

(No Model.)

W. P. PRENDERGAST.
LOCOMOTIVE PILOT DRAW BAR COUPLING.

No. 506,724.

Patented Oct. 17, 1893.

Fig. I.

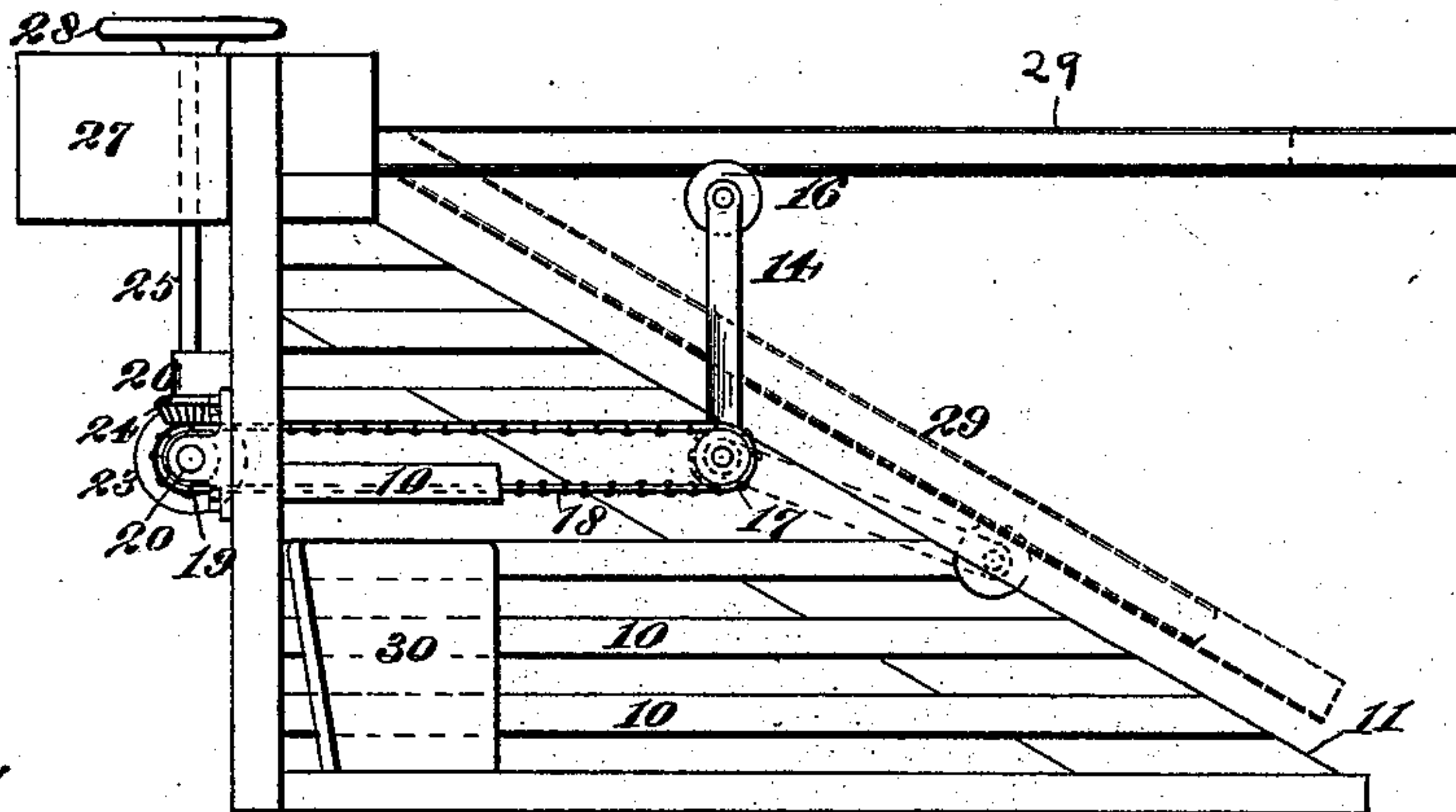


Fig. 2.

