

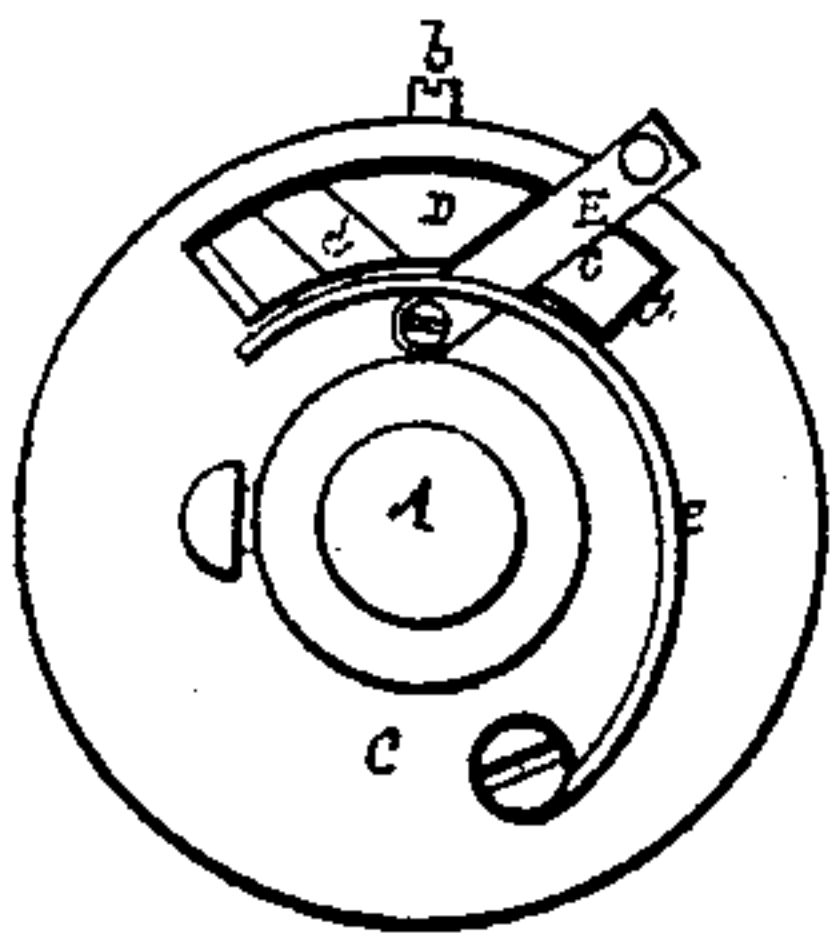
*C. T. Moore,*

*Grant.*

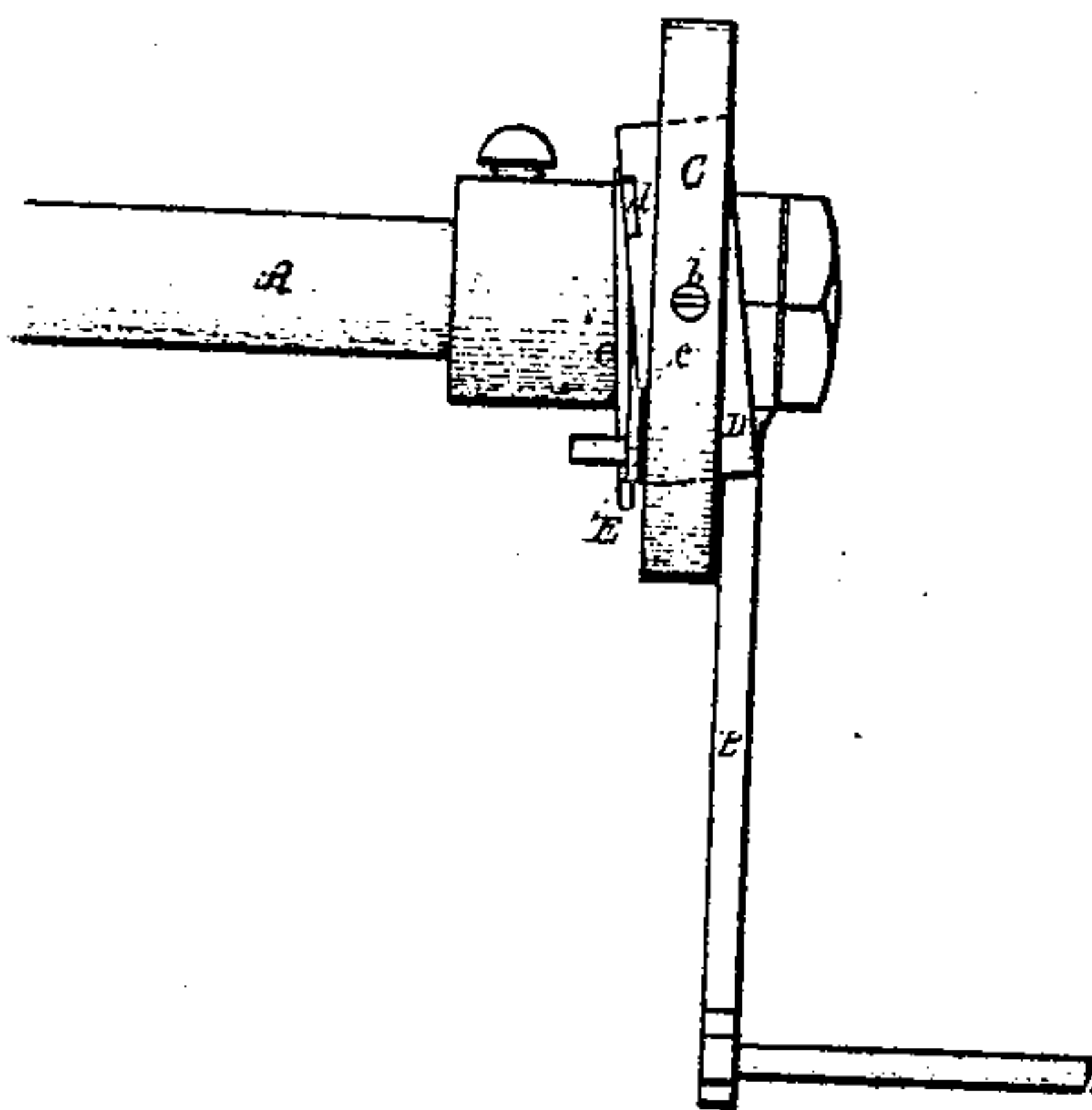
*No. 89423.*

*Patented Apr. 27. 1869.*

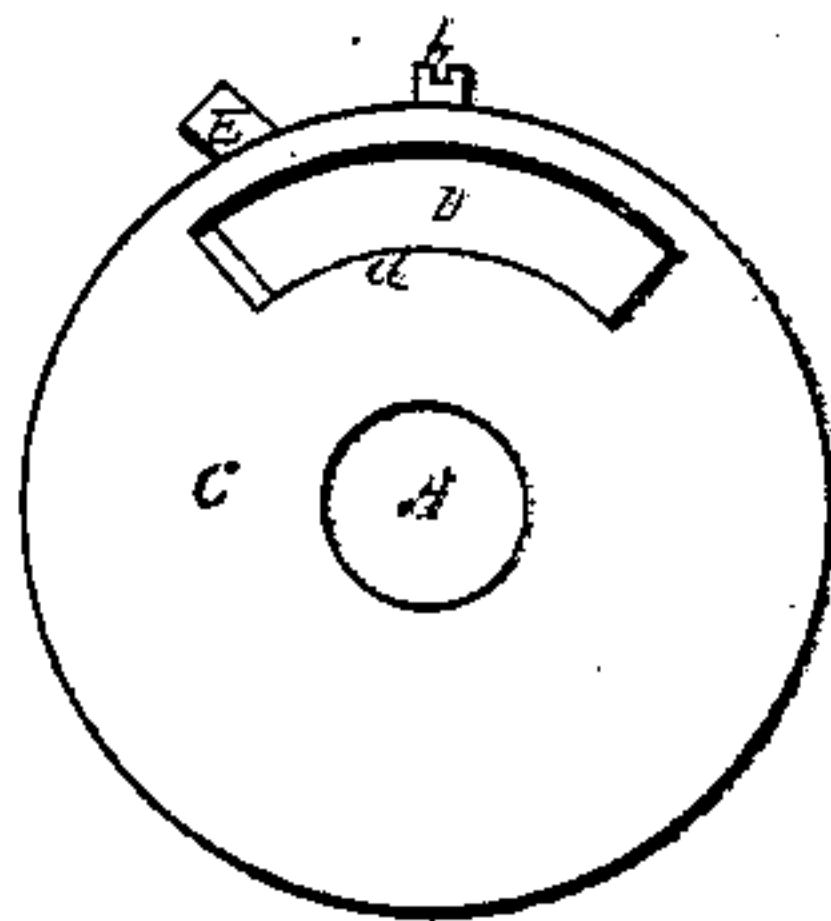
*Fig. 3*



*Fig. 1*



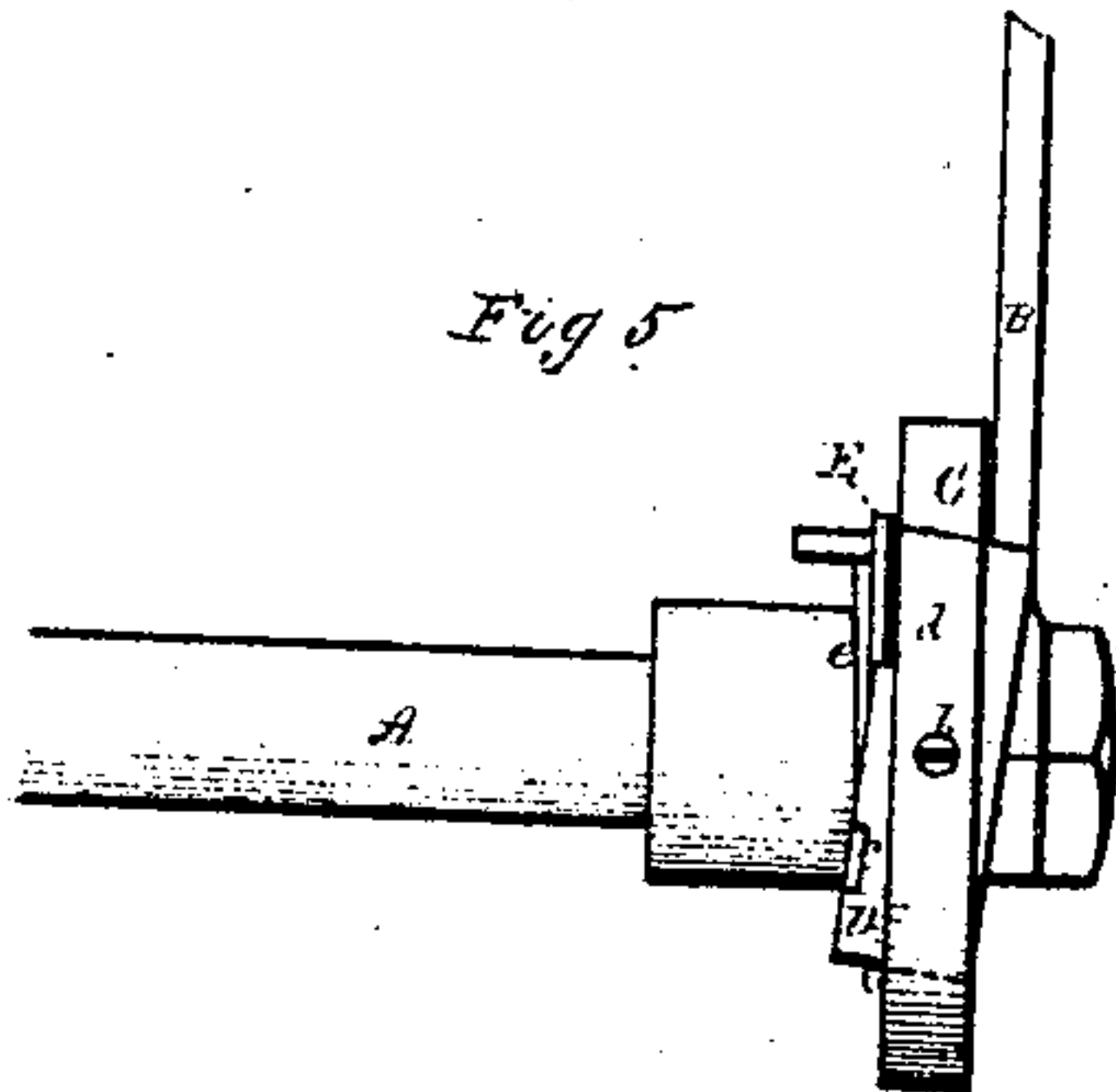
*Fig. 2*



*Fig. 4*



*Fig. 5*



*Witnesses.*

*S. N. Piper.*

*J. A. Brown.*

*C. T. Moore.*

*by his attorney.*

*R. H. Eddy*



CYRUS T. MOORE, OF GILMANTON, NEW HAMPSHIRE.

Letters Patent No. 89,423, dated April 27, 1869.

IMPROVEMENT IN CRANKS.

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

To all persons to whom these presents may come:

Be it known that I, CYRUS T. MOORE, of Gilmanton, of the county of Belknap, of the State of New Hampshire, have made a new and useful invention, having reference to Shafts, and the Driving-Cranks thereof; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view of a shaft and its crank, with my invention applied thereto;

Figure 2 is a front view; and

Figure 3 is a rear view of the shaft-head, with the reversible pawl, and its holding-mechanism, to be hereinafter described.

