(No Model.)

3 Sheets—Sheet 1.

P. BROWN.

DRAFT AND BUFFER MECHANISM.

No. 548,863. Patented Oct. 29, 1895.

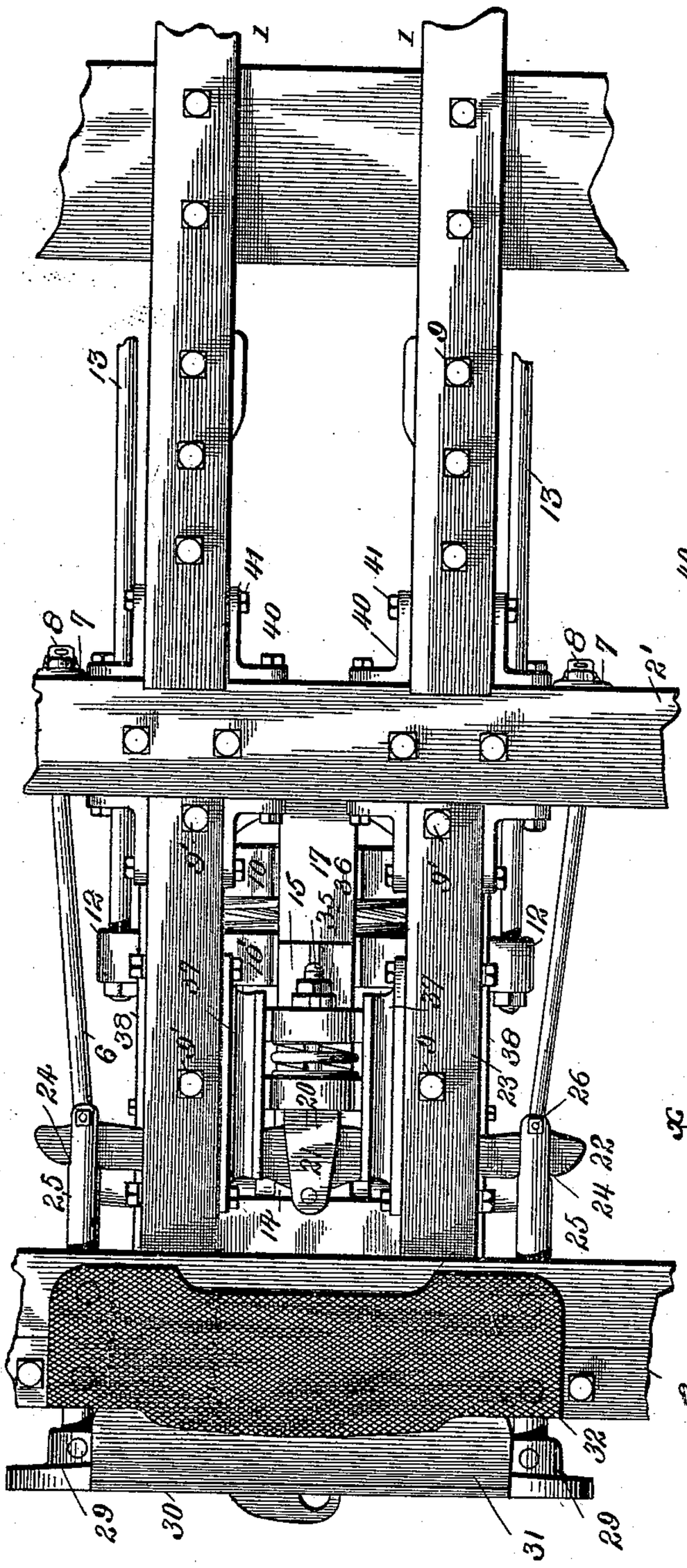


Fig. 1.

