No. 896,794. PATENTED AUG. 25, 1908.

R. A. BELL & J. B. McKIEL.

HEADLIGHT.

APPLICATION FILED MAR. 11, 1908.

Fig.1.

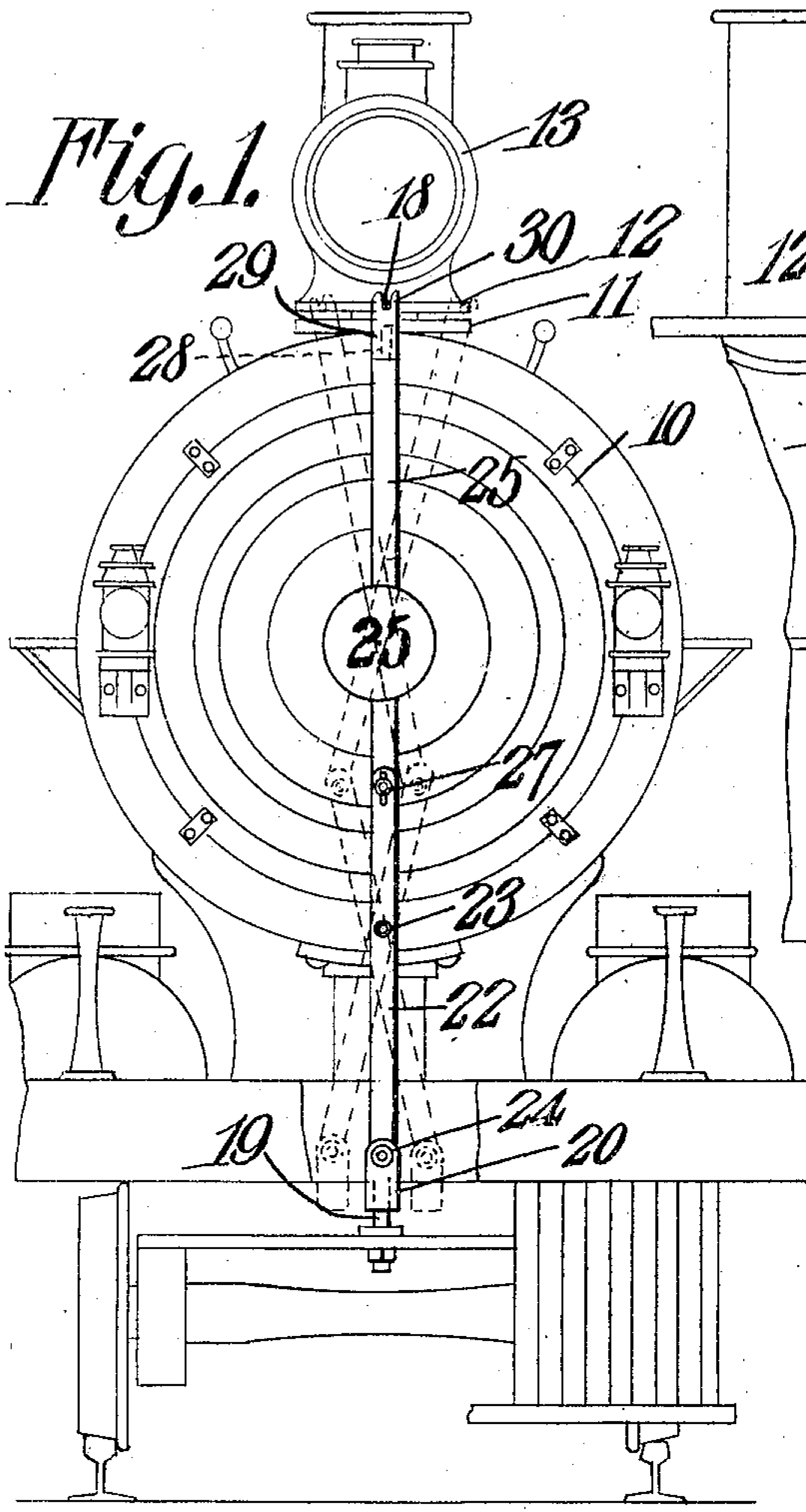
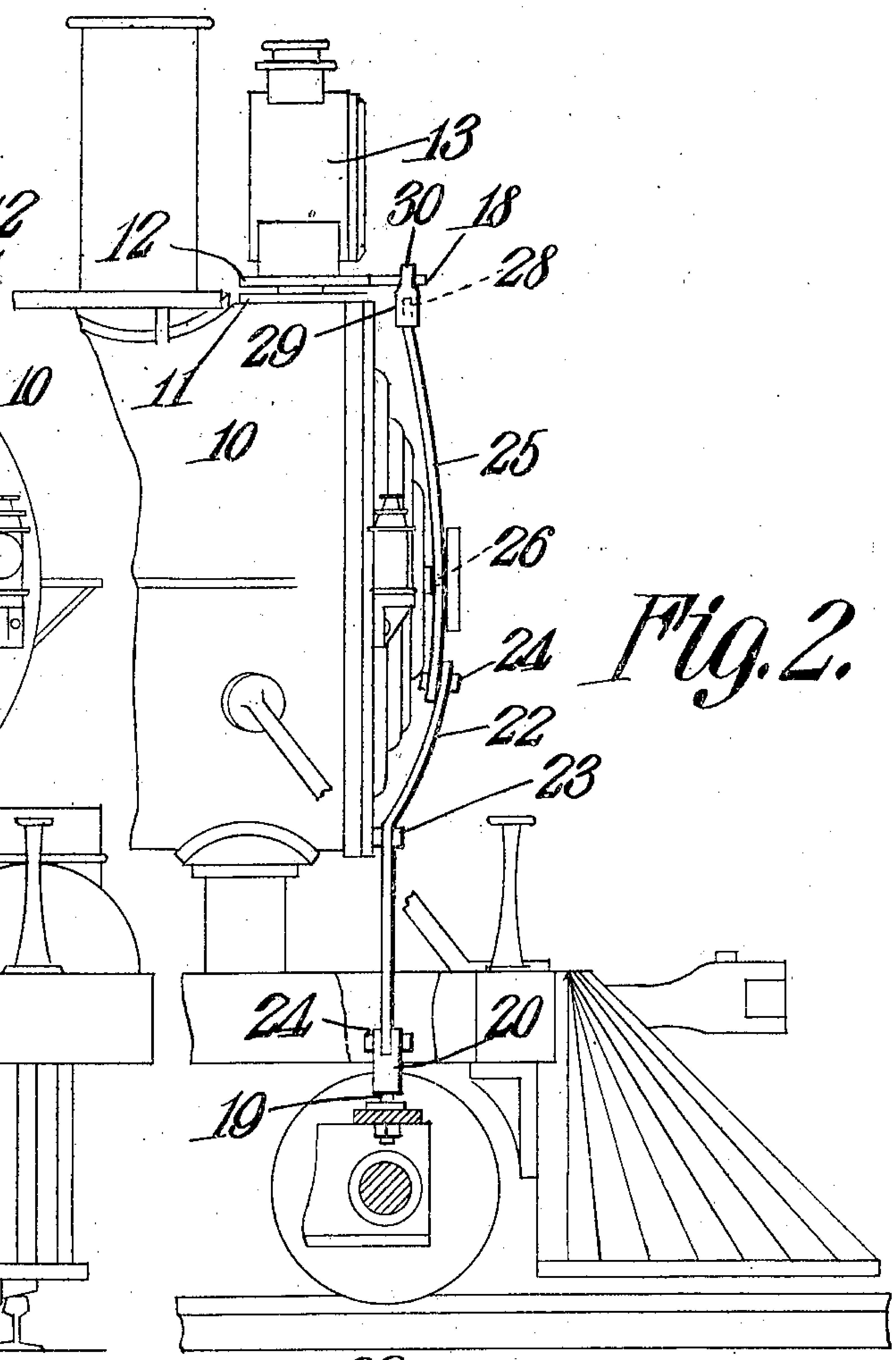


