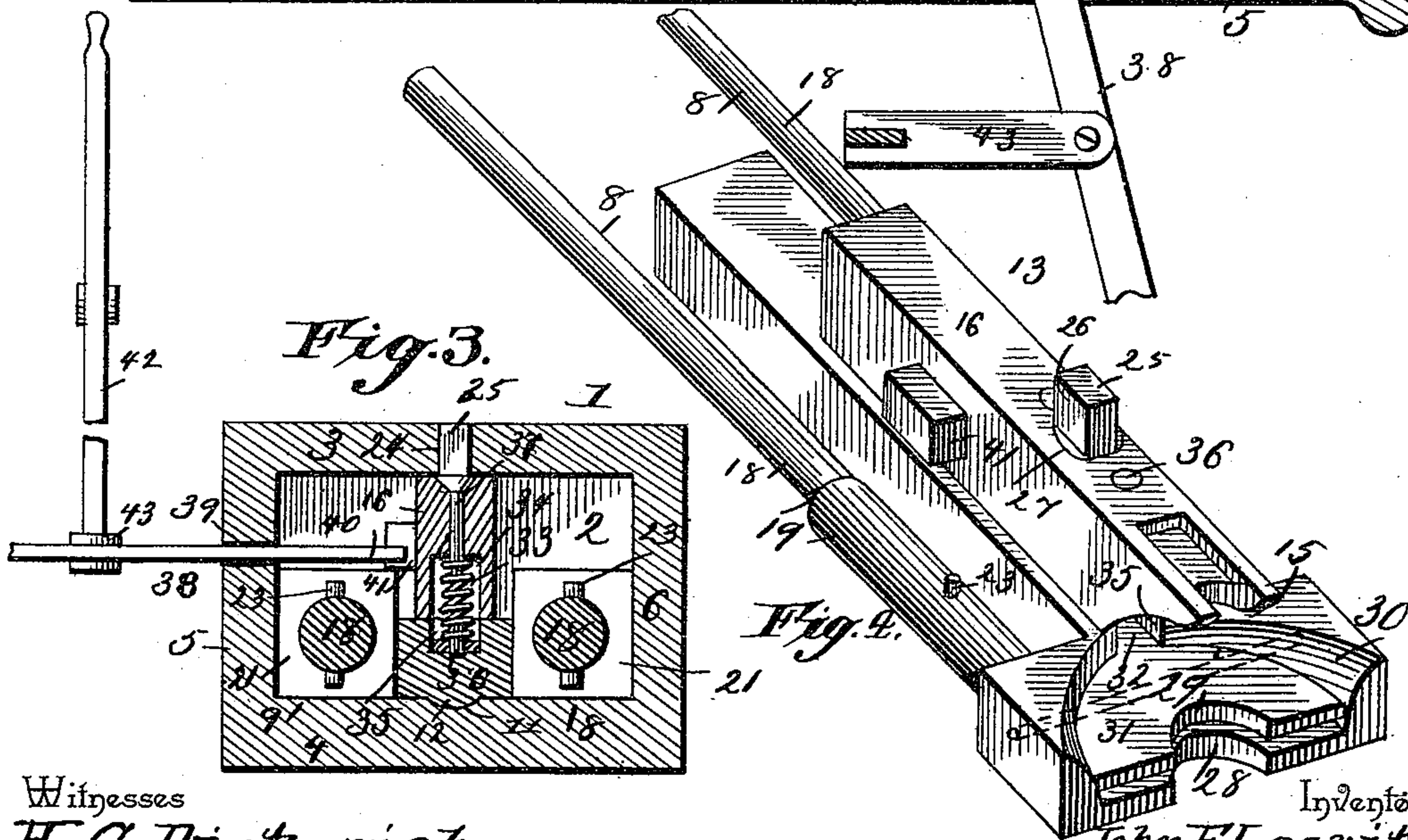
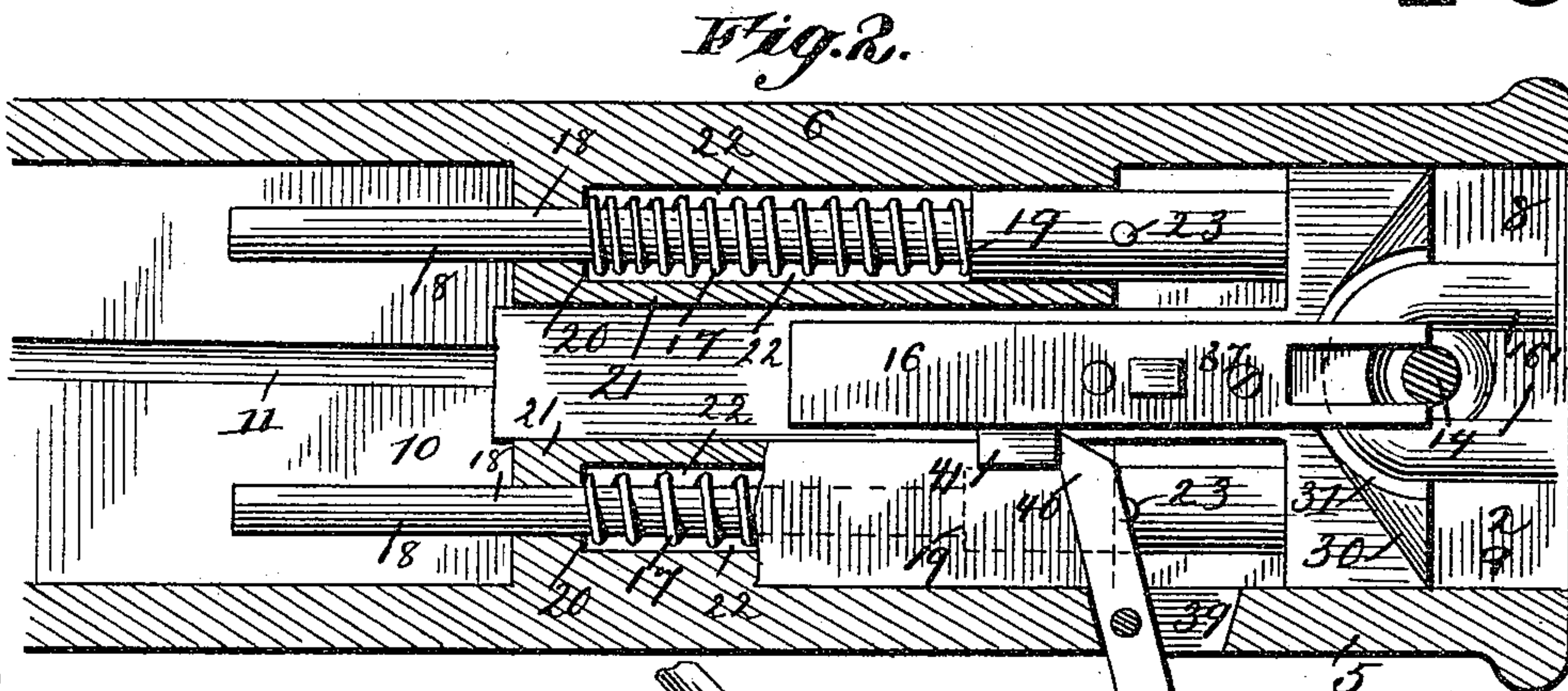
