

(No Model.)

A. W. BONDERSON.  
CAR COUPLING.

No. 560,254.

Patented May 19, 1896.

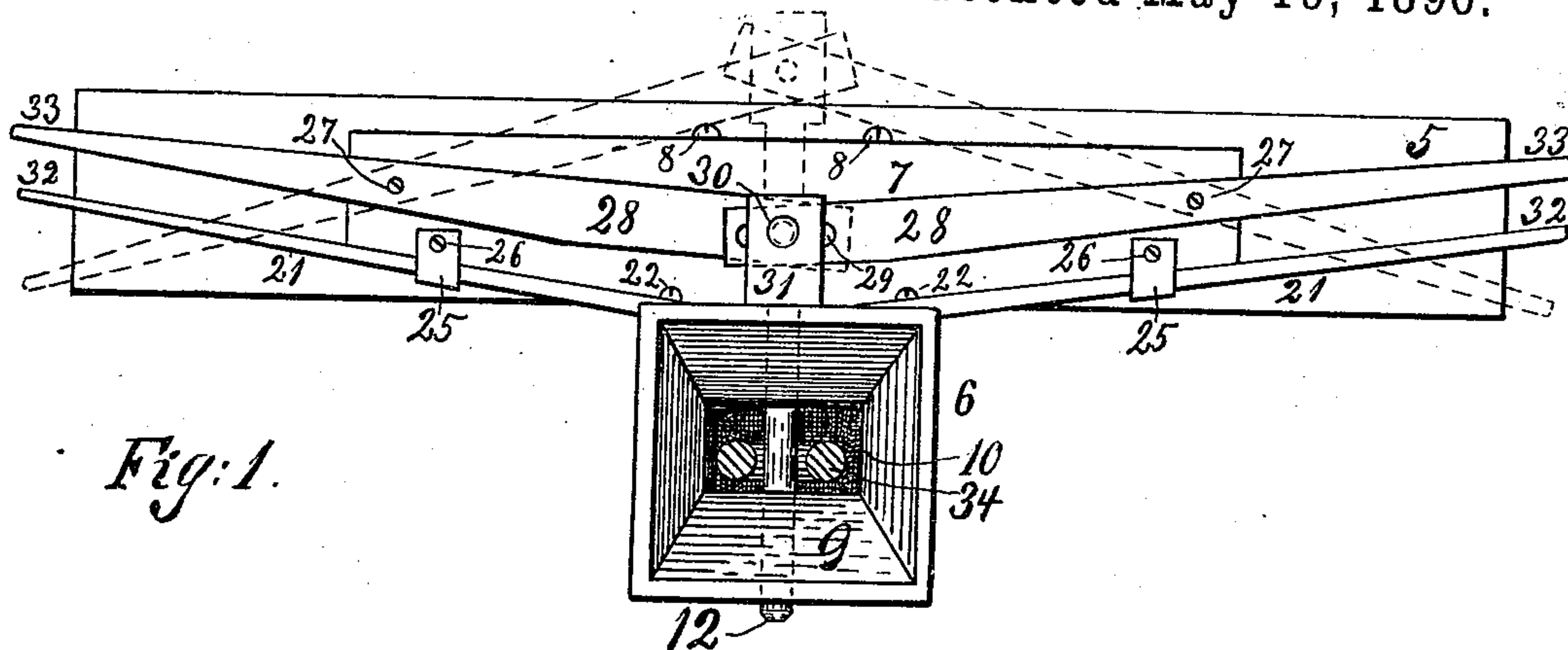


Fig:1.

