(No Model.)

E. J. BROOKS.

SEAL.

No. 303,417. Patented Aug. 12, 1884.

Fig. 1x.

Fig. 1.

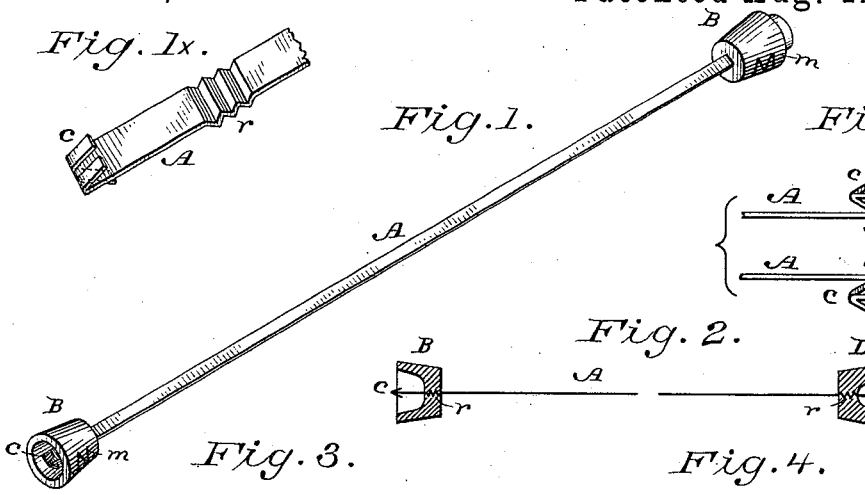


Fig. 1z.

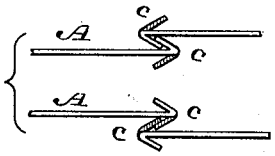


Fig. 2.

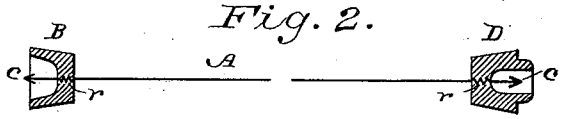
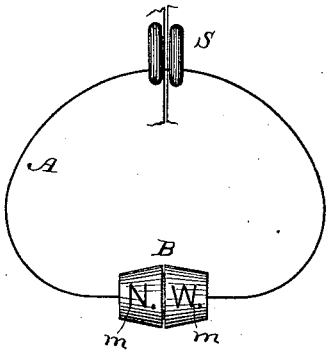


Fig. 3.

Fig. 4.



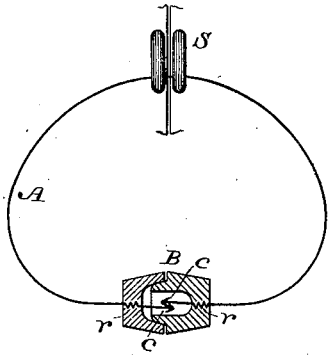
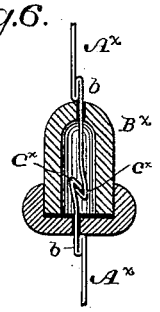


Fig. 5.

Fig. 6.



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SEAL.

SPECIFICATION forming part of Letters Patent No. 303,417, dated August 12, 1884.

Application filed April 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. BROOKS, a citizen of the United States, residing at 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, in common with numerous improvements in seals heretofore patented by me, relates to that class of seals a characteristic of which is the employment or use, as a part or the whole of each seal, of a flexible shackle the ends of which are united or fastened at the "sealing" operation, and which is or may be easily cut to open or unseal the car-door or other object secured by the seal, the seal, complete in and of itself, being applied to a pair of sealing-staples or the like. Heretofore seals of this class have commonly been fastened by means of a seal-press or a punching or stamping instrument, at a distinct operation, after applying the seal, and interthreading the shackle-ends, or otherwise preparing the seal therefor, at a second previous operation.

