

(No Model.)

2 Sheets—Sheet 1.

C. PERKINS.
CAR COUPLING.

No. 563,406.

Patented July 7, 1896.

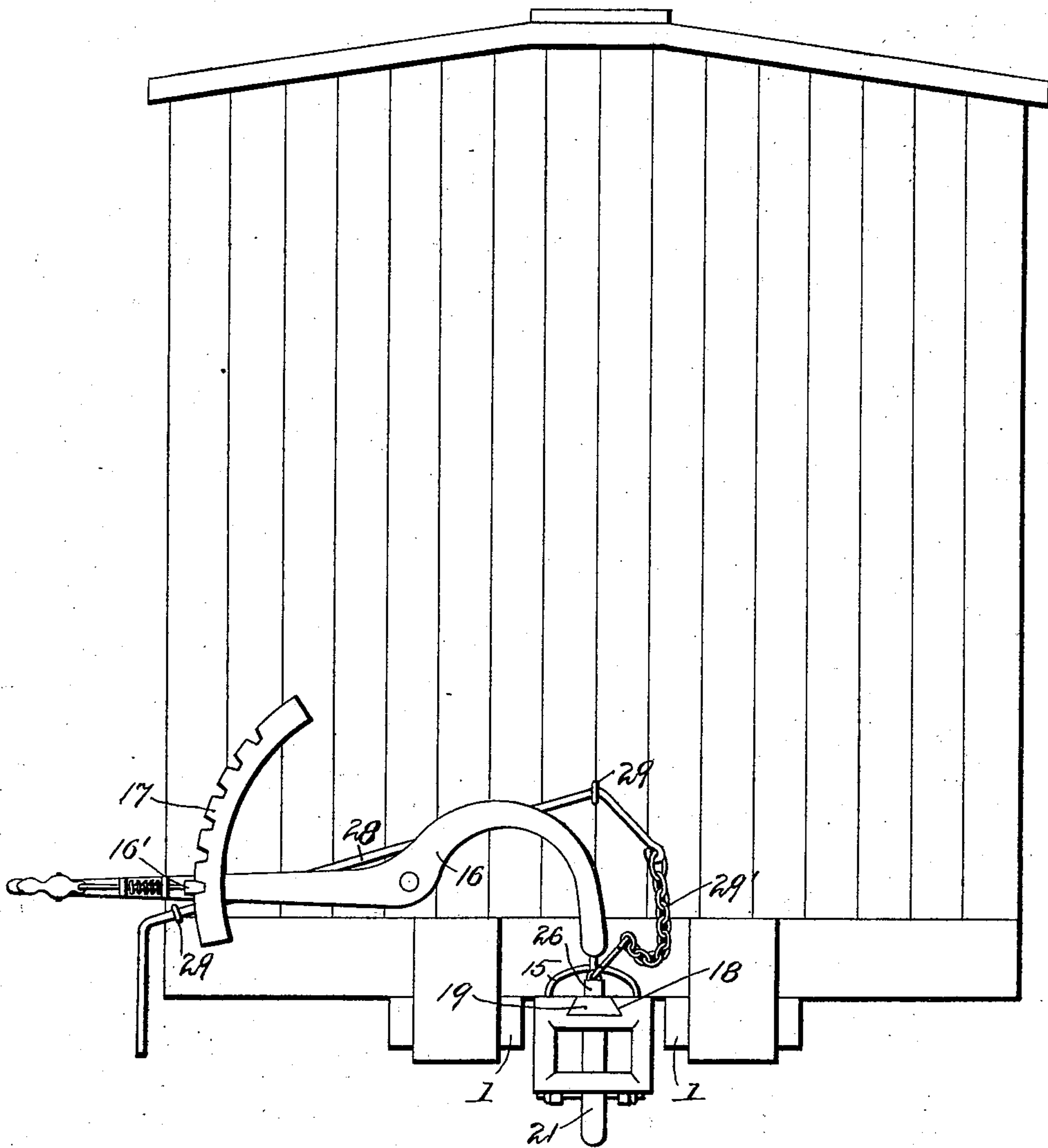


Fig. 1.

