No. 719,643. PATENTED FEB. 3, 1903.

E. J. BROOKS.

SNAP SEAL.

APPLICATION FILED SEPT. 29, 1902.

NO MODEL.

Fig. 1.

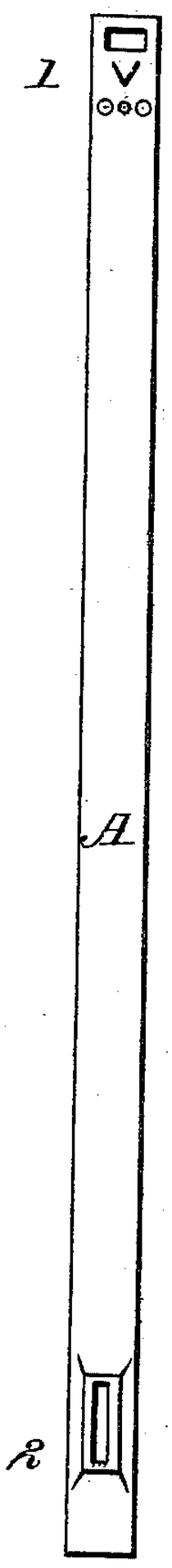


Fig. 2.

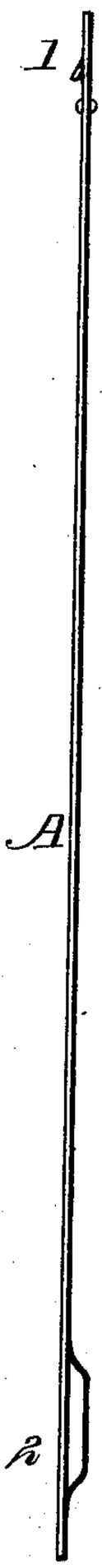


Fig. 3.

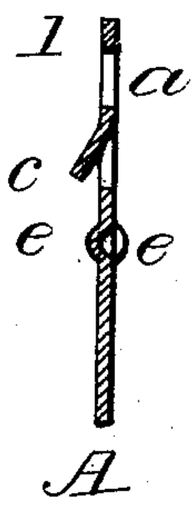


Fig. 5.

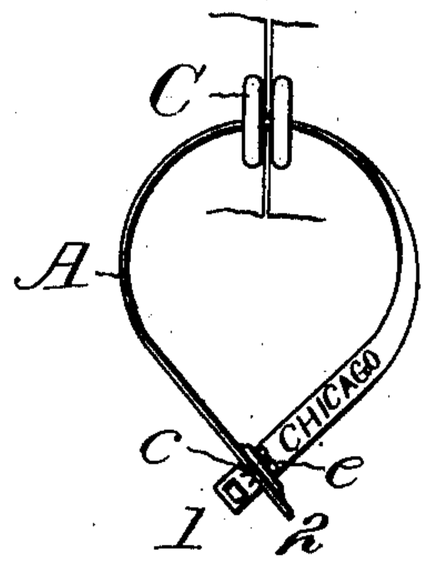


Fig. 6.

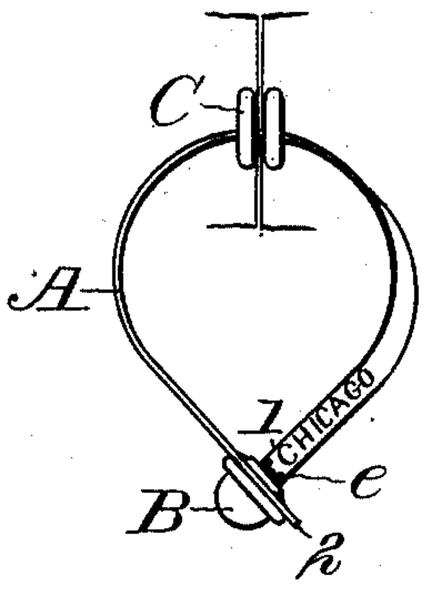


Fig. 4.

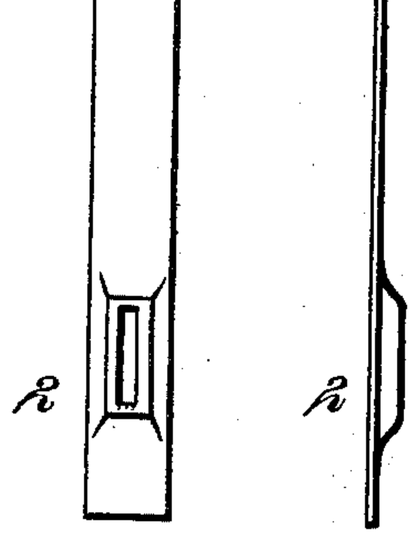


Fig. 7.

