

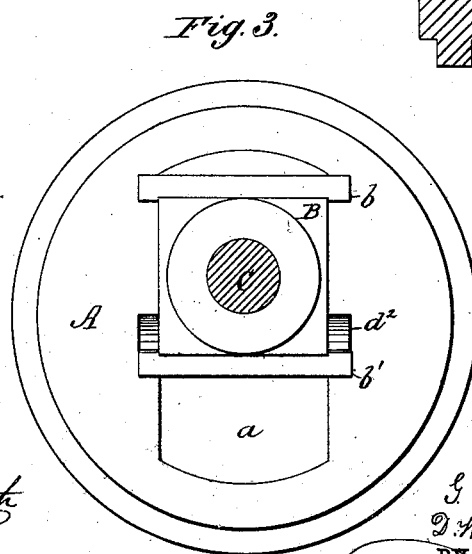
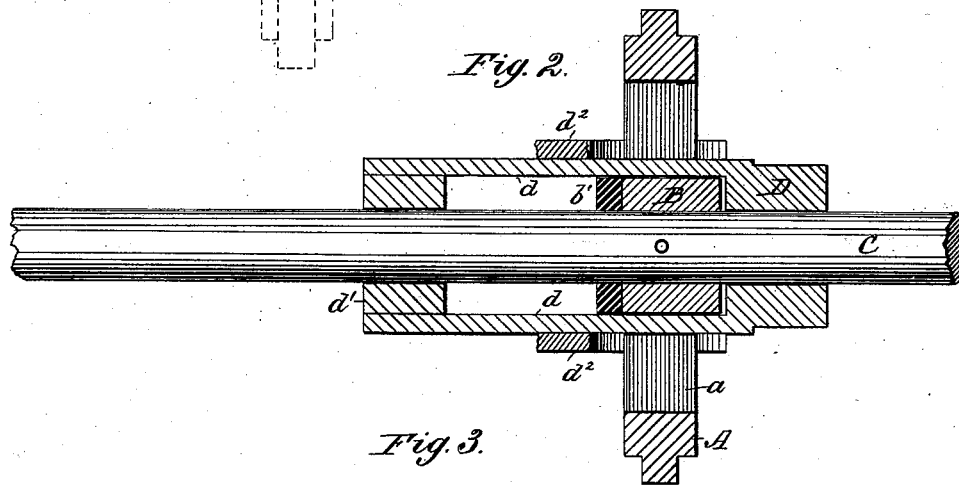
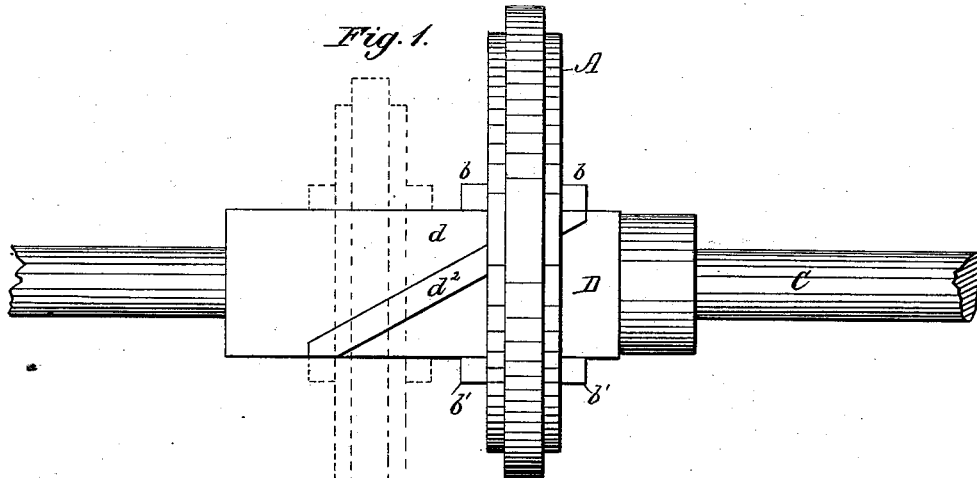
(No Model.)

