

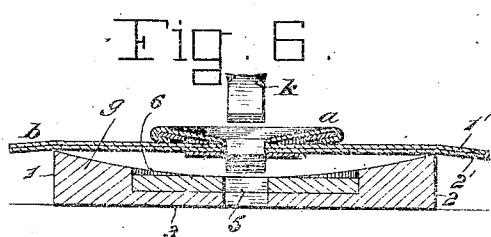
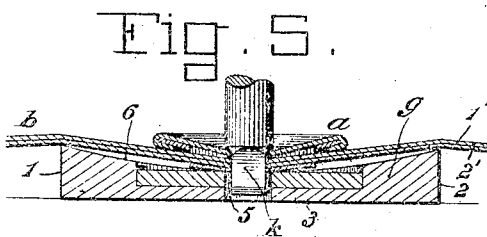
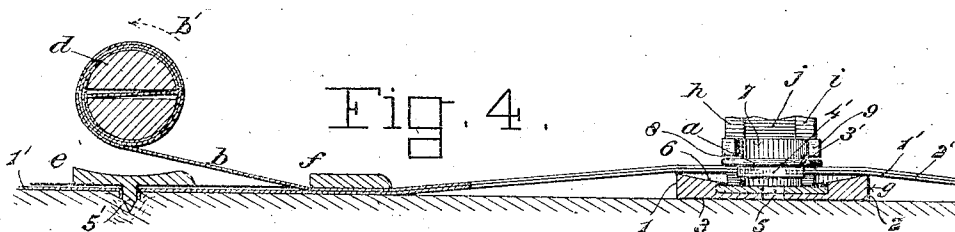
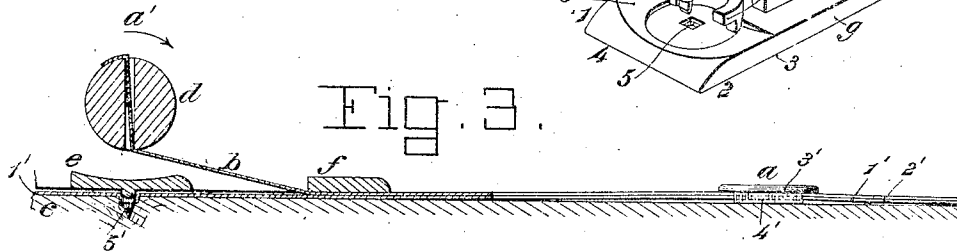
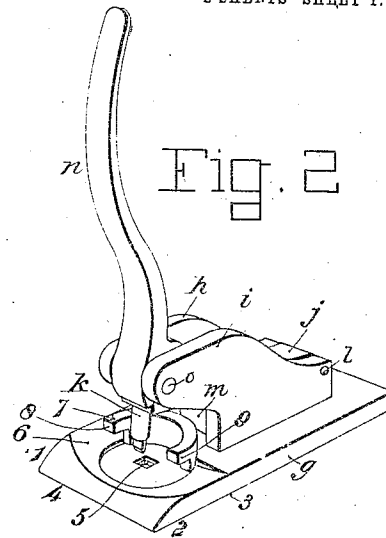
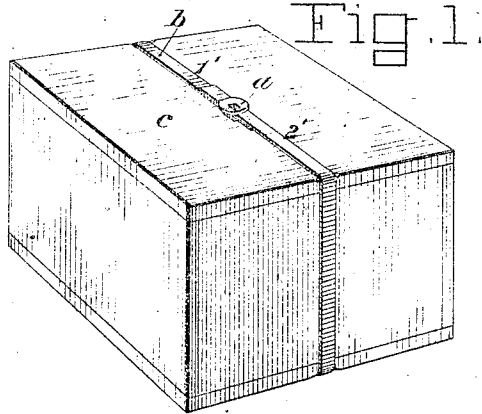
E. J. BROOKS.
SEAL PRESS.

APPLICATION FILED MAY 6, 1909.

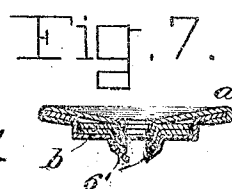
932,438.

Patented Aug. 31, 1909.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 8.