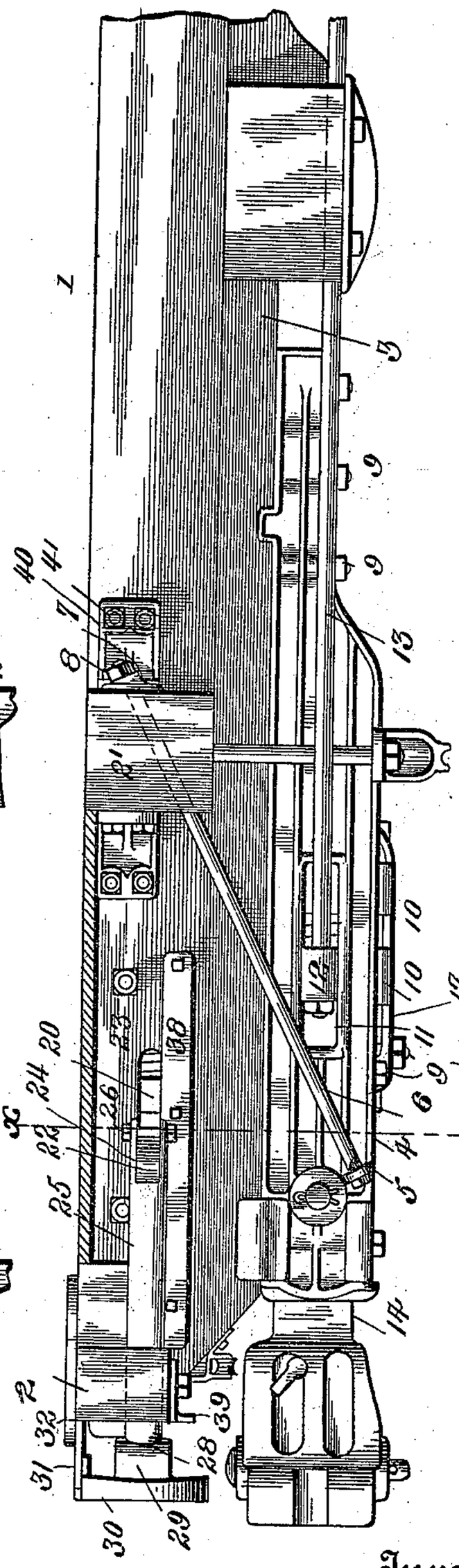


Fig. 2.

Witnesses
John Dennis
Thos. E. Robertson

Inventor
Perry Brown
By T. J. W. Robertson
Attorney.

(No Model.) 3 Sheets—Sheet 2.

P. BROWN.

DRAFT AND BUFFER MECHANISM.

No. 548,863. Patented Oct. 29, 1895.

Fig. 3.