Witnesses
F. L. O'Rand.
A. B. Smith.

Inventor
Charles Perkins,
By *A. B. Smith*
Attorney

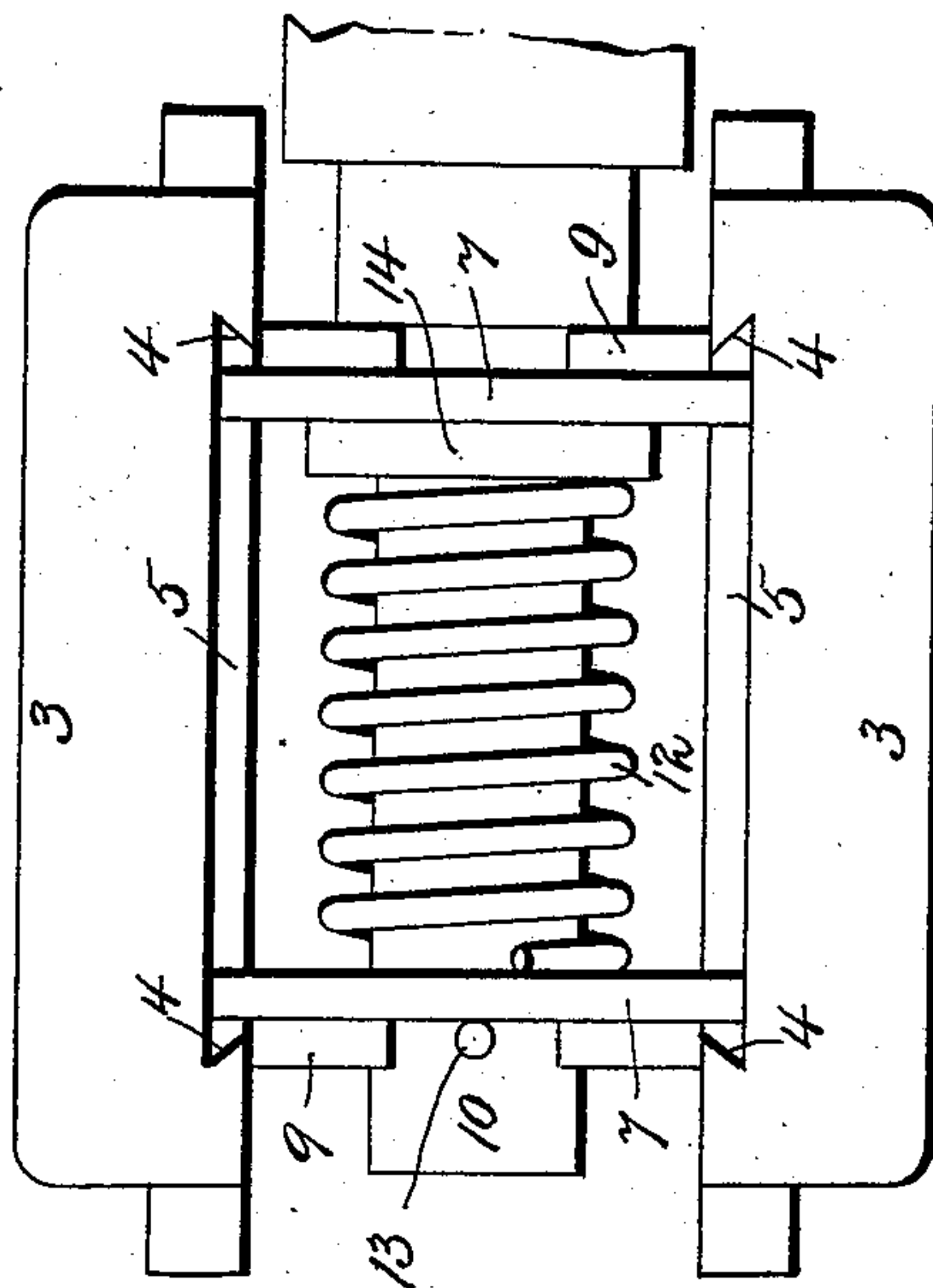
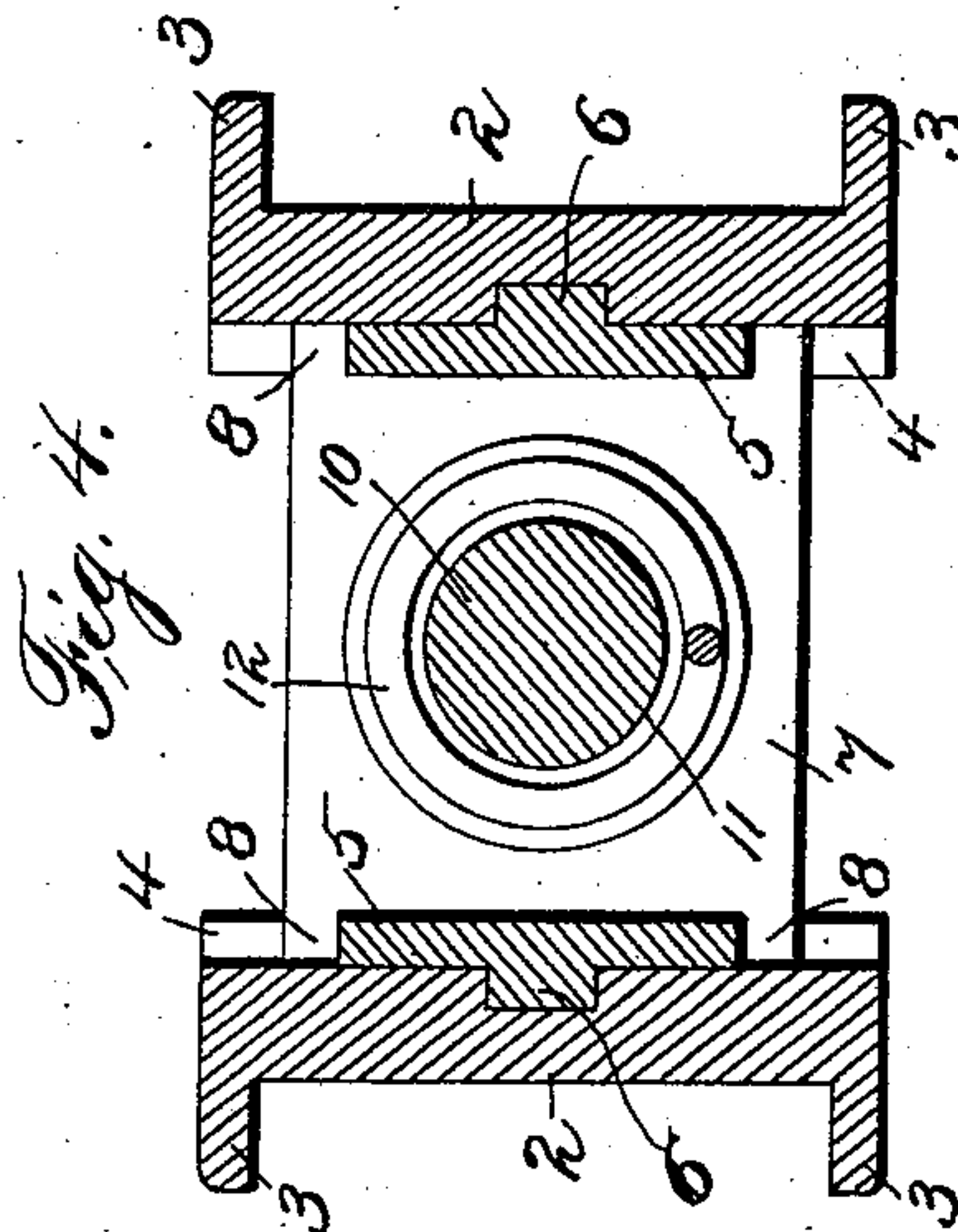