The object of my invention is to prevent accidents, which are liable to occur, by a crank, carried around by a shaft, after having been put in revolution by power applied to a crank, the invention being specially applicable to manumotives, or what are termed "hand-cars," as used on railways, and for the transportation thereon of workmen and their tools. Persons on such cars have been known to be seriously injured, and occasionally killed in consequence of being struck by the driving-crank while the car was in motion.

My invention enables the crank-shaft to be revolved in either direction by the crank, and prevents such crank from revolving with the shaft, while the latter may be in motion, after a person may have released or withdrawn his hands from the crank.

In the drawings—

A denotes a shaft, and

B, its crank, the latter being applied to the former, so as to be capable of being freely revolved thereon.

There is fixed to the shaft alongside of the crank, a circular disk or head, C, provided with a circular-curved slot, *a*, made through it, concentrically, and near its periphery.

Within this slot is a reversible pawl, D, formed as shown in top view, in fig. 4, and in edge view, as represented in figs. 2 and 3, it being pivoted, at its middle, to the disk, by a pin, *b* extended into such disk, and through the pawl.

The said pawl has two notches, *c d*, made in its rear edge, and on opposite sides of the middle thereof.

A latch, E, pivoted to the disk, and pressed against the pawl by means of a spring, *e*, arranged as represented, and fixed to the disk, serves, with such notches, to hold the pawl in either of its positions, that is to say, in that shown in fig. 1, or in that represented in fig. 5.

The pawl should be so pivoted to the disk as to enable the pawl to be moved both parallel to the disk, and away from it, at right angles, or thereabouts.

From this it will be seen that the pawl may be adjusted, and held in either of the positions, as represented in the drawings; and when it is in either of them, if we turn the crank one way, such crank will abut against one end of the pawl, so as to turn the disk and shaft; but if we reverse the motion of the crank, it will so act against the pawl as not only to press it back within the disk, but pass across and by it, and not revolve the shaft.

Therefore, it will be seen, that if, while the shaft may be in the act of being revolved by the crank, the hand of the mover be suddenly removed from the crank, the latter will drop into a vertical position, and the momentum of the shaft will cause it to revolve, and every time the pawl may be carried against the crank, such pawl will fall back, and the crank will pass it, without producing any rotary motion of it.

I do not claim a single pawl and ratchet, arranged with a crank and shaft, so as to cause the cranks, when in revolution, to turn the shaft, and the latter while in revolution, and the power for turning the crank may have been withdrawn therefrom, to continue to revolve, without revolving the crank; but

What I do claim as my invention, is the combination and arrangement of the reversible pawl D, and its holding-latch E, and spring *e*, with the shaft-head C, and the crank B, applied to the shaft A, substantially in manner as specified.

CYRUS T. MOORE.

Witnesses:

R. H. EDDY,

SAMUEL N. PIPER.