

J. DONALDSON.
Hominy Machine.

No. 69,903.

Patented Oct. 15, 1867.

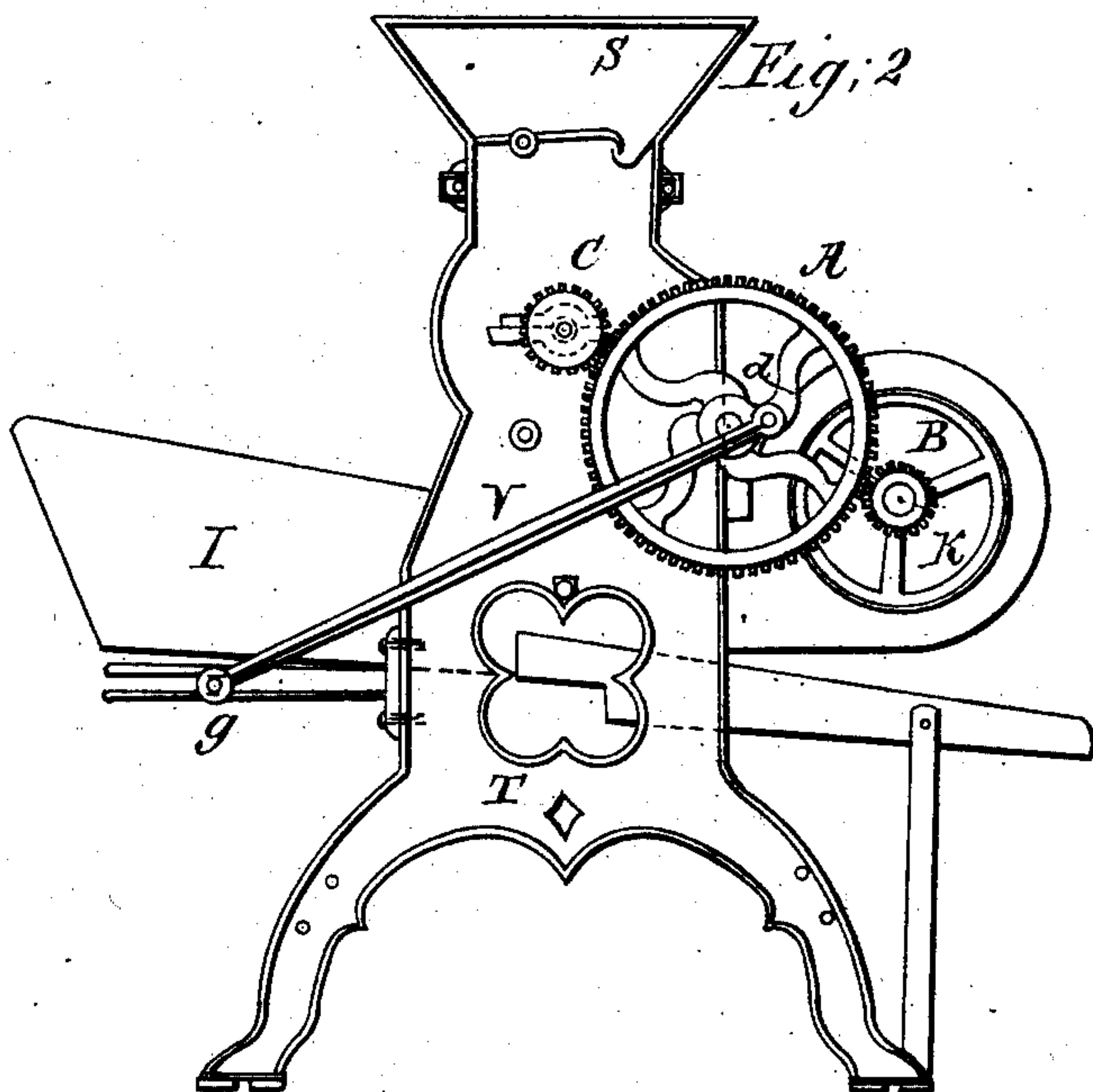


Fig. 4.

