

SEAL LOCK.

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Patented Apr. 27, 1909.

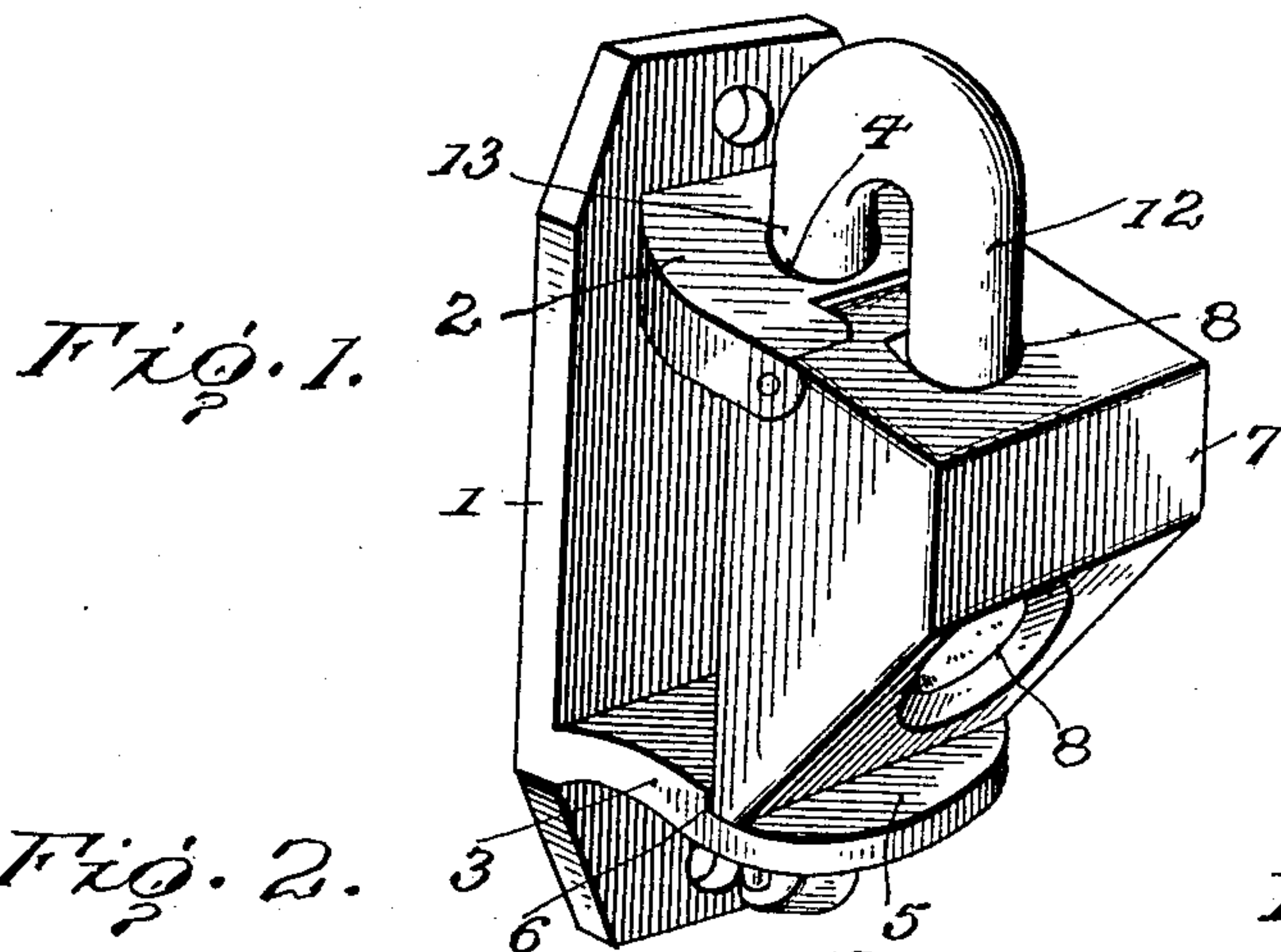


Fig. 2.

