

No. 743,864.

PATENTED NOV. 10, 1903.

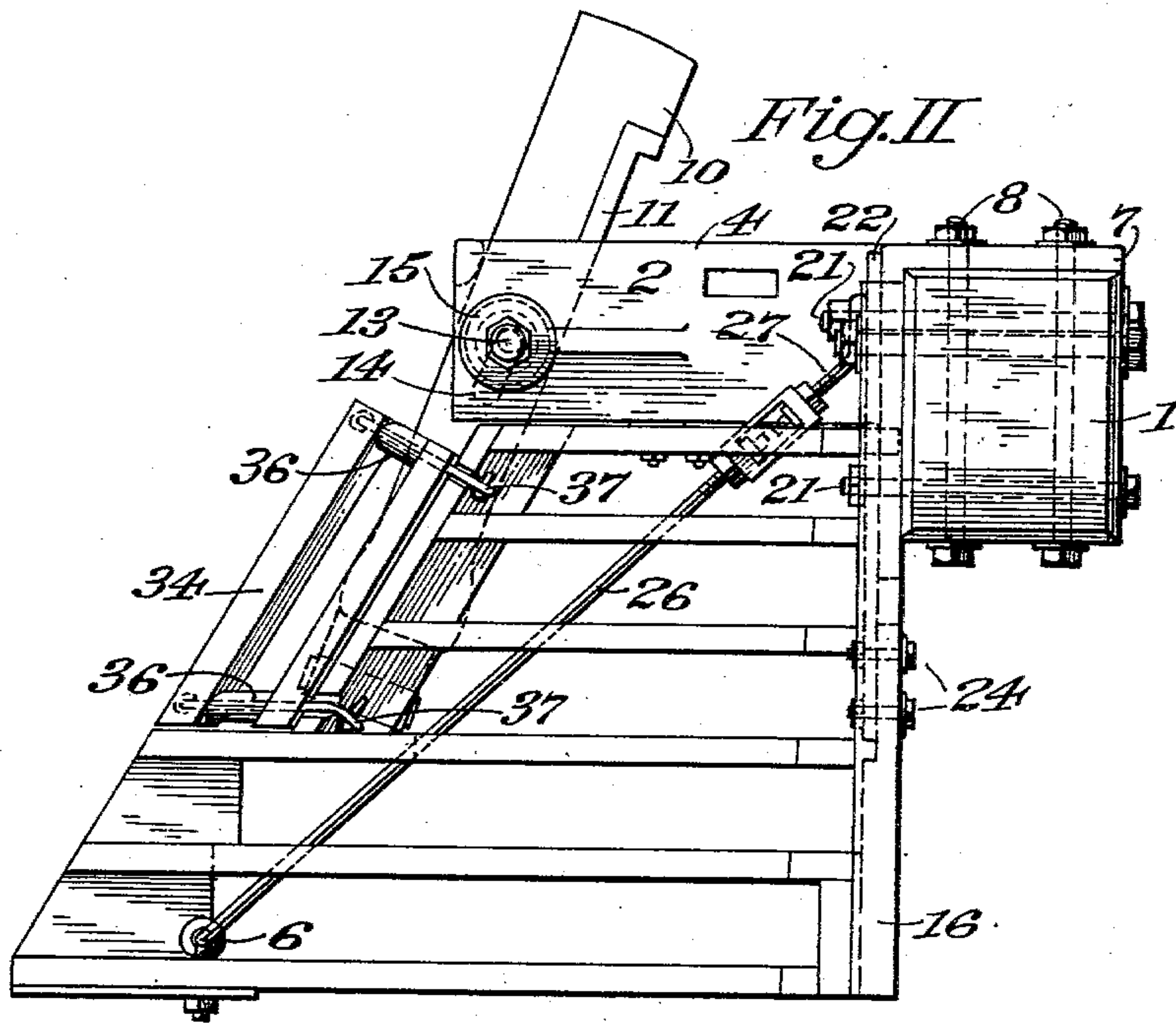
