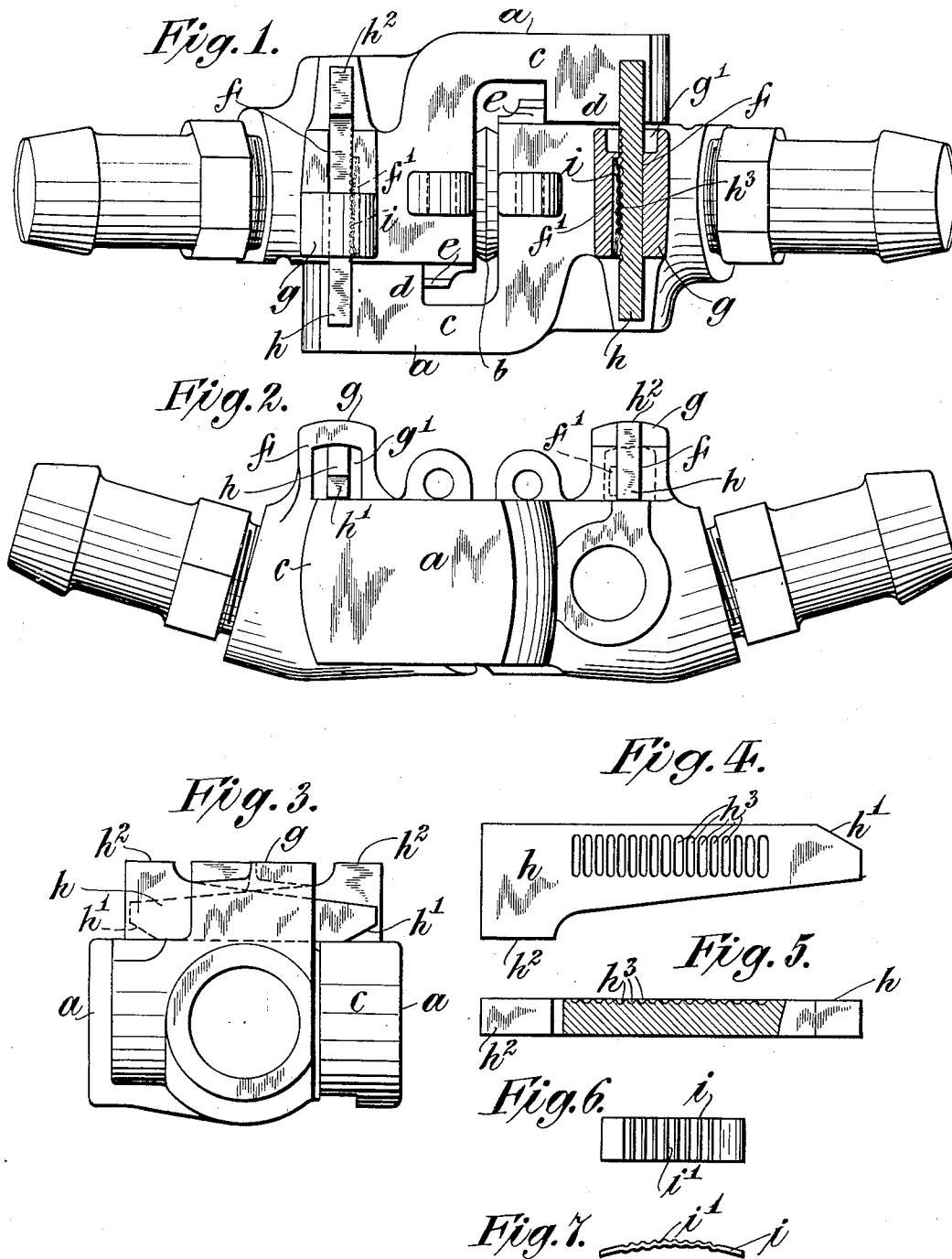


F. T. KITCHEN.
HOSE COUPLING LOCK.
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1,056,184.

Patented Mar. 18, 1913.



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UNITED STATES PATENT OFFICE.

FREDERICK T. KITCHEN, OF WEST NEW BRIGHTON, NEW YORK, ASSIGNOR TO GOLD CAR HEATING & LIGHTING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

HOSE-COUPLING LOCK.

1,056,184.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed October 24, 1911. Serial No. 656,494.

To all whom it may concern:

Be it known that I, FREDERICK T. KITCHEN, a citizen of the United States, residing at West New Brighton, county of Richmond, State of New York, have invented certain new and useful Improvements in Hose-Coupling Locks, of which the following is a specification, reference being had to the accompanying drawings, which form a part hereof.

This invention relates to hose couplings, such as are used to couple the ends of steam hose between cars of railway trains, and it has for its object to provide a simple and convenient device for locking the two coupling heads together so as to prevent their accidental disengagement and also to prevent such separation of the couplings as might permit leakage although they are not actually disengaged.