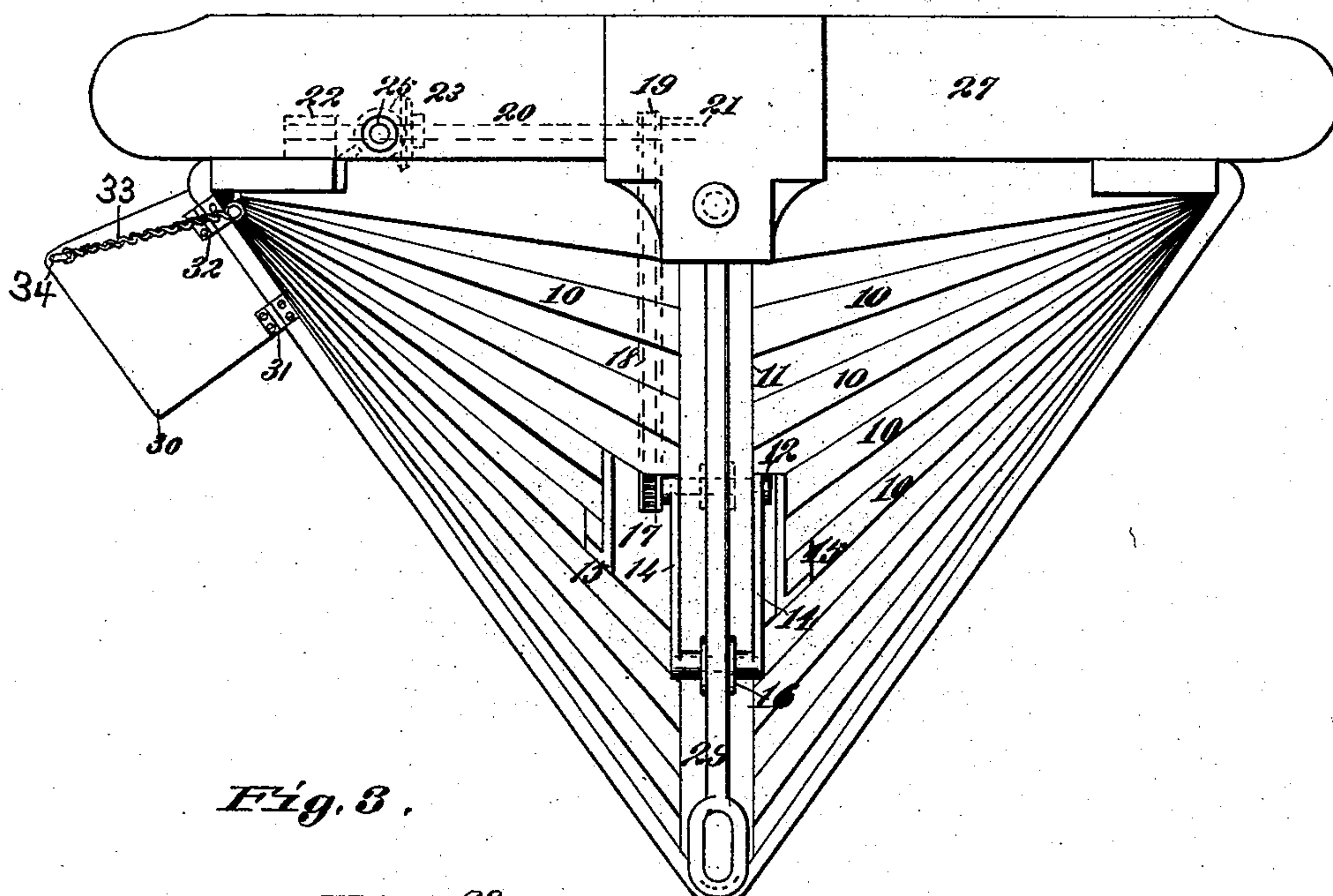
