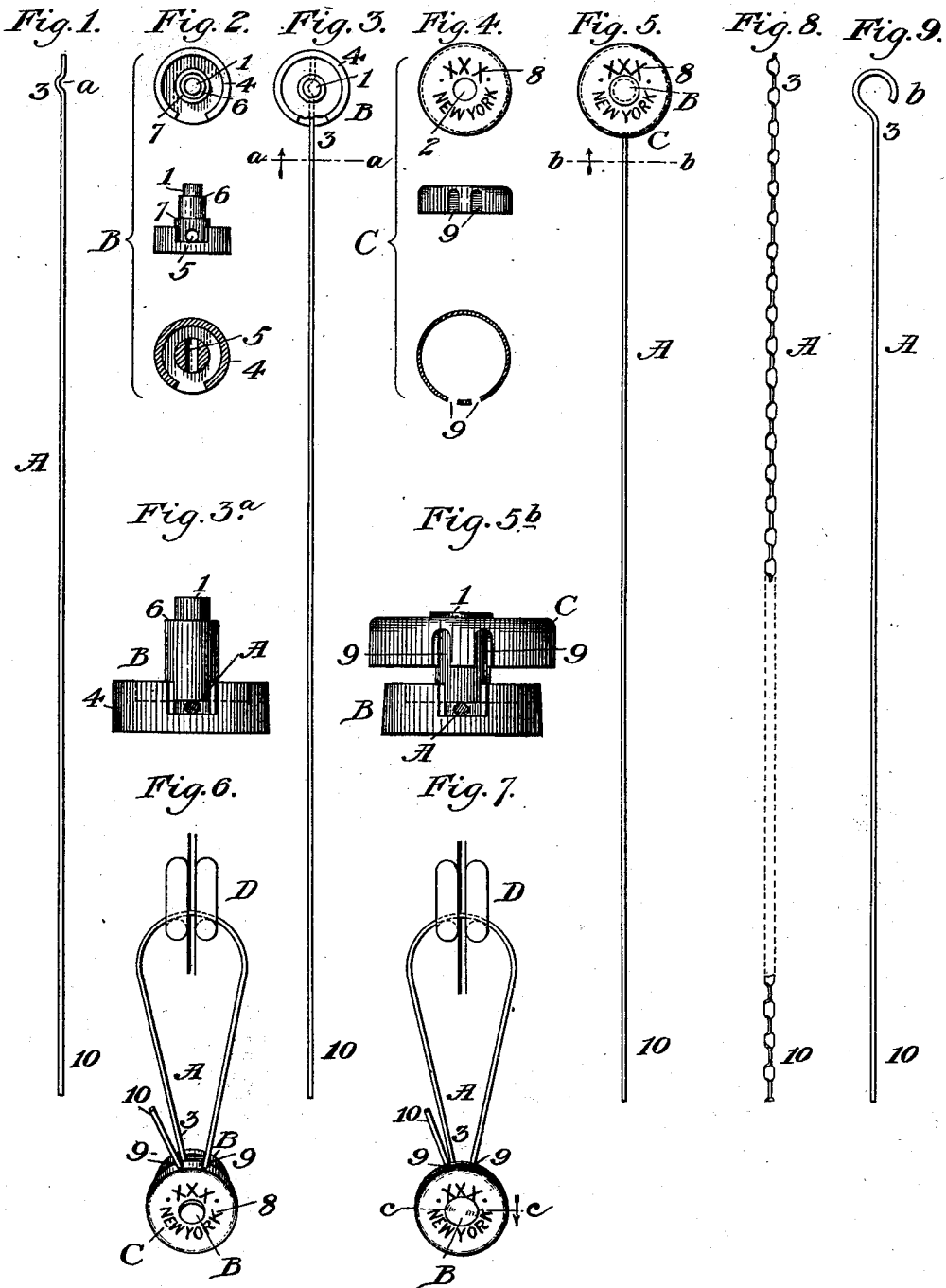


E. J. BROOKS.
SEAL.

No. 521,136.

Patented June 5, 1894.



Witnesses
T. A. Comer
Geo. M. Whitney

Inventor
Edward J. Brooks
 by *W. L. Davis*,
 Attorney.

E. J. BROOKS.
SEAL.

No. 521,136.

Patented June 5, 1894.

Fig. 10.



Fig. 11.

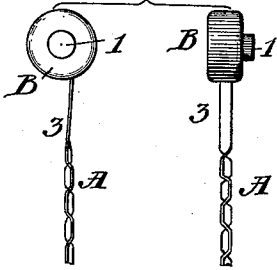


Fig. 12.

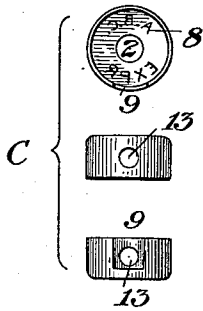


Fig. 13.

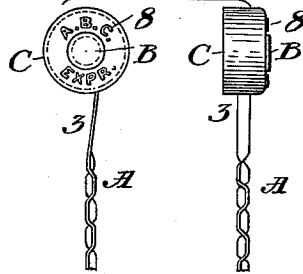


Fig. 14.

