

(No Model.)

E. J. BROOKS.  
SEAL.

No. 524,676.

Patented Aug. 14, 1894.

Fig. 1

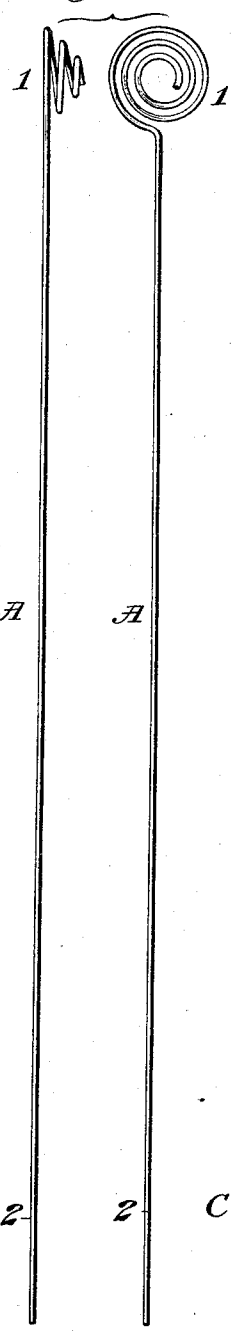


Fig. 2

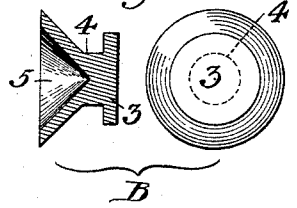


Fig. 3

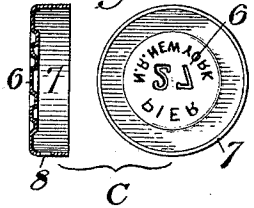


Fig. 4

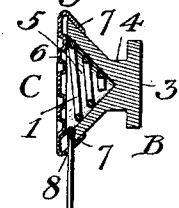


Fig. 5

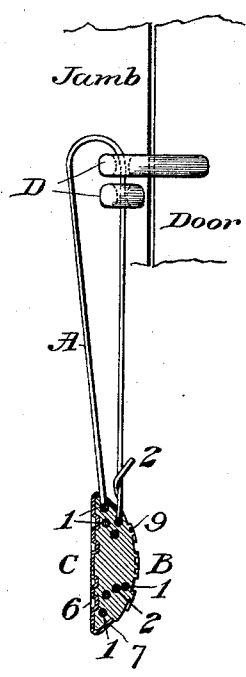


Fig. 6

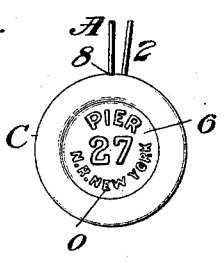
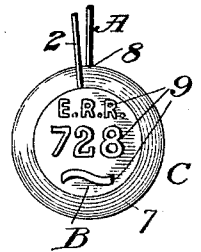


Fig. 7



Witnesses  
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# UNITED STATES PATENT OFFICE.

EDWARD J. BROOKS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE  
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## SEAL.

**SPECIFICATION** forming part of Letters Patent No. 524,676, dated August 14, 1894.

Application filed May 14, 1894. Serial No. 511,187. (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 improvements on the "button-seals" set forth in expired patent, No. 174,797, granted March 14, 1876, to Alphonse Friedrick, and on the metallic seal of Joseph Wappenstein set forth in expired patent, No. 87,017, granted February 16, 1869.

The present invention consists in an improved seal adapted to be used in the same manner as said button-seals, and like said Wappenstein seal composed of lead, wire, and sheet-metal, with the latter in the form of a cut-proof shell; except that such shell of the improved seal is preferably not annular, and all the parts of the improved seal are adapted to be preliminarily united at the factory; whereas in said Wappenstein seal the parts of each seal must be carried separately, and can only be united as a whole after the shackle has been threaded through the car-door staples, or their equivalent, in the final act of applying or using the seal.

Other improved seals of the general description above stated are set forth in my previous specifications forming part of United States Letters Patent dated June 5, 1894, Nos. 521,134, 521,135, and 521,136.

