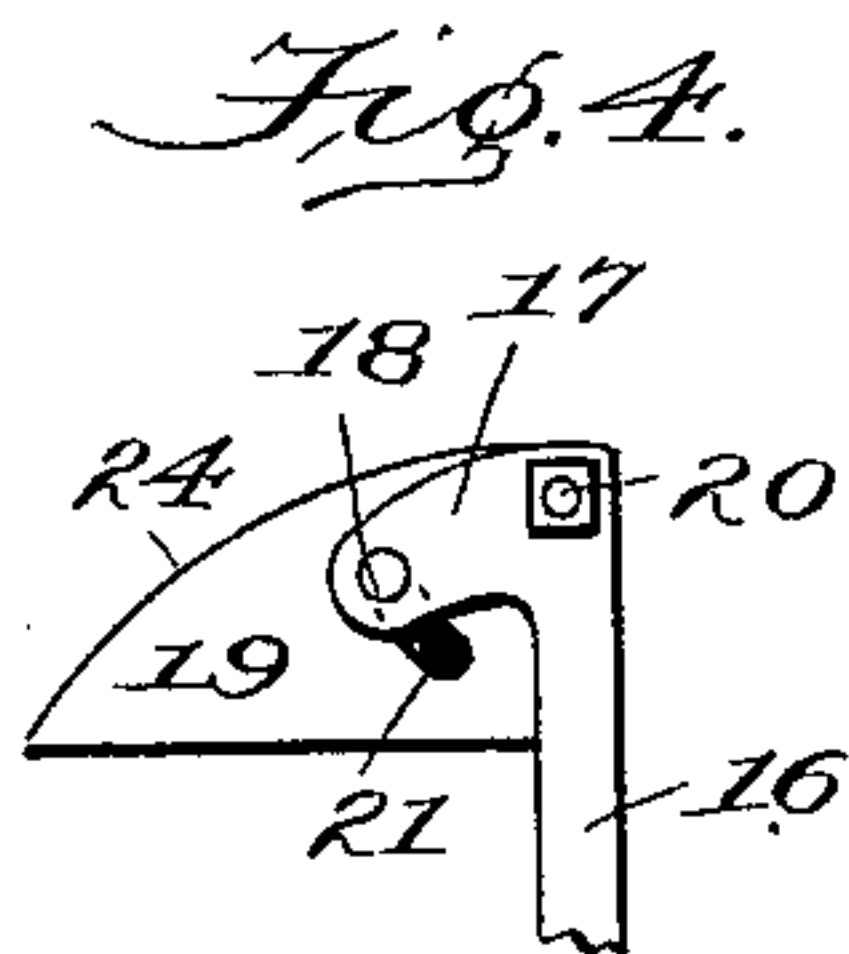
