

E. R. Cole,

Crank Connection

N^o 67,957.

Patented Aug. 20, 1867.

Fig. 1

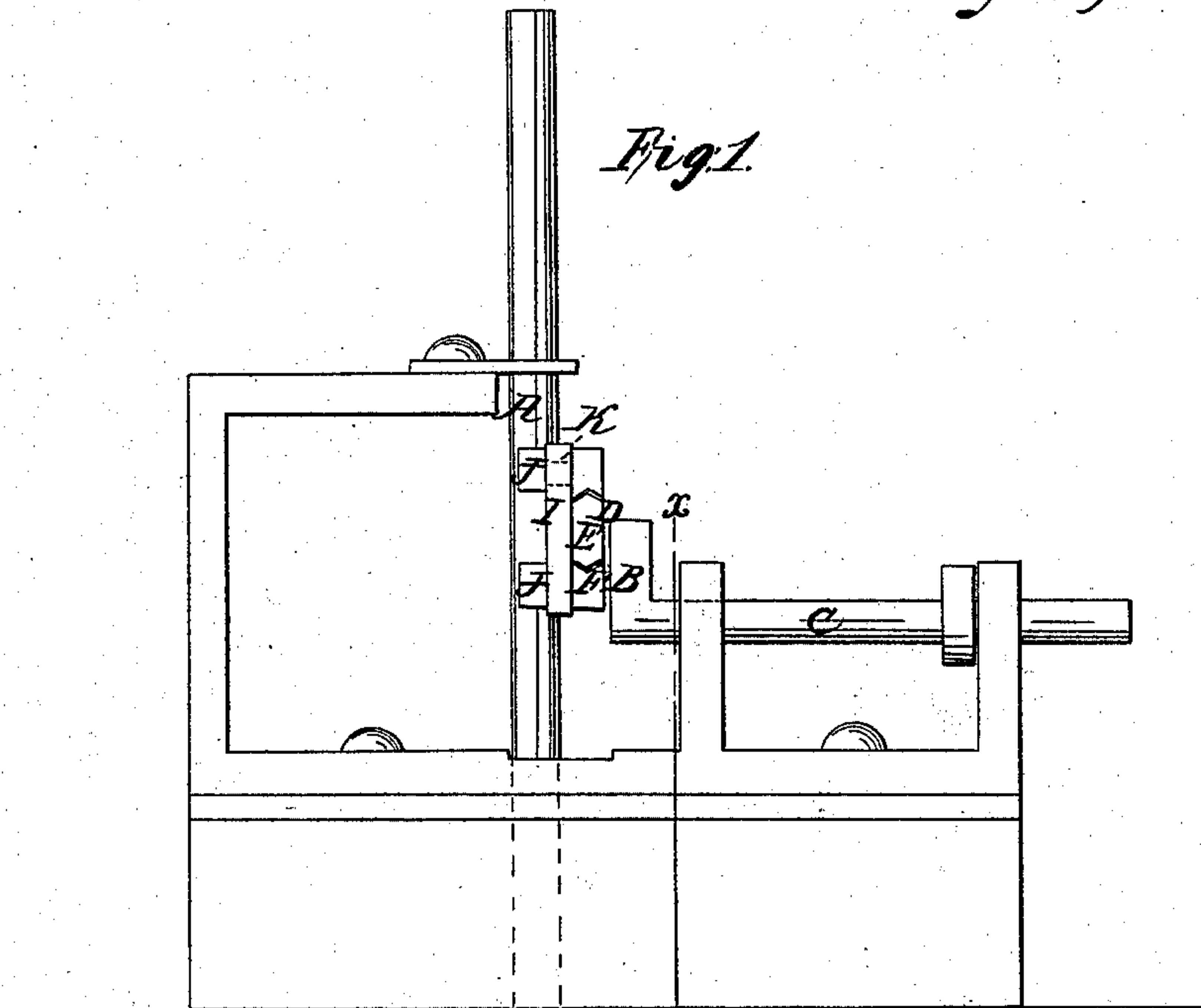
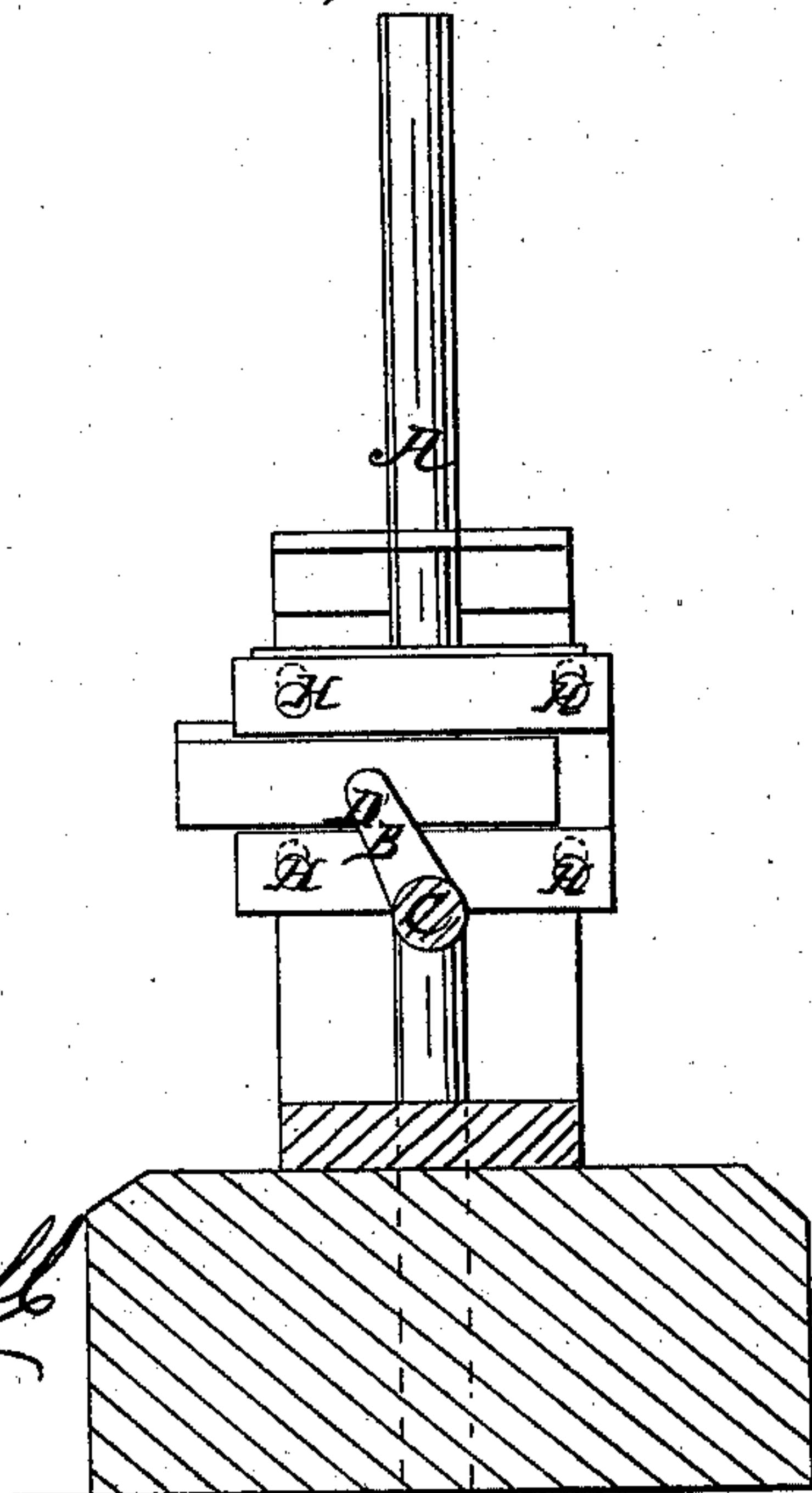


