

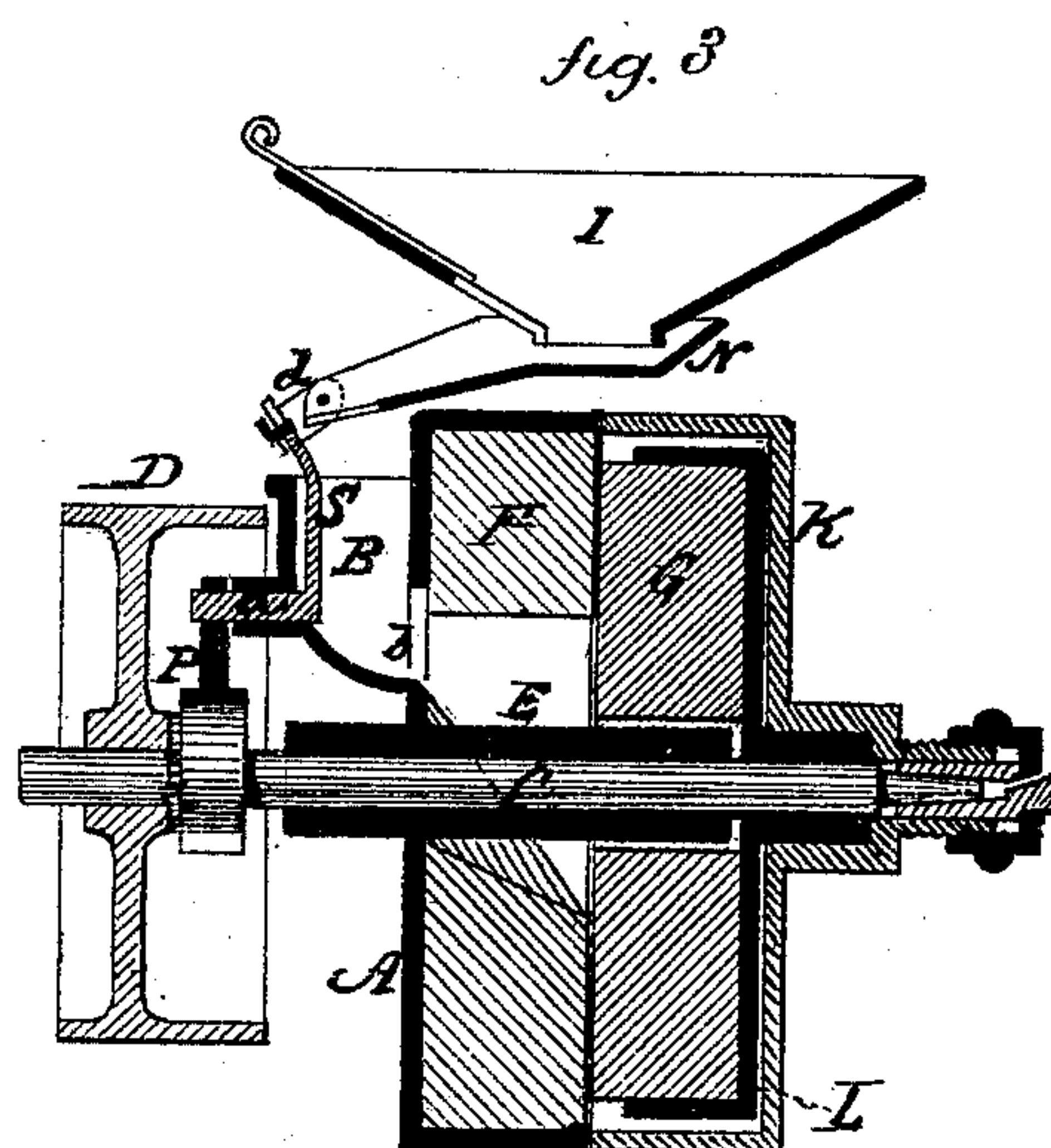