G. T. & D. W. METCALF.

ECCENTRIC.

No. 261,470.

Patented July 18, 1882.



WITNESSES:
W. W. Hollingsworth
A. G. Lyne.

INVENTOR:

G. T. Metcalf

D. W. Metcalf

BY

Wm. L.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE T. METCALF AND DWIGHT W. METCALF, OF HILLSDALE, MICHIGAN.

ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 261,470, dated July 18, 1882.

Application filed May 16, 1882. (No model.)

To all whom it may concern:

Be it known that we, GEORGE T. METCALF and DWIGHT W. METCALF, of Hillsdale, in the county of Hillsdale and State of Michigan, have invented a new and useful Improvement in Eccentrics, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

10 The object of this invention is to provide an eccentric having means for connecting it adjustably to a shaft, whereby the motion imparted by the eccentric shall be reversed at will.

15 The invention consists in an eccentric having a slot therein, in which is loosely secured a block, which is rigidly connected to the shaft, and a slotted slide inclosing the said block and adapted to move longitudinally upon the shaft, which slide is provided with diagonal ribs, 20 fitted in corresponding grooves in the eccentric, whereby the eccentric shall be adapted to slide upon the block when the slide is moved along the shaft, as hereinafter more particularly described.

25 In the drawings, Figure 1 is a side elevation of our invention. Fig. 2 is a sectional view, and Fig. 3 is an end elevation, of the device.

30 The eccentric A is constructed with a slot, *a*, extending from its center in opposite directions to points near the periphery thereof. Within this slot is arranged a block, B, having projections *b*, which overlap one side of the eccentric, and a plate, *b'*, having similar projections, is secured to one side of the block in 35 such manner as to include the eccentric between said projections. This block is rigidly secured to the shaft C, and is loosely arranged in the said slot, in order that the eccentric may slide thereon from one end of the slot to the 40 other. The block is suitably recessed on two opposite sides to receive between it and the eccentric the side pieces, *d* of the bifurcated or slotted slide D. The slide is thus made to include the block B within its slot, and after the 45 parts are thus put together, a block, *d'*, through which the shaft C passes, is secured between

the side pieces, *d*. The shaft passes through the slide from end to end in such manner that the latter may be made to move freely thereon. 50 To the outer surfaces of the side pieces are secured ribs *d''*, which are arranged diagonally thereto and parallel with each other, and the eccentric is provided with corresponding grooves in opposite edges of the slot *a* to receive these ribs. 55

With this construction, as the slide D is moved along the shaft C the diagonal ribs will cause the eccentric to slide along the block B in a direction at right angles to the movement 60 of the said slide. In this manner the throw of the eccentric may be transferred from one side of the shaft to the opposite side, and thus the movement of a valve connected to the eccentric may be instantly reversed. A suitable 65 lever is to be connected to the slide D, whereby it may be readily shifted.

Instead of the ribs *d''*, we may use any other suitable means for giving the proper movement to the eccentric. 70

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination, with a shaft, of a radially-slotted eccentric, a block loosely arranged 75 within the slotted eccentric and rigidly secured to the shaft, and suitable means whereby the eccentric may be made to move along the said block, substantially as and for the purpose specified. 80

2. The combination, with a shaft, of the radially-slotted eccentric, the block loosely arranged therein and secured to the shaft, and the slotted slide loosely inclosing the block and having diagonal ribs loosely in engagement with the eccentric, substantially as shown and described, whereby the eccentric may be 85 adjusted with respect to the longitudinal center of the shaft, for the purpose set forth.

GEORGE T. METCALF.
DWIGHT W. METCALF.

Witnesses:

A. ST. JOHN,
R. E. CONVERSE.