

D. OLIVER.
Oatmeal-Machine.

No. 205,293.

Patented June 25, 1878.

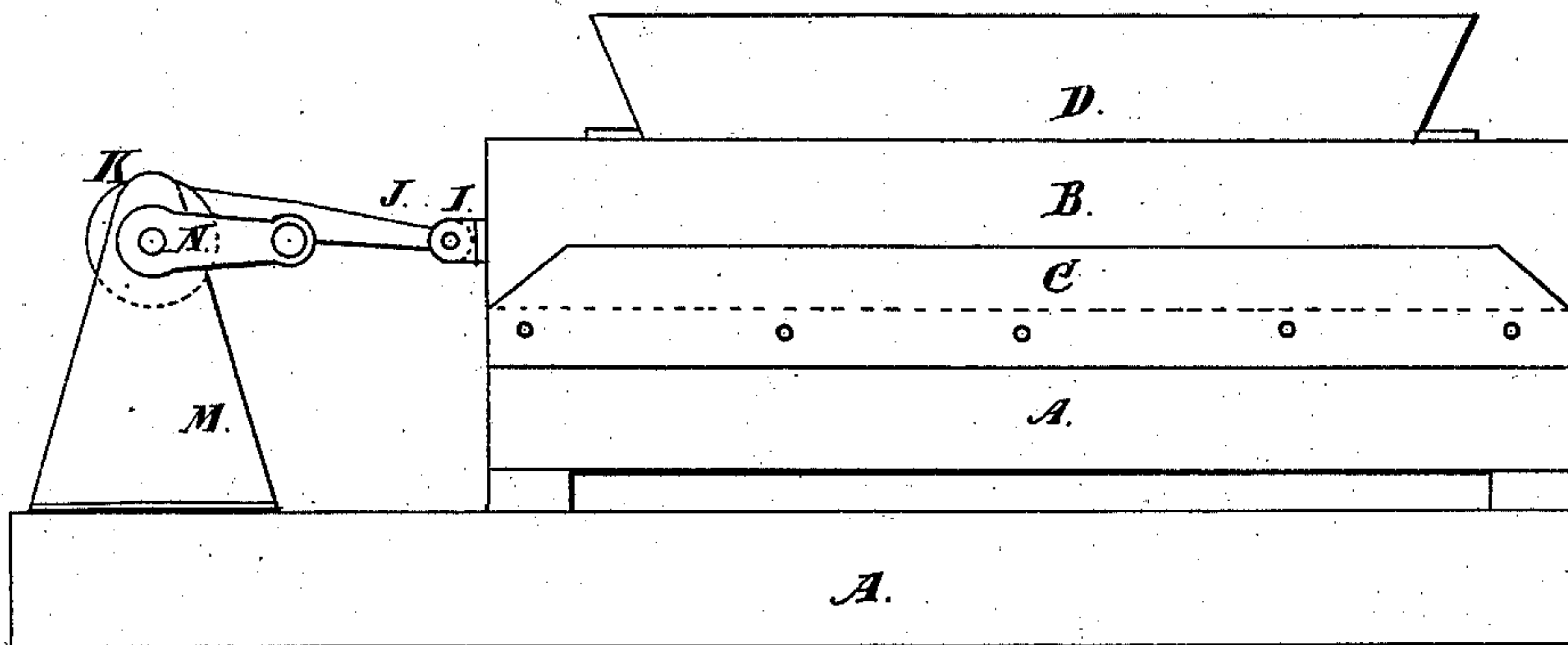


Fig. 1.