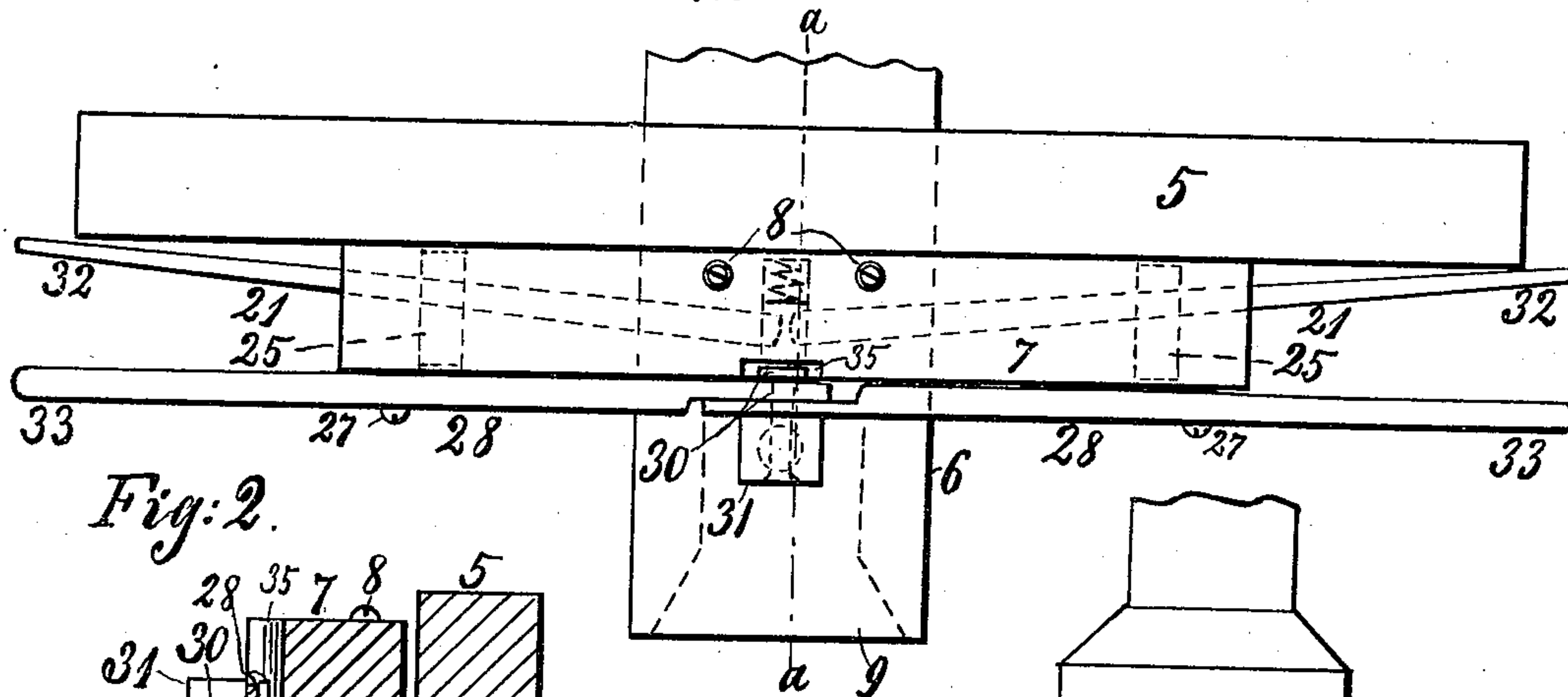


Fig:2.

