

J. W. ROHRER.

DRIVING MECHANISM FOR LOCOMOTIVE STOKERS.

APPLICATION FILED MAY 22, 1920.

1,421,994.

Patented July 4, 1922.

2 SHEETS—SHEET 1.

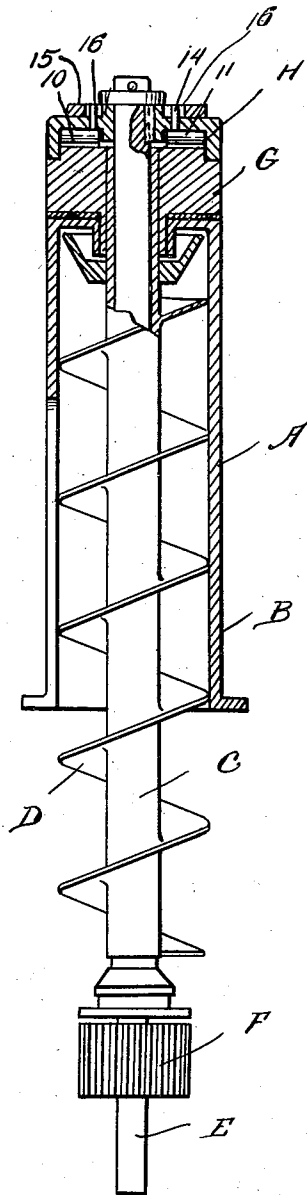
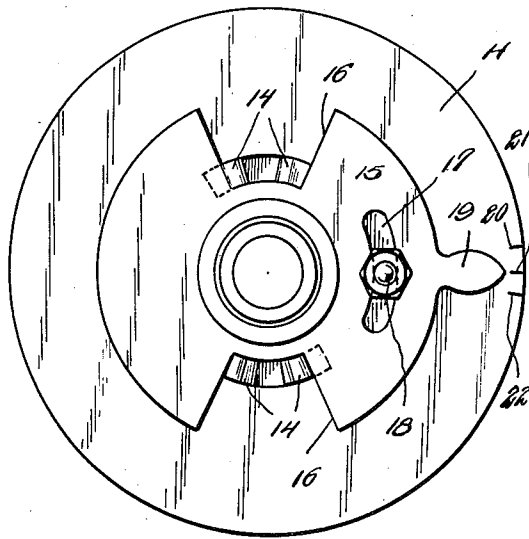


Fig. 1.

Fig. 2.



H. L. Fox,

WITNESSES:

J. W. Rohrer,

INVENTOR

BY *Victor J. Evans.*

ATTORNEY

J. W. ROHRER.
DRIVING MECHANISM FOR LOCOMOTIVE STOKERS.
APPLICATION FILED MAY 22, 1920.

1,421,994.

Patented July 4, 1922.

2 SHEETS—SHEET 2.

Fig. 3.

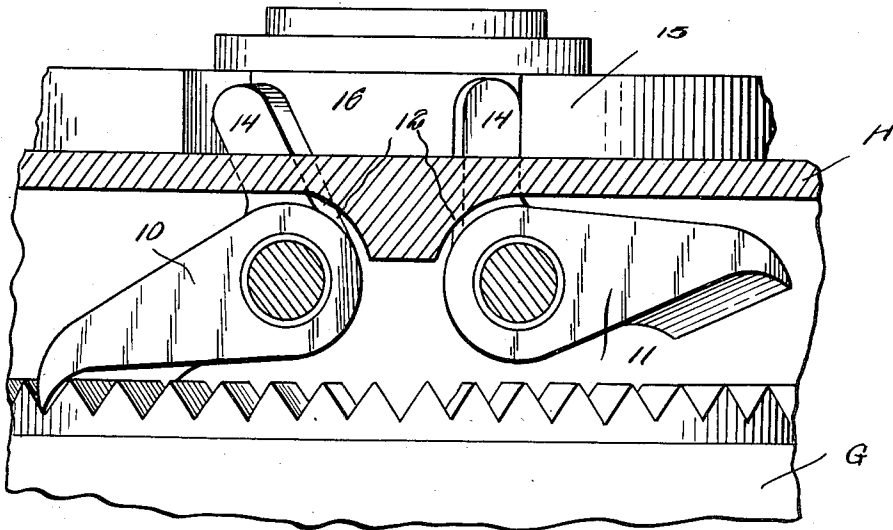
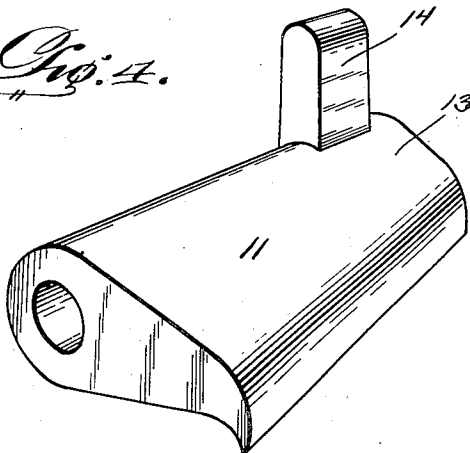


Fig. 4.



