

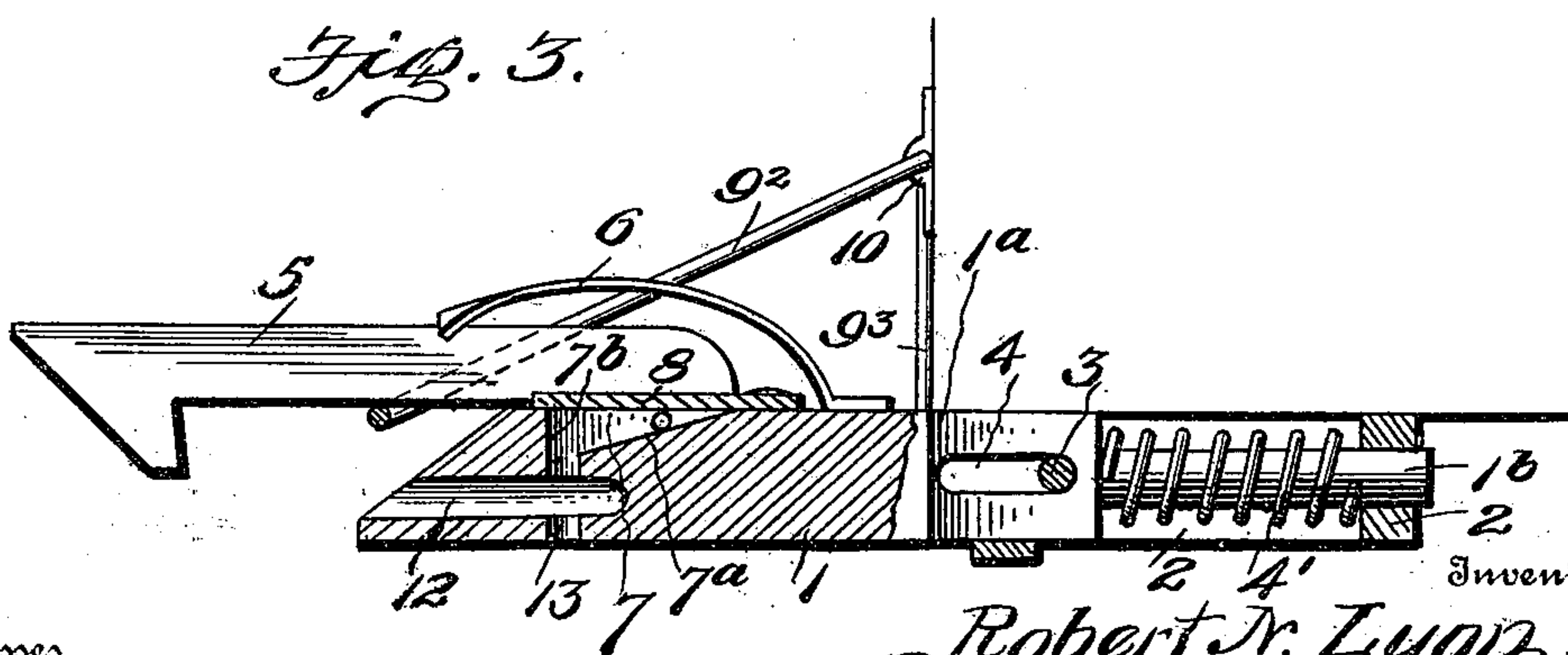
