

(No Model.)

J. W. KINCAID.

MECHANICAL MOVEMENT.

No. 390,976.

Patented Oct. 9, 1888.

Fig. 1.

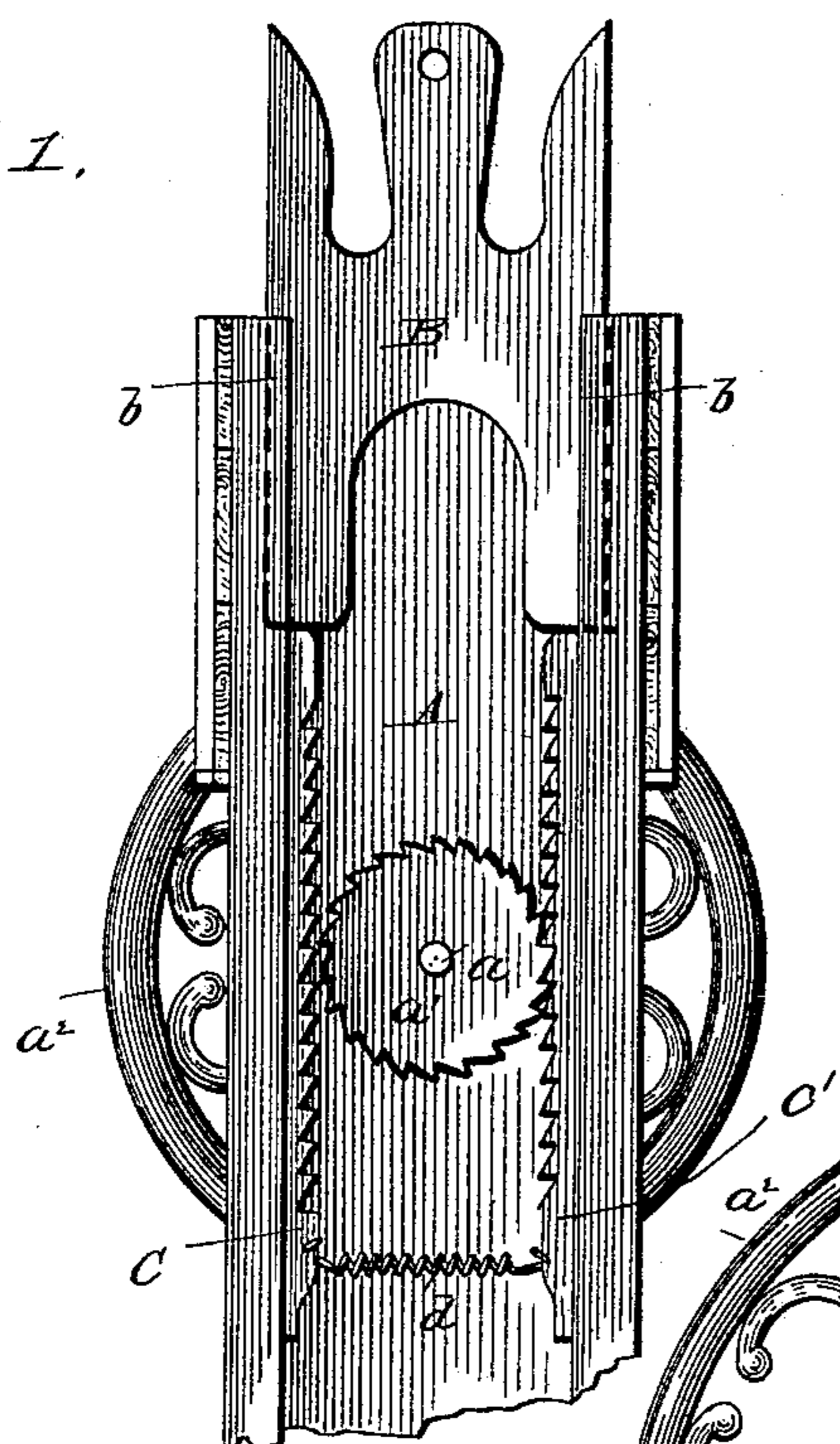
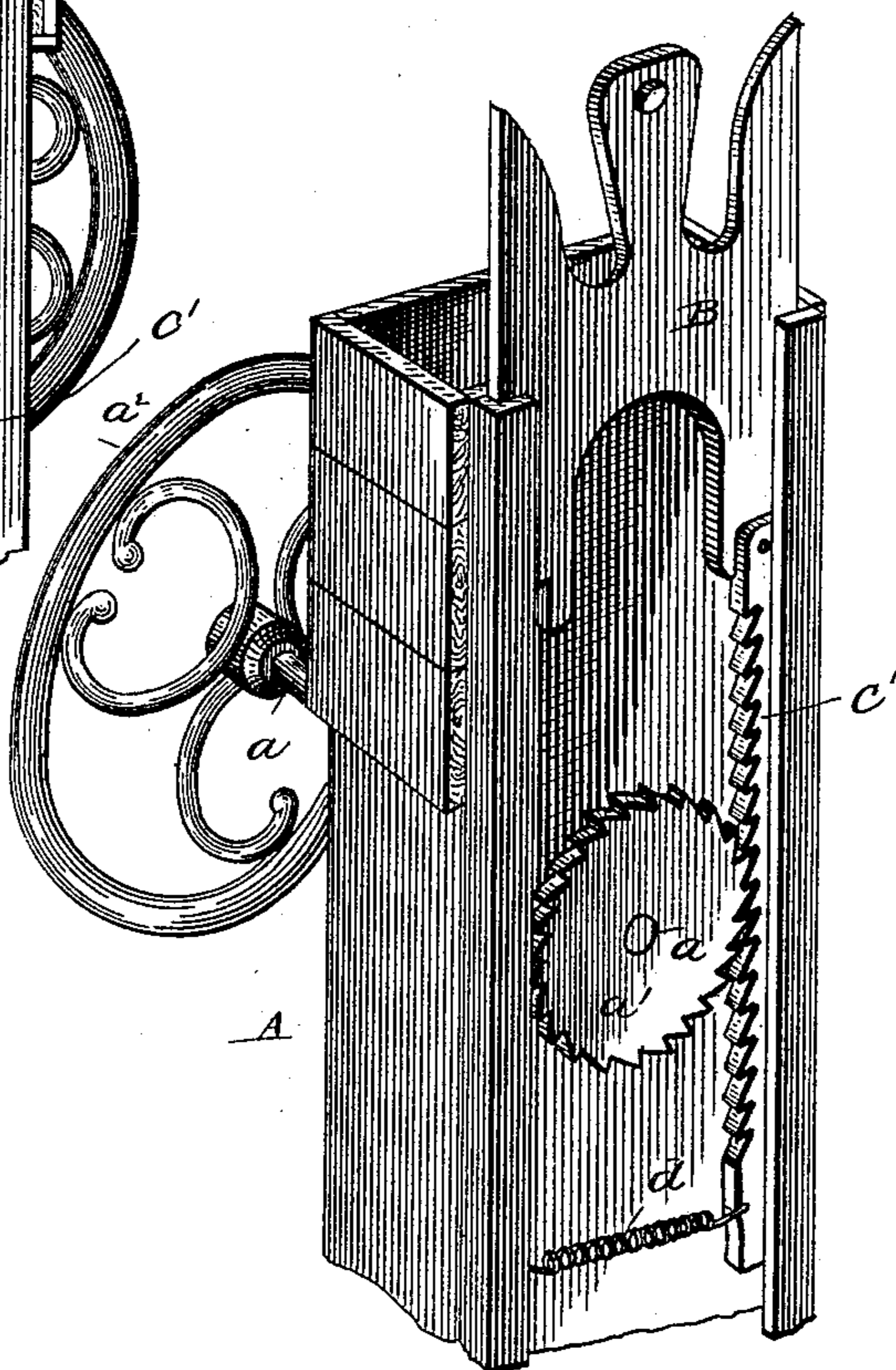