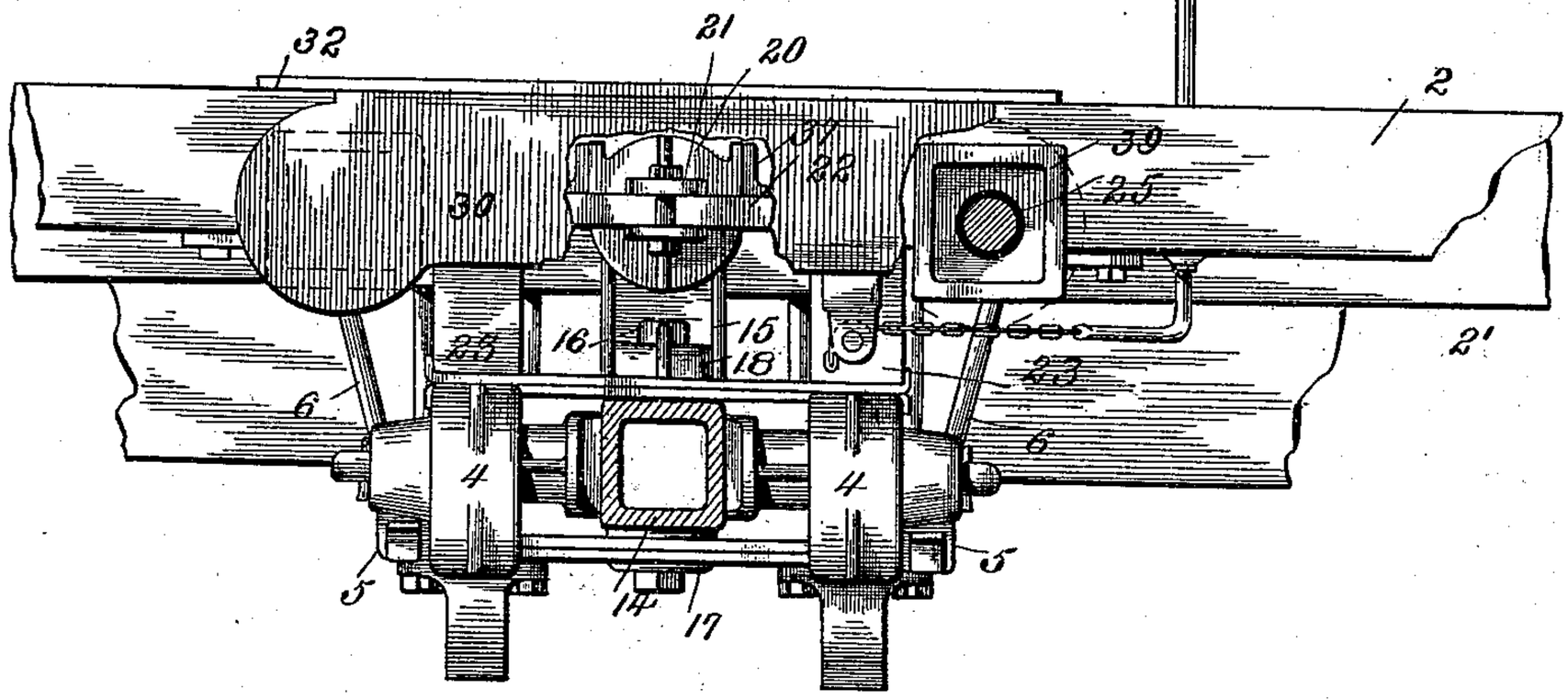


Fig. 4.

