L. MOWRY.

Middlings Purifiers.

No. 133,662. Patented Dec. 3, 1872.

Fig. 1

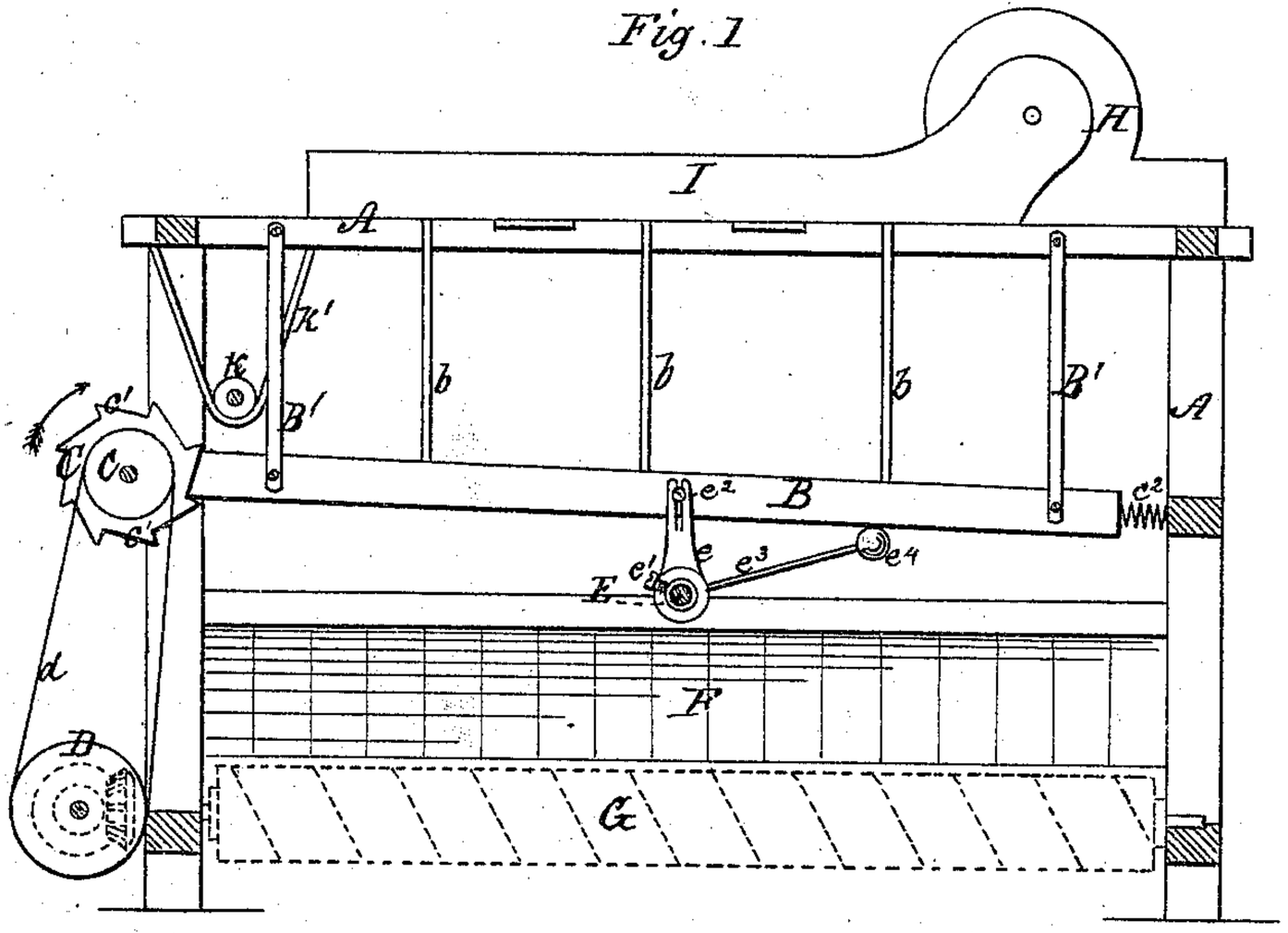
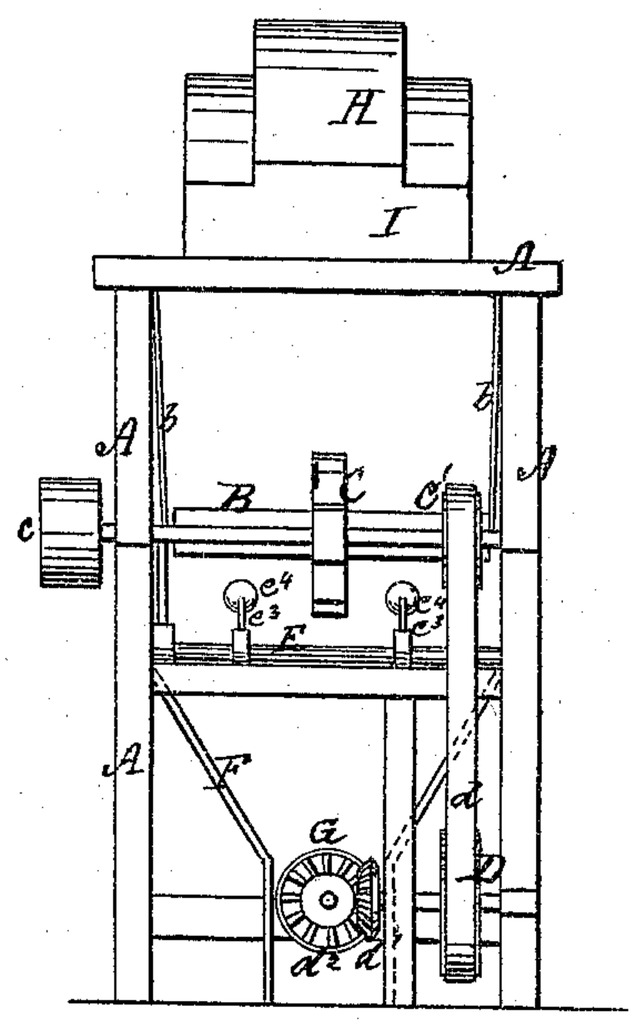


