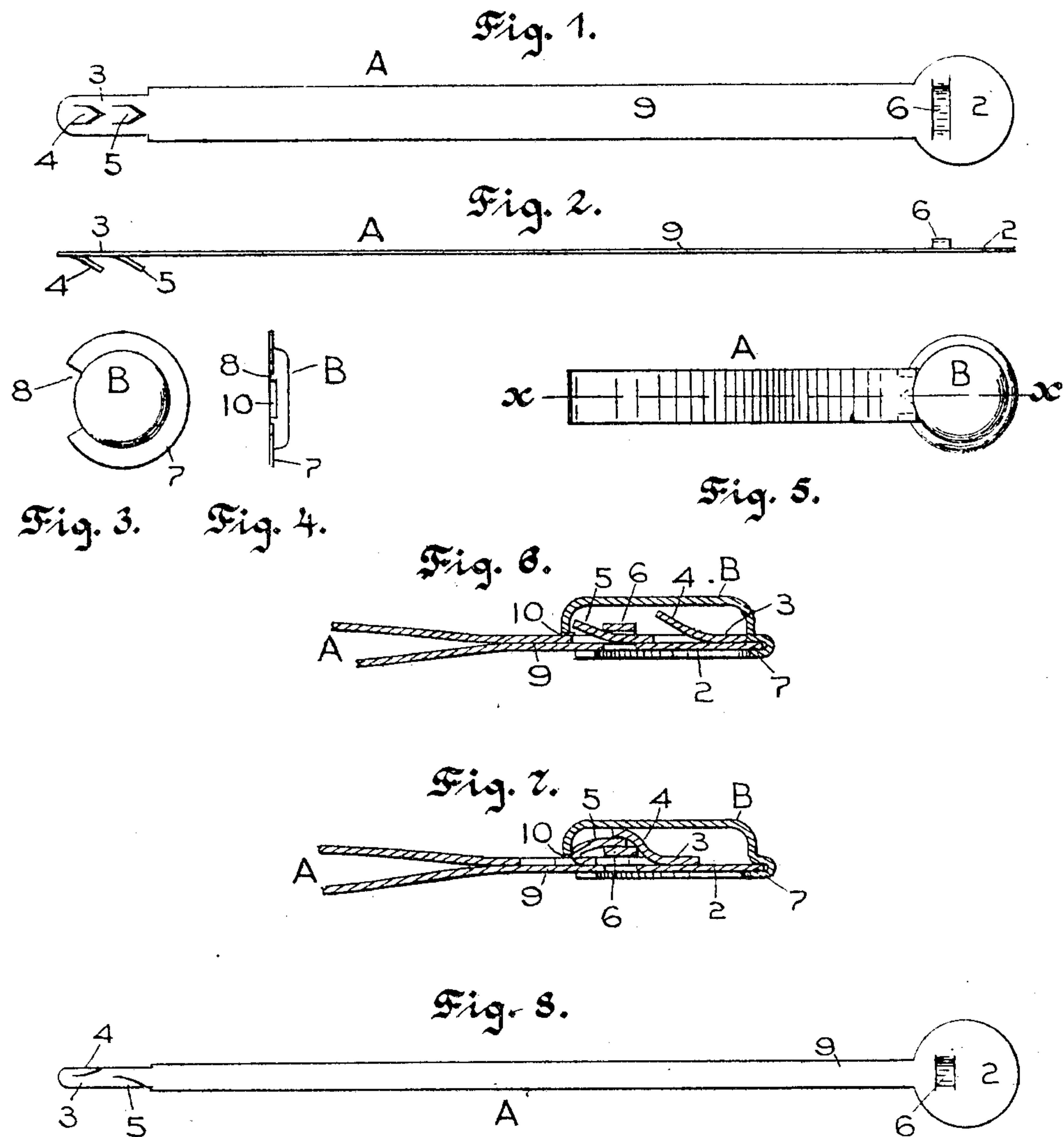


No. 799,086.

PATENTED SEPT. 12, 1905.

R. C. PLEINS.
SEAL.
APPLICATION FILED JUNE 14, 1904.



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UNITED STATES PATENT OFFICE.

RUDOLPH C. PLEINS, OF ST. PAUL, MINNESOTA, ASSIGNOR TO THE WESTERN CAR SEAL COMPANY, OF ST. PAUL, MINNESOTA, A CORPORATION OF MINNESOTA.

SEAL.

No. 799,086.

Specification of Letters Patent.

Patented Sept. 12, 1905.

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To all whom it may concern:

Be it known that I, RUDOLPH C. PLEINS, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Seals, of which the following is a specification.

My invention relates to improvements in seals for railway-cars, packing-cases, and the like, and has for its object to provide a simple, easily-operated, and effective seal which may be cheaply constructed and not easily tampered with.

To this end my invention consists in the features of construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of the blank forming the strap member of the seal. Fig. 2 is a side edge view thereof. Fig. 3 is a plan view of the cap member. Fig. 4 is a side view thereof. Fig. 5 is a plan view of the seal in locked position. Fig. 6 is a longitudinal section on line *x x* of Fig. 5. Fig. 7 is a similar section with the tongue end of the strap member drawn back into the position shown in dotted lines in Fig. 5, and Fig. 8 is a plan view of a modified form of strap-blank.

