

D. MYERS.
Pipe-Couplings.

No. 138,515.

Patented May 6, 1873.

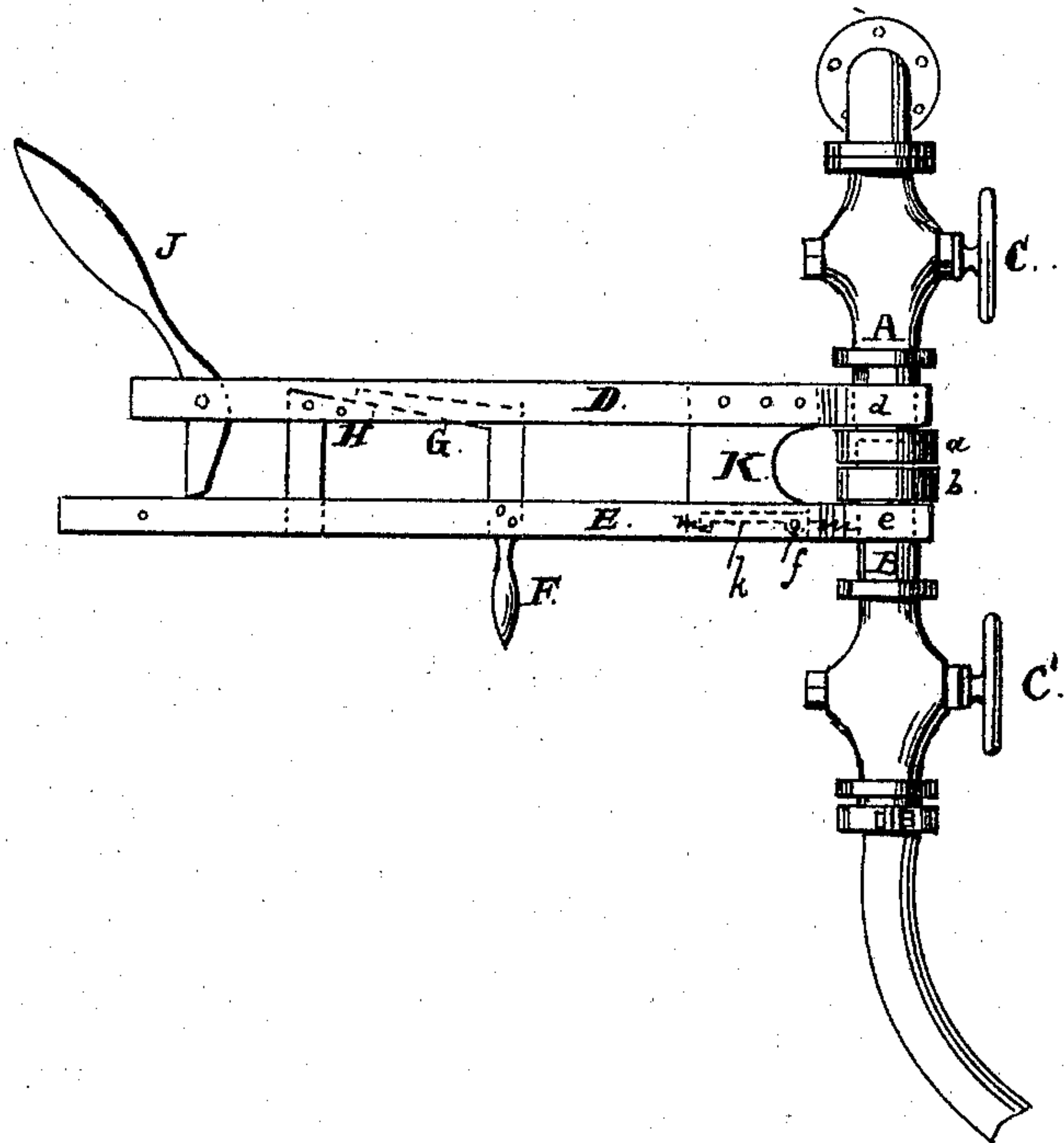


Fig. 1.