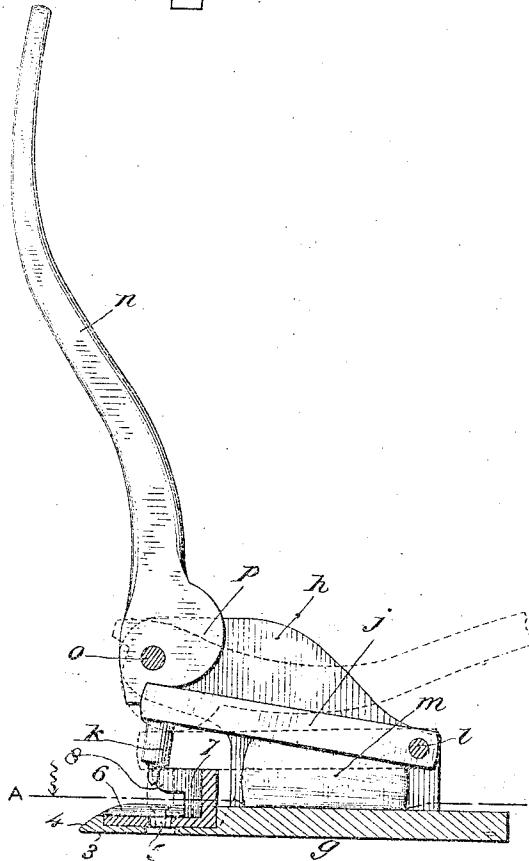


Fig. 10.

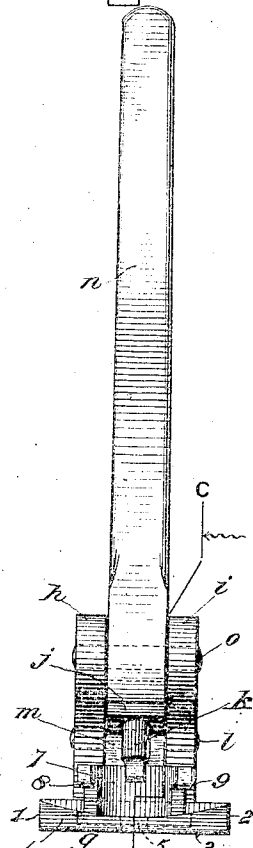


Fig. 9.

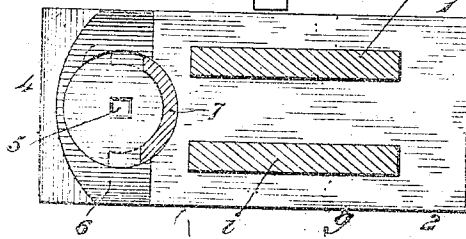


Fig. 11.



Fig. 12.



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UNITED STATES PATENT OFFICE.

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SEAL-PRESS.

932,433.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed May 6, 1909. Serial No. 494,441.

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 Seal-Presses, of which the following is a specification.

This invention relates to means for sealing boxes and the like by means of metallic box straps and nailless metallic seals; and consists in certain novel combinations of parts, and in a seal press for press fastening such box straps and seals embodying such combinations or any of them, all as hereinafter more particularly described and claimed.

Nailless metallic box seals and a method of sealing wooden boxes therewith are set forth in previous specifications forming part of my applications for United States Letters Patent Serial No. 484347, filed March 19, 1909; Serial No. 484662, filed March 20, 1909; and Serial No. 491271, filed April 21, 1909. (See Letters Patent No. 925450 and No. 925451, dated June 22, 1909, and No. 927217, dated July 6, 1909.) According to the method set forth in said previous specifications, the fastening or sealing tool was or might be an ordinary nail punch, or the like, and fastening portions of the box strap and seal part were interlocked with each other around a permanent empty indentation in a subjacent portion of the wood of the box, formed at the sealing operation.

The leading objects of the present invention are to securely fasten and interlock the overlapped ends of the box strap and a nailless seal part embracing them by a single press-fastening operation and to do this without indenting the subjacent portion of the box, which may consequently be as thin as may be desired, or of wood or other material not suitable to such indentation.

Another object is to free the fastening portions of the box strap and seal part from the bed of the seal press by the resiliency of the box strap itself, so as to facilitate disengaging the seal press after the sealing operation, and thus to provide for so sealing boxes with rapidity.

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

Two sheets of drawings accompany this specification as part thereof.

Figure 1 is a perspective view of a box sealed according to the present invention; Fig. 2 is a perspective view of the improved seal press; Figs. 3 and 4 are sectional edge views illustrating the sealing operation; Figs. 5 and 6 are sectional views on a larger scale, including sections through the metallic seal part, in further illustration of the sealing operation; Fig. 7 represents a cross section through the overlapped box-strap ends and seal part as they appear after the sealing operation; Fig. 8 is a sectional side view of the seal press on the same scale as Figs. 3 and 4, showing its movable parts in different positions by full and dotted lines; Fig. 9 represents a horizontal section on the line A—B, Fig. 8; Fig. 10 is a front view of the seal press with its movable parts in their normal positions represented in full lines in Fig. 8; and Figs. 11 and 12 are respectively bottom and top views of the punch-carrying movable part of the seal press, detached.

