

No. 632,912.

Patented Sept. 12, 1899.

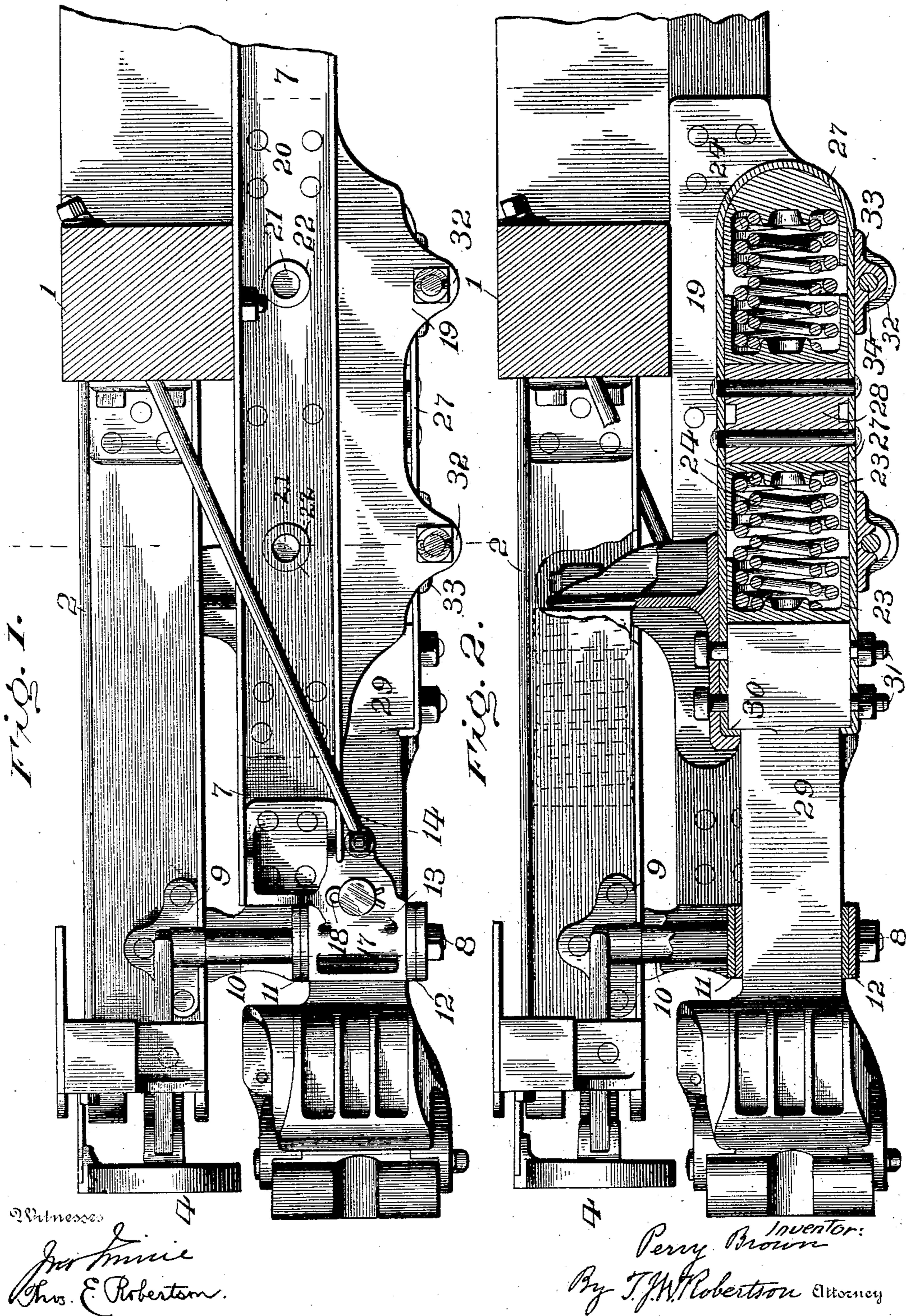
P. BROWN.

DRAFT MECHANISM.

(Application filed Sept. 2, 1898.)

(No. Model.)

