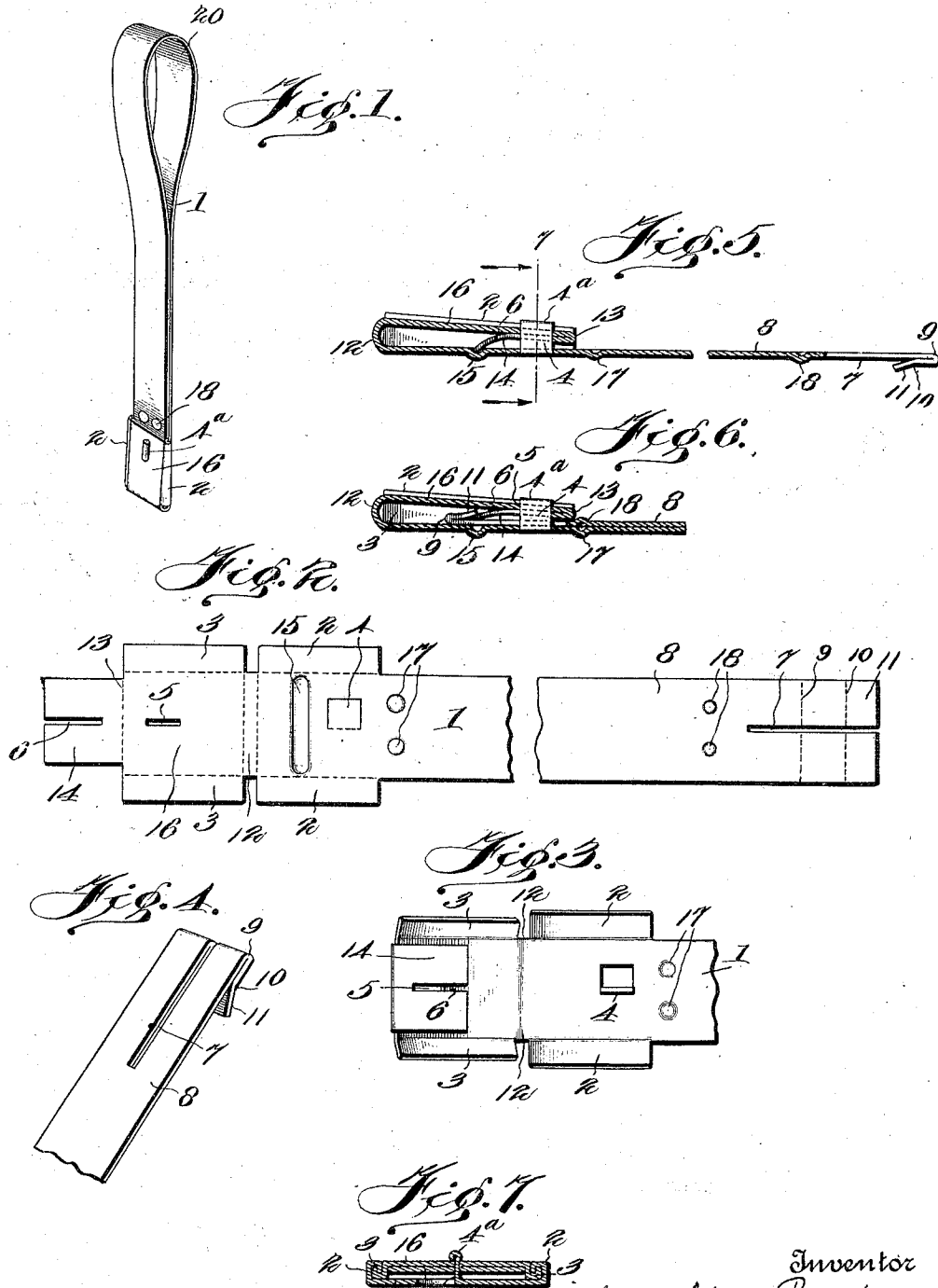


W. A. BRAMBERRY.
SELF LOCKING SEAL.
APPLICATION FILED NOV. 18, 1911.

1,038,485.

Patented Sept. 10, 1912.



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UNITED STATES PATENT OFFICE.

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SELF-LOCKING SEAL.

1,038,485.

Specification of Letters Patent.

Patented Sept. 10, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM ALONZO BRAMBERRY, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Self-Locking Seals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in self-locking seals, and it is specially applicable to seals for railway cars, although it may be applied to sealing up any wagon, package, or other article, where it is desired to show whether the wagon, package, or other article has been tampered with. In other words, the invention belongs to that class of tell-tale seals, which is intended merely to show whether the package has been broken or tampered with, and not as a protection against the actual disruption of same.