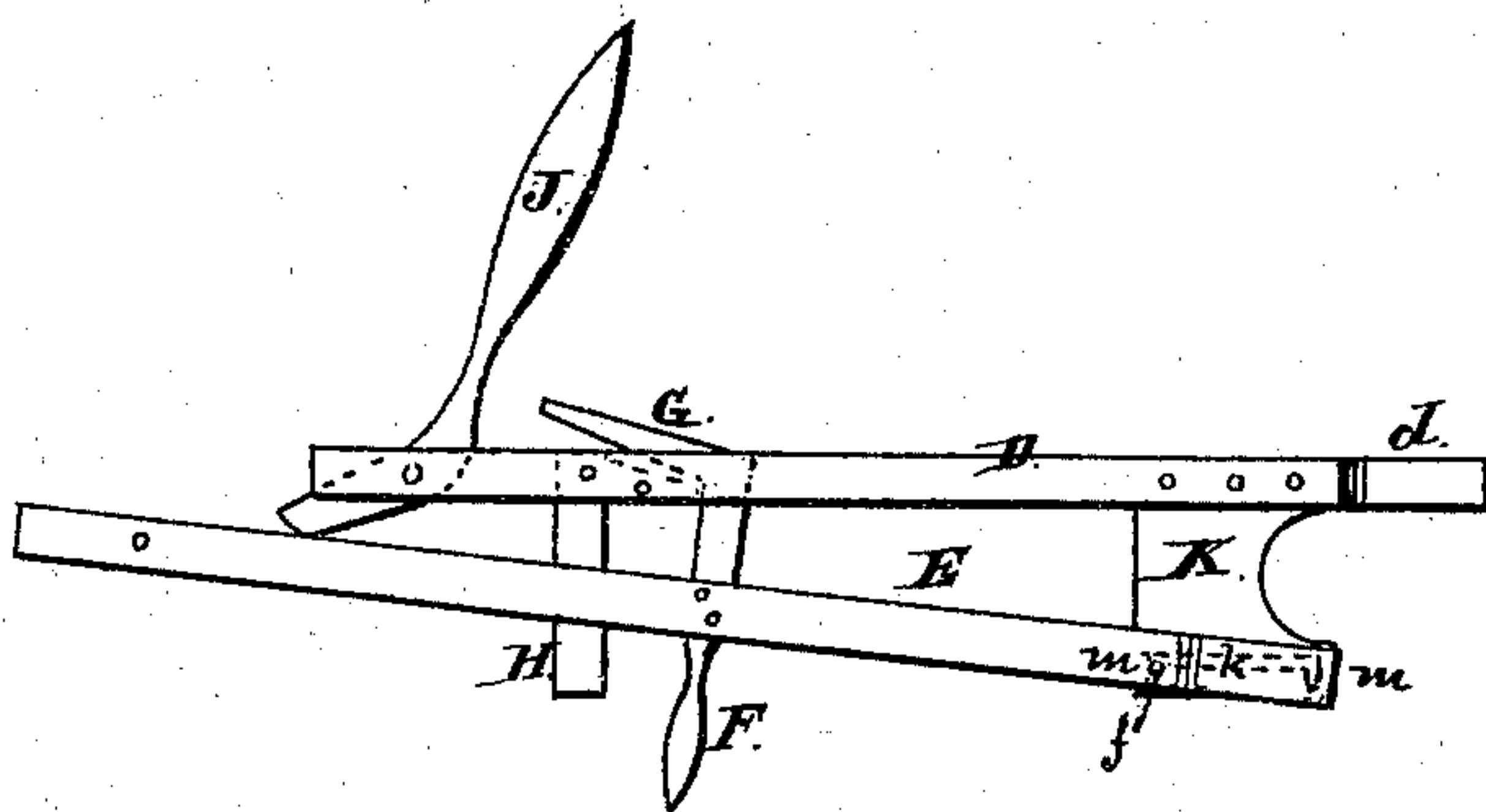


Fig. 2.

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DAVID MYERS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN PIPE-COUPPLINGS.

Specification forming part of Letters Patent No. 138,515, dated May 6, 1873; application filed March 24, 1873.