Fig. 3.

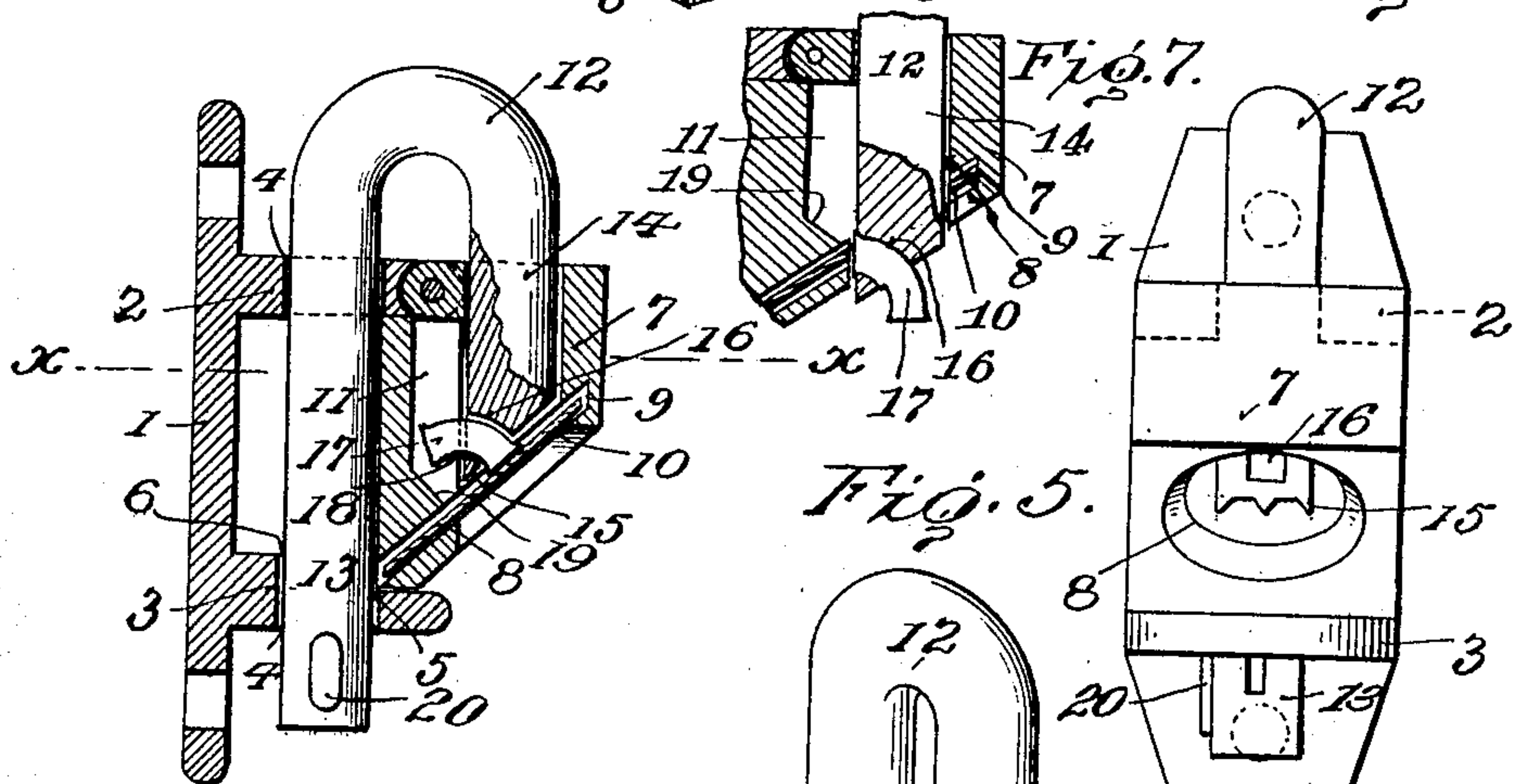