The general object of the present invention is to embody in seals of the aforesaid class, in a peculiar way, a principle which has heretofore been embodied in "seal-locks"—to wit, to render them "self-fastening." To this end I use a "seal part" of pottery or other hard and frangible material, within which the shackle-ends are secured by snap-catches, which may be formed wholly on the shackle-ends themselves, and are wholly inclosed when fastened, so that they cannot be tampered with, and which can be quickly opened either by breaking said seal part, or by cutting the shackle, as may be most convenient.

This invention consists, primarily, in the combination, in a self-fastening seal, of a flexible flat metallic shackle having snap-catches at its respective extremities, adapted to interlock with each other, and a permanently-hollow seal part of hard and frangible material—such as pottery—adapted to inclose the interlocked catches; and, further, in the combination of a flat metallic shackle having its respective extremities shaped into snap-catches adapted to interlock with each other, and the respective halves of a double seal part held in place on the respective shackle-ends, so as to come together and inclose the "catches," and so that they cannot be slid back to expose said catches; also, in the combination, with a shackle of the aforesaid description, having roughened portions adjacent to its catch extremities, of the halves of a double seal part, of pottery, molded and burned fast upon said roughened portions of the shackle, to preclude their displacement; also, in a double seal part, of pottery, having distinguishing-marks molded therein, in combination with a shackle burned fast in said seal part, or in its respective halves, said marks thus guarding all the parts of the seal against fraudulent duplication; also, in a flat metallic shackle having double snap-catches at its respective extremities, each having lips on both sides of the shackle, and adapted to interlock with each other on either side of a central line; and, also, in a peculiar form of double snap-catches formed by the respective ends of a flat metallic shackle, whereby interlocking said shackle-ends out of sight at the first attempt is insured, as hereinafter more fully set forth.

A sheet of drawings accompanies this specification as part thereof.

Figure 1 of these drawings is a perspective view of a seal illustrating this invention, in the condition in which the seal leaves the factory; and Figs. 1^x 1^z are detail perspective views of its shackle-ends. Fig. 2 represents a longitudinal section of said seal in the same condition. Fig. 3 is a front view thereof, as applied in an illustrative way to a car-door, and fastened; and Fig. 4 is a sectional front view of the fastened seal. Fig. 5 is a front view of another fastened seal, illustrating modifications; and Fig. 6 is a sectional edge view thereof.

Like letters of reference indicate corresponding parts in the several figures.

In the several forms illustrated by the drawings, these seals consist each of a flat metallic shackle, A or A^x, and a seal part, B or B^x, preferably of "pottery" or baked clay, the shackle provided at its extremities with snap-catches *c* or c^x, and the seal part adapted to admit and inclose said snap-catches and to render them inaccessible while fastened, said snap-catches serving, moreover, to fasten the

seal automatically, as will be readily understood by examining the sectional views of the fastened seals, Figs. 4 and 6, so as to obviate any pressing or fastening of the seals by seal-presses and the like, subsequent to the operation of putting the parts together by hand.

In the preferred combination of parts, illustrated by Figs. 1 to 4, inclusive, the snap-catches *c* of the shackle A are adapted to interlock with each other, as illustrated by Fig. 4. The seal part B is "double," its respective "halves" being held in place on the respective ends of the shackle, so that they cannot slide back to expose the fastened catches, which they are adapted to effectively inclose by fitting partially one within the other, as clearly seen in Fig. 4, and thus forming a broken joint. Said halves are so held in place by roughening the shackle at given points, in any approved way, as illustrated at *r*, Figs. 1^x, 2, and 4, molding the solid ends of the seal part on these roughened portions, and burning or baking the respective halves of the seal part in place, the same being thus easily rendered absolutely immovable on the shackle. The respective halves of the seal part are provided, at the molding operation, with distinguishing-marks *m*, which are rendered permanent at the burning or baking operation, and, owing to the permanent union of said halves with the shackle-ends, serve for the whole seal and every part thereof; and, finally, said snap-catches *c* are each made double in a peculiar way, (illustrated by Figs. 1^x, 1^z,) so that, whichever sides of the respective snap-catches come together in the fastening operation, effective holds will be afforded, and the risk of having to close the seal more than once before it will "catch" is avoided. The seal will immediately reopen in the hand of the sealer if not fastened, and the completion of the automatic fastening operation is evidenced by an audible "click;" but said peculiar construction of the snap-catches insures securely fastening them at the first attempt. To this end each of said catches *c* has a central lip on one side of the shackle, and a pair of lips on the other, formed by cutting a pair of short slits in each shackle-end, and bending the three points so produced in opposite directions, a central lip at one end and a pair of lips at the other end projecting on each side of the shackle, so that when the latter is bent either the two single lips or the pairs of double lips will come together, as shown in Fig. 1^z.

