

No. 835,058.

PATENTED NOV. 6, 1906.

J. S. COOPER.  
DRAFT RIGGING.  
APPLICATION FILED JUNE 28, 1906.

Fig. 1.

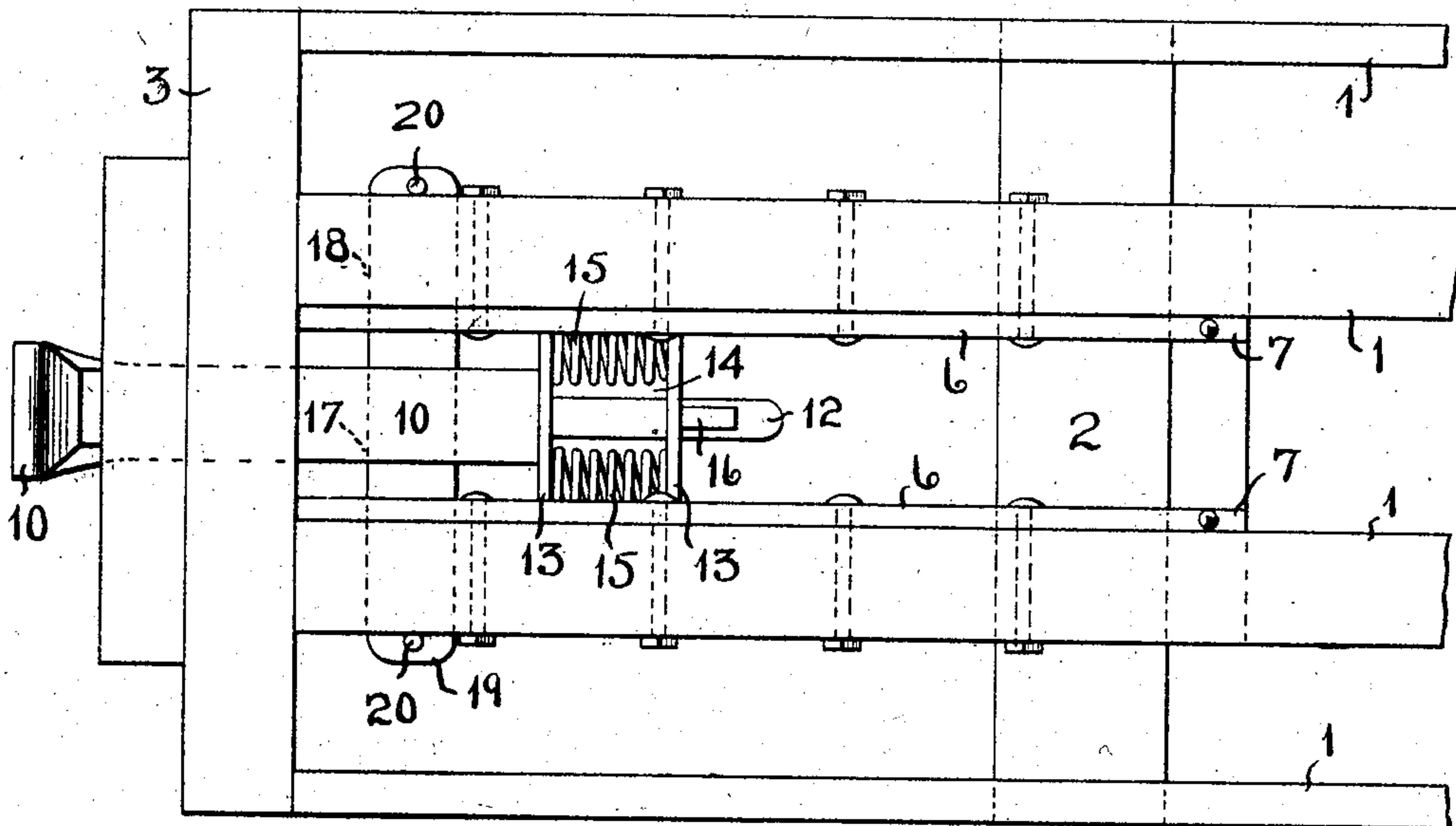


Fig. 2.