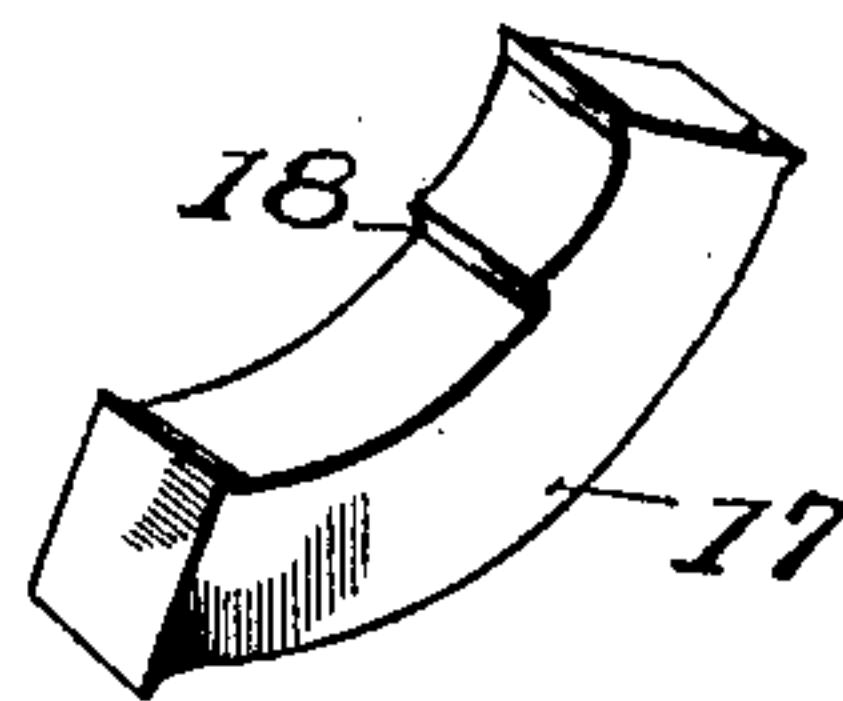
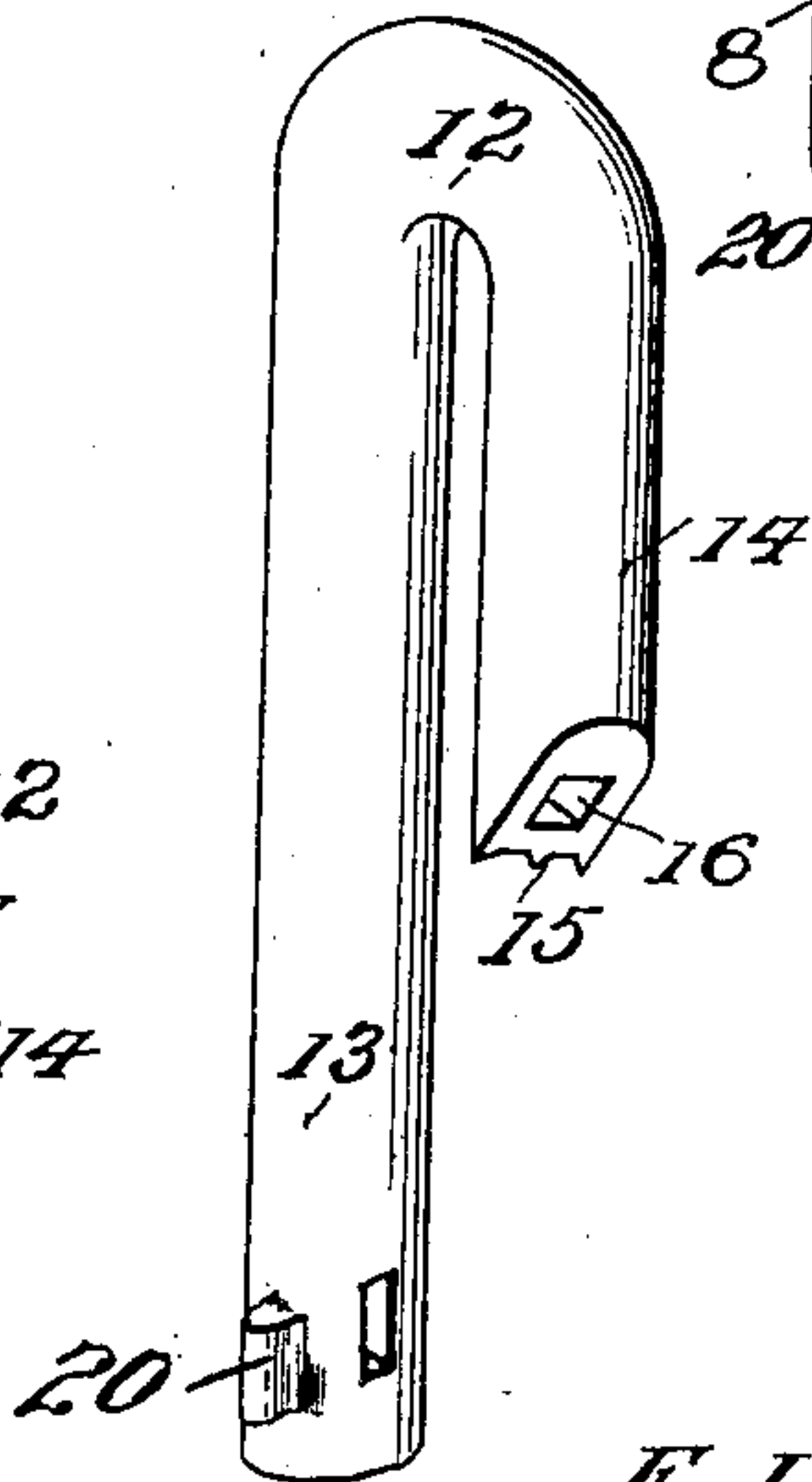