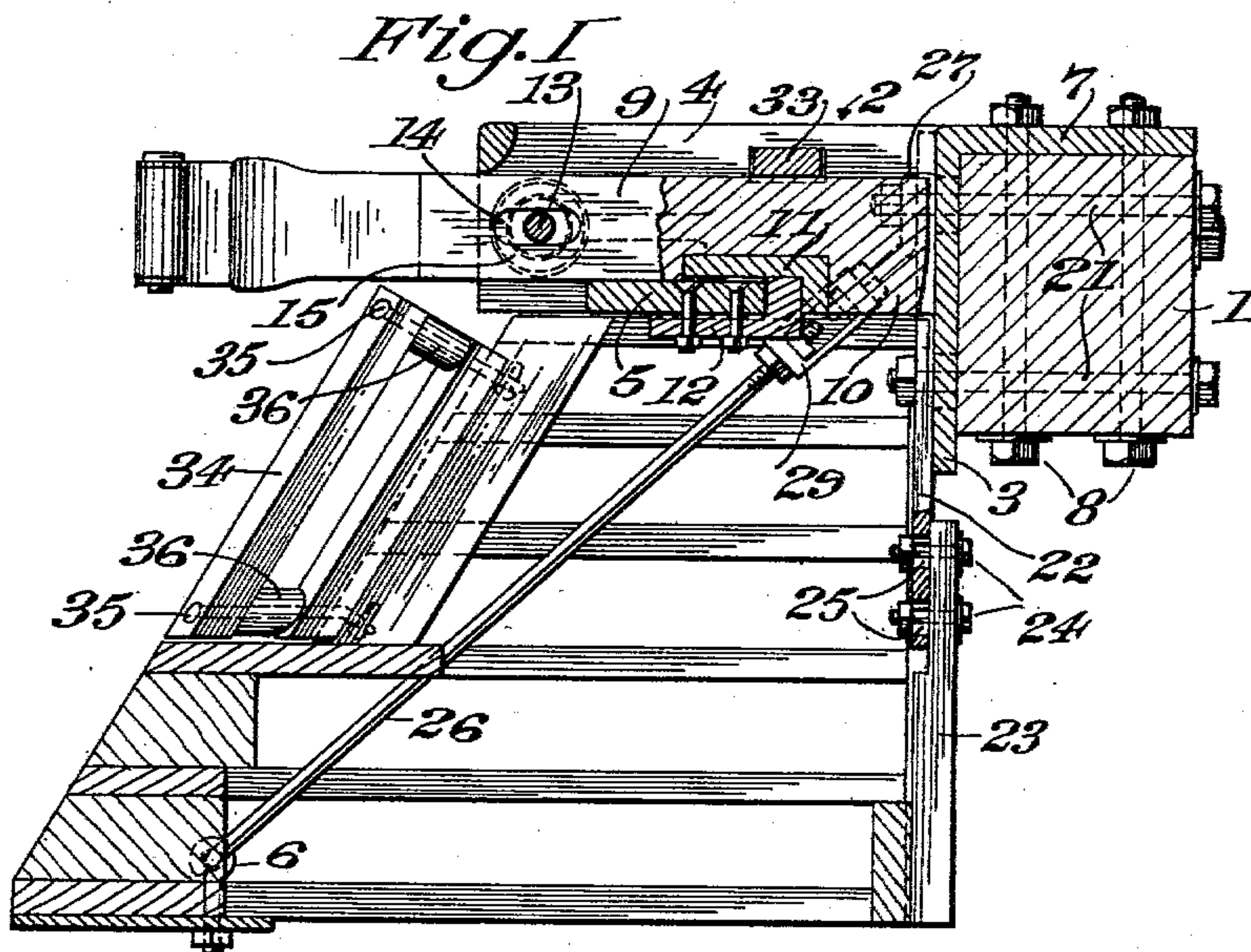
E. R. HALESWORTH.

