

No. 896,931.

PATENTED AUG. 25, 1908.

C. E. McWADE.
TURN TABLE OPERATING MECHANISM.

APPLICATION FILED MAY 7, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

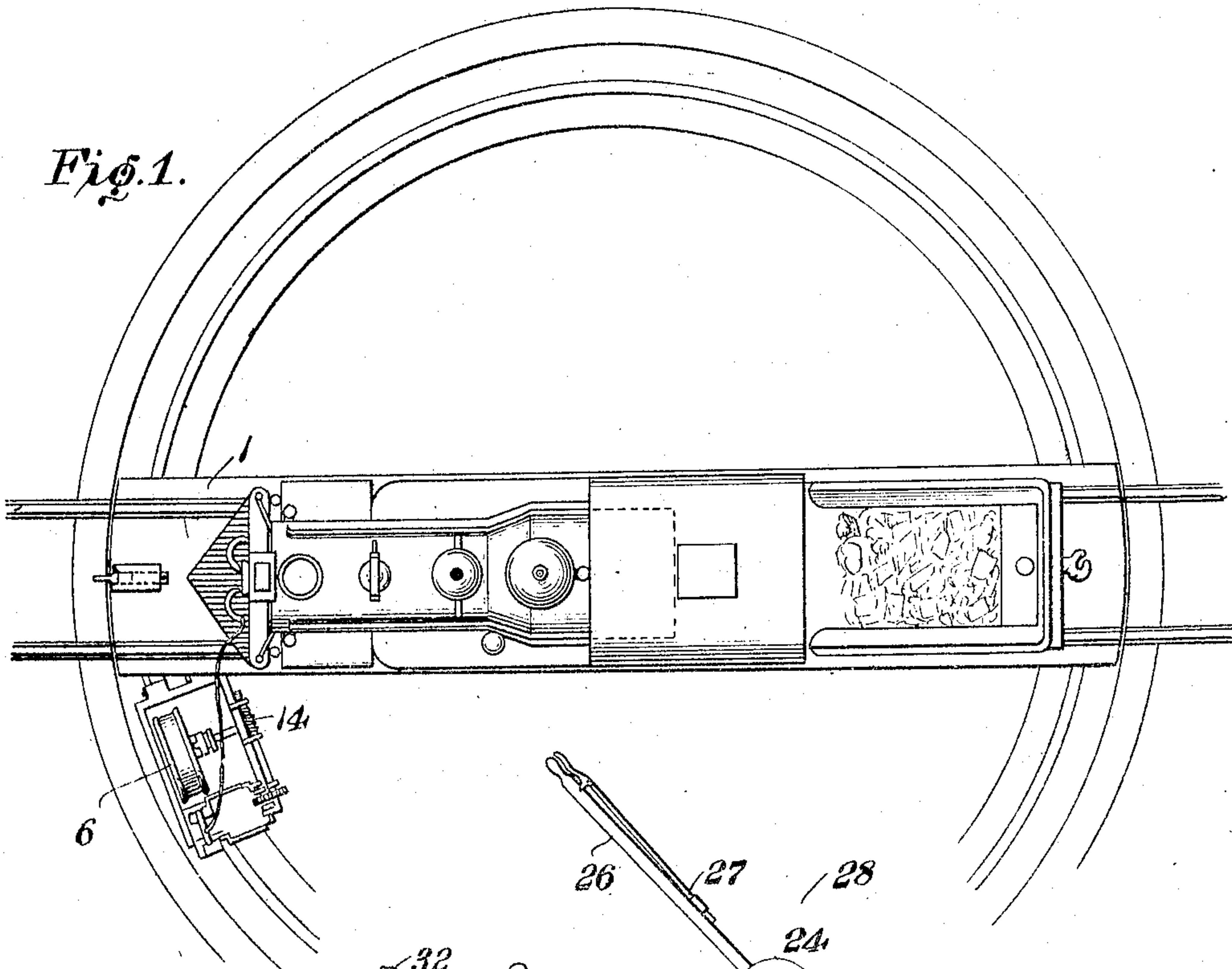
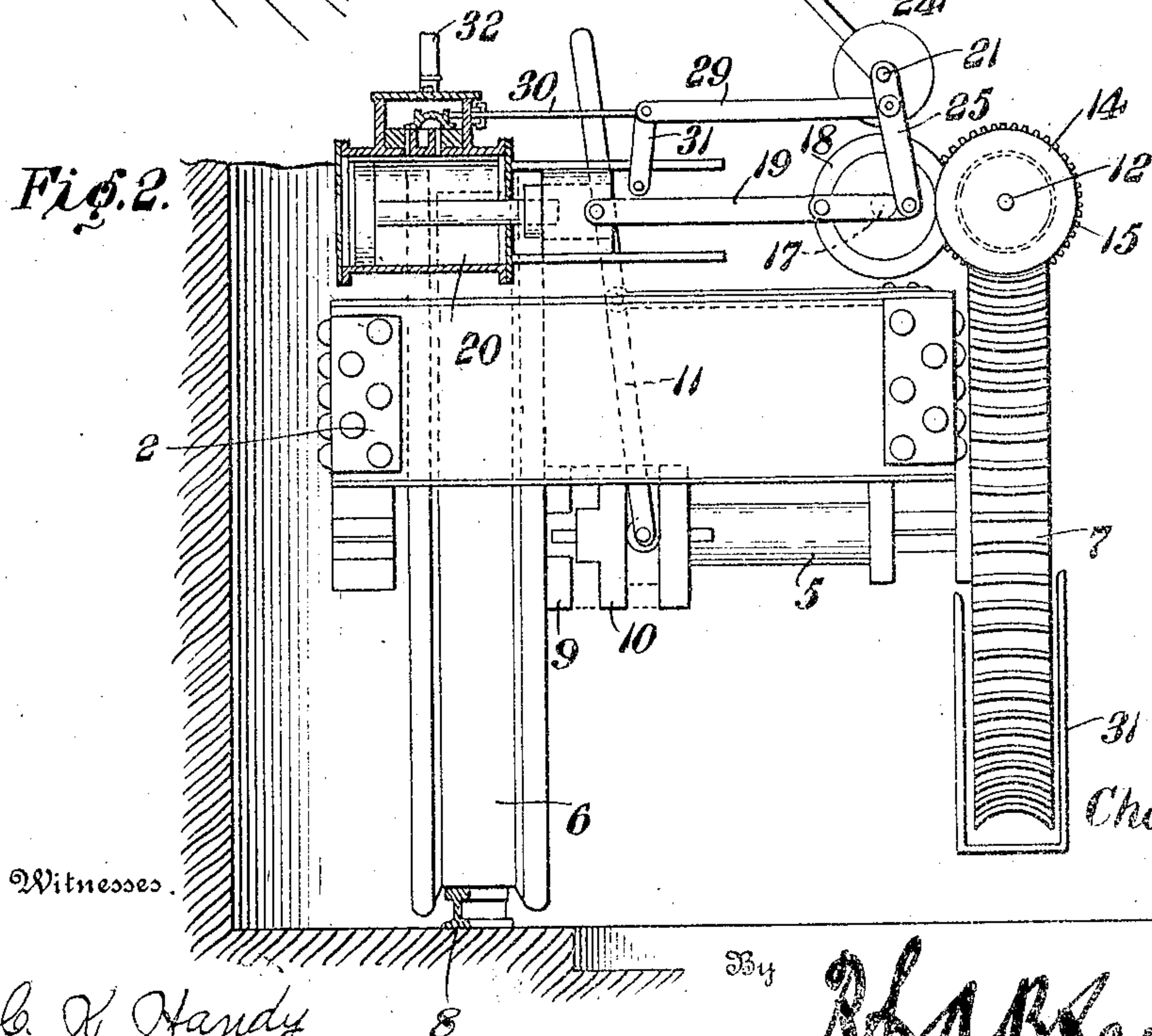