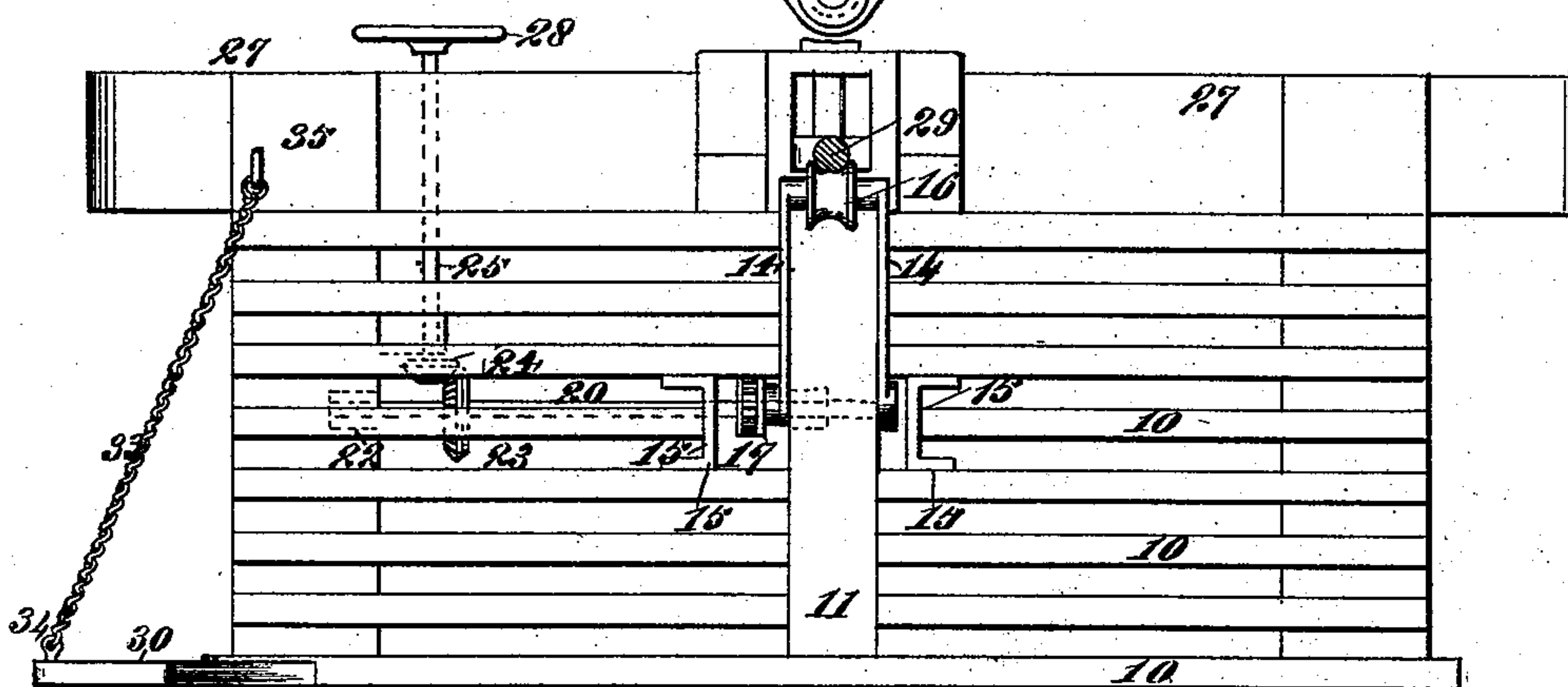


