

W. S. SCHROEDER.
CAR COUPLING.
APPLICATION FILED MAY 11, 1908.

Patented Feb. 2, 1909.
2 SHEETS—SHEET 1.

911,526.

Fig. 1

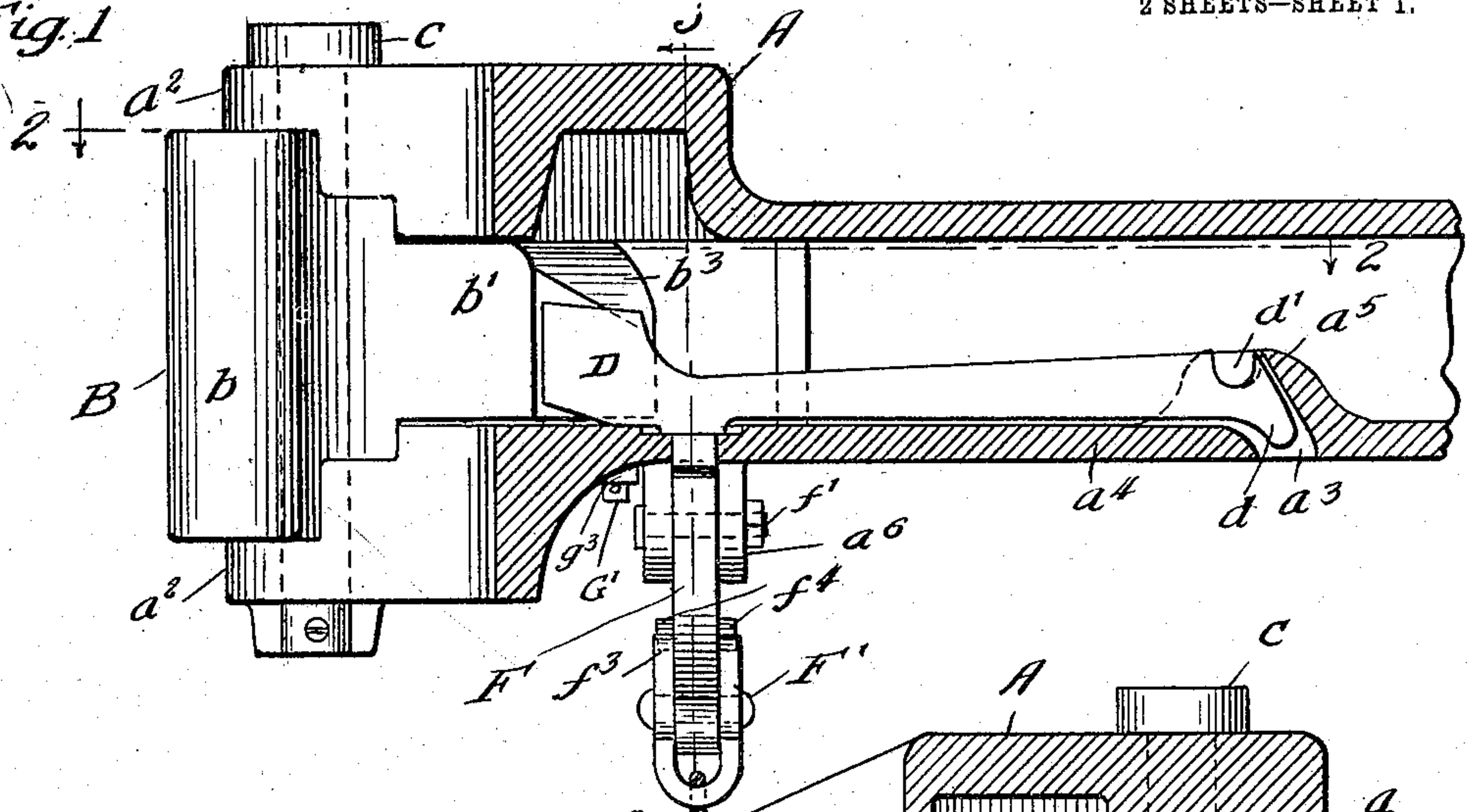


Fig. 3