The present seal is distinguished by a wire shackle having a volute coil within a hollow lead part, whereby such lead part is so supported during the pressing operation as to insure perfect impressions in the seal-press, and the other end of the shackle is rendered more secure against being tampered with than heretofore by interlocking with said volute coil.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of the drawings represents two elevations of the flexible wire-shackle of the improved seal; Fig. 2 sectional and face views of its lead part; Fig. 3 sectional and face views of its sheet-metal part; Fig. 4 a sectional view showing the parts as preliminarily united at the factory; Fig. 5 a sectional

view of the improved seal as press-fastened; and Figs. 6 and 7 the obverse and reverse of the pressed seal-disk.

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

Each improved seal is composed of a flexible wire-shackle A preliminarily formed as in Fig. 1, a hollow lead-part B preliminarily formed as in Fig. 2, and a sheet-metal part C preliminarily formed as in Fig. 3; which are permanently united at the factory as illustrated by Fig. 4, and are combined in the pressed seal as illustrated by Figs. 5 to 7. Said shackle A has a volute coil 1 at one of its ends, and its other or free end, 2, is straight in the shackle as originally formed; the shackle being cut of a proper length from plain wire of suitable gage as it comes from the wire-mill, and provided with its volute coil 1 by a mechanical bending operation. The seal-part B may be formed either by casting or by pressing, and is originally a hollow cone with a button-head 3 and a neck 4 at the apex of its conical cavity 5. The sheet-metal part C, hereinafter termed the shell of the seal, is conveniently stamped by means of a pair of dies, and is composed of a disk 6 conveniently and preferably lettered or provided with suitable permanent distinguishing marks, as indicated in the drawings, and a marginal rim 7 originally cylindrical or substantially cylindrical, and provided with a single threading-hole 8 fitted to the wire of which the shackle A is formed.

The free end 2 of the shackle A is threaded through the hole 8 of the shell C, from inside the rim outward; and in continuation of the same act the shell is placed rim upward on an anvil-plate, with said volute coil base downward within the shell. The lead-part B is then introduced with the button 3 upward, and the parts are fed beneath a hollow punch which turns down the rim 7 of the shell C to a sufficient extent to permanently retain the lead-part. This completes the improved seal as in Fig. 4; the volute coil 1 retaining its form within the cavity 5 of the hollow lead-part as in this figure. After threading the free end 2 of the shackle through a pair of sealing lugs D or their equivalent, said free end is wrapped one or more times around the

neck 4, and rebent as in Fig. 5 to temporarily  
 secure it; and an ordinary seal-press is then  
 applied to press and stamp the lead-part B.  
 In such pressing operation the volute coil 1  
 5 serves to support the lead so as to prevent it  
 from buckling between the dies, and thus in-  
 sures sharp and perfect press-marks 9, which  
 may of course be otherwise of any approved  
 description. At the same time the loop of  
 10 said free end of the shackle becomes with  
 reasonable certainty interlocked in every case  
 with one of the convolutions of the coil 1, as  
 in Fig. 5, so as to prevent liberating said free  
 end without such mutilation of the leaden  
 15 face of the seal as to insure detection. The  
 obverse of the seal-disk, represented by Fig.  
 6, bears the embossed lettering or permanent  
 distinguishing marks O with which the disk  
 6 of the shell C is originally provided; and  
 20 the shell as a whole does not require to be  
 pressed after the seal leaves the factory;  
 which renders the seal easily and quickly  
 press-fastened.

The neck 4 may in practice be provided  
 with a threading hole as set forth in said 25  
 Friedrich patent, No. 174,797; the shapes and  
 proportions of the several parts may be con-  
 siderably varied without materially affecting  
 the structure of the improved seal; and other  
 like modifications will suggest themselves to 30  
 those skilled in the art.

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

An improved seal composed of a wire-shac- 35  
 kle having a volute coil at one end, a hollow  
 lead-part having a cavity which receives said  
 coil, and a sheet-metal shell having a margi-  
 nal rim which overlaps the marginal edge of  
 said lead-part and preliminarily unites all the 40  
 parts of the seal, substantially as hereinbe-  
 fore specified.

EDWARD J. BROOKS.

Witnesses:

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