ADJUSTABLE LOCOMOTIVE PILOT AND DRAW BAR.

APPLICATION FILED APR. 20, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
Geo. L. Gott
G. T. Hackley

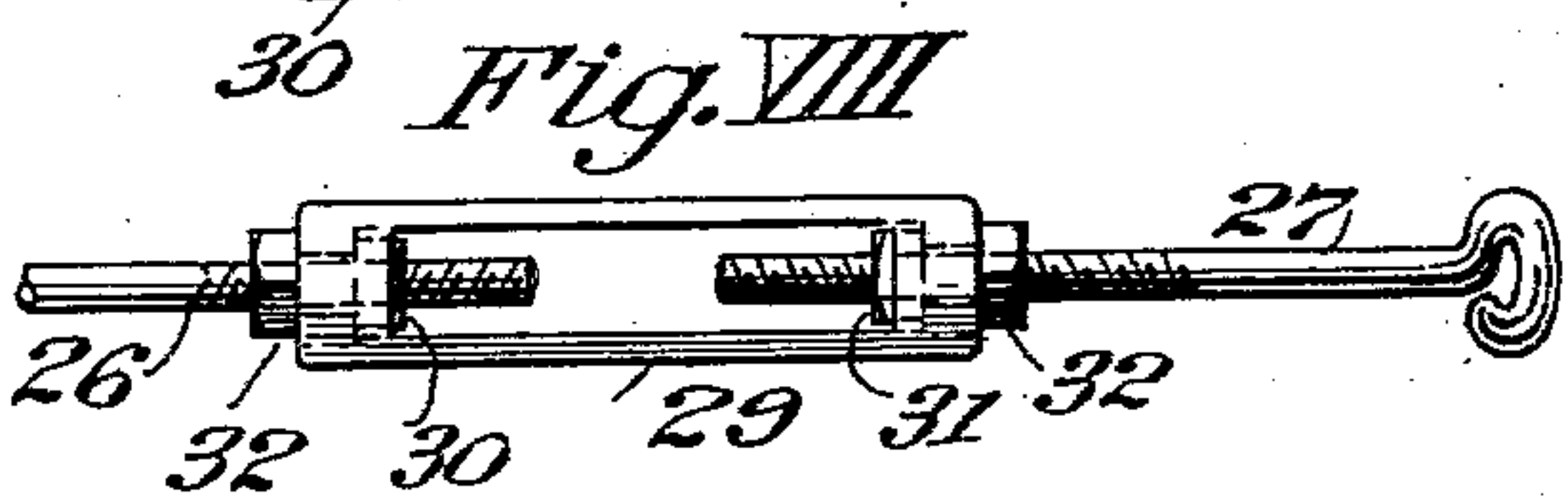
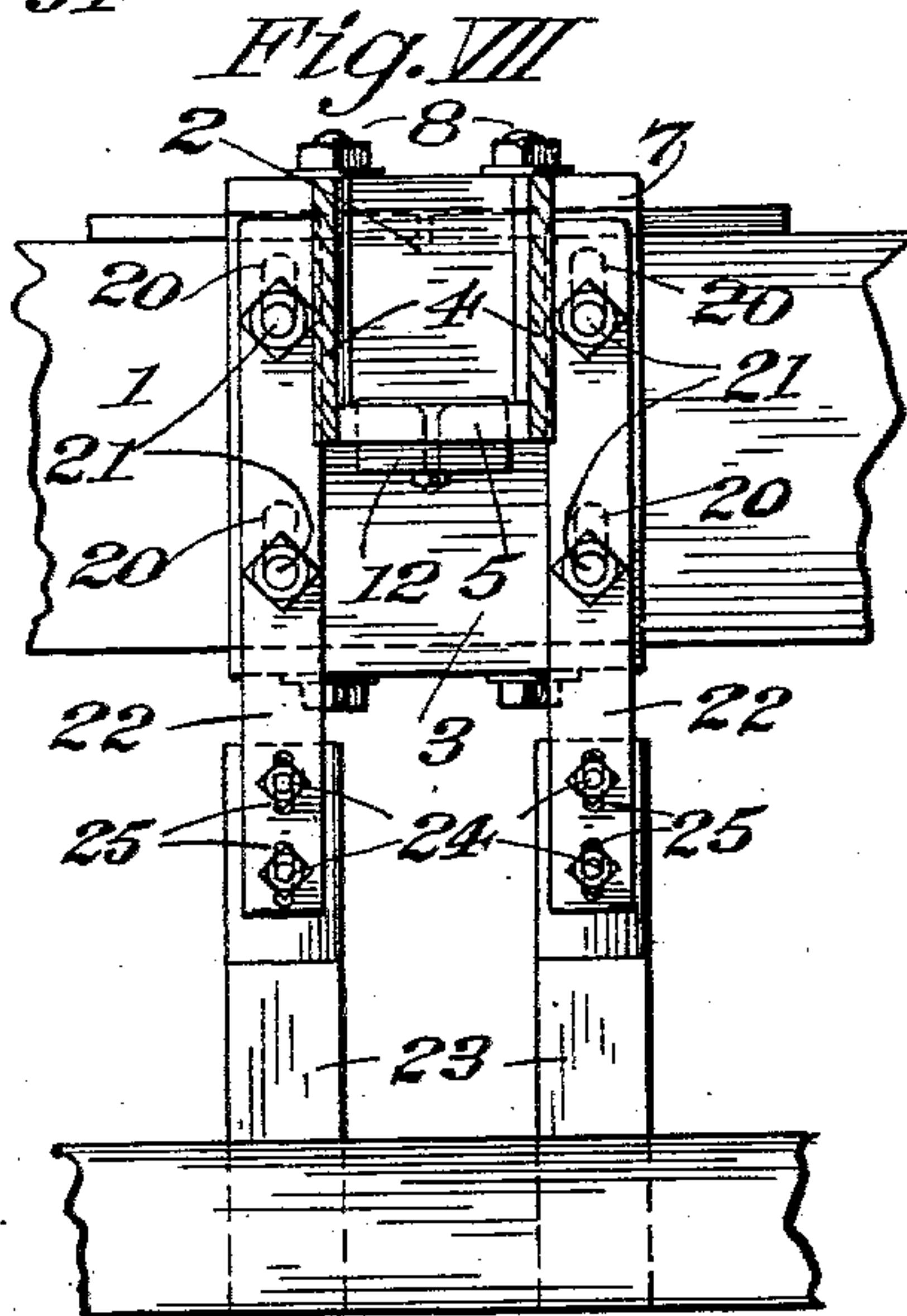