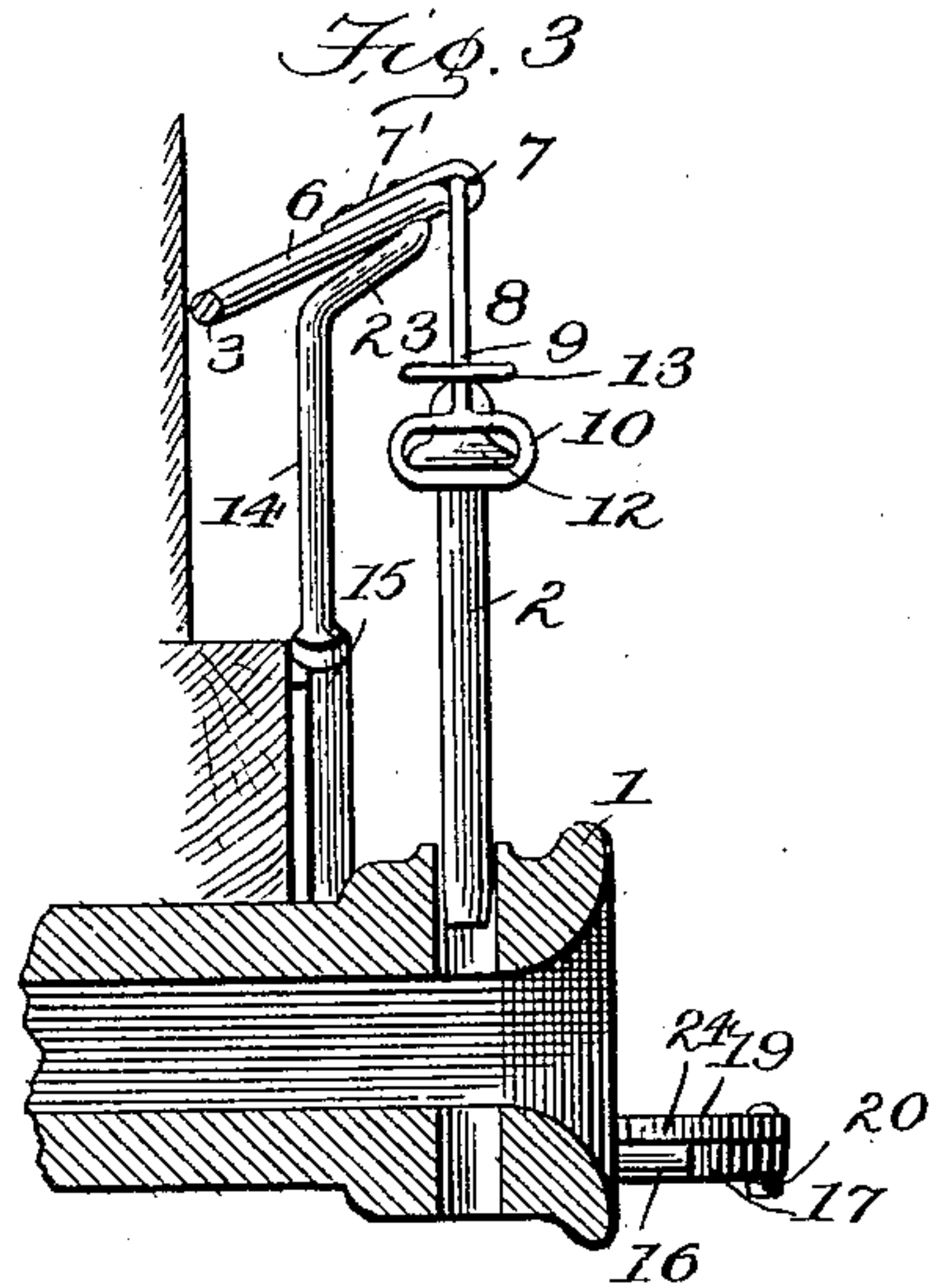
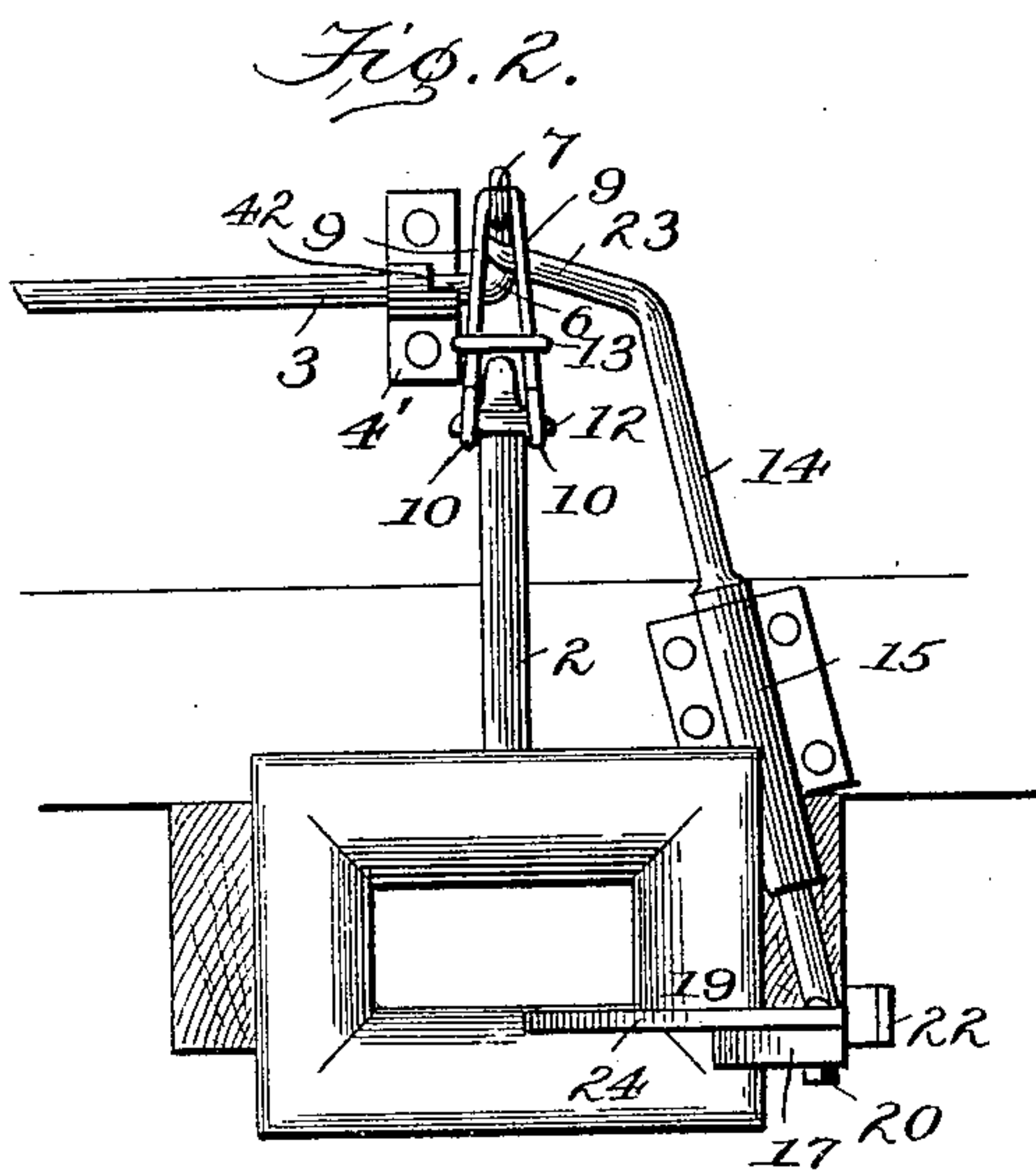
