

D. S. MACKEY.

Hulling Machine.

No. 30,072.

Patented Sept. 18, 1860.

Fig: 1.

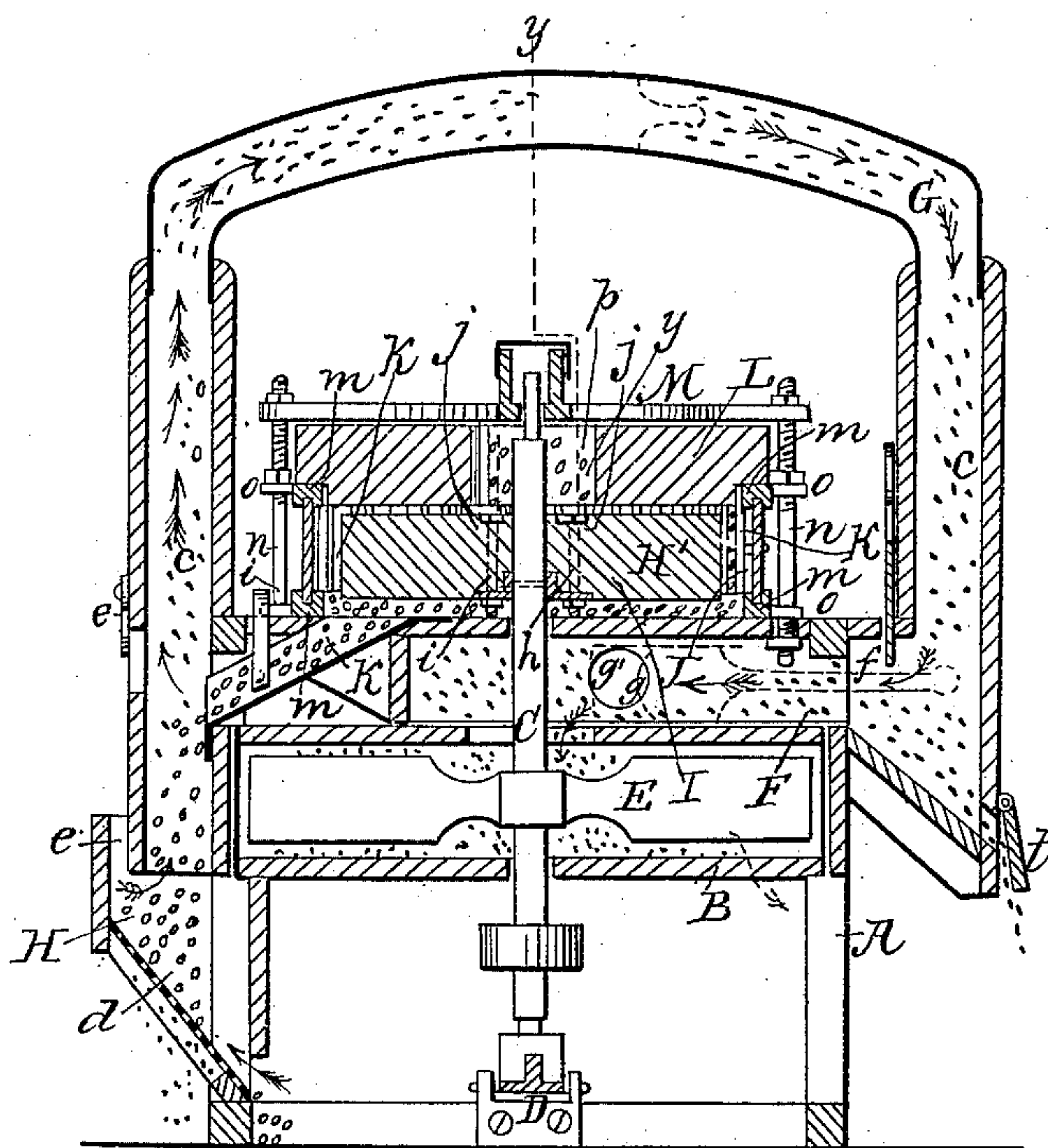


Fig: 3