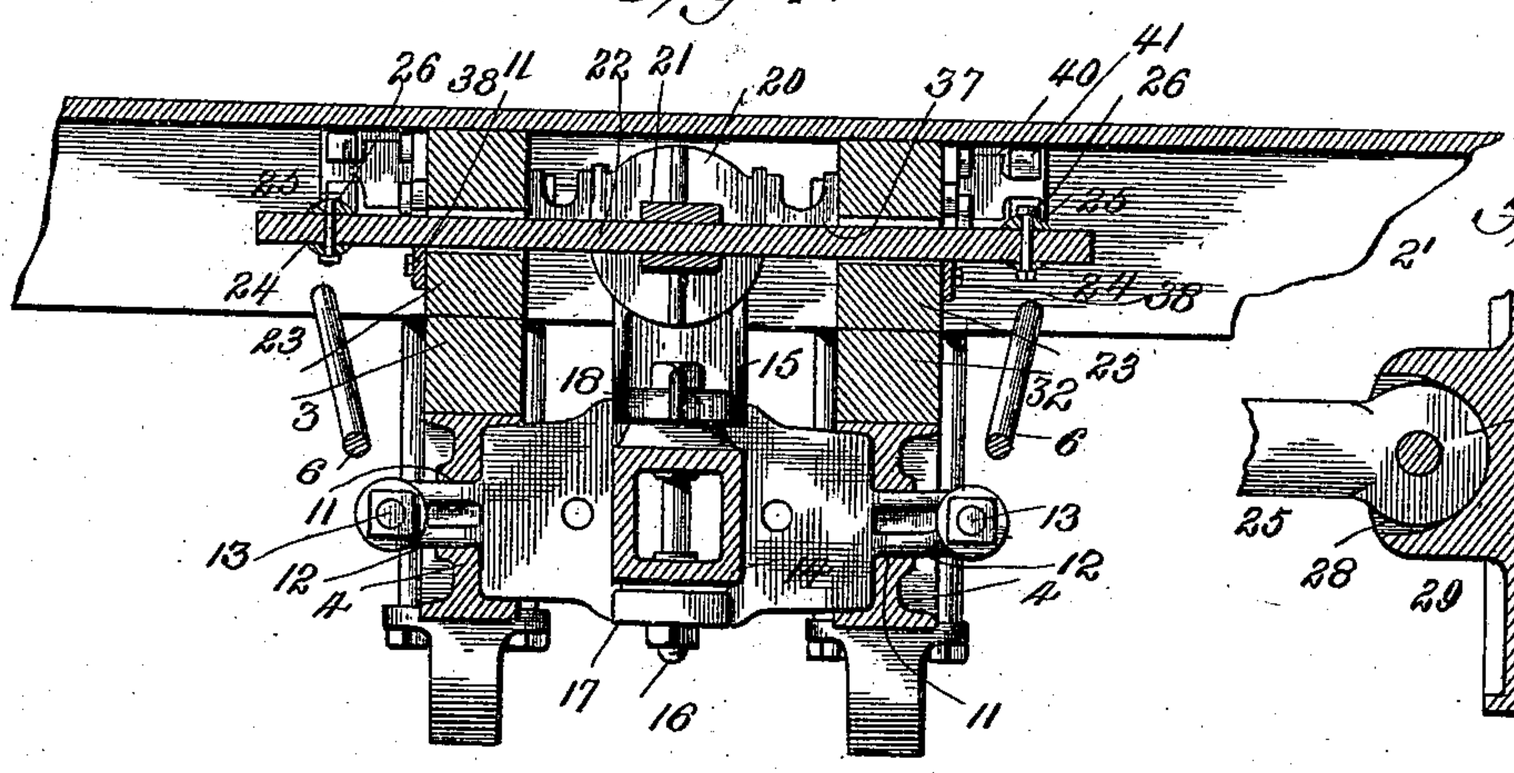
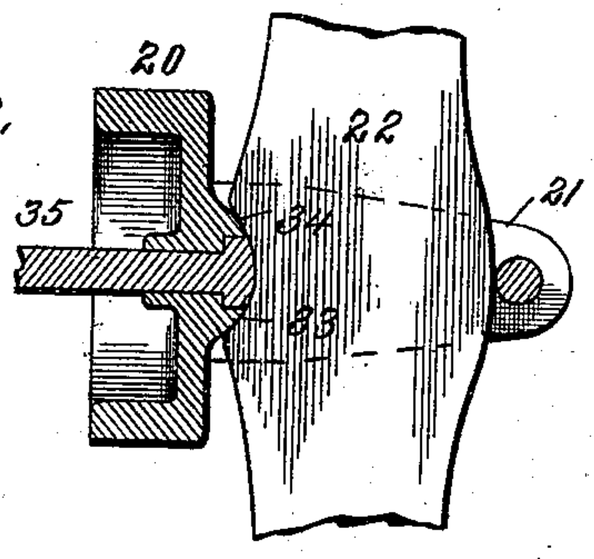


Fig. 5.

Fig. 6.



Witnesses
John D. Lonnie
Thos. E. Robertson

Inventor
Perry Brown
By T. J. W. Robertson
Attorney.

(No Model.) 3 Sheets—Sheet 3.

P. BROWN.

DRAFT AND BUFFER MECHANISM.

No. 548,863. Patented Oct. 29, 1895.

Fig. 8.