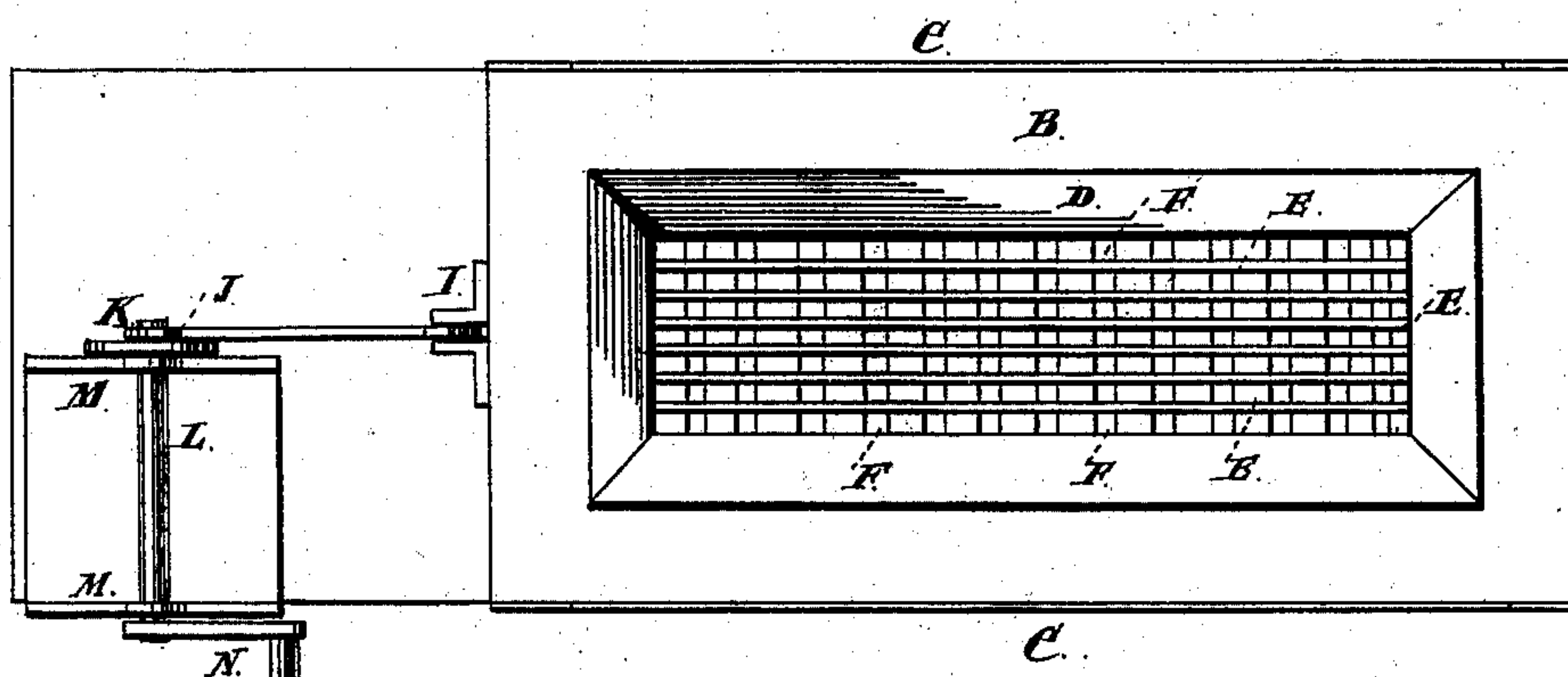


Fig. 2.

