

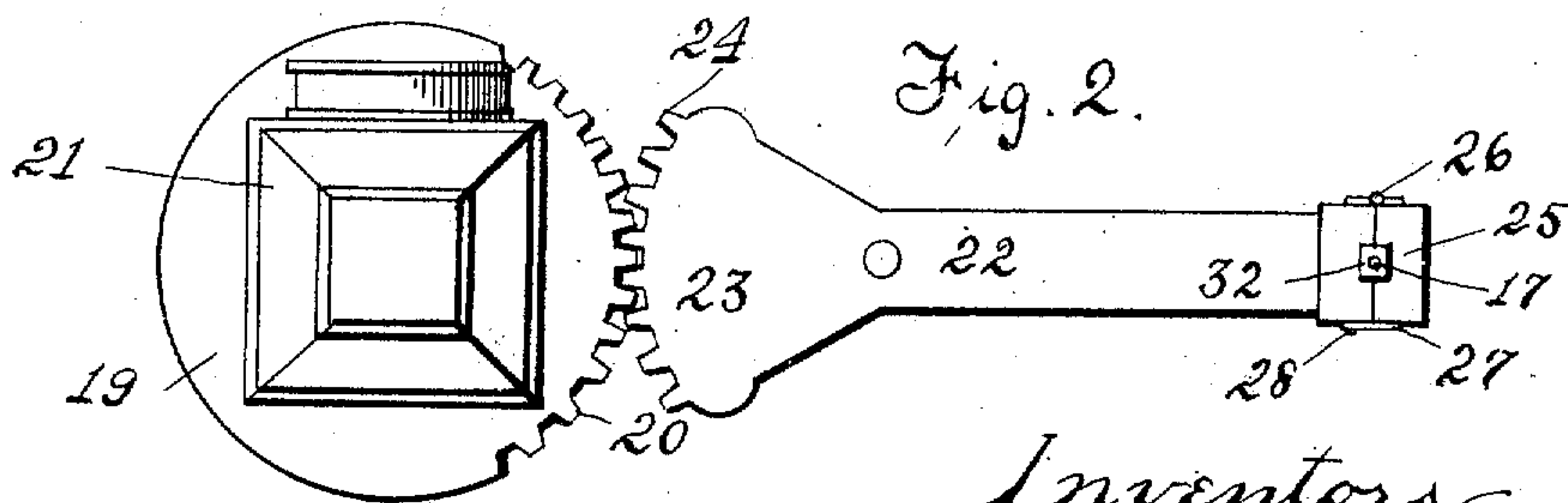
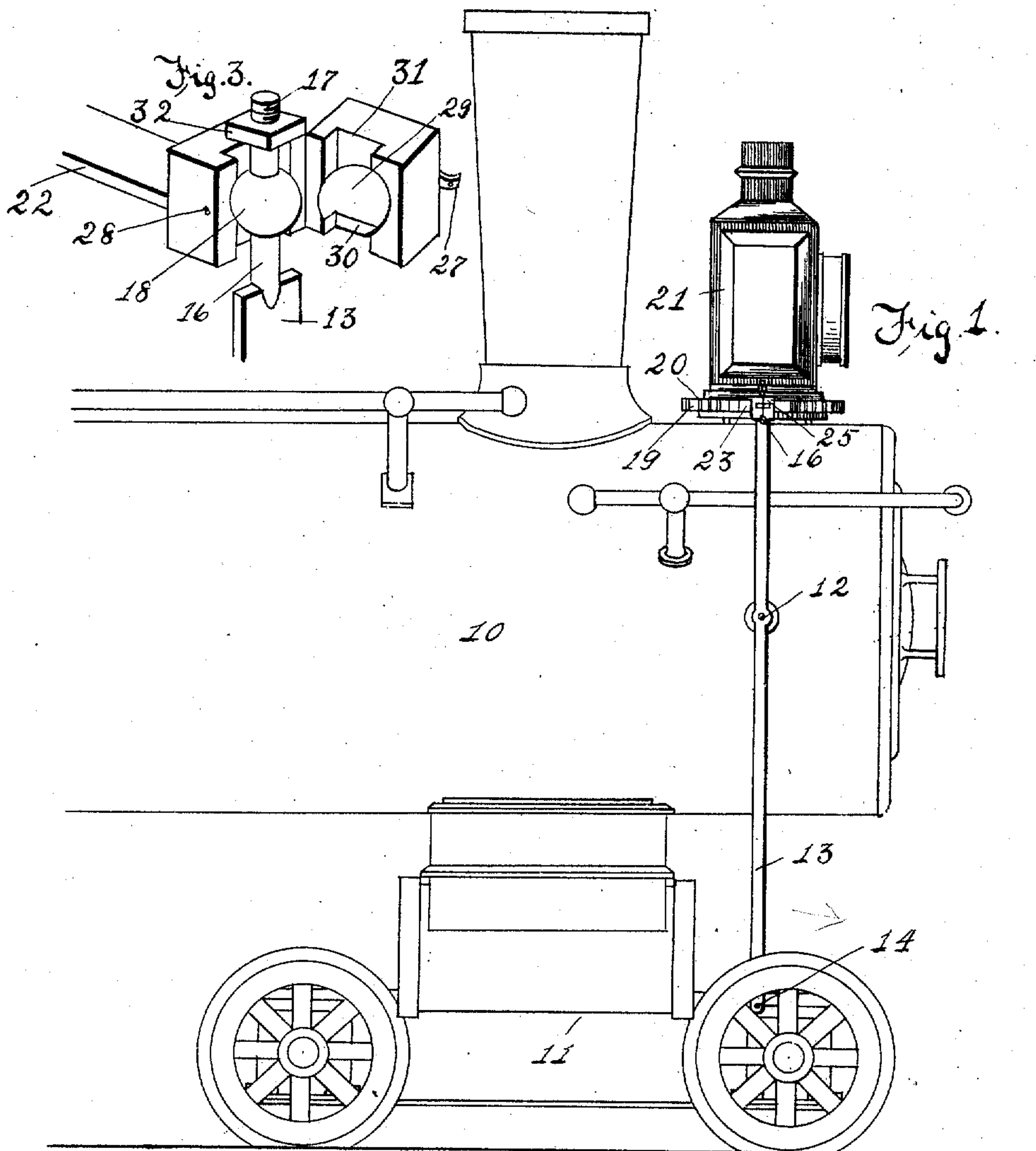
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J. & G. A. JOSLEN.
AUTOMATIC HEADLIGHT DIRECTING DEVICE.