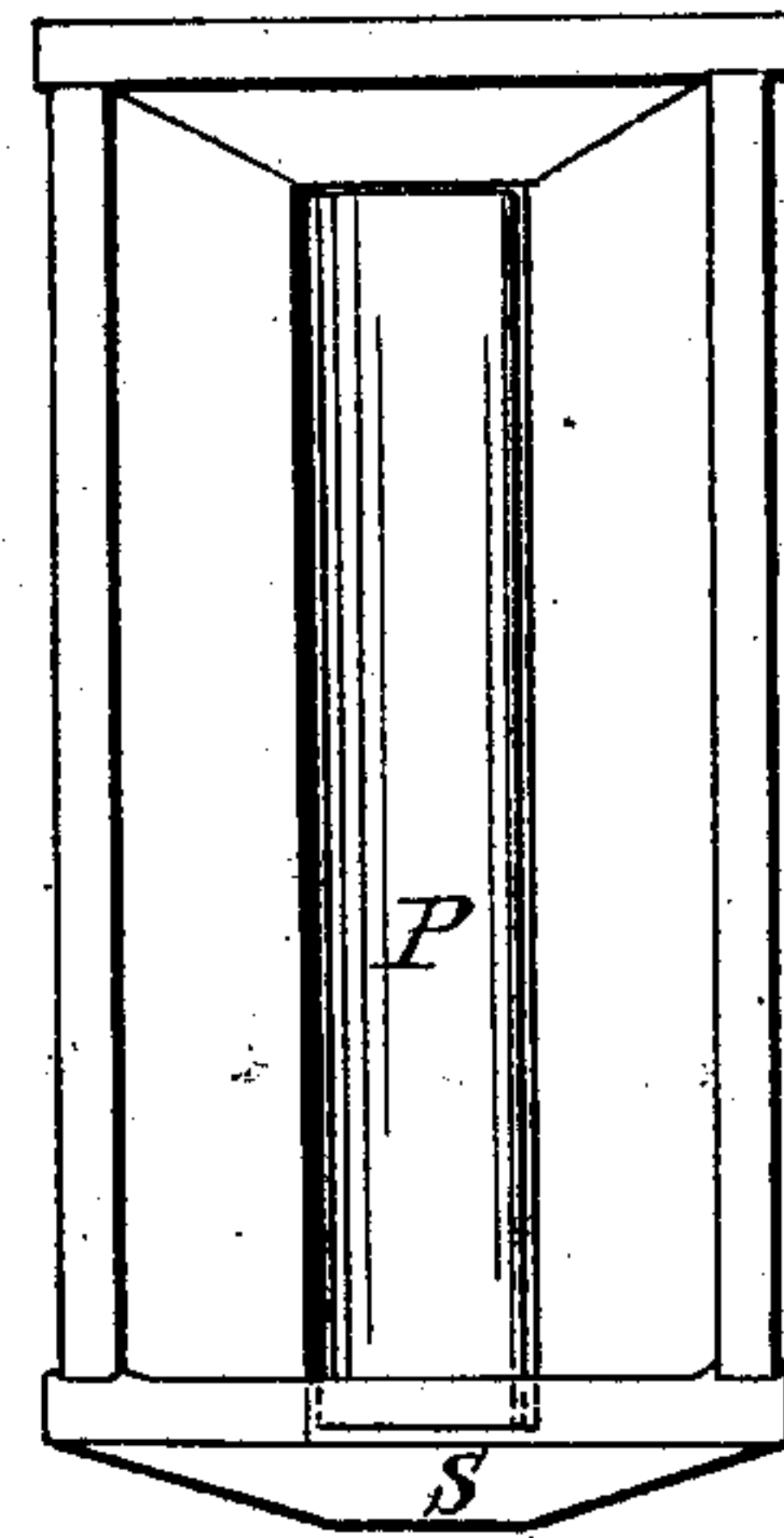


Fig. 1.