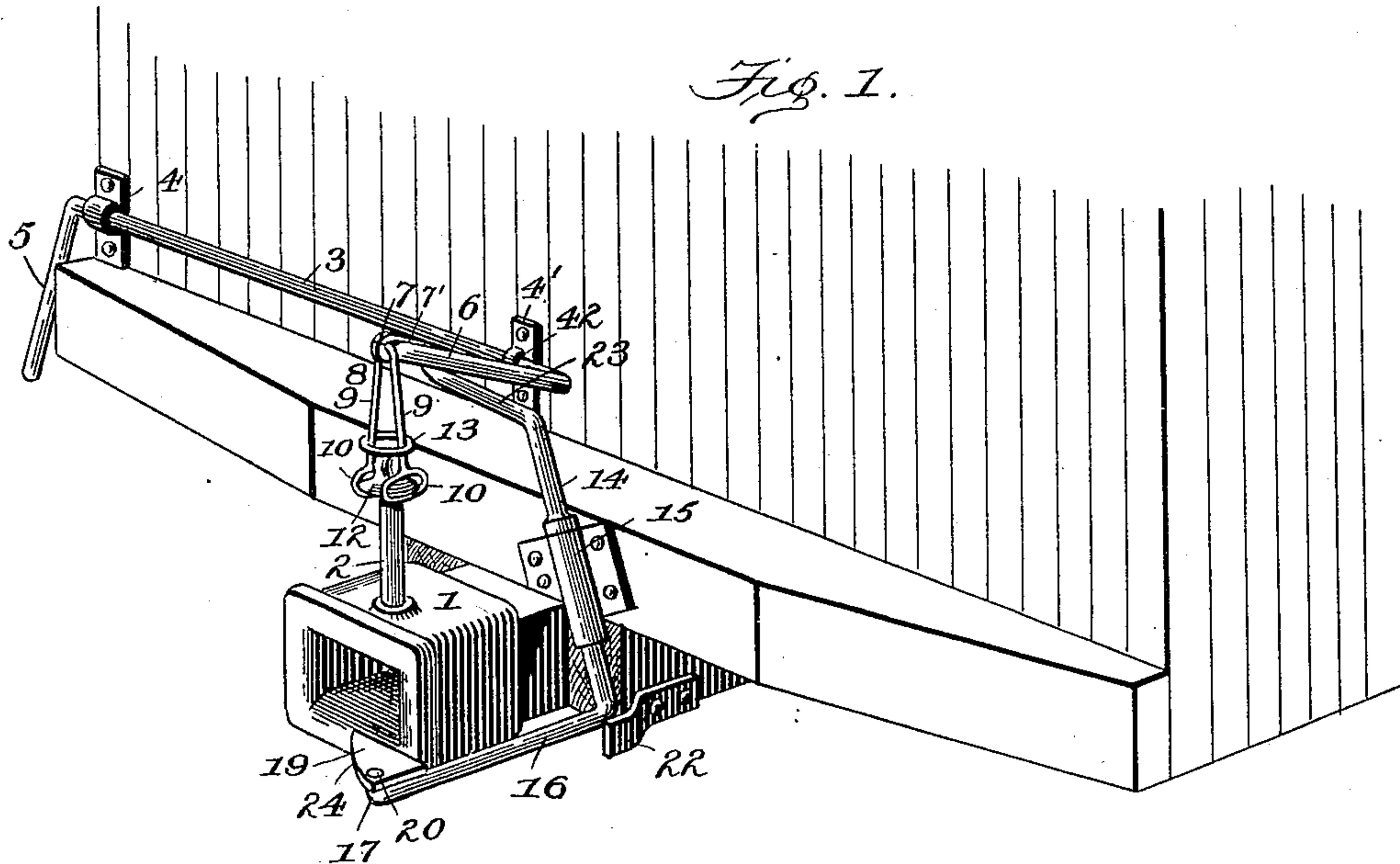