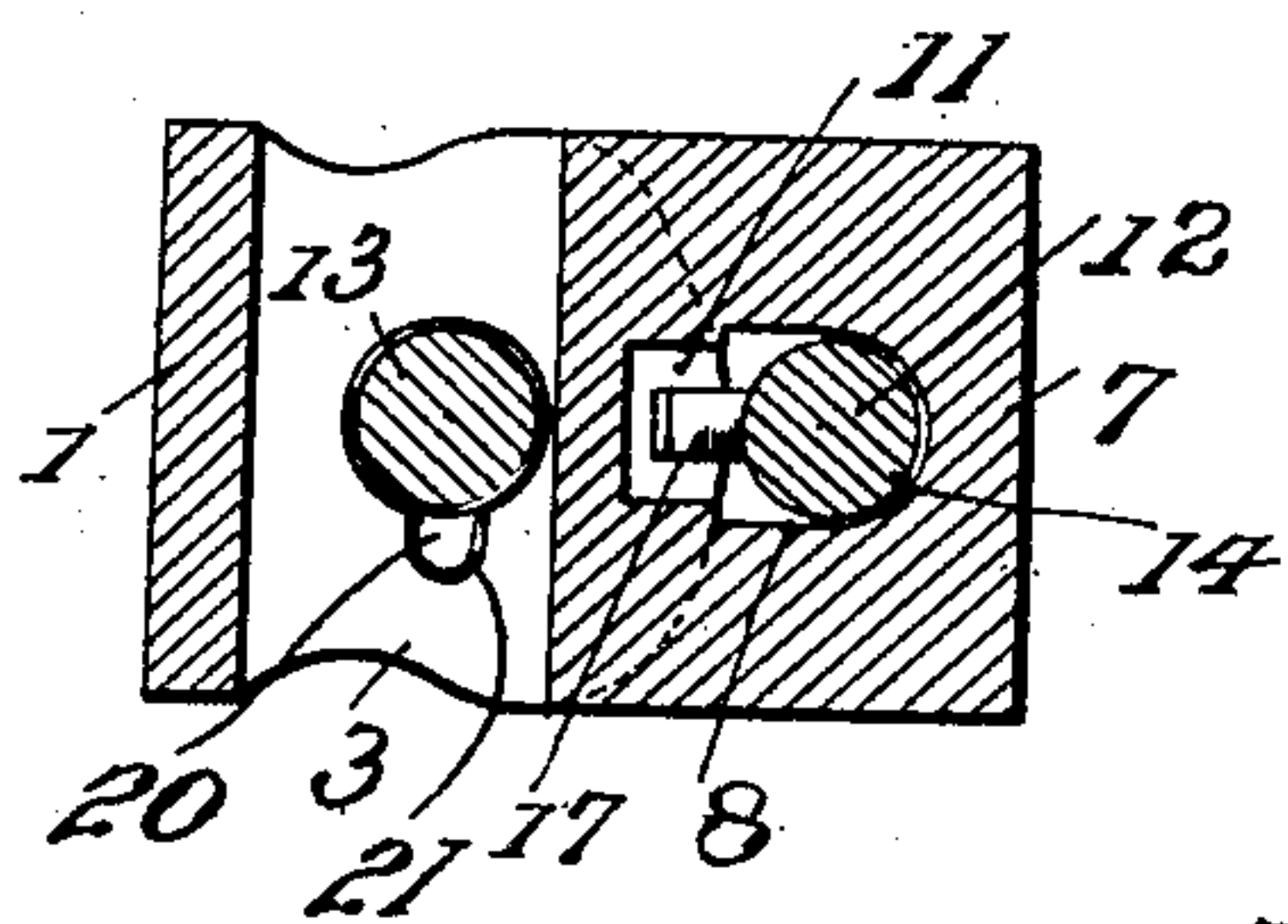