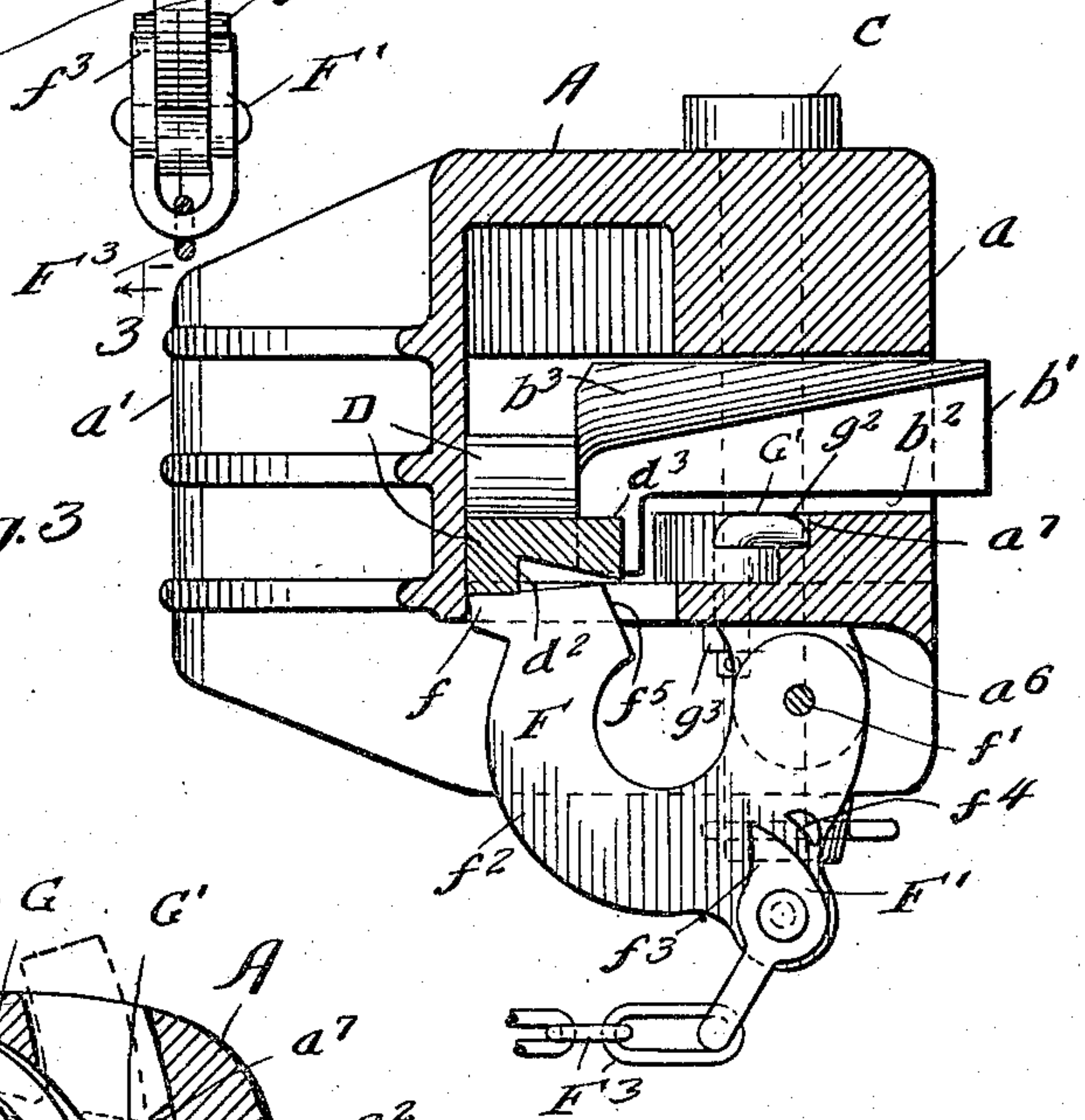
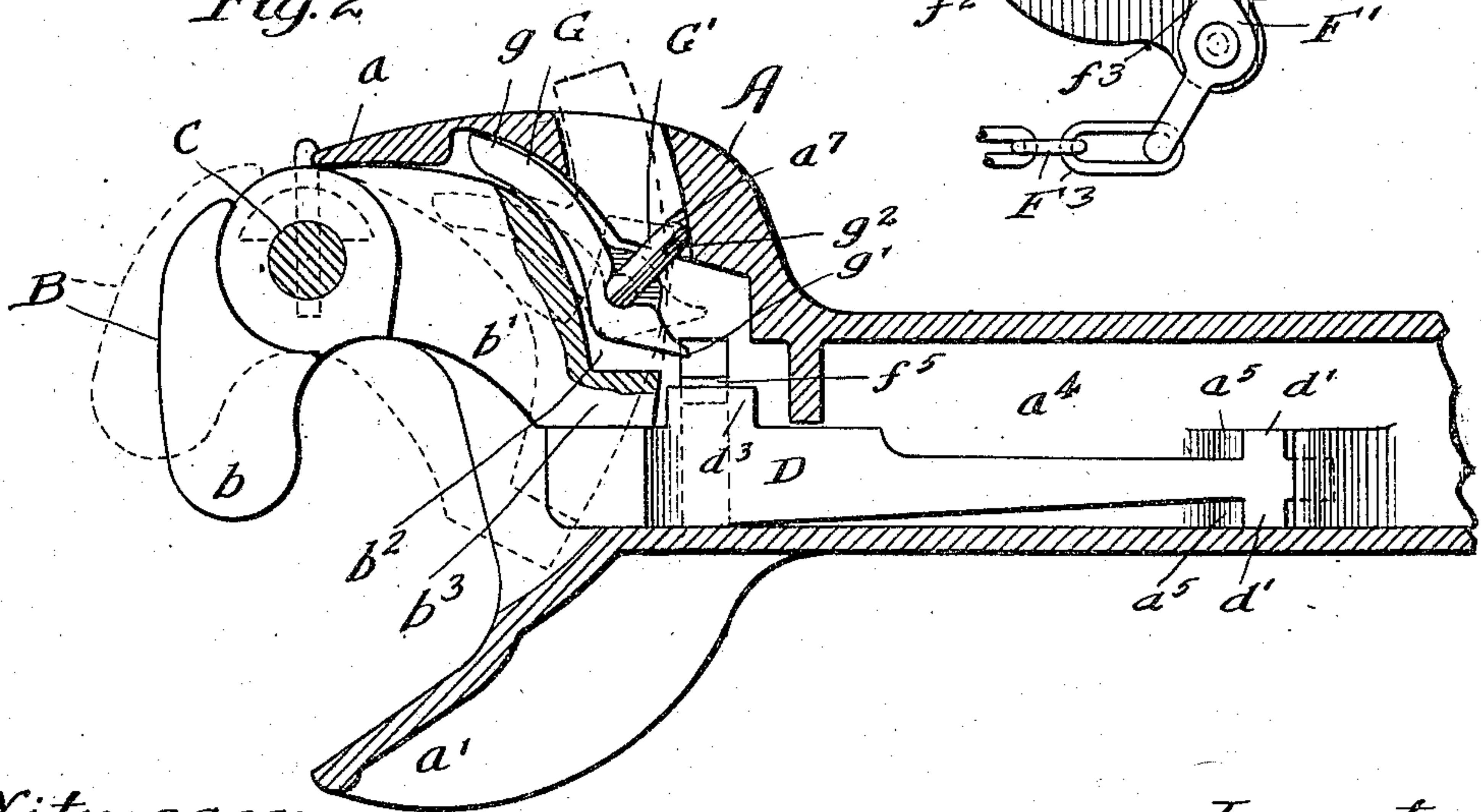