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LISCOM MOWRY, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN MIDDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **133,662**, dated December 3, 1872.

To all whom it may concern:

Be it known that I, LISCOM MOWRY, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Machines for Cleaning and Dressing Flour or Middlings, of which the following is a specification:

Figure 1 is a side elevation of my improved machine with the inclosing case or shell removed, and Fig. 2 is an end view.

The invention relates to that class of machines in which the middlings are operated upon by means of a current of air which passes through the bolting-surface.

In the accompanying drawing, A is the frame; B, the shaker, hung from frame A by means of links B′. C is a wheel, mounted upon a shaft, *c*, and provided with a series of ratchet-teeth, c^1, the end of the shaker being chamfered to correspond with the longer faces of the teeth. c^2 represents a spring or a series of springs so arranged as to press the shaker against wheel C, substantially as shown in Fig. 1. It will be readily seen that a rotation of said wheel in the direction indicated by the arrow will impart a reciprocating motion to the shaker. Any desired form of cam may be substituted for wheel C, when desired. E is a rock-shaft, mounted upon the frame A. *e* is an arm, the lower end of which is expanded into a hub and secured to rock-shaft E at a point just inside the frame by a set-screw, e^1. The upper end of this arm is slotted and passes up by the side of the shaker B, with which it is connected by means of a pin, e^2, in the slot of the arm. This slot permits the necessary freedom of movement of the parts, as will be readily understood without further explanation. e^3 are arms projecting from rock-shaft E, and enlarged at their free ends into hammers or thumpers e^4. As the shaker reciprocates arm *e* actuates the rock-shaft and causes the hammers e^4 to strike against the lower side of the said shaker, thus imparting a jarring motion, which effectually removes any fine particles of flour which may adhere to the bolting-cloth and facilitates the passage of the material through it. F are the gather-boards, and G is the conveyer, driven from pulley C′ through pulley D, belt *d*, and bevel-gear d^1 d^2, or any other suitable or approved train of gearing. Of course the hammers must be so arranged that they will strike against the ribs of the shaker, and any number of shafts and hammers may be employed as shall be found necessary. The strength of the stroke may be regulated at will by turning the rock-shaft E in the arm *e*, or by moving the pin e^2 up or down in the slot in said arm. The middlings may be fed to the shaker by the feed-roller K in hopper K′.

It will be seen that when the shaker B is thrust forward from the ratchet-wheel C the hammers or thumpers e^4 are moved downward and away from the shaker, and as the shaker is moved back again by the springs the thumpers are forced up against the bolt, jarring it sufficiently to assist materially the passage of the material through it.

Having thus described my invention, what I claim as new is—

In a middlings-dressing machine, in combination with a vibrating bolting-surface through which a current of air is made to pass, the rock-shaft E, arms e^3, and knockers e^4, substantially as set forth.

LISCOM MOWRY.

Witnesses:

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