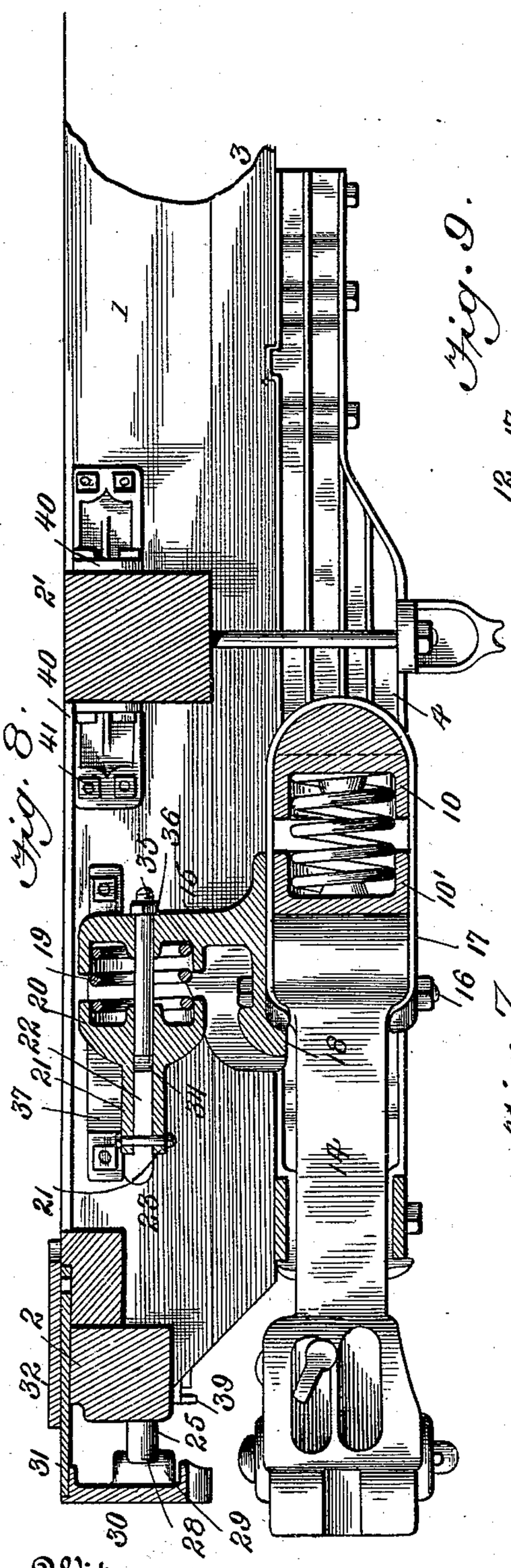


Fig. 9.

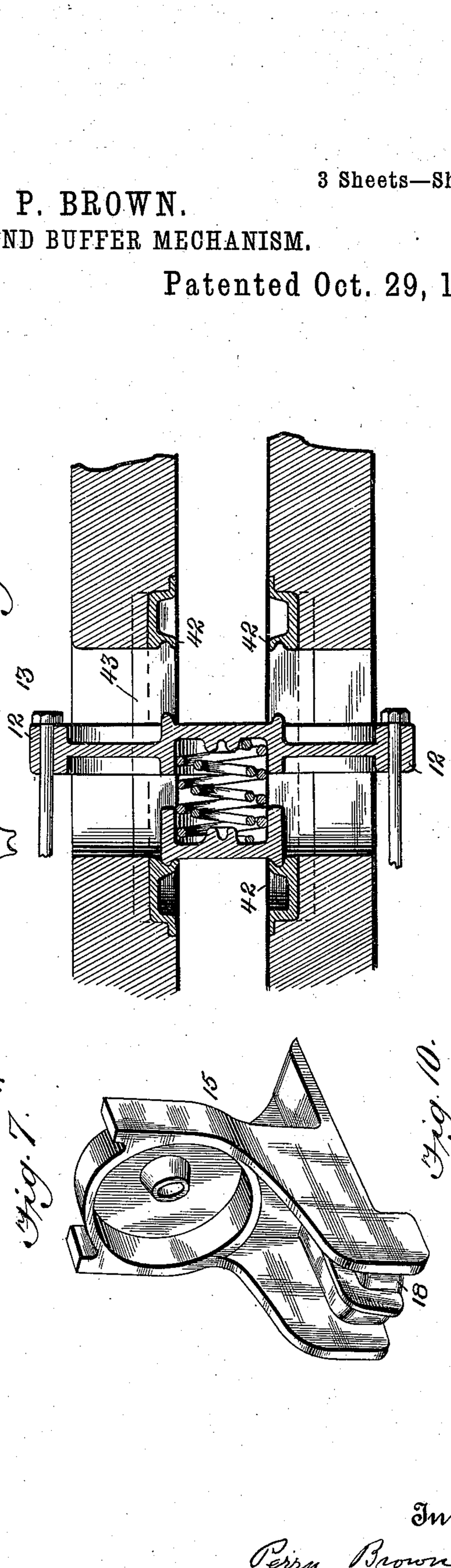


Fig. 7.

