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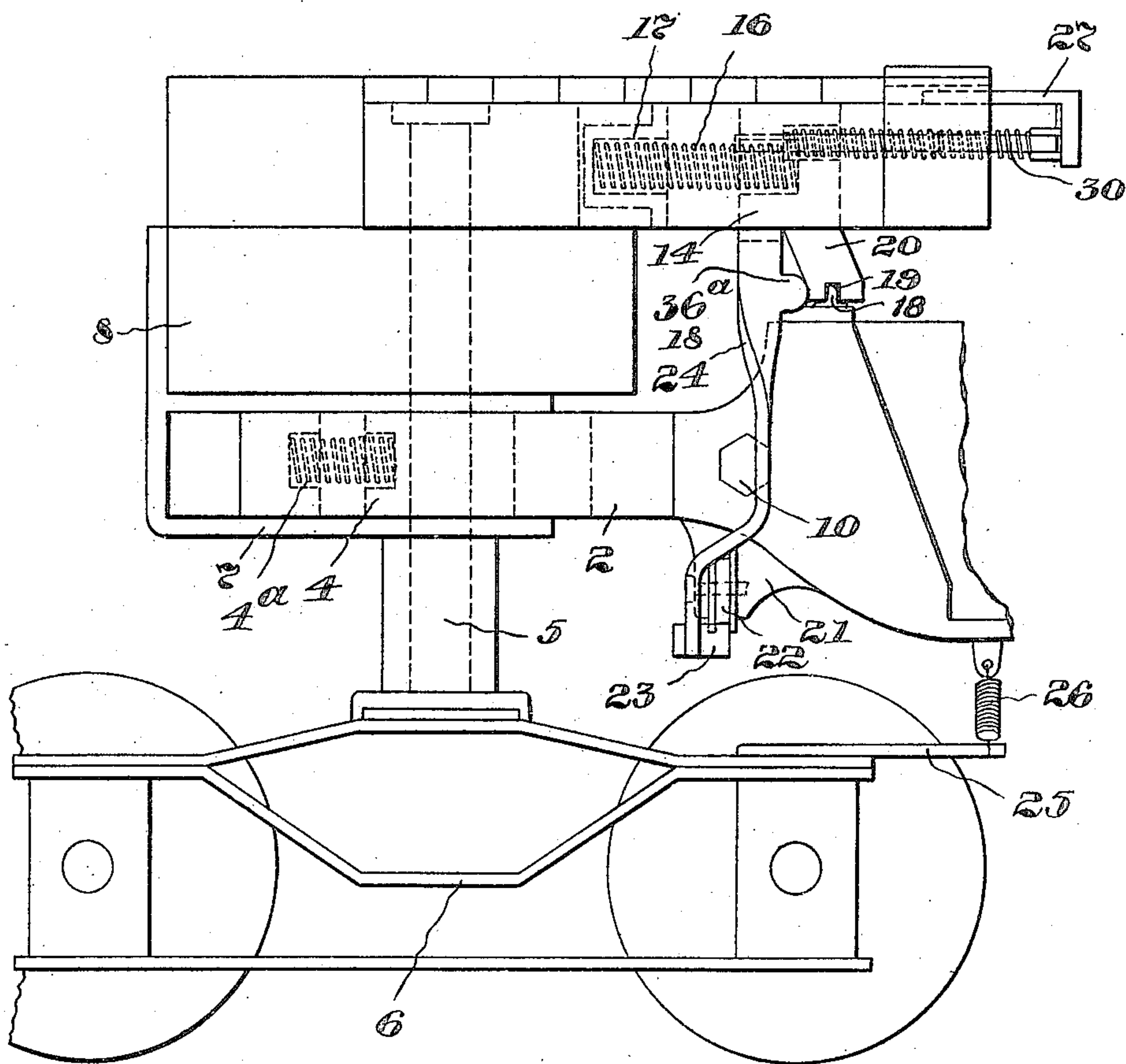
PATENTED DEC. 31, 1907.

