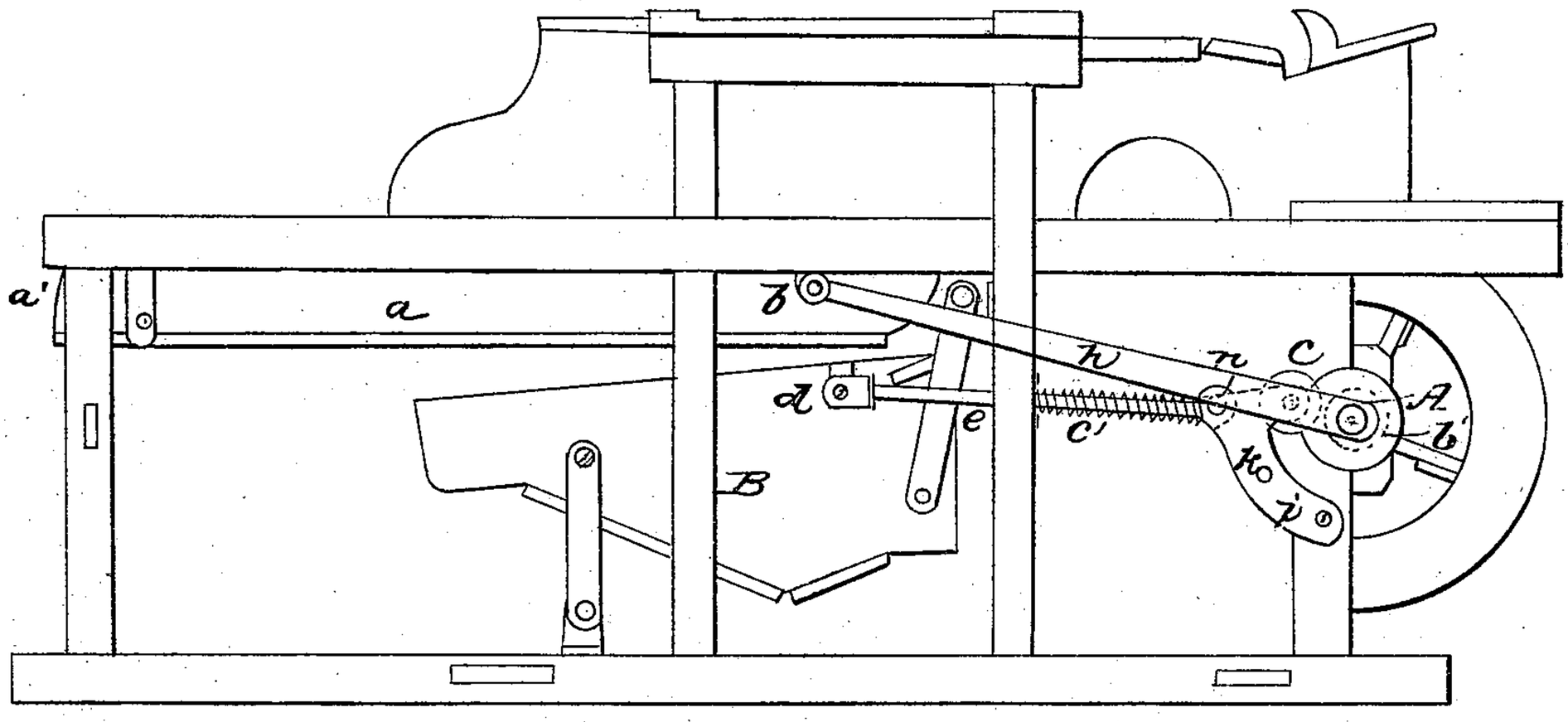
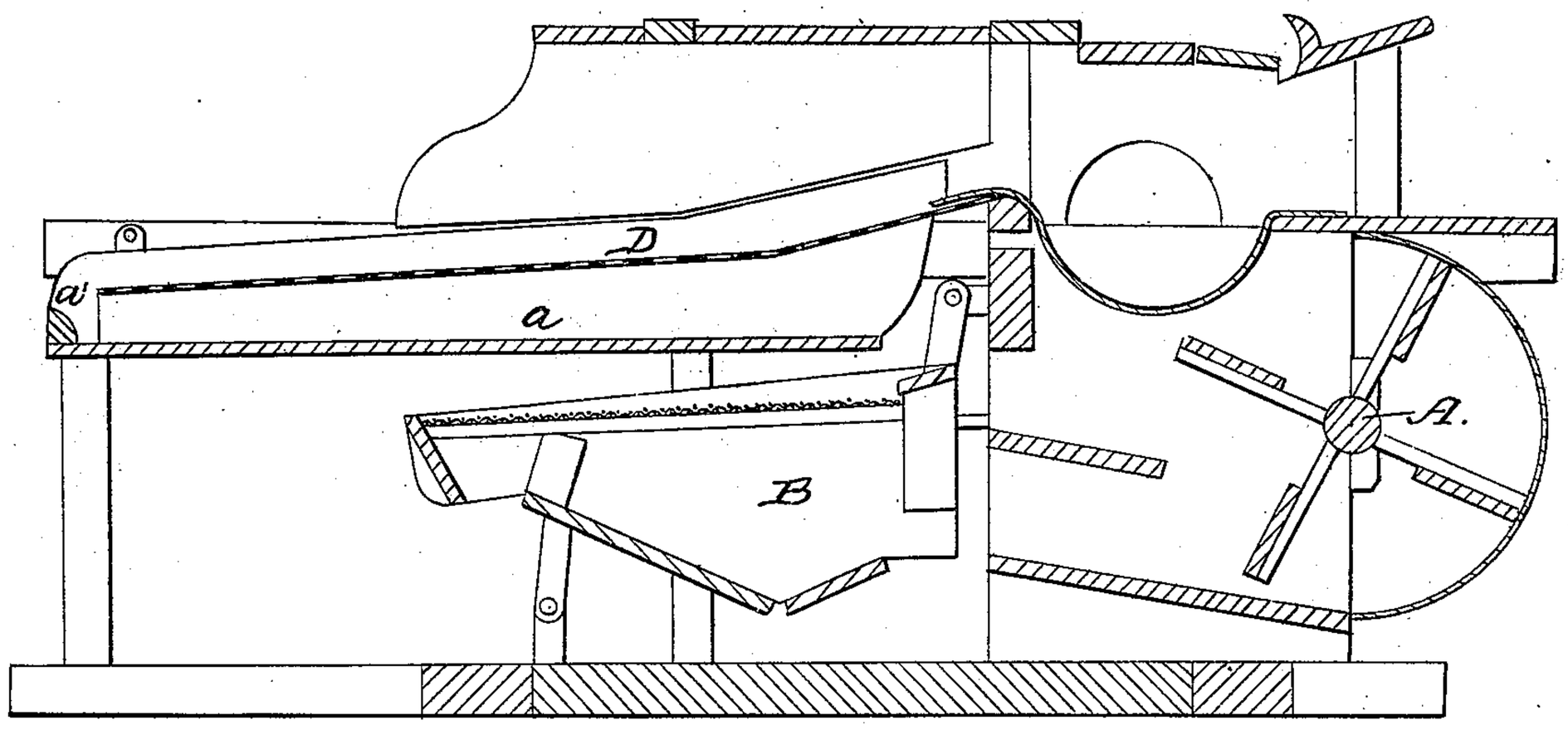
HARVEY & BECKER.

