

(No Model.)

J. J. & B. CLARK.

GRINDING MILL.

No. 255,772.

Patented Apr. 4, 1882.

Fig. 1.

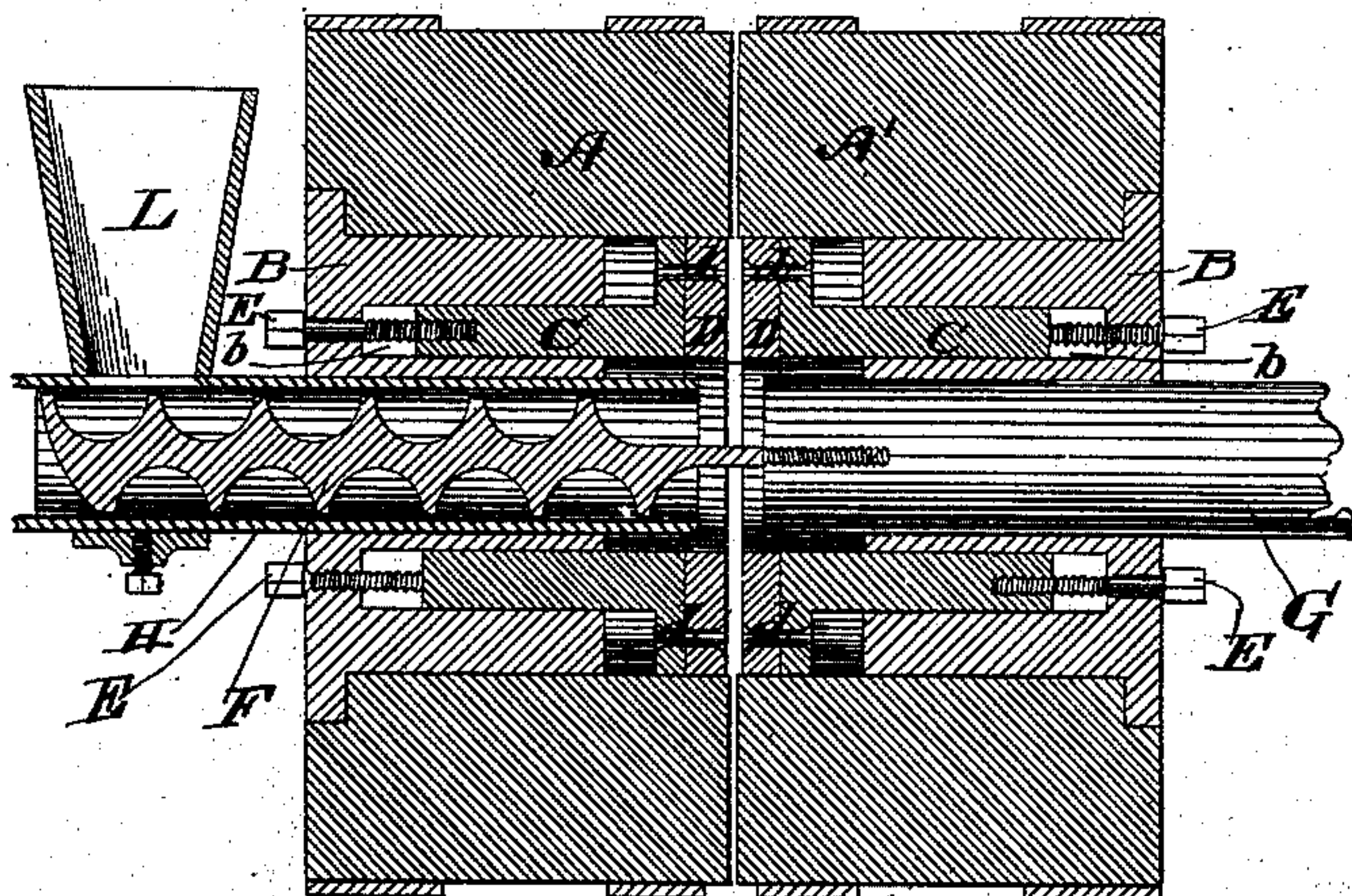


Fig. 2.