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILL P. PRENDERGAST, OF DE SOTO, MISSOURI.

LOCOMOTIVE-PILOT DRAW-BAR COUPLING.

SPECIFICATION forming part of Letters Patent No. 506,724, dated October 17, 1893.

Application filed May 9, 1893. Serial No. 473,523. (No model.)

To all whom it may concern:

Be it known that I, WILL P. PRENDERGAST, a citizen of the United States, residing at De Soto, county of Jefferson, and State of Missouri, have invented certain new and useful Improvements in Locomotive-Pilot Draw-Bar Couplers, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to draw-bar couplers for locomotive engines.

I have as the object of my invention, to provide means whereby a pilot draw-bar may be readily and conveniently coupled to a car without danger to the person effecting the coupling, the said coupling to be effected by means of appliances which will require only a slight exertion of muscular power on the part of the operator, the said appliances to be permanently attached to the locomotive pilot, and to be durable and not likely to get out of repair.

I have as a further object of my invention, to so construct the means employed for effecting the coupling as to adapt it to use on a locomotive pilot in which the pilot bars are placed parallel to the roadbed.

In conjunction with the coupling devices aforesaid, I may provide a platform situated to one side of the rear part of the pilot, upon which the operator may stand when a coupling is to be made, said platform being adapted to be removed out of the way when not in use.

These several objects I accomplish by means of the devices hereinafter described, the patentable novelty of said devices being pointed out in the claims.

My invention will be best understood by reference to the accompanying drawings, in which the same marks of reference indicate the same parts throughout the several views.

Figure 1 is a side elevation of the pilot of a locomotive engine provided with my coupler, and also with the platform employed in conjunction therewith. Fig. 2 is a top view of the pilot of a locomotive provided with my coupler and platform. Fig. 3 is a front ele-

vation of a locomotive pilot provided with my coupler and platform.

10 are the pilot bars of a locomotive pilot or cow-catcher of any ordinary construction. In the drawings the said bars are shown as placed parallel with the roadbed or track, as my invention is peculiarly applicable to locomotive pilots so constructed, although it may also be used upon pilots having the bars lying in vertical planes.

11 is the central frame piece of the pilot, to which the bars 10 are properly united.

To the underside of the central frame piece 11, near the center thereof, is secured a shaft 12. The manner of securing said shaft 12 to the frame piece 11 is by means of a suitable bracket or equivalent device, which will permit the shaft to rotate freely therein. The shaft 12 is of sufficient length to have its ends extend beyond the frame piece 11 at both sides thereof.

Rigidly mounted upon the shaft 12 is a bail-like arm 14. The said bail-like arm 14 extends through the bars of the pilot. One or more of said bars have their ends cut away, and are secured to angle-irons 15, as shown in Figs. 2 and 3, so as to permit the bail-like arm 14 to extend outward at the front of the pilot.

Upon the outer end of the bail-like arm 14 is placed the antifriction roller 16, said roller being adapted to rotate freely upon that part of the arm on which it is placed, and being further adapted to take under the pilot draw-bar, as hereinafter explained.

Upon one end of the shaft 12 is rigidly affixed a sprocket-wheel 17. Over said sprocket-wheel 17 passes a sprocket-chain 18, which said sprocket-chain passes around a second sprocket-wheel 19 mounted upon a second shaft 20, said shaft 20 being journaled in suitable bearings in brackets 21 and 22 secured to the rear of the pilot.

Rigidly mounted upon the shaft 20 is a beveled gear-wheel 23. The beveled gear-wheel 23 is adapted to mesh with a second beveled gear-wheel 24. The beveled gear-wheel 24 is rigidly mounted upon the lower extremity of a vertically-extending shaft 25. The shaft 25 is journaled near its lower end in a bracket 26, and passes upward through a suitable

aperture in the heavy cross-beams 27, and has rigidly mounted upon its upper extremity the hand-wheel 28. The beveled wheel 23 is made larger than the beveled wheel 24 into which it meshes, and the hand-wheel 28 is preferably of considerable diameter, thus augmenting the power applied by the operator to the hand-wheel 28, and enabling him to lift the draw-bar with a slight application of muscular power.

29 is the locomotive draw-bar, which is of any ordinary construction, and is pivoted to the pilot in the usual manner. The draw-bar 29 rests upon the antifriction roller 16, as shown in Fig. 2.

