

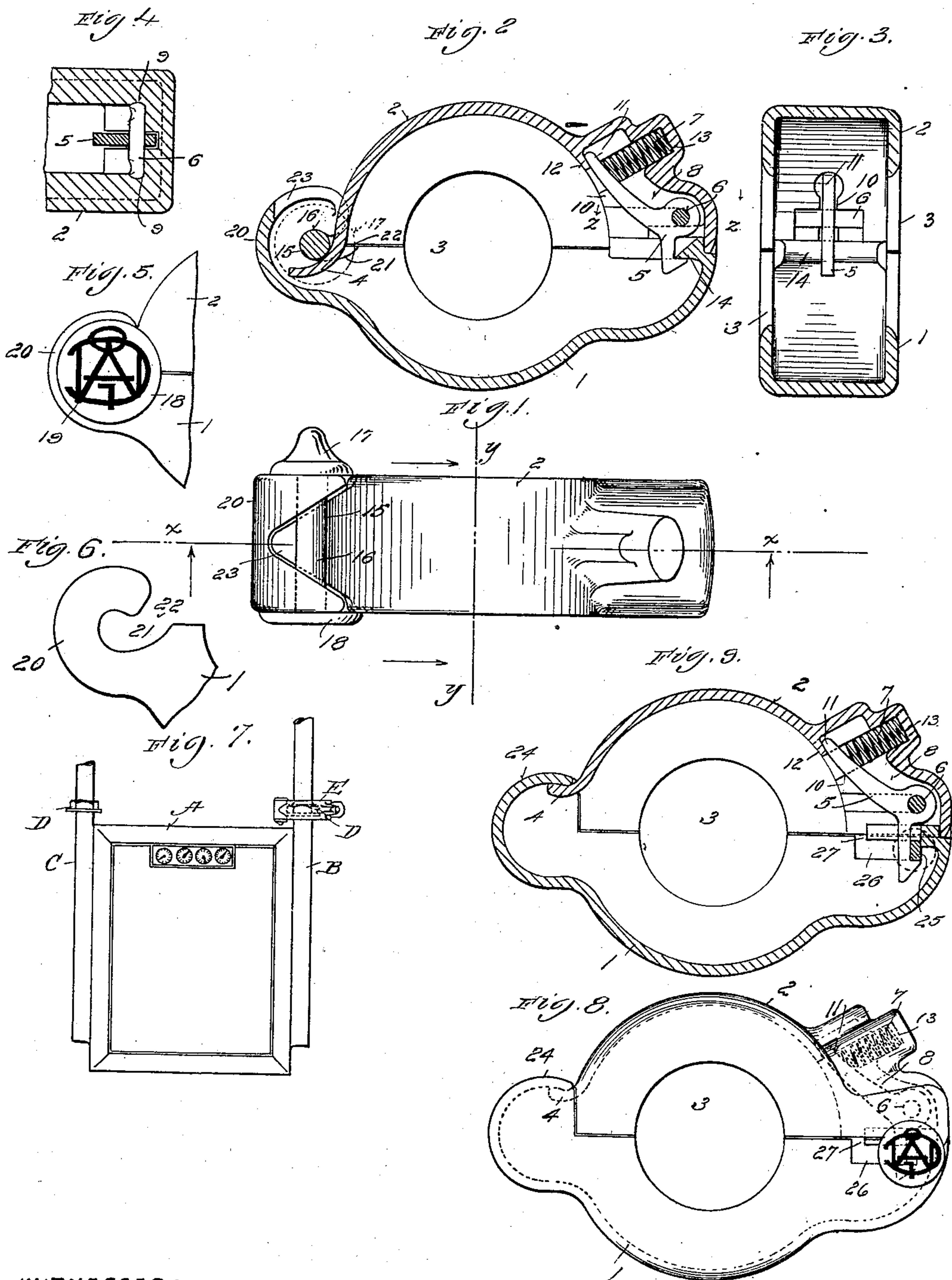
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R. D. TITTLE.
SEAL LOCK FOR PIPE COUPLINGS.

APPLICATION FILED NOV. 28, 1902.

NO MODEL.



WITNESSES:
J. O. Dawley
Willoughby

INVENTOR,
R. D. Tittle
By H. A. Toulmin
ATTORNEY.

UNITED STATES PATENT OFFICE.

REUBEN D. TITTLE, OF SPRINGFIELD, OHIO.

SEAL-LOCK FOR PIPE-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 720,196, dated February 10, 1903.

Application filed November 28, 1902. Serial No. 133,022. (No model.)

To all whom it may concern:

Be it known that I, REUBEN D. TITTLE, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Seal-Locks for Pipe-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to seal-locks for pipe-couplings, being devised more particularly, although capable of other applications, for use in connection with gas and other meters for the purpose of preventing unauthorized connecting or disconnecting of the same with or from the supply and distributing pipes.