P. J. DUGAN.  
CAR COUPLING.

APPLICATION FILED OCT. 7, 1905,

4 SHEETS—SHEET 1.

*Fig. 1*



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*Inventor:*  
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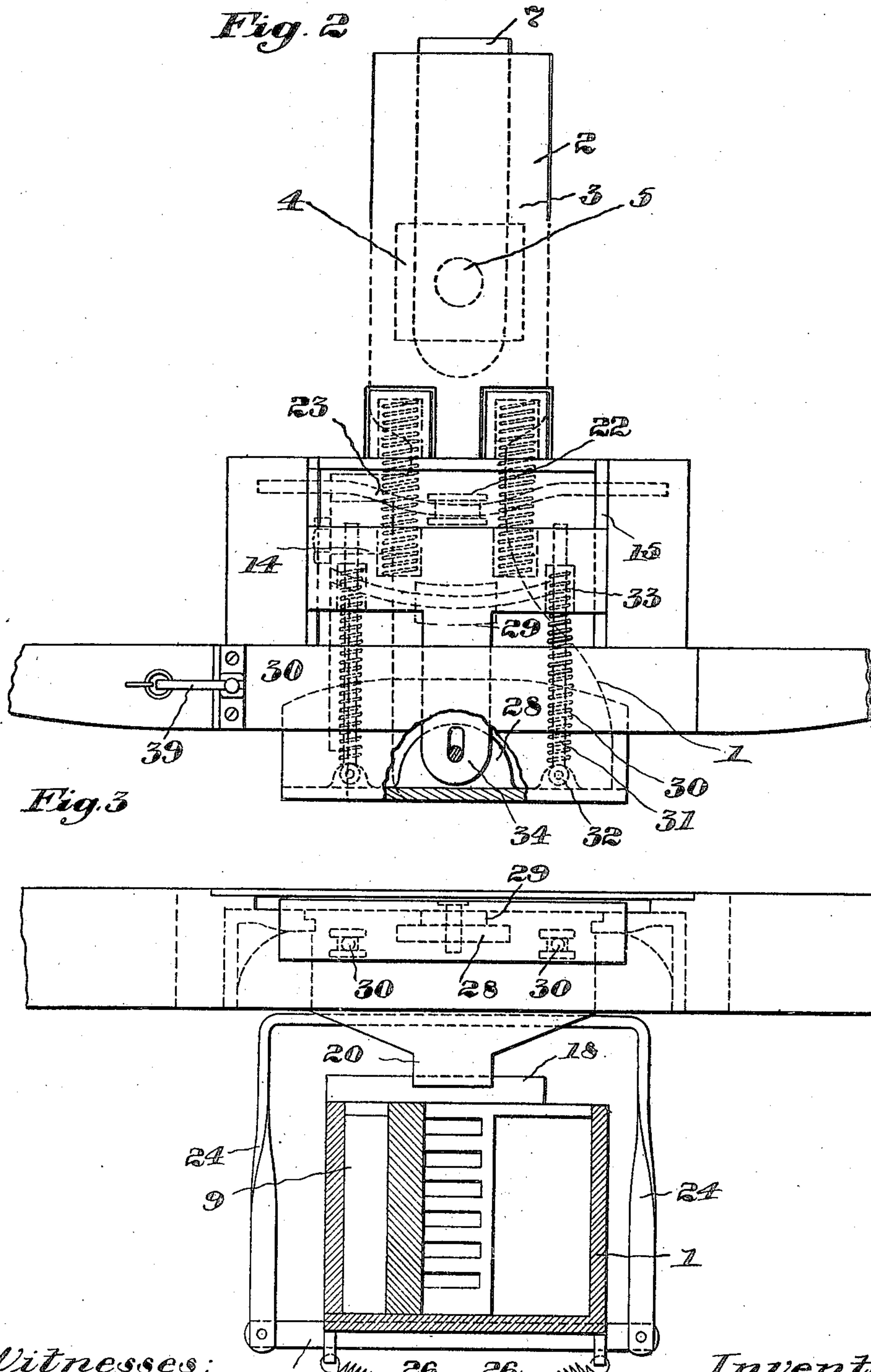
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4 SHEETS—SHEET 2.