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 390,976, dated October 9, 1888.

Application filed June 19, 1888. Serial No. 277,578. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. KINCAID, a citizen of the United States of America, residing at Georgetown, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Mechanical Movements, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to certain new and useful improvements in mechanical movements, having for its object the provision of improved and highly efficient means for converting the reciprocal movement of a windmill-shaft to a rotary motion of a horizontally-disposed shaft.

15 The invention, therefore, comprises the peculiar construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claim.

20 In the accompanying drawings, Figure 1 is a rear elevation of my improved mechanical movement or motion-converter. Fig. 2 is a detail perspective view thereof.

25 Referring to the drawings, A designates a post or upright, wherein is supported one end of a horizontally-disposed shaft, *a*, upon the end of which is secured a pinion, *a'*, having curved teeth, as shown. Upon this shaft is secured a balance-wheel, *a''*, to regulate or balance said shaft in its movement.

30 B is a sliding block or frame designed to move in guideways *b b*, formed in the rear side of the post or upright A, and to this block or frame is connected the lower end of the pitman (not shown) of the windmill to which it is attached. To the lower opposite corners of this block or frame B are pivotally connected the upper
40 ends of two vertically-disposed rack-bars, C C', connected together at their lower ends by a

spiral or coil spring, *d*, as shown. The teeth of these hanging rack-bars C C' project in opposite directions, those of the rack-bar C being projected upwardly, while those of the rack-bar C' project downwardly, as shown. The object of this arrangement is that the teeth of the rack-bar C will engage the curved teeth of the pinion *a'* only in its upward movement, while the teeth of the rack-bar C' will engage
45 said teeth of the pinion only in its downward movement.

From this it will be seen that the teeth of both rack-bars are always held in contact with the teeth of the pinion, and that the teeth of each rack-bar will alternately mesh with the teeth of said pinion, whereby the reciprocal motion imparted to said rack-bars will impart a continuous rotary motion to the shaft *a*, the teeth of the bar not meshing with the pinion
55 readily riding over said teeth, as is obvious.

My invention is extremely simple, and by means thereof the motion of a windmill is readily and easily imparted to a revolving shaft, whereby power is obtained for driving or operating machinery, or for any other purpose.

I claim as my invention—

The combination, with the vertical post or upright having guideways formed therein, and the horizontally-disposed shaft having the pinion secured thereon, of the slidable block or frame, the rack-bars pivotally secured to the lower end thereof and having oppositely-projecting teeth, and the spring connected to the lower ends of said rack-bars, substantially as
65 shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. KINCAID.

Witnesses:

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