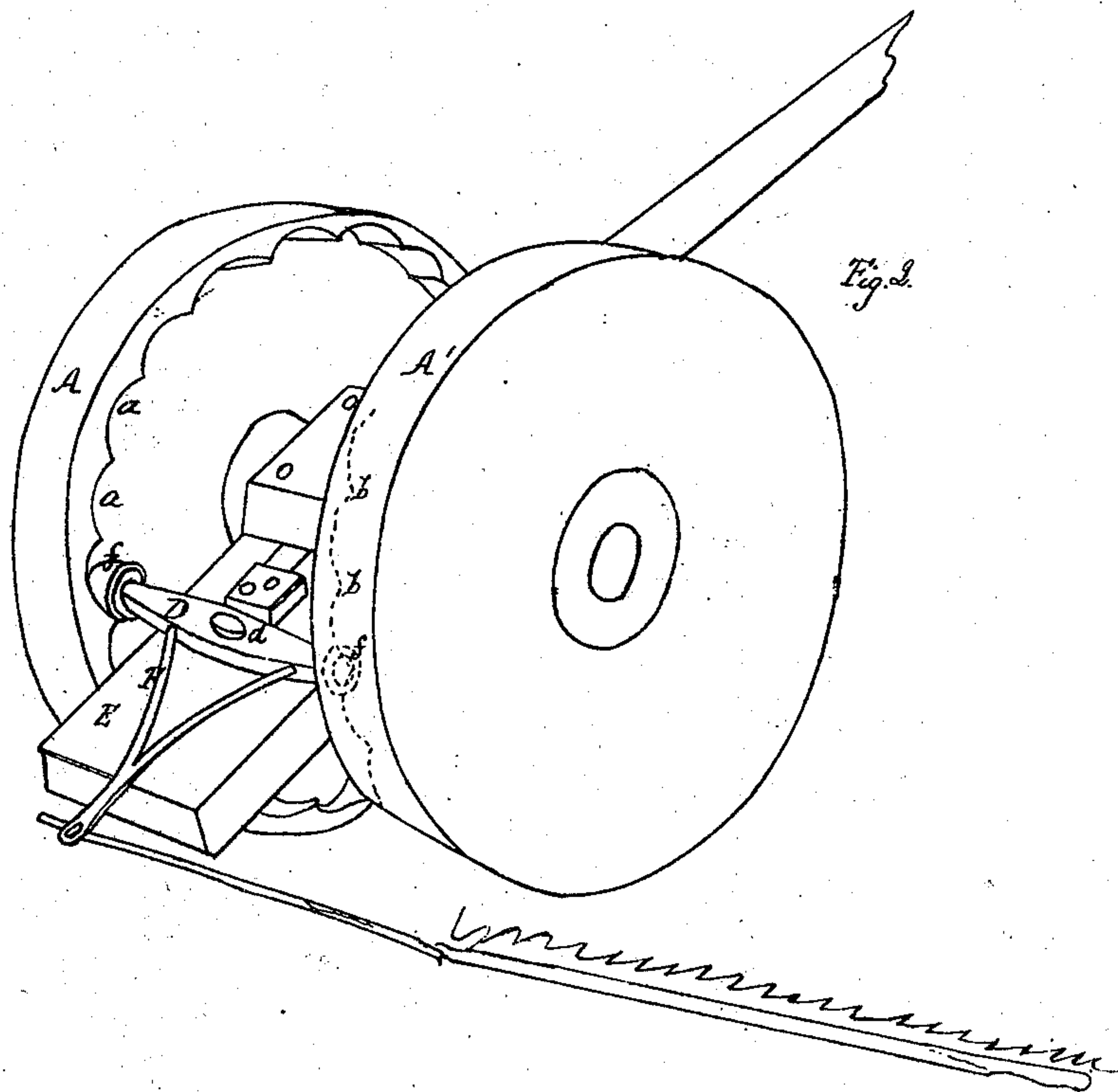
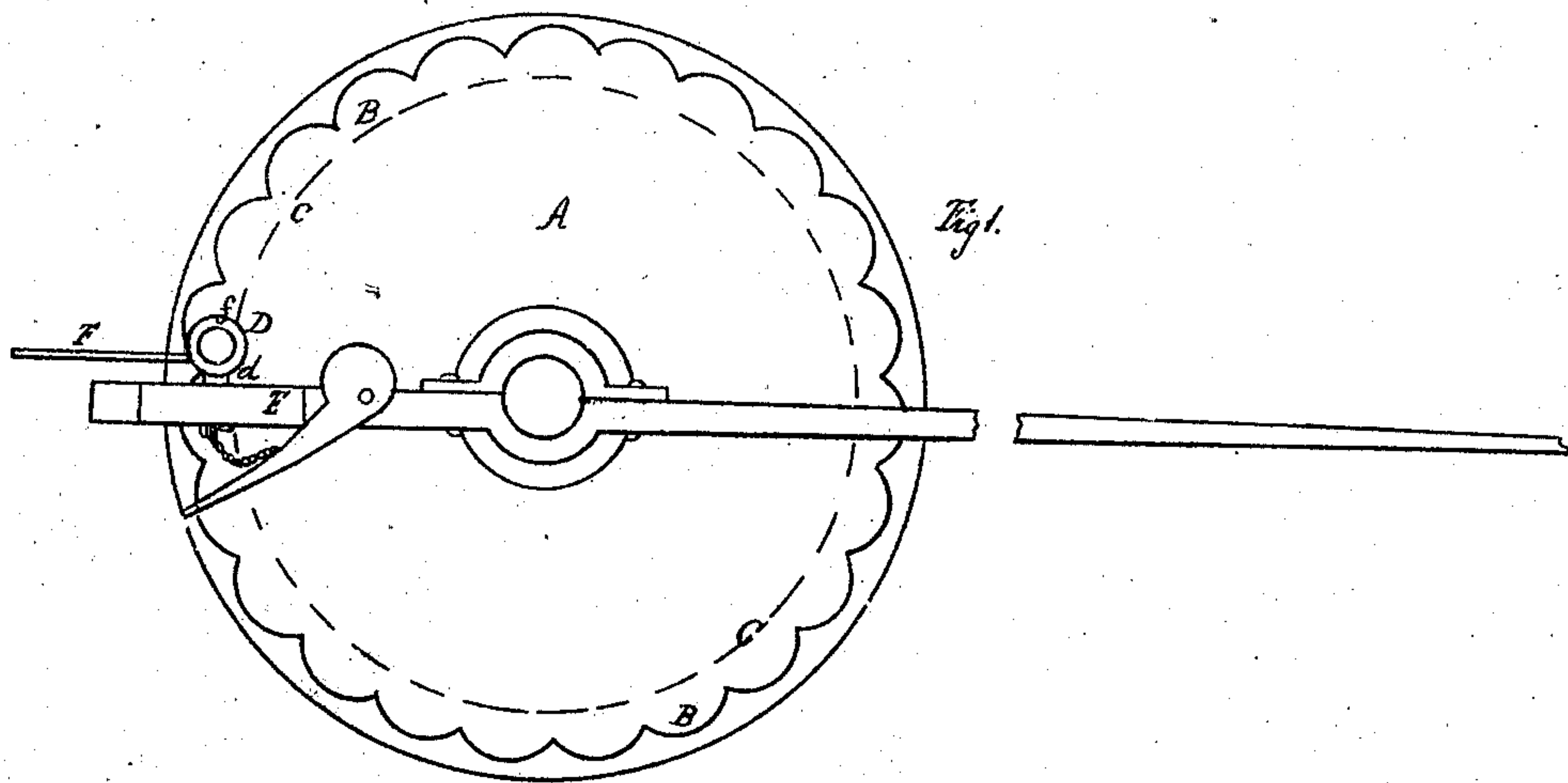