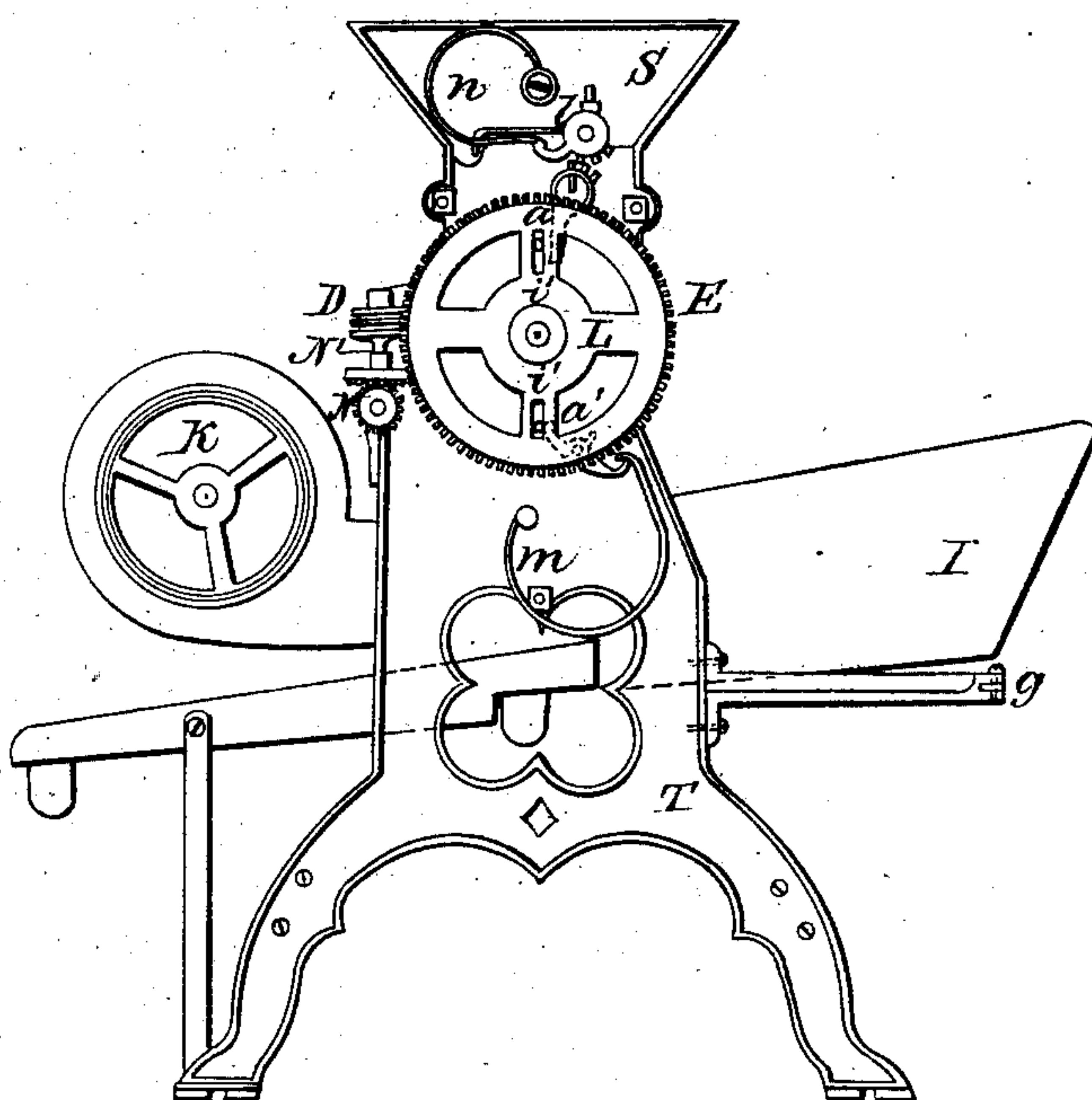
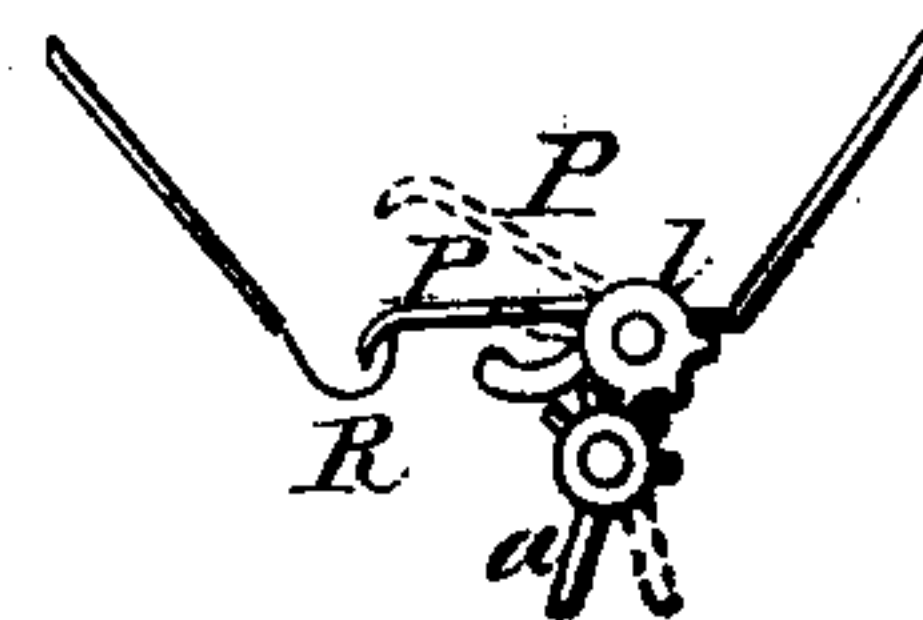


Fig. 3.