To all whom it may concern:

Be it known that I, DAVID MYERS, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Pipe-Coupling Apparatus, of which the following is a specification:

Nature of the Invention.

This invention relates to a device for securely coupling a hose or pipe together. It is especially adapted to coupling the supply-pipe from a stationary pump or reservoir to the reservoir upon a car or engine operated by compressed air or steam. When the reservoir upon the car is filled an enormous return pressure is exerted by the compressed air upon the supply-pipe and its coupling, rendering it difficult and dangerous to use a screw-coupling, aside from the inconvenience and loss of time caused by such coupling. This return pressure from the reservoir in the car causes the hose to be thrown forcibly out with great violence if the coupling is loosened before the cut-off valve between it and the reservoir is closed. Accidents dangerous to life or limb are apt to be caused by this where common couplings are used.

The present invention consists of a novel frame-work attached to the car-body and to the reservoir end of the supply-pipe. In this frame-work slides with a peculiar motion a bar having at one end a fork, which takes under the coupling of the pipe and holds it firmly in place in such manner that the two pipes cannot be uncoupled until the pressure of air is removed or cut off from the reservoir, all of which will presently be fully explained.

In the accompanying drawing, which forms a part of this specification, Figure 1 is a side view of the device with the coupling made and locked. Fig. 2 is a similar view with the device shown unlocked.

General Description.

In the said drawing, A represents the mouth or end of the supply-pipe, which proceeds to the reservoir in the car; and B is the hose from the pumping-engine or stationary reservoir. The pipe A is furnished with a cut-off valve, C, and the hose B with a like valve, C'. D is a frame-work of metal secured to the body

of the car and extending to and inclosing the pipe A by means of a fork, *d*, which permanently encircles said pipe at the neck just above the collar *a* or female part of the coupling. This frame-work D is made of two parts placed side by side with an interval between them to form a slot or passage-way for the hook G, hereafter mentioned. E is a bar provided with a fork, *e*, at one end, of a size proper to encircle the neck just below the collar *b* upon the male portion of the coupling. This bar E is made also of two pieces side by side like the frame D. A piece, K, of metal attached rigidly to the frame D, is provided with a long slot, *k*, through which a pin or pivot, *f*, passes from the bar E. This slot is made with a depression, *m*, at each end, into which the pivot *f* descends when the bar is moved forward or back as far as it will go. The bar E is furnished with a handle, F, which projects below to give a grasp for the hand, and is extended upward through the frame-work D, and is prolonged to the rear into a hook or inclined projection, G. A guide-leg, H, with an inclined upper end passes down through the bar, as shown, being rigidly connected to the frame-work D. Behind this guide-leg is pivoted in the frame-work a cam-lever, J, the point of which operates upon the bar E.

The coupling takes place as follows: The device stands normally as at Fig. 2. The hose is brought up and the male portion inserted. The bar E is then pressed forward by the handle until the fork encircles the neck of the coupling, as shown at Fig. 1. The lever J is then brought down, as shown at said figure, depressing the end of the bar and raising the fork, forcing the coupling securely home. The pivot *f* now rests down in the depression *m* at the forward end of the slot *k*. Now, if an attempt is made to uncouple before cutting off the air at the valves C C', the back pressure exerted forcibly upon the coupling and against the fork will hold said fork down firmly, and, as the bar cannot be raised, the pivot *f* cannot be released from the depression *m* in which it lies, and, consequently, the bar cannot be drawn back to remove the fork, and the coupling cannot therefore be separated. However, when the pressure is re-

moved by closing the valve C C', the bar E may be raised readily after having turned back the lever J, and then the fork may be readily drawn back, releasing the coupling so that it may be drawn apart.

Claim.

Having thus fully described my invention, that which I deem new, and desire to secure by Letters Patent, is—

The combination and arrangement of the

frame D d, leg H with inclined top, the movable bar E with a fork, e, at one end, the handle F extending up into the hook G, the part K furnished with a slot, k, having a depression, m, at each end, all constructed and operating, in connection with the pipes A B and valves C C', as and for the purpose specified.

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Witnesses:

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