Fig. 10.

Witnesses
John Dennie
Thos. E. Robertson

Inventor
Perry Brown
By T. J. W. Robertson
Attorney

UNITED STATES PATENT OFFICE.

PERRY BROWN, OF WILMINGTON, DELAWARE.

DRAFT AND BUFFER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 548,863, dated October 29, 1895.

Application filed March 13, 1895. Serial No. 541,561. (No model.)

To all whom it may concern:

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

This invention is designed as an improvement on the draft and buffing mechanism shown in my allowed application, Serial No. 507,572; and the invention consists in a new arrangement of a buffing-plate and its connection with the draw-bar, whereby the buffing-plate is always under the same tension of the buffing-spring whether buffing or drawing; and it further consists in certain details of construction and arrangement hereinafter more particularly described and then definitely claimed.

In the accompanying drawings, Figure 1 is a plan of a draft-rigging, buffer-plate, &c., constructed according to my improvement. Fig. 2 is a side view of the same. Fig. 3 is a front elevation with parts broken away. Fig. 4 is a cross-section on the line *x x*, Fig. 2. Figs. 5, 6, and 7 are details which will be more fully described hereinafter. Fig. 8 is a longitudinal vertical central section. Fig. 9 is a modification. Fig. 10 is a sectional detail of part of a draw-iron

Referring now to the details of the drawings by figures, 1 indicates the longitudinal, and 2 2′ the cross, sills; 3, a filling-in piece, below which are attached the draft-irons 4, each of which is provided with a perforated lug 5 to receive a truss-rod 6, whose threaded end passes through the cross-sill 2′ and a plate 7, and is provided with a nut 8 to firmly tie the draft-iron to the said sill 2′, thus forming an additional support for the draft-irons and keeping the platform from sagging. These draft-irons are secured by bolts 9 in the usual manner; but two of the bolts (9 and 9′) from their position serve as additional strengthening means against the pull of the follower-blocks 10 10′, which pull on the draft-irons directly in line with said bolts, as shown in Fig. 10.

The draft-irons 4 are slotted at 11, and through the slots recessed arms 12 of the follower-block 10′ project to receive the draft-rods 13, instead of passing through the springs, as in my previous application before referred to.

Firmly attached to the draw-bar 14 (see Fig. 8) is a bracket 15, (shown in perspective in Fig. 7,) which is secured by a bolt 16, passing through the base of the bracket, the yoke 17, and the rear of the draw-bar. The base of the bracket is turned downward at 18, so as to take a bearing against the end of the yoke, and therefore does not depend altogether on the bolt 16 for security. The upper end of the bracket is cup-shaped to receive a spring 19, which is inclosed between said cup and a hollow follower 20, having ears 21, which receives an equalizing-lever 22, which passes through the breast-timbers 23 and through slots 24 in the rods 25, and are secured therein by keys or pins 26. These rods 25 have enlarged round ends 27, (see Fig. 5,) which fit into corresponding sockets 28 in the projections 29, formed on the buffer-plate 30, whose upper edge is recessed, as shown in Fig. 8, to receive a safety-plate 31, riveted thereto, and which slides under the door-plate 32 as the buffer-plate recedes or is driven in. This mode of attaching the safety-plate prevents its being knocked upward by contact with opposing plates, which frequently occurs when the buffer-plate is not recessed to receive the safety-plate.

Between the ears 21 is a rounded projection 33, (see Fig. 6,) which fits into a corresponding recess 34 in the equalizing-lever 22. Through this projection the follower 20, the spring 19, and the cup of the bracket 15 is passed a bolt 35, having a rounded T-head, preferably shaped to the same curve as the projection 33 and having its opposite end threaded to receive a nut 36, by which the pressure on the spring is regulated.