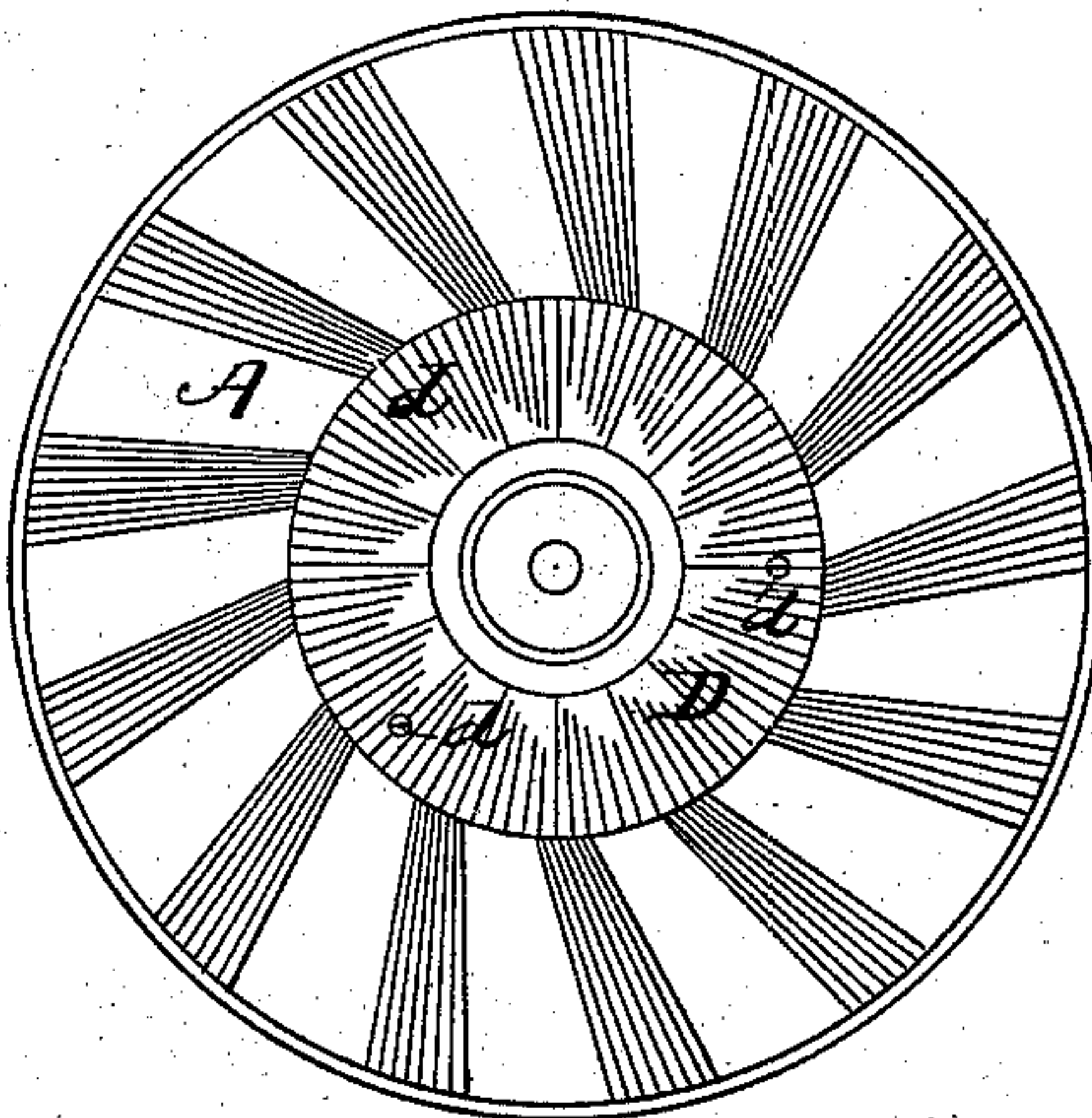
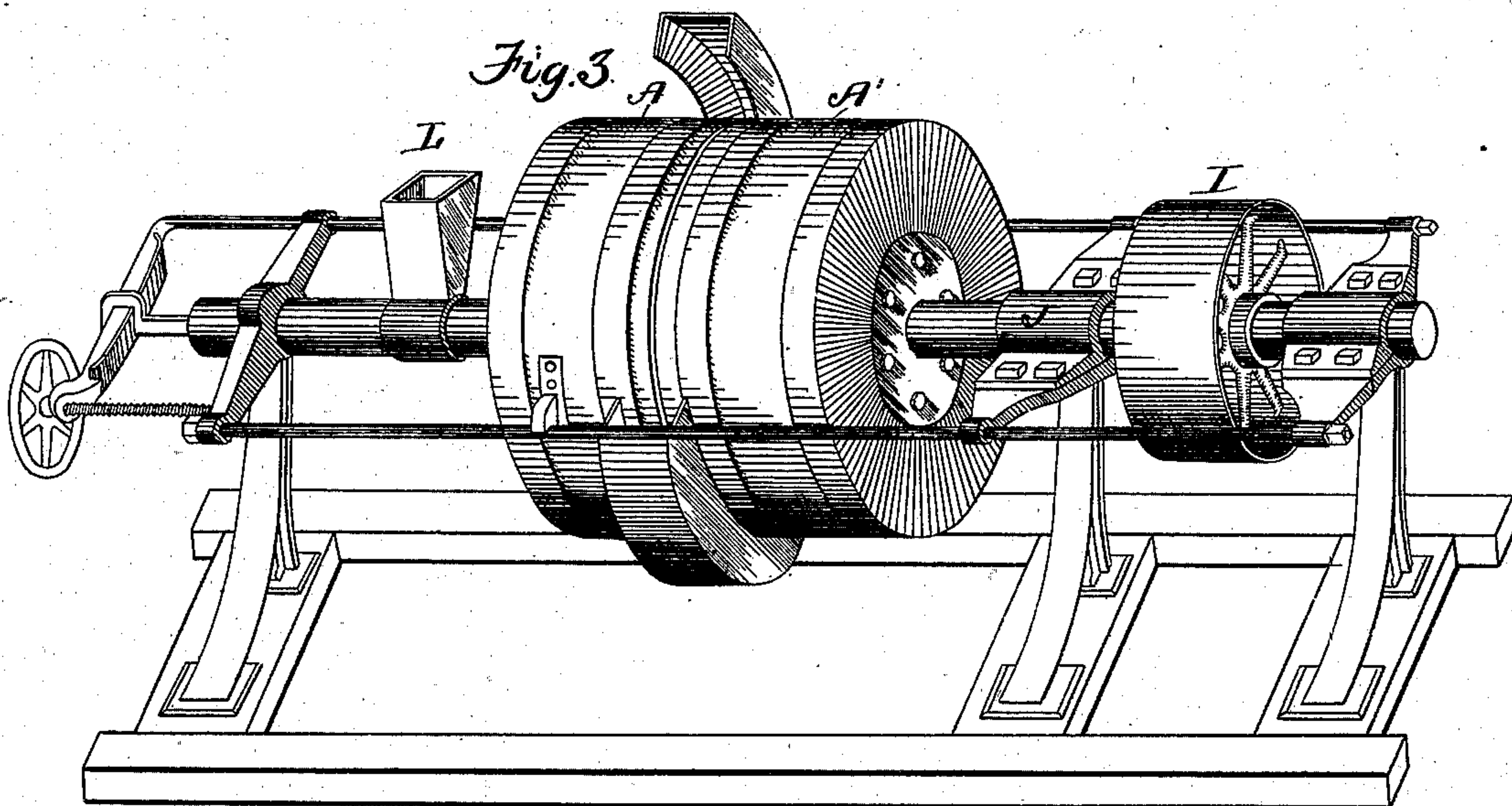


