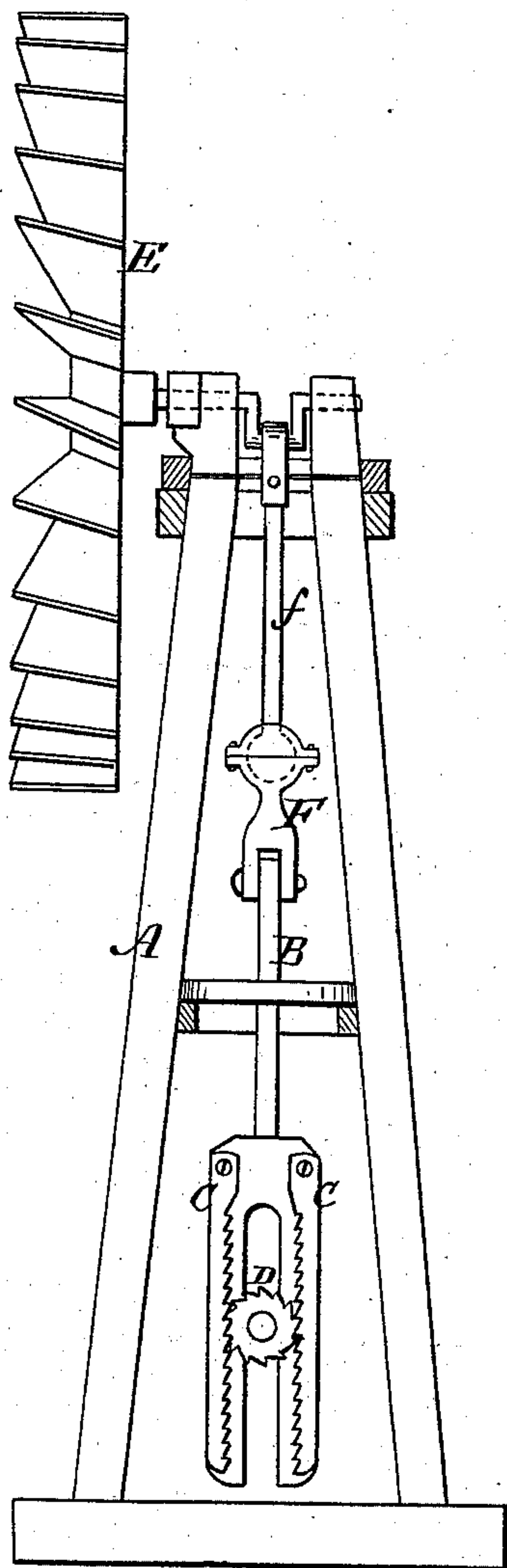


A. A. STUART.  
Windmill-Motor.

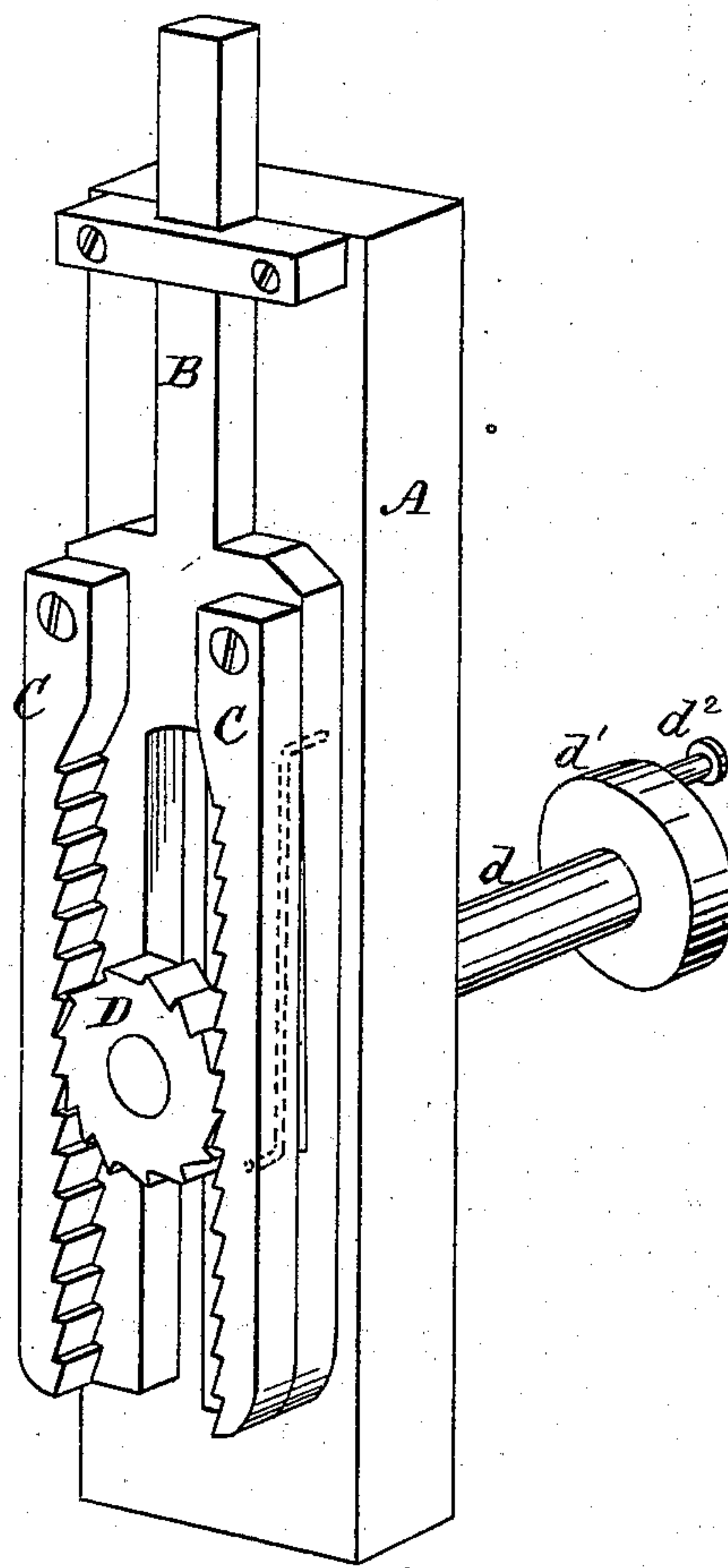
No. 217,026.

