No. 712,250. Patented Oct. 28, 1902.

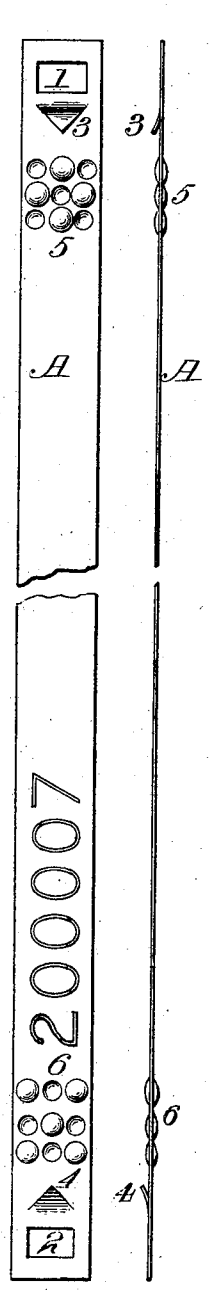
E. J. BROOKS.

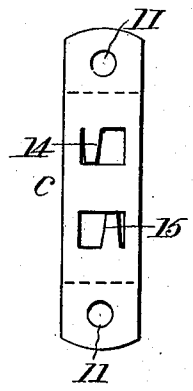
SNAP SEAL.

(Application filed Aug. 1, 1902.)

(No Model.)

Fig. 1. Fig. 2. Fig. 3. Fig. 5. Fig. 6.





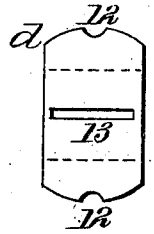




Fig. 12.

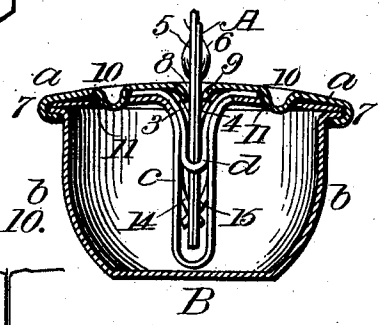


Fig. 10.

Fig. 4.



Fig. 7.

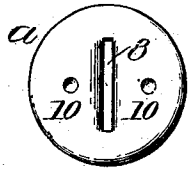


Fig. 8.

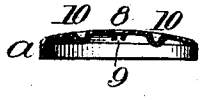
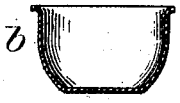


Fig. 9.



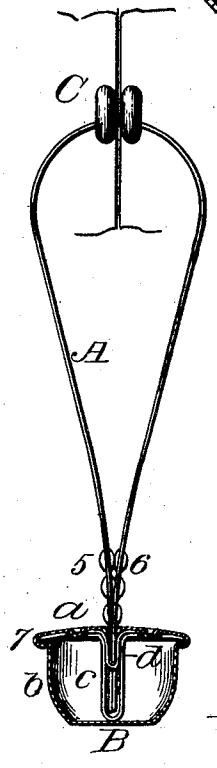
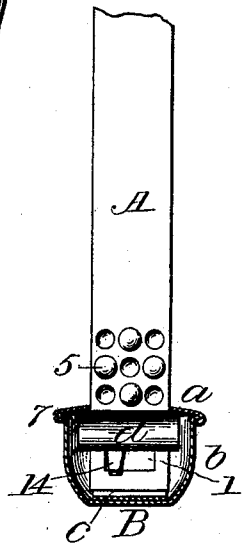


Fig. 11.



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UNITED STATES PATENT OFFICE.

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

SNAP-SEAL.

SPECIFICATION forming part of Letters Patent No. 712,250, dated October 28, 1902.

Application filed August 1, 1902. Serial No. 117,977. (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 commonly termed, for use as substitutes for lead-and-wire seals and other press-fastened sealing devices to secure the doors of railway freight-cars and for other sealing purposes. Previous forms of such snap-seals are set forth in my specification forming part of United States Letters Patent No. 696,002, dated March 25, 1902, and in my previous specifications therein referred to.

The present invention is more particularly an improvement on the sheet-metal snap-seal of said Letters Patent No. 696,002.