(No Model.)

A. F. KUHLMANN.
CAR COUPLING.

No. 583,380.

Patented May 25, 1897.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ADOLPH FRIDERICH KUHLMANN, OF LA CROSSE, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 583,380, dated May 25, 1897.

Application filed February 23, 1897. Serial No. 624,621. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH FRIDERICH KUHLMANN, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplings; and I do hereby 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 has relation to improvements in automatic car-couplings; and the object is to provide a simple and effective device of this kind that may be applied to the ordinary draw-head coupling pin and link now in use.

To this end the novelty consists in the construction, combination, and arrangement of the several parts of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference-characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved car-coupling. Fig. 2 is a front elevation of the same, showing the coupling-pin raised. Fig. 3 is a longitudinal section through the draw-bar. Fig. 4 is a bottom plan view of the coupling-pin tripping mechanism.

1 represents the usual draw-head, and 2 the ordinary coupling-pin.

3 is a horizontal transverse shaft sliding horizontally in bearings 4 4' on the end of the car, and its outer end terminates in a depending crank-handle 5, while its inner end is bent horizontally forward and forms a lever 6, the end of which terminates in a spring-eye 7, in which is suspended a bail 8. This bail 8 is formed with integral depending parallel spring-arms 9 9, the lower ends of which terminate in integral oblong parallel eyes 10 10, which engage the opposite edges of the flange 12 on the head of the coupling-pin 2.