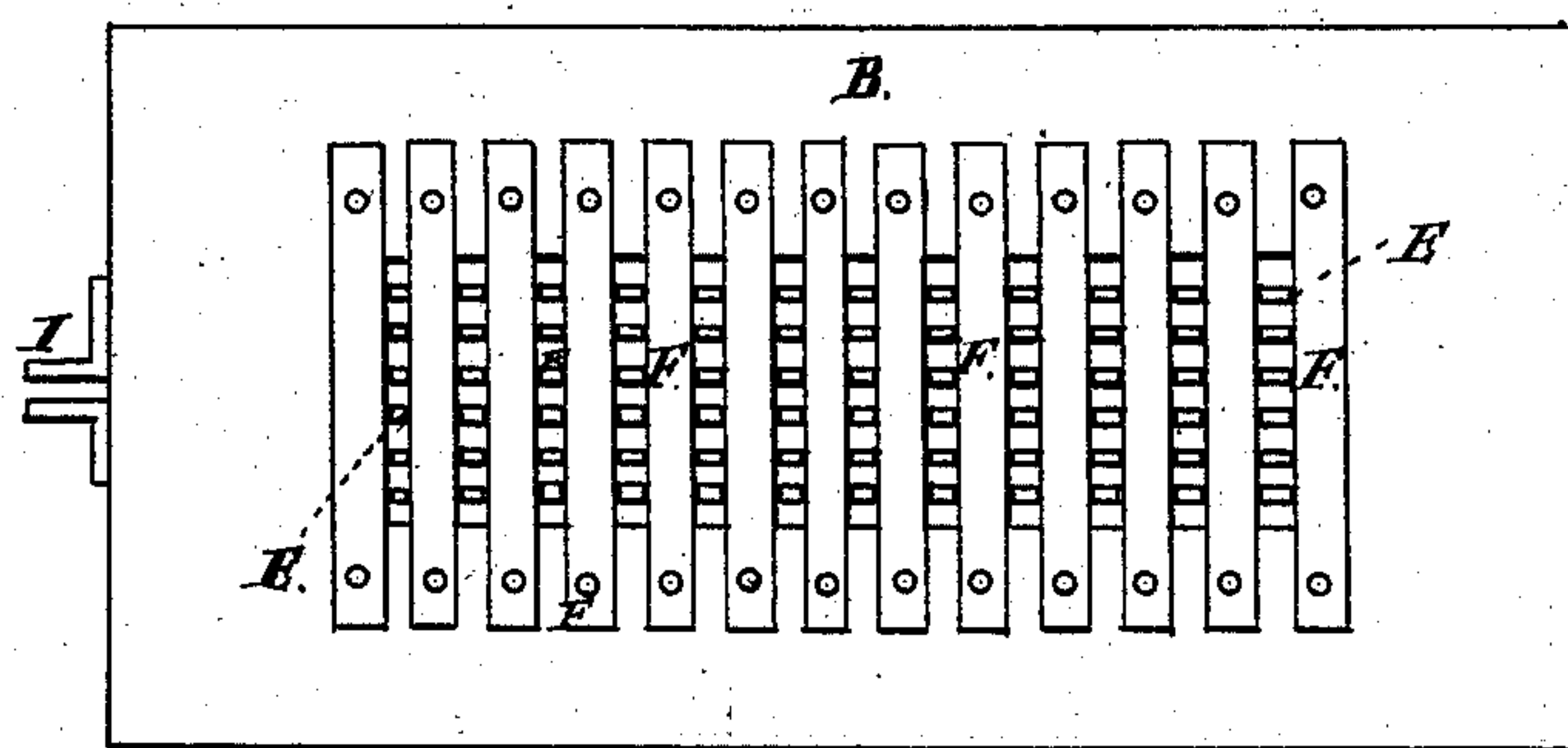


Fig. 3.

Witnesses:

H. F. Burns.
A. W. Bond.

Inventor:

David Oliver.

