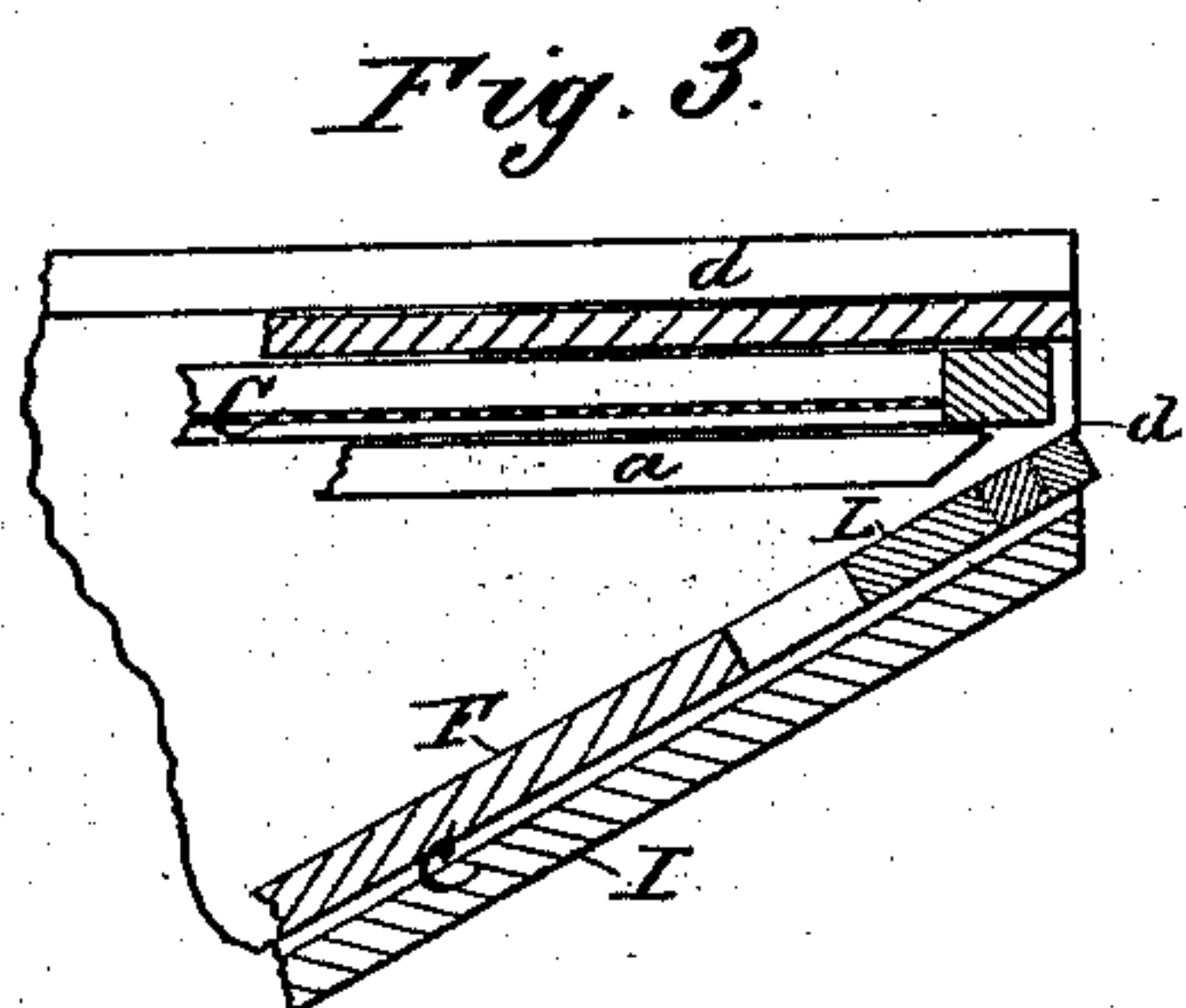
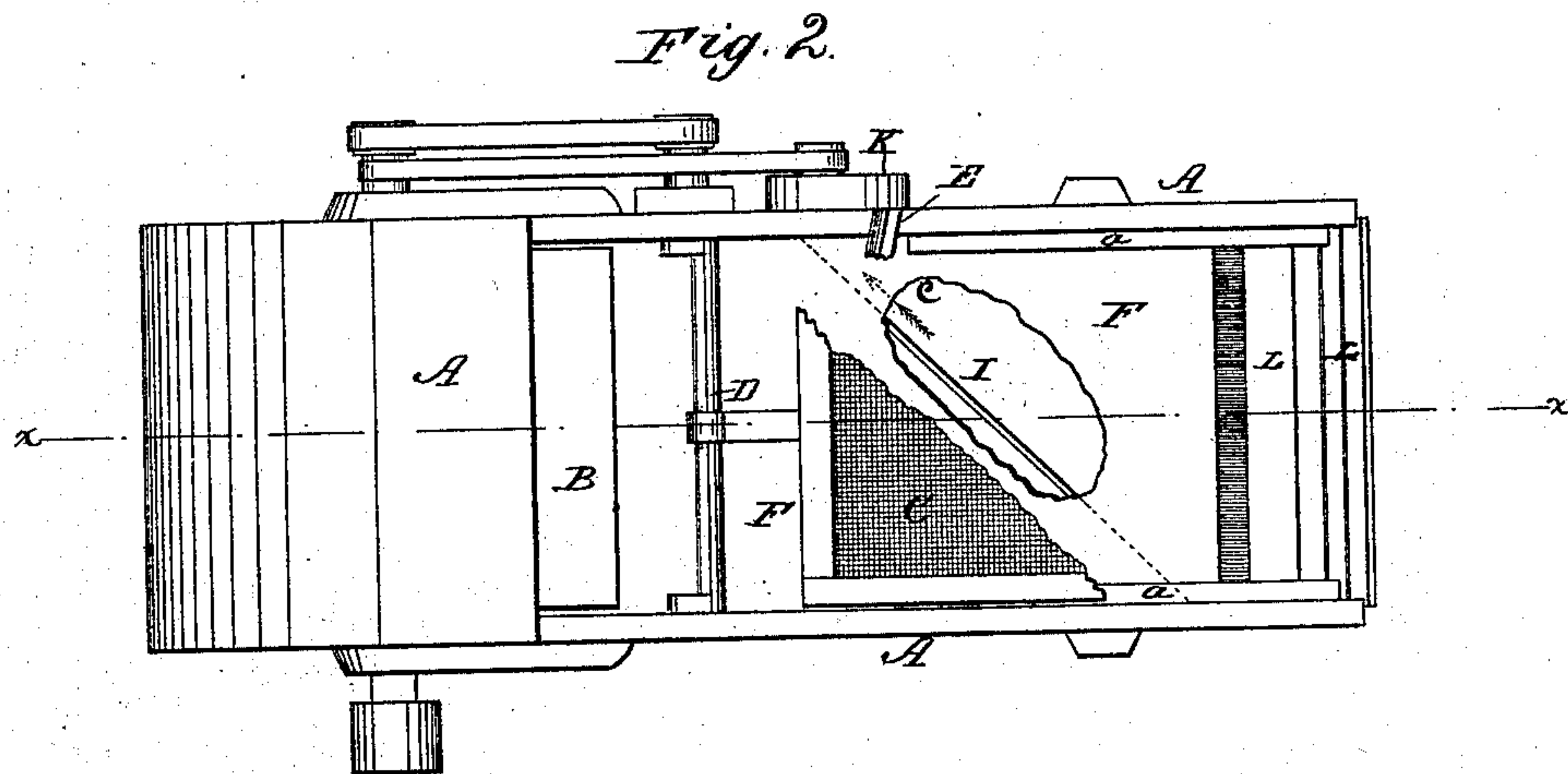