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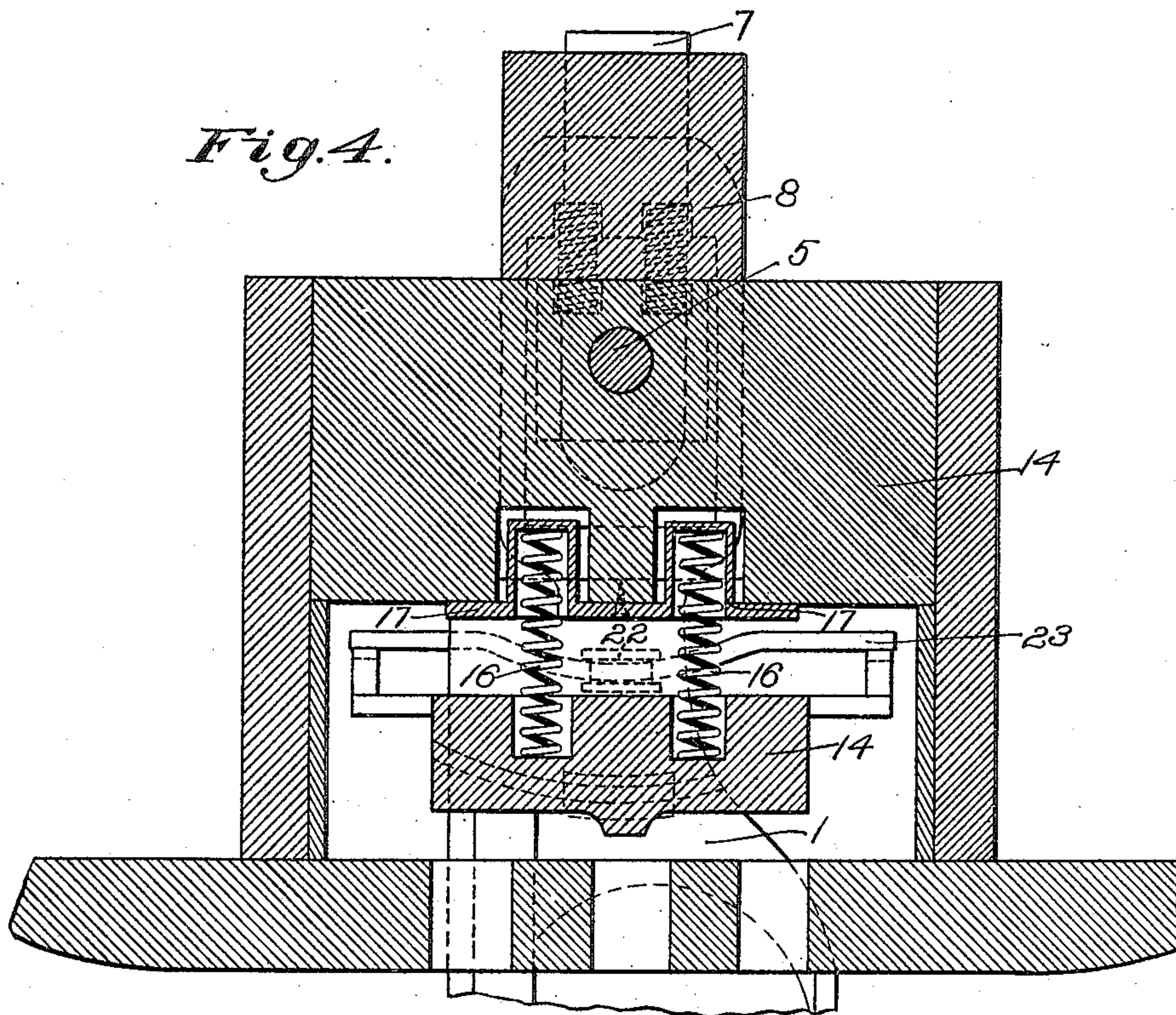
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