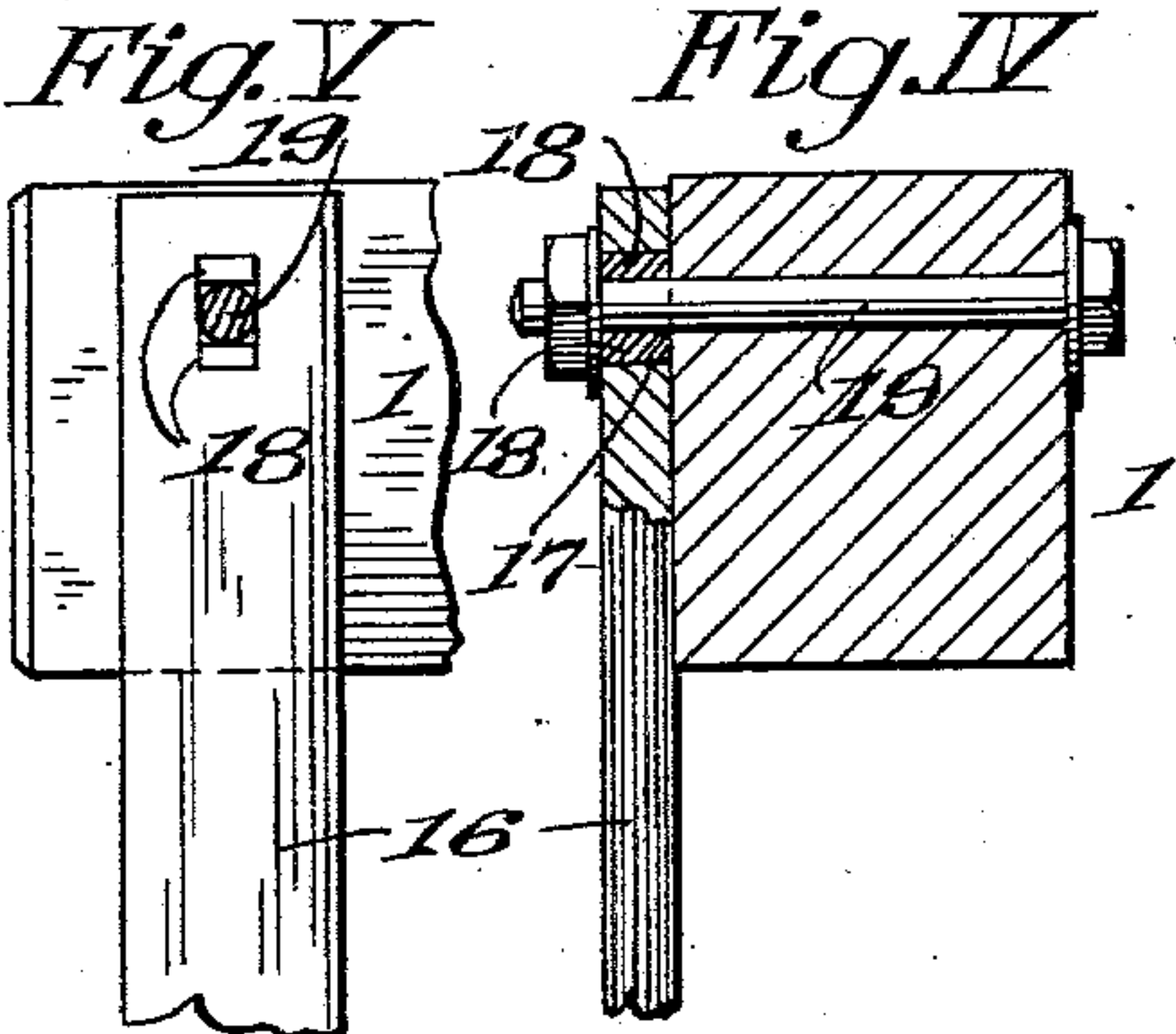
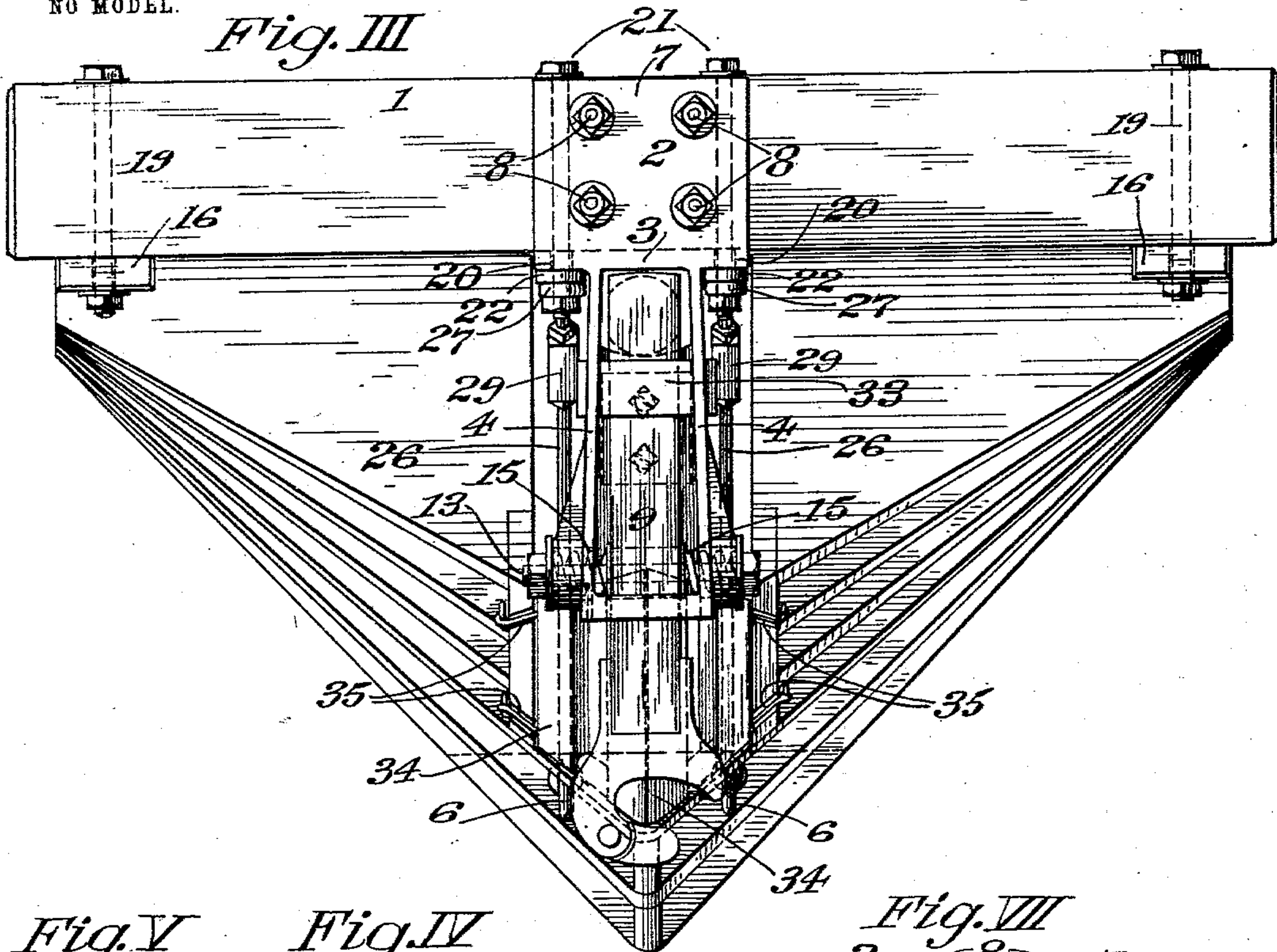
Inventor
Edwin R. Halesworth
by Townsend Bros.
his atty.