Patented July 1, 1879.

*Fig. 1.*



*Fig. 2.*



Witnesses:  
W. B. Masson  
E. E. Masson

Inventor:  
Addison A. Stuart  
By T. C. Woodward,  
Attorney.

# UNITED STATES PATENT OFFICE.

ADDISON A. STUART, OF CEDAR RAPIDS, IOWA.

## IMPROVEMENT IN WINDMILL-MOTORS.

Specification forming part of Letters Patent No. **217,026**, dated July 1, 1879; application filed February 10, 1879.

*To all whom it may concern:*

Be it known that I, ADDISON A. STUART, a resident of Cedar Rapids, in the county of Linn, in the State of Iowa, have invented a certain new, useful, and important Improvement in Windmill-Motors, the principal construction and operation of which are described in this specification.

Figure 1 is a vertical view of the motor combined by ball-and-socket joint with the pitman of a windmill. Fig. 2 is a perspective view of the motor, showing the shaft and drum or crank to be driven.

The object of my invention is to convert the reciprocating motion of the pitman of a windmill into constant rotary motion communicated to a counter-shaft, thus rendering it easy and practicable to drive a grindstone, a corn-sheller, a feed-mill, a churn, and other machinery by a windmill.

The invention consists in a forked ratchet-bar to operate alternately on the opposite sides of a pinion-wheel on a counter-shaft; and, further, in the combination of this motor with the pitman of a windmill.

B is a forked ratchet-bar supported to slide on a frame, A, or in any suitable manner. The ratchet-bar has two ratchets, C C, to operate alternately upon a pinion-wheel, D, on a counter-shaft,  $d$ , having a pulley,  $d^1$ , or a crank,  $d^2$ , or both.

The ratchet-bar B is connected to the pitman  $f$  of a windmill, E, by a universal joint, F. A pump may be operated by connecting the pump-rod to the crank  $d^2$ , and a grindstone or other machine may be operated by a belt from the pulley  $d^1$ .

When the windmill is running, and the windmill and the motor are connected as described, the reciprocating motion of the pitman of the windmill is communicated to the ratchet-bar, which as it descends engages by one of its ratchets with the pinion-wheel, and as it ascends engages by its other ratchet with the pinion-wheel, thus revolving the pinion-wheel, the counter-shaft, and the drum or crank continuously in one direction, to impart motion by belt or otherwise to the machine or machines to be operated.

The details of construction and operation may be varied without departing from the principle of my invention.

I claim—

1. The combination, with the pitman of a windmill, of a universal joint, a forked ratchet-bar carrying two ratchets, C, controlled by springs, a pinion-wheel, a counter-shaft, and a drum or crank, to produce constant rotary motion in one direction, as shown and described.

2. The combination, with the pitman of a windmill, of a forked ratchet-bar, B, two ratchets, C, controlled by springs, and a pinion-wheel, to produce constant rotary motion in one direction.

In testimony whereof I hereunto subscribe my signature and affix my seal in the presence of two attesting witnesses, in the city, county, and State aforesaid, this 15th day of January, A. D. 1879.

ADDISON A. STUART. [L. S.]

Witnesses:

ROBT. J. THOMPSON,  
GEORGE LARIMER.