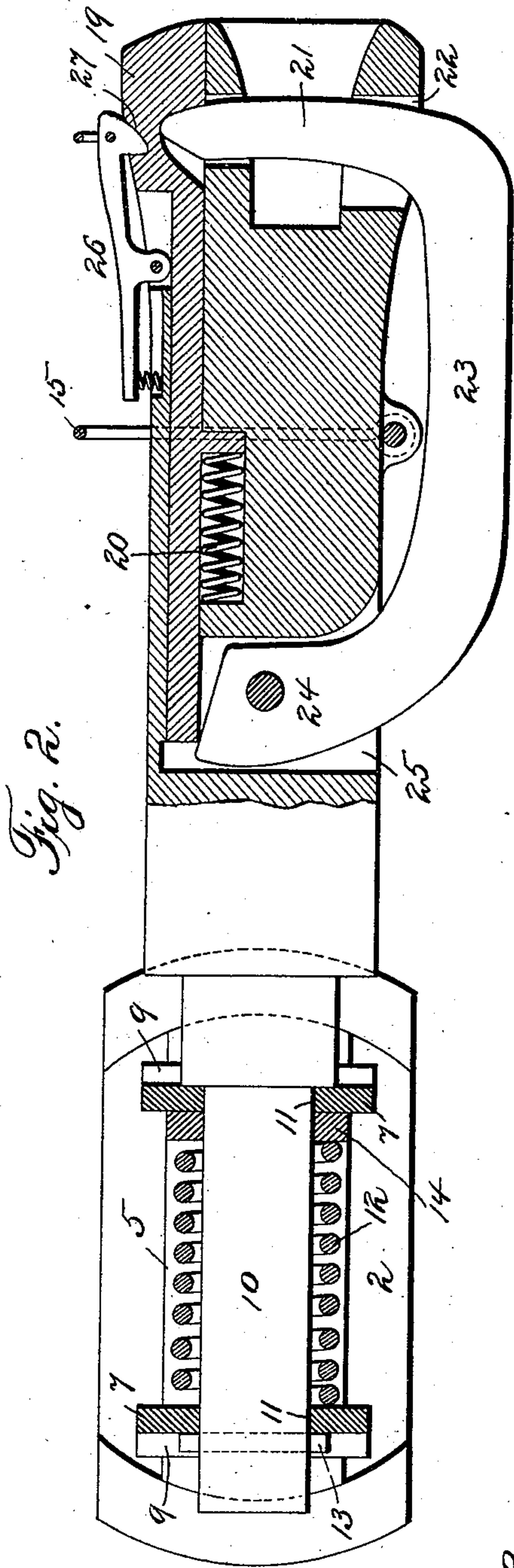
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Fig. 3.