Fig. 2



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Fig. 4

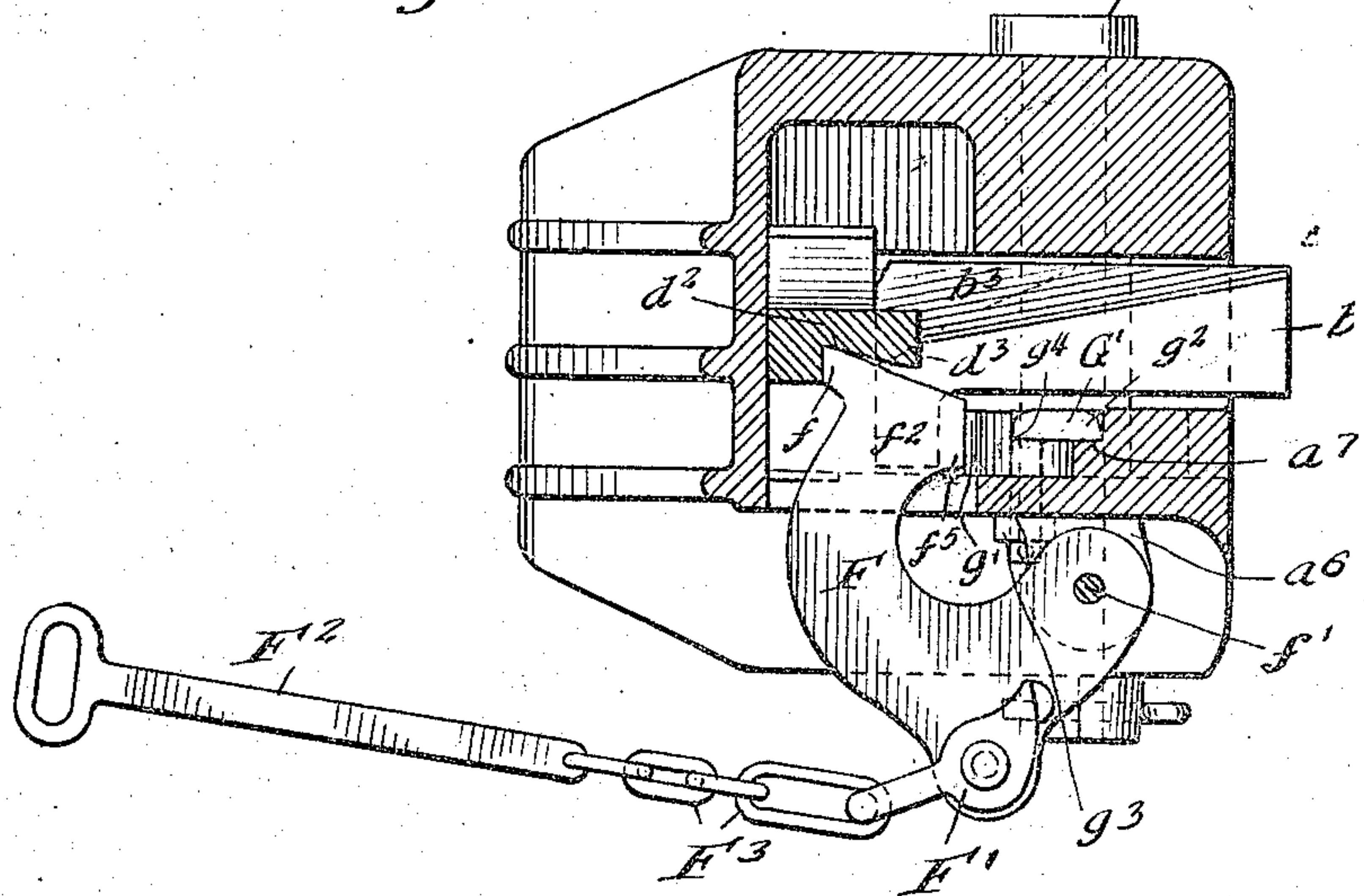


Fig. 5

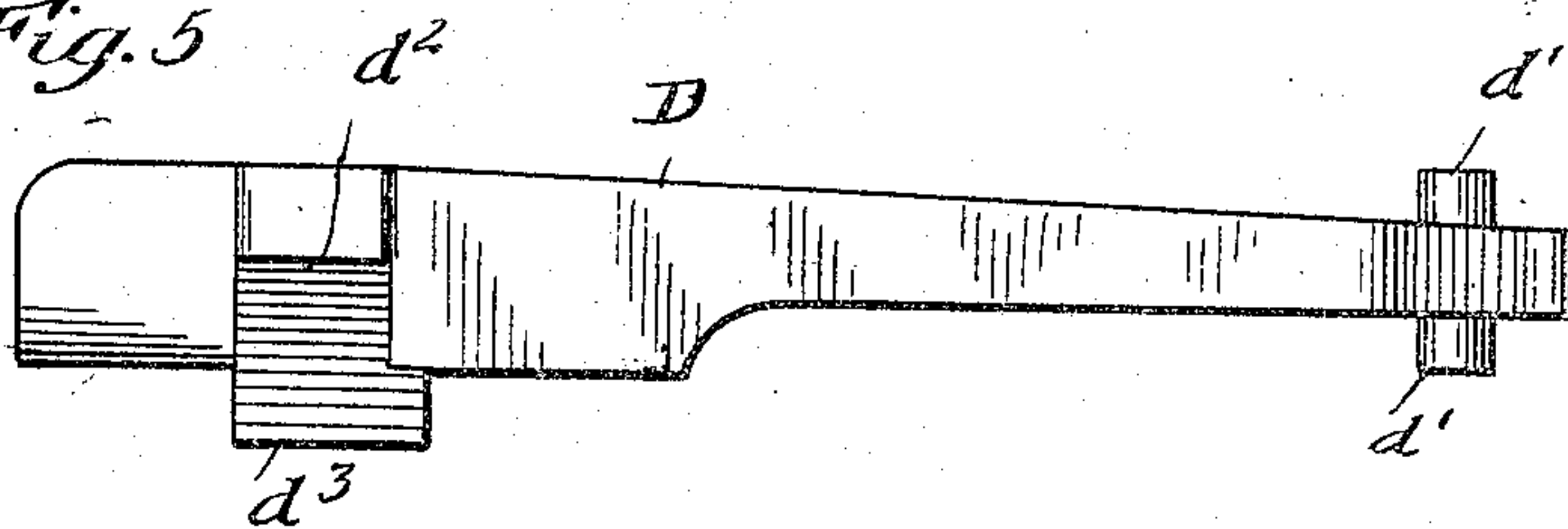


Fig. 6