Fig.2.



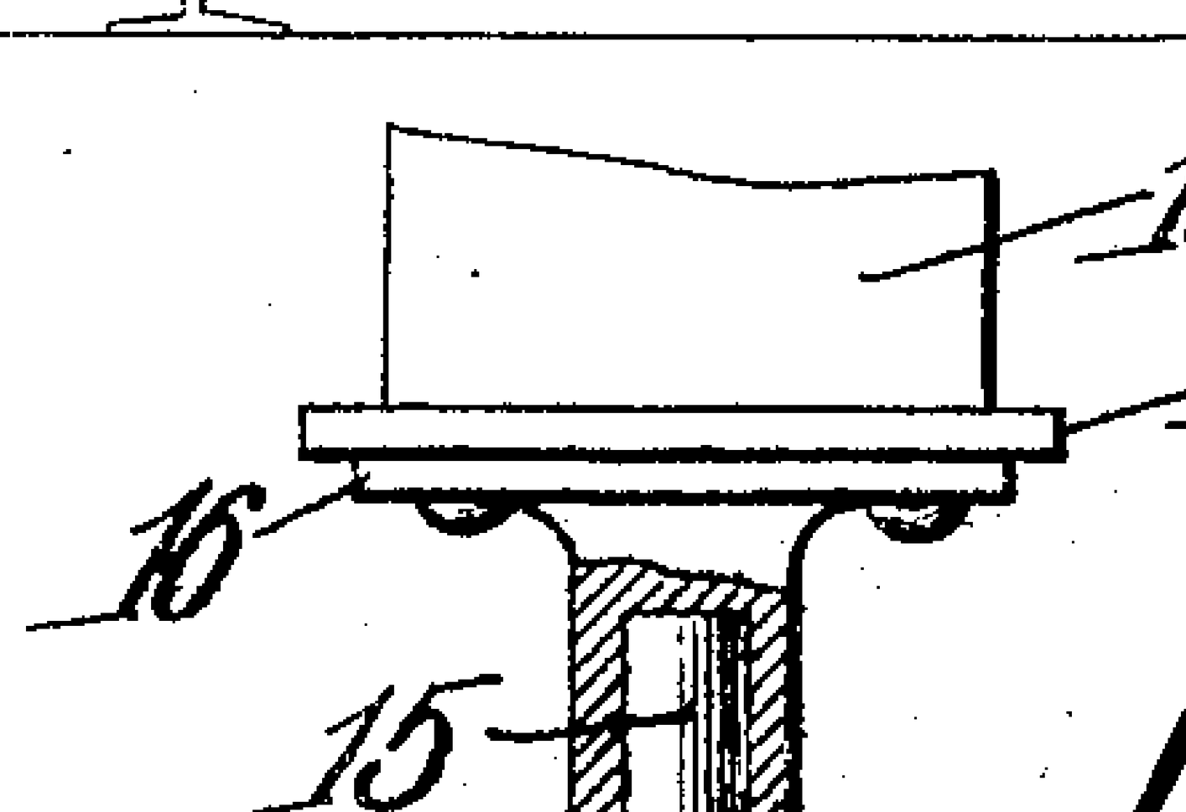


Fig.3.

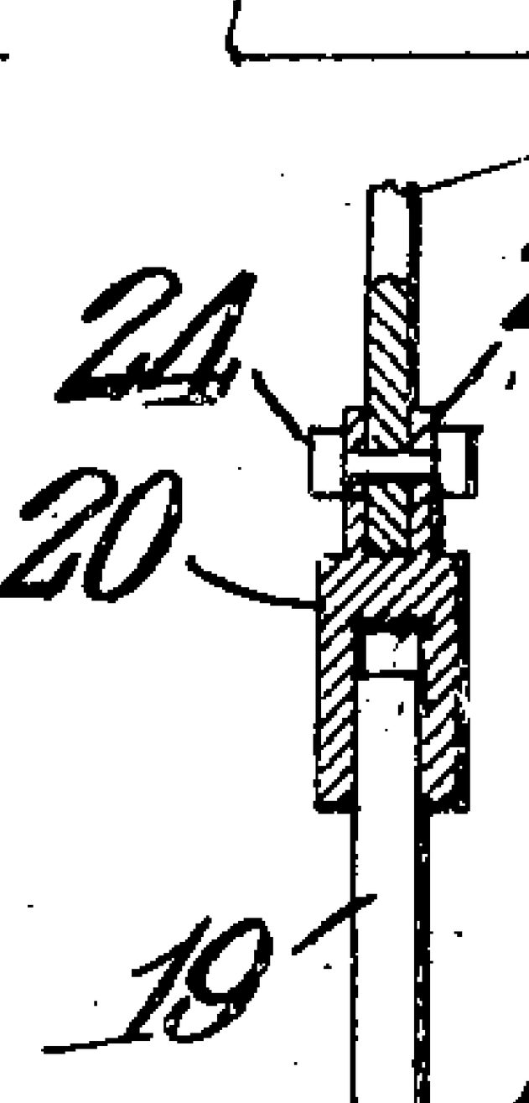


Fig.6.

