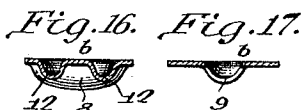
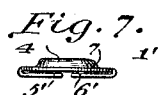
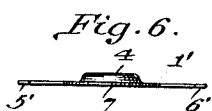
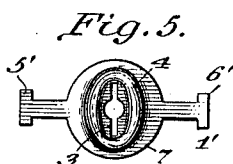
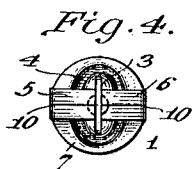
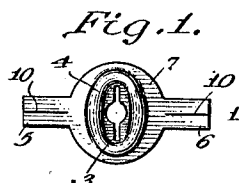


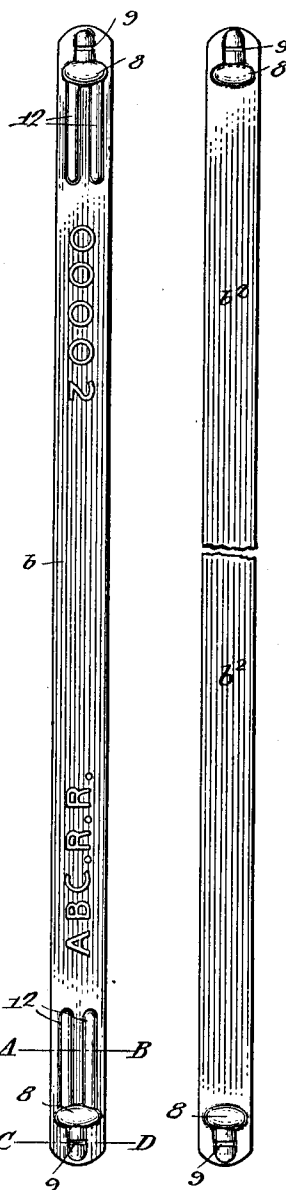
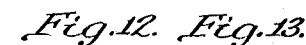
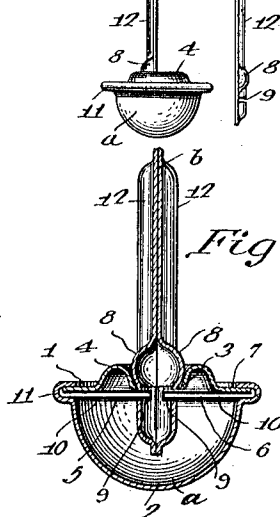
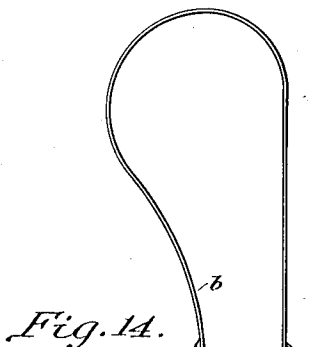
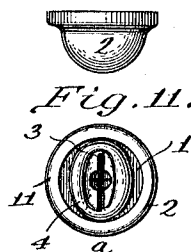
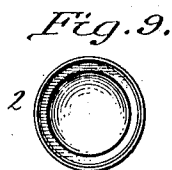
W. M. BROOKS.
SNAP SEAL.
APPLICATION FILED JUNE 6, 1912.

1,039,358.

Patented Sept. 24, 1912.



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UNITED STATES PATENT OFFICE.

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SNAP-SEAL.

1,039,358.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed June 6, 1912. Serial No. 702,021.

To all whom it may concern:

Be it known that I, WINFRED MUDGE 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, in common with numerous improvements by Edward J. Brooks and myself 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 or press fastenable sealing devices, to secure the doors of railway freight cars and for other like purposes. Recent examples of such snap seals are set forth in my previous specification forming part of United States Letters Patent No. 1,013,836, patented January 2, 1912, and previous specifications of said Edward J. Brooks therein referred to.

The present invention is additional to the improvement in snap seals of the bulb type described and claimed in my said previous specification, and consists in certain novel combinations of parts, and in an improved sheet-metal snap seal of said bulb type embodying said combinations or any of them, as hereinafter particularly described and claimed.

The leading objects of the present invention are to render the snap-catch construction more simple and at the same time more secure; and to resist attempts to unfasten the improved snap seal by tampering therewith.

Other objects will be set forth in the general description which follows.

A sheet of drawings accompanies this specification as part thereof.

Figures 1 and 2 are face and edge views of a top-piece blank for one species of the seal part of the improved snap seal; Figs. 3 and 4 are edge and bottom views of the same as finally bent; Figs. 5 and 6 are face and edge views of a modified top-piece blank for a second species of the seal part; Figs. 7 and 8 are edge and bottom views of the top piece bent up from said modified blank; Figs. 9 and 10 are top and side views of the body piece or bulb member of either species of the seal part; Fig. 11 is a top

view of a finished seal part; Figs. 12 and 13 are face views of two species of the improved shackle; Fig. 14 is an elevation of an improved snap seal of the first species, as it customarily leaves the factory with its parts preliminarily united; Fig. 15 represents a magnified longitudinal section through the seal part and shackle ends of the same snap seal as finally snap fastened; and Figs. 16 and 17 represent magnified cross sections through one end of the shackle on the lines A—B and C—D, respectively.

Like reference characters refer to like parts in all the figures.

The improved snap seal, in either species thereof, is composed of a two-piece seal part, a , and a flexible sheet metal shackle b or b^2 .

