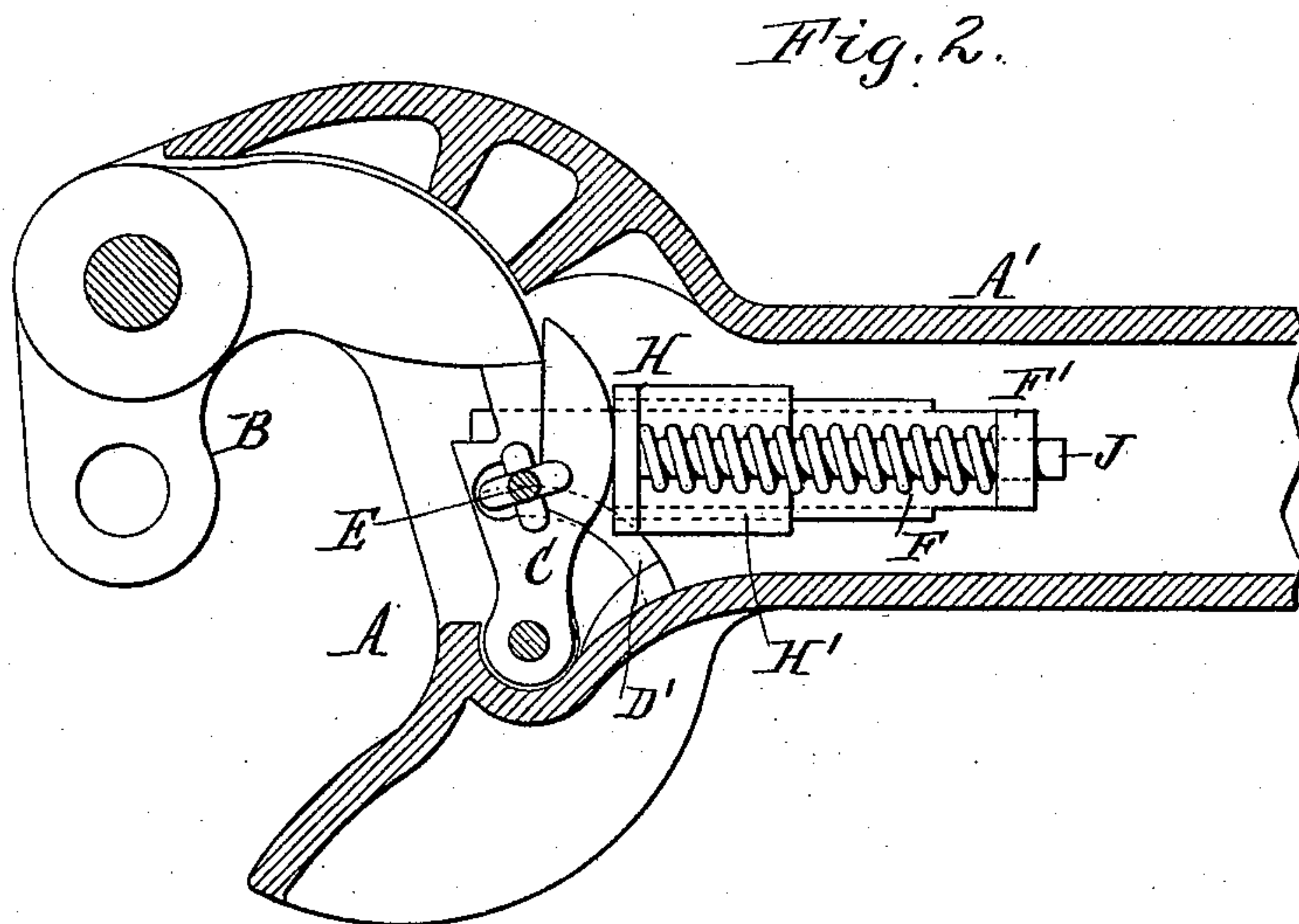
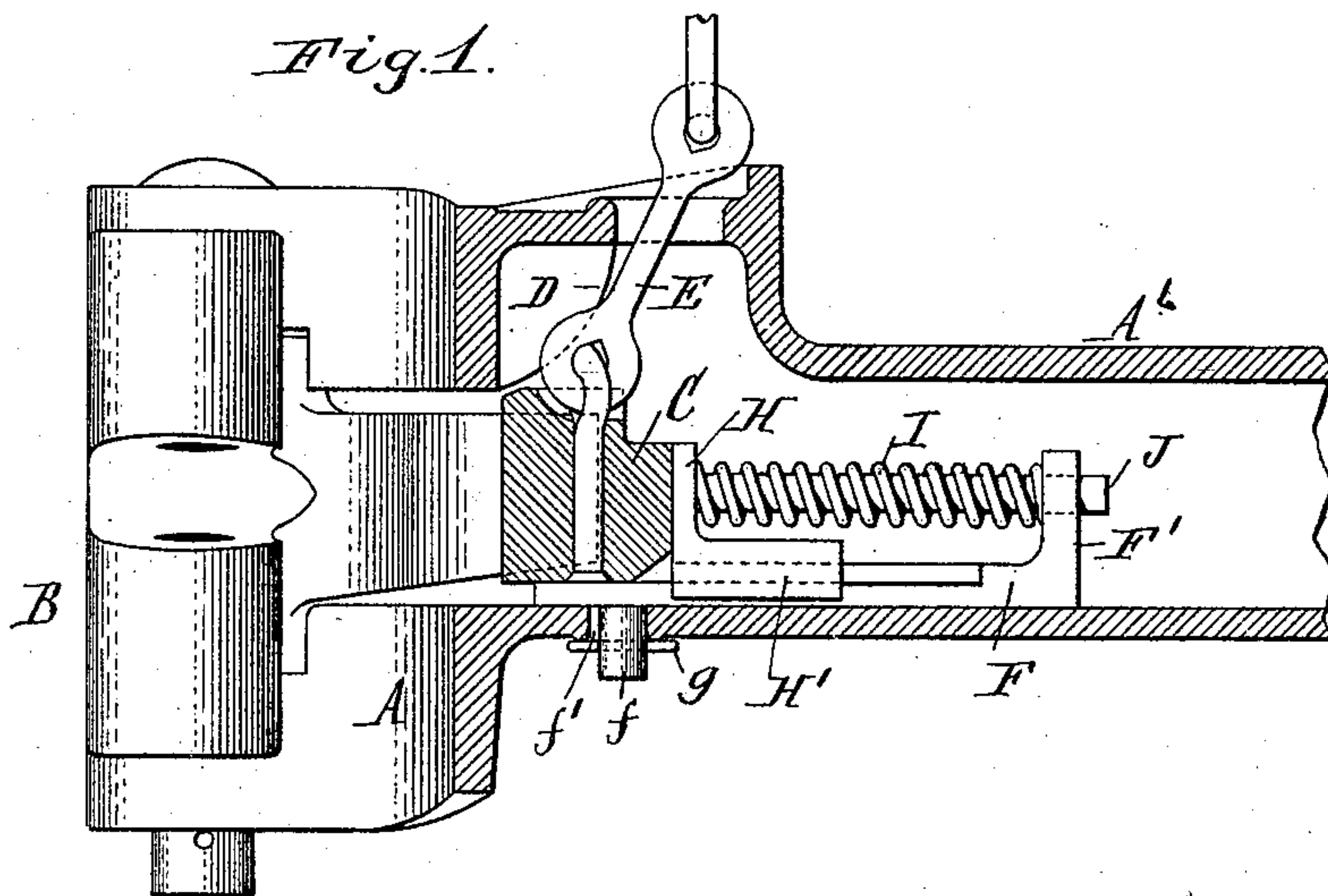