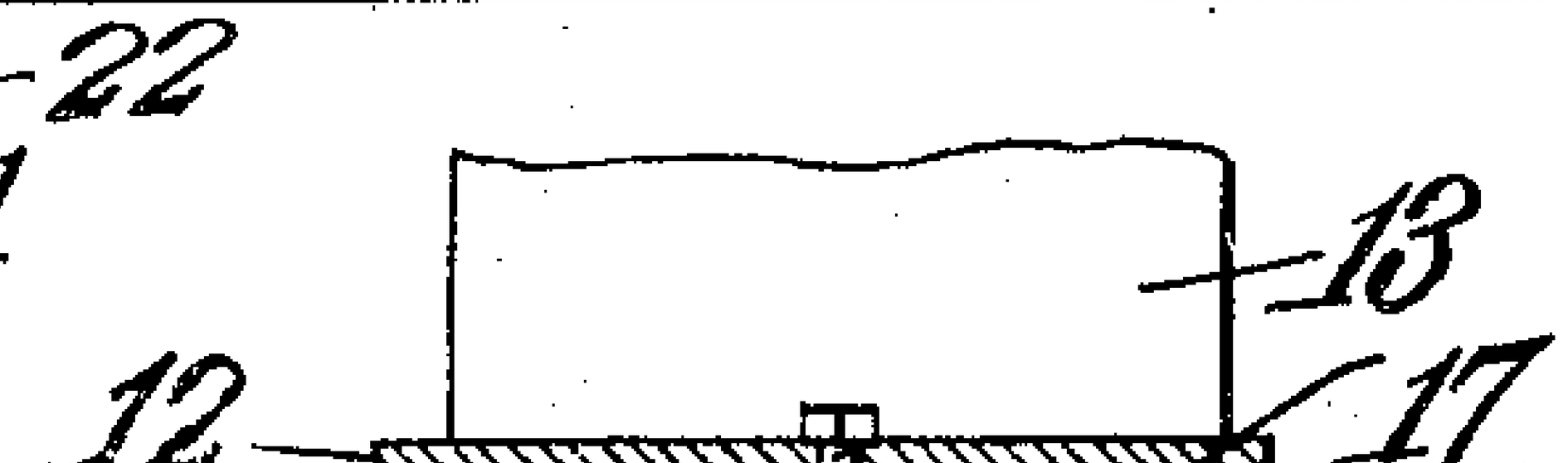
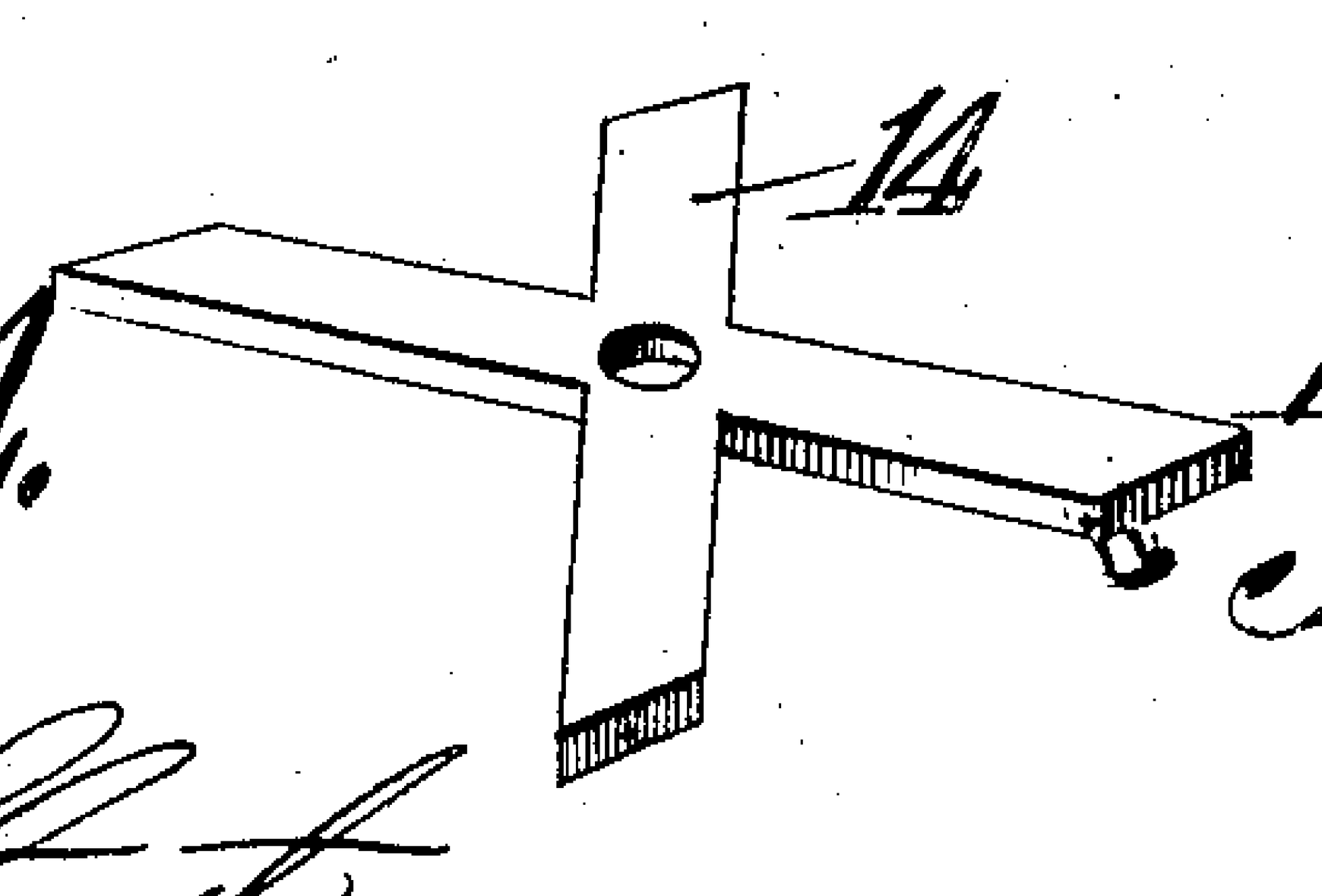