More specifically, my invention has for its object to provide a seal-lock of this class having certain advantageous features of construction and operation, which will be hereinafter more specifically pointed out.

To these ends the invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation of a structure embodying my invention in one form. Fig. 2 is a sectional view of the same, taken on the line $x x$ of Fig. 1 and looking in the direction of the arrows. Fig. 3 is a transverse sectional view taken on the line $y y$ of Fig. 1 and looking in the direction of the arrows. Fig. 4 is a detail sectional view taken on the line $z z$ of Fig. 2 and looking in the direction of the arrows. Fig. 5 is a detail elevation of one end of the seal and the parts adjacent thereto when the seal is in position. Fig. 6 is a detail view of one end of one of the members of the casing. Fig. 7 is a view illustrating the application of the device to a meter. Fig. 8 is an elevation showing a modified form of my invention; and Fig. 9 is a sectional view of the same, corresponding in its plane of section with Fig. 2.

Heretofore seal-locks of this character have been proposed consisting of a two-part casing adapted to fit around the coupling or union, so as to inclose the same and prevent access thereto for the purpose of unscrewing and disconnecting the joint. It is to this class of seal-locks that my present invention relates; and the improvement consists in pro-

viding the members of such a two-part casing with internal engaging hooks and cooperating engaging members or keepers inclosed within the casing when the parts are assembled, one of the hooks being a yielding spring-hook, so as to cause the parts to automatically lock when brought together, and one of the engaging members or keepers with which one of said hooks engages being a removable sealing member, which when the seal is broken will permit the disengagement of the corresponding hook.

The usual application of my improvement where it is used in connection with a gas-meter may be understood from Fig. 7, in which A indicates the meter, and B and C the supply and distributing pipes, having couplings D, to one of which, preferably the coupling of the supply-pipe, the seal-lock (indicated as a whole by the reference-letter E) is applied. The lock may, however, be applied to both couplings.

Referring now more particularly to the detailed construction of the seal-lock, I have shown in Figs. 1 to 6, inclusive, one form of my invention. In this construction the casing consists of two members 1 and 2, the bodies whereof are hollow and semicylindrical, so as to fit around the union or coupling, and have lateral openings 3 for the passage of the pipe ends. In the particular embodiment shown both of the hooks are located upon the same member, in the present instance the member 2, although this is not essential. In said construction the member 2 is provided at one end with a hook projection 4, preferably integral with the body of said member, while at its other end said member 2 is provided with a hook 5, pivoted at 6 within the hollow body of the member and backed by a coiled spring 7 to cause it to engage its keeper. This hook may be constructed and mounted in any suitable manner; but I prefer the construction shown, in which the member 2 is provided with a recess 8, having terminal recessed seats 9 to receive the ends of the pivot 6. The pivot is made of relatively soft material capable of swaging and is originally of such a length as to enable it to be introduced into the recess 8, the ends being subsequently swaged out into the seats 9, so as to secure the pivot in

place. The hook 5 fits in a slot 10, and its shank or tailpiece 11 is pressed by the spring 7 against a suitable stop 12. The spring 7 is preferably a spiral spring fitted in a recess 13 circular in cross-section to adapt it to receive and support said spring. The other member, 1, is provided with a fixed or permanent engaging member or keeper 14, which in the present instance is adapted to be engaged by the hook 5 and which is preferably in the nature of a lip or flange integral with the body of the member 1. Said member 1 is also provided with a removable engaging member or keeper 15, which in the present instance is engaged by the fixed hook 4 and which constitutes the sealing member. In the form of construction which I prefer this keeper 15 is in the shape of a bar 16, having terminal heads 17 and 18 and constructed of some brittle or frangible material or metal—as, for instance, cast-iron. One of the heads—as, for instance, the head 18—is preferably flat and provided with a distinctive device thereon—as, for instance, the monogram 19—so as to prevent the substitution of an unauthorized sealing device. The member 1 is provided with a hook-shaped extension 20, having lateral apertures 21 to form seats for the bar-like portion 16 of the member 15, the heads 17 and 18 preferably fitting closely against the sides of said hook-like extension 20, as shown in Fig. 1. A notch or opening 22 on each side permits the introduction of the member 15 to its seat, in which it is held by the hook 4, and the hook-like extension 20 is centrally notched or cut away, as indicated at 23, to permit the free removal of the hook 4 when the combined keeper and sealing member 15 is removed. This particular embodiment of my invention operates in the following manner: Assuming that the two members 1 and 2 are separated and are to be placed around a coupling, the combined keeper and seal 15 is placed in position in its seat 21 in the member 2, which latter is then placed around one half of the coupling. The hook 4 of the other member 1 is then engaged with the keeper 15, and the member 1 is turned around said keeper as a pivot until the hook 5 at the other end of the member 1 enters the member 2 and automatically engages with the keeper 14. This simple operation completes the locking of the parts together, and the engaging hooks are inclosed and concealed within the body of the casing when the parts are assembled. When it is desired to remove the lock, the sealing-keeper 15, is readily broken as a slight blow on one of its heads, preferably the head 18, will break off said head and permit the withdrawal of the shank thereof, thus freeing the hook 4, which may be drawn out through the notch 23, provided for that purpose, thus disconnecting the two members of the lock, since the hook 5 may be freed as the two members are swung apart. Obviously any unauthorized opening of the lock requires the breaking of the sealing member, which

