

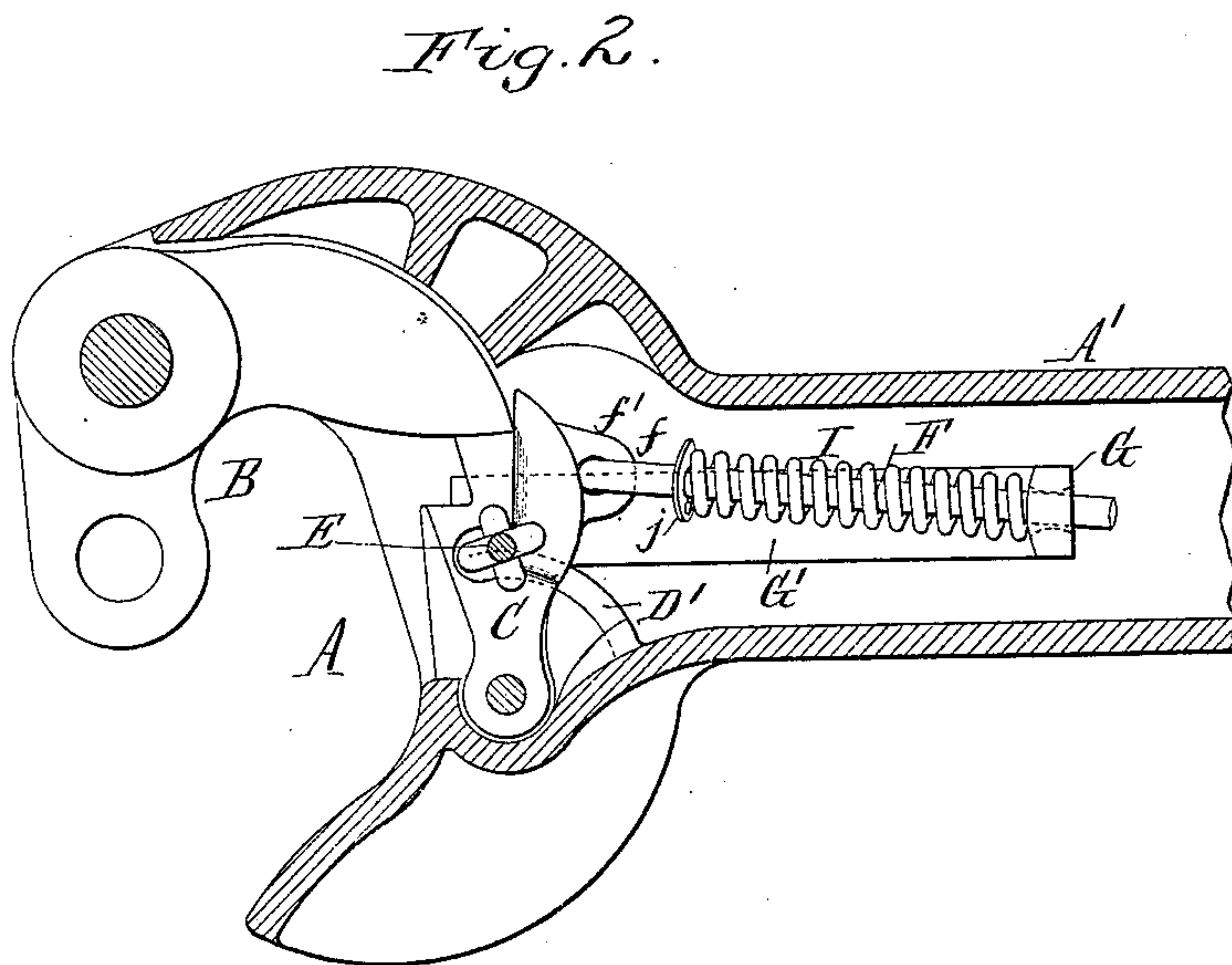
