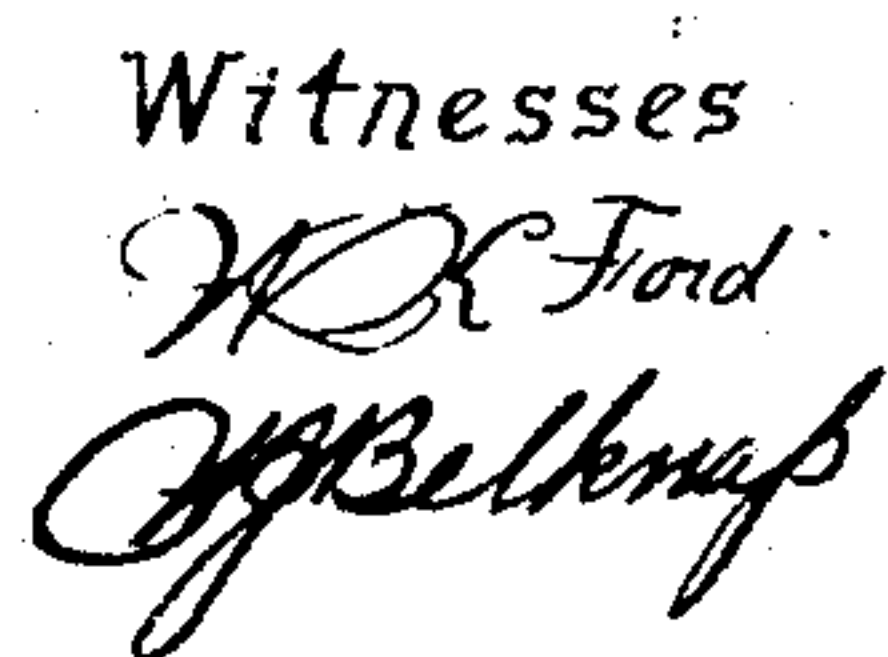


916,430.

Patented Mar. 30, 1909.



Inventor

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UNITED STATES PATENT OFFICE.

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PROPELLING MECHANISM.

No. 916,430.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed June 3, 1908. Serial No. 436,387.

To all whom it may concern:

Be it known that I, JOSIAH C. FLEMING, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Propelling Mechanisms, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a propelling mechanism especially designed in the present instance for use in connection with locomotive turntables, but applicable as will be apparent from its construction to other analogous uses.

The invention consists primarily in mechanism of this character having traction-inducing means other than the usual springs or similar appliances heretofore employed, whereby a simple, less expensive and a more efficient apparatus is obtained, and one in which the liability of breakage and the necessity of repair is reduced to a minimum.

The invention further consists in the novel construction of a supporting frame, in the connections between the frame and the device to be propelled, and still further in certain details of construction as will be more fully hereinafter set forth.

In the drawings illustrating my invention,—Figure 1 is a perspective view of the propelling mechanism as applied to a turntable; Fig. 2 is a fragmentary end view of the motor; and Fig. 3 is a detached plan view of the attaching end of the supporting frame.

In general, the apparatus comprises a supporting frame, as A, connected to a turntable or other device to be driven, a traction wheel B journaled in bearings on the frame, and a motor C for driving the traction wheel. The frame, as shown, is an elongated structure, the traction wheel being journaled in bearings D in its forward or attaching end, and the motor mounted upon the projecting portion of the frame beyond the traction wheel. With the parts arranged and constructed in this manner, the supporting frame constitutes a lever of the second class, in which the weight of the projecting portion of the frame and that of the motor is utilized in pressing the traction wheel to the track, thereby producing the desired traction, and this without the use of springs or other similar devices heretofore employed.

The preferred form of frame is illustrated, consisting of a single structural member, preferably a channel bar, bent into yoke-shaped form, with its free ends adjacent to the turntable F or other device that is to be propelled. Intermediate the free ends of the frame bar is bolted a cross member G,—preferably a yoke-shaped casting,—and projecting forwardly beyond the frame and forming preferably part of the casting are spaced apertured ears *a*, forming pivot members. H represents an attachment, also preferably a casting, adapted to be suitably bolted to the turntable or other device to be driven. This in turn is provided with a cooperating pivot member or members, in this instance in the form of a tubular bearing *d* extending intermediate the ears, as shown.

e represents a bolt or pivot pin engaging the members and completing the coupling between the table and frame.