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UNITED STATES PATENT OFFICE.

CHARLES PERKINS, OF PLAINVILLE, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 563,406, dated July 7, 1896.

Application filed October 18, 1895. Serial No. 566,120. (No model.)

To all whom it may concern:

Be it known that I, CHARLES PERKINS, a citizen of the United States, residing at Plainville, in the county of Rooks and State of Kansas, have invented certain new and useful Improvements in Car-Couplers; 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 ap-
10 pertains to make and use the same.

My invention relates to car-couplers, and more particularly to that class of automatic couplers capable of vertical adjustment, which enables cars of different heights to be
15 connected.

The object of the invention is to provide a car-coupler which shall be simple and strong of construction, durable in use, and which may be easily operated to uncouple cars, as
20 well as to raise or lower the draw-head to accommodate it to cars of different heights.

With these objects in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a front view of a portion of a car-body, showing the application of my invention thereto. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a top plan view of the rear end of the drawhead, the supporting-beams, and other parts forming the buffer. Fig. 4 is a cross-sectional view.

1 denotes the longitudinal supporting-beams secured to the under side of the car-body. To the inner sides of these beams at their rear ends are secured plates 2, having laterally-projecting flanges 3, which embrace and are secured to the edges of the beams.
40 These plates have V-shaped guides 4 at their ends curved on the arc of a circle. Plates 5 are pivoted to the plates 2 by bolts 6, and their ends are curved and shaped to correspond with and fit into the V-shaped guides
45 4. Cross-heads 7 are mounted between the pivoted plates 5 and have arms 8 projecting laterally to engage and slide on the upper edges of said plate, which are provided with lugs 9 to limit the movement of the cross-heads. The reduced rounded end 10 of the
50 draw-head is inserted through openings 11 in the cross-head, and a coil-spring 12 is ar-

ranged around the end 10 and is confined between the cross-heads. A pin 13 is inserted through the extreme inner end of the portion
10 and prevents the draw-head from drawing out, while a collar 14 is secured to the portion 10 in advance of the spring and acts to compress it when the draw-head is moved rearward by concussion.

The forward end of the draw-bar is pivotally supported in a bail 15, which is connected to the curved end of a lever 16, pivoted to the end of the car. The free end of this lever is provided with a spring-actuated pawl 16' and
65 a handle connected to said pawl for operating it. A segmental rack 17 is secured to the end of the car and is adapted to be engaged by the pawl, which will hold the draw-head in the desired adjusted position.

A longitudinal dovetail groove 18 is formed in the upper side of the forward end of the draw-head, and a dovetail slide-block 19 is mounted to slide in said groove. A spring 20 is arranged in said groove and is connected
75 with the block to project it forward a distance past the end of the draw-head. A pin 21 projects upward through an aperture 22 in the draw-head and has a rearward projecting portion 23, which terminates in a vertical portion 24, which projects upward through an
80 aperture 25 in the draw-head within the path of movement of the sliding block. This vertical portion 24 is pivoted in said aperture 25, and when the sliding block is thrust outward
85 it will strike said vertical portion 24 and raise the pin 21 through its aperture 22 and hold it in engagement with the coupling-link, as the said sliding block is retained in position
90 by a spring-actuated dog 26, engaging a notch 27 in the upper side of the block.

A crank-lever 28 is hung in bearings 29 on the end of the car above the draw-head and is connected with a chain 29' to the dog 26, so that when the lever is operated to release the
95 dog from the sliding block the block will be thrust outward by the action of its spring, thus returning the parts to their normal position.

In operation, after the draw-head has been
100 adjusted vertically to make it register with a coupler on another car, a link is placed in one of the draw-heads. When the cars come together, the draw-head of one car striking the

sliding block of the other car will move the block rearward under its dog, which will hold it. The pin 21 will be raised through its aperture 22 and engage and hold the link, by reason of the block striking the vertical portion 24 of the pin. The jar incident to the cars coming together will be reduced to a minimum by means of the buffer hereinbefore described.

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

1. In a car-coupler, the combination with a draw-head, of a spring-actuated slide-block mounted thereon, a dog for holding said block in its retracted position, and a pin pivoted to said draw-head and having a portion extending within the path of movement of the sliding block, substantially as set forth.

20 2. In a car-coupler, the combination with a draw-head having a longitudinal dovetail groove, of a dovetail block mounted in said groove, a spring to thrust the block forward, a dog to hold the block in its retracted position, a pin provided with a rearward-extending portion terminating in a vertical portion, which is pivoted to the draw-head and extends in the path of travel of the sliding block, and

means for releasing the dog from the latch, substantially as set forth.

3. In a car-coupler, the combination with the longitudinal supporting-beams and a draw-head having a rounded inner end, of plates secured to said beams and provided with circular V-shaped guides, plates pivoted to these plates and provided with corresponding V-shaped edges and with inwardly-projecting lugs, cross-heads having short arms to engage the upper and lower edges of the pivoted plates and provided with apertures, through which the rounded end of the draw-bar passes, a pin secured to the extreme inner end of the draw-head, a collar secured to the draw-head in advance of the pin, a spring coiled around the draw-head and confined between the cross-heads, a bail pivoted to the forward end of the cross-head, and an operating-lever pivoted to the end of the car and connected with the forward end of the draw-head, substantially as set forth.

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

CHARLES PERKINS.

Witnesses:

C. A. BURLIN,
A. M. KING.