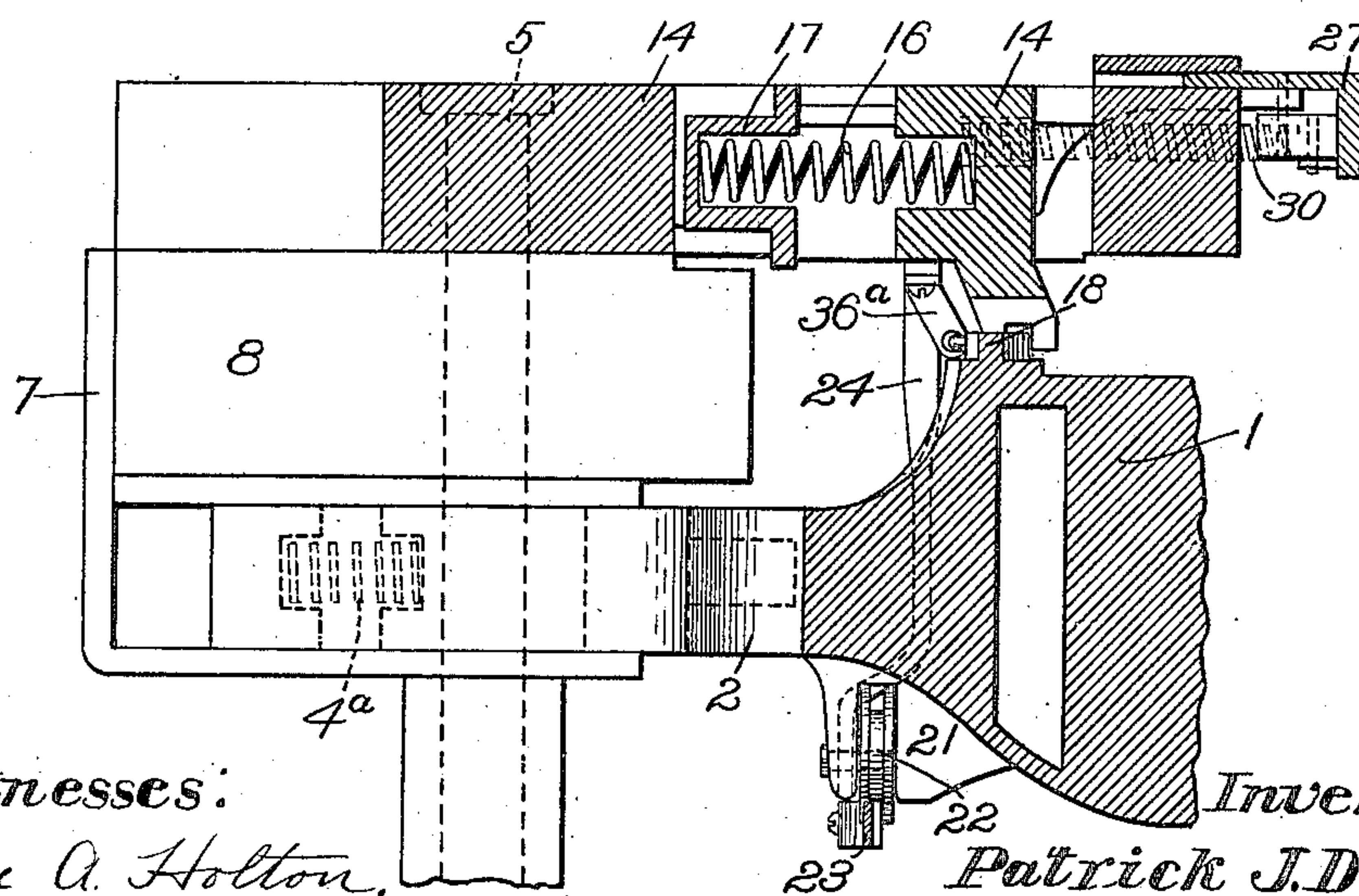
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4 SHEETS—SHEET 3.