Fig.5.

Fig.4.



Robert A. Bell AND James B. McKiel Inventors

Witnesses

[illegible]

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By C.A.Snow & Co. Attorneys

UNITED STATES PATENT OFFICE.

ROBERT A. BELL AND JAMES B. McKIEL, OF MARSHALL, TEXAS.

HEADLIGHT.

No. 896,794. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed March 11, 1908. Serial No. 420,481.

To all whom it may concern:

Be it known that we, ROBERT A. BELL and JAMES B. McKIEL, citizens of the United States, residing at Marshall, in the county of Harrison and State of Texas, have invented a new and useful Headlight, of which the following is a specification.

This invention relates to locomotive head lights.

The object of the invention is to provide an improved form of pivotally mounted light arranged to throw the rays of light in the direction in which the engine moves, as when passing around a curve.

A further object of the invention is to simplify the means whereby this may be done.

The invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings:—Figure 1 is a front elevation of a locomotive constructed in accordance with the invention, parts being broken away to show the same. Fig. 2 is a side elevation of a portion of a locomotive arranged in the same manner. Fig. 3 shows one manner of supporting the head light. Fig. 4 shows a detail of one of the parts thereof. Fig. 5 shows another manner of supporting the head light. Fig. 6 is a detail of one of the lever connections.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The numeral 10 indicates the locomotive smoke box on which is held a bracket 11 having mounted thereon a rotatable platform 12 and a head light 13 is detachably held on said platform. In the form shown in Fig. 3 it will be noted that cross bars 14 support a pin 15, and the platform 12 is carried on a sleeve 16. It is preferred, however, to use the previously described form, as shown in Fig. 5, and there equip the same with rollers 17 to decrease the friction of rotation.