The invention will be more fully explained hereinafter with reference to the accompanying drawing in which it is illustrated as applied to a hose coupling of a well known form, and in which—

Figure 1 is a top view of the hose coupling provided with the improved lock, one of the locks (of which there may be two) being shown in horizontal section. Fig. 2 is a view of the same in side elevation. Fig. 3 is a view of the same in end elevation. Figs. 4 and 5 are detail views of the locking wedge, and Figs. 6 and 7 are detail views of the spring which coöperates with the locking wedge.

The complementary coupling-heads *a*, which may be of any usual or suitable character and of the same pattern or of different patterns, are formed as usual to make a tight joint, as at *b*, when the two coupling-heads are interlocked. The two heads are shown as formed, in the usual manner, with reversely offset arms *c*, each of which is provided with a cam flange, located at *d*, to coöperate with the corresponding cam flange *e* on the adjacent side of the other head, these or any other usual or suitable devices constitute interlocking means by which the two heads are interlocked with a relative swinging movement to hold the heads together with the steam-tight joint at *b*, the weight of the parts, acting through the coöperating cam flanges, ordinarily maintaining the heads in engagement with the steam-tight joint. The special purpose in view in

the present case is to provide a simple and effective device to prevent the accidental disengagement or separation of the two heads from any cause, such as a blow from beneath or the jumping of the cars. The improved device will accomplish its purpose if applied to only one of the heads, so that a head which is provided with the device will be securely locked thereby in engagement with a head which is not so provided, but in order to meet all conditions of use it is obviously desirable that each head shall be provided with the locking device.

The device comprises simply an eye or guide *f* on the upper side of the head *a*, preferably formed in a boss *g* which is cast on the head, and a sliding locking bolt *h* which slips through the eye *f* and overlies the adjacent, offset arm or free end *c* of the other head, thus preventing that relative swinging of the heads which is necessary to effect a disengagement or separation thereof. The bolt *h* is preferably wedge-shaped, as shown, and its lower, forward corner is preferably chamfered off, as shown at *h'*, so that the bolt may be driven into place readily and may also lock the two heads together tightly. At its rear end the bolt is provided with a head *h²* for convenience in manipulation. In order that the bolt shall be prevented from working loose under actual conditions of use and also shall be prevented from falling out when the heads are separated and retained in place without the use of chains or other devices, the inside of the eye *f* is recessed, as at *f'* to receive a bent, flat spring *i*, which presses the bolt *h* firmly against the other side of the eye. To further insure the retention of the bolt, the spring may be ribbed or corrugated as shown at *i'*, and the adjacent side of the bolt *h* may be ribbed or corrugated correspondingly, as shown at *h³*, so that the spring, which is seated in the recess *f'*, shall have something more than a mere frictional engagement with the bolt, while at the same time the intended movement of the bolt shall not be prevented. The bolt is driven into place to lock the heads by hammer blows upon the head *h²*, the point or forward end of the bolt being driven over the adjacent offset arm *c* as already stated. When it is desired to unlock the heads the bolt may be driven back by hammer blows either against the shoulder of the head *h²* or against the point

or forward end of the bolt. In practice the bolt will be driven back usually by hammer blows on the point or forward end of the bolt and such point or forward end will therefore be more or less battered. In order, therefore, to prevent such battering from interfering with the driving backward of the bolt sufficiently to clear the adjacent offset arm of the other head, the boss *g* is countersunk, or recessed, as at *g'*, around the end of the bolt *h* so as to permit the battered end of the bolt to be driven backward clear of the adjacent offset arm *c*.

It will be observed that the improved lock is exceedingly simple, effective, and always ready for use either with a head of the same pattern and also provided with a locking bolt or with a head of different pattern but adapted to interlock with the head to which the lock is applied.

I claim as my invention:—

1. The combination with a hose coupling head provided with interlocking means whereby it is engaged with the corresponding head with a swinging movement, and provided on its upper surface with an eye, of a wedge-shaped sliding locking bolt guided by said eye and adapted at one end

to project over and engage directly with the upper surface of the corresponding head to prevent positively relative movement and disengagement of the interlocking means and at the other end to project beyond the eye, said eye being countersunk adjacent the first named end of the bolt to form a recess into which the battered end of the locking bolt may be driven.

2. The combination with a hose coupling head provided with locking means whereby it is engaged with a corresponding head with a swinging movement and provided with an eye, of a sliding locking bolt carried by the first named head adapted to engage directly the corresponding head to prevent positively relative movement and disengagement of the interlocking means and a friction spring seated in a recess within said eye and cooperating with the bolt, the friction spring and the said locking bolt with which it operates being ribbed or corrugated.

This specification signed and witnessed this 20th day of October, A. D. 1911.

FREDERICK T. KITCHEN.

Signed in the presence of—

W. B. GREELEY,
AMBROSE L. O'SHEA.