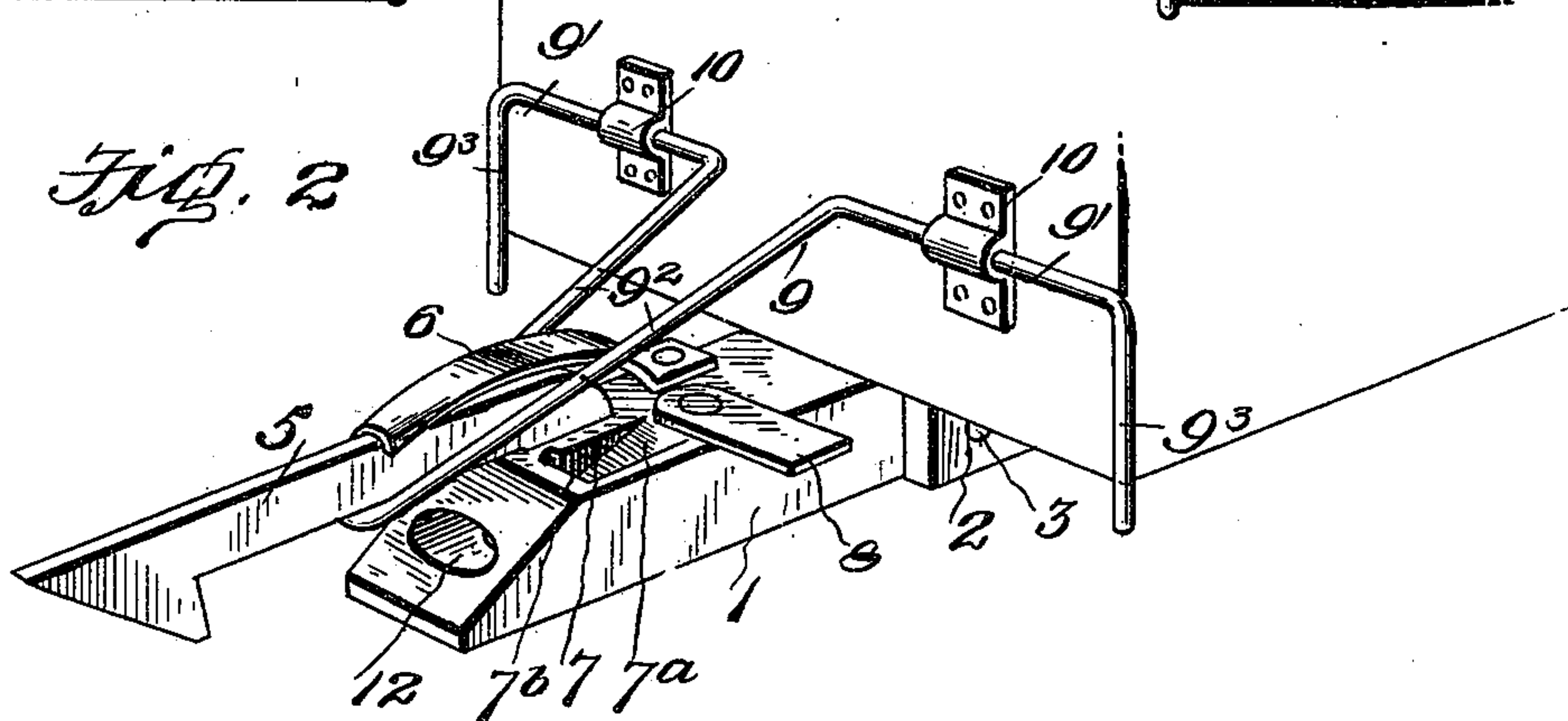