Fig. 5.

Fig. 4.

Fig. 6.



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Witnesses

Witnesses
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UNITED STATES PATENT OFFICE.

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SEAL-LOCK.

No. 919,539.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, EDWARD L. CHRISTIAN, citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented certain new and useful Improvements in Seal-Locks, of which the following is a specification.

This invention comprehends certain new and useful improvements in locks, relating more particularly to that type known as seal locks which are designed particularly for use in closing railway cars or the like and which embody a seal that must be broken before the opening of the lock can be effected, thereby affording means for detecting the unauthorized opening of the lock and a fraudulent entrance to the car, and the object of the invention is an improved device of this character which is simple and durable in construction and consists of comparatively few parts which may be easily and cheaply manufactured and readily assembled, the parts being so arranged that with the exception of the seal itself, they are in no wise injured during the opening of the lock as would prevent its reuse.

With this and other objects in view that will more readily appear as the description proceeds, the invention consists of certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view; Fig. 2 is a vertical sectional view; Fig. 3 is a front elevation; Fig. 4 is a horizontal sectional view on the line $x-x$ of Fig. 2; Fig. 5 is a detail view of the hasp; Fig. 6 is a detail view of the lock pin; and Fig. 7 is a similar view of the locking pin, showing the same in inoperative position.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out my invention, I provide a bracket 1 which is designed to be bolted or otherwise permanently secured to one of the parts to be secured together, and in the present instance it is carried by the car body, and which is formed with upper and lower out-
standing arms 2 and 3 that have vertically

aligning openings 4 extending therethrough, the opening in the lower bracket arm 3 being slightly larger than the other opening, and said arm 3 being recessed in its upper face beyond the opening, as indicated at 5, so as to form a substantially vertical wall or outwardly facing shoulder 6.