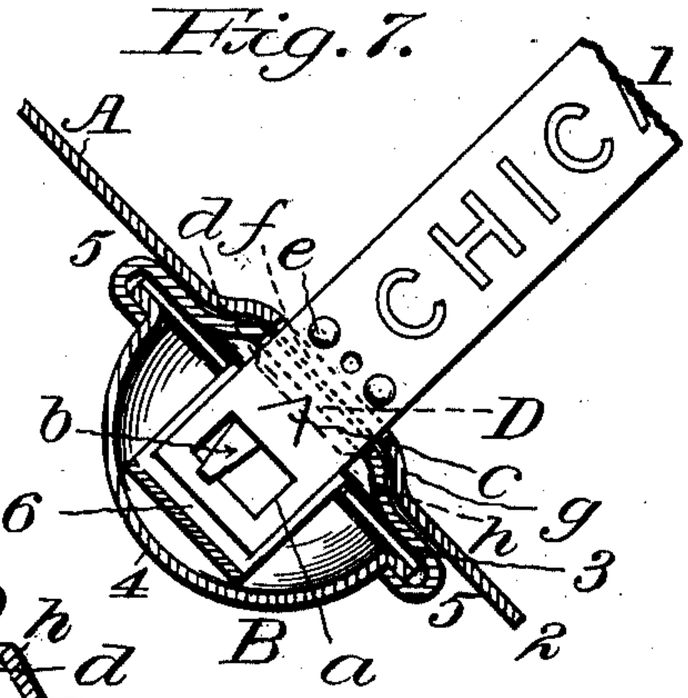
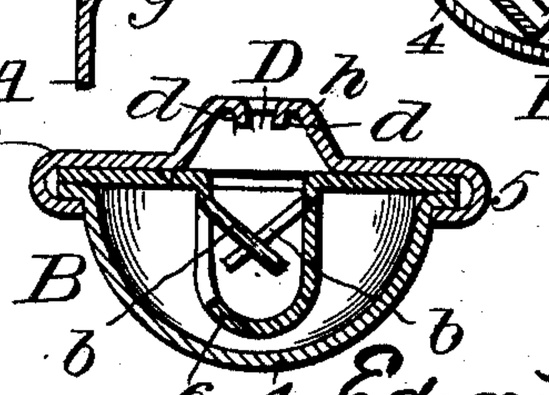


Fig. 8.



Inventor

Witnesses

C. H. Walker.

E. Thos. Loftus

Edward J. Brooks

By

L. L. Lewis,

Attorney

UNITED STATES PATENT OFFICE.

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

SNAP-SEAL.

SPECIFICATION forming part of Letters Patent No. 719,643, dated February 3, 1903.

Application filed September 29, 1902. Serial No. 125,234. (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 self-fastening 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 specifications forming part of United States Letters Patent No. 679,104, dated July 23, 1901; Nos. 696,002 and 696,003, dated March 25, 1902, and No. 697,375, dated April 8, 1902, and in my previous specifications therein referred to.

The present invention consists in a snap-seal adapted to be made wholly of sheet metal, in which one end of the shackle is made to guard the snap-fastening of the other end against being tampered with, and thus to render highly secure a relatively inexpensive seal.

The invention further consists in certain novel combinations of parts in the improved seal, as hereinafter set forth and claimed.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 are respectively face and edge views of the shackle of the improved seal flat. Figs. 3 and 4 represent magnified longitudinal sections of the respective shackle ends. Figs. 5 and 6 are small-scale elevations of the improved seal, showing it, respectively, before and after the fastening operation. Fig. 7 represents a magnified section through the seal part and shackle ends of the fastened seal, and Fig. 8 represents a like section through the seal part alone in a plane at right angles to that of Fig. 7.

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

The improved seal is composed of a flexible shackle A and a permanently-hollow seal part B, both of tin-plate or like sheet metal, and is designed to fasten together a pair of car-door staples C or the like, as in Figs. 5 and 6.

The shackle A is preferably and conveniently of the customary shape and proportions, as represented in Figs. 1 and 2, and is thus adapted to be embossed and provided with any desired distinguishing-marks in the sheet to be severed therefrom by a shearing operation and to be threaded through a pair of car-door staples or the like in the same manner as the shackles of lead and wire seals. Its respective ends 1 and 2 are of the peculiar construction represented by Figs. 3 and 4, respectively, said shackle end 1 being provided with a member or members of a snap-catch combination—for example, a hole *a* to interlock with a catch or catches *b* within the seal part B and a supplemental catch or catches *c* to interlock with one or each of a pair of lips *d* at the sides of the inlet D of said seal part. Said end 1 is further provided with a stop or stops *e*, opposed to said catch or catches *c*, or, in other words, located close thereto and between the same and mid-length of the shackle. (See Fig. 1.) Said stop or stops are consequently above said catch or catches in the fastened seal. (Compare Figs. 5, 6, and 7.) The other shackle end, 2, Fig. 4, has a longitudinal slot *f*, adapted to receive the snap end 1, as in Figs. 5, 6, and 7, and to be temporarily fastened thereon against the stop or stops *e* by the catch or catches *c*, as in Fig. 5, and permanently held against the top 3 of the seal part B by said stop or stops *e* when the seal is fastened, as in Figs. 6 and 7, said slot being preferably and conveniently formed in a dome *g*, raised on the shackle, as in Fig. 4, and said top 3 having a matching dome *h*, within which the inlet D is formed. The inlet D is thus located within the dome *g* of the catch-guarding shackle end 2 when the seal is fastened, as in Fig. 7, and any tampering with the catches *b* and *c* within the seal part by the insertion of tools or implements into the inlet D is thus effectively prevented.