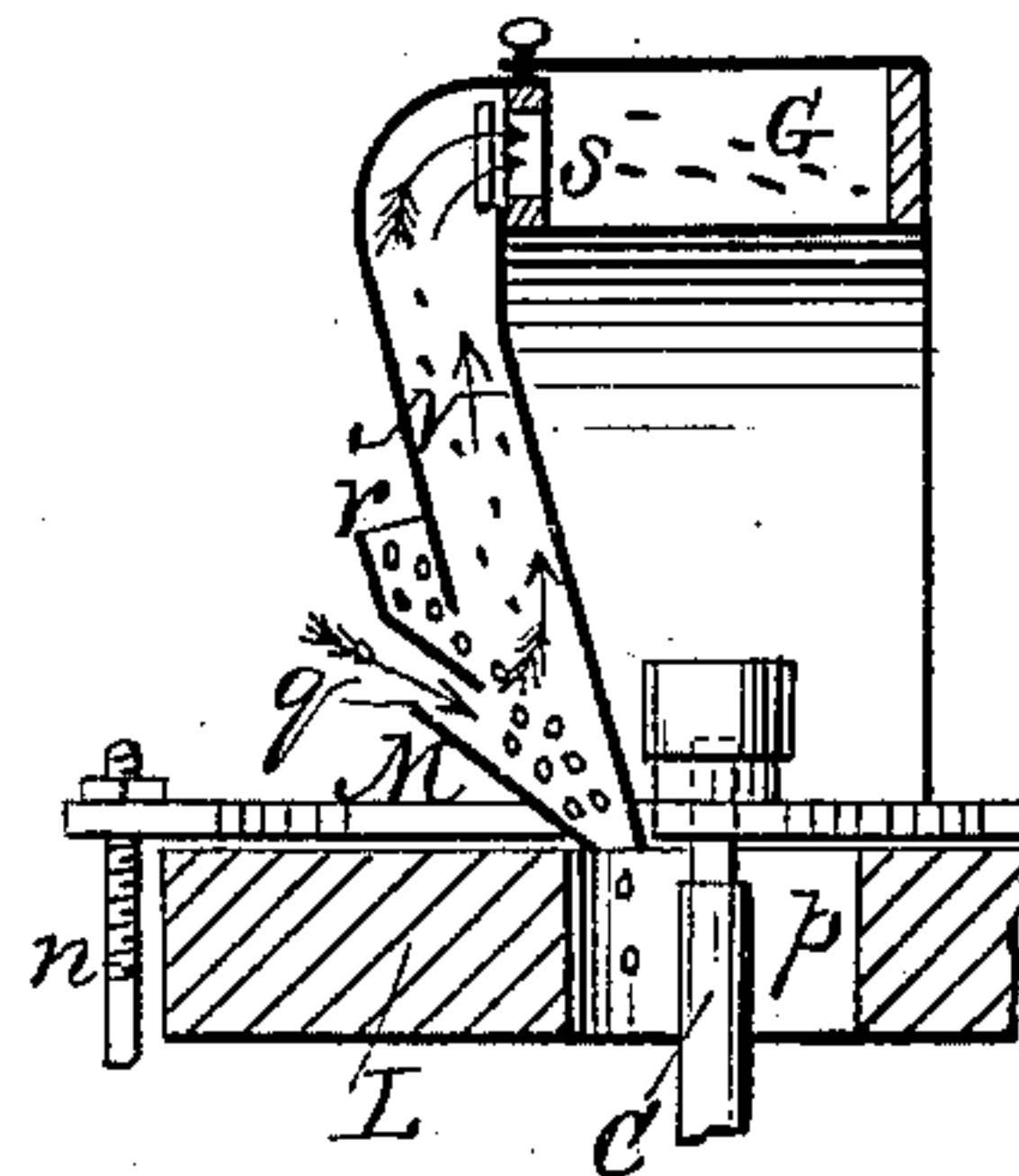
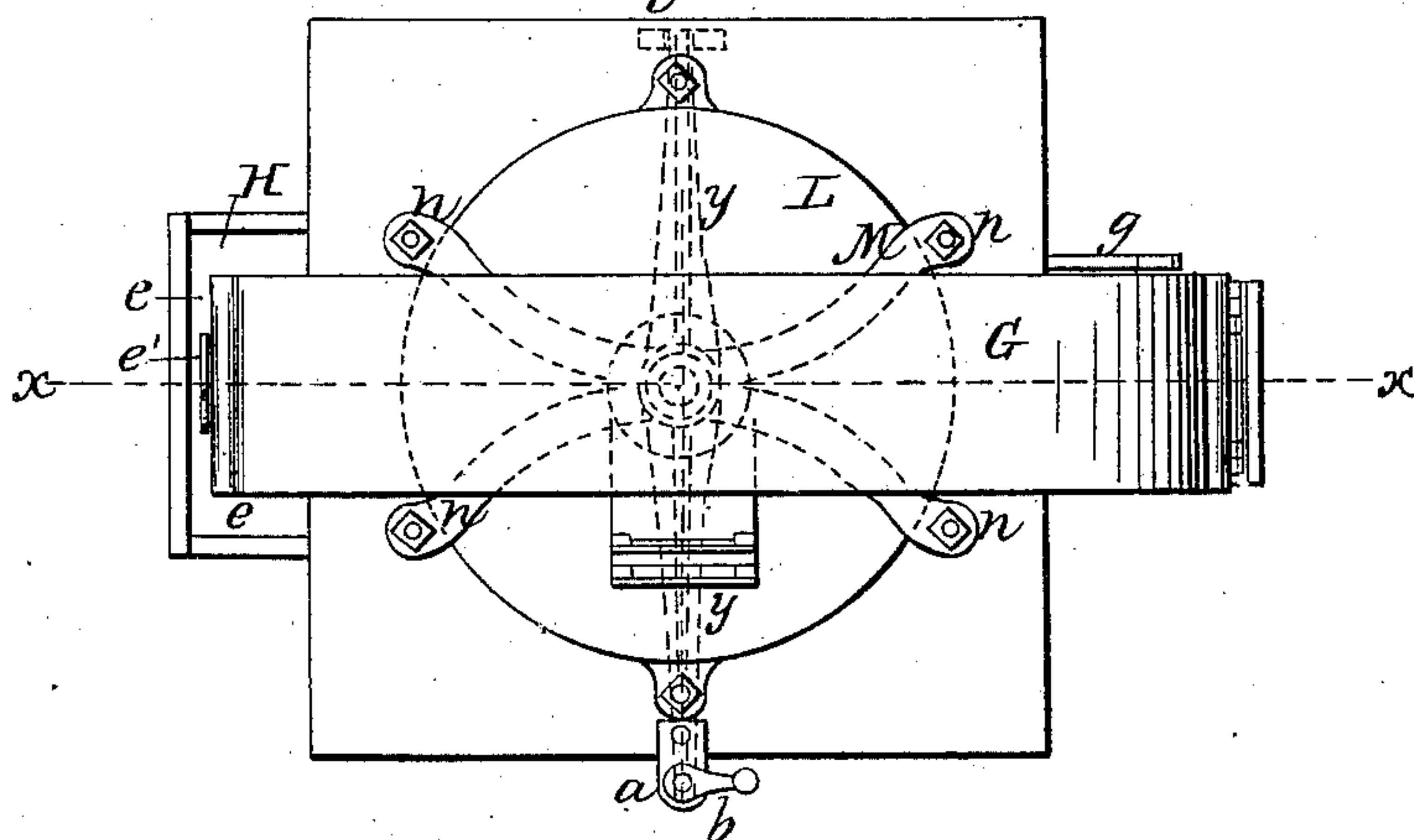