*Fig. 4.*



*Fig. 5.*



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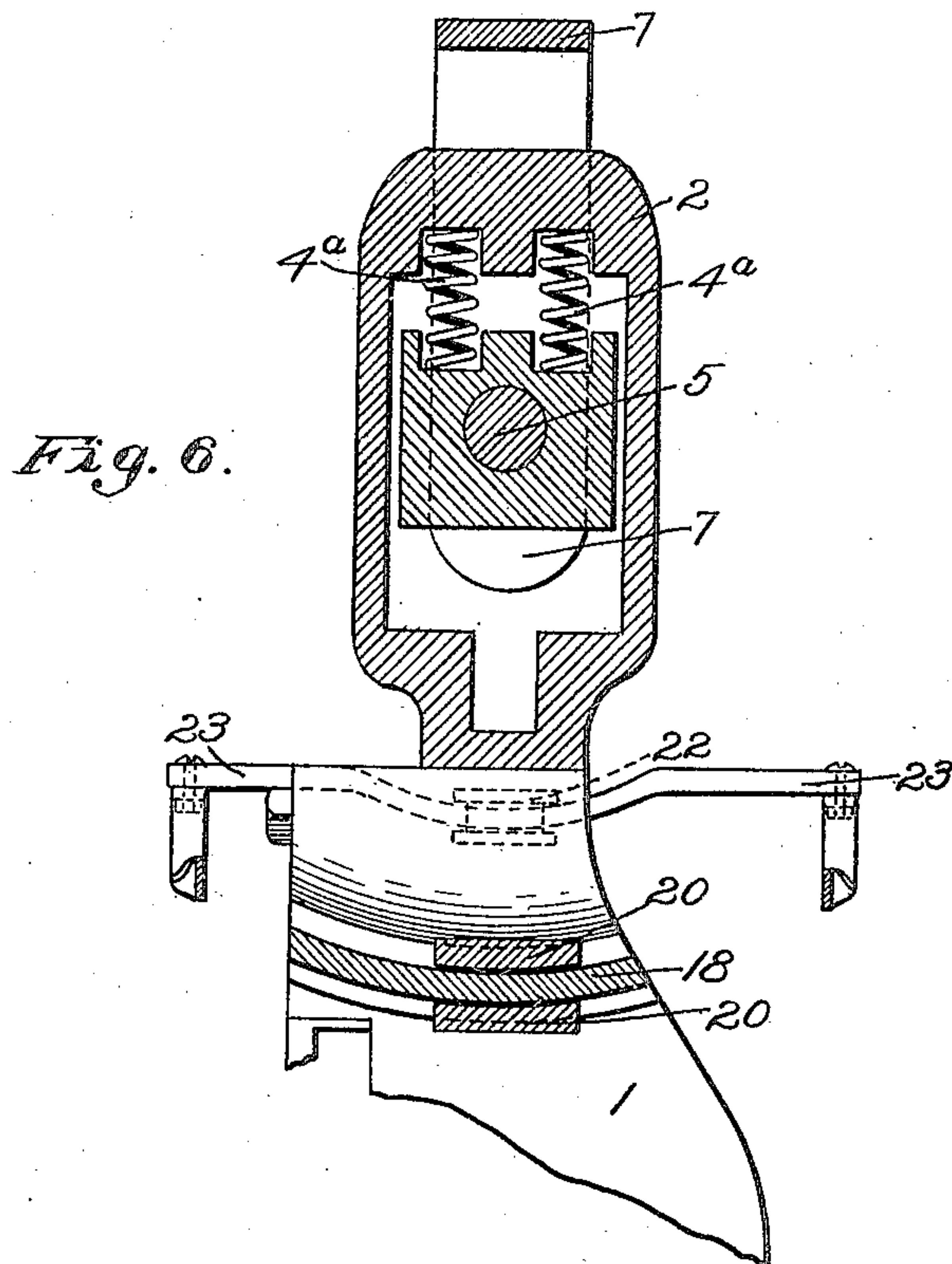
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