(No Model.)

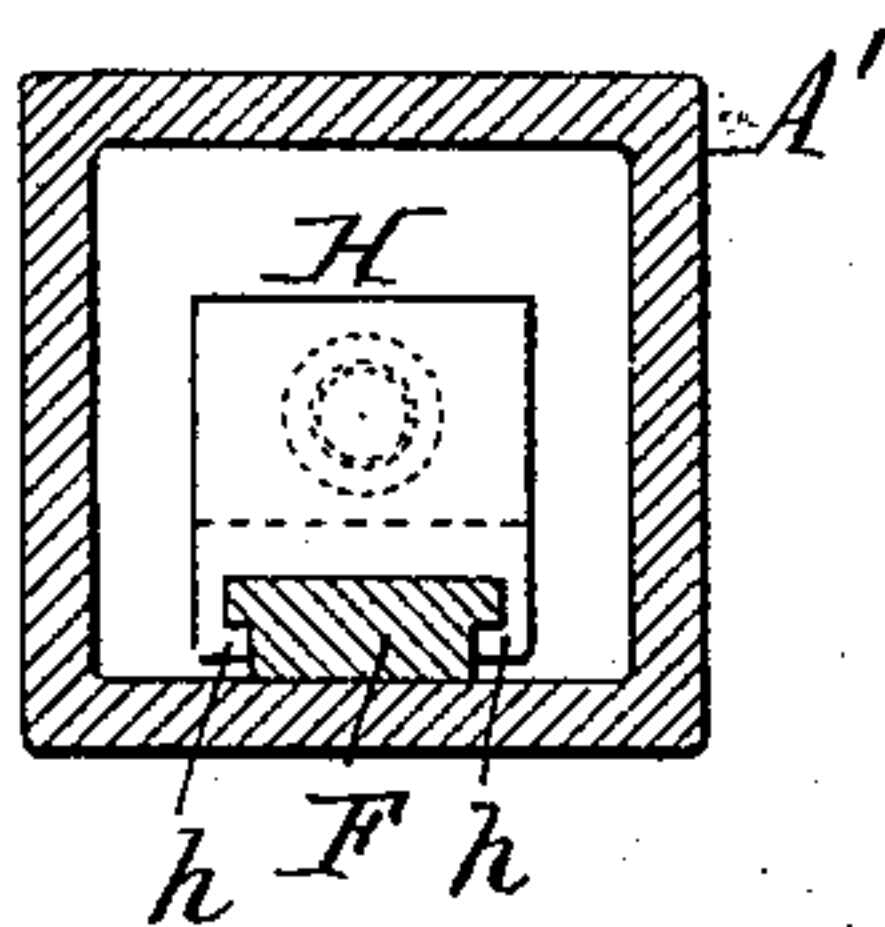
W. F. RICHARDS.  
CAR COUPLING.