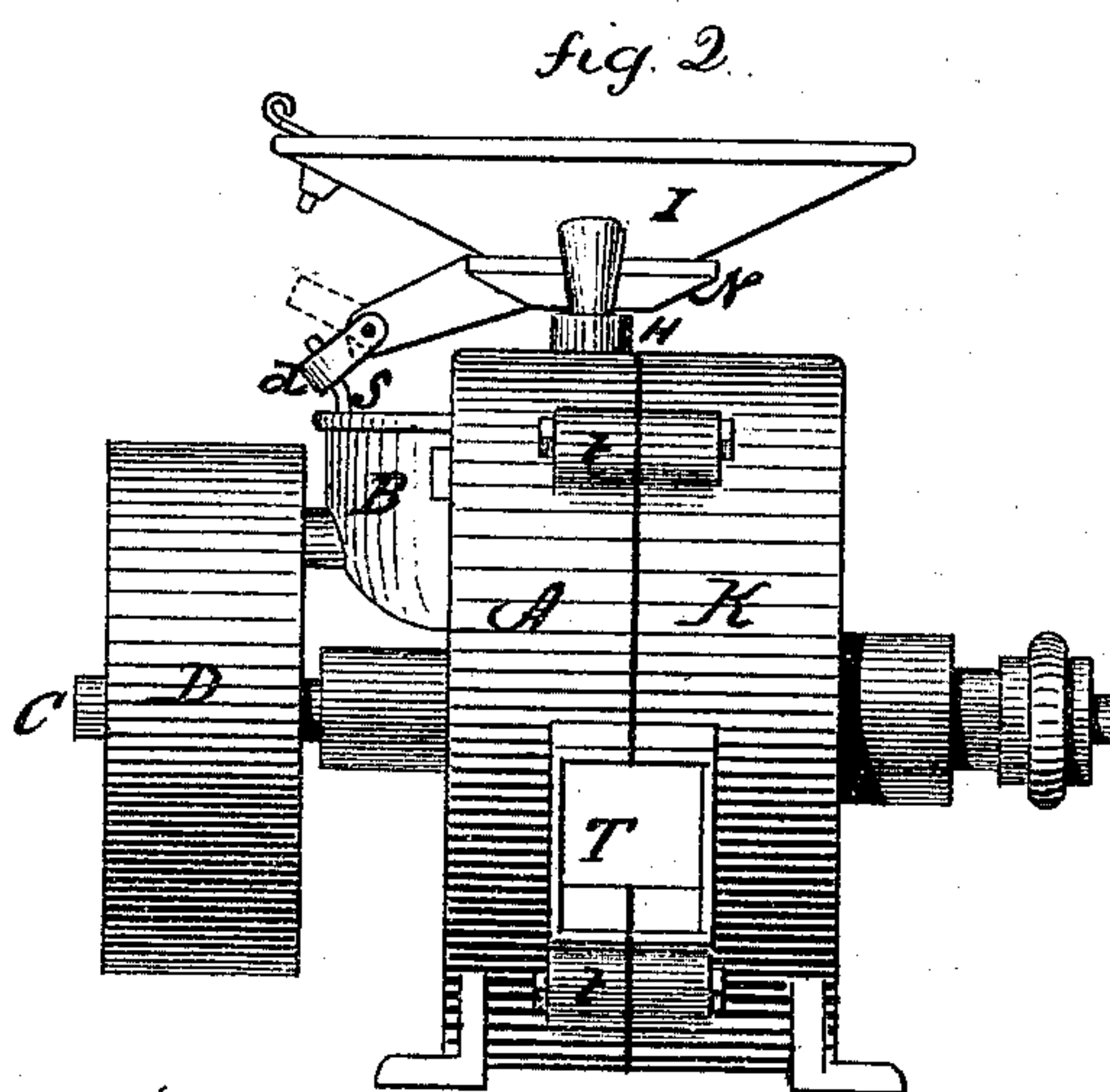
