E. J. BROOKS.

CORDING SEAL.

APPLICATION FILED MAY 6, 1910.

961,931. Patented June 21, 1910.

Fig. 1.

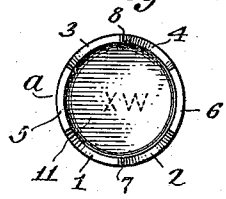


Fig. 2.

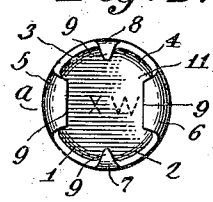


Fig. 3.

Fig. 4.

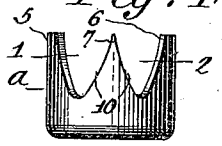


Fig. 5.

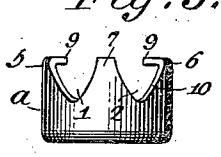


Fig. 6.

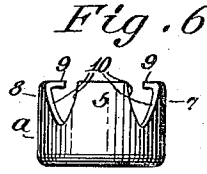


Fig. 7.

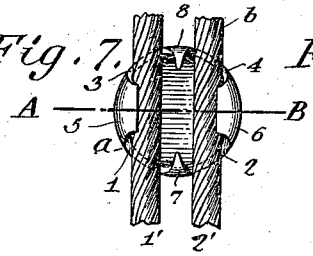


Fig. 8.

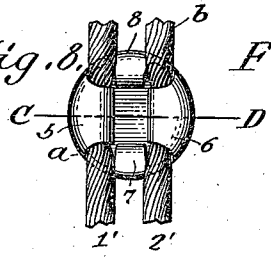


Fig. 9.

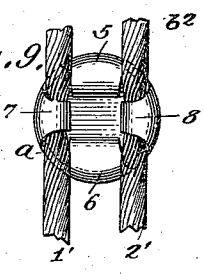


Fig. 10.

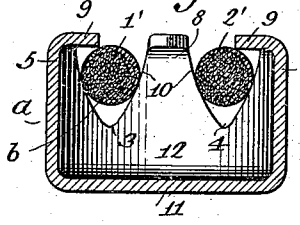


Fig. 11.

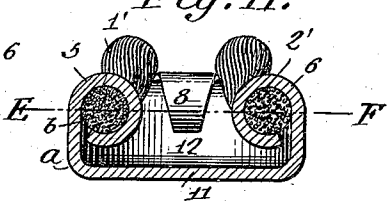


Fig. 14.

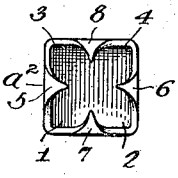


Fig. 12.

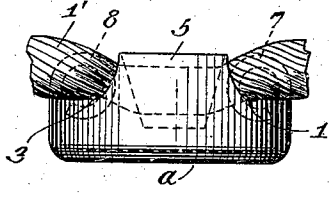


Fig. 13.

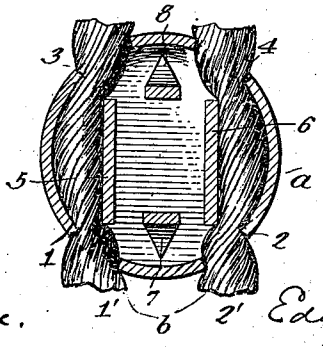
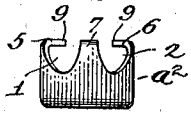


Fig. 15.



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UNITED STATES PATENT OFFICE.

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CORDING-SEAL.

961,931. Specification of Letters Patent. **Patented June 21, 1910.**

Application filed May 6, 1910. Serial No. 559,672.

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 Cording-Seals, of which the following is a specification.

This invention relates to seal-press fastened or press fastenable cording seals for securing packing cases and the like containing goods in bond, and other receptacles, against being opened without detection, and thus to prevent the abstraction of the contents of such receptacles.

The present invention is additional to the improvements in such seals set forth in my previous specifications forming part of United States Letters Patent No. 676,415, dated June 18, 1901, Nos. 796,107 and 796,108, dated August 1, 1905, and No. 836,560, dated November 20, 1906. A feature common to the seals set forth in said previous specifications and those of the present invention is the construction of the seal part without any threading holes and with an open fronted recess which receives a bight of both cord ends and preliminarily attaches the seal part thereto so as to facilitate applying the seal part.

The present invention consists in a seal part for such seals embodying any or all of certain novel features of construction hereinafter particularly described and claimed, and in the combination of the same with a soft and flexible sealing cord which may be of any suitable kind as hereinafter more particularly indicated.

The leading object of this invention is to adapt the improved seal part to be made in one piece of nearly rigid sheet metal, and with fastening lips bendable only by means of suitable tools, and which cannot be opened to release either end of the sealing cord without such defacement as to insure detection.

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 front views of a cup-shaped seal part having an open front, as it appears before and after the last stage of its manufacture as a distinct part; Fig. 3 is a back view thereof; Figs. 4 and 5 are side views projected from Figs. 1 and 2 respectively; Fig. 6 is another side view of the finished seal part; Fig. 7 is a front view showing the seal part preliminarily attached to the ends of the sealing cord; Fig. 8 is a like view of the press-fastened seal; Fig. 9 is a view similar to Fig. 8, showing the employment of the smaller lips of the seal part as fastening means; Figs. 10 and 11 represent magnified cross sections on the line A—B, Fig. 7, and the line C—D, Fig. 8, respectively; Fig. 12 is a side view of the press-fastened seal on the same scale as Fig. 11; Fig. 13 represents a section through the seal part of the press fastened seal on the line E—F, Fig. 11; and Figs. 14 and 15 are respectively front and side views of another seal part illustrating modifications.