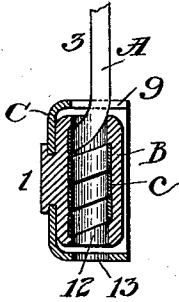


Fig. 15.

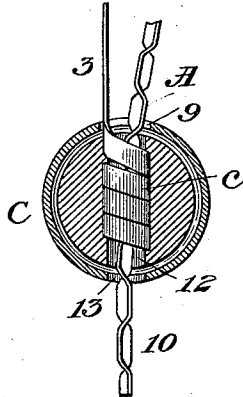


Fig. 16.

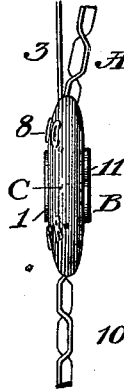
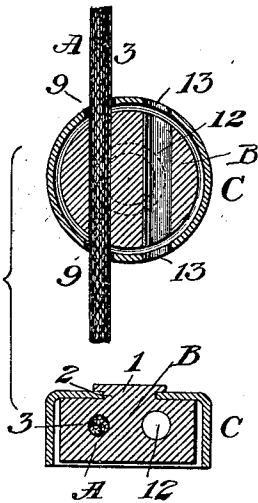


Fig. 17.



Witnesses

L. A. Comings,
Geo. M. Whitney.

Inventor

Edward J. Brooks
by *[Signature]*
Attorney.

UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE
E. J. BROOKS & COMPANY, OF NEW YORK, N. Y.

SEAL.

SPECIFICATION forming part of Letters Patent No. 521,136, dated June 5, 1894.

Application filed March 7, 1894. Serial No. 502,721. (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.

This invention relates to press-fastened seals, and consists primarily in a one-part cut-proof jacket of sheet-metal combined with the relatively soft leaden "seal-part" of a "lead-and-wire" seal; the jacket being originally cup-shaped, and preliminarily attached by means of a rivet-stud on the seal-part, and being provided with a rivet-hole to receive such stud, with or without a wire-admitting notch or notches and a threading hole or holes in its rim. Also in a simple and secure "button" seal formed by so attaching a cut-proof jacket to the stem of a "horseshoe" seal or other seal having a compressible rivet-like seal-part, as hereinafter set forth.

By "horseshoe" seals I mean those seals so termed in my specifications forming part of United States Patents Nos. 368,126 and 512,274, and by "button" seals I mean seals in which there is a wire-admitting recess between two disks united by a central stem, as in expired Patent No. 174,797, prior to the fastening and stamping of the seal in the seal-press.

The objects of this invention are to prevent cutting into the lead at the edges of the pressed seal in the simplest manner possible and by means of a device applicable quite generally to lead-and-wire seals, and to produce inexpensive cut-proof button-seals.

Two sheets of drawings accompany this specification as part thereof.

Figures 1 and 2 of the drawings represent respectively the shackle-wire and the seal-part of a horseshoe-seal adapted for conversion into a cut-proof button-seal according to this invention. Fig. 3 is a face view of said shackle-wire and seal-part as preliminarily united, and Fig. 3^a a magnified edge view from the line *a-a* Fig. 3. Fig. 4 shows the cut-proof jacket by face, edge and sectional views. Fig. 5 is a face view of the button-seal as it leaves the factory, and Fig. 5^b a magnified edge view from the line *b-b* Fig. 5. Fig. 6 represents the same seal as applied to a car-

door and ready for the seal-press. Fig. 7 represents the same seal after it has been pressed, and Fig. 7^c a cross-section on the line *c-c* Fig. 7. Figs. 8 and 9 represent two substitute shackle-wires. Fig. 10 represents the shackle wire of a certain "cast-in" seal made under claim 2 of Patent No. 395,481. Fig. 11 represents such cast-in seal by face and edge views. Fig. 12 shows its cut-proof jacket by face and edge views. Fig. 13 shows face and edge views of the jacketed seal as it leaves the factory. Fig. 14 represents a magnified longitudinal section through the jacketed cast-in seal as it hangs ready to be threaded. Fig. 15 represents a section through the same in a central plane parallel to its face, showing the seal ready for the press. Fig. 16 represents an edge view of the same seal after the pressing operation; and Fig. 17 represents by a sectional plan view and a cross-section the application of said jacket to other lead and wire seals.

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

All the improved seals hereinafter described and claimed are composed in common of shackle-wires A, soft-metal seal-parts B, and cut-proof jackets C of relatively hard sheet-metal, preferably thin iron such as is used for metallic button-shells; and in each embodiment of the invention the cut-proof jacket C is preliminarily attached to the seal-part B by a rivet-stud 1 cast on the seal-part and headed down on the jacket after insertion through a central hole 2 in the latter; such jacket serving in the pressed seal (Figs. 7 and 7^c or Fig. 15) to protect the edges of the seal against being cut into for the liberation of either of the shackle-ends, and thus serving to render it impossible to tamper with the improved seal without detection.