The objects of the respective parts or features of this invention are, first, to provide a sheet-metal shackle with supplemental snap-catches in a peculiar manner, and, second, to render still more difficult and practically impossible any access to the snap-catches of the seal part, and thus to more effectively prevent any tampering with the fastened seal.

A sheet of drawings accompanies this specification as part thereof.

Referring to the drawings, Figures 1 and 2 are face and edge views of the improved shackle. Fig. 3 is a face view of the "middle" piece of the seal part flatted or as it appears before bent into U shape. Fig. 4 is a sectional view of the middle piece in shape. Fig. 5 is a face view of an inner middle piece flatted or as it appears before bent into U shape. Fig. 6 is a sectional view of said inner middle piece. Fig. 7 is a top view of the shell of the seal part. Figs. 8 and 9 are sectional views of the respective pieces of said shell. Fig. 10 is a sectional edge view of the seal applied to a pair of car-door staples. Fig. 11 is a sectional edge view of the fastened seal at right angles to Fig. 10, and Fig. 12 represents a portion of Fig. 10 magnified.

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

The improved snap-seal is composed of a flexible shackle A and a seal part B, both of which are preferably and conveniently made as a whole of small pieces of sheet metal, and it is designed to be used in connection with car-door staples C or the like in customary manner for any of the purposes for which such seals are or may be employed.

The improved shackle A has a pair of catch-holes 1 and 2 at its respective ends, and between said holes and the middle of the shackle a pair of supplemental snap-catches 3 and 4 in the form of resilient tongues, preferably and conveniently V-shaped, with the apex projecting and opposed to the withdrawal of the shackle end. Adjacent to said supplemental catches the shackle is conveniently and preferably provided with embossed inlet-guards 5 and 6 at the respective ends, and it will in practice be provided with any required distinguishing marks, which are represented by the serial number 200,007 in Fig. 1. Such marks may be embossed in the sheet metal or may be printed or stamped thereon in any known or improved manner.

The improved seal part B comprises two shell-pieces *a* and *b*, Figs. 7 to 9, a middle piece *c*, Figs. 3 and 4, and an inner middle piece *d*, Figs. 5 and 6, which are permanently united with each other, as in Figs. 10, 11, and 12. The shell and middle piece may be and preferably are constructed substantially as set forth in said previous specification forming part of Letters Patent No. 696,002, which see.

In assembling the pieces of the seal part an inner middle piece *d*, of relatively thick and rigid metal as compared with the resilient middle piece *c* and U-shaped, like the latter, is inserted within the open upper end of the middle piece, so as to be rigidly held in place when the pieces of the seal part are united with each other by its circumferential joint 7. The cap *a* of the seal part is preferably constructed, in addition to its central inlet-hole 8 and inwardly-projecting lips 9, Figs. 7, 8, and 12, with a pair of indentations 10 in its top, forming protuberances on its inner side. The ends of the middle piece *c* are provided with holes 11, Figs. 3, 4, and 12, to interlock with said protuberances, and the inner middle piece *d* is or may be notched at

its ends, as shown at 12 in Fig. 5, to interlock with the same protuberances. A slot 13, Figs. 5 and 6, in the inner middle piece, snugly fitted to the pair of shackle ends, is thus or in any approved way kept in line with the inlet-hole 8 of the shell-cap *a*.

At the factory or before the seal is taken out for use one end of the shackle A is inserted through the inlet-hole 8 and slot 13, and its catch-hole 1 or 2 interlocks with the snap-catch or snap-catches of the middle piece *c*. A pair of such main snap-catches are shown at 14 and 15, projecting from opposite sides across the path of the shackle ends, which is the preferred construction. After passing the free end of the shackle through the car-door staples C or their equivalent it is inserted and fastened in like manner. Both ends of the shackle thus become permanently and securely fastened against withdrawal within the seal part B by snap-catches 14 and 15, between which and the inlet-hole 8 a rigid guard is formed by said inner middle piece *d*, the slot 13 of which need only be wide enough to admit the two shackle ends in close contact with each other. At the same time an effective supplemental fastening of the shackle ends is effected by the interlocking of the supplemental snap-catches 3 and 4 with the lips 9 at the sides of the inlet-hole 8 within the inner middle piece *d*, as shown in Fig. 12, and access to these supplemental catches is rendered difficult by the inlet-guards 5 and 6, which should project close above the seal part in the fastened seal.