will at once disclose the fact that the lock has been tampered with.

Obviously the essential features of my invention may be embodied in other forms than that shown in Figs. 1 to 6, inclusive. For instance, I have shown in Figs. 8 and 9 a modification in which the combined seal and keeper is engaged by the spring-hook instead of the fixed hook. In this construction the fixed hook 4 engages with a hook-like extension 24 on the member 2, which may be similar to the hook-like extension 20 except that the notch 23 is omitted, so that the two members cannot be disengaged at this end until they are disengaged at the other end. In this case the part 24 constitutes the engaging member or keeper at this end of the device. Any suitable connection for this purpose may be employed at this end. At the other end the construction and arrangement of the hook 5 may be identical with that already described. The member 2 at this end is, however, provided with a keeper 25, which may be identical in all respects with the keeper 15 except that its bar-like body portion is preferably rectangular in cross-section or otherwise so shaped as to suitably engage and hold the hook 5. The casing member 2 is provided on each side with a slot 26, parallel with the meeting faces of the two members and having an outlet portion 27, by means of which the sealing-keeper may be introduced into the slot 26, against the end of which it is seated and held by the hook 5. In this construction also the two parts may be automatically locked together in the manner already described and may be separated when desired by breaking the sealing member or frangible keeper and removing the same, if necessary, so as to free the hook 5, the separation of the two parts in this case occurring by swinging outward from each other the two ends connected by the hook 5.

Various other modifications will readily suggest themselves, and I therefore do not wish to be understood as limiting myself to the precise details of construction hereinbefore described, and shown in the accompanying drawings. For instance, the frangible sealing member need not be integral when intact, as any of the well-known means for securing this sealing member in place by a seal which must be destroyed to effect its removal will come within the scope of my invention in its broader sense, and I include such a device within the term "frangible seal member" as employed herein.

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

1. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling, the two members of the casing being connected on opposite sides of the coupling by cooperating inclosed hooks and keepers, one of said hooks being yielding or spring-actuated to effect the au-

tomatic union of the parts, and one of said keepers consisting of a frangible seal member, substantially as described.

2. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling, the two members of the casing being connected on opposite sides of the coupling by cooperating inclosed hooks and keepers, one of said hooks being yielding or spring-actuated to effect the automatic union of the parts, and one of said keepers consisting of a frangible seal member having a bar-like body portion within the casing and terminal enlargements outside of the casing, substantially as described.

3. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling, the two members of the casing being connected on opposite sides of the coupling by cooperating inclosed hooks and keepers, one of said hooks being yielding or spring-actuated to effect the automatic union of the parts, and one of said keepers consisting of a frangible seal member having a bar-like body portion within the casing and integral terminal heads outside of the casing, substantially as described.

4. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling and provided on opposite sides thereof with connecting devices, the connecting devices on one side consisting of a hook on one member, a hook-like extension on the other member, and a frangible keeper seated in the hook-like extension and constituting a sealing member, the connec-

tions on the other side of the coupling consisting of a spring-actuated hook on one member and a cooperating keeper on the other member, said hooks being inclosed within the casing when the parts are assembled, substantially as described.

5. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling, one of the members of said casing being provided with a fixed hook at one end and with a yielding or spring-actuated hook at the other end, the other member of said casing being provided at one end with a keeper to engage the yielding hook, and having at its other end a hook-like extension having a notch or opening for the passage of the fixed hook on the first-mentioned member, and a frangible sealing member seated in the hook-like extension, having a body portion therein constituting a keeper, and terminal heads outside of the casing, substantially as described.

6. A seal-lock for pipe-couplings and the like, consisting of a two-part casing adapted to fit around the coupling, said members being connected at one end by a frangible seal-pivot, and at the other end by an inclosed automatic hook and keeper, respectively, substantially as described.

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

REUBEN D. TITTLE.

Witnesses:

AL. H. KUNKLE,
IRVINE MILLER.