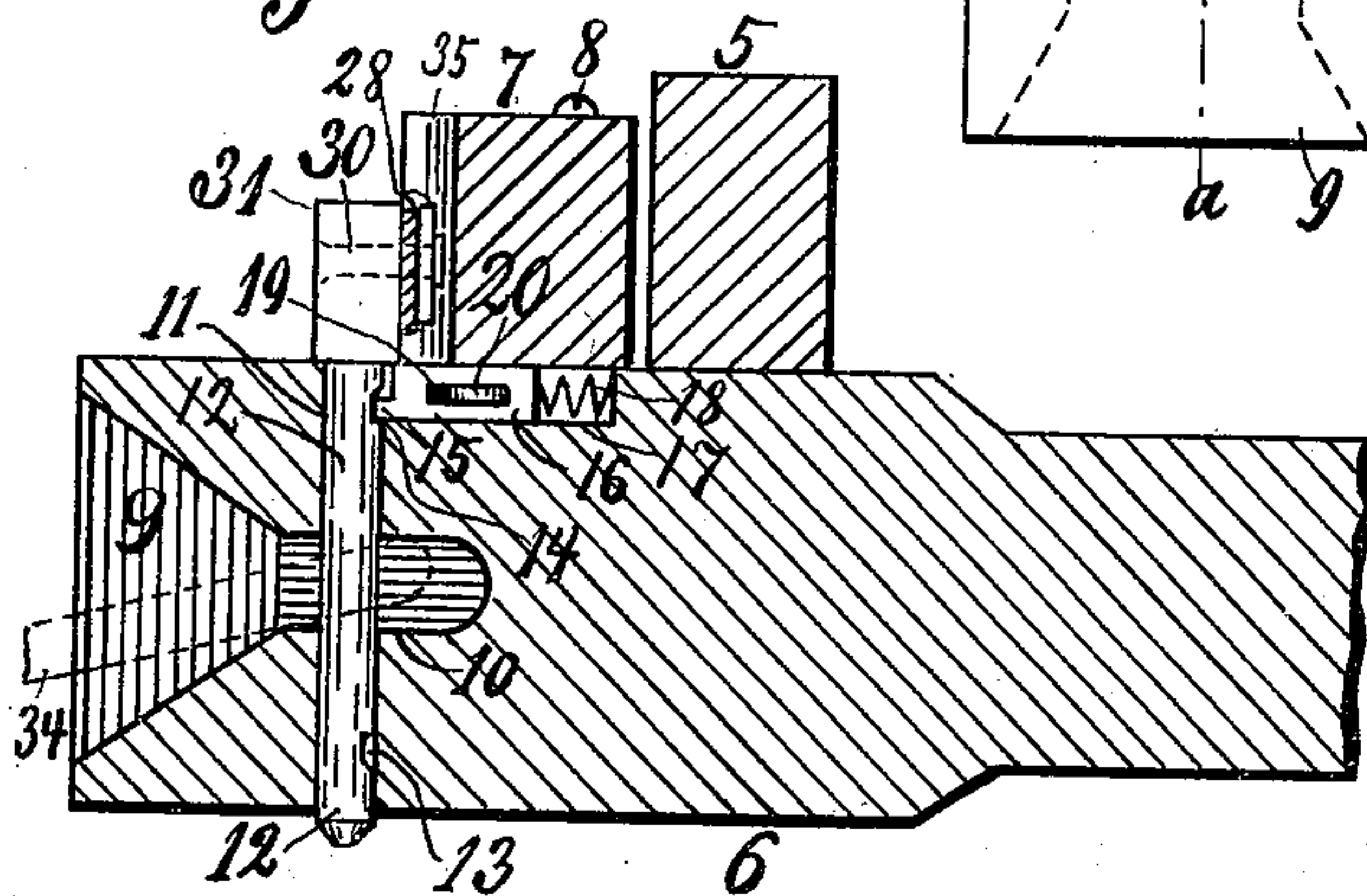


Fig:3.