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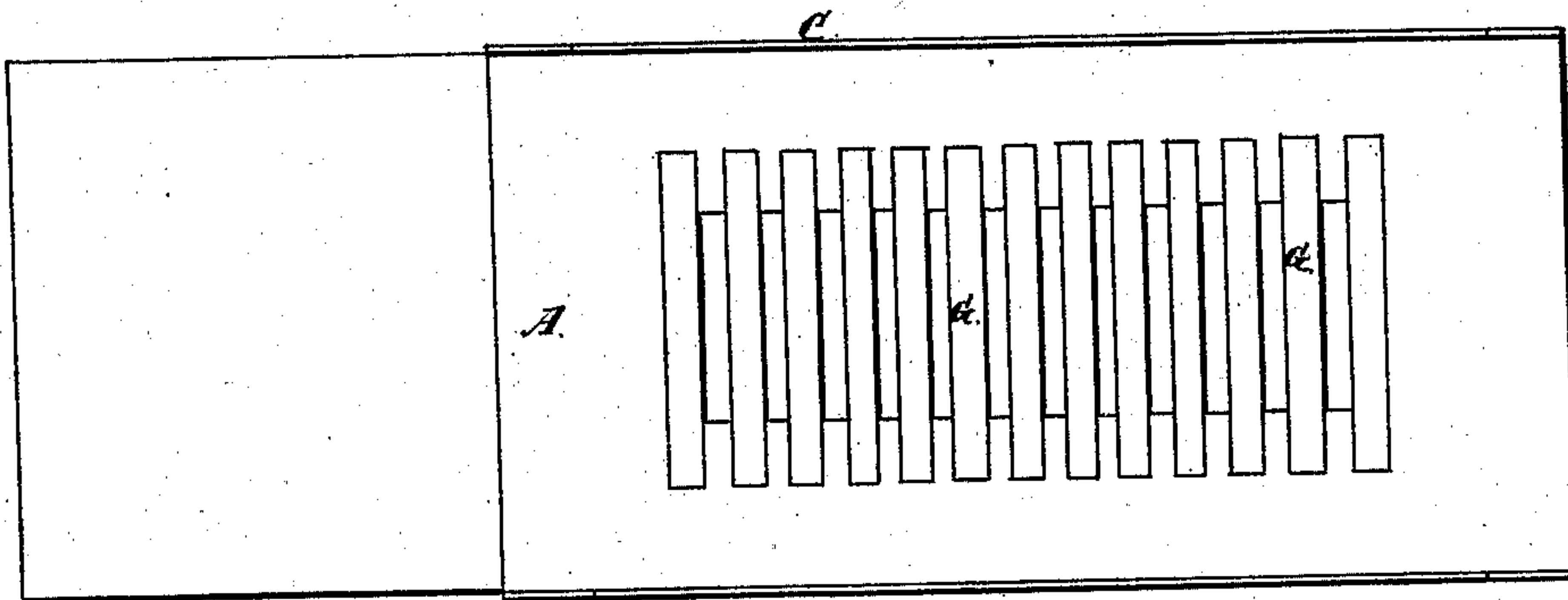


Fig. 4.