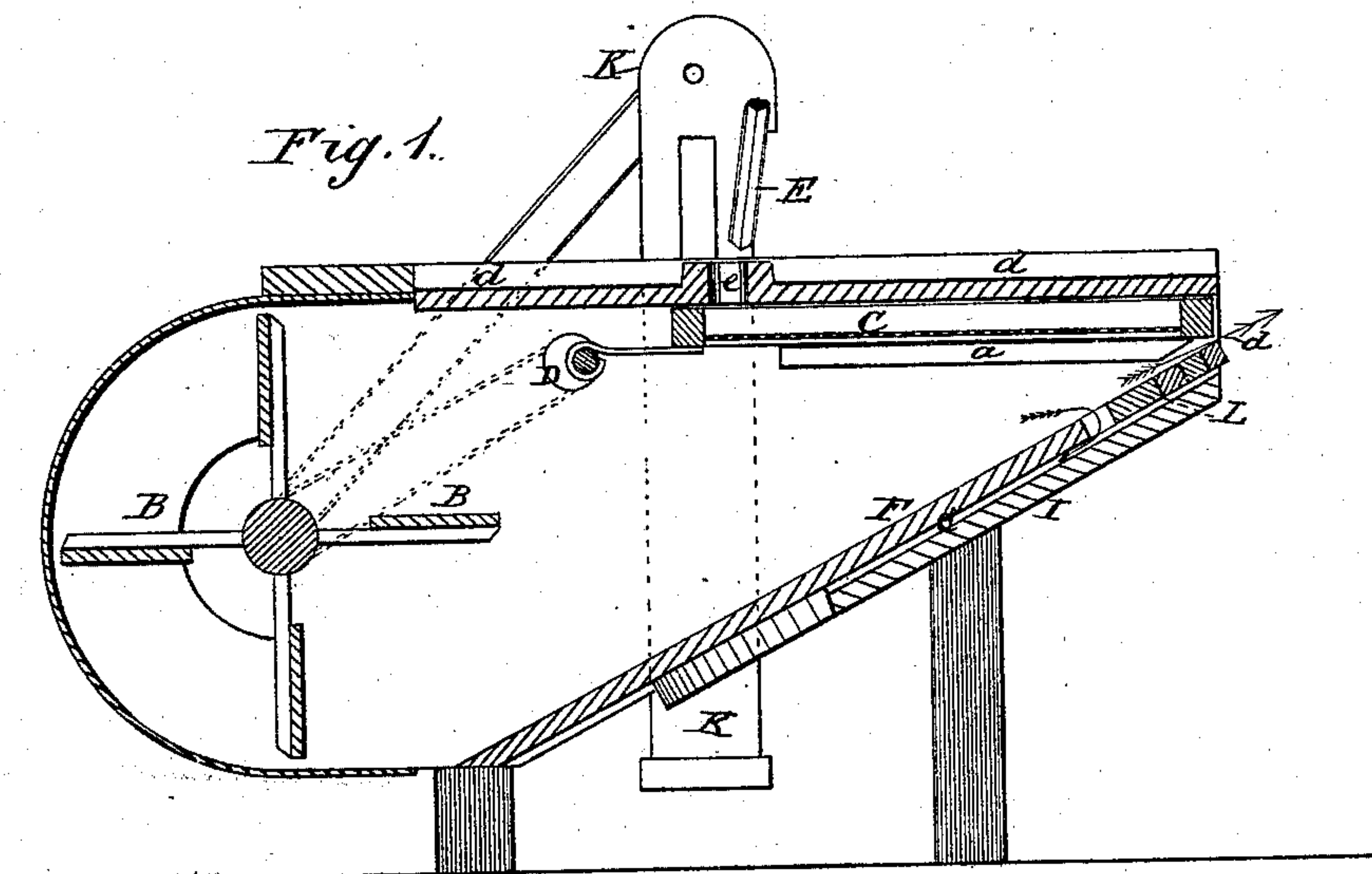