For the purposes of the leading feature of the present invention the seal part B may be of any known or improved construction suited to the novel construction of the shackle A. As shown in Figs. 6 to 8, inclusive, its shell is completed by a body-piece 4, united with said top 3 by a circumferential seam 5, and said catches *b* are carried by a U-shaped middle piece 6, the ends of which are rigidly held in and by said seam 5, as set forth and claimed

in my specification forming part of said Letters Patent No. 696,002. When the seal part B is applied to the shackle A, as in Figs. 6 and 7, the ends of the latter being already interlocked with each other, the catch-hole *a* interlocks with the catch or catches *b*, and the supplemental catches *c* simultaneously interlock with the inturned lips *d*, so as to permanently fasten the seal part in place and prevent the separation of the car-door staples C or the like until the shackle is cut or the seal part destroyed.

In addition to the combinations set forth and claimed in my specifications forming part of said Letters Patent the combination of a flexible 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 top or cap piece 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, is claimed in my companion specification forming part of an application for patent, filed August 1, 1902, Serial No. 117,977, and the combination, in a snap-seal, of a hollow seal part of sheet metal composed of two disk-shaped pieces having its chamber formed by concavo-convex portions of both pieces of substantially equal depth and having one of its pieces provided with an inlet and inwardly-projecting rigid lips or vestibule-walls, a flexible shackle of sheet metal constructed with snap-catches to interlock with said vestibule-walls within the seal part and provided with an external inlet-guard surrounding the shackle and having a roof-shaped body within which the convex top of the seal part projects, and means for securing the other end of the shackle, is claimed in my companion specification forming part of an application for patent, filed September 6, 1902, Serial No. 122,425. All such combinations set forth in my previous specifications are hereby disclaimed in favor of such previous specifications, respectively.

The term "snap-catch" in the appended claims is intended to mean one or more snap-catches and the term "stop" one or more stops, as hereinbefore described and indicated, and the term "sheet material" is intended to include equivalents of sheet metal, such as sheet-celluloid.

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

1. A snap-seal composed of a flexible shackle, of sheet material, having one end provided with one member of a snap-fastening and with a stop that is above the same in the fastened seal, and its other end provided with a slot through which protrudes that portion of the end first named below said stop, and a hollow seal part having an inlet and provided internally with the other member of such snap-fastening, and adapted to interlock with the shackle end first named and to have its inlet guarded by the other shackle end.

2. The combination, in a snap-seal, of a flexible shackle having one end provided with one member of a snap-fastening and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a dome raised thereon and slotted for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with the other member of such snap-fastening, and having a convex top provided with its inlet and adapted to project within the dome of said inlet-guarding shackle end.

3. The combination, in a snap-seal, of a flexible shackle having one end provided with a catch-hole and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a slot for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with a snap-catch adapted to interlock with said catch-hole, and having an inlet that is covered and protected by said inlet-guarding shackle end.

4. The combination, in a snap-seal, of a flexible shackle having one end provided with a snap-catch adapted to resist the withdrawal of such shackle end and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a slot for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with lips arranged to interlock with said snap-catch, and having an inlet that is covered and protected by said inlet-guarding shackle end.

5. The combination, in a snap-seal, of a flexible shackle having one end provided with a catch-hole near its extremity and a snap-catch adapted to resist the withdrawal of such shackle end and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a slot for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with a snap-catch adapted to interlock with said catch-hole and lips arranged to interlock with the snap-catch first named, and having an inlet that is covered and protected by said inlet-guarding shackle end.

6. The combination, in a snap-seal, of a flexible shackle having one end provided with a catch-hole and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a dome raised thereon and slotted for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with a snap-catch adapted to interlock with said catch-hole, and having a convex

top provided with its inlet and adapted to project within the dome of said inlet-guarding shackle end.

7. The combination, in a snap-seal, of a flexible shackle having one end provided with a snap-catch adapted to resist the withdrawal of such shackle end and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a dome raised thereon and slotted for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with lips arranged to interlock with said snap-catch, and having a convex top provided with its inlet and adapted to project within the dome of said inlet-guarding shackle end.

8. The combination, in a snap-seal, of a flexible shackle having one end provided with a catch-hole near its extremity and a snap-catch adapted to resist the withdrawal of such shackle end and with a stop that is above the same in the fastened seal, and an inlet-guarding end having a dome raised thereon and slotted for the protrusion therethrough of that portion of the end first named below said stop, and a hollow seal part provided internally with a snap-catch adapted to interlock with said catch-hole and lips arranged to interlock with the snap-catch first named, and having a convex top provided with its inlet and adapted to project within the dome of said inlet-guarding shackle end, substantially as hereinbefore specified.

EDWARD J. BROOKS.

Witnesses:
ELLEN J. BROOKS,
ELINOR BROOKS.