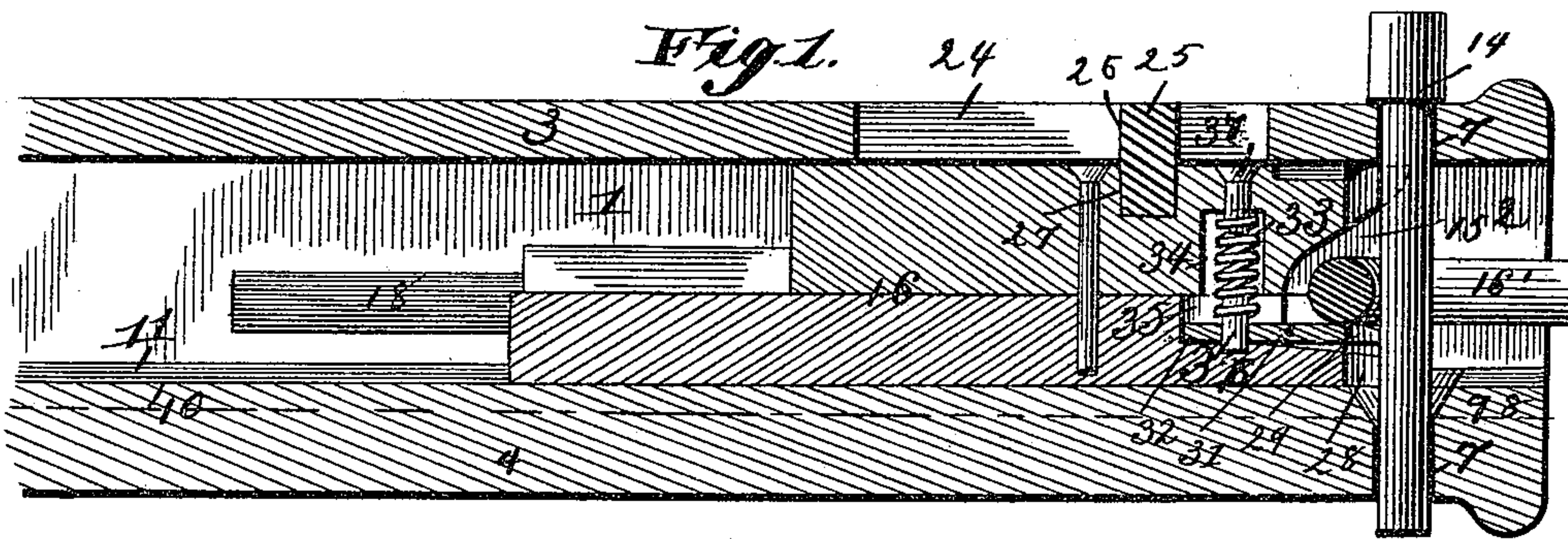