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UNITED STATES PATENT OFFICE.

EDWIN R. HALESWORTH, OF SAN BERNARDINO, CALIFORNIA.

ADJUSTABLE LOCOMOTIVE-PILOT AND DRAW-BAR.

SPECIFICATION forming part of Letters Patent No. 743,864, dated November 10, 1903.

Application filed April 20, 1903. Serial No. 153,445. (No model.)

To all whom it may concern:

Be it known that I, EDWIN R. HALESWORTH, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino and State of California, have invented a new and useful Adjustable Locomotive-Pilot and Draw-Bar, of which the following is a specification.

My invention relates to improvements in the means for supporting locomotive-pilots and in improved construction of the draw-bar and its connection with the pilot and in details of construction of parts of the draw-bar and pilot, which will be fully described hereinafter.

The objects of my invention are to provide new and improved means for adjustably attaching the pilot to the pilot-beam and to provide new and improved construction of parts of the pilot and draw-bar.

The accompanying drawings illustrate the invention, and referring to the same, Figure I is a vertical sectional view taken longitudinally through the pilot. Fig. II is a side elevation of the pilot. Fig. III is a plan view of the pilot. Fig. IV is a sectional detail taken vertically through the pilot-beam and shows a portion of one of the pilot-standards. Fig. V is a front elevation of the same with the nut removed and the attaching-bolt shown in section. Fig. VI is a detail of the improved turnbuckle. Fig. VII is a front elevation of the draw-bar casting attached to a portion of the pilot-beam with the pilot-supporting straps attached thereto. Fig. VIII is a plan view of my improved turnbuckle.

1 designates the usual pilot-beam, to which is attached the draw-bar casting 2, the latter being formed with a base 3, which abuts against the front face of the pilot-beam 1 and from which forwardly project a pair of wings 4, which are united at the bottom by a wall 5. Projecting rearwardly from the upper edge from the base 3 is a bracket 7, which lies upon the top face of the pilot-beam 1, the draw-bar casting 2 being fastened to the pilot-beam by means of bolts 8, which pass through the bracket 7.

9 designates the draw-bar, which on the lower side of its rear end is provided with a lug 10. The lug 10 is rounded except for its forward face, which is flat.

11 is a shoe or shim, the rear face of which is flat and abuts against the face of the lug 10. The shoe 11 is otherwise rounded to form with the lug 10 a substantially cylindrical boss. The shoe 11 may be bolted to the under side of the rear end of the draw-bar 9. The rear face of the lug 10 is somewhat undercut, as shown, to allow the draw-bar 9 to be tilted. The boss thus formed lies in an opening formed by cutting away the wall 5 near the base 3. In order to form a bearing against which the shoe 11 may draw, I provide another shoe 12, which is bolted, preferably, to the under side of the wall 5 and has a concave rear face against which the convex face of the lug 11 bears when the draw-bar 9 receives the tensile strain.

The draw-bar 9 is pivotally attached to the wings 4 by means of a bolt 13, which passes through the wings 4 and through an elongated slot 14 in the draw-bar 9. Interposed between each wing 4 and the draw-bar 9 are coil compression-springs 15, the width of the draw-bar being somewhat less than the space between the wings 4. The length of the slot 14 is enough to allow for sufficient play of the draw-bar, and it will be observed that the draft does not come upon the bolt 13, but is taken up by the shoes 12 and 11. The rear end of the draw-bar lies very close to the base 3, and the object in forming the lug 10 undercut at its rear portion is to allow the draw-bar to be tilted. By making the shoes 11 and 12 removable they may be replaced by new shoes when they become so worn as to unfit them for use.

