

(No Model.)

E. J. BROOKS.  
SNAP SEAL.

No. 524,974.

Patented Aug. 21, 1894.

Fig. 1.



Fig. 2.

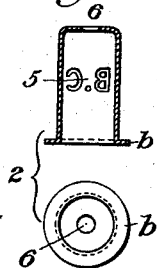


Fig. 3.

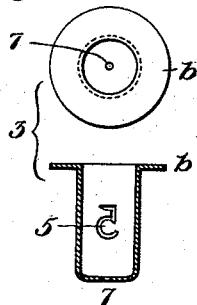


Fig. 4.

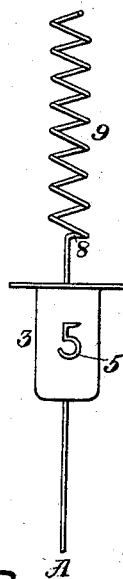


Fig. 5.

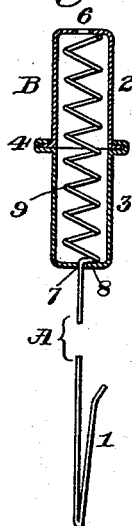


Fig. 6.

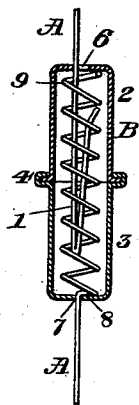


Fig. 8.

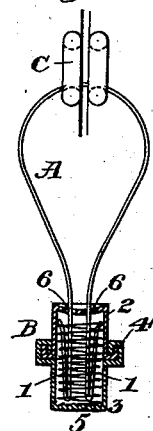


Fig. 9.

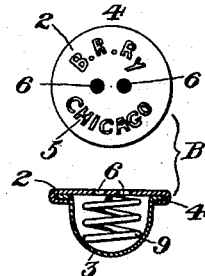


Fig. 10.

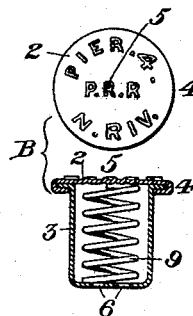


Fig. 11.

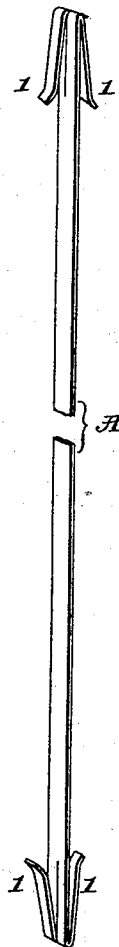


Fig. 7.

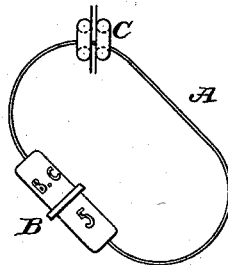
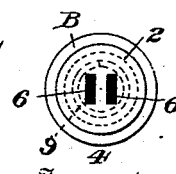


Fig. 12.



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# UNITED STATES PATENT OFFICE.

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## SNAP-SEAL.

SPECIFICATION forming part of Letters Patent No. 524,974, dated August 21, 1894.

Application filed April 27, 1894. Serial No. 509,270. (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 Snap-Seals, of which the following is a specification.

This invention relates to self-fastening seals, or "snap-seals" as they are now termed, adapted for use as substitutes for lead-and-wire seals and other press-fastened sealing devices to secure railway car-doors and the like, as set forth in my previous specifications, forming part of United States Letters Patent No. 303,417, dated August 12, 1884; No. 304,258, dated August 26, 1884; No. 312,963, dated February 24, 1885; No. 314,994, dated April 7, 1885; No. 340,932, dated April 27, 1886; No. 345,764, dated July 20, 1886; No. 348,509, dated August 31, 1886, and No. 353,246, dated November 23, 1886.

The improved snap-seal in a preferred form having a hollow sheet-metal seal-part, is adapted to be made very light, and of a large variety of shapes, and to be provided with any required distinguishing marks or lettering with the utmost facility.

The present invention consists in an open coil of wire within a snap-seal to coact with its snap or snaps, as a guard against tampering therewith and as an anti-rattling device, and in the combination with a seamed seal-part of a snap-shackle having such a coil formed on one of its ends, as hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figures 1, 2 and 3 of these drawings show respectively the several parts of an improved snap-seal as preliminarily formed by means of dies; Fig. 1 being an elevation of the shackle-wire, Fig. 2 sectional and face views of one piece of the seal-part, and Fig. 3 end and sectional views of its other piece. Fig. 4 shows in elevation the shackle-wire threaded through one seal-part piece and provided with a coil on its threaded end. Fig. 5 shows the improved seal as finished at the factory, with the seal-part in longitudinal section. Fig. 6 is a like sectional view of the fastened seal. Fig. 7 is a small-scale elevation of the im-

proved seal illustrated by Figs. 1 to 6 inclusive, as in use. Fig. 8 is a sectional elevation of a modified seal, fastened. Fig. 9 shows end and sectional views of a modified seal-part for use as in Fig. 8. Fig. 10 shows end and sectional views of a like seal-part of another shape. Fig. 11 is a perspective view of a sheet-metal shackle, and Fig. 12 is an end view of an improved seal-part adapted to coact with the latter.