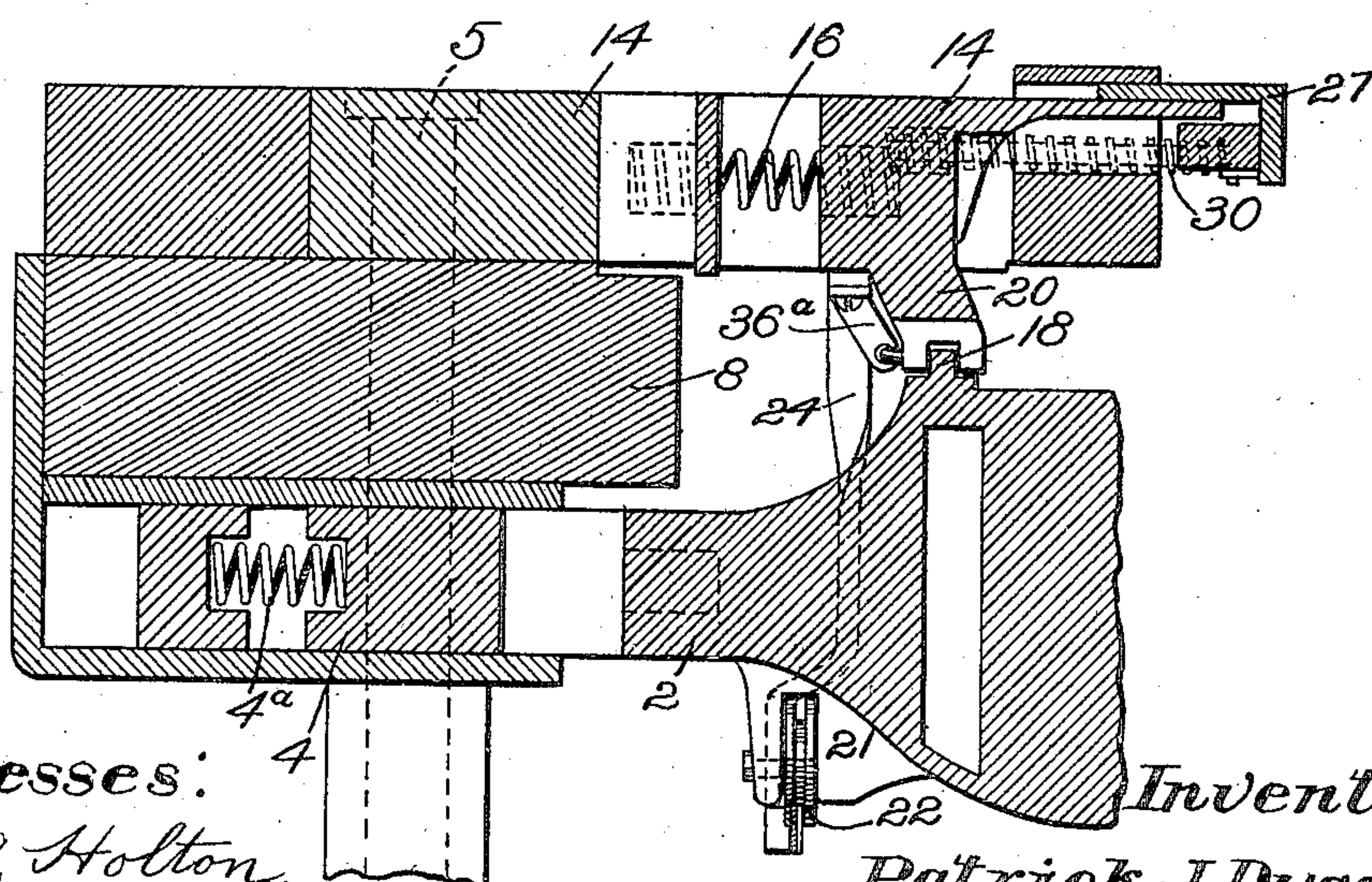
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APPLICATION FILED OCT. 7, 1905.