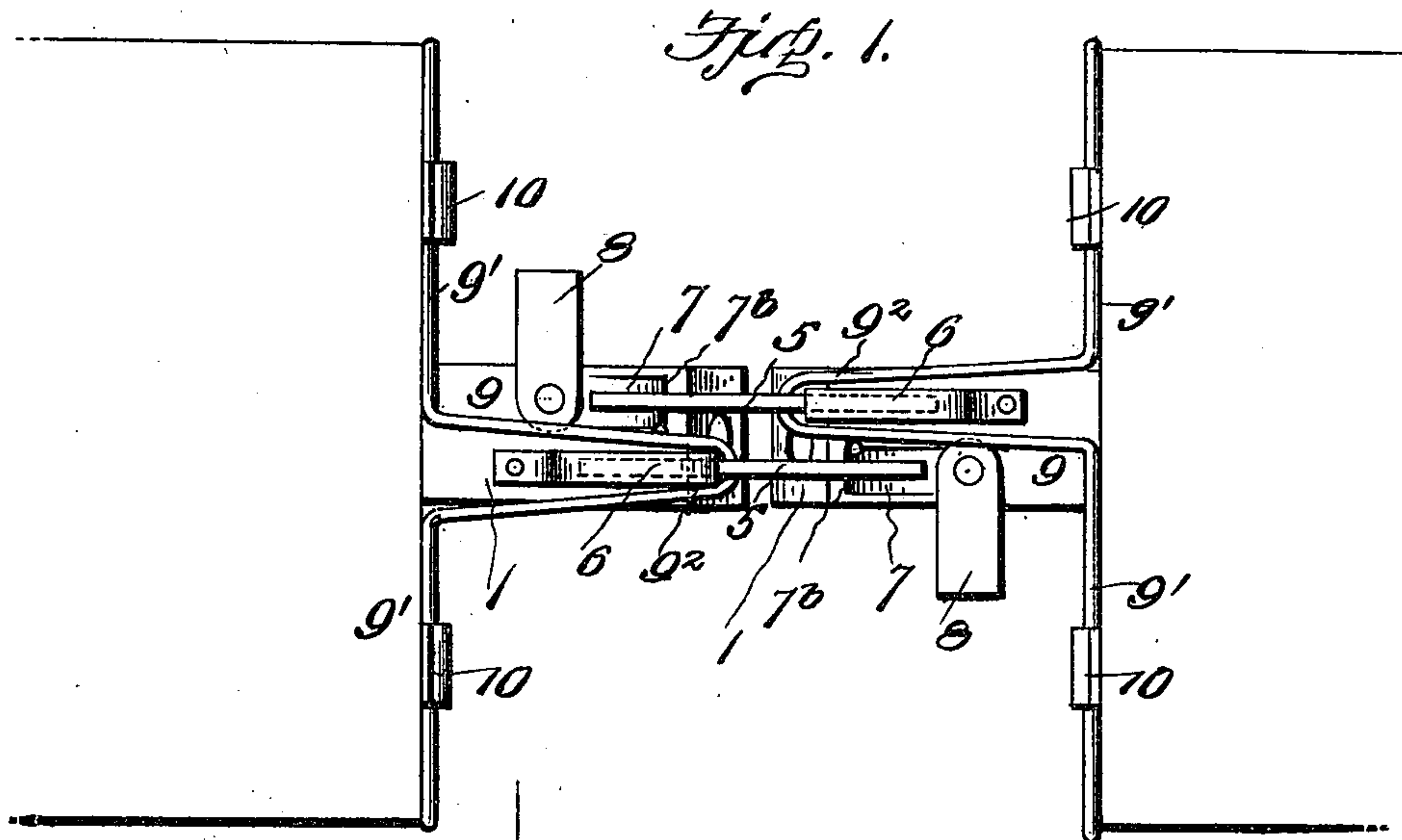
No. 668,531.