Witnesses
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JOHN DONALDSON, OF ROCKFORD, ILLINOIS.

Letters Patent No. 69,903, dated October 15, 1867.

IMPROVEMENT IN GRINDING-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN DONALDSON, of the city of Rockford, in the county of Winnebago, and State of Illinois, have invented a new and useful Hominy Mill; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing forming part of this specification, and to the letters of reference marked thereon. In the drawing—

Figure 1 is an end elevation of the power end of the machine.

Figure 2 shows the opposite end of the machine from fig. 1.

Figure 3 shows an end view of the feed-valve P and its operating levers.

Figure 4 shows the hopper S and feed-valve P.

My invention has reference to the making of hominy from corn, and consists of certain combinations of devices hereinafter to be set forth.

In the drawing, T T show the main supports of the machinery. L is the driving-pulley, turning the hulling machinery, attached to the same shaft, by any convenient power. S is the hopper, receiving the corn, which is let into the hulling device by the valve P, figs. 1 and 3, as hereafter described. On the same shaft with the pulley L, but on the opposite end, fig. 2, is the pinion C, which gives motion to the spur-wheel A, which in turn gives motion to the pinion B, driving the fan K. To the wrist-pin *d*, upon the spur-wheel A, is secured the shake-rod V, which, connecting with the sieves I, by the lever *g*, gives a reciprocating motion to the sieves, fig. 2. On the same shaft with spur-wheel A, but on the opposite end, is secured the bevel pinion N, which meshes into the bevel-wheel N'. Upon the same shaft with bevel-wheel N' is the screw or "wormer" D, which gives motion to the wheel E, moving loosely upon the same shaft as pulley L, fig. 1. In the opposite arms of wheel E are the slotted openings *i i'*, in which are secured the adjustable pins or studs which give motion to the feed-lever *a*, and discharge-lever *a'*. The lever *a* is cogged on its upper end, and meshes into the cogs of the valve-lever *l*, secured to the same shaft as feed-valve P.

In this invention particular attention is asked to the following points:

First. The pinion C, being secured to the same shaft as the driving-pulley L and the hulling-cylinder, will always have a proportional motion to the hulling machinery. This pinion C meshes into the spur-wheel A, which, by means of the wrist-pin *d* and shake-rod V, gives a regular reciprocating motion to the sieves I. This spur-wheel A also gives motion to the fan K, by means of the pinion B. It will be observed that the motion of the sieves I and fan K are both positive, and always proportional to the speed of the hulling machinery.

Second. The bevel-wheel N' and "wormer" D, both upon the same shaft, give a steady and fixed motion to the worm-wheel E, and, by means of the adjustable pins in the slots *i i'*, a regular intermittent motion to the feed-valve P and discharge-valve, fastened to the same shaft as lever *a'*.

Third. By means of the adjustable pins, secured in the slots *i i'* of the wheel E, as hereinbefore described, the feed and discharge-valves are held open a longer or shorter interval at each revolution of the wheel E, in proportion as these pins or studs are moved outward toward the circumference of said wheel, or inward toward its centre, which adjustment of the amount of grain let into the hulling machinery has been found necessary to accommodate for the difference of power applied to the machine, enabling any amount of power to be applied less than its full capacity, and at the same time the feed being reduced will permit the machinery to run at the proper speed.

Fourth. It will be observed that feed-valve P opens upward, and therefore has the weight of the corn to assist in closing it and holding it closed, a great improvement over my former plan of opening this valve downward. The cogged levers *a* and *l*, and spring *n*, operating as described, give a very certain and satisfactory motion to the feeding device.

Fifth. The feed-valve P, fig. 3, is bent downward on its outer edge, coming into the groove R, in the bed-piece of the hopper S. This curved or tongue shape of valve P, and recess or groove R, insure the valve against leakage between the intervals of being raised. This security against leaking has been found of great advantage in the operation of hominy making, as no grain ought to get into the "batch," when once let in, until completed.

Having thus described my machine, what I claim as my present invention, and desire to secure by Letters Patent, is—

1. The arrangement of the slots *i i'*, in wheel E, with the pins, adjustable in said slots, and the feed-levers *a* and *l*, and discharge-lever *a'*, operating in connection with the feed and discharge-valves, and the hulling machinery, substantially as described and for the purpose set forth.
2. The arrangement and construction of the feed-valve P and groove R in hopper S, substantially as described.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

JOHN DONALDSON.

Witnesses:

FRAS. D. CAMMANN,

A. E. BALL.