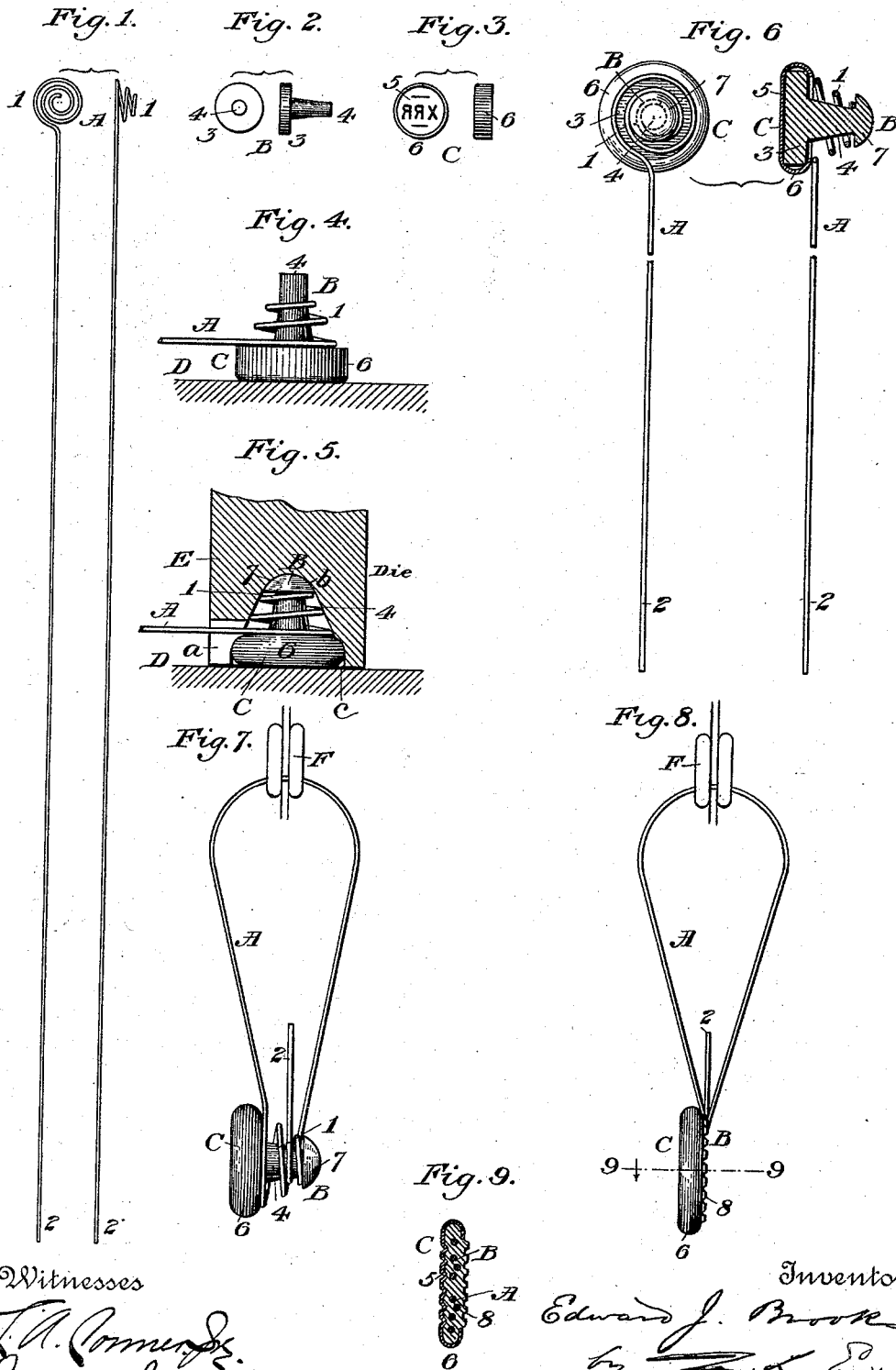


(No Model.)

E. J. BROOKS.  
SEAL.

No. 526,218.

Patented Sept. 18, 1894.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## SEAL.

SPECIFICATION forming part of Letters Patent No. 526,218, dated September 18, 1894.

Application filed August 2, 1894. Serial No. 519,316. (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 sealing device adapted to be used in the same manner as said Friedrick seal, 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 preliminarily united at the factory.

