seal part.

The cord ends 1′ and 2′ are then pulled hard to tighten the cord *b* to the utmost around the bag neck; said projections 5 and 6 and die recesses 5′ and 6′ serving in this operation to prevent the displacement of the seal part between the seal-press die by the pulling strain; and the cord is kept taut until the dies are closed upon the seal part as represented by the arrow *h*, Fig. 7, and by the product of the dies shown at *a* in Figs. 9 and 10. The cord ends may then be cut off as close to the seal part as desired, and no knotting of the cord before or after the seal-pressing operation is required. In the pressed seal part represented at *a* in Figs. 9 and 10, that portion of the cord *b* which connects the two neck-embracing loops, being inclosed within said edge recess 4, is wholly inclosed within the solidified lead and protected thereby. Moreover, the returned cord ends 1′ and 2′ being crossed by said loop connecting portions within said recess, as in Fig. 6, both ends of each of the horseshoe-shaped loops of the cord are more securely fastened within the pressed seal than heretofore. Compare Figs. 6 and 10.

In the species represented by Figs. 1 to 10, inclusive, the seal part *a* is triangular in shape, with the sides of the triangle equal and its apex coincident with that end of the middle threading hole 3 which is distant from the edge recess 4 said recess being located within the base edge of the triangular seal part. This construction provides for a neat and secure seal part of minimum weight and cost; the saving of lead being an important consideration in the manufacture of such seals by the million.

In the species represented by Figs. 11 and 12 the seal part a^2 is round; with the middle hole 3 diametrical, and the relation between the threading holes and projections as above described.

In the species represented by Figs. 13 and 14 the seal part a^3 is square; the threading holes 1, 2 and 3 being arranged parallel to two of the edges, and the recess 4 in a third edge, which makes the latter identical with the recessed edge of the triangular seal part shown in Fig. 4.

With the dies *d* and *e* constructed or modified as above described, seal presses of ordinary make may be employed; or the peculiarly constructed dies may be embodied in my "cording and wiring seal press" patented February 12, 1907, by United States Letters Patent No. 844,095.

The term "lead" is intended to include suitable soft metal alloys.

The term "cord" is intended to include suitable twine of any known or improved kind.

Other shapes of the seal part and other like modifications will suggest themselves to those skilled in the art.

Having thus described said improvement, I claim as my invention, and desire to patent under this specification:

1. An improved bag seal having, in combination, a cord forming a pair of loops adapted to embrace the neck of a bag, and a compressible lead seal part having threading holes including separated side holes and a double-width middle hole, through which latter the returned ends of the cord protrude opposite the loops; said seal part being further constructed with an edge recess connecting said side holes and communicating with said middle hole, and adapted to inclose a loop-connecting portion of the cord crossing the returned ends within said recess.

2. An improved bag seal having, in combination, a loop-forming cord adapted to embrace the neck of a bag and a compressible lead seal part having threading holes through which the ends of the cord protrude sufficiently to be pulled to tighten the cord around the bag neck, said seal part being further constructed with projections on one side adapted to interact with recesses in the face of one of the dies of a seal press to resist the pulling strain and prevent the displacement of the seal part between said dies.

3. An improved bag seal having, in combination, a cord forming a pair of loops adapted to embrace the neck of a bag, and a compressible lead seal part having threading holes including separated side holes and an edge recess connecting said side holes and adapted to inclose a portion of the cord connecting the two loops, said seal part being further constructed with projections on one side arranged at right angles to said threading holes and adapted to interact with displacement-preventing recesses in the face of one of the dies of a seal press to resist the pulling strain in the cord-tightening operation.

4. A compressible lead seal part, for a bag seal, constructed with threading holes parallel with each other adapted for threading the ends of a double-loop cord through the seal part and returning them, an edge recess crossing said threading holes and in communication therewith adapted to inclose a loop connecting portion of the cord, and projections on one side of the seal part at right angles to said threading holes adapted

to interact with counterpart die recesses within a seal press to prevent the displacement of the seal part by pulling strains.

5. A triangular lead seal part, for a press-fastenable bag seal, constructed with three threading holes parallel with each other adapted for threading the ends of a double-loop cord through the seal part and returning them, the middle hole having one end at the apex of the seal part, a recess in the opposite or base edge of the seal part communicating with said holes and adapted to inclose a loop-connecting portion of the cord, and projections on one side of the seal part parallel with said recessed base edge adapted to interact with counterpart die recesses within a seal press to prevent the displacement of the seal part by pulling strains, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:
N. F. CAREY,
GEO. J. WENT.