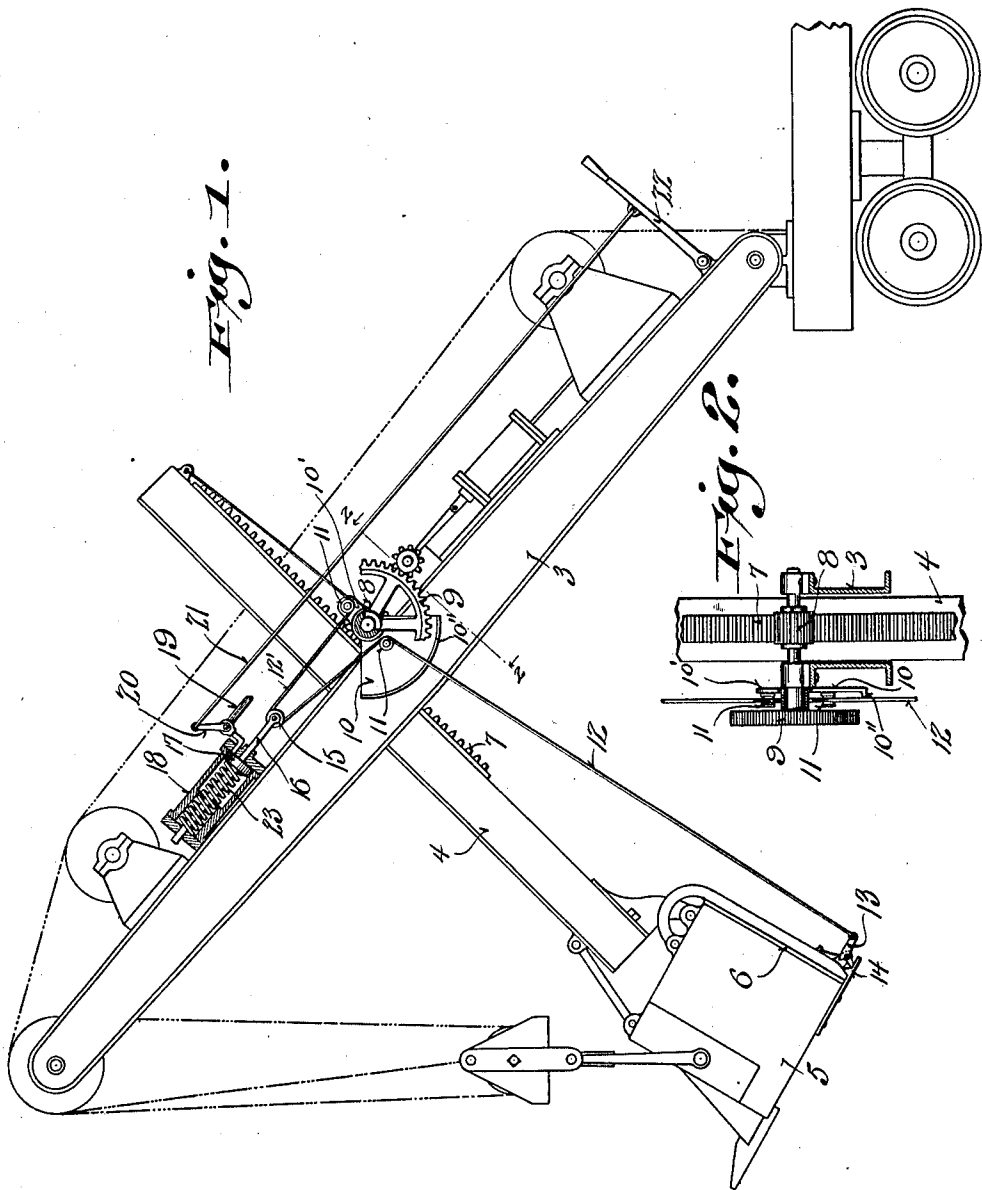


T. G. TRAVERS.
EXCAVATOR.
APPLICATION FILED OCT. 10, 1911.

1,031,402.

Patented July 2, 1912.