The extremity of the upper bracket arm 2 is preferably bifurcated as shown, and is hingedly connected in any suitable manner to the upper end of a seal holder 7 near the inner or rear side thereof, so as to render the same susceptible of being swung upwardly and outwardly about a horizontal axis. The lower end of this seal holder is outwardly inclined or beveled in the present instance and said holder is formed with a vertical opening 8 extending longitudinally thereof and opening outwardly at the opposite ends of the holder, as shown. This opening 8 is enlarged intermediate of its ends and preferably in close proximity to its lower end, in order to form a chamber 9 which is substantially parallel to the beveled end of the holder and which opens outwardly through the rear side of the same so as to be closed against the vertical wall or outwardly facing shoulder 6 when the holder is in its normal position and rests upon the recessed extremity 5 of the lower bracket arm 3, as shown. Positioned within the chamber 9 is a seal 10 which extends transversely of the opening 8 and which is preferably constructed of paper or tin, although it is to be understood that I do not limit myself to any particular form of seal, but may construct the same of glass or clay, or any other approved material, and if desired may provide the portion of the outer face thereof that is exposed to view through the portion of the opening 8 below the chamber 9, with an inscription relating to the destination of the car, its official number, or any other subject matter. The seal holder 7 is also formed with a longitudinally extending and inwardly disposed slot 11 which is located above the chamber 9 and has its lower end preferably tapered, as shown, and which communicates with the upper portion of the opening 8 for a purpose to be hereinafter disclosed.

12 designates a securing member that in the present instance is in the form of a downwardly facing hooked hasp which is designed to be engaged with a suitable keeper carried by the other one of the parts to be secured

together, and the shank 13 of which is slid-
 ingly mounted in the vertical alined open-
 ings 4 and has its lower extremity slightly
 enlarged, as shown, so as to be susceptible
 5 of passing through the opening in the lower
 bracket arm, but to be prevented from be-
 coming disengaged from the slightly smaller
 opening in the other arm. The hooked end
 10 14 of this hasp is shorter than the shank 13
 and is substantially parallel thereto and is
 designed to be inserted in the opening 8 to
 sustain the seal holder 7 in its normal posi-
 tion with the chamber 9 closed against the
 outwardly facing shoulder 6, said hooked end
 15 14 terminating in close proximity to the seal
 10 and being preferably chamfered to con-
 form to the inclination thereof and formed
 at its lowermost extremity with one or more
 teeth 15. Above the teeth the hooked end
 20 14 of the hasp is formed with an inwardly
 and upwardly curved aperture 16 extending
 therethrough as shown, and designed for the
 reception of a curved lock pin 17 which is
 slidingly mounted therein and has its ex-
 25 tremities slightly enlarged so as to prevent
 the pin from becoming disengaged from the
 aperture. This pin is somewhat longer than
 the aperture and is designed to have its outer
 end bear lightly against the seal as the hasp
 30 is pushed home into an operative position,
 and a continued downward movement of the
 hasp causes the inner end of the pin to be
 projected inwardly beyond the aperture and
 to be received into the slot 11. A shoulder
 35 18 is formed in the lower surface of the
 lock pin 17 near the inner end thereof and
 is designed to catch over the end of the
 hasp as the lock pin is projected into the
 slot 11, thereby preventing the lock pin from
 40 passing through the aperture and out of en-
 gagement with the slot 11 when the hasp is
 slightly raised, and thus holding the hooked
 end of the same securely in position in the
 seal holder.

45 From the foregoing description in connec-
 tion with the accompanying drawing, it will
 be apparent that in order to release the
 hooked end of the hasp and permit it to be
 moved upwardly beyond the holder to be
 50 disengaged from the keeper on the car door,
 it is necessary to bear downwardly upon the
 hasp to project the hooked end 14 thereof
 through the seal 10, whereby to afford con-
 venient access to the lock pin 17 and permit
 55 the same to be withdrawn from engagement
 with the slot 11. Obviously, the hasp may
 then be moved upwardly and the hooked
 end 14 thereof raised out of the opening 8 in
 the seal holder 7.