As it is frequently desirable that the person by whom the coupling of the cars to the locomotive is effected, should be carried along by the said locomotive, and that there should be provided means whereby he should be so carried, the said means being so situated relatively to the appliances by which the coupling is effected as to permit the operator to effect such coupling when stationed thereon, I provide for this purpose a hinged platform 30, which is secured to one side of the pilot near the rear thereof. I preferably secure the platform to the pilot by means of the hinges 31 and 32 attached to the lower bar 10. For the purpose of strengthening and bracing said platform, I provide a chain 33 which is attached at one end to a swivel or staple 34, said swivel or staple being secured to the outer side of the platform 30, and at the other end to a hook 35 secured to the cross-beam 27. When said platform is to be used it is swung outward into the position shown in Figs. 2 and 3. When not in use, it is swung inward in the inwardly-inclined position shown in Fig. 1. When the platform 31 is swung inward it may be held in that position by gravity, or the chain 33 may be suitably looped up upon the hook 35 so as to hold it securely in the position aforesaid.

It is obvious that if preferred, the hinges 31 and 32 hereinbefore described as used in conjunction with the platform 30, may be dispensed with, and I may provide an extensible platform adapted to be drawn in and out from beneath the pilot in any suitable grooves or slots formed for that purpose. I regard the latter construction as within the spirit of my invention, the essence of which in this particular, consists in providing a platform adapted to be removed out of the way when not in use, and so situated relatively to the hand-wheel 28 as to permit persons operating the draw-bar to be carried upon the platform.

In Letters Patent No. 491,719, granted to me on February 14, 1893, I described a locomotive draw-bar coupler somewhat similar to the one herein described. In the device described in said Letters Patent I employed an extensible shaft for rotating the sprocket-wheel 21, but it is found in practice that the extensible shaft is very likely to be left in an exposed position by the operator after having

effected a coupling, and when in such exposed position it is very likely to come in contact with some object near the side of the roadbed, which will invariably so injure the shaft and the devices employed in conjunction therewith as to render the coupling appliances inoperative. Furthermore, when the extensible shaft is employed, it requires very considerable muscular exertion to raise the heavy iron draw-bar into a suitable position for coupling.

It has been my design to remedy the several defects present in the device referred to, and I effect that design by employing the compact and fixed appliances herein described in lieu of the extensible shaft, the said appliances enabling me to effect the coupling with a marked decrease in muscular exertion, and by means which lie at all times entirely out of the way of injury. My present device is also especially applicable to use in conjunction with pilots constructed of bars placed parallel with the roadbed, while the device described in the patent aforesaid could not, in the form there described, be conveniently applied to locomotive pilots unless they were constructed of bars placed in a vertical plane.

Having fully described my invention, what I desire to claim and secure by Letters Patent of the United States is—

1. As a means for raising and lowering the pilot draw-bar of a locomotive, the combination of an arm mounted beneath said draw-bar, a vertically extending shaft placed at the rear of the pilot, said shaft being provided with a suitable handle for rotating the same, and intermediate mechanism between said shaft and said arm, for the purpose described.

2. As a means for raising and lowering the pilot draw-bar of a locomotive, the combination of a bail-like arm mounted beneath said draw-bar, a vertically-extending shaft placed at the rear of the pilot, said shaft being provided with a suitable handle for rotating the same, and intermediate mechanism between said shaft and said arm, for the purpose described.

3. As a means for raising and lowering the pilot draw-bar of a locomotive, the combination of an arm rigidly mounted upon a shaft, a wheel also rigidly mounted upon said shaft, a second wheel rigidly mounted upon a second shaft, suitable intermediate mechanism for communicating the motion of said second wheel to the wheel first mentioned, a gear wheel mounted upon said second shaft, a third vertically-extending shaft provided near its lower end with a gear wheel meshing into the gear wheel first mentioned, and having a suitable handle or hand-wheel near its upper end by means of which it may be rotated.

4. The combination with a pilot constructed of pilot bars placed parallel with the roadbed, and having an aperture therethrough formed by cutting away the end of one of

said pilot bars and supporting said pilot bar with a suitable angle-iron, of an arm extending outwardly through the aperture aforesaid, the said arm being mounted beneath the draw-
5 bar, and means for elevating and lowering said arm, for the purpose described.

In testimony whereof I have hereunto set

my hand and affixed my seal, this 24th day of April, 1893, in the presence of the two subscribing witnesses.

WILL P. PRENDERGAST. [T. S.]

Witnesses:

WALTER D. COLES,

M. M. BROWN.