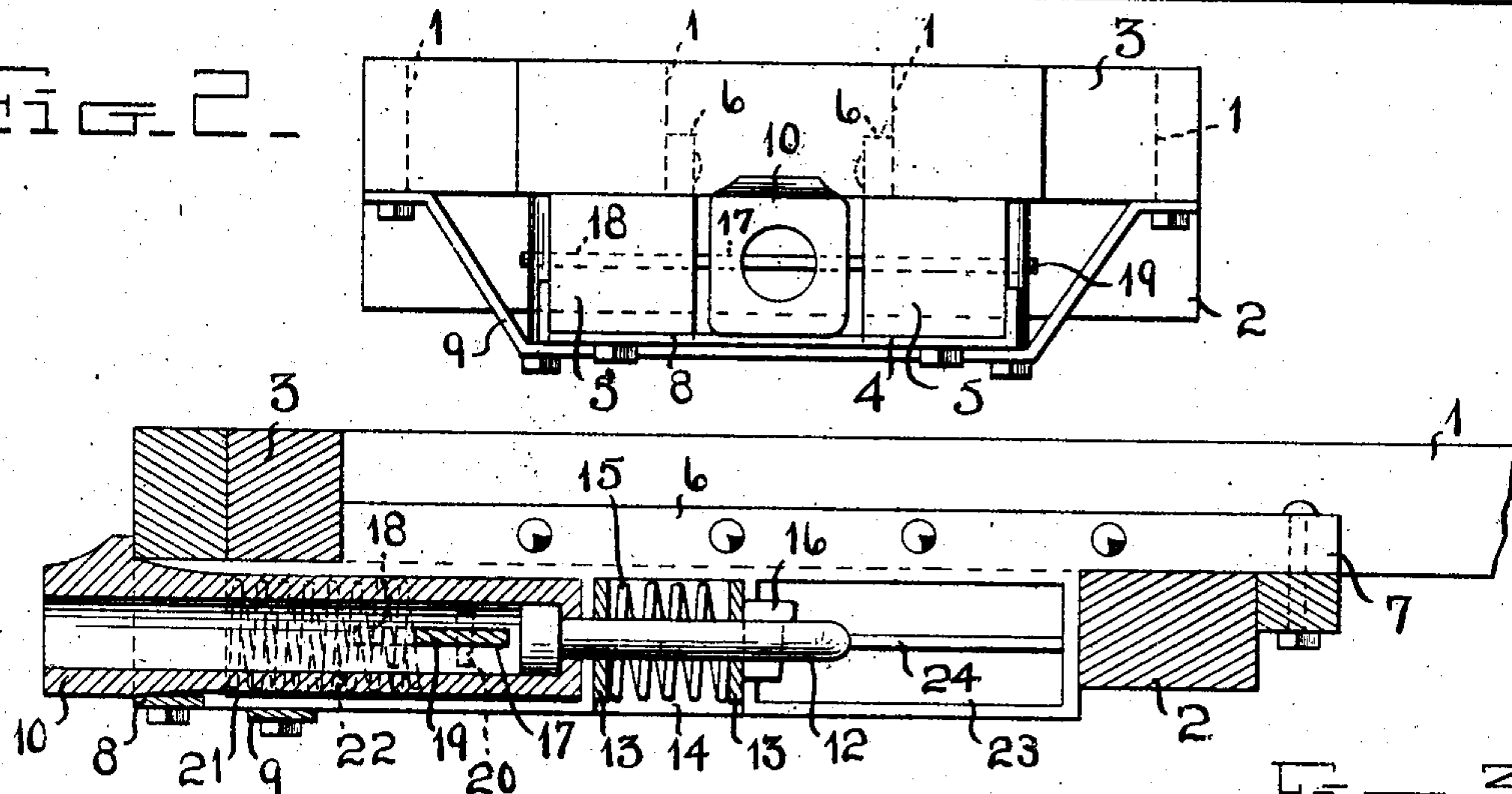


Fig. 3.