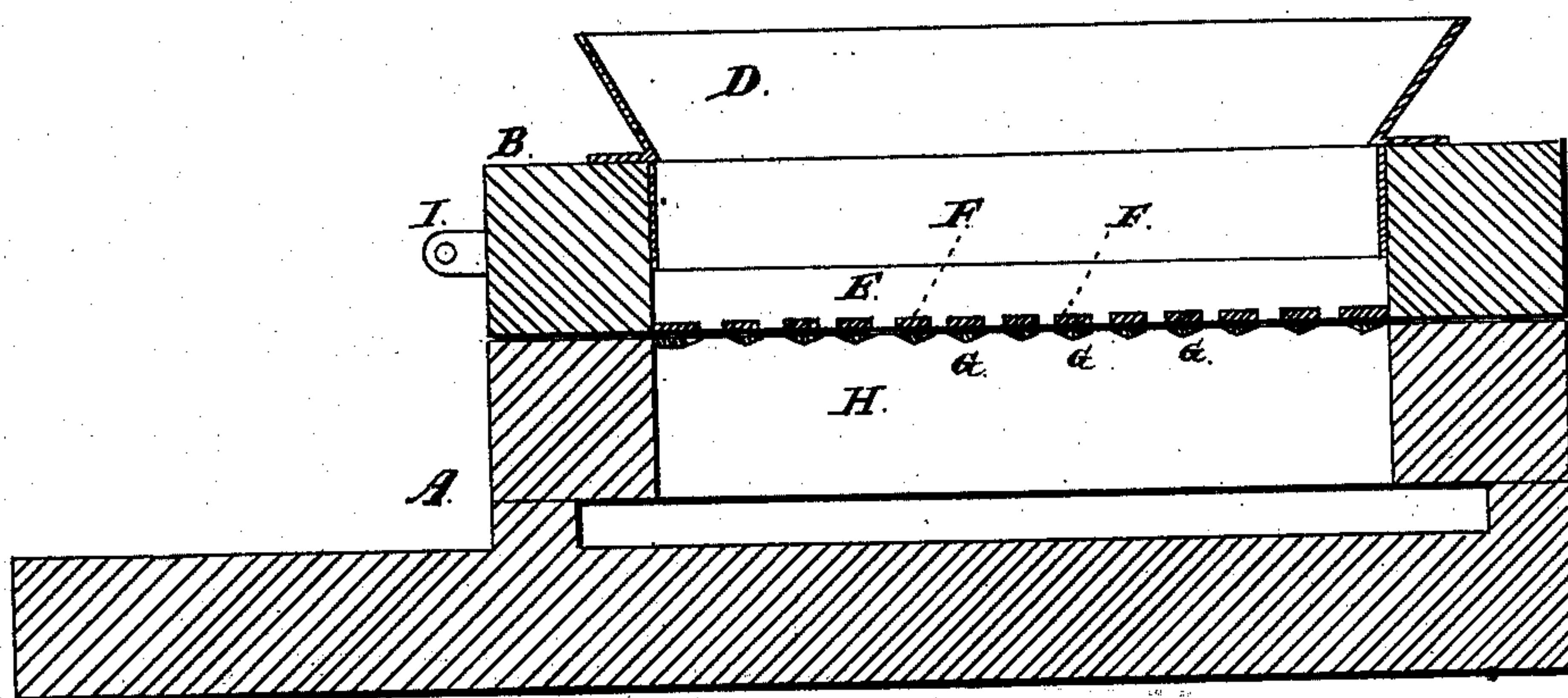


Fig. 5.