It is frequently necessary,—especially where the propelling mechanism is used in connection with turntables,—to effect a lateral adjustment between the table and frame, in order that the propelling mechanism may properly follow the turntable during its rotation. I have therefore provided for such an adjustment by making preferably the tubular bearing *d* of considerably less length than the distance between the projecting ears, and filling the space upon either side of the bearing by washers, as *f*. Thus, the apparatus may be shifted laterally in relation to the device to be driven in either direction by increasing or diminishing the number of washers upon the respective sides of the attachment coupling.

The motor for driving the mechanism may be of any suitable construction, but I have herein shown the same as a compressed air motor provided with a suitable supply conduit I and an exhaust pipe J. The motor, as shown, is mounted directly upon transverse supports *a'* and *b*, which in turn are suitably bolted to the frame flanges.

Any suitable drive connection may be employed between the motor and traction wheel. I have herein shown a gear train, consisting of a pinion P fixed upon the motor-shaft Q, meshing with a spur gear R upon a transverse shaft S mounted in bearings T upon the supporting frame, as shown in Fig. 1.

U represents a pinion fixed to the shaft S, which meshes with a spur gear V fixed upon the traction wheel.

- For convenience in operation I have provided controlling means for the motor extending from the latter to the turntable. This mechanism consists of a main operating lever K for the motor, a longitudinally extending lever L extending from the first-mentioned lever to a standard M on the turntable, and a handle or other suitable operating member, as O, pivoted to the standard and having a pivotal connection at its lower end with the member L.
- What I claim as my invention is,—
1. An automatic propelling mechanism, comprising a horizontally supporting frame adapted for attachment at one end with the device to be propelled, of a traction wheel journaled in bearings upon the frame in proximity to its attaching end, a fluid motor mounted upon the opposite end of the frame beyond the traction wheel, and a drive connection between said motor and wheel.
 2. The combination with a turntable, automatic propelling mechanism therefor comprising a horizontal supporting frame pivoted at one end to the table, a power motor mounted upon its opposite end, a traction wheel journaled in bearings upon the frame between its point of attachment and the motor, and a gear connection between said motor and wheel.
 3. In automatic propelling mechanism for turntables, the combination with an attachment adapted to be connected to the table, a horizontal supporting frame pivoted to the attachment, a traction wheel journaled upon the frame near the pivot, a power motor upon the frame end opposite the point of attachment, and a drive connection between said motor and wheel.
 4. In a propelling mechanism, the combination with a supporting frame, consisting of a single structural member fashioned into yoke-shaped form, a traction wheel within the frame journaled in suitable bearings thereon, and a motor also mounted upon the frame for driving the wheel.
 5. In a propelling mechanism, the combination with an elongated supporting frame, consisting of a single laterally flanged yoke-shaped member, means for attachment with the device to be propelled located between the extremities of said member, a traction

wheel within the frame journaled in suitable bearings thereon, a motor mounted upon the frame flange, and a drive connection between said motor and wheel.

6. A propelling mechanism, consisting of a supporting frame composed of a single yoke-shaped member, a cross bar connecting the yoke ends and carrying means for attachment to the device to be propelled, a motor upon the frame, a traction wheel within the frame journaled in bearings upon the latter intermediate the motor and cross member, and a drive connection between the motor and wheel.

7. In a propelling mechanism, the combination with an elongated supporting frame, composed of a single yoke-shaped bar, a cross member connecting the bar ends, an attachment adapted to be connected to the device to be propelled, cooperating pivot members upon the attachment and cross member, and a pivot pin connecting said members, a traction wheel journaled in bearings upon the frame, and a motor also upon the frame having a drive connection with the wheel.

8. The combination with a turntable, of a supporting frame pivoted at one end thereto, a motor upon the frame, a traction wheel journaled in bearings upon the frame intermediate the motor and turntable, a drive connection between the wheel and motor, and controlling means for said motor extending from the latter to the turntable.

9. In a propelling mechanism, the combination with the supporting frame, of an attachment adapted to be connected to the device to be propelled, cooperating pivot members upon the frame and attachment, a pivot bar engaging the members, and means for effecting a relative lateral adjustment between the pivot members.

10. The combination with a turntable, of a supporting frame carrying a traction wheel, and a motor for operating the same, a horizontal pivot connecting the frame and table, and means for laterally adjusting the frame at its point of attachment.

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

JOSIAH C. FLEMING.

Witnesses:

NELLIE KINSELLA,
JAMES P. BARRY.