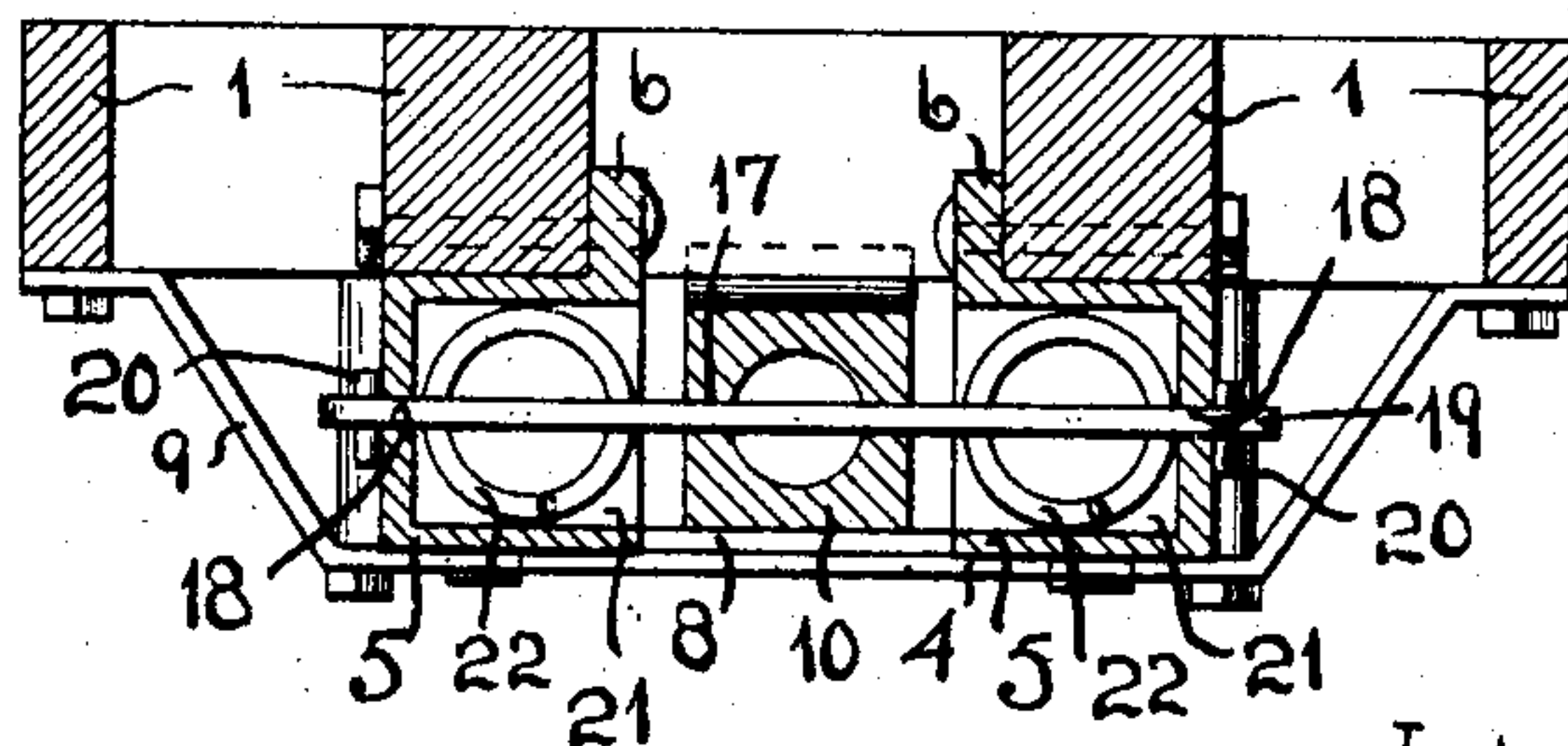


Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## DRAFT-RIGGING.

No. 835,058.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed June 28, 1906. Serial No. 323,810.

*To all whom it may concern:*

Be it known that I, JOHN S. COOPER, a citizen of the United States, residing at Villa Grove, in the county of Douglas and State of Illinois, have invented certain new and useful Improvements in Draft-Rigging; and I do declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

This invention relates to improvements in draft-rigging for railway-cars.

The object of the invention is to provide a draft-rigging having means whereby the slack of the draw-bar, due to the wear of the parts, will be taken up, thereby preventing the jerking of the car when starting or the sudden jarring of the same when stopping.