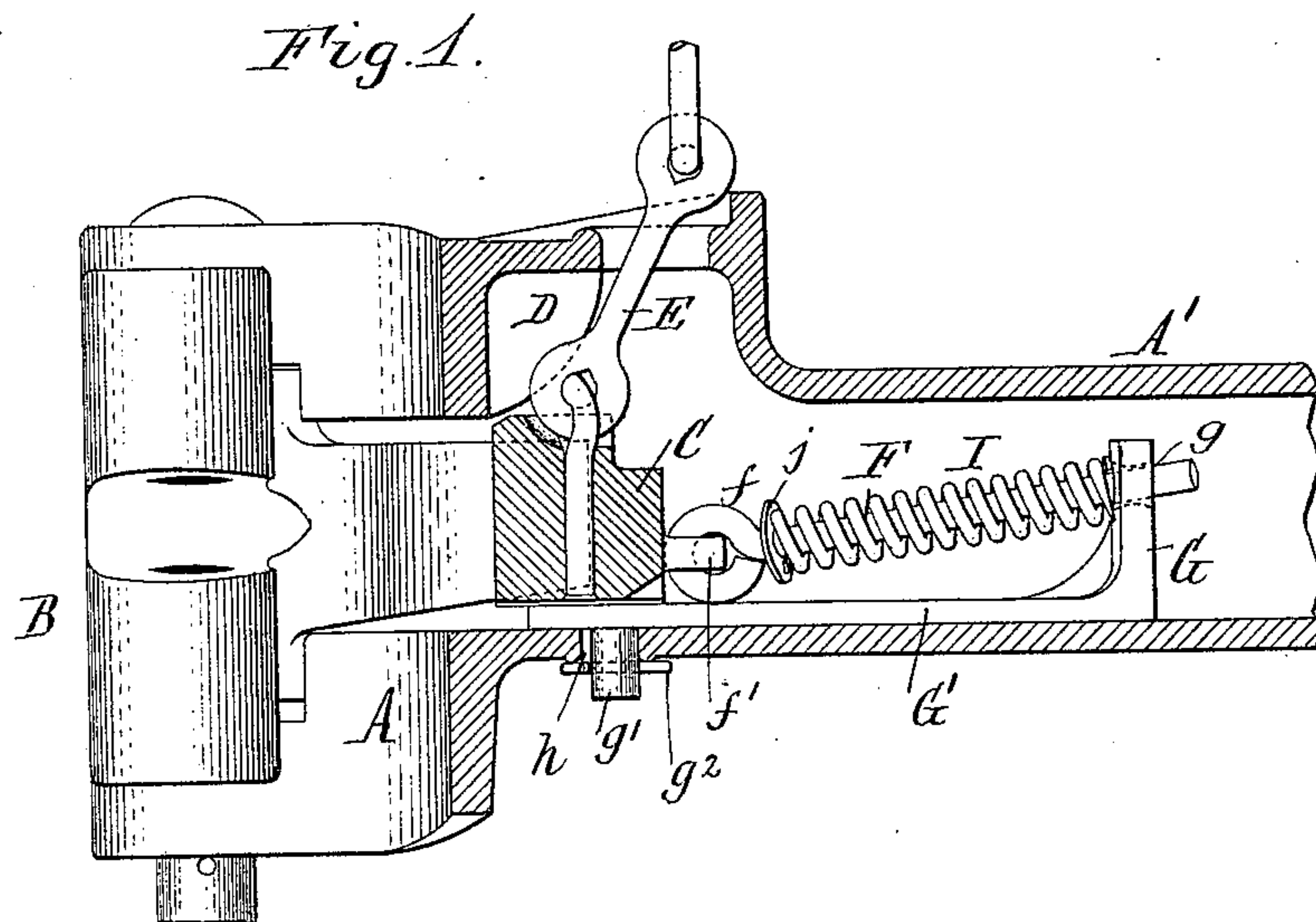
(No Model.)