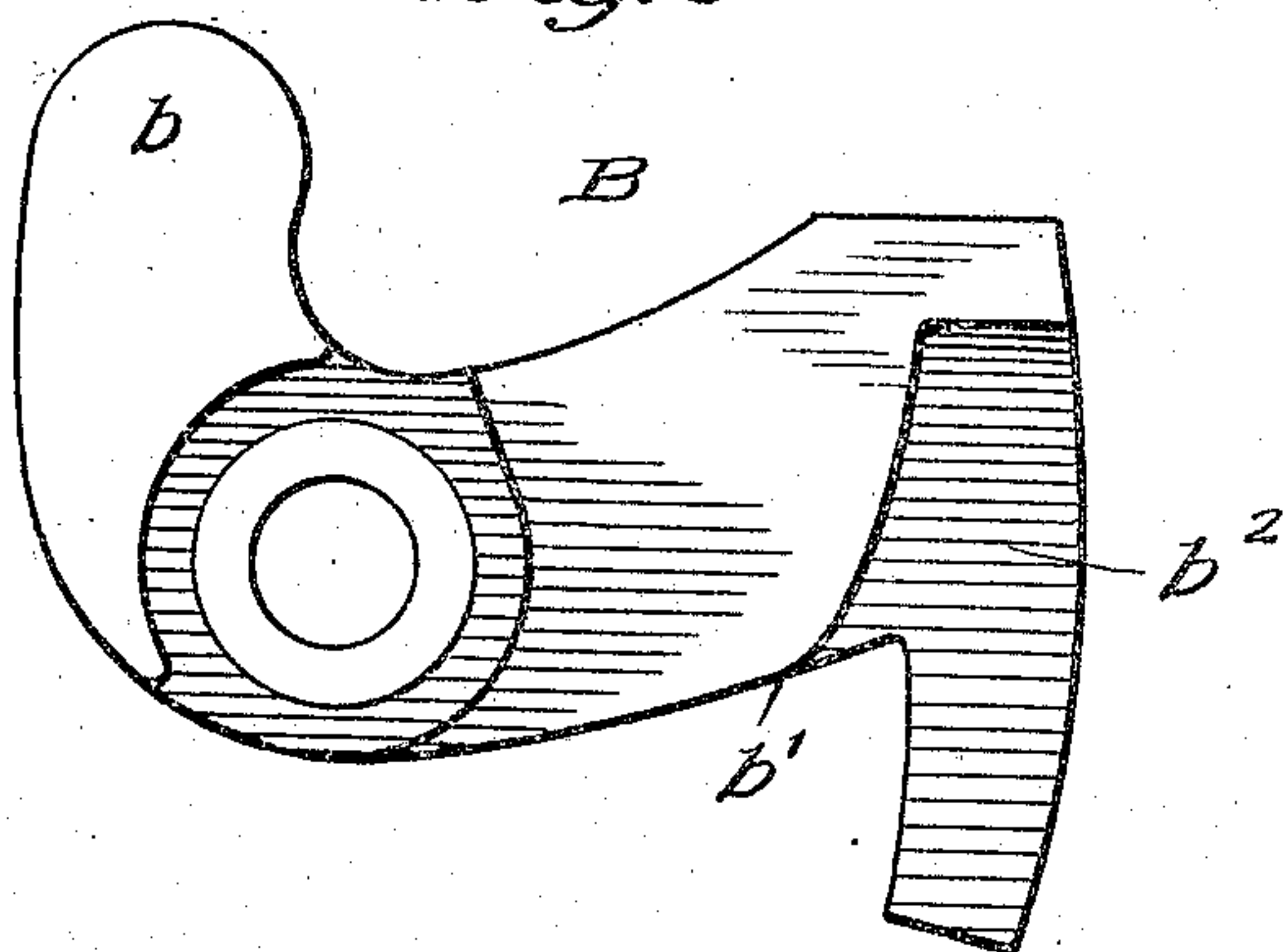
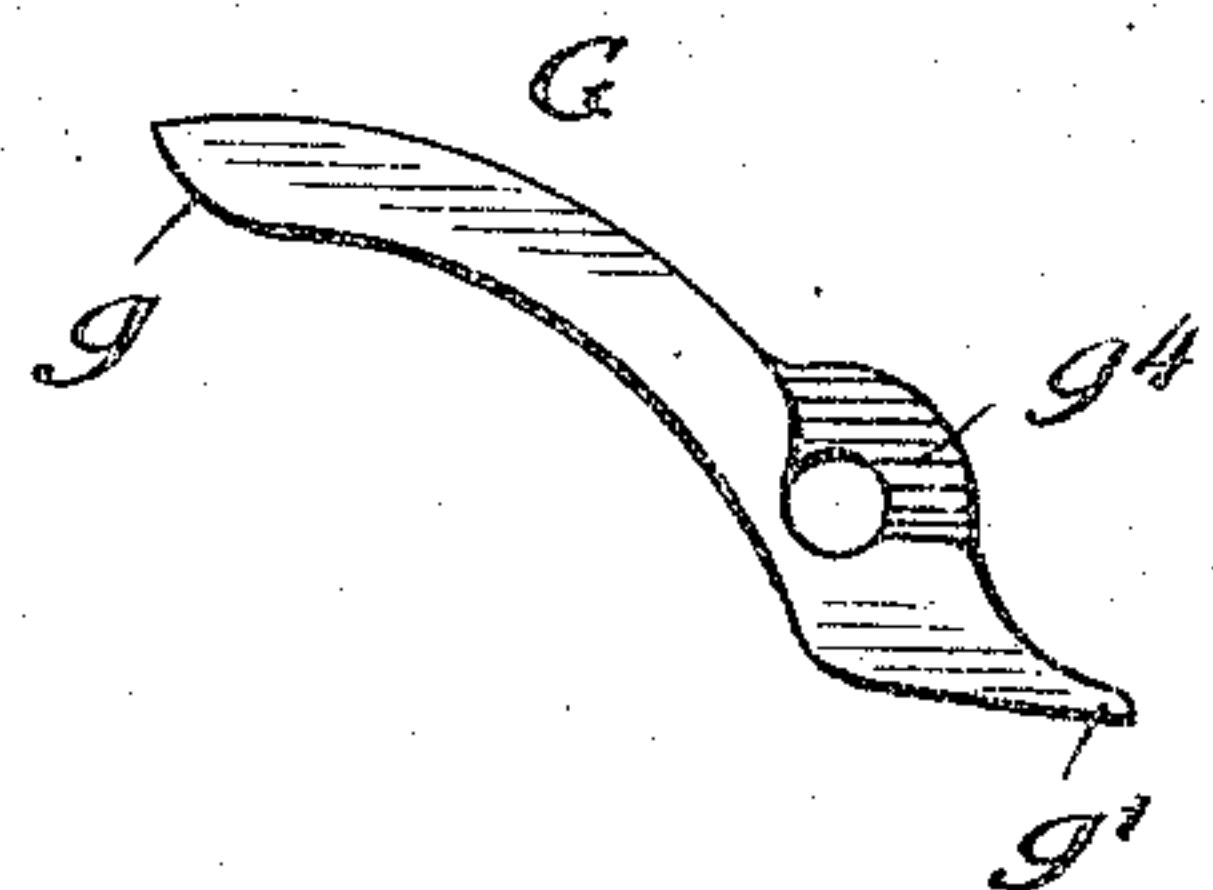