J. M. LUDWIG.
Middlings-Purifier.

No. 224,705.

Patented Feb. 17, 1880.



WITNESSES:

W. W. Hallingworth
Amos W. Hart.

INVENTOR:

Jno. M. Ludwig
BY *Wm. L.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN M. LUDWIG, OF EDENBURG, VIRGINIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO J. J. STONEBURNER AND LEWIS T. STONEBURNER, OF SAME PLACE.

MIDDLINGS-PURIFIER.

SPECIFICATION forming part of Letters Patent No. 224,705, dated February 17, 1880.

Application filed November 22, 1879.

To all whom it may concern:

Be it known that I, JOHN MORGAN LUDWIG, of Edenburg, in the county of Shenandoah and State of Virginia, have invented a new and useful Improvement in Middlings-Purifiers; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement in the class of middlings-purifiers in which the middlings are delivered upon a horizontal reciprocating screen.

My invention is embodied in the construction and arrangement of parts hereinafter described, and shown in accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the machine. Fig. 2 is a plan view with the top of machine removed and other parts broken out. Fig. 3 is a detail section.

The case A of the machine has a fan-blower, B, located in its larger end, and a screen, C, is arranged horizontally in its upper portion. Said screen consists of a rectangular frame having a piece of No. 4 or 5 bolting-cloth attached, and it is vibrated or reciprocated on supporting-ways *a* by means of the eccentric or crank shaft D, with which it is connected by a strap. The frame of the screen C slides in contact with the detachable top *d* of the case A, in which a hole, *e*, is provided for the entrance of the middlings falling from spout E. The reciprocation of the screen C spreads the middlings over its surface and subjects them to agitation. The middlings pass through the screen C and are acted on by the blast from fan B, which separates them into two grades, the heavier grade passing down the inclined bottom F into a trough, (not shown,) having a conveyer for discharging it laterally into a suitable receptacle, and the lighter grade passing down the passage *c* over the second bottom, I, and being discharged laterally, either into a suitable receptacle, (not shown,) to be sold as a lower-grade flour, or else into an elevator, K, by which they may be again conveyed up and delivered by

the spout E upon the screen C. The coarse portion that cannot pass through the sieve is from time to time removed therefrom, for which purpose it is necessary to draw off the sliding top *d*. Bottom I is arranged beneath and parallel to the true bottom, F, but is of less length, and is inclined on the lower side, so as to have a side delivery.

The entrance to the passage *c* between bottoms F I may be made wider or narrower by adjustment of the bars L, whose ends enter grooves in the sides of the case A. By placing the bars L so that the entrance to said passage *c* is farther from or nearer the fan B the grade and quantity of middlings that pass down passage *c* is changed, as will be understood on reference to Figs. 1 and 3 of drawings; but said bars L may also serve to regulate the size of the aperture *d*, through which the blast discharges from the machine, which is done by adjustment or detachment of the outer one of the series of bars, thus diminishing or enlarging the size of the blast-aperture.

By the above construction I provide a simple and economical construction of middlings-purifier, by which a large percentage of a high-grade family flour may be obtained. The machine also occupies small space, and may be run with less power than an ordinary grain-separator.

What I claim is—

In a middlings-purifier, the combination of the horizontal reciprocating screen with the case A, having its top provided with a small aperture for entrance of middlings, and arranged in close contact with the screen-frame, the inclined bottom, the conveyer, and the fan-blower, placed below the screen and rotating in the direction required to cause a blast of air upward beneath the screen, all as shown and described.

JOHN MORGAN LUDWIG.

Witnesses:

B. F. MURRAY,
A. L. BELEW.