Other button-seals of lead wire and sheet-metal 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 an open coil exposed between the back disk and the front disk or head of the seal-part, so that the free end of the shackle is wrapped between two or more of the successive rings of such coil in preparing the seal for the seal-press, and the interlocking of the two ends of the shackle with each other is thus insured in a simple and effective manner. The improved seal is at the same time readily manufactured without threading the shackle through the sheet-metal shell, and without casting the lead within or upon the shell or shackle of the seal, and with the lead-part as originally produced in the form of a simple rivet.

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, end and side views of its lead-part; Fig. 3, face and edge views of its shell; Fig. 4, an edge view of the loosely assembled parts, and Fig. 5, an edge view,

with a sectional view of a die, illustrating the completion of the seal; Fig. 6, face and sectional views of the seal as it leaves the factory; Fig. 7, an edge view of the seal ready for the press; Fig. 8, an edge view of the pressed seal, and Fig. 9, a cross-section on the line 9—9 Fig. 8; Figs. 4 to 9 inclusive being enlarged one diameter from Figs. 1, 2 and 3.

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

The improved seal is composed of a flexible wire-shackle A preliminarily formed as in Fig. 1, a rivet-shaped lead-part B preliminarily formed as in Fig. 2, and a sheet-metal shell C preliminarily formed as in Fig. 3; the respective parts as thus preliminarily formed being constructed as follows: Said shackle A has an open coil 1, preferably volute, at one of its ends, and its other or free end 2 is straight; 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 open coil 1 by a mechanical bending operation.

The lead-part B may be formed either by casting or by pressing, and is rivet-shaped as above; consisting conveniently and preferably of a flat circular disk 3 and a central or substantially central stem 4, the latter somewhat longer than is required for the stem or neck of the finished seal, and preferably conical at its base.

The shell C is conveniently produced by means of a stamping-machine, and is composed of a disk 5, conveniently and preferably lettered with suitable permanent distinguishing marks, as indicated in Fig. 3, and a marginal rim 6 which is cylindrical or substantially cylindrical in the shell as so preliminarily formed.

The parts are loosely assembled, as in Fig. 4, upon a table or anvil D, in reverse order; a shell C being placed on the anvil with its rim 6 upward; a lead-part B inserted within said rim with its stem 4 upward, and the coil 1 of a shackle A then loosely applied to the stem 4. The parts are then fed by means of the shackle beneath a reciprocating die E, having a notch *a* to clear the shackle A, and internal swaging surfaces *b* and *c* as shown in Fig. 5; which die simultaneously forms a

front disk or head 7 on the shank 4 of the lead-part, and turns in the rim 6 of the shell so that it overlaps the marginal edge of the back-disk 3 of the lead-part sufficiently to prevent its escape therefrom. This finishes the seal; which leaves the factory as aforesaid in the form represented by Fig. 6, with the parts securely united by means of said returned rim 6 and head 7.

After threading the free end 2 of the shackle A through a pair of car-door staples F or the like, it is wrapped around the shank 4 of the lead-part B in customary manner, and is at the same time, without additional care or attention, wrapped between two or more of the successive rings of the coil 1, as in Fig. 7. An ordinary seal-press is then applied, and the protruding portions of the lead-part B are pressed into the shell C, flattening the coil 1, and securely interlocking the two ends of the shackle A with each other within the lead, as in Figs. 8 and 9. At the same time the face of the seal is stamped with the customary press-marks 8, Figs. 8 and 9, and the seal is thus completed as a simple and secure fastening-device for car-doors, baggage, &c., or for attaching labeling-tags or the like so as to prevent fraudulently changing them.

The shape and proportions of the coil 1

may vary in practice. The preliminary lettering on the shell C may be omitted or varied to any extent; and other like modifications will suggest themselves to those skilled in the art.

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

1. The combination, in a button-seal, of a wire-shackle having an open coil at one end and a lead-part having a back-disk and a head united by a stem which is surrounded by said coil, whereby these parts are preliminarily united with each other and said coil is exposed to insure interlocking the other end of the shackle therewith.

2. An improved button-seal composed of a wire-shackle having an open coil at one end, a lead-part having a back-disk and a head united by a stem which is embraced by said coil, and a shell having a marginal rim which overlaps the marginal edge of said back-disk of the lead-part, substantially as hereinbefore set forth.

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