My invention will be understood by reference to the accompanying drawings, in which—

Figure 1 shows the device in its complete form when in use. Fig. 2 is a plan view, which shows the blank from which a seal is made. Fig. 3 is a detail, showing one end of the blank partly folded up. Fig. 4 is a detail showing the other end as completely folded. Fig. 5 is a detail showing a central longitudinal section of the seal in the open position. Fig. 6 is a similar section to Fig. 5, showing the seal in the locked position, and Fig. 7 shows a section along the line 7—7 of Fig. 5, and looking in the direction

of the arrows. 1 represents the single blank from which the complete seal is constructed. This blank is provided with ears 2 and 3 at one end, with the tongue 4 pressed up in the center of the device between the ears 2, 2. 5 represents a slot to receive said tongue when the parts are in the folded position.

6 and 7 indicate slots at the ends of the blank, the slot 7 in the end 8 of the blank being considerably longer than the slot 6 in the opposite end. The slotted end of the member 8 is bent over through 180°, as at 9, and again through a small angle, as at 10, to form a hook 11. The end portion 16 is

first bent along the line 13 to provide the hook 14. The blank is then folded over across the portion 12, and the ears 2 and 3 are then bent inwardly so as to engage in the manner shown. This construction provides a box which is open at one end to receive the hooked end (9, 10 and 11). The box construction is made secure through the medium of the tongue 4 which passes through a slot 6 in the hook 14 and a similar slot 5 in the box wall 16. The outer edges of the tongue 4 are then formed with a bead 4^a which holds the box against springing open. Before the box is formed the part 16 is bent as at 12 to form the hook 14 which projects into a groove 15 between the ears 2, as shown in Fig. 5. Bosses 17 and 18 are stamped into the blank, for purposes hereinafter to be described.

In constructing the device, a single blank is used, as shown in Fig. 2, with the slots, tongue, bosses, and groove already described; and this blank has its two ends bent, as shown in Fig. 5, the tongue 4 being struck up from the blank metal.

Now to apply the device, slip the end 9 through the staple, eye, or other device, and bend it to form a loop, as at 20 (see Fig. 1), passing the hook 11 underneath the hook 14, lifting the same out of engagement with the groove 15; and the hook 11 passing beyond the hook 14 will snap up and engage same, as shown in Fig. 6. The slot 7 will permit the hook 11 to pass freely by the tongue 4. This tongue 4 will engage the shoulder at the end of the slot 7, and will prevent the hook 11 from being forced in beyond a certain distance, at which time the free end of the hook 11 will clear the hook 14, and will spring up above same, as shown in Fig. 6. It will then be impossible to draw the end 9 outward without breaking some of the parts.

In seals as now in use, it is feasible to cut the strap 8 at about the position indicated by the bosses 18, and then force the strap 8 in the closed box, thus presenting the appearance of an unbroken seal; but with this device, the tongue 4 will obstruct the insertion of the strap 8 after the end of the slot 7 has been reached. As a further protection, should an additional slot be cut, by anyone tampering with the seal, in continuation of the slot 7, the bosses 17 and 18 would engage

beneath the bend 13 (see Fig. 6), and prevent the forcing in of the end of the strap beneath said bend.

It will thus be seen that I provide a simple seal, made of a single piece of sheet metal, which may be conveniently bent into shape, and in which the locking parts are effectively screened against tampering with; and in which, if the seal be once broken, it cannot under normal conditions be reset, so as to deceive anyone exercising even ordinary care in inspection.

It will be obvious that the seals can be shipped, "knocked down" in large quantities, and bent up where used, without the requirement of special tools, other than ordinary pliers; or, if preferred, they may be delivered already for use, as indicated in Fig. 5 of the drawings.

It will be obvious that various modifications might be made in the herein described device, and in the combination and arrangement of parts, which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. A locking seal comprising a blank strip constructed at one end to provide a box, one wall of said box having a projecting portion thereof interlocked with another wall of the box to secure the box structure, and to provide a guard; and the opposite end of said blank constructed with an engaging device, and slotted to permit of insertion of said device in the box past the guard thereof, substantially as described.

2. A locking seal comprising a blank strip constructed to provide a box, one wall of said box having a tongue struck therefrom,

said tongue passing through and engaging with the opposite wall to secure the box structure, and to provide a guard; and the opposite end of said blank constructed with an engaging device, and slotted to permit of insertion of said device in the box past the guard thereof, substantially as described.

3. A locking seal comprising a blank strip constructed to provide a closed box, one end of the strip bent to provide a catch within said box, one wall of the box having a tongue struck therefrom, said tongue passing through a slot in said catch and a slot in the opposite wall and engaging with said wall to secure the box structure, and to provide a guard; the opposite end of said blank constructed with a member for engaging with the catch, and slotted to permit of insertion of said member in the box past the guard, substantially as described.

4. A locking seal comprising a blank strip constructed to provide a closed box; one end of the strip slotted and bent to provide a catch within said box; one wall of the box having a tongue struck therefrom, and the wall opposite perforated; said tongue passing through the slotted catch and said perforation and beaded to engage with the perforated wall to secure the box structure, and to provide a guard; and the opposite end of said blank constructed with a hook for engaging with said catch, and slotted to permit of insertion of said hook in the box past the guard, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

WILLIAM ALONZO BRAMBERRY.

Witnesses:

H. W. HANLUL,
J. H. BROGDON.