3 Sheets—Sheet 1.



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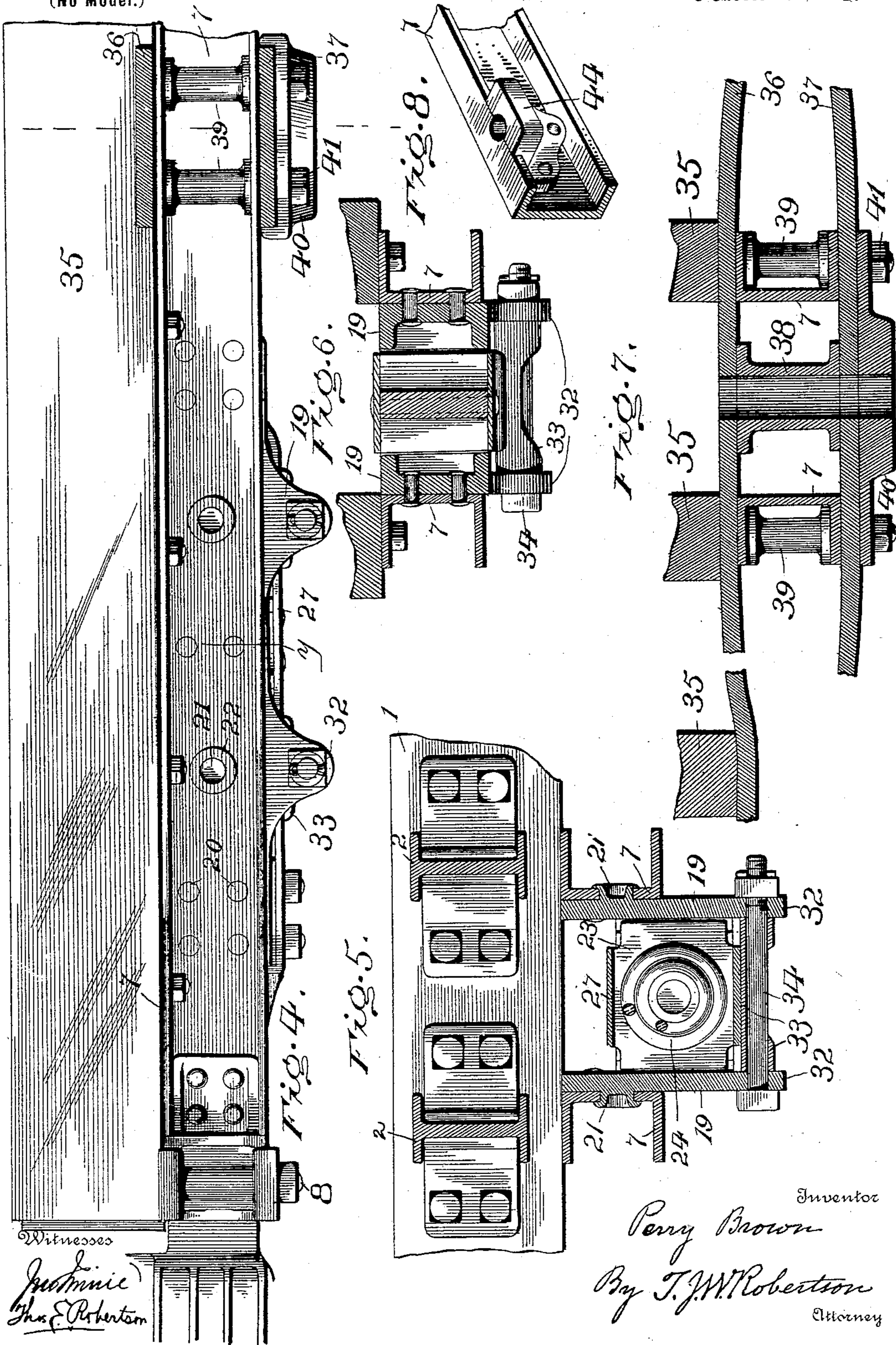
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3 Sheets—Sheet 2.