As shown in the drawings, the seal comprises two members—a locking-strap A and a cap B. The locking-strap is made, preferably, of sheet metal and is formed at one end with a base 2, preferably enlarged and circular in outline, and at the other end with a tongue 3 of reduced width. The tongue is formed with two upturned spring barbs or lips 4 and 5, arranged one in advance of the other and directed toward the base, and the base is formed with a transverse bridge 6 of less height than the upsprung forward barb 4, extending up from the plane of the base, the barbs and bridge being upon opposite faces of the strap. Where the strap is made of sheet metal, the barbs may be struck up from the metal and the bridge be formed by cutting two parallel slits in the metal and striking up the intermediate portion, as shown in the drawings.

The cap B is formed at the bottom with a flange 7, whereby the cap may be secured upon the base 2 of the locking-strap in any convenient way, but preferably, as shown in

the drawings, by bending the flange around 55 and under the edge of the base. The flange is formed with a notch 8 to accommodate the shank 9 of the locking-strap, and the side wall of the cap adjacent to the notch is formed with a transverse slot 10 of just sufficient 60 width and height to permit the passage therethrough of the barbed tongue 3. When the cap is thus secured upon the base of the locking-strap, it will cover the bridge 6 and the slot 10 will stand in line with the shank of the 65 locking-strap and substantially parallel with the bridge 6.

The seal is put together by bending the locking-strap upon itself so as to bring the tongue 3 over to the cap. The barbed tongue 70 is then inserted into the slot 10 and thrust therethrough into the cap as far as it will go, passing under the bridge 6. In passing through the slot the spring-barbs 4 and 5 will yield to the pressure of the side wall of the 75 cap until they have passed within the cap, when they will spring up into their normal position, the forward barb 4 being again depressed, however, in passing under the bridge 6, but springing up after it has passed the 80 bridge. The barbs will then be in upsprung position on opposite sides of the bridge, as shown in Fig. 6. The seal is now in locked position, the tongue end of the strap being held doubly against withdrawal, first, by the 85 bridge 6, which intercepts the upsprung forward barb 4, and, second, by the side wall of the cap, which forms a stop to the upsprung rearward barb 5. Furthermore, by pulling back the tongue end of the strap the rear 90 barb 5 will be forced against the inside of the side wall of the cap and be bent back thereby over upon the bridge into approximately the position shown in Fig. 7. The forward barb will at the same time be drawn back into 95 bridge-overlapping position, as shown in Fig. 7, so that the tongue will then be held from longitudinal movement in either direction.

As will be evident from the drawings, the rear barb 5 will completely block the way to 100 the insertion in the slot 10 of any instrumentality to depress the forward barb 4, and so long as the rear barb 5 is bent back against the bridge the barb 4 will overlap the bridge and cannot be depressed so as to pass under it, 105 and where the bridge is struck up from the sheet metal, as shown in the drawings, the tongue portion of the strap passing under

the bridge is visible from the under side of the seal and it may be seen at a glance whether the seal has been tampered with. Furthermore, by the use of a rear barb 5, which when
 5 turned over prevents the tongue from being pushed forward within the cap to carry the forward barb out of bridge-overlapping position, the forward barb cannot be effectively reached with any instrumentality inserted
 10 through the opening beneath the bridge.

It will be observed that the shank of the strap A being wider than the tongue 3 or slot 10 cannot be inserted into the cap after the seal has been tampered with by breaking off
 15 the tongue.

In Fig. 8 is shown a slightly-modified form, wherein the barbs 4 and 5 instead of being struck up from the middle of the tongue are struck up from the sides thereof. This form
 20 is suitable for use where a narrow strap is desirable or necessary, as in seals for packing-cases. The operation of this form is in all respects similar to that of the form shown in the other figures of the drawings.

The term "barb" as used herein is intended to cover generically any lip or tongue, whether pointed or not and whatever its shape, which will operate in substantially the way described.

While I prefer to use two barbs, as shown, it will be evident that an efficient seal will result if the tongue be formed with either one of the barbs alone, and various modifications may be made in the details of the device without departing from the principle of the invention, the scope of which is defined in the
 35 claims.

Having now described my invention, what I claim as new, and desire to secure by Letters
 40 Patent, is—

1. A seal of the class described comprising

a locking-strap having at one end a spring-barb and at the other end a cap formed with a transverse slot in its side to receive the
 45 barbed end of the strap, and a transverse bridge within the cap, the bridge being fixed at both ends and so positioned that when the barbed end of the strap is inserted into the cap the barb will be depressed by the bridge and pass beyond it.

2. In a seal of the class described, in combination, a locking-strap formed at one end with a narrowed tongue having two spring-barbs, one extending forwardly of the other, and at the other end with a transverse bridge,
 55 the bridge and barbs being upon opposite faces of the strap, and a cap secured upon the strap over the bridge, the cap being formed with a transverse slot in its side registering with the passage under the bridge, the slot
 60 being of just sufficient width to permit the insertion therethrough of the tongue, and the slot and bridge being of less height than the upsprung barbs.

3. A seal of the class described comprising
 65 a locking-strap having at one end a pair of spring-barbs, one extending forwardly of the other, and at the other end a cap formed with a slot in its side to receive the barbed end of the strap, and a transverse bridge within the
 70 cap, the bridge and barbs being so positioned and constructed that when the barbed end of the strap is inserted into the cap the forward barb will be depressed by the bridge and pass beyond it, and the rear barb will be depressed
 75 in passing through the slot.

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

RUDOLPH C. PLEINS.

Witnesses:

ARTHUR P. LOTHROP,
 EMILY F. OTIS.