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

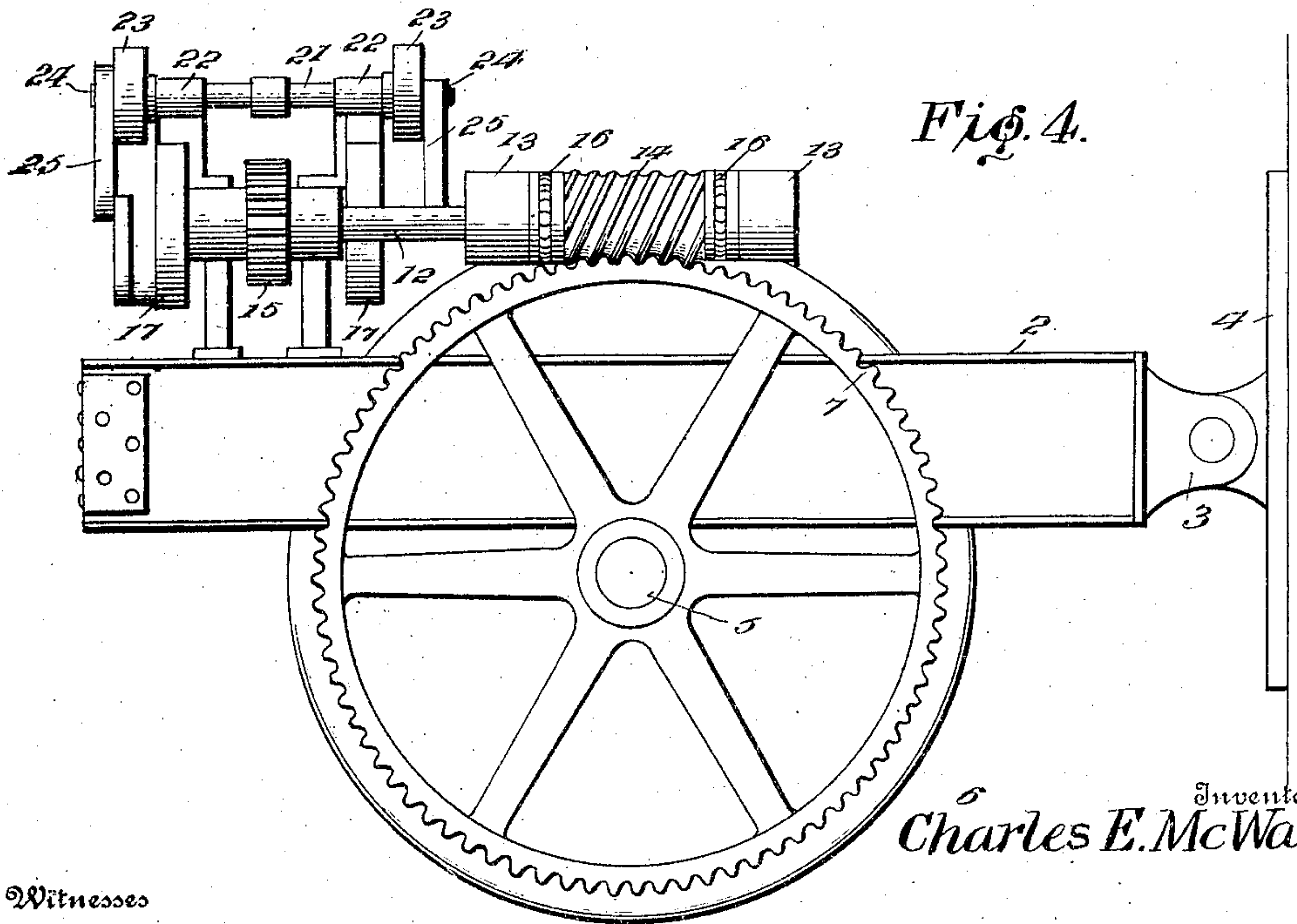
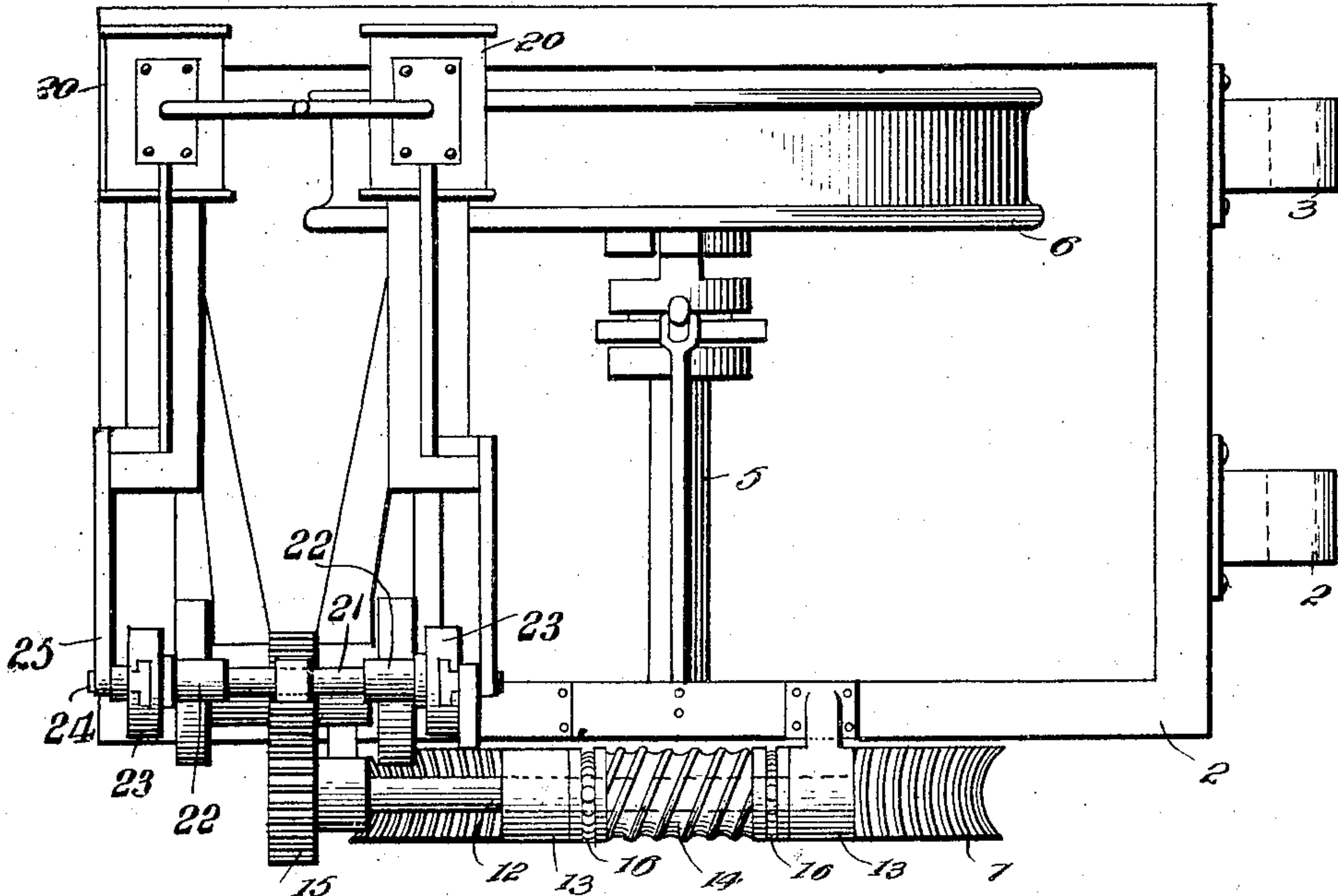


