No. 750,020. PATENTED JAN. 19, 1904.

E. J. BROOKS.

SEAL.

APPLICATION FILED NOV. 18, 1903.

NO MODEL.

Fig. 1.

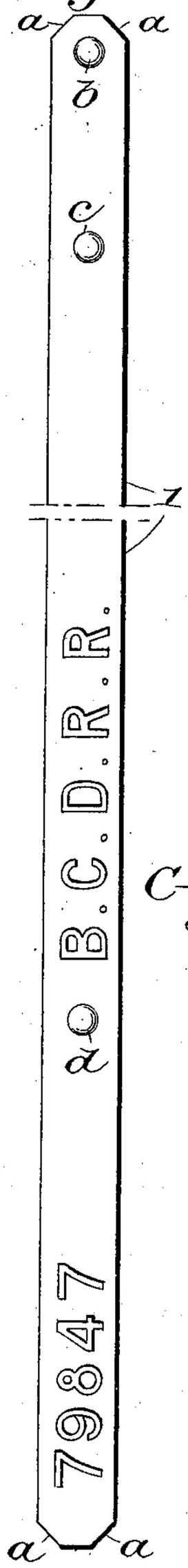

Fig. 2.

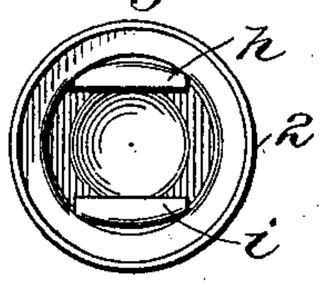

Fig. 3.

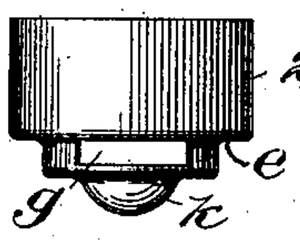

Fig. 4.

Fig. 5.

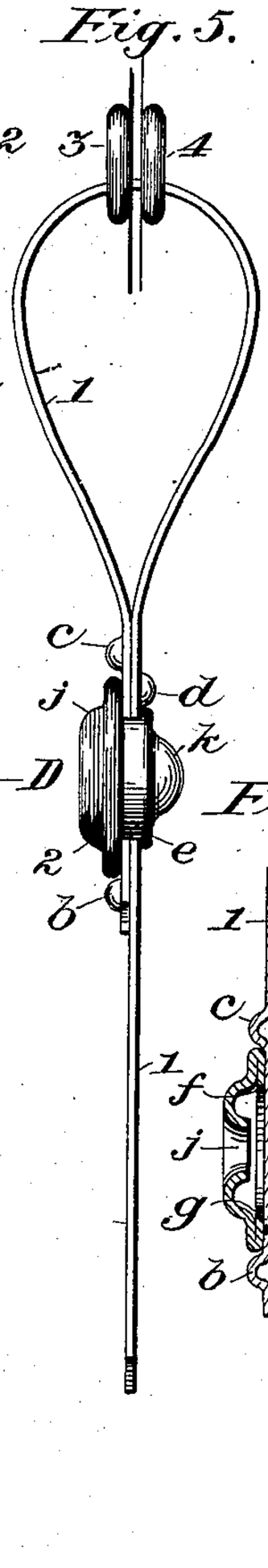

Fig. 6.

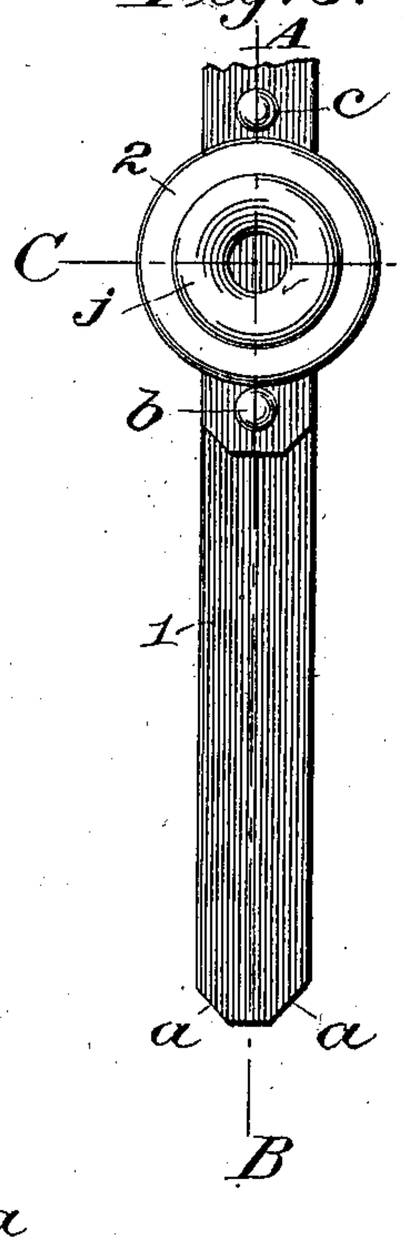

Fig. 11.