E. Walker.
Converting Motion.
Nº 75495 *Patented Mar. 10, 1868.*



Witnesses.

James H. Martin
William Gale

Eaton Walker Inventor
by J. B. Lurking
his attorney

United States Patent Office.

EATON WALKER, OF DUNDEE, ILLINOIS.

Letters Patent No. 75,495, dated March 10, 1868.

IMPROVEMENT IN DEVICE FOR CONVERTING ROTARY INTO RECIPROCATING MOTION.

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, EATON WALKER, of Dundee, in the county of Kane, and State of Illinois, have invented new and useful "Mode of Converting Rotary into Reciprocating Motion;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 represents the elevation of wheel and cams and a section of short axle, and

Figure 2 represents a perspective view of the device.

The nature of my invention consists in converting rotary into rapid reciprocating motion by means of two wheels provided with segmental cams or cogs, the sides of said cams intersecting each other at sharp points, and a short axle, revolving on a pivot, and provided at the ends with rollers, said axle being pivoted to and placed on a frame, and between said wheels, in such a manner that when one end of the axle enters a recess between the two cams of one wheel, its other end comes out to the apex of the intersection of the sides of the two cams of the other wheel, said wheels being firmly keyed to their axle, and in such a manner that the recesses of cams of one wheel are directly opposite to the coming-out points of the cams of the other wheel, as will be hereinafter fully explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is a wheel, provided with cams or cogs B B. These are of segmental shape, the centres of the segments lying on the line C C. There is another wheel, A', constructed in the same way. Both wheels are firmly keyed to their axle in such a manner that the recesses *a a* of the wheel A are placed directly opposite to the points of intersection, *b b*, of the sides of the cams of the wheel A'. The cams may be cast with the wheels, or made separately and in sections, and properly secured to the wheels. A short axle, D, is pivoted to the frame E of the carriage, and can move around bolt or pivot *d*. Its ends are provided with rollers *f f* to diminish friction, and its length is such as to allow the ends to fully enter the recesses *a a* of the cams. A forked lever, F, is attached to the axle D, the end of which may be connected with any part of machinery to which short and rapid reciprocating motion is to be communicated. Axle D is pivoted to a cushion, which may slide in grooves of the frame E, and any proper device may be contrived to move back and forth said cushion, so as to put the axle D in gear or out of gear.

The accompanying drawing represents the arrangement for moving sickle-bar of a reaper, but the same can be applied to many other machines, as, for instance, sieves in separators, a gig-saw, &c., &c.

The operation consists in this, that when the wheels revolve, the ends of the axle D are forced in turn into recesses of the cams, or are ejected out to the points of the intersection, and, as the ends of the axle D make rapid reciprocating motion around pivot *d*, the end of the forked lever F produces the same motion.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the wheels A, provided with the cams *a*, the oscillating-lever D, provided with the friction-rollers *f* and the arm F, all constructed and arranged to operate substantially as described.

EATON WALKER.

Witnesses:

J. B. TURCHIN,

L. H. LANE.