No. 585,163.

Patented June 22, 1897.



*Fig. 3.*



Witnesses:

Ernest W. Pilsford.

Henry L. Deck.

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# UNITED STATES PATENT OFFICE.

WILLARD F. RICHARDS, OF BUFFALO, NEW YORK, ASSIGNOR TO THE  
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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 585,163, dated June 22, 1897.

Application filed March 15, 1897. Serial No. 627,677. (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 relates more particularly to the 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 holding the lock in engagement with the knuckle.

My invention has for its object to provide a simple and efficient spring mechanism for the lock which is inexpensive in construction.

In the accompanying drawings, Figure 1 is a sectional elevation of a car-coupling embodying my improvement, showing the knuckle locked. Fig. 2 is a horizontal section thereof. Fig. 3 is a cross-section taken through the draw-bar and showing the carrier-bar in section and the follower in front elevation.

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

A is the draw-head, chambered in the usual manner.

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

D is the customary upper incline for swinging the lock backward when lifted, and D' the lower incline for swinging the lock 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 a carrier-bar for the spring mechanism, arranged in the draw-head and the draw-bar and resting upon the bottom thereof. This carrier-bar is provided at its rear end with a standard or upright abutment F' and at its front end with a depending retaining-pin *f*, arranged in an opening *f'*, formed in the bottom of the draw-head. This opening may be the same as that usually formed in the draw-head for the discharge of snow and water,

and when the pin is placed in that opening the pin is made sufficiently smaller than the opening to leave a passage between the latter and the pin, as shown. A collar *g* or other suitable means is employed for retaining the pin *f* in its opening.

H is an upright follower bearing loosely against the rear side of the lock and having a base-plate H', which is guided lengthwise upon the carrier-bar F by inwardly-extending lips or flanges *h*, formed at its longitudinal edges, and embracing similar flanges projecting outwardly from the upper portion of the carrier-bar, as most clearly shown in Fig. 3.

I is a spring interposed between the abutment F' and the follower H and tending to force the follower against the lock, so as to hold the latter in reliable engagement with the tailpiece of the knuckle, the spring being so large that it is compressed in the normal position of the lock. The spring surrounds a longitudinal supporting-rod J, formed on or secured to the follower H at its front end and guided at its rear end in an opening formed in the abutment F'. The spring being compressed between the follower and the abutment F' constantly forces the follower against the lock, preventing the lock from being jarred out of engagement with the knuckle by the shocks to which the cars are subjected.

I claim as my invention—

1. The combination with the draw-head, the hollow draw-bar and the knuckle, of a horizontally-swinging lock engaging with the knuckle, a carrier-bar arranged in the draw-bar on the rear side of the lock and provided at its rear end with an abutment, a follower guided on said carrier and bearing against the back of the lock between the pivot thereof and its free end, and a spring interposed between said abutment and said follower, substantially as set forth.

2. The combination with the draw-head, the hollow draw-bar, the knuckle and a lock for the same, of a carrier-bar arranged in the draw-bar and provided at its rear end with an abutment, and at its sides with projecting guide-flanges, of an upright follower bearing



against the lock and provided at its base with  
flanges which embrace said guide-flanges, a  
supporting-rod extending rearwardly from  
said follower and guided in said abutment,  
5 and a spring surrounding said rod between  
said abutment and said follower, substan-  
tially as set forth.

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

WILLARD F. RICHARDS.

Witnesses:

JNO. J. BONNER,  
ELLA R. DEAN.