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

The line C—D, Fig. 10, represents the plane of section in Fig. 8.

In carrying this invention into effect a metallic seal part, *a*, or any number of such seal parts, and a metallic box strap, *b*, or any member of such box straps, are applied to a wooden box, *c*, or the like, by means of a box-strap tool or "tightener," parts of which are represented at *d*, *e* and *f*, in Figs. 3 and 4, and an improved sealing tool or "seal press," represented as a whole by Fig. 2 and at *g* in Figs. 4 to 6 inclusive, which is distinctively the subject matter of the present invention.

The seal part *a* or each seal part is adapted to embrace the overlapped ends, 1' and 2', of the box strap *b* interacting therewith, and is preferably made of tin scrap or like sheet metal and with top and bottom portions, 3' and 4', Fig. 3, that are imperforate or substantially imperforate until the seal is press fastened. Otherwise, for the purposes of this invention, the seal parts may be of any suitable known or improved construction. The specific seal part shown at *a* is the subject matter of said previous specification forming part of said application Serial No. 491271 (Patent No. 927217), where the same is more fully described, and in favor of which it is hereby disclaimed.

The box strap *b* or each box strap may be

cut from a continuous length of any strap iron or like flat metal or metallic ribbon and requires no preliminary treatment.

The tightener represented in Figs. 3 and 4 is or may be of the construction set forth in my previous specification forming part of an application Serial No. 481201, filed March 3, 1909, (Letters Patent No. 925990, dated June 22, 1909) and the parts represented in Figs. 8 and 9 are the slotted shaft of the tool, represented at *d*, a cross bar of the frame beneath said shaft, represented at *e*, and a cross bar at the front edge of the frame, represented at *f*. For the purposes of the present invention said cross bar *e* beneath the winding shaft may be provided with a spur, 5', which is driven through one of the box-strap ends, 1', into the wooden box cover or a like wooden box portion to preliminarily and temporarily fasten the box-strap end for the tightening operation. Otherwise the tool may be of the construction set forth in said previous specification forming part of said application Serial No. 481201, (Patent No. 925990) or of any suitable known or improved construction.

The improved seal press, shown by Figs. 8 to 12, inclusive, in connection with said Figs. 2, 4, 5 and 6, is characterized by a base, *g*, of novel construction having lateral edges, 1 and 2, of sufficient depth for the sealing and seal-releasing operations hereinafter described, a flat bottom, 3, and a free front edge, 4, tapered as shown, with its thin extremity in the plane of said bottom, a central hole, 5, extending vertically through the bottom, and a concavity or depression, 6, in the top of the base, between said lateral edges 1 and 2 and adjacent to said free edge 4, within which said hole is located. Said base *g* is further provided with a gage stop, 7, adapted to embrace the seal part *a*, and undercut front ends, 8 and 9, to engage the inner edge of the box strap *b* when the latter is in effective position within the seal press as in Fig. 4. This gage stop may be formed by an inserted circular piece through which said hole 5 extends, as shown in the drawings, or may be integral with the base casting, as preferred. A pair of cheeks, *h* and *i*, supported by said base *g* and preferably integral therewith, are located behind said gage stop 7 with their front ends overhanging said depression 6; and a movable member, *j*, carrying a punching bit or punch, *k*, at its free end, is pivoted between said cheeks by a pivot, *l*, at its rear end parallel with said free edge 4 of the base, said punch *k* being alined with said hole 5 in the base in the depressed position of the movable member represented in Fig. 5 and by dotted lines in Fig. 8. Said movable member *j* and punch *k* may conveniently be cut from rod steel.

A spring, *m*, Fig. 8, interposed between the

base *g* and punch-carrying movable member *j*, renders the latter normally spring elevated, with the punch in its position represented in Figs. 1, 6 and 10, and in full lines in Fig. 8. The specific spring represented is of rubber.

As means for depressing the movable member *j*, in the sealing operation, a hand lever, *n*, is pivoted between the overhanging front ends of the cheeks *h* and *i* by a horizontal pivot, *o*, parallel with said pivot *l*, and is constructed with the customary cam, *p*, adjacent to its pivot, to interact with the free end of the movable member substantially in line with the punch *k*.