Fig. 2. x



Witnesses.

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EDWARD R. COLE, OF PAWTUCKET, RHODE ISLAND.

Letters Patent No. 67,957, dated August 20, 1867.

IMPROVEMENT IN CRANK-CONNECTION.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, EDWARD R. COLE, of Pawtucket, in the county of Providence, and State of Rhode Island, have invented a new and improved Crank-Connection; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to converting a reciprocating rectilinear motion into a rotary motion, or *vice versa*, and consists principally in hanging the crank-pin in a box arranged to slide in a suitable way or groove attached to a rod or shaft having a reciprocating rectilinear motion given to it in any proper manner, the sides of the said groove or way being susceptible of adjustment with regard to each other, so as to compensate for their wear, and also for that of the sliding-box. In accompanying plate of drawings my improvement in crank-connection is illustrated—

Figure 1 being a side view, showing my improved crank-connection.

Figure 2 a transverse vertical section taken in the plane of the line *x x*, fig. 1.

In the following description, my improved crank-connection will be particularly explained, in connection with the piston-rod of a steam-engine cylinder, the movement of which is reciprocating rectilinear, A being the piston-rod, B the crank, and C the shaft to which such crank is secured. Between the said rod A and the said crank B a connection is made as follows: D, the crank-pin, hung to and in a box, E, arranged to slide in a dove-tail way or groove, F, formed upon the rod G, and extending in a direction at right angles to its length and its line of movement. The sides L of the groove or way F are attached to the plate I of the rod A by means of bolts H or nuts J, the former of which pass through elongated slots K of the said plate I, extending in such a direction as to allow the said sides to be adjusted to a greater or lesser distance apart, whereby their wear, as well as that of the slide-box, is compensated for.

From the above description it is plainly apparent that the up-and-down movement, or, in other words, the reciprocating rectilinear movement of the piston-rod through the crank-connection hereinabove described, is made to impart a continuous rotary motion to the crank-shaft C, the said connection being extremely simple, direct, and positive in its action, and in many other evident respects advantageous.

I claim as new, and desire to secure by Letters Patent—

1. In combination with the sliding-box E and grooved guide of the shaft A, the adjustable sides for the groove or way of the sliding-box, substantially as and for the purpose specified.
2. I also claim the adjustable sides for the groove or way of the sliding-box, substantially as and for the purpose described.

EDWARD R. COLE.

Witnesses:

ROYAL LEE,

GEO. A. CARPENTER.