Fig. 7



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UNITED STATES PATENT OFFICE.

WILLIAM S. SCHROEDER, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHARLES S. FERRY, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

No. 911,526.

Specification of Letters Patent.

Patented Feb. 2, 1909.

Application filed May 11, 1908. Serial No. 432,864.

To all whom it may concern:

Be it known that I, WILLIAM S. SCHROEDER, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to improvements in car couplers.

10 The object of my invention is to provide a car coupler of the Master Car Builders' type, specially adapted for passenger car service, in which the lock may be lifted from the bottom or under side and which will also have provision for setting the lock in position for uncoupling and for throwing the knuckle open.

My invention consists in the combination with the draw-head, pivoted knuckle and gravity lock, furnished on its lower face with a lock-set shoulder and a bent lifting lever pivoted to the draw-head, and provided with a lock-set projection adapted to engage the lock-set shoulder on the lock, and adapted to swing transversely of the draw-head, and a horizontally swinging knuckle throwing lever pivotally connected to the draw-head and operated by the lifting lever.

My invention further consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

35 In the accompanying drawing forming a part of this specification, Figure 1 is a longitudinal vertical section of a car coupler embodying my invention. Fig. 2 is a horizontal section on line 2—2 of Fig. 1. Fig. 3 is a vertical cross section on line 3—3 of Fig. 1. Fig. 4 is a view similar to Fig. 3 showing the lock in its lock-set position supported by the lifter. Fig. 5 is a detail bottom view of the lock. Fig. 6 is a detail bottom view of the knuckle. Fig. 7 is a detail plan view of the knuckle thrower.

In the drawing, A represents the draw-head of the coupler, having the customary pivot arm a , guard arm a^1 and pivot lugs a^2 .

50 B is the knuckle having the customary front arm b and rear arm or tail b^1 . The rear arm or tail b^1 of the knuckle is provided on its lower face with a recess b^2 to receive the knuckle thrower.

C is the pivot pin, D the lock, F the lock lifting lever and G the knuckle thrower. 55

The lock D may be a gravity lock of any suitable construction. It is, however, preferably in the form of a longitudinally extending locking bar having a rounded toe or projection d , fitting in a recess or opening a^3 60 in the bottom wall or floor a^4 of the draw-bar, and an integral pivot lug d^1 fitting in a suitable bearing a^5 in the draw-bar. The lock D is provided on its lower face with a lock-set shoulder d^2 adapted to be engaged 65 by the lock-set toe or projection f of the lifting lever F. The lock D is further provided with a side extension or wing d^3 to give it an extended bearing or engagement with the upper end of the lifting lever F 70 which swings transversely in raising the lock.