Fig. 4.

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CHARLES E. McWADE, OF MATTOON, ILLINOIS.

TURN-TABLE-OPERATING MECHANISM.

No. 896,931.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed May 7, 1908. Serial No. 431,406.

To all whom it may concern:

Be it known that I, CHARLES E. McWADE, citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Turn - Table - Operating Mechanisms, of which the following is a specification.

The present invention provides a novel mechanism particularly designed for moving the platform of turntable structures employed in connection with railways, the mechanism being intended to be operated by means of the locomotive mounted upon the turntable during the operation of the latter, and said mechanism also admitting of the turntable being operated by hand when required, or found necessary.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a top plan view of a turntable embodying the invention. Fig. 2 is a sectional view of the turntable actuating mechanism, showing a portion of the pit, the parts being illustrated on a larger scale. Fig. 3 is a top plan view of the operating mechanism on the same scale as Figs. 2 and 4. Fig. 4 is a side view of the actuating mechanism.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The platform 1 constituting the turntable proper may be of any construction commonly employed for effecting shifting of railway locomotives and cars. The platform is mounted so as to swing in a horizontal plane about a vertical axis, and in the present instance is adapted to be operated by mechanism constructed in accordance with this invention and mounted independently of the platform and having connection therewith.

The actuating mechanism is mounted upon a frame 2 which may be of any substantial construction and which is provided at one

end with lugs 3 by means of which the frame is pivotally connected to corresponding lugs 4 projected from the framework of the platform. A shaft 5 is mounted in bearings at opposite sides of the framework 2 and is provided with a drive wheel 6 and a worm wheel 7. The drive wheel 6 is grooved in its periphery and is mounted to travel upon a circular track 8 located in the bottom of the pit. The drive wheel 6 is adapted to be secured to the shaft 5 by means of a clutch so as to be thrown into and out of gear according as the turntable is to be operated by hand or mechanically. The clutch consists of elements 9 and 10, the element 9 being fast to the drive wheel 6 and the element 10 loose upon the shaft 5 and secured thereto by a feather and spline connection so as to rotate therewith. A shipper lever 11 is provided to throw the clutch into and out of gear. When the clutch is unshipped, the drive wheel 6 is adapted to turn freely upon the shaft 5.