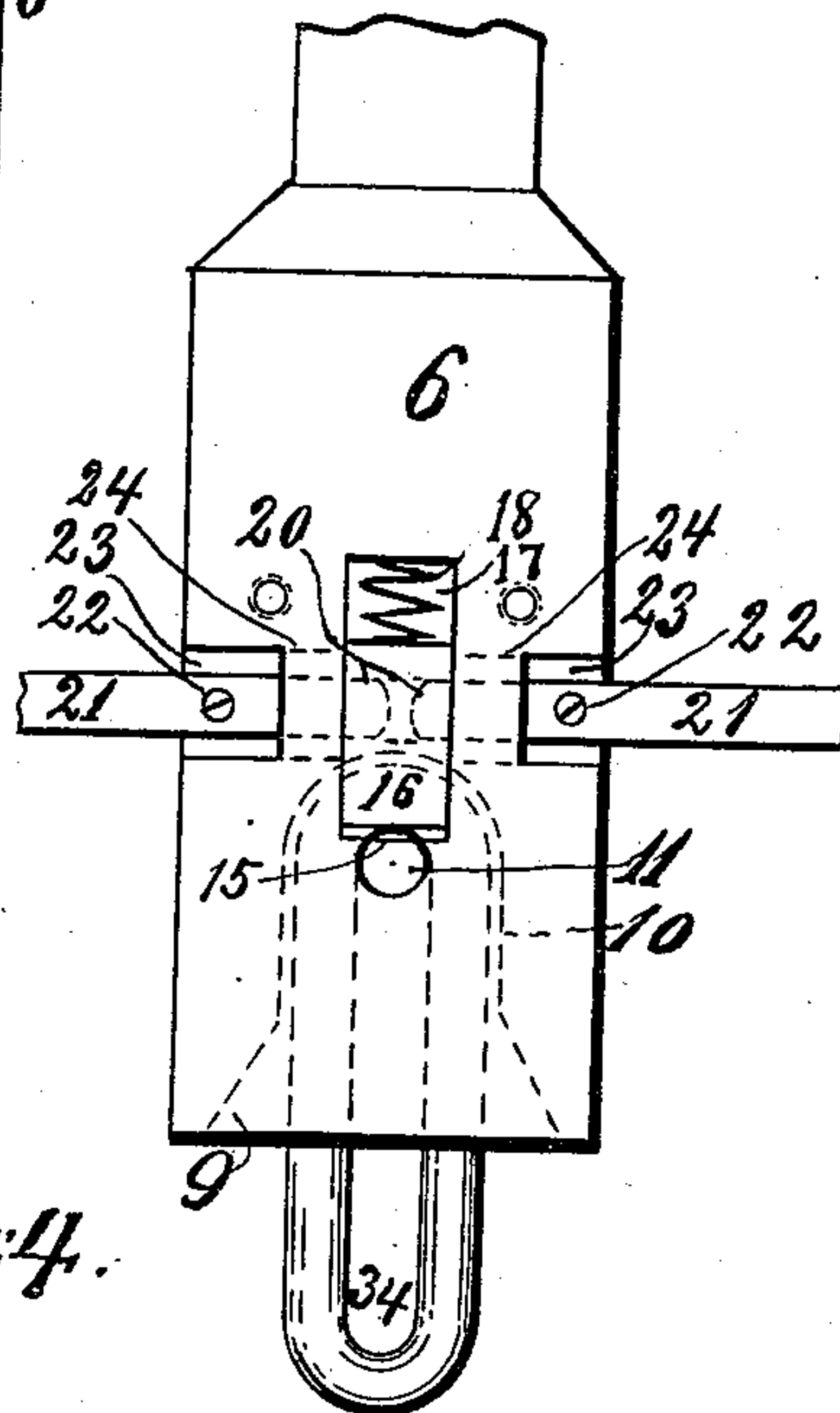


Fig:4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

ADOLF W. BONDERSON, OF BERNADOTTE, MINNESOTA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 560,254, dated May 19, 1896.

Application filed July 11, 1895. Serial No. 555,687. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLF W. BONDERSON, a subject of the King of Sweden and Norway, residing at Bernadotte, in the county of Nicol-  
5 let and State of Minnesota, 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  
10 in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 My invention relates to improvements in car-couplings of the kind using a link and two pins for securing the ends of the link in the draw-heads.

The objects of my invention are, first, to  
20 provide a car-coupling of extraordinary strength; second, to provide a car-coupling of such construction that the operator need not go in between the cars to operate either the link or the pins; third, to provide a car-  
25 coupling which will not accidentally uncouple by itself. These and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

30 Figure 1 is a front end elevation of one of my couplings. Fig. 2 is a top plan view of Fig. 1. Fig. 3 is a sectional side view on the line *a a* in Fig. 2. Fig. 4 is a top plan view of one of the draw-heads with the link shown,  
35 but the pin and all woodwork removed.

The two draw-heads being alike and having a like means for holding the link a description of one answers for both.

40 In the drawings, 5 designates the "dead-wood" or horizontal end timber of the car, directly below which the draw-head 6 is located.

