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2,055,041

STOKER OPERATING MECHANISM

Filed March 15, 1935

Fig. 1.

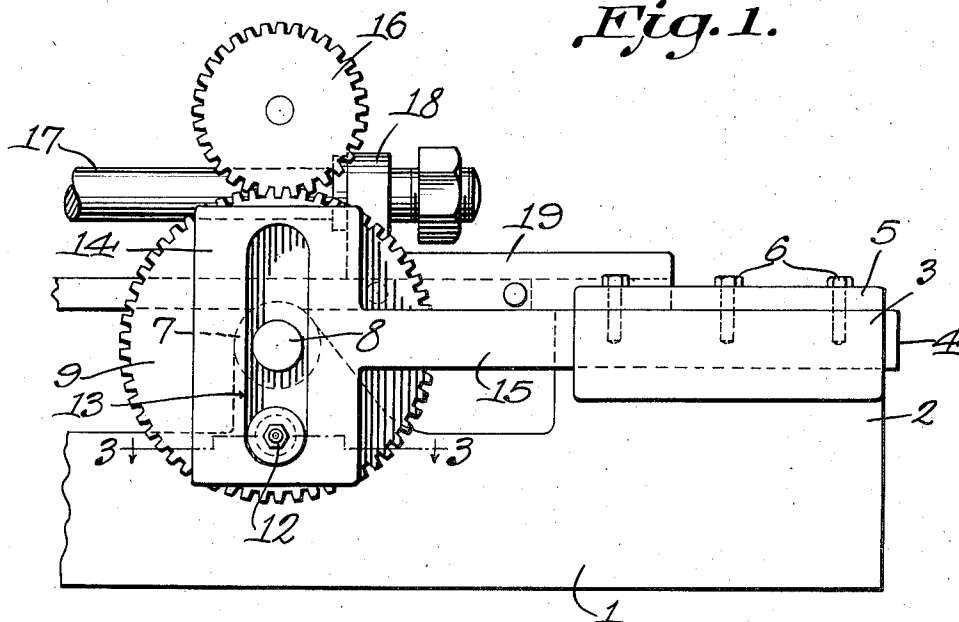


Fig. 2.

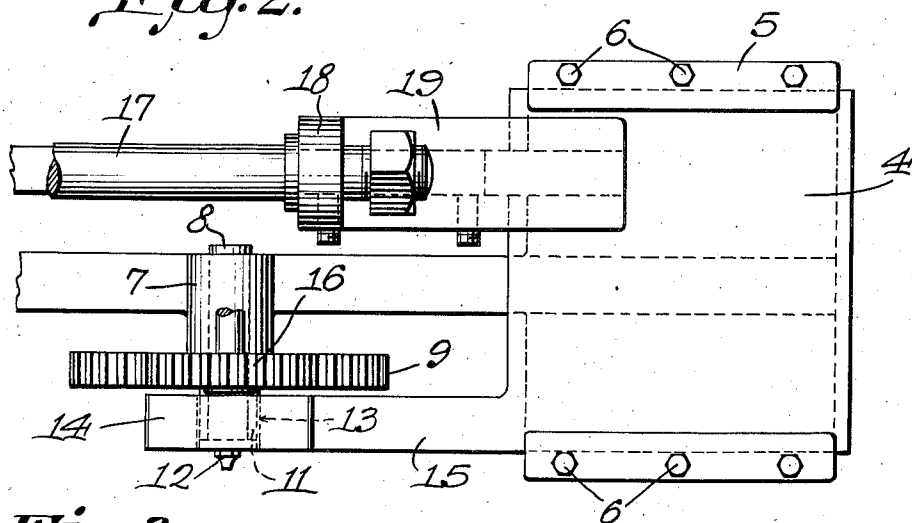
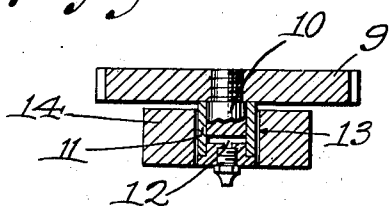


Fig. 3.



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UNITED STATES PATENT OFFICE

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STOKER OPERATING MECHANISM

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Application March 15, 1935, Serial No. 11,338

1 Claim. (Cl. 74—50)

This invention relates to mechanism adapted to be interposed between a motor and the fuel forcing mechanism of a stoker for the purpose of transferring motion to said mechanism from the motor and converting rotary motion into reciprocating motion.

It is an object of the invention to provide simple, compact and efficient mechanism of this character which will operate efficiently under all conditions and will not be choked or otherwise interfered with by dust or other foreign substances so frequently present where mechanisms of this type are in use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing the preferred form of the invention has been shown.

In said drawing

Figure 1 is a side elevation of the mechanism constituting the present invention.

Figure 2 is a plan view thereof.

Figure 3 is an enlarged section on line 3—3, Figure 1.

Referring to the figures by characters of reference, 1 designates a base or bed frame one end portion of which is extended upwardly as shown at 2 to provide a guide and support 3 for a cross head 4, the side edge portions of which are held properly in position by retaining strips or plates 5 which can be detachably held in place by bolts 6.

The bed frame 1 is provided with a bearing 7 in which is journaled the shaft 8 of a gear 9 and extending from this gear adjacent to its periphery is a wrist pin 10 on which is mounted an anti-friction roller 11 mounted to rotate freely and having suitable means such as indicated generally at 12 for supplying a suitable lubricant thereto. The roller is mounted to work within a slot 13 located in a head 14 on which is carried an arm 15 extending from the cross head

4. This slot is extended at right angles to the path of movement of the arm and along a line parallel with the face of gear 9.

Obviously when the gear is rotated the roller 11 will work upwardly and downwardly within this slot and cause arm 15 and cross head 4 to reciprocate. As all of the friction is taken up by the roller the only point where lubrication might be needed is between the roller and the wrist pin. No lubricant is necessary along the walls of the slot. Thus there is no danger of the slot becoming filled with a mixture of oil and dust or with other foreign substances which might act to interfere with the operation of the mechanism.

Gear 9 is adapted to be driven by any suitable means such as a motor driven gear 16 and the fuel feeding mechanism is adapted to be actuated by a plunger 17 having lost motion driving connection with an ear 18 upstanding from an arm 19 projecting from cross head 4.

It is believed that the operation of the structure will be apparent.

As the gear 9 rotates at a desired speed the roller 12 will travel along the walls of the slot, thereby imparting a reciprocating motion to the cross head and this motion will be transmitted to the plunger 17 and other parts of the mechanism controlled by the cross head.

What is claimed is:

The combination with the bed frame of a stoker mechanism, a horizontally extended cross-head supported at its sides on the bed frame, and guides lapping the sides of the cross-head and secured on the bed frame, of a transverse shaft journaled on the bed frame in the path of and in the same plane with the cross-head, a gear thereon in front of one side portion of the cross-head and rotatable in a vertical plane, a wrist pin on the gear, a roller on the wrist pin, an arm extending from the one side portion of the cross-head, a head on the arm parallel with and at one side of the gear and having a vertical slot into which the roller extends, a plunger, and a lost motion connection between the plunger and the other side of the cross-head.

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