The pilot may be partially carried by standards 16, which may extend downwardly from the pilot-beam 1. In order to adjust the standards 16 and secure the proper positioning of the pilot, I provide the upper end of each standard 16 with an elongated slot 17. In the slots 17 are inserted plugs 18, which lie above and below the bolts 19, which secure the standards 16 to the pilot-beam 1. When the pilot sags and it is wished to raise or lower the same, one or the other of the plugs 18 in each slot may readily be removed and the standards 16 slipped up or down, as the case may be, after which new plugs may be readily inserted to fill the gaps between the bolts 19 and the remaining plugs, after

which the nut may be screwed down. Here-
 tofore in adjusting the pilot-frame it has been
 necessary to remove the standards 16, plug
 the old holes, and bore new holes, and this
 5 required the use of tools and occasioned con-
 siderable inconvenience. It will readily be
 seen that with the present construction the
 adjusting of the pilot is accomplished quickly
 without the use of special tools and without
 10 requiring the removal of the pilot.

When the front of the engine sags and al-
 lows the pilot to come too close to the track,
 it is necessary to raise the pilot, including
 the draw-bar casting, and I have provided
 15 means whereby the draw-bar casting may
 also be adjusted to compensate for the sag of
 the front of the engine. In carrying out this
 feature of my invention I construct the draw-
 bar casting with a base 3, having elongated
 20 slots 20, through which bolts 21 pass. By
 loosening the bolts 21 and 8 the draw-bar
 casting may be raised and a shim placed un-
 der the bracket 7. The slots 20 allow for the
 raising of the draw-bar, after which the bolts
 25 21 and 8 may be tightened. In order to fur-
 ther support the bottom frame of the pilot, I
 provide a pair of straps 22, which may be
 held in place by the bolts 21 and which may
 extend down and be attached to uprights 23
 30 of the pilot-frame by means of bolts 24, which
 may pass through elongated slots 25 in the
 straps 22. The slotted ends of the straps 22
 allow of an adjustment of the rear end of the
 pilot-frame relatively to the straps 22. The
 35 straps 22 also provide a solid full face, against
 which the nuts of the bolts 21 take, the straps
 22 covering the slots 20.

In order to support the nose of the pilot, I
 provide a nose-brace 26, the lower front end
 40 of which may be hooked to an eyebolt 6.
 The upper rear end of the nose-brace will be
 connected by a hooked rod 27 with one of the
 bolts 21. In order to adjust the length of the
 nose-brace 26, I provide a novel turnbuckle.
 45 One end of the nose-brace rod 26 passes
 loosely through a yoke-frame 29 and is pro-
 vided with threads which engage a nut 30,
 which is held loosely in the yoke-frame 29.
 The other end of the frame is drilled and re-
 50 ceives loosely the threaded end of the rod 27.
 31 is a nut inside of the yoke-frame and
 mounted on the threaded end of the rod 27.
 32 is a set-nut on the rod 27. It will be seen
 that the threads are not formed in the frame
 55 29, as is usual in the ordinary turnbuckles,
 but that the rods pass loosely therethrough.
 Therefore by loosening the nuts 31 and 32 it
 is possible to quickly shift the frame 29 along
 the rods. The set-nuts may be run back
 60 from the frame 29, and as the sides of the
 yoke-frame 29 lie over the faces of the nuts
 30 and 31 they act as a wrench to turn the
 nuts, so that the nose-brace is tightened by
 merely turning the yoke-frame 29. The nuts
 65 30 and 31 have right and left threads.

In order to hold the draw-bar in a horizon-
 tal position, I provide a pin 33, which passes

through the wings 4 and lies over the top of
 the draw-bar.

When the draw-bar is not being used, the 70
 pin 33 may be withdrawn and the draw-bar
 may be dropped into the position shown in
 Fig. II, so that it rests between the mid-ribs
 of the pilot.

In order to cover the space between the 75
 mid-ribs of the pilot, I provide gates 34, each
 of which consists of a pair of slats carried by
 rods 35, the slats being spaced apart by
 wooden washers 36.