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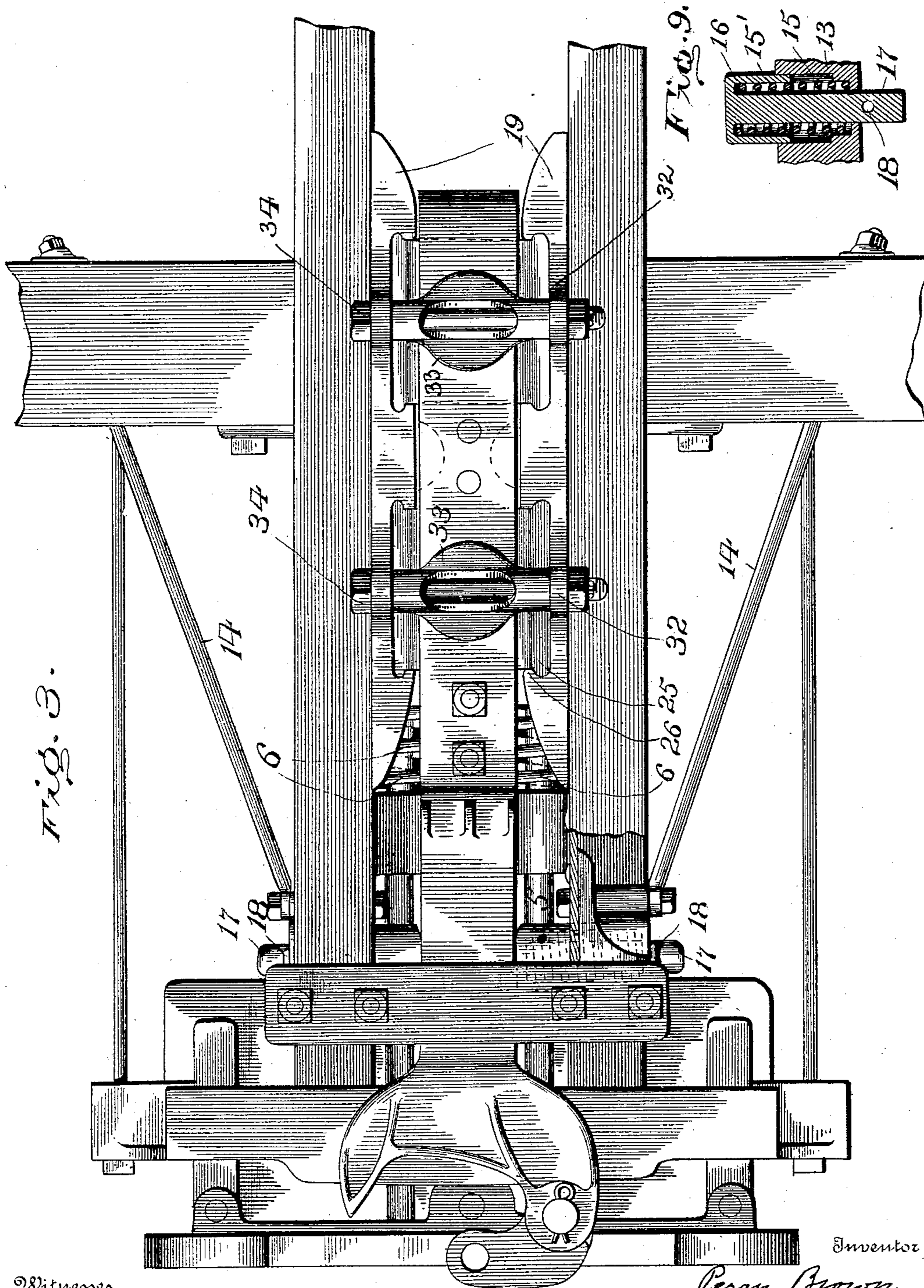
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(No Model.)

3 Sheets—Sheet 3.



Witnesses

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UNITED STATES PATENT OFFICE.

PERRY BROWN, OF WILMINGTON, DELAWARE.

DRAFT MECHANISM.

SPECIFICATION forming part of Letters Patent No. 632,912, dated September 12, 1899.

Application filed September 2, 1898. Serial No. 690,124. (No model.)

To all whom it may concern.

Be it known that I, PERRY BROWN, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented a certain new and useful Improvement in Draft Mechanism, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improvement on that class of draft mechanism shown in my Patent No. 598,765, granted February 8, 1898; and it consists in the peculiar construction, arrangement, and combination of parts hereinafter more particularly described and then definitely claimed at the end hereof.

In the accompanying drawings, Figure 1 is an elevation of a part of a draft mechanism constructed according to my improvement, adapted for use on a passenger-car. Fig. 2 is a similar view, but with part in section. Fig. 3 is a bottom plan of the same. Fig. 4 is an elevation of a draft-rigging on the same principle adapted for use on freight-cars. Fig. 5 is a transverse section through the line *xx*, Fig. 1. Fig. 6 is a similar section through the line *yy* in Fig. 4. Fig. 7 is a similar section through the line *zz* in Fig. 4. Figs. 8 and 9 are details, which will be more fully described hereinafter.

Referring now to the details of the drawings by numerals and more particularly to Figs. 1, 2, 3, and 5, 1 represents the end sill of the car, to which are secured the steel I-beams 2 2, which carry the buffing-plate 4, its guide-bar 5, its springs 6, and other connections, as substantially shown in my aforesaid patents, and therefore require no further description. Below the sill 1 are draw-irons 7, which are secured by bolts passing through the upper flange of the draw-irons and the sill and are further secured in front by bolts 8, passing through the castings 9 10, straps 11 12, and a peculiarly-formed casting 13, which is riveted to the draw-irons 7. The casting has one end of a brace-rod secured to it, whose other end passes through the sill 1. A socket 15 (see Fig. 9) is formed in the castings 13 to receive the spring 15', the guide-thimble 16, and the pin 17, whose outer end projects through the casting and receives a cotter 18. These thimbles (there being one on each side of the draw-bar)

serve to keep it in a central position, and yet allow it to yield in either direction when necessary.