Fig. 3.



WITNESSES

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JOHN J. CLARK AND BYRON CLARK, OF ELGIN, ILLINOIS.

GRINDING-MILL.

SPECIFICATION forming part of Letters Patent No. 255,772, dated April 4, 1882.

Application filed July 27, 1881. (No model.)

To all whom it may concern:

Be it known that we, JOHN J. CLARK and BYRON CLARK, both of Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Grinding-Mills; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal section of the mill; Fig. 2, a face view of one of the metal grinding-rings; Fig. 3, a perspective view of the mill.

Similar letters of reference in the several figures denote the same parts.

Our invention relates to that class of grinding-mills known as "vertical mills;" and it consists in certain novel improvements in construction, whereby such mills are rendered more efficient in their operation, and which we will now proceed to describe.

In the drawings, A A', represent two burr-stones, the same being of annular form and dressed on their proximate grinding-surfaces in the manner shown, or in any other suitable manner. Within each stone is fitted a hub-like casting, B, having an annular lateral groove or recess, *b*, extending nearly its entire length, and adapted to receive the body of a second hub-shaped casting, C, as shown, and to the outer portion or face of such casting C, is secured by bolts *d d d* or otherwise a metal grinding-ring, D, dressed as shown, or in any other suitable manner. A series of set-screws, E, (see Figs. 1 and 3,) passing through the outer face of each of the castings B, work into and against the inner end of the casting C, and serve to adjust the faces of the metal grinding-rings nearer to or farther from each other,

according to the kind, quality, and condition of the material to be ground.

The casting B of the stone A, (which latter we may here remark is the stationary stone of the mill) is mounted upon and secured to a hollow shaft, H, carrying a feed-hopper, L, while the casting B of the revolving stone or runner A', is mounted upon and secured to a solid rotary shaft, G, in a suitable bearing, J, and deriving motion from a belt-pulley, I, or in any other suitable manner.

A spiral conveyer, F, projects from the end of shaft G into the hollow shaft H, and operates to feed the material to be ground from the hopper L, through the said hollow shaft in between the grinding-surfaces.

We have found from practical test that by the employment of the metal grinding-rings in connection with the grinding-stones full double the quantity of material can be ground in the same time by the same power as can be ground where stones alone are used.

The set-screws E enable the metal grinders to be readily adjusted within, flush with, or out beyond the surfaces of the stones, as occasion requires.

We claim as our invention—

The combination, with the stones A A', of the hub-shaped castings B, fitted within the stones, and having the annular grooves *b*, the castings C, carrying the metal grinding-rings and working within the grooves in the castings B, and the adjusting-screws E, substantially as described.

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Witnesses:

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