The two pieces 1 and 2 or 1' and 2' of each seal part are respectively a top piece of hardened sheet metal and a body piece or "bulb" of any suitable shape and material; said top piece 1 or 1' of each seal part having an inlet hole, 3, constructed with a rounded central enlargement surrounded by a continuous raised curb, 4, conveniently oval in shape, and having a pair of resilient catches, 5, 6, or 5', 6', integral with opposite edges of a round main portion, 7, in which said inlet hole is centrally located, said catches being constructed in common with thin and horizontally flat effective edges. The flat blank of each top piece, Figs. 1 and 2, or Figs. 5 and 6, is stamped from thin soft steel or the like, and is bent into its final shape, Figs. 3 and 4, or Figs. 7 and 8, with its catches inturned horizontally beneath said main portion 7, before hardening the metal, which last named operation adapts the top piece to resist any enlargement or distortion of the inlet hole 3, and also renders the catches 5, 6 or 5' 6' effectively resilient.

In each species the improved shackle b or b^2 is provided at each end with an embossed inlet guard, 8, fitted to the curb 4, and to said central enlargement of the inlet hole 3, constructed to extend both above and below said main portion 7 of the top piece 1 or 1', and milled to form a catch notch, 9, adapted to interlock with any of said catches 5, 6, or 5', 6' below said main portion 7 of the top piece. The two shackle

ends are constructed to snugly fill the inlet hole 3, and should the embossed inlet guards of a fastened seal (Fig. 15) be flattened above the top piece, to expose the inlet hole, the shackle ends will be widened by such operation so as to tighten them within the inlet hole of the hardened top piece, and the seal will thus be more securely locked by tampering with it.

In each species the seal part *a* is finished by permanently uniting its top piece and bulb by a circumferential joint, 11, as represented by Fig. 11; one end of the shackle *b* or *b*² is customarily snap-fastened at the factory as represented by Fig. 14, to attach the seal part; and after passing the other end of the shackle through a pair of card-door staples or the like, the snap-fastening operation is completed in customary manner; Fig. 15 representing the fastened seal.

In the first species, represented by Figs. 1-4, Figs. 9-12 and Figs. 15-17, the catches 5, 6, of the top piece 1 of the seal part are divided by longitudinal slits, 10, so that in the fastened seal, Fig. 15, both members of each catch must be simultaneously manipulated from opposite sides of the seal in order to unfasten either shackle end. The shackle *b* of said first species, in addition to said inlet guards 8 and catch notches 9, is provided at each end with a plurality of embossed stiffening ribs 12 adjoining said inlet guards and arranged side by side parallel with the edges of the shackle, adapting each shackle end to be firmly grasped between finger and thumb and pressed endwise into the inlet hole 3 against the resistance of the catches 5, 6, and also to be twisted and pulled in testing the seal. The shackle *b* is also preferably and conveniently embossed with the customary distinguishing marks or lettering and serial number represented by "A B C R. R." and "00002" in Fig. 12.

In the second species represented by Figs. 5-8 and Fig. 13, in connection with Figs. 9-11 and 14-17, the catches 5' and 6' of the top piece 1' of the seal part *a* are T-shaped, with their effective edges thus widened as compared with more yielding shank portions. The shackle *b*² of the second species illustrates the omission of the stiffening ribs 12 on sufficiently stiff shackles; the omission of distinguishing marks on the shackle as it leaves the factory; and the elongation of the shackle to any required extent.

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. The combination, in a snap seal, of a seal part composed of top and body pieces permanently united by a circumferential joint, the former having a main portion provided with an inlet hole surrounded by a

curb and a pair of catches integral with said main portion inturned horizontally beneath the same and constructed with thin and horizontally flat effective edges, and a flexible shackle provided with embossed inlet guards fitted to said inlet hole and curb and milled to form notches adapted to interlock with said horizontally flat catch edges.

2. The combination, in a snap seal, of a seal part composed of top and body pieces permanently united by a circumferential joint, the former having a main portion provided with an inlet hole surrounded by a curb and a pair of catches integral with said main portion inturned horizontally beneath the same, divided by longitudinal slits and constructed with thin and horizontally flat effective edges, and a flexible shackle provided with embossed inlet guards fitted to said inlet hole and curb and milled to form notches adapted to interlock with said horizontally flat catch edges.

3. The combination, in a snap seal, of a seal part composed of top and body pieces permanently united by a circumferential joint, the former being of hardened sheet metal and having a main portion provided with an inlet hole having a rounded central enlargement and a pair of resilient catches integral with said main portion inturned horizontally beneath the same and constructed with thin and horizontally flat effective edges, and a flexible shackle of sheet metal provided with embossed inlet guards fitted to said central enlargement of the inlet hole constructed to extend both above and below said main portion of the top piece and notched to interlock with said horizontally flat catch edges, the two shackle ends being constructed to snugly fill said inlet hole; whereby provision is made for more securely locking the shackle ends by expanding them in width within the inlet hole should their said inlet guards be flattened above the said top piece to expose the inlet hole.

4. The combination, in a snap seal, of a seal part composed of top and body pieces permanently united by a circumferential joint, the former having a main portion provided with an inlet hole having a rounded central enlargement and a pair of resilient catches integral with said main portion inturned horizontally beneath the same and constructed with thin and horizontally flat effective edges, and a flexible sheet-metal shackle provided with embossed inlet guards fitted to said central enlargement of the inlet hole, constructed to extend both above and below said main portion of the top piece and milled to form notches adapted to interlock with said horizontally flat catch edges.

5. In a snap seal, a seal part composed of top and body pieces permanently united by a circumferential joint, the former having a main portion provided with an inlet hole

and a pair of resilient catches integral with said main portion, intumed horizontally beneath the same, divided by longitudinal slits and constructed with thin and horizontally
5 flat effective edges, in combination with a flexible shackle the ends of which are constructed to enter said inlet hole and to interlock with said horizontally flat catch edges within the seal part, substantially as hereinbefore specified.

WINFRED MUDGE BROOKS.

Witnesses:

CHARLES C. LURICH,
JOS. L. EWIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