(No Model.)

J. F. LEAVITT.  
CAR COUPLING.

No. 438,692.

Patented Oct. 21, 1890.



Witnesses

H. G. Dieterich.

*H. G. Riley*

By his Attorneys,

*Cash & Co.*

Inventor  
John F. Leavitt.



# UNITED STATES PATENT OFFICE.

JOHN F. LEAVITT, OF CAMDEN, NEW JERSEY.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 438,692, dated October 21, 1890.

Application filed August 5, 1890. Serial No. 361,041. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. LEAVITT, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

The object of the present invention is to simplify and improve the construction of car-couplings in which the coupling-pin is held preparatory to coupling by a spring-support adapted to be withdrawn when the cars come together, and to provide means for holding the link in proper position for coupling.

The invention consists of the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a vertical longitudinal sectional view of a car-coupling constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the sliding support.

Referring to the accompanying drawings, 1 designates a rectangular coupler-head, provided at its front end with a link-opening 2, and consisting of the top 3, bottom 4, and sides 5 and 6, which are preferably formed integral and suitably secured to a car. The coupler-head is provided with a pin-opening 7, extending through the top and bottom, and the latter is provided with a T-shaped piece 8, which is arranged within the coupler-head, and has its head 9 arranged across the front and its stem 10 extending rearward from the head 9, and provided with a longitudinal groove 11 in its upper face adapted to receive a longitudinal rib 12 of a pin-and-link support 13. The pin-and-link support 13 is T-shaped, and is provided on its lower face with the rib 12, which has a convex face and is arranged in the groove 11, and the said pin-and-link support is normally held at the front of the coupler-head, and is adapted to support a coupling-pin 14, which is adapted to rest in a recess 15 in the upper face of a block 16, that is secured to the stem of the