2 Sheets—Sheet 1.

W. F. RICHARDS.
CAR COUPLING.

No. 584,895.

Patented June 22, 1897.



Witnesses:

Ernest Pulsford
Henry L. Deck.

W. F. Richards Inventor.
By Wilhelm Hornum
Attorneys.

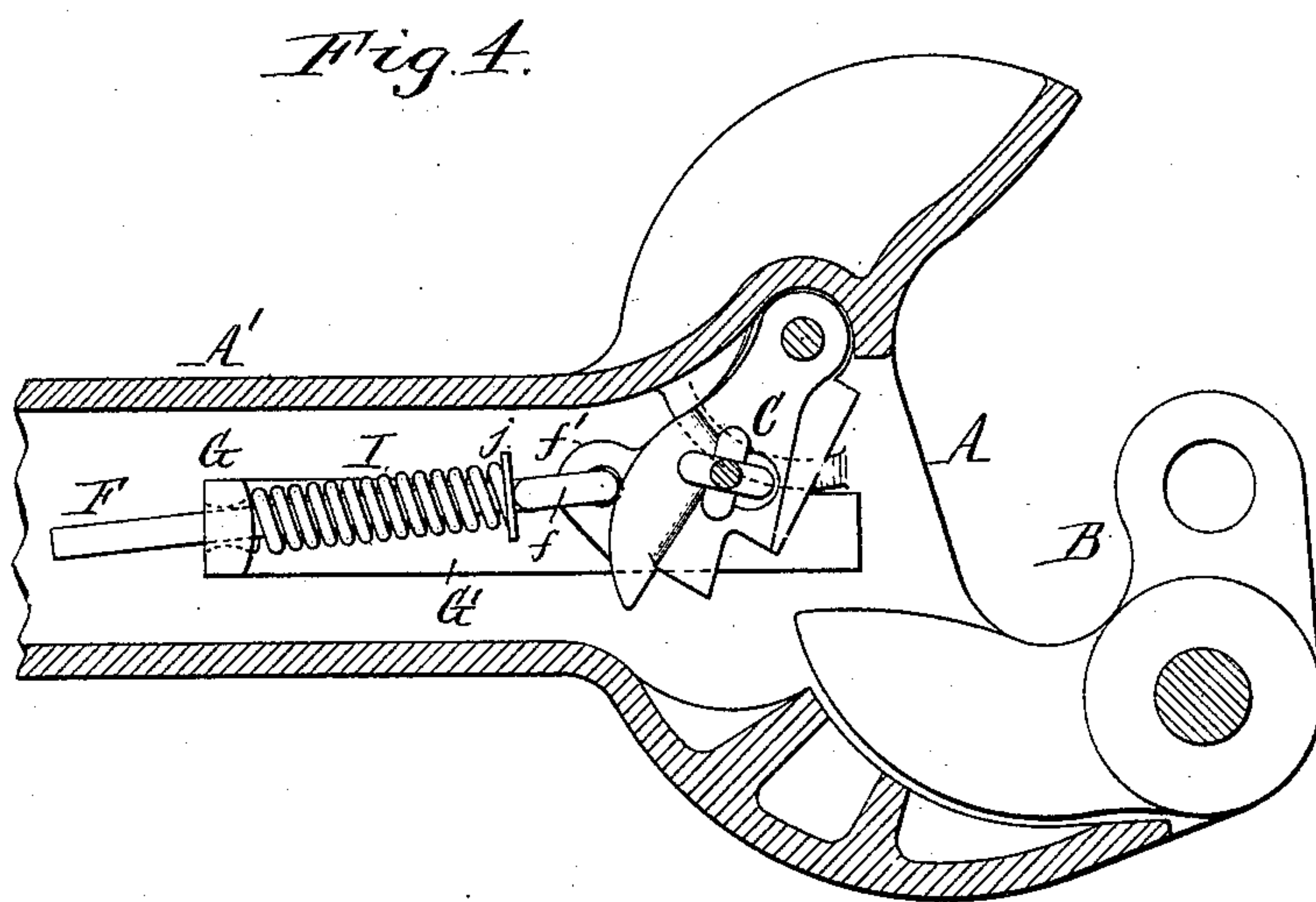
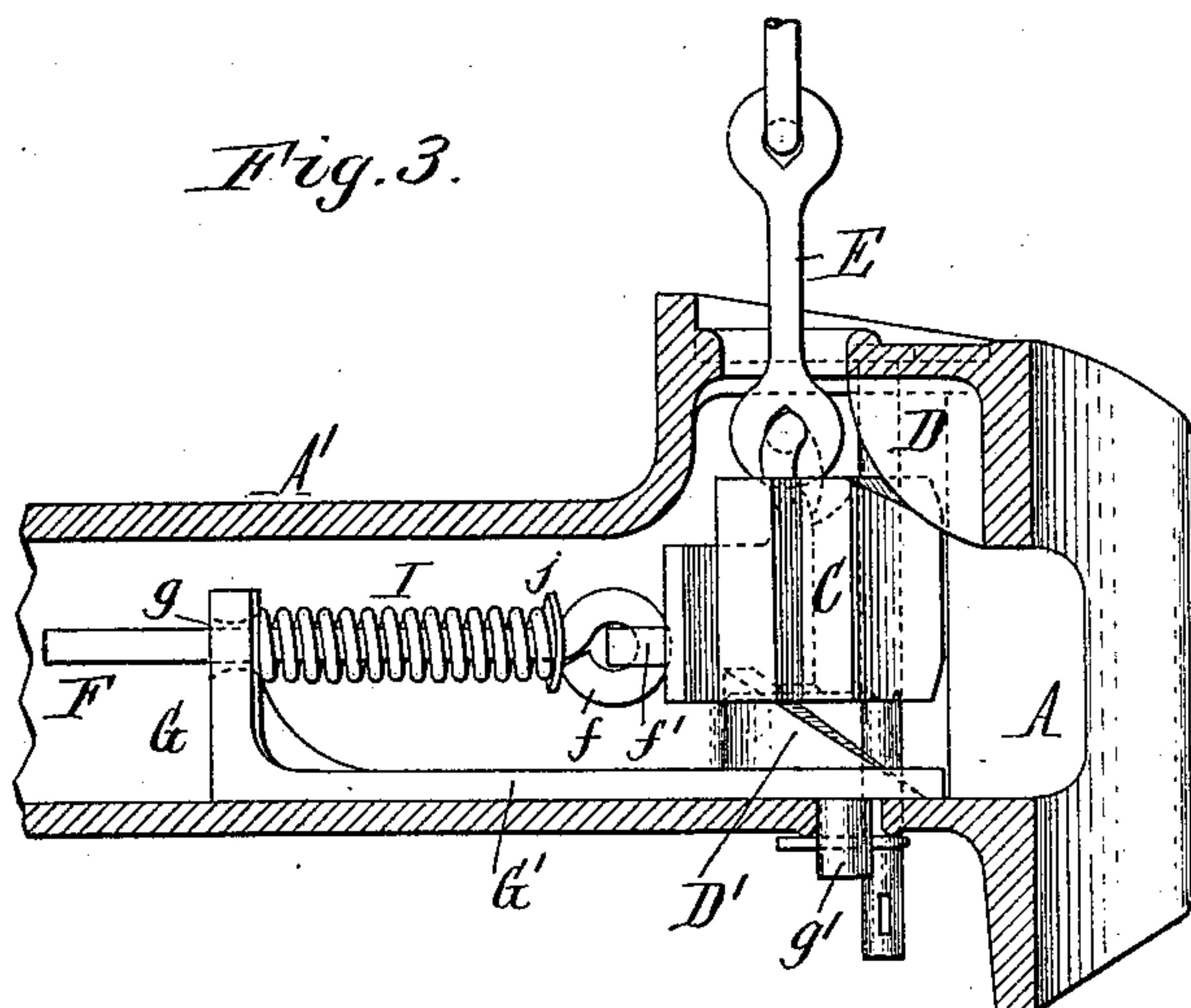
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UNITED STATES PATENT OFFICE.