7 is a supporting-bar secured by the bolts 8 transversely upon the draw-head in front of  
45 the timber 5. The front end of the draw-head is provided with a flaring opening 9, with a parallel extension 10, down through the center of which is provided in the draw-head the hole 11, in which is placed the coupling-pin  
50 12, which at its rear side is provided with a lower locking-notch 13 and an upper locking-notch 14, adapted to receive the locking tooth

or lip 15 of the locking-key 16, sliding in the groove 17, provided in the upper side of the draw-head and covered up by the bar 7. 55

18 is a spring tending at all times to push the sliding key 16 forward against the pin 12. In the key 16 I provide the slot 19, which extends transversely through the key and receives the ends 20 of the locking-levers 21, 60 which are fulcrumed at 22 in niches, as 23, provided in the upper and outer edges of the draw-head, and extend through the apertures 24 in the draw-head into the key 16. These levers 21 are supported by and swing in the  
65 guides 25, provided at the under side of the supporting-bar 7, to the sides of which it is secured, as at 26 in Fig. 1. Upon the front side of the supporting-bar 7 are fulcrumed at 27 the two pin-operating levers 28, of which 70 the overlapping ends are provided with the slots 29, in which engages the pin 30, secured in the head 31 of the coupling-pin 12. The outer ends 32 and 33 of the levers 21 and 28 extend sufficiently outward to be reached and  
75 operated without danger to the operator by coming between the ends of the cars.

As shown in dotted lines in Fig. 3, the link 34, when connected only in one of the draw-heads, is held by the top and bottom of the  
80 inner and parallel cavity 10 in a partly-lifted position with its outer end, so that the latter will enter the bell-shaped opening 9 of the opposite draw-head when the cars come together without guiding the link by the hand  
85 or by a stick, which has heretofore been the regular practice in the operation of this type of coupling.

In operation the operator may from either side of the car unlock the pin 12 by pushing  
90 forward against the handle 32, so that the lever 21 by its inner end 20 withdraws the key 16 from the notch 14. The pin 12 is then lifted by pressing with the other hand down upon the handle 33 of the lever 28. The lever 95 21 being in the meantime released allows the spring 18 to push the key 16 into the notch 13, whereby the pin 12 is kept in its elevated position, as shown in dotted lines in Fig. 1. This gives the link a chance to be withdrawn  
100 from the draw-head and to enter it again, and when it is desired to have the pin 12 descend into the link again the operator simply gives a push forward on the handle 32, so as to



withdraw the key 16 from contact with the notch 13, and the levers 28 and pin 12 descend at once by their own weight, and the pin is locked by the spring-pressed key 16 entering again the notch 14 with its reduced front end 15.

Means may readily be devised for operating the pin 12 and the key 16 from the top of the car; but such attachments are so easily constructed that they need not be herein shown or described. The same is the case with means for automatically coupling two draw-heads together every time they come in position for coupling. Still if the engineer desires to actually couple the cars and not only give them a push (as is often the case) all he has to do is to run the cars together with sufficient force to cause the momentum of the long levers 21 to take the place of a push against the handles 32, and the pin 12 will be released and drop the moment the draw-heads meet and their main springs yield in the usual manner.

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

In a car-coupling, the combination with the draw-head 6, and link 34, of the coupler-pin 12, having the two notches 13, and 14, said draw-head having in its upper side a longitudinal cavity or keyway as 17, the spring-pressed key 16, moving in said keyway and engaging the notches in the coupling-pin; two horizontally-moving levers as 21, pivoted to the draw-head as at 22, and engaging with their inner ends the key 16, while the outer ends extend out to the corners of the cars or platform thereof, so as to be reached by hand without stepping between the cars, or to be operated by their momentum in coupling the cars, the supporting cross-bar 7, secured upon the draw-head and covering the key 16, and spring 18, the lever-guides 25 secured to the supporting-bar and embracing the levers 21, and means for raising the coupling-pin, substantially as shown and described.

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

ADOLF W. BONDERSON.

Witnesses:

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THILDA RYDEN.