(Application filed July 9, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEPHIEN JOSLEN AND GEORGE A. JOSLEN, OF DES MOINES, IOWA.

AUTOMATIC HEADLIGHT-DIRECTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 687,964, dated December 3, 1901.

Application filed July 9, 1901. Serial No. 87,662. (No model.)

To all whom it may concern:

Be it known that we, JOSEPHIEN JOSLEN and GEORGE A. JOSLEN, citizens of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Automatic Headlight-Directing Devices, of which the following is a specification:

Locomotive-engines are usually provided with headlights firmly fixed to the front end portion thereof, and hence when the engine is rounding a curve in the track the rays from the headlight do not illuminate the track. We have observed in rounding a curve the front truck of the locomotive stands at an angle relative to the longitudinal movement of the locomotive.

Our object is to provide a pivoted headlight and simple, durable, and inexpensive means whereby the forward or backward movement of one side of the front truck of the locomotive-engine relative to the boiler will operate to turn the pivoted headlight in the proper direction for throwing the rays of light upon the track when the engine is rounding a curve.

A further object is to provide a device of this class that will not be affected by the vertical movements of the boiler and the front truck relative to each other and the levers for operating the headlight will not be bent or broken by such movements.

Our invention consists in certain details in the construction, arrangement, and combination of the various parts of the device with a locomotive-engine, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claims, and illustrated in the accompanying drawings, in which—

Figure 1 illustrates diagrammatically the front portion of a locomotive-engine, showing our improvements attached thereto. Fig. 2 shows a top or plan view of the locomotive-headlight and the levers for operating the headlight-base. Fig. 3 shows in perspective the joint for connecting the headlight-operating levers with each other.

Referring to the accompanying drawings, we have used the reference-numeral 10 to indicate the locomotive-engine boiler, and 11 the front truck thereof. Fixed to the side

of the boiler near its forward end is a journal 12, upon which the lever 13 is fulcrumed. The lower end of this lever is projected straight downwardly and is pivotally attached to the truck-frame at 14. The upper end of the lever is provided with a hinged extension 16 and screw-threaded at its top at 17, and mounted upon the extension 16 is a ball 18, capable of moving vertically upon the extension 16 for purposes hereinafter made clear.

The reference-numeral 19 indicates a circular platform having cog-teeth 20 on its edge, said platform being rotatably mounted on top of the front end portion of the locomotive-boiler. A headlight 21 of ordinary construction is fixed on top of this platform.

The reference-numeral 22 indicates a lever fulcrumed to a suitable support on top of the locomotive-boiler and having a segmentally-shaped head 23, provided with cog-teeth 24, said cog-teeth in mesh with the teeth on the rotary platform. Formed on or fixed to the outer end portion of the lever 22 is a block 25, divided along a vertical line of the two parts, the said parts being connected by a hinge 26. At the side opposite from the hinge is a spring-latch 27 to engage a pin 28, whereby the parts of the block may be locked together when desired. On the interior of each portion of the block is a hemispherical recess 29, having slots 30 in their lower ends. These recesses 29 are designed to admit the ball 18 and enter between the parts of the block, and the slots 30 and 31 permit the extension 16 to move laterally and vertically therein. A nut 32 is placed on top of the screw-threaded extension 16 to prevent the parts from becoming disengaged.

In practical use it is obvious that when rounding a curve the side of the truck to which the lever 13 is pivoted will move either forwardly or backwardly relative to the boiler, and this movement will be imparted to the headlight through the lever 22 and the cog-teeth 20 and 24, thereby moving the headlight in the desired direction. It is obvious, further, that the connection between the levers 13 and 22 will permit the desired movements of the levers relative to each other, and at the same time the lever 13 may move vertically relative to the lever 22 by having this

extension 16 slid through the ball 18. This movement is necessary, because the lever 13 will move vertically relative to the boiler.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An automatic headlight-directing device, comprising a platform having a toothed rim and pivoted to the engine-boiler to swing in a horizontal plane, a headlight mounted on said platform, a lever fulcrumed on top of the engine-boiler and having cog-teeth on one end to mesh with the teeth on the platform, and a lever pivoted to one side of the engine-truck fulcrumed to the boiler and connected with the aforesaid lever, for the purposes stated.

2. An automatic headlight-directing device, comprising a platform having a toothed rim pivoted to the engine-boiler to swing in a horizontal plane, a headlight mounted on said platform, a lever fulcrumed on top of the boiler having cog-teeth on one end meshing

with the teeth of the said rim and having at its other end a block divided vertically into two parts, said parts being hinged together at one side, means for detachably connecting the parts of the block at the side opposite from the hinges, the interior of each portion of the block having a hemispherical recess, vertical slots above and below the recesses, a lever fulcrumed to the side of the boiler and capable of swinging in a vertical plane, and pivoted at its lower end to one side of the engine-truck and having an extension at its top, a ball slidably mounted on said extension, said extension and ball being designed to pass through the said block with the ball resting in the recesses therein, substantially as and for the purposes stated.

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