A pin 18 projects from the front of the head light or its support, preferably in substantially horizontal direction. Mounted upon the engine truck is a pin 19 securely fixed thereon. On the pin 19 is a sleeve 20 rotatable and slidable thereon. It is preferred to form this sleeve with a forked end, as shown at 21. A lever 22 is intermediately fulcrumed as shown at 23, and it is to be noted that, if desired, one of the smoke box front bolts may be used for this fulcrum. The lever 22 is provided with a suitable opening therethrough, and the forked end 21 of the sleeve 20 is, also, provided with openings adapted to register with the opening in the lever and a bolt 24 is arranged to pass through these openings and pivotally connect the lever and sleeve. A record lever 25 pivoted as at 26 is held to be slidably pivoted to the first lever, as at 27. The fulcrum at 26 may consist of a bolt which supports the number plate, as here shown, or such other device as may be adopted. On the upper end of the lever 25 is formed a pin 28 whereon is mounted a sleeve 29 which is here shown provided with a forked end 30, although any other form of slot is equally well adapted for the purpose. The sleeve 29 is so mounted on the pin 28 as to be freely rotatable thereon, and the forked end 30 is arranged so that the sides of the slot engage the pin 18 before mentioned.

In the operation of the device, it will be readily observed that when the truck swings to one side or the other, as indicated at the dotted lines in Fig. 1, the lower end of the lever 22 will be swung to the same side. At the same time due to that end moving in the arc of a circle, the end will rise slightly being permitted to do so by the slidable connection between the pin 19 and the sleeve 20. The pin 19 will, also, be caused to rotate slightly in the sleeve 20, inasmuch as the lever will prevent the sleeve 20 from moving except in a fixed plane, while the pin 19 moves in the arc of a circle of comparatively great radius. The upper end of the lever 22 will be caused to move in the opposite direction and carry the lower end of the lever 25 with it, the slot and pivot connection between the two levers permitting this movement. The upper end of the lever 25 will thus be caused to move in the same direction as that in which the truck swings and the slotted sleeve 29 permits freedom in this movement in a manner similar to that of the sleeve 20 before described.

It is a well known fact that there is more or less vertical movement of the trucks of a locomotive relative to the boiler and parts carried above the frame, and it is, therefore, necessary that some freedom of motion be provided and this has been done in the various slidable and rotatable connections shown in the present invention.

The various parts heretofore described are so connected that there is a slight degree of

play in the sliding joints thereof, further, the material of which the device is made is intended to have a certain amount of resiliency or spring. By this means allowance is made for the slight forward and backward motion caused by the pin passing through the arc of a circle.

It is obvious that while the device is here shown as applied to a locomotive, and while it is especially well adapted for this purpose, yet the same may be used on road engines or other motors analogous thereto. It is not desired therefore to confine the application of the device simply to locomotives but to include all such as properly come within the scope of the invention.

It will be further obvious that this device may be used upon the side of the engine, as well as on the front thereof. To accomplish this result it is merely necessary to move the pin 19 to a suitable position on the truck and rearrange the pivotal supports for the lever.

What is claimed is:—

1. In a device of the character described, a pivotally mounted truck, a pivotally mounted headlight, a lever, a pin rigidly fixed on said truck, a sleeve held to freely rotate and slide on said pin, means for connecting said sleeve and said lever, and means for connecting said lever to the headlight to swing the same as the truck swings.

2. In a device of the character described, a pivotally mounted truck, a pivotally mounted headlight, a lever, a freely rotatable and slidable connection between said truck and lever comprising a pin fixed on said truck and a sleeve pivotally attached to said lever, a second lever slidably pivoted to the first lever, a pin formed on said second lever, a sleeve having a slot, rotatably mounted thereon, and a pin projecting from the headlight into said slot.

3. In a device of the character described, a pivotally mounted truck, a pivotally mounted roller supported headlight, a pin on said truck, a sleeve held to rotate and slide on said pin, an intermediately fulcrumed lever pivotally connected to said sleeve, a second intermediately fulcrumed lever, a sliding pivot connection between said levers, a pin formed on said second lever, a sleeve having a slot, rotatably mounted on said pin, and a pin on said headlight held in said slot.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

ROBERT A. BELL.
JAMES B. McKIEL.

Witnesses:
F. McGee,
W. A. Adair.