Fig: 2



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UNITED STATES PATENT OFFICE.

DAVID S. MACKEY, OF BATAVIA, NEW YORK.

MACHINE FOR SEPARATING AND SCOURING GRAIN, &c.

Specification of Letters Patent No. 30,072, dated September 18, 1860.

To all whom it may concern:

Be it known that I, D. S. MACKEY, of Batavia, in the county of Genesee and State of New York, have invented a new and Improved Grain Separating, Scouring, and Hulling Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1, is a side sectional view of my invention, taken in the line *x, x*, Fig. 2. Fig. 2, a plan or top view of the same. Fig. 3, a detached sectional view of the hopper, with a portion of the upper and stationary stone, *y, y*, Figs. 1 and 2, indicate the line of section.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a framing which may be constructed in any suitable way to support the working parts of the machine. B, is a fan box which is placed in said framing, and C, is a vertical shaft which passes centrally through the fan box B, and has its lower end stepped in a bridge-tree D, which is adjusted by a screw rod *a*, and nut *b*, see Figs. 2 and 3. On the shaft C, and within the fan box B, there is secured a fan E, which may be of usual construction see Fig. 1.

Directly over the fan box B, there is an air chamber F, which communicates with a passage or trunk G, that is curved and extends over the top of the framing, and has two vertical and parallel parts *c, c'*, as shown clearly in Fig. 1. The air chamber F, communicates with the part *c*, of the trunk G, and the lower end of the other corresponding part *c'*, of said trunk extends down within a box H, which has an inclined sieve *d*, for a bottom, a space *e*, being allowed at the upper end of the box H, between it, and the part *c'*, of the trunk G, as shown clearly in Fig. 1. The part *c'*, of the trunk G, is provided with a slide or flap *e'*, which covers an opening *e'*, and the lower end of the part *c*, at its junction with the air chamber F, is provided with a slide *f*. The air chamber F, is provided with a slide *g*, which covers an opening *g'*.

The shaft C, extends up through the air chamber F, and has a circular stone H', attached to it. This stone is secured to the

shaft C, by means of a plate I, which is provided with a central sleeve or collar *h*, through which the shaft passes snugly the sleeve or collar being secured to the shaft by bolts *i*. The stone H', rests on the plate I, and vertical bolts *j*, pass through the plate and stone. By this means the stone is firmly secured to the shaft see Fig. 1. The stone H', it will be seen by referring to Fig. 1, is just above the air chamber F, and said stone is encompassed by a curb J, which may be of metal and fluted or corrugated at its inner side. The curb J, is considerably larger in diameter than the stone H', so as to leave a space *k*, all around the stone between it and the curb, said space communicating with the lower part of the part *c'*, of the trunk G, by means of an inclined spout K. The curb J, is fitted between two wings or annular plates *m*, which are grooved to receive the edges of the curb. On the upper ring *m*, a stone L, is placed. This stone L, has bars M, resting or bearing on its upper surface, said bars extending entirely across the stone L, and having screw bolts *n*, passing through their ends, said bolts also passing through ears or bolts *o*, attached to the wings *m, m*, as shown clearly in Fig. 1. The bolts *n*, it will be seen secure the curb J, as well as the stone L, in proper position and hold both firmly in their places. The stone L, has an eye *p*, made centrally through it, and an inclined spout N, leads into said eye from the trunk G, the spout N, having an air induction opening *q*, and grain inductions opening *r*, as shown in Fig. 3. In the upper part of spout N, at its junction with trunk G, there is a slide, *s*, and at the lower part of the part *c*, of trunk G, there is a flap *t*.

The operation is as follows: The grain is passed through the opening *r*, into spout N, and down through the eye *p*, between the stones L, H', the latter being rotated by any convenient power applied to shaft C. The grain in passing down spout N, is subjected to a blast as indicated by the black arrows, and all light foreign substances are drawn up into trunk G, the strength of the blast in spout N, being regulated by the slide *s*. The grain in passing between the stones L, H', is scoured or hulled and all dirt detached from it, and the grain after being ejected into the space *k*, is further subjected to a scouring action by the rotation of the stone H', and the inner fluted or corru-

gated surface of the curb J. The grain passes from the space *k*, down the inclined spout K, into the part *c'*, of the trunk G, and is subjected to a second blast, the direction of which is indicated by the black arrows, and all light foreign substances, which escaped the blast in spout N, are drawn up the part *c'*, and pass around into the lower end of the part *c*, of the trunk G, and the heavier portions possessing some value pass out through the flap *t*, while the lighter worthless portions pass into the air chamber F, and down into the fan box B, from whence they are ejected by the action of the fan. The strength of the blast in the air chamber F, is regulated as occasion may require by adjusting the slide *g*, and the separation of the worthless portion of the offal from the goods may be graduated as desired by adjusting the slide *f*. The strength of the blast *c'*, of the trunk G, may be regulated by adjusting slide *e'*. The sieve *d*, allows the sound and all small heavy sub-

stances to pass through it, the good and cleansed grain being discharged from the lower end of screen *d*. 25

I am aware that curved trunks or suction blast spouts G, have been used, and arranged in various ways, and I do not claim separately such device, but 30

I do claim as new and desire to secure by Letters Patent—

1. The arrangement of the suction blast spout G, with the air chamber F, spout N, fan box B, inclined spout K and box H, as and for the purposes herein shown and described. 35

2. The arrangement of the stone L with the wings or annular plates *m*, *m*, bolts *n*, curb J, and bars M, as and for the purposes herein shown and described. 40

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Witnesses:

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