The shackle A may be made of sheet iron or brass or tin (tin-plate) or of flat wire sufficiently hard or brittle to preclude straightening out and rebending its catches without breaking the metal, so as to insure detection. Metal answering this description possesses, also, ample springiness to adapt the shackle-ends themselves to operate as snap-catches. The seal part B may be made of other substances or compounds adapted for the use; but pottery or baked clay is preferred, as aforesaid. The shape and size of the seal part, the relative size of its respective halves, and the length and width of the shackle are all capable of unlimited variations; and the seal part, as well as the shackle, being subjected to no "pressing" or stamping at the fastening or sealing operation, is peculiarly adapted to be made of different colors, as well as of diversified shapes, to distinguish the seals of different roads or users.

In the modification illustrated by Figs. 5 and 6 the halves of the seal part B^x are held in place on the respective shackle-ends; but by double bends *b* in the shackle formed and pressed by the manufacturer, as illustrative means for uniting the parts subsequent to burning or otherwise completing the seal part. The snap-catches c^x interlock with each other, but are shown "single" in this modification. Making one "half" of the seal part smaller than the other, to facilitate passing it through the sealing-staples S, is also illustrated in this modification. The shackle A^x is provided with distinguishing-marks *mm*, in addition to the marks *m* in the seal part, to provide against replacing a shackle in a violated seal.

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

1. The combination, in a self-fastening seal, of a flexible flat metallic shackle having snap-catches at its respective extremities, adapted to interlock with each other, and a permanently-hollow seal part of hard and frangible material—such as pottery—adapted to inclose the interlocked catches, substantially as herein specified.

2. The combination, in a seal, of a flat metallic shackle having snap-catches integral therewith at its respective extremities, adapted to interlock with each other, and the respective halves of a double seal part held in place on the respective shackle-ends, so as to come together and inclose the catches, and so that they cannot be slid back to expose said catches, substantially as herein specified.

3. The combination, in a seal, of a flat metallic shackle having snap-catches integral therewith at its respective extremities, and roughened portions adjacent thereto, and the respective halves of a double seal part of pottery to inclose said catches molded and burned fast upon said roughened portions of the shackle, substantially as herein specified, for the purposes set forth.

4. In combination with a flat metallic shackle having interlocking snap-catches at its extremities, a seal part of pottery in halves molded and burned fast on the respective shackle-ends, and having distinguishing-marks molded therein, substantially as herein specified, for the purposes set forth.

5. In a self-fastening seal having a permanently-hollow seal part of pottery, a flat metallic shackle provided with double snap-catches at its respective extremities, each hav-

ing lips on both sides of the shackle, and adapted to interlock with each other on either side of a central line, substantially as herein specified, whereby they are adapted to be readily interlocked out of sight within the opaque seal part, in the manner set forth.

6. A flat metallic shackle having at its respective extremities double snap-catches integral therewith, each composed of a central single lip on one side of the shackle and a pair of lips on its other side, a single lip and one of the pairs projecting on each side of the shackle, as herein specified, in combination with a hollow seal part of pottery in halves, molded and burned fast on the respective shackle-ends to inclose the fastened catches, for the purposes set forth.

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