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

The improved seal part, a or a^2, is preferably and conveniently cup-shaped, and made in one piece of suitable sheet metal, hereinafter referred to as substantially rigid, which is preferably a sufficiently heavy grade of tin (tin plate) say XX or XXX. Made from this metal it is practically impossible to unfasten the seal part after it is press fastened in the manner hereinafter described.

The sealing cord, b or b^2, is cut of the required length from suitable soft and flexible twine or cord of sufficient strength and durability. For additional security the "cord" may be made with a knitted strand, as set forth in my specification forming part of Patent No. 208,953 dated October 15, 1878, or with a strand of wire as set forth in that of J. Howlett and myself forming part of Patent No. 249,357 dated November 8, 1881; but, for the purposes of the present invention, may be of any suitable known or improved kind, and must be soft and flexible as aforesaid.

Two species of the seal part are shown respectively at a in Figs. 1 to 13 inclusive, and at a^2, Figs. 14 and 15. In both species the seal part is hollow and has an open front and is constructed with deep flaring notches 1, 2, 3 and 4, and with substantially parallel prongs or lips 5 and 6, at opposite sides of its open front, and with another pair of such prongs or lips, 7 and 8, substantially at right angles to the pair first named; and both pairs of the "lips", as they are hereinafter termed, are constructed with inturned front extremities, 9, and with inclined edges, 10 (Fig. 10). These inclined edges are

formed by said notches, 1, 2, 3 and 4, which also admit the ends, 1′ and 2′, of the cord, b or b^2, between the fastening lips in preliminarily attaching the seal part to the cord, as illustrated by Figs. 7 and 10. When the seal part is thus preliminarily attached, the inturned front extremities 9 of the fastening lips engage with the cord to a sufficient extent, as represented in Fig. 10, to hold the seal part temporarily in place in juxtaposition to the cord ends 1′ and 2′ preparatory to the application of the seal press; and the inclined edges 10 of the other pair of lips direct the cord beneath said extremities, and support the same to a sufficient extent.

At the press fastening operation all the lips are coiled into the open-fronted recess or interior of the seal part, as best shown in Fig. 11, and the cord is securely held against separation from the pressed seal part by the interaction therewith of the edges of said notches 1, 2, 3 and 4, as well as the inner surfaces and edges of the fastening lips as shown in Fig. 13.

In the species represented by Figs. 1 to 13, inclusive, the seal part a is first stamped or drawn into the form of a deep round cup and provided with the notches 1, 2, 3 and 4, as represented by Figs. 1 and 4, and is finished by providing the prongs or lips 5—6 and 7—8 with their inturned extremities 9, as represented in Figs. 2, 5, 6, 7, and 10; and the back, 11, of the seal part is or may be provided with any desired lettering or other permanent distinguishing marks, as represented by "W. X." (Fig. 3). The several lips are coiled into the shapes and locations represented in Figs. 8, 9, 11, 12 and 13, at the press fastening operation. The two pairs of lips 5—6 and 7—8 are preferably and conveniently made of different shapes and proportions as shown; the more rigid wide lips 5—6 being primarily designed for use as the fastening lips, and the pointed lips 7—8 with their more slanting inclined edges 10 as supporting lips, as in Figs. 7, 8, 10, 11, 12 and 13. The narrower lips 7—8 may, however, be used as fastening means, if desired, especially for securing thinner cord, b^2, as illustrated by Fig. 9. The space 12, Figs. 10 and 11, between the bottom or back 11 of the seal part and the notches 1, 2, 3 and 4, serves to admit the movable die of the seal press, and to accommodate the coiled lips of the fastened seal.

The modifications represented by Figs. 14 and 15 consist in making the cup-shaped seal part (a^2) square in plan view instead of round, illustrating changes of shape, and in making the lips 5, 6, 7, and 8 of one and the same size and shape.

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. A seal part, for press-fastenable cording seals, made of nearly rigid sheet metal, and constructed with substantially parallel lips arranged at opposite sides of an open front and having inturned front extremities, and a second pair of lips substantially at right angles to those first named and constructed with inclined edges adapted to interact with said inturned extremities of the opposing lips in temporarily attaching the seal part to the ends of a cord preparatory to the press fastening operation.

2. A seal part, for press-fastenable cording seals, made of nearly rigid sheet metal, and constructed with substantially parallel lips arranged at opposite sides of an open front, and a second pair of lips substantially at right angles to those first named; both pairs of lips being constructed with inturned front extremities and inclined edges, and adapted to be coiled into the interior of the seal part at the press fastening operation.

3. A cup-shaped seal part, for press-fastenable cording seals, made in one piece of nearly rigid sheet metal and constructed with deep notches in its front edge forming substantially parallel lips at opposite sides of the open front of the seal part, such lips having inturned front extremities and being adapted to be coiled around the respective ends of a sealing cord by the action of a seal press.

4. A cup-shaped seal part, for press-fastenable cording seals, made in one piece of nearly rigid sheet metal, and constructed with deep notches in its front edge forming substantially parallel lips at opposite sides of the open front of the seal part and a second pair of lips substantially at right angles to those first named; both pairs of lips having inturned front extremities and inclined edges, and adapted to be coiled into the interior of the seal part at the press fastening operation.

5. In combination with a soft and flexible sealing cord, a hollow seal part made of nearly rigid sheet metal and constructed with substantially parallel lips at opposite sides of an open front, and with a back adapted to carry distinguishing marks; said lips having inturned front extremities, and being adapted to be coiled around the respective ends of said cord by the action of a seal press, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:
ELLEN J. BROOKS,
ELINOR BROOKS.