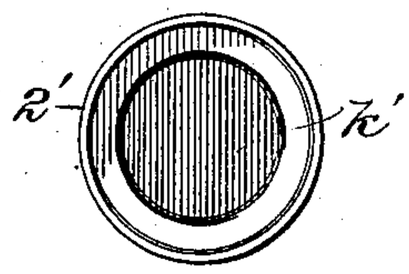

Fig. 12.

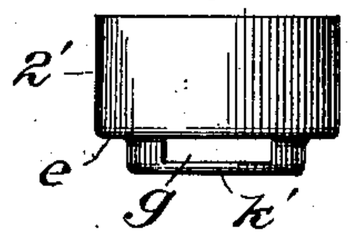

Fig. 13.

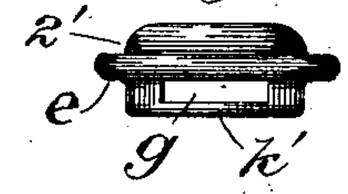

Fig. 14.

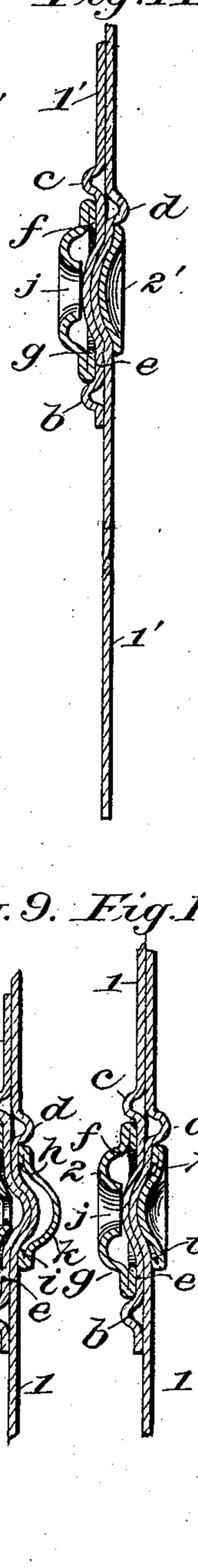

Fig. 7.

Fig. 8.

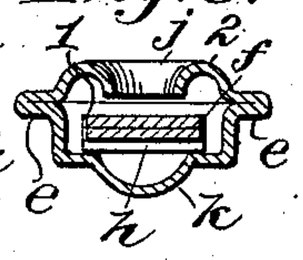

Fig. 9.

Fig. 10.

79847

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No. 750,020. Patented January 19, 1904.

UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY.

SEAL.

SPECIFICATION forming part of Letters Patent No. 750,020, dated January 19, 1904.

Application filed November 18, 1903. Serial No. 181,717. (No model.)

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 Seals, of which the following is a specification.

In common with previous improvements this invention relates to press-fastened seals, the generic elements of each seal being a shackle and a seal part for fastening the doors of railway freight-cars or securing their fastenings against violation and for other like uses.

The present invention consists more particularly in improvements on the construction of such seals set forth in my previous specification, forming part of United States Letters Patent No. 734,807, dated July 28, 1903, as hereinafter specified and claimed.

The objects of the present invention are, in the first place, to provide in a peculiar manner for making a secure press-fastened seal wholly of pliable sheet metal—such as a suitable grade of tin-plate, hereinafter termed "tin"—with the seal part in one piece, to facilitate slotting the seal part and at the same time to add to the security of the seal, and to facilitate locating the seal part near one extremity of the shackle, both ends of which extend through the seal part.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings is a face view of the flexible shackle of the improved seal. Fig. 2 is a face view of the partly-formed seal part, showing a feature of its internal construction. Fig. 3 is an edge view projected from Fig. 2. Fig. 4 is an edge view of the finished seal part. Fig. 5 is an elevation of the improved seal applied to a pair of car-door staples and ready for the seal-press. Fig. 6 is a fragmentary face view projected from Fig. 5. Fig. 7 represents a longitudinal section on the line A B, Fig. 6. Fig. 8 represents a cross-section on the line C D, Fig. 6. Figs. 9 and 10 represent longitudinal sections corresponding as to plane with Fig. 7, showing the seal part press-fastened in different ways. Figs. 11, 12, and 13 are seal-part views corresponding, respectively, with Figs. 2, 3, and 4 and illustrating modifications. Fig. 14 represents a longitudinal section through a pressed seal having its seal part constructed as in Figs. 11 to 13.

Like letters and numbers refer to like parts in all the figures.

The improved seal in either of its forms consists of two parts 1 and 2 or 1′ and 2′, both of sheet metal, preferably tin, and each formed complete by a single piece of the metal.