In the sealing operation, illustrated by Figs. 3 to 6 inclusive, after threading both ends 1' and 2' of the box strap *b* through the seal part *a*, the under end 1' is preliminarily fastened as by driving the spur 5' on the cross bar *e* of the tightener therethrough, and the upper end 2' is attached to the shaft *d* of the tightener, and drawn beneath its cross bar *f* by working the tool, as represented by the arrow *a'* in Fig. 3, until the box strap is under the desired tension. The free edge 4 of the base *g* of the seal press is then inserted edgewise beneath the seal part *a*, and the overlapped ends of the box strap *b* embraced thereby are located therewith beneath the punch *k* by means of the gage stop 7. A single movement of the hand-lever *n* then depresses the punch *k* until the seal part is arrested by the bottom of the depression 6, and the punch is driven through the seal part and box strap as in Fig. 5. In this operation downturned portions of the metal of the top and bottom of the seal part and of both box strap ends are interlocked with each other as represented at 6' in Fig. 7, and an effective sealing operation is thus completed. A return movement of the hand lever *n* permits the punch-carrying movable member *j* to be reelevated by the spring *m* so as to free the punch *k* from the seal part *a*, and the resiliency of the box strap *b*, owing to the elevated supports of the box strap at the lateral edges 1 and 2, reelevates the seal part *a* within the depression 6 so as to free said interlocked portions 6' from the hole 5 of the base *g*, as in Fig. 6, and thus permit the seal press to be withdrawn edgewise from the sealed box strap.

A single sealed box strap may in the above manner be located between the ends of the box as in Fig. 1, or between the sides or between the bottom and top of the box, as there is no seal nail to be driven through the cover or like box part into the ends. The box-strap and seal part may also, of course, be otherwise arranged, and may be duplicated or multiplied if desired.

The several parts of the improved seal-press obviously admit of considerable variation in shape, including the point of the

punch *k*; a metallic spring of coiled wire or flat metal may take the place of the rubber spring *m*; 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. A seal press for fastening metallic box straps under tension by means of nailless metallic box seals, such press having, in combination, a horizontal base portion constructed with a flat bottom adapted to rest solidly upon the box and with a tapered free edge insertible edgewise beneath a seal part embracing the overlapped ends of a box strap under tension, and provided with a hole adapted to admit downwardly projecting fastening portions of the seal part and box strap and a stop gage for locating the seal part above the hole, a superjacent downwardly movable member carrying a punch alined with said hole in its depressed position, and means for operating said movable member to complete the seal.

2. A seal press for fastening metallic box straps under tension by means of nailless metallic box seals, such press having, in combination, a horizontal base portion insertible edgewise beneath a seal part embracing the overlapped ends of a box strap under tension and provided with a hole adapted to admit downwardly projecting fastening portions of the seal part and box strap, a superjacent downwardly movable member carrying a punch alined with said hole in its depressed position, and means for operating said movable member to complete the seal, said base portion being flat-bottomed and constructed with a tapered free edge having its thin extremity in the plane of the bottom of the base.

3. A seal press for fastening metallic box straps under tension by means of nailless metallic box seals, such press having, in combination with a suitable punch and means for operating the same, a horizontal base portion constructed with a free edge, insertible edgewise beneath a seal part em-

bracing the overlapped ends of a box strap under tension, and provided with a central hole within a depression adjacent to said free edge between relatively elevated lateral edges, whereby a box-strap under tension supported at said lateral edges is adapted to free the fastening portions of the seal part from said hole by its own resilience after the sealing operation.

4. A seal press for fastening metallic box straps under tension by means of nailless metallic box seals, such press having, in combination, a horizontal base portion constructed with a free edge, insertible edgewise beneath a seal part embracing the overlapped ends of a box strap under tension, and provided with a hole to admit downwardly projecting fastening portions of the seal part and a concavity adjacent to said hole adapted to be located beneath the box strap and seal part, a superjacent spring-elevated movable member carrying a punch alined with said hole in its depressed position, and a hand lever for depressing said punch-carrying member at the sealing operation.

5. A seal press for fastening metallic box straps under tension by means of nailless metallic box seals, such press having, in combination, a horizontal base portion constructed with a free edge and insertible edgewise beneath a seal part embracing the overlapped ends of a box strap under tension, and provided with a hole to admit downwardly projecting fastening portions of the seal part and a concavity adjacent to said hole adapted to be located beneath the box strap and seal part, a superjacent spring-elevated movable member having a horizontal pivot parallel to said free edge and carrying a punch alined with said hole in its depressed position, and a hand lever having a horizontal pivot parallel with said free edge, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:

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ELIZABETH VON SIEFERT.