On the inner side of each of the draw-irons is attached a cheek-plate 19, partially by rivets 20 and partially by hollow lugs 21, formed on said cheek-plate and which are passed through holes 22 bored in the irons 7 and then riveted on the outside thereof. Between these cheek-plates are set the follower-blocks 23, inclosing the springs 24, each of which blocks are provided with lips 25 to engage with lips 26 on the cheek-plates. Three of the follower-blocks are alike in form, but the fourth has a semicircular back, around which passes the yoke 27, having secured thereto near the center of its length a block 28, which acts on the follower-blocks 23 adjoining it as the draw-bar 29 is drawn in or out. The front ends of this yoke are bent so as to catch over the shoulders 30, formed on the draw-bar, and said yoke is firmly secured to said draw-bar by bolts 31. On the bottom of the cheek-plates are formed ears 32, through which and through retaining-plates 33 are passed bolts 34, by withdrawing which the follower-blocks, springs, and yoke could be dropped down from between the cheek-plates if the nuts on the bolt 8 were loosened sufficiently to allow the strap 12 to drop slightly.

It will be seen on examining Fig. 5 that in some cases the cheek-plates extend considerably below the channel-iron sills and that the retaining-plate 33 being tightly fitted between the ears of the cheek-plate and the bolt 34, passing through the ears and retaining-plate and secured by a nut the lower part of the cheek-plates and the retaining-plate are firmly secured together and the former prevented from spreading, and thus the retaining plate and bolt, besides serving as a means of holding the draw-bar in place, also serve as a means for securing together the lower parts of the cheek-plates. It is evident that to accomplish either of these purposes it is not necessary that the part 33 should be of the exact shape shown, as this may be varied to a considerable extent, whether said part 33 is used as a retaining-plate or as a "filler" or filling-in piece between the ears on the cheek-plates to enable the bolt and nut to firmly connect the opposite cheek-plates.

Referring now to that form of my invention illustrated in Figs. 4 and 6, which show a draft mechanism particularly adapted for freight-cars and having a bolster, which latter may also be used with the draft mechanism for passenger-cars, heretofore described, in this figure the draw-bars and cheek-plates are set higher up in the channel-irons 7, bolted to the draft-timbers 35 of the car, the relative position of the cheek-plates and channel-irons being shown in Fig. 6, while the position of the cheek-plates in the passenger-car draft mechanism may be seen in Fig. 5. These two figures also show that the depth of the cheek-plates in the freight-car draft mechanism is considerably less than in that used under passenger-cars. Except in the particulars noted the cheek-plates and their accompanying parts are substantially the same in both forms.

The bolster is formed of two plates 36 and 37, the former being let into the timbers 35 (which are cut away to receive it) and is then bent down to avoid cutting away the other timbers. Between the plates are set the channel-irons 7 and the king-bolt spool 38. Between the flanges of the channel-irons are set four spools 39, and beneath the plate 37 the bolster-plate 40 is set, and the whole secured together and to the timbers 35 by bolts 41, which pass through the iron-work and the timber above.

In some cases instead of using the channel-irons with wide flanges, as in Fig. 6, which are difficult to procure, I may use narrower-flanged irons, such as is shown at 7' in Fig. 8, which can be done by riveting a bracket 44 to the channel-iron, as shown in said figure, and then boring a hole through the bracket and the edge of the flange of the channel-iron.

What I claim as new is—

1. The combination in a draft mechanism, of two draw-irons, followers set between the

draw-irons, a spring between the followers, cheek-plates having depending ears between the followers and draw-irons, a filler fitted between the ears, and a bolt passing through said ears, and having a nut thereon to secure the filler and cheek-plates rigidly together, substantially as described.

2. The combination in a draft mechanism, of two draw-irons, cheek-plates set between them, and having ears extending below the same, followers and springs working between the cheek-plates, a retaining-plate set below the cheek-plates, and a bolt passing from ear to ear of the cheek-plates centrally under the retaining-plates, substantially as described.

3. The combination in a draft mechanism, of a draw-iron having a vertical web, a casting 13 secured to the web of said iron and having a socket 15 formed therein, with a spring 15' set in said socket, a thimble 16 partially inclosing said spring and having a pin 17 projecting through said casting, substantially as described.

4. The combination in a draft mechanism, of the two draw-irons 7, the plates 36, 37, one set under and the other over said irons, the bolster-plate 40, the spools 38, 39, set between the plates and means for securing these parts together, substantially as described.

5. In a draft mechanism, and in combination with the sills of the car, a bolster having its upper plate let into the under side of the inner sills and bent downward and then horizontally, whereby the outer sills rest upon and are supported by the ends of said plate, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 25th day of August, 1898.

PERRY BROWN.

Witnesses:

THOS. E. ROBERTSON,
ALFRED ROBERTSON.