pin-and-link support 13, and has its front end normally arranged beneath the opening 7 in the top of the coupler-head. The support 13 is adapted to slide longitudinally in the coupler-head to allow the coupling-pin to fall and engage the link 16', and is maintained at the front of the coupler-head by springs 17, which are arranged upon bars 18, and have their front ends bearing against shoulders 19 of the bar and their rear ends engaging shoulders 20 of guide-blocks 21, which are provided with longitudinal openings to receive the bars 18, and are arranged upon each side of the stem 10 of the T-shaped piece 8 and between the same and the sides of the coupler-head, the springs being within the openings 22 of the guide-blocks, and the said bars are provided with stops 23 to limit the rearward movement of the support 13, and the top 3 of the coupler-head is provided with a longitudinal slot 24, in which works the rectangular upper end 25 of a plug 26, that is secured in a cylindrical recess 27 of the block 16. The support 13 and the block 16 secured thereon are provided in their front ends with curved notches 28 and 29, adapted to fit against the pin and prevent the same being accidentally thrown from the coupler-head, and the upper face of the head of the support is provided with a semicircular recess 30, in which is pivoted a curved plate 31, having a rearward extension 32, upon which bears the lower end of a spring 33, which has its upper end seated in a cylindrical recess 34 in the lower face of the block 16, and the rearward extension 32 is arranged in a recess 35 of the support, and is provided with a pin 36, which is arranged within the spring and prevents the same slipping from the extension. The curved recess 30 of the support 13 is adapted to receive the end of the link 16', which rests upon the curved plate and is secured between the same and the block 16, the lower face of the front end of which is recessed and curved to conform to the end of the link, and the latter is securely clamped between these parts, and the tension of the spring can be regulated by a screw 37.

The spring-support 13 is operated from the side of the car by a lever 38, fulcrumed in a slot 39 of the side 5, and having its inner end



40 arranged to engage a shoulder 41 on the side of the block 16, and as the outer end of the lever is pushed forward the spring-support is withdrawn and releases the coupling-  
 5 pin. The support is operated from the top of the car by a lever 42, connected with the lever 38 by a bar 43, having its ends bifurcated and pivotally connected to the levers.

From the foregoing description and the accompanying drawings the construction, operation, and advantages of the invention will readily be understood.

What I claim is—

1. In a car-coupling, the combination of the  
 15 coupler-head having a longitudinal opening and provided with the curved groove 11 in its bottom, the T-shaped support provided on its lower face with the convex rib 12 and having the curved recess 30 in its front end, the block  
 20 secured on the support, and the curved plate 31, pivoted in the recess 30 and having the rearward extension, substantially as described.

2. In a car-coupling, the combination of the coupler-head having the longitudinal opening and provided on its bottom with the T-  
 25 shaped piece 8, having the longitudinal groove 11 in its stem 10, the guide-blocks arranged upon each side of the stem 10 and provided with longitudinal openings, the T-shaped support having the rib 12 on its lower face arranged in the groove 11, the block secured upon the support and provided with the recess 15, adapted to receive the end of a coupling-pin, the bars 18, secured to the head of  
 30 the support and arranged within the guide-blocks, and the springs arranged upon the bars and engaging the same and the guide-

block and adapted to hold the support at the front of the coupler-head, substantially as described. 40

3. In a car-coupling, the combination of the coupler-head, the T-shaped support arranged within the coupler-head and provided with the curved recess 30, the block secured on the support, the curved plate 31, pivoted in the  
 45 recess 30 and having the rearward extension, and the spring engaging the extension, substantially as and for the purpose described.

4. In a car-coupling, the combination of the coupler-head, the T-shaped support sliding  
 50 in the coupler-head and having its front end recessed, the curved plate pivoted in the recess and provided with a rearward extension having the pin, the block, the spring seated in the block and engaging the rearward extension of the curved plate, and the screw adapted to regulate the tension of the spring, substantially as described. 55

5. In a car-coupling, the combination of the coupler-head, the T-shaped support sliding  
 60 in the coupler-head and having its front end recessed and provided with the curved notch, the block secured upon the support and having its front end recessed and provided with the curved notch, the pivoted plate, and the  
 65 spring engaging the pivoted plate, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN F. LEAVITT.

Witnesses:

J. R. LIPPINCOTT,  
 RODMAN SHARP.