The bracket 15 and follower 20 run between guides 37, attached to the breast-timbers, which guides also form guides for the top of the equalizing-lever 22, which lever rests on strap-guides 38, attached to the outside of the breast-timbers. The rods 25 pass through guides 39, attached to the platform-sill 3, which guides are recessed sufficiently to receive the projection 29 on the buffer-plate, as shown in

Fig. 3. The end sill 3, the breast-timbers 3′, and the longitudinal sills 1 are all firmly secured together by angle-plates 40 and bolts 41.

Where draft-timbers are used instead of draft-irons, I use the arrangement shown in Fig. 9, in which 42 indicates check-plates set in the draft-timbers, having slots 43, through which the arms 12 of the follower-block pass to receive the draft-rods 13.

I deem it very important that the bracket forming part of the buffing mechanism be attached rigidly to the draw-bar, for by this arrangement it makes no difference what the position of the draw-bar is, the power of the spring between the bracket and its follower being always equal.

What I claim as new is—

1. The combination with a draw-bar, of a bracket rigidly connected thereto and moving in the same direction, a follower, a spring between said bracket and follower, constantly acting on said bracket a buffing-plate and connections between said buffing-plate and the follower, substantially as described.

2. The combination with a draw-bar, of a bracket connected thereto and moving in the same direction, a follower, a spring between said bracket and follower, an equalizing lever connected to said follower and a buffer-plate connected with the equalizer, substantially as described.

3. The combination with a draw-bar, of a bracket rigidly connected therewith, a follower, a spring between said bracket and follower, an equalizing lever connected to said follower, rods connected with the opposite ends of said equalizing lever, and a buffer-plate having its opposite ends connected to said rods, substantially as described.

4. The combination with a draw-bar, of a bracket 15 rigidly secured thereto and having its upper end cupped, a follower 28 having ears 21, an equalizing lever 22 set in said ears, a buffer-plate 30, rods 25 connected to the buffer-plate and equalizing bar, and a spring 19 set between the follower and bracket, substantially as described.

5. In combination with a draw-bar, a buffing mechanism provided with a follower, a buffing-spring acting against said follower, and a bracket rigidly mounted upon said draw-bar, and continuously bearing against the buffing-spring, whereby the pressure on the buffing-plate remains unaffected by the position of the draw-bar, substantially as described.

6. The combination in a draw-bar and a buffing-mechanism, of a follower 20 having ears 21, a curved projection 33 between said ears, an equalizing lever recessed to receive said projection, and a buffing-plate yieldingly connected to the opposite ends of said equalizing lever, substantially as described.

7. The combination with the slotted timbers of a car, of slotted check-plates let into said timbers, a follower acting against a spring set between said check-plates, and a follower having a bearing for said spring and arms integral with said follower and projecting through said check-plates and timbers substantially in line with the bearing for the spring, as set forth.

8. The combination with a draw-bar 14 and breast-timbers 23, of guides 37, the bracket 15 and follower 20 working in said guides, a spring 19 set between said bracket and follower guide-straps 38, an equalizing lever 22 attached to the follower 20 and working between the guides 37 and straps 38, and a buffer-plate connected with the follower, substantially as described.

9. In a buffing mechanism, the combination with the draw-bar 14, the bracket 15 rigidly mounted thereon and always moving therewith, the spring 19 set in front of said bracket and continually acting thereon, the follower 20 set in front of the spring, and the equalizing lever 22 attached directly to said follower, of rods 25 connected to said equalizer, the buffing-plate 3 having projections forming sockets for said rods, and guides 39 set in the sill to form supports for the rods and having recesses to receive the projections on the buffing-plate, substantially as described and shown.

In testimony whereof I affix my signature, in presence of two witnesses, this 2d day of March, 1895.

PERRY BROWN.

Witnesses:
THOS. E. ROBERTSON,
D. G. STUART.

Correction in Letters Patent No. 548,863.

It is hereby certified that in Letters Patent No. 548,863, granted October 29, 1895, upon the application of Perry Brown, of Wilmington, Delaware, for an improvement in "Draft and Buffer Mechanism," an error appears in the printed specification requiring correction, viz: In line 77, page 1, the word "door-plate" should read *floor-plate;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 12th day of November, A. D. 1895.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

S. T. FISHER,
Acting Commissioner of Patents.