4 SHEETS—SHEET 4.



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

No. 875,330.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed October 7, 1905. Serial No. 281,768.

*To all whom it may concern:*

Be it known that I, PATRICK J. DUGAN, a citizen of the United States, residing at Chestnut Hill, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Car-Couplers, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to an improved buffer and draft appliance for railroad cars.

Heretofore, the buffers in common use have been rigidly secured to the body of the car, to which in turn was secured the drawbar. In buffers of this type no movement of the buffer would cause a corresponding movement of the drawbar, nor would any movement of the drawbar cause a corresponding movement of the buffer without first causing a movement of the body of the car to which the drawbar was secured.

By my invention the movement of either the drawbar or the buffer will cause a corresponding movement in the other member without movement of the car body, thus providing for sufficient movement of both members to allow of the adjustment made necessary by the contact of two cars when coupled together or by the unequal movement of the car bodies when the train is in motion, without the necessity of first moving the car body itself, thus obviating much of the gyrating of the cars caused by the use of the drawbars and buffers now in common use.

The invention will be best understood from a description of one particular embodiment thereof which is herein selected for illustration.

In the drawings,—Figure 1 is a view in side elevation of a car coupler and adjacent part embodying my invention; Fig. 2 is a plan view of the parts shown in Fig. 1; and Fig. 3 is a front elevation of said parts. Fig. 4, is a horizontal sectional view on the line running through the center of the spring 16. Fig. 5, is a vertical sectional view on the line running through the center of the spring 16. Fig. 6, is a horizontal sectional view on the line running through the center of the spring 4<sup>a</sup> to a point opposite the end of the beam 8, thence on a line running through the center of the rib 18 and slot 19. Fig. 7, is a vertical

sectional view on the line running through the center of the spring 4<sup>a</sup>.

In the embodiment of my invention as herein selected for illustration the buffer and draft appliance are shown only in conjunction with a car platform peculiarly adapted for use on passenger cars.

The draft appliance proper, as here shown, consists of the socket member 1 having a rearward extension 2, which is recessed at 3 (Fig. 2) to receive the pivot block 4 mounted upon the king bolt 5, which depends from the body of the car and upon which also the car truck typified at 6 (Fig. 1) may also be pivoted. The drawbar member 2 together with the pivot block is supported in a suitable bracket 7 secured in any desired manner to a cross-beam 8 of the car body.

Between the rear wall of the recess 3 of drawbar member 2 and the pivot block 4 are interposed the draft springs 4<sup>a</sup> which afford spring draft to the drawbar member.

To provide for the spring buffer action usually present in devices of this description the drawbar 2 is connected with a buffer member or block 14, which is mounted to slide longitudinally of the car body upon guide-ways 15 (Fig. 2) and is normally held in its forward position by means of buffer springs 16 which are interposed between said block 14 and suitable socket members 17 secured to a cross-beam of the car body.

To permit of lateral swinging movement of the drawbar member 2 upon its pivot 5 with respect to the buffer member 14, the drawbar member is provided upon its upper face with a guide rib 18 (Figs. 1, 2 and 3), which engages a guide slot 19 in the bottom face of a downwardly extending lug 20 of the buffer block 14.

To afford additional support to the drawbar member 2 at its forward end, the latter is provided on its under side with a lug 21 carrying a friction wheel 22, arranged to run upon a curved track 23, supported by arms 24 depending from the buffer member 14. By this arrangement also the track 23 is adapted to move in unison with the drawbar member 2 and buffer member 14.

In order that the drawbar may be held normally in central longitudinal position with respect to the car, springs 26 are provided, by means of which the forward end of the drawbar is adjustably connected to the



truck, either at a substantially central point thereon, or at a convenient point upon each side of the truck.

In order to provide for a continuous passage-way between adjacent cars, I have here shown the platform extension member 27, which ordinarily is spring mounted in a recess in the edge of the car platform, but is here shown as pivoted at 28 to a forwardly extending arm 29 of the buffer member 14. This platform extension is normally held in parallelism with the edge of the platform by means of springs 30, carried by the rods 31, pivoted at 32 to said member and passing through sockets 33 in the buffer member 14.

The arm 29 to which the platform extension is pivoted, is slotted at 34 to permit of limited extension and retraction of the platform extension in addition to its pivotal movement.

The arrangement of the platform extension above-described, by which it is connected through the buffer member 14 with the head of the drawbar 2, serves also a further and important function in that when the extension members of adjacent cars are moved inwardly to the limit of their slots 34, further inward movement of said extensions causes the drawbar to move inwardly also, whereby damage to the coupling device is prevented.

From the arrangement of the platform extension above described, it will be obvious that it is adapted to be extended and retracted in unison with the drawbar member

2, thus insuring proper contact between adjacent platform extension members at all times.

While I have here described a particular construction and arrangement of parts of my invention, it is to be understood that the invention is not limited to such specific embodiment.

Claim—

1. In a draft appliance the combination of the pin 5, pivot block 4, spring 4<sup>a</sup>, drawbar 2 provided with the lug 21 carrying friction wheel 22, track 23 supported by the arm 24, said drawbar provided with a rib 18 adapted to receive the guide slot 19 in the buffer block 14, spring 16, socket member 17, spring 30, rod 31 connected to the extension member 27 pivotally connected to the arm 29 of the buffer 14.

2. In a device of the class described, a buffer provided with hangers, a track supported thereby and a pivoted draw bar provided with a wheel to run upon said track, and yielding means for normally maintaining the track engaging wheel in engaging position and for normally maintaining the track engaging wheel in central position relative to and upon said track.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

PATRICK J. DUGAN.

Witnesses:

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EVERETT S. EMERY.