60 In order to render the lock susceptible of
 being again used, it is only necessary to
 swing the seal holder 7 upwardly about its
 horizontal axis, while the hasp is in raised
 position, and move the rear side of the holder
 65 outwardly beyond the lower bracket arm 3,

whereupon the ruptured seal may be con-
 veniently withdrawn and replaced by a new
 one.

It will thus be seen that I have provided
 an improved seal lock which may be used 70
 repeatedly without becoming materially in-
 jured, which is positive in action and necessi-
 tates a breaking of the seal before the lock
 may be opened, and which consists of few
 parts that may be cheaply manufactured 75
 so as to be placed upon the market at a price
 not too great to prevent the general adop-
 tion of the lock.

When the hasp or securing member 12 is
 pressed downward, to break through the seal 80
 10, the pin or lock 17 automatically is
 moved at the same time so as to clear the
 slot or recess 11, whereby upon the reverse
 movement of the hasp or securing member
 to disengage the part 14 from the holder 7, 85
 the pin or lock 17 will be out of the way and
 not interfere with the upward movement of
 the hasp or securing member. This result
 is effected by an inclined shoulder 19 at the
 lower end of the slot or recess 11, the inner 90
 end of the pin or lock 17 riding upon said
 inclined shoulder 19 and being moved out-
 ward thereby. When the inner end of the
 pin first comes in contact with the inclined
 shoulder 19, it is lifted to disengage its shoul- 95
 der 18 from the inner end of the opening 16
 and a continued downward movement of the
 securing member 12 presses the lock 17 out-
 wardly through the aperture so that the in-
 ner end of the lock is entirely retracted from 100
 the slot 11 and the outer end is projected
 downwardly and forwardly beyond the
 chamfered end of the part 14 to assume the
 position illustrated in Fig. 7. In this posi- 105
 tion the lock is arranged in substantially the
 same relation to the part 14 as when the
 latter was first inserted in the holder 7, and
 it will be observed that because of the curved
 formation of the lock, its forward end does
 not extend beyond the line of the periphery 110
 of the part 14, and hence in nowise interferes
 with the longitudinal movement of this part
 through the opening 8. As before described
 the ends of the lock pin 17 are sufficiently
 enlarged so as to be prevented from passing 115
 through the aperture 16, to prevent the lock
 from becoming completely disconnected
 from the hasp, as might result in its loss,
 which would thereby render the entire de-
 vice inoperative. 120

As the preferred means for effecting a
 suitable sliding connection between the hasp
 and the bracket, the shank 13 is formed, or
 provided after it has been passed through
 the upper opening 4, with a lug or projection 125
 20 which constitutes a stop to prevent the
 shank from being withdrawn through said
 opening, and which is adapted to be passed
 through an enlargement 21 formed in the
 lower opening 4 so as to render the hasp sus- 130

ceptible of having the desired limited movement relative to the bracket.

Having thus described the invention, what is claimed as new is:—

5 1. A seal lock comprising a holder having a chamber and an opening intersecting the chamber, a seal located in said chamber, a hasp or like securing member slidably mounted in the said opening and supported
10 in operative position by the seal, and a lock pin carried by said securing member and co-operating with the holder to prevent release of the securing member so long as the seal remains intact.

15 2. A seal lock comprising a holder having a chamber and an opening intersecting the chamber, a seal located in said chamber, a hasp or like securing member slidably mounted in said opening and supported in operative
20 position by the seal and a lock pin for preventing release of the securing member so long as the seal remains intact and adapted to release the securing member after the seal has been broken.

25 3. A seal lock comprising a holder having a chamber and an opening intersecting the chamber, a seal located in said chamber, a hasp or like securing member slidably mounted in said opening and supported in operative
30 position by the seal and a curved lock pin carried by the securing member to prevent the release thereof so long as the seal remains intact.