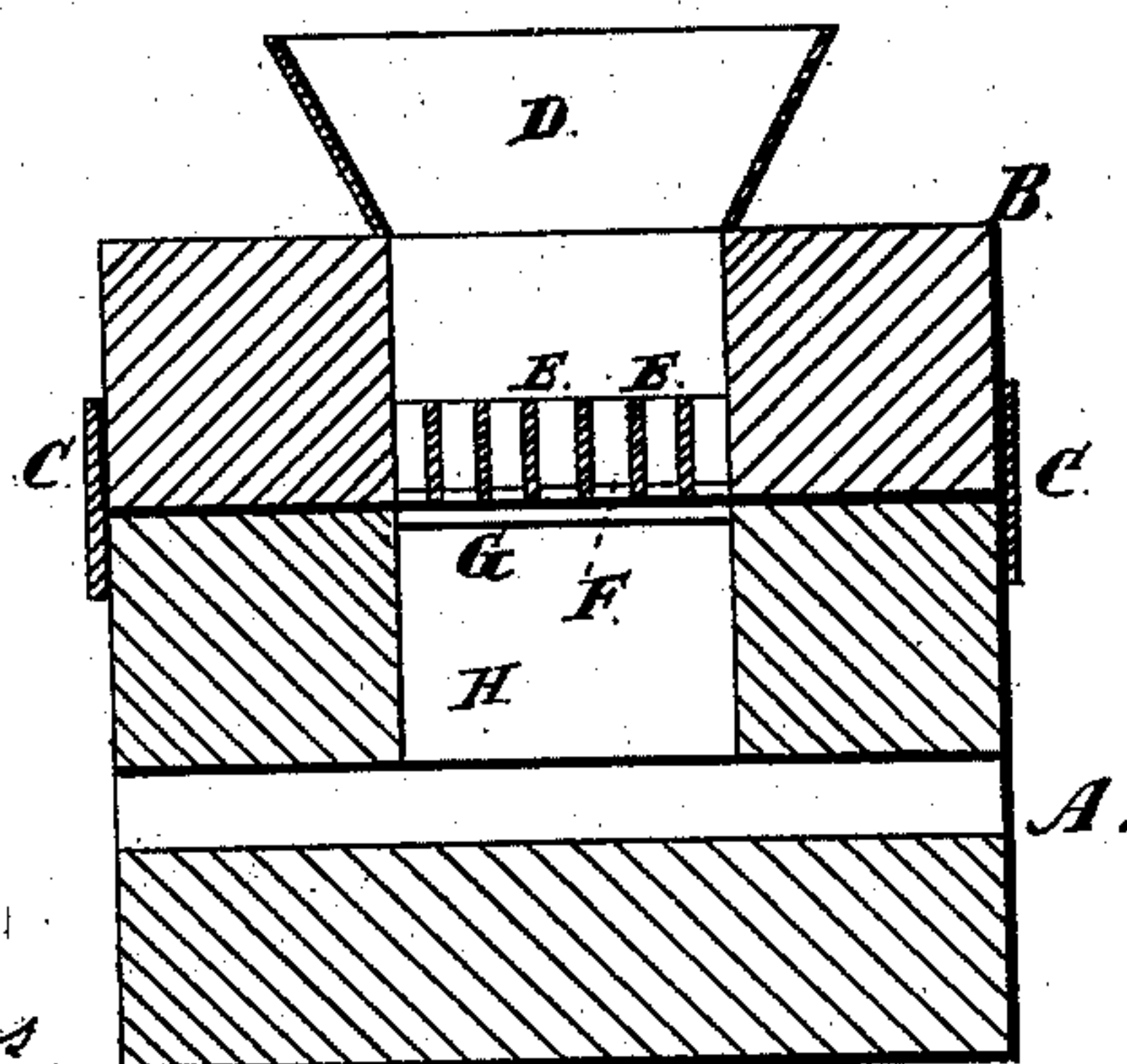


Fig. 6.

Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID OLIVER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN OATMEAL-MACHINES.

Specification forming part of Letters Patent No. **205,293**, dated June 25, 1878; application filed May 15, 1878.

To all whom it may concern:

Be it known that I, DAVID OLIVER, of the city of Chicago, Cook county, State of Illinois, have invented a new and useful Improvement in Grain-Grit Machines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, a top or plan view; Fig. 3, a bottom view of the reciprocating frame; Fig. 4, a top or plan view of the main frames; Fig. 5, a longitudinal vertical section; Fig. 6, a vertical cross-section.

This invention relates to machines for manufacturing grain-grits.

Its object is to improve the delivery of the grain to the cutting blades or knives, so as to present the grain in better shape for cutting, and to enable a cleaner and better cut to be made; and its nature consists in providing the reciprocating hopper, from which the grain is fed to the cutting-blades, with a bottom consisting of a series of cross blades or bars and a series of longitudinal bars located above the cross-bars, so as to form longitudinal openings for the grain to fall into lengthwise and be directed vertically through openings between the bars to the cutting-blades, and combining such reciprocating hopper with cutting-blades located below the cross-blades in a stationary bed or frame.

In the drawings, A represents the stationary frame; B, the reciprocating frame; C, the side pieces or guides; D, the hopper; E, the longitudinal bars; F, the cross knives or bars; G, the stationary knives or cutters; H, the receptacle for the cut grain; I, the ears; J, the connecting-rod; K, the wheel; L, the shaft; M, the standards; N, the crank.