The lifting lever F is mounted below the draw-bar and pivotally connected to pivot lugs a^6 by a removable pin f^1 thereon, and its lifting arm f^2 projects upward through a suitable transverse slot or opening in the bottom web or floor of the draw-head. The lifting lever F is provided with a hinged clevis F^1 , having arms or projections f^3 engaging suitable lugs f^4 on the lifting lever to limit the swinging movement of the clevis. The clevis F^1 is connected to the operating rod F^2 by a chain or flexible connection F^3 .

The knuckle throwing lever G has a 85 curved arm g fitting in the recess b^2 of the knuckle tail and adapted to engage the knuckle tail to throw the knuckle open. It also has an operating arm g^1 adapted to be engaged by the heel f^5 of the lifting 90 arm f^2 of the lifting lever F by the further movement of the lifting lever after it has raised the lock sufficiently to permit the knuckle to be thrown open. The knuckle thrower G is preferably pivotally connected 95 to the draw-head by a removable pin or bolt G^1 having a bent or hooked upper end g^2 fitting in a slot or recess a^7 in the draw-head and engaging the draw-head so that the nut g^3 of the bolt G^1 may be screwed up tight 100 without causing it to clamp the knuckle thrower G, and thus prevent it from swinging freely. The knuckle thrower G has a recess g^4 to receive the bent end or hook of its pivot bolt G^1 . 105

The lifting lever is pivotally connected or

hinged to the draw-head at a point well to one side of the lock so that the weight of the lock on the lifting lever serves to hold the lock-set shoulders of the lock and its 5 lifter in firm engagement.

As the knuckle swings open, the lock rides on the rear arm or tail of the knuckle; and the upper face b^3 of the knuckle tail upon which the lock rides is somewhat inclined so 10 as to raise the lock off of the lock-set toe or projection of the lifting lever K , and thus release the lifting lever so it may drop down out of the way.

I claim:—

15 1. In a car coupler, the combination with a draw-head, pivoted knuckle and a gravity lock having a lock-set shoulder on its lower face, of a lock lifter below the draw-head, having a lifting arm projecting upward 20 through the bottom wall of the draw-head, and furnished with a lockset projection and a knuckle thrower having an operating arm engaged by the lifter to throw the knuckle open, substantially as specified.

25 2. In a car coupler, the combination with a draw-head, pivoted knuckle and gravity lock, having a lock-set shoulder on its under face, of a lock lifting lever pivotally connected to the draw-head below the same and 30 having a lock-set shoulder engaging the lock-set shoulder on the lock, and a horizontally swinging knuckle throwing lever pivotally connected to the draw-head and having an arm engaging the tail of the 35 knuckle and an operating arm engaged by the lifting lever, substantially as specified.

3. In a car coupler, the combination with a draw-head, knuckle and gravity lock, of a transversely swinging lifting lever pivotally 40 connected to the draw-head underneath the same and a horizontally swinging knuckle

thrower having an operating arm engaged by the lifting lever to throw the knuckle open, substantially as specified.

4. In a car coupler, the combination with 45 a draw-head, knuckle and gravity lock, of a transversely swinging lifting lever pivotally connected to the draw-head underneath the same, and a horizontally swinging knuckle thrower having an operating arm engaged 50 by the lifting lever to throw the knuckle open, said lock and lifting lever having lock-set shoulders on their meeting faces, substantially as specified.

5. In a car coupler, the combination with 55 a draw-head, knuckle and gravity lock, of a transversely swinging lifting lever pivotally connected to the draw-head underneath the same, and a horizontally swinging knuckle thrower having an operating arm engaged 60 by the lifting lever to throw the knuckle open, and a pivot pin having a bent upper end for pivotally connecting said knuckle thrower to the draw-head, substantially as specified.

6. In a car coupler, the combination with 65 a draw-head, knuckle and gravity lock, of a transversely swinging lifting lever pivotally connected to the draw-head underneath the same, and a horizontally swinging knuckle 70 thrower having an operating arm engaged by the lifting lever to throw the knuckle open, and a pivot pin having a bent upper end for pivotally connecting said knuckle thrower to the draw-head, the draw-head 75 having a recess to receive and engage the extremity of said bent end of the pivot pin, substantially as specified.

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Witnesses:

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