A further object is to provide a draft-rigging which may be taken out and replaced under a car without removing the load.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a bottom plan view of a portion of a freight-car, showing the application of the invention thereto. Fig. 2 is an end view of the same. Fig. 3 is a central vertical longitudinal sectional view, and Fig. 4 is a vertical cross-sectional view taken on a line with the draw-bar key.

Referring more particularly to the drawings, 1 denotes the longitudinal sills of the car, 2 denotes the front bolster, and 3 the front cross-sill of the same. Secured to the lower side of the longitudinal sills 1 is a draw-bar-supporting frame 4, said frame comprising parallel longitudinally-disposed guide-bars 5, having on its inner edges upwardly-projecting longitudinally-disposed securing-flanges 6, which are adapted to engage the inner sides of the longitudinal sills and are securely bolted thereto, as shown. The inner ends of the flanges 6 project beyond the ends of the side bars and engage the upper side of the front bolster 2, as shown at 7. The forward ends of the guide-bars 5 are connected together by a strap 8 and are securely held to the front cross-sill 3 by a strap 9.

Slidably mounted between the side bars 5 is a draw-bar 10, in the inner end of which is secured a rearwardly-projecting guide-stem

12, which extends through apertured follower-plates 13, the ends of which are seated in oppositely-disposed recesses 14 on the adjacent inner faces of the guide-bars 5. Between the follower-plates 13 in the recesses 14 are arranged coil-springs 15. In the inner end of the stem 12 is formed a vertically-disposed slot, in which is arranged a retaining-key 16, adapted to engage the adjacent face of the inner follower-plate 13, as shown.

Through the draw-bar 10, adjacent to its inner end, is formed a horizontal transversely-disposed slot 17, through which and through aligned longitudinally-disposed slots 18 in the guide-bars 5 is adapted to be inserted a draw-bar key 19. The key 19 is secured in place by means of pins or other fastening devices 20, arranged in the projecting ends of the key and engaging the outer sides of the guide-bars 5, as shown. The slots 18 are of greater length than the width of the key 19, thereby permitting the same to have a greater or less amount of play. In the inner sides of the guide-bars 5, adjacent to each side of the draw-bar, are formed longitudinally-disposed recesses 21, in each of which is disposed a spiral spring 22. One end of the spring 22 bears against the forward wall of the recesses 21, while the opposite ends thereof engage the draw-bar key, whereby said draw-bar is normally forced inward and by means of which a yielding connection is provided between the draw-bar and the guide-bar 5.

If desired, the inner ends of the guide-bars 5 may be recessed longitudinally, as shown at 23, and provided with a centrally-disposed rim or web 24, thereby decreasing the weight of the guide-bars without diminishing the strength of the same.

By providing a draft-rigging such as herein shown and described a yielding connection is provided for the draw-bar, whereby all jerking or jarring resulting from looseness of the parts due to wear will be prevented by the taking up of said looseness or slack with the springs 15 and 22, as will be understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the prin-



ciple or sacrificing any of the advantages of this invention as defined by the appended claim.

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

A draft-rigging for railway-cars comprising a pair of longitudinally-disposed guide-bars, attaching-flanges formed on the upper inner edges of said bars to engage the longitudinal sills and front bolster of the car-frame, securing-straps arranged on the front end of said guide-bars to attach the latter to the front cross-sill of the car, a draw-bar slidably mounted between said guide-bars, follower-plates arranged in oppositely-disposed recesses in the inner sides of said bars, coil-springs arranged between said plates to yieldingly force the same apart, a stem connected to the inner end of the draw-bar and

extending through alined apertures in said plates, a key arranged in the inner projecting end of said stem, a transversely-disposed draw-bar key arranged in said draw-bar and slidably engaging alined slots in said guide-bars, coil-springs arranged in longitudinal recesses in the inner sides of said guide-bars between the forward edge of said draw-bar key and the end walls of said recesses, whereby said key and draw-bar are yieldingly forced inward or retracted, and means to hold said draw-bar key in place, substantially as described.

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

JOHN S. COOPER.

Witnesses:

G. L. KENNEDY,  
BARNEY HESSLER.