Witnessed:
C. W. Young
May Downey

Inventor:
Thomas G. Travers
By *Christopher Young*
Attorney

UNITED STATES PATENT OFFICE.

THOMAS G. TRAVERS, OF IRON RIDGE, WISCONSIN.

EXCAVATOR.

1,031,402.

Specification of Letters Patent.

Patented July 2, 1912.

Application filed October 10, 1911. Serial No. 653,941.

To all whom it may concern:

Be it known that I, THOMAS G. TRAVERS, a British subject, and resident of Iron Ridge, in the county of Dodge and State of Wisconsin, have invented certain new and useful Improvements in Excavators; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to economize door-trip cable employed in conjunction with excavator-dippers and to avoid having such cable in the way of excavator operators.

Figure 1 of the drawings represents a side elevation of a portion of a swing-crane dipper excavator having parts thereof broken away and in section, and Fig. 2, a partly sectional view of the same on the plane indicated by line 2—2 in Fig. 1.

Referring by numerals to the drawings, 3 indicates the swing-crane, 4 the traveler-beam, 5 the dipper and 6 the dipper-door of an excavator of the type aforesaid as ordinarily constructed, said beam being provided with the usual rack 7 in mesh with a pinion 8 of a gear-train for which a suitable motor is employed. Loose on the hub of a spur-wheel 9 of said gear-train is the hub of a rocker 10 carrying a pair of diametrically opposite pulleys 11, said rocker being preferably a segmental plate provided with a shank-extension 10' and a lower outer guard flange 10'' in opposition to a door-trip cable 12 that is trained on said pulleys. One end of the cable is fastened to the traveler-beam 4, and its other end is fastened to the spring-controlled lever 13 by which the spring-latch 14 on the dipper 5 is moved out of engagement with the door 6 of said dipper. A bight 12' of the cable between the pulleys 11 is trained on another pulley 15 in connection with a suitable reciprocative device, the one herein shown being the rod 16 of a piston 17 in a cylinder 18 on the swing-crane 3 of the excavator. The piston is actuated in one direction by a fluid under pressure admitted to the cyl-

inder through a head of the same from a valve-controlled pipe 19, the valve-lever 20 being connected by a link-rod 21 with a hand-lever 22 convenient to the operator of the excavator. The piston-rod extends through the other head of the cylinder and a spring 23 is confined under pressure in said cylinder back of said piston. This spring acts, by expansion, to return the piston to normal position when the fluid under pressure is cut off from the cylinder.

The cable 12 is always taut on the pulleys 11 and 15 and automatically adjusts itself to conform to the movements of the traveler-beam 4, there being free play of the pulley-carrying rocker 10 to facilitate the cable adjustment, and to free the door of the dipper it is only necessary to effect a draw upon the bight of said cable.

From the foregoing it will be readily understood that but comparatively little door-trip cable is necessary in the equipment of an excavator and none of the same is ever in the way of the operator of said excavator.

I claim:

1. In an excavator, a rocker, a pair of pulleys carried by the rocker, another pulley and means for reciprocating the same, and a taut cable having a bight thereof trained on said pulleys, the ends of the cable being secured in connection with the traveler-beam and dipper-door latch-releasing mechanism of the machine.

2. In an excavator, a rocker having a hub thereof loose on the hub of a spur-wheel in the gear-train by which the traveler-beam of the machine is actuated, a pair of pulleys carried by the rocker, another pulley and means for reciprocating the same, and a taut cable having a bight of the same trained on said pulleys, the ends of the cable being secured in connection with said beam and the dipper-door latch-releasing mechanism of said machine.

3. In an excavator, a rocker in the form of a segmental plate having a shank extension and an outer guard-flange, a pair of pulleys carried by the rocker, another pulley and means for reciprocating the same, and a

taut cable having a bight thereof trained on
said pulleys, the ends of the cable being se-
cured in connection with the traveler-beam
and dipper-door latch-releasing mechanism
5 of the machine.

In testimony that I claim the foregoing I
have hereunto set my hand at Iron Ridge in

the county of Dodge and State of Wisconsin
in the presence of two witnesses.

THOMAS G. TRAVERS.

Witnesses:

JOHN MILLER,
F. SETTE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
