

G. A. McIlhenny,

Pipe Coupling.

No. 105,105.

Patented July 5, 1870.

Fig. 1.

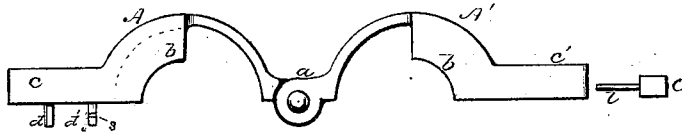


Fig. 2.

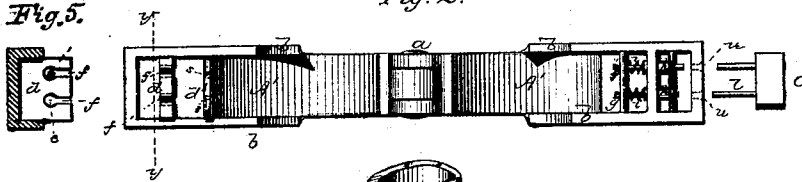


Fig. 5.

Fig. 3.

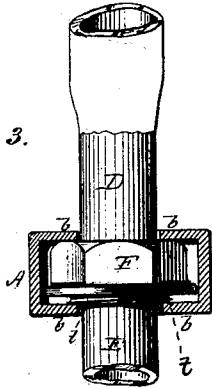
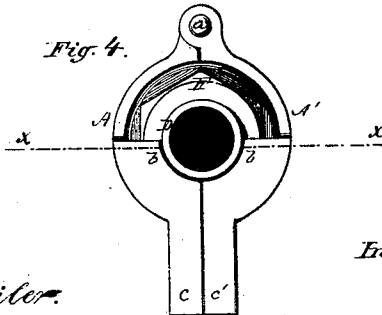


Fig. 4.



Witnesses,

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GEORGE A. McILHENNY, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 105,105, dated July 5, 1870.

IMPROVEMENT IN LOCKS FOR PIPE-COUPLINGS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE A. McILHENNY, of Washington, in the county of Washington and District of Columbia, have invented certain Improvements in Lock for Pipe-Couplings or Unions, of which the following is a specification, reference being had to the accompanying drawing.

My invention relates to a device to be applied to the union-couplings of pipes, to prevent the pipes from being uncoupled by unauthorized persons; and

It consists in a hollow metallic case, which may be applied around a pipe and locked in such manner as to inclose the coupling.

Figure 1 is a top plan view of my device opened;

Figure 2, an inside face view of the same;

Figure 3, a cross-section of the lock in position around a union coupling;

Figure 4, a top plan view of the lock in position with the pipe, taken in section just above it; and

Figure 5, a cross-section on the line *yy* of fig. 2.

In constructing my locking device, I first provide two semicircular bands or cases A A', having inwardly-turned flanges, *b*, on their edges, and hinge these bands together, as shown at *a*, figs. 1 and 2, so that, when closed, they form a round case or ring, as in fig. 3.

This case I make of such size that it may be clasped around a pipe so as to inclose the coupling-nut, as shown in fig. 4, in which D and E represent the two pipes, and F the coupling-nut, which screws onto the screw-neck *t* in the usual manner.

The flanges *b* I make of such width that when the case is applied around a coupling in the manner described, the flanges on one side of the case will bear closely against the pipe E, behind the screw-neck *t*, while the flanges on the opposite side will engage over the top of the nut F, as shown in figs. 3 and 4.

It will be seen that, when the case A A' is thus applied, the flanges *b* hold the nut down in place on the neck *t*, so that it cannot be unscrewed, and that they thereby prevent the pipes from being uncoupled or disconnected while the case A A' is in position.

To provide for locking the case shut when applied, I provide the part A, at its free end, with a head, *c*, having two projecting arms or hasps, *d d'*, on its face, and also provide the part A' with a corresponding recessed head, *c'*, into which the arms *d d'* project when the two parts are closed together.

Through the arm *d* I make two or more holes, *e*, and cut narrow slits, *f*, from the end of the arm into these holes, as shown in fig. 5, and through the arm *d'*, in line with holes *e*, I make small holes, *s*, as shown in figs. 2 and 5.

In the head *c'* I mount parallel sliding bolts, *g*, (as many in number as the holes *e*,) each having, near its front end, an enlargement, *h*, and on the back ends of

these bolts, I place spiral springs, *i*, so arranged as to keep the bolts thrown forward, as shown in fig. 2. These bolts *g* are so arranged that when pushed back in certain positions, their forward ends, which are of small diameter, will, upon the case being closed, enter the slits *f* of arm *d*, and their rear ends be brought down in front of the arm *d'*. If, when this has been done, the bolts are released, the springs *i* force them forward, so that the enlargements *h* enter the holes *e* and lock the case shut.

To unlock the case, it is only necessary to push back the bolts until the enlargements clear the holes *e*; but, to render the locking more difficult, I arrange the bolts so that they can slide further than is required for merely unlocking, and so that when moved more than to just disengage their rear ends, they will enter the holes *s* in arm *d'*, and thereby relock the case.

For the purpose of readily opening the lock, I make holes, *u*, through the end of head *c* in line with the bolts, and then provide a key, C, having a series of pins, *l*, of the proper lengths to set the bolts, as shown in figs. 1 and 2.

When the locking devices are thus arranged, and the bolts made of different lengths, they will be found to require such nice adjustments that it is almost impossible to unlock and open the case without the proper key.

In this manner I produce a cheap, strong, and simple device, which can be applied to the ordinary union coupling in an instant, and which, when applied effectually, guards against the pipes being disconnected except by the persons provided with the key.

It is designed to manufacture the device and put them in the market of different sizes and forms, adapted for the various sizes and styles of couplings in general use, so that a person provided with an assortment of the locks can readily select therefrom one that will fit any particular coupling without fitting or alteration.

It is obvious that my locking device can be applied to pipes used for any purpose, as for gas, water, or liquor, but it is more especially designed for locking the coupling that connects the supply-pipe to gas-meters, as it is a well-known practice among a certain class of gas consumers to disconnect the two pipes from the meter and then connect them by a piece of hose or other pipe, and thus pass the gas by the meter without registering it. To prevent this practice, it has been a common habit with the gas companies to cover the joints with wax and impress their private seal thereon, but this has been found ineffectual, as the wax is frequently destroyed by accident or design.

It is obvious that the form of my device may be materially varied in form, to adapt it for different kinds of couplings, and that, instead of having the locking devices form a part of the case, a pad-lock may

be applied in any suitable manner to the free ends of the parts A A'.

If desired, a seal-holder may be arranged within the head *c* in such manner that a paper or seal can be secured over the inside of the key-holes, so that the key cannot be inserted without puncturing the seal. If this be done, however, it will be necessary to bevel the arm *d* or the enlargements of the bolts, so that the lock can be sprung shut without using the key to set and hold the bolts.

To render the picking of the lock more difficult than otherwise, the front ends of the bolts *g* may be made pointed, so as to afford a small bearing for a wire or tool inserted through the key-hole.

Having thus described my invention,
What I claim is—

1. A joint shell for gas and similar pipes, consisting of the parts A and A', hinged together and provided with flanges, *b*, in such a manner that it can be applied to the union or coupling-nuts of pipes after said nuts are on the pipe, substantially as described.
2. A joint-shell or case, provided with a lock, substantially as described.

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Witnesses:

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