The shackle part 1 or 1′, hereinafter termed the "shackle," leaves the factory flat, as shown in Fig. 1, and may be of the customary rectangular form, so as to be severed from the plate in complete form by shearing; but its angles are preferably blunted, as shown at *a*, to make them less liable to scratch the hands of the sealer and at the same time to facilitate threading the seal. The shackle 1 is further provided with stops *b*, *c*, and *d*, preferably and conveniently embossed and so arranged as to facilitate locating the seal part 2 or 2′ near one extremity of the shackle between said stops *b* and *c* and to limit the protrusion of the other shackle end, as in Figs. 5 to 7, &c. The schackle 1 may be and preferably is further provided with a serial number, represented by the number "79,847" in Fig. 1, and with the name or initials of a railroad or other owner, as illustrated by the initials "B. C. D. R. R." in Fig. 1, or with equivalent distinguishing-marks, one of which is preferably and conveniently displayed on the shackle end, the protrusion of which is gaged by the stop *d*. Such marks may be on either or both sides of the shackle.

The seal part 2 or 2′ is made in one piece, as aforesaid, from a circular blank or planchet, which is converted into a cup, Figs. 2 and 3 or Figs. 11 and 12, having a circumferential shoulder *e* and provided in its main wall, adjacent to said shoulder, with diametrically opposite slots *f* and *g*. Forming such slots is materially facilitated if the metal is severed along only one of the longer sides of each slot. For this reason and in order to provide the seal part 2 internally with biting edges to assist in preventing the withdrawal of the shackle

ends and also to resist attempts to expand the slot in tampering with the seal the metal from the respective slots is turned in along one of the longer edges of each in the form of rigid lips *h* and *i*, as shown in Figs. 2 and 7 to 10. The metal between said shoulder *e* and the open side of the cup is then drawn in and upset, so as to form a circumferential doubled rim at the shoulder *e*, and a recurved inwardly-projecting annular portion *j*, integral with said rim, which sufficiently closes what has been termed the "face" of the seal part. The seal part 2 is further constructed with a hollow central protuberance *k* in what may be termed its "back," as shown in said Letters Patent No. 734,807. After inserting through the threading holes or slots *f* and *g* that one of the shackle ends provided with said pair of stops *b* and *c* and engaging these stops with the rim of the seal part 2 or 2′ the shackle 1 or 1′ is passed through a pair of car-door staples 3 and 4, Fig. 5, or the like, and its other end is passed through the slots *f* and *g* behind the shackle end first named and drawn down until its stop *d* is against the slotted wall of the seal part, as in Figs. 5 and 6. A seal-press with suitable dies is then applied to the seal part 2 or 2′, and the seal is so pressed as to securely fasten it, as illustrated by Figs. 9, 10, and 14. A "ratchet" seal-press—such as is shown in my drawings forming part of Letters Patent No. 660,837, dated October 30, 1900—is preferred. In the pressing operation one side of the seal part, which may be either its face or its back, as above described, is indented, and those portions of the shackle within the seal part receive permanent bends in close contact with the substantially rigid metal of the pressed-seal part, and the withdrawal of either shackle end is thus prevented.

The face of the seal part 2, as above described, is preferably indented, as shown in Fig. 9, so as to hold the bends of the shackle ends against said rigid lips *h* and *i* within the seal part. What has been termed the "back" may be indented instead, as shown in Figs. 10 and 14. If the seal is to be thus pressed, the seal part may preferably be made with a flat back *k*′, as shown in Fig. 13. In either case the lips *f* and *g*, Fig. 2, &c., may be omitted, as indicated in Fig. 11.

The improved seal part in either of its forms may obviously be used also in connection with a tin shackle, one end of which is otherwise secured as—for example, in the manner set forth in said Letters Patent No. 734,807—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 part, for a press-fastened seal, constructed in one piece of pliable sheet metal, such as tin, and having a circumferential shoulder, diametrically opposite slots adjacent to said shoulder, a circumferential rim at said shoulder, and an inwardly-projecting annular portion integral with said rim, in combination with a flexible shackle of like pliable metal adapted to be threaded through said slots and to receive a permanent bend within said seal part.

2. A seal part, for a press-fastened seal, constructed in one piece of pliable sheet metal, such as tin, and having a circumferential shoulder, diametrically opposite slots adjacent to said shoulder, a rigid inwardly-projecting lip integral with one of the longer sides of each slot, a circumferential rim at said shoulder, and an inwardly-projecting annular portion integral with said rim, in combination with a flexible shackle of like pliable metal adapted to be threaded through said slots and to receive a permanent bend within said seal part.

3. A seal part, for a press-fastened seal, constructed in one piece of pliable sheet metal, such as tin, and having a circumferential shoulder, diametrically opposite slots adjacent to said shoulder, a rigid inwardly-projecting lip integral with one of the longer sides of each slot, a circumferential rim at said shoulder, an inwardly-projecting annular portion opposed to such lips at the face of the seal, and a hollow central protuberance at the back of the seal, in combination with a flexible shackle of like pliable metal adapted to be threaded through said slots and to receive a permanent bend within said seal part in contact with said lips.

4. In a press-fastened seal, the combination with a compressible seal part having diametrically opposite slots, of a flexible shackle of pliable sheet metal, such as tin, adapted to have both ends threaded through said slots, and constructed with a pair of stops on one shackle end, projecting on one and the same side, and adapted for the location of the seal part between them, and an oppositely-projecting stop at a distance from the extremity of the other shackle end, forming a gage whereby the protrusion of the shackle end last named is limited, substantially as hereinbefore specified.

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