35 4. A seal lock comprising a holder having a chamber, an opening intersecting the chamber, and a recess at one side of said opening provided with an inclined wall, a seal located in said chamber, a hasp or like securing member slidably mounted in the opening and supported in operative position by the seal and
40 a lock pin carried by the securing member and having an end portion projected into the recess in communication with the aforesaid opening to prevent release of the securing member so long as the seal remains intact, said lock pin being automatically thrown out
45 of operative position by the aforesaid inclined wall when the securing member is moved to break the seal.

50 5. A seal lock comprising a supporting member and a seal holder movably related the latter having a chamber which is closed at its entrance when the two members are associated, a seal located in the said chamber,
55 and a hasp or securing member mounted in both members of the seal lock and adapted in an operative position to secure the same against separation.

60 6. A seal lock comprising a bracket having spaced arms, a seal holder having an opening and a chamber, the latter being closed at its entrance when the two parts of the seal lock are together, a seal located in said chamber,
65 and a hasp having one arm slidably mounted in the arms of the aforesaid bracket and hav-

ing its other arm slidably mounted in the said holder and maintained in operative position so long as the seal remains intact.

7. A seal lock comprising a bracket having spaced arms, a seal holder having an opening
70 and a chamber, the latter being closed at its entrance when the two parts of the seal lock are together, a seal located in said chamber, a hasp having one arm slidably and rotatably mounted in the arms of the aforesaid bracket
75 and having its other arm slidably mounted in the said holder and supported in operative position by the seal, and a lock pin coöperating with the holder and the hasp member mounted therein to prevent release of the
80 hasp and holder so long as the seal remains intact.

8. A seal lock comprising a holder having a chamber and an opening intersecting the chamber, a seal located in said chamber, a se-
85 curing member mounted in the opening, and a lock pin for preventing the release of the securing member so long as the seal remains intact.

9. A seal lock comprising a holder having
90 a chamber and an opening intersecting the chamber, a seal located in said chamber, a securing member slidably mounted in the opening, a lock pin for preventing the release of the securing member, and means for
95 rendering the lock pin inoperative upon the movement of the securing member to break the seal.

10. A seal comprising a holder having a chamber and an opening intersecting the
100 chamber, a seal located in said chamber, a securing member slidably mounted in the opening, a lock pin carried by the securing member, means for engaging the lock pin with the holder upon the movement of the
105 securing member against the seal, and means for rendering the lock pin inoperative upon the movement of the securing member to break the seal.

11. A seal lock comprising a holder having
110 a chamber, an opening intersecting the same, and a recess at one side of the opening, a seal located in said chamber, a securing member slidably mounted in the opening and provided with a beveled end, and a lock pin
115 slidably mounted in the said beveled end and having one end arranged to bear against the seal and project the other end of the pin into the recess.

12. A seal lock comprising a holder having
120 an opening, a securing member mounted in the opening, a seal secured in proximity to the opening, means for preventing the release of the securing member, and means for rendering said first named means inopera-
125 tive by and upon the movement of the securing member to break the seal.

13. A seal lock comprising a holder having
an opening, a securing member mounted in the opening, a seal secured in proximity to
130

the opening, a lock pin carried by the securing member, means for engaging the lock pin with the holder by and upon the movement of the securing member against the seal, and means for rendering the lock pin inoperative by and upon the movement of the securing member to break the seal.

14. A seal lock comprising a holder having an opening and a recess at one side of the same, a seal in proximity to the opening, a securing member mounted in the opening, and a lock pin slidably connected to the securing member and having one end arranged to bear against the seal to project the other end into the recess.

15. A seal lock comprising a holder having an opening, a recess at one side of the same, a seal secured in proximity to the opening, a securing member mounted in the opening, a lock pin slidably connected to the securing

member, means for projecting the lock pin into the recess, and means for preventing the disengagement of the lock pin from the recess as long as the seal remains intact.

16. A seal lock comprising a supporting member and a seal holder movably related, a seal secured in operative position when the two members are assembled, a securing member mounted in both of the first named members and adapted to hold the same against separation, and means for preventing the release of the securing member as long as the seal remains intact.

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

E. L. CHRISTIAN. [L. s.]

Witnesses:

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