The stationary frame A is made of wood or other suitable material, and may be of any desired form of construction, having an upper portion to receive the cutting knives or blades G, and a receptacle or opening, H, for the cut grain, located beneath the knives, into which the cut grain falls after it has been operated upon. The knives or blades G are provided with cutting-edges on both sides, the bevel to form the edges being on the under side only, so as to leave the upper surface smooth and straight. These knives G, as shown, are stationary, and are secured to the upper portion

of the stationary frame in any suitable manner, so as to bring their upper surfaces on the same plane, or nearly so, as the upper face of the frame, and are located a sufficient distance apart to leave spaces between them to enable the grain to be cut by the knives.

The pieces or flanges C are secured to or formed with the side pieces of the upper portion of the frame A, and project a sufficient distance above the top of the frame to form guides for the reciprocating frame B, located between the pieces C, which frame may be made of wood or other suitable material, and is moved back and forth on the upper face of frame A. To this frame is secured the hopper D, made in any suitable form for receiving the grain, the opening therein for the passage of the grain extending to the bottom of the frame B. The bottom of this hopper is formed from a series of bars or knives, F, which extend crosswise of the hopper-opening, and a series of longitudinal bars, E, located in the hopper-opening above the blades or bars F, the bars E and knives F being secured to the sides of the frame or hopper in any suitable manner, and the bars or knives F are so located with reference to the knives G as to bring them to the proper position to perform the cutting operation. The location of the knives F G is shown in Figs. 5 and 6.

The bars E are located so as to leave a long narrow space between them of a size sufficient to allow the grain to drop lengthwise therein, and the arrangement of the bars and knives is such as to form openings to pass the grain vertically to the cutting or stationary blades.

When the knives F have a very thin edge the bars E are located in contact therewith; but when the knives or bars F are thick the bars E may be provided with projections, which extend down between the knives to insure the proper guiding of the grain.

To one end of the frame B are secured ears I, between which is pivoted one end of the bar J, the other end of which is connected to a wrist-pin on the wheel K, which wheel is secured to the end of the shaft L, which has its bearings in the upper ends of the standards M, secured to the base plate or frame A in any suitable manner. On the other end of this shaft L is a crank, N, by means of which motion is im-

parted to the shaft, and the frame B given a reciprocating movement. A pulley-wheel or other device may be used in place of the crank N for this purpose, and other devices than those shown may be used for reciprocating the frame B.

In use the frame B is given a reciprocating motion back and forth over the frame A, which motion shakes the grain contained in the hopper and causes it to drop into the long narrow openings between the bars E, from which it passes through the openings formed by the bars E and knives F vertically to be cut by the stationary knives G; and by making the cross bars or knives F with a cutting-edge such bars will aid the cutting-knives, so as to make a cleaner cut when dividing the grain.

The knives or bars F may be made with thick edges, and do the work effectually, though not making as clean a cut.

The longitudinal bars E and cross bars or knives F form a bottom for the hopper, which will guide or direct the grain to the cutting-blades in a better manner than heretofore, because the grain can only fall into the openings between the bars E lengthwise, which brings it into better position to be passed by the reciprocating movement of the frame between the bars F to the cutting-blades. The bars E

must be located in contact with the bars or knives F, to prevent the grain from working under the bars E, so as to be caught and not passed to the cutting-blades.

The longitudinal bars E may be made to have a separate movement independent of the reciprocating movement of the frame B, and these bars and the cross bars or knives F and cutting blades or knives G may all be given separate and independent movements, if desired.

What I claim as new, and desire to secure by Letters Patent, is—

1. The reciprocating frame B, carrying the hopper D, having its bottom provided with the longitudinal bars E and cross knives or bars F for guiding and directing the grain to the cutting-blades, substantially as specified.

2. The reciprocating frame B, hopper D, longitudinal bars E, and cross knives or bars F, in combination with the stationary cutting knives or blades G and a supporting-frame, A, substantially as and for the purposes specified.

DAVID OLIVER.

Witnesses:

O. W. BOND,
H. F. BRUNS.