WILLARD F. RICHARDS, OF BUFFALO, NEW YORK, ASSIGNOR TO THE GOULD
COUPLER COMPANY, OF NEW YORK, N. Y.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 584,895, dated June 22, 1897.

Application filed March 11, 1897. Serial No. 626,939. (No model.)

To all whom it may concern:

Be it known that I, WILLARD F. RICHARDS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

This invention has more especial reference to that class of twin-jaw car-couplings having a horizontally-swinging coupling jaw or knuckle, a horizontally-swinging lock, commonly known as the "Gould" lock, and a spring for keeping the lock in reliable engagement with the tailpiece of the knuckle.

The object of my invention is to improve the construction of the support and abutment of the locking operating-spring.

In the accompanying drawings, consisting of two sheets, Figure 1 is a sectional elevation of a car-coupling containing my improvement, showing the position of the parts when the knuckle is locked. Fig. 2 is a horizontal section thereof. Fig. 3 is a longitudinal section of the coupling viewed from the side opposite that shown in Fig. 1 and showing the lock swung back and raised, the knuckle being omitted; and Fig. 4 is a horizontal section showing the lock in the same position.

Like letters of reference refer to like parts in the several figures.

A is the usual chambered draw-head; A', the hollow draw-bar; B, the knuckle, and C the pivoted lock.

D and D' are the customary inclines arranged in the draw-head above and below the lock for swinging the lock backward when lifted and forward when released.

E is the link connecting the lock with the usual operating devices, which latter are not shown in the drawings, and passing through an opening in the top of the draw-head.

F is an actuating or thrust rod arranged in the draw-head and the hollow draw-bar and having its front end positively connected with the free end of the lock, preferably by engaging eyes $f f'$, formed on these parts, as shown, and having its rear portion guided in an opening g , formed in a standard or upright abutment G, arranged in the draw-bar. This abutment rises from the rear end of a carrier-bar G', resting upon the bottom of the draw-

bar and draw-head and extending forwardly from the abutment. The carrier-bar is provided at its front end with a depending stop pin or projection g' , which is arranged in an opening h , formed in the bottom of the draw-head. This opening may be the same opening which is generally provided for the escape of snow and water from the chamber of the draw-head, and when that opening is so used the pin g' is made sufficiently smaller than the opening to leave a discharge-passage between the pin and the opening, as shown in Figs. 1 and 3. The pin g' is removably confined in its opening by a cotter g^2 or other suitable means.

I is a spring which tends to hold the lock in engagement with the tailpiece of the knuckle and which surrounds the thrust-rod F, between the abutment G and a washer j , bearing against the eye f of the rod. The spring is under compression in the forward or normal position of the lock, so as to prevent the lock from being accidentally swung out of engagement with the knuckle by shocks.

Owing to the swinging movement of the lock the thrust-rod F is caused to swing laterally on the carrier-bar G' in operating the lock. The eyes $f f'$ of the lock and thrust-rod form the necessary joint between these parts, and in order to permit the necessary swiveling motion of the rod in the abutment G the guide-opening g is flared toward both ends, as shown by dotted lines in the drawings.

I claim as my invention—

1. The combination with the draw-head, the hollow draw-bar and the knuckle, of a lock engaging with the knuckle and pivoted to swing horizontally in the draw-head, an abutment arranged in the draw-bar, a thrust-rod guided with its rear portion in said abutment and having its front end swiveled to the free end of the lock, whereby the thrust-rod is capable of swinging laterally, and a spring arranged on the thrust-rod between the lock and said abutment, substantially as set forth.

2. The combination with the hollow draw-bar and the draw-head provided in its bottom with an opening, of the knuckle and its lock, a carrying-bar arranged within the draw-bar and draw-head and provided at its rear end

with an upright abutment and at its front end
with a depending stop-pin arranged in the
opening of the draw-head, means for retain-
ing said pin in its opening, and a spring bear-
5 ing at its rear end against said abutment and
operating to hold the lock in engagement with
the knuckle, substantially as set forth.

3. The combination with the draw-head and
the hollow draw-bar, of a knuckle and a lock
10 for the same having an eye at or near its free
end, a carrier-bar arranged within the draw-
bar and the draw-head and provided at its
rear end with an abutment and having its

front end attached to the bottom of the draw-
head, a thrust-rod guided in said abutment 15
and provided at its front end with an eye en-
gaging with the eye of the lock, and a spring
surrounding the thrust-rod between its eye
and said abutment, substantially as set forth.

Witness my hand this 6th day of March, 20
1897.

WILLARD F. RICHARDS.

Witnesses:

JNO. J. BONNER,
ELLA R. DEAN.