37 designates hinges, which carry the gates 80
 and are mounted on the mid-ribs.

The gates may be swung back to allow the
 draw-bar to be dropped into place, after
 which they may be closed over the space and
 cover the draw-bar. 85

What I claim is—

1. A pilot-bar, a draw-bar casting provided
 with elongated slots, bolts passing there-
 through and fastening the draw-bar casting
 to said pilot-beam, and a draw-bar connected 90
 to the draw-bar casting.

2. A pilot-beam, a draw-bar casting pro-
 vided with elongated slots, bolts passing
 therethrough and fastening the draw-bar
 casting to the pilot-beam, a draw-bar pivoted 95
 to the draw-bar casting, and a lug on the
 draw-bar abutting against a portion of the
 draw-bar casting.

3. A pilot-beam, a draw-bar casting bolted
 thereto, a draw-bar pivoted to the draw-bar 100
 casting, a shoe forming an abutment on said
 draw-bar casting, and a boss on said draw-
 bar bearing against said shoe.

4. A pilot-beam, a draw-bar casting bolted
 thereto, a draw-bar pivoted to the draw-bar 105
 casting, a shoe on said draw-bar casting, and
 a boss on said draw-bar comprising a lug and
 a shoe bolted to said draw-bar next to said
 lug and bearing against the first-named shoe.

5. A pilot-beam, a draw-bar casting bolted 110
 thereto, a draw-bar pivoted to the draw-bar
 casting, a shoe on said draw-bar casting, and
 a boss on said draw-bar comprising a lug and
 a shoe bolted to said draw-bar next to said
 lug and bearing against the first-named shoe, 115
 said boss being cylindrical and the rear por-
 tion being undercut.

6. A pilot-beam, a draw-bar casting com-
 prising a base which lies against the front
 face of said pilot-beam, a bracket extending 120
 rearwardly from the upper edge of said base
 and lying over the top of said pilot-beam, a
 pair of wings united at the bottom by a wall
 and extending forwardly from said base, said
 base being provided with elongated slots, 125
 bolts passing through said slots and fasten-
 ing the base to said pilot-beam and bolts pass-
 ing through the pilot-beam and said bracket.

7. A pilot-beam, a draw-bar casting pro-
 vided with a pair of forwardly-projecting 130
 wings, a draw-bar provided with an elongated
 slot, a bolt passing through said wings and
 said slot, springs between each side of the
 draw-bar and said wings, a boss on the rear

end of said draw-bar, an abutment carried by the draw-bar casting against which said boss bears, and means for allowing an adjustment of said draw-bar casting with respect to said pilot-beam.

8. A pilot-beam, a draw-bar casting attached thereto, a draw-bar connected to the draw-bar casting, a pilot, standards connected to the pilot, the upper ends of the standards being provided with elongated slots, removable plugs in the slots and bolts passing through the pilot-beam and the respective slots.

9. A pilot-beam, a draw-bar casting comprising a base, a rearwardly-extending bracket, and forwardly-extending wings; said base being provided with elongated slots, straps lying over said slots, and bolts passing through said straps, base, and beam; a pilot, and means for adjustably attaching the lower ends of said straps to said pilot.

10. A pilot-beam, a draw-bar casting adjustably attached thereto, a pilot adjustably connected to the pilot-beam, a nose-brace connected with the front end of said pilot and with said draw-bar casting; and means for tightening said nose-brace comprising a

yoke-frame, a pair of nuts loosely mounted within said yoke-frame, and threaded ends on the members of the nose-brace engaging said nuts.

11. A pilot-beam, a draw-bar casting attached thereto, a draw-bar connected to the casting, a pilot adjustably connected with the pilot-beam, the two mid-ribs of the pilot being spaced apart to receive said draw-bar when the latter is depressed and a cover for said space.

12. A pilot-beam, a draw-bar casting attached thereto, a draw-bar connected to the casting, a pilot connected to the pilot-beam, the two mid-ribs of the pilot being spaced apart to receive said draw-bar when depressed and a pair of gates hinged to the respective mid-ribs of the pilot.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, in the county of Los Angeles and State of California, this 8th day of April, 1903.

EDWIN R. HALESWORTH.

Witnesses:

G. T. HACKLEY,
JULIA TOWNSEND.