In the specific button-seal represented by Figs. 1 to 7^c inclusive on Sheet 1 of the drawings, the preliminarily attached end 3 of the shackle-wire A is provided with an anchoring bend *a* Fig. 1, and the seal-part B of cast-lead comprises a circular disk having a marginal crown flange 4 notched at one point, and a central stem, surrounded by said flange, provided with a hole 5 in line with said notch, and with shoulders 6 and 7 on the stem, which terminates in said rivet-stud 1.

As the seal-part leaves the mold it appears as in Fig. 2, with said shoulder 7 at about mid-height of its stem. After the end 3 of the shackle-wire is inserted in the hole 5, it is fastened in by forcing down said shoulder 7 and upsetting the lead below the same in the manner set forth in my specification forming part of said Patent No. 512,274. The parts thus preliminarily united appear as in Figs. 3 and 3^a. A cup-shaped jacket C (Fig. 4) is then attached as above. See Figs. 5 and 5^b. The jacket of this specific seal is provided in course of manufacture with permanent marks in the form of lettering 8 on its face, and with a notch or notches 9 on its rim to engage with the free end 10 of the shackle-wire after it has been passed through a pair of car-door staples D or the like and wrapped around the stem of the button seal, as in Fig. 6, preparatory to the pressing operation, and to facilitate forming the edge of the pressed seal, Figs. 7 and 7^a, at this point. The pressed seal is conveniently provided in addition to said permanent marks 8 on the jacket, with press-marks in the form of a lettering or numbers on the exposed portion of the lead, as at 11 in Fig. 7^c. It will be apparent that a shackle-wire having any other form of anchoring device at one end may be substituted for said shackle-wire A Fig. 1, or a shackle-wire A Fig. 8 having anchoring bends or the like throughout its length, without any change in the seal-part B. The substitute shackle wire A represented by Fig. 9 has an open loop *b* at the extremity of its preliminarily attached end 3. This wire can also be used without any change in the seal-part B; but if a looped wire is used the seal-part need not be provided with said hole 5, Fig. 2.

The specific seal represented by Figs. 10 to 16 inclusive on Sheet 2 of the drawings has a flexible shackle A (Fig. 10) of flat wire having its preliminarily attached end 3 provided with a tubular coil *c*, shown in Figs. 10, 14 and 15, in which the wire is disposed flatwise, in combination with a seal-part B, in the form of a spheroidal seal-disk, cast fast upon the coiled shackle-end as in Fig. 11, and provided with a threading hole 12, Figs. 14 and 15, which extends through said coil *c*, together with said rivet-stud 1 cast thereon as in Fig. 11. The jacket C for this seal, in addition to its rivet-hole 2, its permanent marks 8 and a wire-admitting notch 9, has a threading-hole 13 in its rim which registers with the opposite end of the threading-hole 12 in the seal-part B when said notch 9 is engaged with the shackle-end 3 and brought opposite the adjoining end of said hole 12. This is readily done by a single movement in assembling the parts for the riveting hammer which attaches the jacket. In preparing the seal for the press, as in Fig. 15, the free shackle-end 10 is threaded through the notch 9 and holes 12 and 13 as readily as

through the hole 12 alone, and the seal may then be fastened, and stamped with any desired press-marks 11, Fig. 16, in any suitable seal-press.

Fig. 17 illustrates the application of a like cut-proof jacket C to any ordinary or improved threaded seal-disk B, cast fast on one end, 3, of a flexible shackle A of any suitable kind, or made fast thereon in the manner set forth in my specification forming part of United States Patent No. 501,042, dated July 4, 1893, or it may be loose from the wire until the seal is fastened and stamped in the seal-press. In connection with a fast wire A, and a seal-part B having a single open threading hole 12, the jacket C is provided with a pair of notches 9 and a pair of threading-holes 13, as in the figure. It will be apparent that with a pair of open threading holes in the seal-part there would be two pairs of threading holes in the jacket; and other like modifications will suggest themselves to those skilled in the art.

The improved seals hereinbefore described are distinguished from the Wappenstein seal, set forth in expired Patent No. 87,017, by the impossibility of uniting the parts of the latter until the seal is ready to be pressed, while all the parts of my seals are or may be preliminarily united to facilitate counting, shipping and applying the seals, and in all cases the one-part jacket and seal-part are so united at the factory.

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

1. The combination, in a press-fastened seal, of a flexible shackle-wire, a compressible seal-part of soft-metal preliminarily attached to one end of the shackle, having a disk to receive the press-marks, and provided with a rivet-stud, and a cup-shaped jacket of cut-proof sheet-metal preliminarily attached to said seal-part by means of said rivet-stud and adapted to inclose the edges of the seal-part in the pressed seal, substantially as hereinbefore specified.

2. An improved button-seal composed of a flexible shackle-wire, a compressible rivet-shaped seal-part of soft metal preliminarily attached to one end of the shackle and having its stem provided with a rivet-stud, and a cup-shaped jacket of cut-proof sheet-metal preliminarily attached to said seal-part by said rivet-stud to form one of the disks of the unpressed seal, the other disk belonging to said seal-part and serving to receive the press-marks, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:

H. L. C. WENK,
GEO. J. WENK.