A longitudinal shaft 12 is mounted in bearings 13 attached to a side piece of the frame 2 and is provided with a worm 14 and a gear wheel 15. Ball bearings 16 are provided between the ends of the worm 14 and the bearings 13 to sustain the end thrust incident to the operation of the mechanism. The worm gearing 14 and 15 provided between the shafts 12 and 5 results in augmenting the power expended for moving the platform and at the same time provides a lock for holding the turntable in the adjusted position, thereby precluding the necessity for providing extra means for locking the turntable in any desired position.

A shaft 17 parallels the shaft 12 and is provided at opposite ends with crank wheels 18 which are connected by pitmen 19 with cross heads having connection with the pistons of a pair of engines 20. The crank wheels 18 are set quartering so as to prevent the engines stopping on a dead center. A shaft 21 is mounted in bearings 22 and is provided at opposite ends with disks 23 in which are formed diametrical grooves in which are slidably mounted blocks 24 which are connected by links 25 with the adjacent crank wheels 17. A hand lever 26 is fast to the shaft 21 and is provided with a latch 27 adapted to enter any one of a series of three notches in a curved bar 28 so as to lock the lever 26 in the desired position according as the engine is running forward, backward or is at rest. Rods or bars 29 connect the links

25 with the valve stems 30, links 31 supporting the parts 29 and 30 at their points of connection. The position of the operating lever 26 controls the position of the valves of the engines. When the lever 26 is thrown forward, as indicated in Fig. 2, the engine runs forward, and when the lever is moved to the opposite end of the bar 28, the engine is reversed, and when said lever occupies an intermediate position of the bar 28, steam or motive medium is cut off from the engine, and the latter is at rest. It is to be understood that the valve mechanism may be adapted for general use and is not restricted in the manner shown. A housing 31 is adapted to inclose a part of the worm gearing and receives a quantity of lubricant, so as to keep the parts 7 and 14 in prime running condition.

As shown most clearly in Fig. 1, the framework provided with the actuating mechanism is wholly independent of the framework of the platform 1 and is pivotally connected thereto. The entire weight of the framework 2 and the mechanism mounted thereon is supported by the drive wheel 6, thereby creating sufficient friction between the drive wheel and rail 8 to insure movement of the turntable when the actuating mechanism is in operation. The motive medium for operating the engines 20 is derived from the locomotive engine run upon the turntable to be shifted, a hose pipe 32 serving to connect the chests of the engines with the air pump, boiler or other part of the engine designed to supply the motive medium for operating the actuating mechanism when used to move the turntable.

Having thus described the invention, what is claimed as new is:

1. In operating mechanism substantially as set forth, the combination of a framework, a shaft provided with a drive wheel, a worm wheel mounted upon said shaft, a sec-

ond shaft arranged at an angle to the first mentioned shaft and provided with a worm in mesh with said worm wheel, and means for imparting rotation to the shaft provided with the said worm.

2. In operating mechanism substantially as set forth, the combination of a framework, a shaft provided with a drive wheel, a worm wheel mounted upon said shaft, a second shaft arranged at an angle to the first mentioned shaft and provided with a worm in mesh with said worm wheel, bearings for said second shaft upon opposite sides of the worm thereof, anti-friction devices between the said worm and the adjacent bearings to sustain end thrust, and means for imparting rotation to said second shaft.

3. In mechanism of the character specified, the combination of a framework, a shaft, a drive wheel loose upon said shaft, a clutch for throwing the drive wheel into and out of gear, a worm wheel fast to said shaft, a second shaft arranged at an angle to the first mentioned shaft and provided with a worm in mesh with said worm wheel, and means for imparting rotation to the second shaft.

4. In actuating mechanism of the character specified, comprising an engine and a slide valve controlling admission to the motive medium thereto, a crank wheel having connection with the piston of the engine, a disk, a block slidable upon the disk, a link connecting said block with the crank wheel, an operating lever for turning the shaft provided with said disk to change the relative position of the block mounted thereon, and connecting means between said link and the stem of the slide valve.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. McWADE. [L. s.]

Witnesses:

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JOHN CANTLON.