Patented Feb. 19, 1901.

R. N. LYON.  
CAR COUPLING.

(Application filed June 6, 1900.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

ROBERT N. LYON, OF ONETA, TEXAS, ASSIGNOR OF ONE-HALF TO J. M. ROSE AND J. H. ROSE, OF SAME PLACE.

## CAR-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 668,531, dated February 19, 1901.

Application filed June 6, 1900. Serial No. 19,248. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT N. LYON, a citizen of the United States, residing at Oneta, in the county of Leon and State of Texas, have invented certain new and useful Improvements in Car-Couplings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to car-couplers, and particularly to hook-and-catch couplers.

One object is to provide a coupler of this character which will automatically couple the cars, which can be readily uncoupled without going between the cars, and which when desired may be prevented from coupling.

A further object is to combine with the automatic coupler the ordinary link-and-pin coupling to be used in case of emergency or when coupled to a car not provided with my automatic coupler.

With these and other objects in view my invention consists in the construction and arrangement of parts, as will be hereinafter more fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of the meeting ends of two cars, showing them coupled. Fig. 2 is a perspective view of one end of a car provided with my improved draw-head and coupler; and Fig. 3 is a longitudinal vertical sectional view thereof taken through the coupling-slot, showing the same covered.

In the drawings, 1 denotes the draw-head of my improved coupler, having a sliding engagement with the supporting-frame 2, rigidly connected to the car. The rear portion of the coupling-head is reduced and slides between the sides of the frame 2 and is limited in its movement by a pin 3, passing through the sides of the frame and through a slot 4 in the squared portion 1<sup>a</sup> of the reduced end of the coupler. The inner reduced portion or stem 1<sup>b</sup> of the draw-head is cylindrical and passes through a circular orifice in the rear wall of the frame 2.

4' denotes a spring coiled around the stem 1<sup>b</sup> of the draw-head and confined between the rear wall of the frame 2 and the shoulder

formed by the cylindrical stem and the square reduced portion of the coupler, this spring acting as a buffer for the draw-head.

The forward end of the draw-head is inclined or beveled off for a purpose hereinafter to appear.

5 denotes the coupler-hooks, pivoted in the upper side of the draw-head and to one side of the center thereof.

6 denotes a leaf-spring having one end connected to the draw-head immediately in the rear of the coupling-hook and having its free end bearing upon the top of said coupling-hook to press the same down into close engagement with the coupling-head of the adjoining car.

7 denotes the catch-openings formed in the upper sides of the draw-head, having a forwardly and downwardly inclined bottom 7<sup>a</sup> and a front vertical wall 7<sup>b</sup>.

8 denotes covering-plates pivoted to swing laterally, so that the catch-openings may be opened or closed when desired.

9 denotes operating levers or rods the horizontal portions 9' of which are journaled in bearings or hangers 10, fixed on the end of the car. The rods 9 are formed about midway their lengths with loop extensions 9<sup>2</sup>, which pass around and beneath the coupling-hooks, as shown. The horizontal portions 9<sup>2</sup> of the rods 9 extend the full width of the cars and are provided at their outer ends with downwardly-depending crank-arms 9<sup>3</sup>, so that upon raising said arms the loop portions 9<sup>2</sup> are also raised, carrying with them the coupling-hooks 5, and thereby uncoupling the cars.

12 denotes a longitudinal opening or slot formed in the forward end of the coupling-heads, and 13 denotes a vertical opening passing through the coupling-head in line with the slot 12. These openings provide for the reception of the ordinary link-and-pin coupling. (Not shown.) The hole 13, opening through the inclined bottom of the catch 7, allows rain and water to drain from said slot, which would otherwise fill up and in cold weather freeze solid, and thereby prevent proper working of the coupling-hooks.

In operation when the cars are brought together for coupling the forward inclined ends of the coupling-hooks ride up the forward



inclined ends of the draw-heads against the tension of the springs 6 and are forced thereby into the catches 7, coupling the cars. When it is desired to uncouple the cars, the  
5 coupling-hooks are raised out of engagement with the catches by means of the operating-rod, as hereinbefore described.

Should it be desired for any reason that the cars be prevented from coupling when coming together, the cover-plates 8 are swung  
10 around over the catch-openings, thereby closing the same. Now when the cars come together the coupling-hooks will ride up the inclined end of the draw-head and over the  
15 cover-plate, which prevents the same from entering the catches and coupling.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my improved coupler will be readily understood and  
20 a further description of the same is not deemed necessary.

Various changes in the form, proportion, and the minor details of construction may be  
25 resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a car-coupler of the class described, the combination of the draw-head having a beveled forward end and provided in its upper side with a catch-opening which communicates with a vertical aperture 13 passing  
30 through the draw-head and intersected by a longitudinal opening 12 extending through the beveled end of the draw-head, the coupling-hook, the leaf-spring engaging said coupling-hook, the operating-rod provided with a  
35 loop for engaging said coupling-hook, crank-hangers actuating said rod and loop, and the pivoted cover-plate adapted to cover said catch-opening and thereby prevent the said coupling-hook from engaging said catch-open-  
40 ing, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT N. LYON.

Witnesses:

D. T. GARTH,

R. E. BURROUGHS.