Thrasher.

No. 41,003. Patented Dec. 22, 1863.





Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS HARVEY AND NICHOLAS J. BECKER, OF AMSTERDAM, N. Y.

IMPROVEMENT IN THRASHERS.

Specification forming part of Letters Patent No. **41,003**, dated December 22, 1863.

To all whom it may concern:

Be it known that we, THOMAS HARVEY and NICHOLAS J. BECKER, of Amsterdam, in the county of Montgomery and State of New York, have invented a new and Improved Attachment to Thrashers and Cleaners for Saving Grain, which we denominate a grain-gatherer; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a side elevation of our invention and Fig. 2 is a vertical longitu linal section.

Like letters refer to corresponding parts in both figures.

The nature of our invention consists in applying an oscillating motion as a propelling power to the fan-shoe B by means of a double cam, *b′*, formed on the end of the fan-shaft and on the inside of the drive wheel or pulley.

This double cam *b′* is attached to both sides of the cleaner, in order to produce a uniform motion of the fan-shoe, and is clearly delineated in Fig. 1, against which double cam on the fan-shaft a pulley or wheel, *c*, rests and turns. Arm *k* is pivoted to the upright post of the mill at *i* by a bolt, which acts as an axle. The other end or prong of arm *k* is pivoted or hinged by a bolt running through the center of pulley *c*, on which the arm turns. That point of the arm at *n* contains a slot or groove, which receives the end of the rod *e*. Around this rod *e* we wind a spiral spring, *c′*. The end of the rod *e* is pivoted at *n*. The other or farther end of the rod *e* is pivoted to the fan-shoe B at *d*. When the mill is in motion, as the double cam *b′* turns half around, the eccentric, pressing against the pulley *c*, crowds back the arm *k* (which turns at *i* and *n*) against the rod *e*, and thus compresses the spiral spring *c′*. This motion thus communicated to the fan-shoe B causes it to vibrate. Then the spring *c′* recoils, crowding the rod *e* against *n*, and this presses *k* again against the other eccentric at *b′*. This motion is continued and produces the vibratory motion of the fan-shoe B. The springs, arm, and double cam, being on each side of the mill, act together, giving a regular and uniform vibratory motion to the fan-shoe B.

Our invention of using a double cam on the fan-shaft and the mode of connecting the fan-shaft A with the fan-shoe and separator-shoe *a* will produce by one revolution of the fan-shaft two motions of the fan-shoe, while in the same revolution the separator-shoe makes but one motion.

What we claim as our invention, and desire to secure by Letters Patent, is—

The double cam *b′*, in combination with arm *k*, rod *e*, and spring *c′*, when constructed and operating in the manner and for the purpose herein set forth.

THOMAS HARVEY.
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Witnesses:
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