13 represents a loose link which slides snugly down over the arms 9 9 to clamp the eyes 10 10 on the pin and prevent its accidental displacement, and by slipping the link 13 up on the arms they are allowed to spring apart, and consequently release the pin when necessary.

14 represents an approximately horizontal

shaft diagonally journaled in a corresponding bearing 15, mounted on the end of the car, and its lower end extends horizontally forward to form the arm 16, terminating in an inwardly and rearwardly formed lug 17, the upper face of the outer end of which is provided with a fixed vertical stud 18.

19 represents a V-shaped pawl or dog pivoted at one end to the outer end of the arm 16 by a bolt 20, and the bottom face of said dog is provided with a recess 21, which permits a limited lateral play of the dog on the lug 17.

22 represents a rigid bracket secured to the car to limit the outward movement of the arm 16. The upper end of the shaft 14 is turned slightly forward to form a finger 23, which extends under the horizontal lever 6 to support the coupling-pin in an elevated position, as shown in Fig. 1.

When the draw-head carrying the link on the opposite car strikes the beveled face 24 of the dog 19, it forces the arm 16 laterally outward, withdrawing the finger 23 from under the lever 6, thereby allowing the coupling-pin to fall by gravity and engage the link to couple the cars.

When it becomes necessary to raise the coupling-pin and sustain it in this position indefinitely, the crank-handle 5 is elevated and then drawn outwardly to insert the inner end of the lever 6 in the horizontal recess 42 in the bearing 4', so that the cars may be pushed about without coupling them. It will be noticed that the eye 7 in the outer end of the lever 6 is formed by a spring-clip 7', which retains the bail 8 in a groove formed in the upper face of the outer end of the lever, and in case of an accident—as, for example, the draw-head leaving the car and carrying the pin with it—the bail 8 will pull clear of the lever without otherwise damaging or deranging the mechanism permanently fixed to the car.

It will thus be seen that the entire operation of coupling is automatically performed without even the presence of the brakeman, and in uncoupling the cars he is not even required to go between them, as he can raise and set the coupling-pin from the side of the car by means of the crank-handle 5, and in performing this operation it is only necessary

to raise the crank-handle 5, when the lever 6 strikes against the under side of the finger 23, pushing it out of the way until the lever has passed above it, when it immediately falls back by gravity into the path of said lever, which is then released and allowed to rest on the top of said finger and support the pin in an elevated position, as above described.

When it is desired to couple the cars, the link is inserted in the draw-head so as to rest on the dog 19, which supports the free end of the link in a horizontal position to readily enter the opposite draw-head when the cars come together. When this occurs, the draw-head strikes the beveled face of the dog, forces it out of the way, and at the same time withdraws the supporting-finger from under the lever 6 and allows the pin to drop through the link and couple the cars.

Although I have described the particular manner of carrying out my invention, I do not wish to limit myself to this precise construction, as it is evident that various modifications of the same will readily suggest themselves to those skilled in the art to which it appertains without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to

secure by Letters Patent of the United States, is—

An automatic car-coupling, comprising the draw-head 1, and the coupling-pin 2, provided with an annular flange 12, in combination with the transverse horizontal shaft, 3, journaled in bearings 4 4', its outer end provided with a depending crank-handle 5, and its inner end with a forwardly-projecting horizontal lever 6, terminating in an eye 7, a bail 8 suspended from said eye 7, and formed with the spring-arms 9 9, terminating in oblong eyes 10 10, adapted to engage the opposite sides of the flange 12, on the coupling-pin, a loose link 13 encompassing the arms 9 9, and the diagonal shaft 14 journaled in the bearing 15, and having its upper end terminating in a forwardly-inclined finger 23, adapted to engage and support the lever 6 and coupling-pin and its lower end formed with a forwardly-projecting arm 16, provided with a V-shaped pivoted dog 19, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ADOLPH FRIDERICH KUHLMANN.

Witnesses:

JOHN J. ESCH,
W. J. HICKISCH.