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

The flexible metallic shackle A of each of the improved seals is provided at one or each end with a long spring hook or "snap" 1, formed on the shackle by suitable bends. The shackle may be of round or square wire in the forms represented in Figs. 1 and 4 to 8, or of suitable sheet-metal in the form represented by Fig. 11, and in this form may conveniently be provided with double snaps 1 projecting in opposite directions at each end, as shown.

The hollow seal-part B of each seal is composed of two pieces, marked respectively 2 and 3, permanently united at the factory by a secure joint; and in said preferred style, to which the drawings are confined, its pieces being of sheet-metal are interlocked with each other by a circumferential sheet-metal "seam" 4, and it is provided with the required distinguishing marks or lettering 5, and a hole 6 matching each snap, in the pieces 2 and 3 as preliminarily formed by machinery.

The seal-part B is in all cases preferably attached at one end of the shackle A, as in Fig. 5, at the factory, and in this form is shipped and carried by the sealer. In applying the seal, the shackle is passed through a pair of car-door staples C, Figs. 7 and 8, or the like, and the free end of the shackle is then fastened by "springing" its snap 1 through the matching hole 6. When the snap opens within the seal-part the seal is securely fastened, and cannot be unfastened without sufficient injury to the seal-part and shackle, either or both, to insure detection. To remove the seal the shackle is cut.

In the species of the improved seals represented by Figs. 1 to 7 inclusive, the shackle A has a snap 1 on one end only, and as preliminarily formed its other end is straight, as

in Fig. 1; and the pieces 2 and 3 of the seal-part B are conveniently of one and the same form and dimensions except their flanges b, Figs. 2 and 3, which are subsequently interlocked to form the seam 4. The snap-hole 6 is shown in the piece 2. It may be in either piece. The other piece is provided with a threading-hole 7 fitted to the wire of which the shackle A is composed. Said straight end of the shackle as preliminarily formed, Fig. 1, is threaded through said hole 7 and provided with a sharp bend 8, and an open coil 9 beyond the same, as in Fig. 4. The seal-part pieces 2 and 3 are then put together, with said coil within their cavities, and the seam 4 is formed by a suitable press, which completes the seal for the market as in Fig. 5. When the seal is fastened the snap 1, sprung through the hole 6 as above, interlocks with one of the convolutions of the open coil 9, as in Fig. 6. Its withdrawal is thus prevented, and the seal is kept from rattling.

The modifications represented in Fig. 8 consist in providing both ends of the shackle A with snaps 1, which coact with an open coil 9 distinct from the shackle within the seal-part B; uniting the seal-part pieces 2 and 3 by a double seam 4 as compared with the single seam represented in Figs. 5 and 6; forming the lettering 5 in one end of the seal part instead of in its sides, and providing its other end with a pair of snap-holes 6 and making this end concave to facilitate inserting the snaps, which interlock with the convex inner surface of the perforated end.

The modification illustrated by Fig. 9, apart from a change of shape, consists in locating the lettering 5 and snap-holes 6 in one and the same piece, 2, of a seal-part B, inclosing a distinct open coil 9 and in making this piece substantially flat with the seam 4 at its perimeter.

The modification represented in Fig. 10, apart from another change of shape, consists in forming the lettering 5 and the snap-holes 6 in the respective seal-part pieces 2 and 3 of a seal-part inclosing a distinct open coil 9.

The modification illustrated by Figs. 11 and 12 consists in making the shackle A of sheet metal with double snaps as above, to coact with a distinct open coil 9 within the seal-

part and providing the seal-part B with snap-holes 6 adapted to receive the flat shackle ends. Otherwise the seal-part may be of any of the forms above described, and with a shackle of flat wire the snap-holes of any of the seal-parts would be substantially of the shape represented at 6 in Fig. 12.

A shackle A with a snap 1 at each end as in Fig. 8 or in Fig. 11 would be used in connection with each of the modified seal-parts B represented by Figs. 9 and 10; and in the seals so formed, as well as in those represented by Fig. 8 and Figs. 11 and 12, the seal-part would be preliminarily attached to one end of the shackle, as in Fig. 5, by springing one of the snaps 1 through one of the snap-holes 6. One end of the shackle may be preliminarily secured within the seal-part, as in Fig. 5, by other suitable means, as by soldering it fast, without materially departing from this invention; the lettering 5 may in all cases be either cameo or intaglio as preferred; 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. An improved snap-seal having a hollow seal-part provided with an open coil within it and with an open snap-hole, in combination with a shackle-wire preliminarily secured within the seal-part at one end, and provided at its other end with a self-fastening snap adapted to be sprung through said snap-hole and to interlock with said coil, substantially as hereinbefore specified.

2. The combination, in a snap-seal, of a seal-part composed of two pieces provided respectively with a snap-hole and a contracted threading-hole and securely interlocked with each other by a circumferential seam, and a shackle extending through said threading-hole from an open coil within the seal-part and provided at its other end with a self-fastening snap adapted to be sprung through said snap-hole and to interlock with said coil, substantially as hereinbefore specified.

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