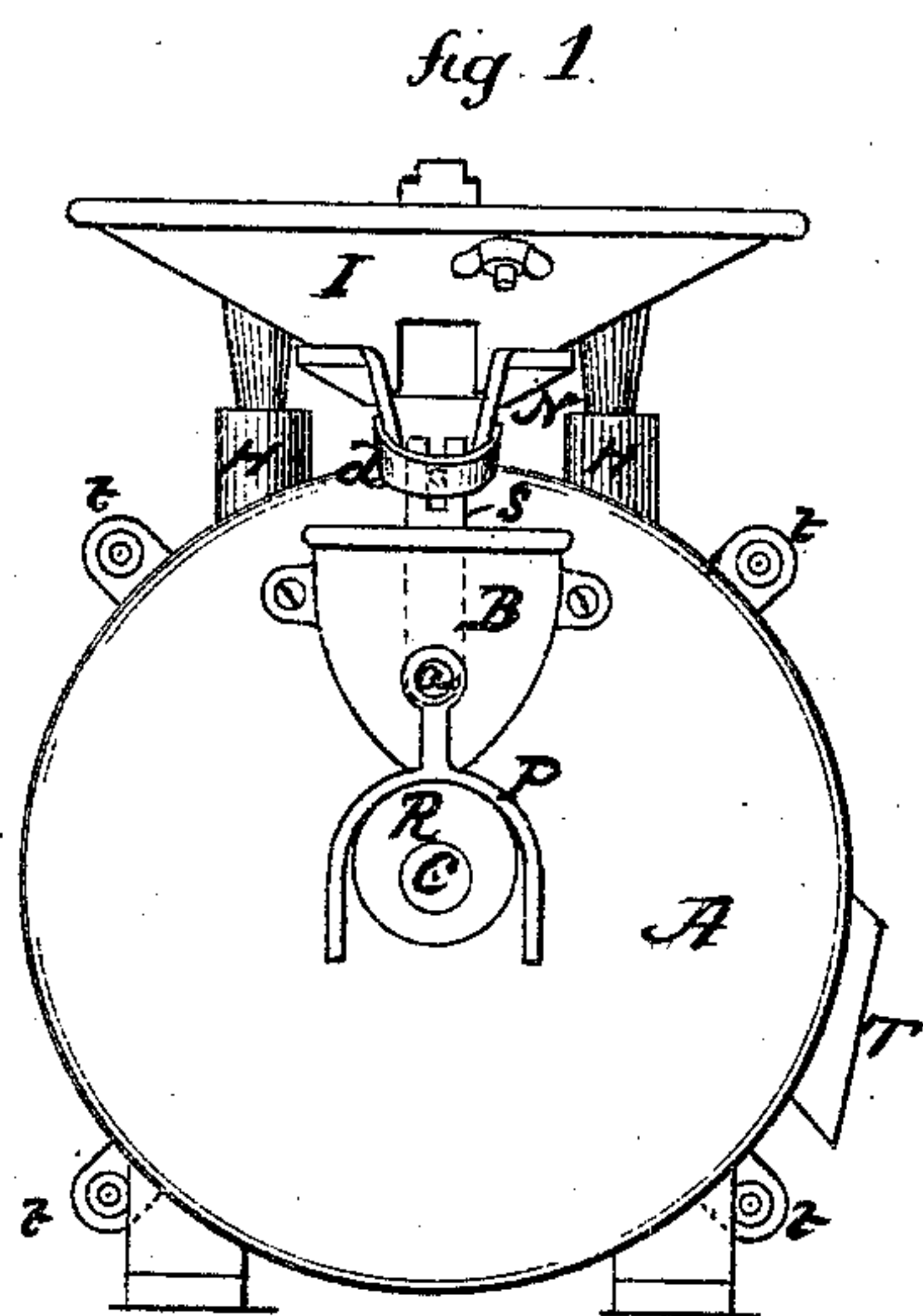
( 37.)