It will be obvious that one of the snap-catches shown at 14 and 15 may be omitted, if preferred, and the snap-catches may be of other forms, as shown in the drawings forming part of said Letters Patent No. 696,002, 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. An improved snap-seal composed of a flexible shackle of sheet metal constructed with catch-holes near its respective extremities and supplemental snap-catches, adjacent to said holes respectively, adapted to resist the withdrawal of the shackle ends, and a seal part having a cap constructed with an inlet-hole and a catch-carrying middle piece with which said catch-holes interlock within the seal part, said supplemental catches being arranged to simultaneously interlock with said cap-piece.

2. An improved snap-seal composed of a flexible shackle of sheet metal constructed with catch-holes near its respective extremities and supplemental snap-catches, adjacent to said holes respectively, adapted to resist the withdrawal of the shackle ends, and a seal part having a cap constructed with an inlet-hole and inwardly-projecting lips at the sides of said inlet-hole and a catch-carrying middle piece with which said catch-holes interlock within the seal part, said supplemental catches being arranged to simultaneously interlock with said lips.

3. The combination, in a snap-seal, of a shackle of sheet metal constructed with a catch-hole near one extremity thereof and a supplemental snap-catch adjacent to said catch-hole adapted to resist the withdrawal of the shackle end, the other shackle end being secured by suitable means, and a seal part having a cap constructed with an inlet-hole and a U-shaped middle piece, the latter carrying a snap-catch to interlock with said catch-hole within the seal part, said supplemental catch being arranged to simultaneously interlock with said cap-piece.

4. The combination, in a snap-seal, of a shackle of sheet metal constructed with a catch-hole near one extremity thereof, the other shackle end being secured by suitable means, and a seal part having a cap constructed with an inlet-hole, a catch-carrying middle piece with which said catch-hole interlocks within the seal part, and an inner mid dle piece having a contracted slot through which the shackle end passes to the interlocking point.

5. The combination, in a snap-seal, of a shackle of sheet metal constructed with a catch-hole near one extremity thereof, the other shackle end being secured by suitable means, and a seal part having a cap constructed with an inlet-hole, a catch-carrying middle piece with which said catch-hole interlocks within the seal part, and an inner middle piece having a contracted slot through which the shackle end passes to the interlocking point, said middle piece and said inner middle piece being in common U-shaped and arranged one within the other.

6. An improved snap-seal composed of a flexible shackle of sheet metal constructed with catch-holes near its respective extremities, and a seal part having a cap constructed with an inlet-hole, a catch-carrying middle piece with which said catch-holes interlock within the seal part, and an inner middle piece having a contracted slot through which the shackle ends pass to the interlocking point, said middle piece and said inner middle piece being in common U-shaped and arranged one within the other.

7. An improved snap-seal of sheet metal composed of a flexible shackle constructed with catch-holes near its respective extremities and supplemental snap-catches, adjacent to said holes respectively, adapted to resist the withdrawal of the shackle ends, and a seal part having shell-forming pieces permanently united with each other by a circumferential joint and provided with an inlet-hole and inwardly-projecting lips at the sides of said inlet-hole, a catch-carrying middle piece with which said catch-holes interlock, within the seal part, and a catch-guarding piece having

a contracted slot through which the shackle ends pass to the interlocking point, said supplemental catches being arranged to interlock with said lips simultaneously with the interlocking of said catch-holes with said catch-carrying middle piece.

8. An improved snap-seal of sheet metal composed of a flexible shackle constructed with catch-holes near its respective extremities and supplemental snap-catches, adjacent to said holes respectively, adapted to resist the withdrawal of the shackle ends, and a seal part having shell-forming pieces permanently united with each other by a circumferential joint and provided with an inlet-hole and inwardly-projecting lips at the sides of said inlet-hole, a catch-carrying middle piece of resilient metal with which said catch-holes interlock within the seal part, and a catch-guarding piece of more rigid metal having a contracted slot through which the shackle ends pass to the interlocking point, said supplemental catches being arranged to interlock with said lips simultaneously with the interlocking of said catch-holes with said catch-carrying middle piece, substantially as hereinbefore specified.

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