F. L. Fox,

WITNESSES:

J. W. Rohrer,

INVENTOR

BY *Victor G. Enns.*

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN W. ROHRER, OF COLUMBUS, OHIO.

DRIVING MECHANISM FOR LOCOMOTIVE STOKERS.

1,421,994.

Specification of Letters Patent.

Patented July 4, 1922.

Application filed May 22, 1920. Serial No. 383,582.

To all whom it may concern:

Be it known that I, JOHN W. ROHRER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented new and useful Improvements in Driving Mechanism for Locomotive Stokers, of which the following is a specification.

This invention relates to pawl and ratchet driving mechanism particularly designed for use in connection with locomotive stoking devices, and has for its object the provision of a novel drive mechanism for driving one rotary member with respect to another in either direction, peculiarly constructed means being provided whereby the reversal of the drive may be effected.

An important object is the provision of a device of this character which includes a rotatable member carrying a plurality of pawls engaging a ratchet carried by the other rotatable member, and novel means whereby either set of pawls may be thrown into or out of engagement with the ratchet member and whereby all the pawls may be held in neutral or inoperative position.

An additional object is the provision of a device of this character which will be comparatively simple and inexpensive in manufacture, highly efficient in use, durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which—

Figure 1 is a longitudinal sectional view through a portion of a locomotive stoking device with my invention applied thereto,

Figure 2 is an end elevation of my device,

Figure 3 is a cross sectional view showing the ratchet and the pawls engaging therewith, and

Figure 4 is a detail view.

Referring more particularly to the drawings, the letter A designates a portion of the elevator of a locomotive stoking device of a well known type. This elevator includes a casing B and a hollow shaft C extending therethrough and having a conveyor screw D. Extending through the hollow shaft C is a solid shaft E provided with a driving gear F. The hollow shaft C carries a head G which is adapted to be driven in one di-

rection or the other by my novel connection which is associated with a pawl carrier H carried by the solid shaft E.

In carrying out my invention I provide two sets of pawls 10 and 11 which are pivoted within recesses 12 in the member H. Each pawl is formed with an extension 13 extending toward the center of the pawl carrier and upon each extension is provided a lug 14.

I also make use of a disk 15 which is rotatable with respect to the member H and this disk is provided at diametrically opposite points with recesses 16 within which the lugs 14 are disposed and with the sides of which the lugs engage. This disk 15 is provided with an arcuate slot 17 through which passes a bolt 18 carried by the member. This disk is also provided at one side adjacent the slot 17 with an extension 19 which is pointed and which serves as a handle and the member H is inscribed with indicating marks 20, 21 and 22 designating the different positions of the extension 19 for controlling the position of the pawls.

In the operation of the device, when it is desired to drive the member G carrying the ratchet, in one direction, it is merely necessary that the operator move the disk 15 in one direction so that the bolt 18 will engage against one end of the slot 17 at which time the pointed extension 19 will be in registration with the mark 20. When the disk 15 is in this position the engagement of the recesses 16 therein with the lugs 14 will cause one set of pawls 10 to operatively engage the ratchet. When it is desired to effect a drive in the opposite direction, it is merely necessary that the operator rotate the disk 15 so as to bring the other end of the slot 17 into engagement with the bolt 18 at which position the pointed extension 19 will register with the mark 22. When the disk is in this position the engagement of the recesses 16 therein with the lugs 14 will cause the other set 11 of the pawls to engage the ratchet and the set 10 to be in inoperative position. It will be apparent that when the disk 15 is in intermediate position, that is with the pointed extension 19 registering with the mark 21, all the pawls 10 and 11 will be held out of engagement with the ratchet so that no drive whatever will be effected.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided a very simply con-

5 structed and extremely easily controlled device by means of which rotary movement may be imparted to one rotatable element from another in either direction or terminated absolutely, at will.

10 While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

15 In a locomotive stoking device including a casing, a head formed on one face with a ratchet, a conveyor having a shaft passing through said head, and a member carried by the shaft of the conveyor adjacent said
20 ratchet; driving mechanism comprising

pairs of pawls pivoted upon said member, a disk mounted upon said shaft and disposed against the outer end of said member, said disk being provided at diametrically opposite sides with cut-out portions and being 25 provided intermediate said cut-out portions with an arcuate slot, said member being formed at diametrically opposite sides with slots registering with the first named cut-out portions, lugs extending from said pawls 30 and disposed through said second named slots and extending into said cut-out portions, and a guide bolt for said disk carried by said member and extending through the arcuate slot in the disk, and an extension 35 on the disk serving as a combined handle and indicator and movable over a scale on said member.

In testimony whereof I affix my signature.
JOHN W. ROHRER.