EDWARD HARRISON.

Grist Mill.

No. 122,827.

Patented Jan. 16, 1872.



Witnesses

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# UNITED STATES PATENT OFFICE.

EDWARD HARRISON, OF NEW HAVEN, CONNECTICUT.

## IMPROVEMENT IN GRIST-MILLS.

Specification forming part of Letters Patent No. 122,827, dated January 16, 1872.

*To all whom it may concern:*

Be it known that I, EDWARD HARRISON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Grist-Mills; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1 an end view, the pulley removed; Fig. 2, a side view; and in Fig. 3, a longitudinal central section.

This invention relates to an improvement in horizontal mills—that is to say, a mill in which the driving-shaft is in a horizontal position, the runner revolving in a vertical plane, and particularly in the mill patented to me September 1, 1868. In that patent, the bearing for the driving-shaft is extended outside the pulley, and the supports of said bearing frequently interfere with the arrangement of the mill, relatively to the driving-pulley—that is, the said bearings are frequently in the way of the belt. The prime object of this invention is to overcome that difficulty; and it consists in constructing the case with a sleeve projecting from its inner side through the bed-stone, and into the runner-case, within which sleeve the driving-shaft rests for support without necessary additional support outside the pulley.

Another difficulty which has been experienced in this mill arises from the fact that the rocking device for the hopper runs up outside, and in such close proximity to the pulley that the running-belt interferes therewith. To overcome this, my invention consists in connecting the rocking device to the feeding-shoe through the feeding-spout, whereby the rocking device is protected from the belt.

A is the bed-stone case; B, the feeding-trough formed therein, with a passage, *b*, leading to the inside of the case; C, the driving-shaft, which has heretofore been supported by a bearing outside the pulley D. To form a bearing for this shaft within the case I make a sleeve, E, extending from the inner surface of the case through the center of the bed-stone F, into the runner G, as seen in Fig. 3, thus giving to the shaft a bearing nearly through the mill, which is sufficient for all purposes, and leaves the pulley free to receive a belt from any direction. On the case A I form sockets

H to receive the studs on the hopper I, as seen in Figs. 1 and 2, and as in my patent before referred to. K is the runner-case, within which the runner-plate L, which carries the runner-stone, is arranged and adjusted upon the shaft C, in substantially the same manner as in my aforesaid patent. N is the rocker, also arranged relatively to the hopper and feeding-spout B, in substantially the same manner as in my patent before referred to; but, to give to the rocker the necessary agitation to discharge the grain, I arrange a shaft, *a*, through the feed-spout B; and onto the said shaft, within the pulley, I attach an arm, P, which is actuated by the eccentric R on the driving-shaft. Inside the feed-spout I extend an arm, S, upward to the rocker N, so that the vibration of the lever P will give a corresponding movement to the inside arm S; thence to the rocker, and within the spout B, the arm S is free from the action of the belt or other outside object.

It frequently occurs while the mill is running that it is desirable to stop the feed. To do this I arrange a yoke, *d*, on the end of the rocker, as seen in Figs. 1 and 2, which, when turned down, connects with the arm S, causing the rocker to move with the said arm; but at any time, when it is desirable to disconnect, raise the said yoke from the arm S, as denoted in broken lines, Fig. 2, thus freeing the rocker from the moving arm.

The discharge-spout T is here represented as formed half in each part of the case, and the two parts of the case bolted together by lugs *t*.

I claim as my invention—

1. In a horizontal grist-mill, the sleeve E, formed upon the inside of the bed-stone case A, and extending into the runner, as described, to form the bearing for the driving-shaft within the mill-case, substantially as specified.

2. The rocking mechanism described, in which the arm S works within the case B in connection with the rocker, substantially as and for the purpose specified.

3. In combination with the rocker N and rocking mechanism, I claim the yoke *d* to connect or disconnect the rocker from the rocking device, substantially as set forth.

EDWARD HARRISON.

Witnesses:

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