2 Sheets—Sheet 1.

D. OLIVER.

Oatmeal-Machine.

No. 204,165. Patented May 28, 1878.

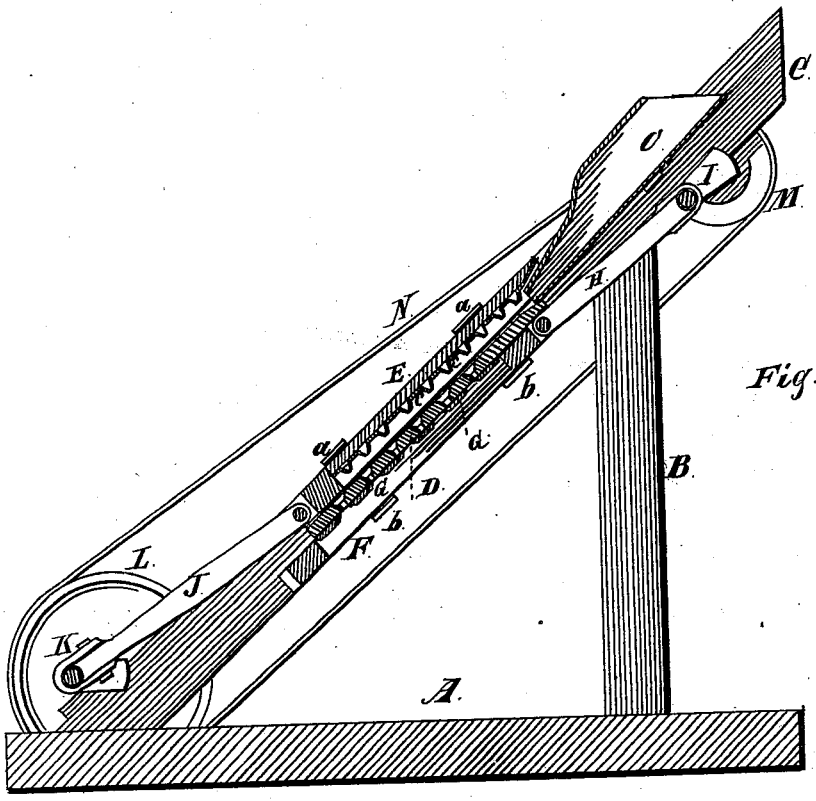

Fig. 1.

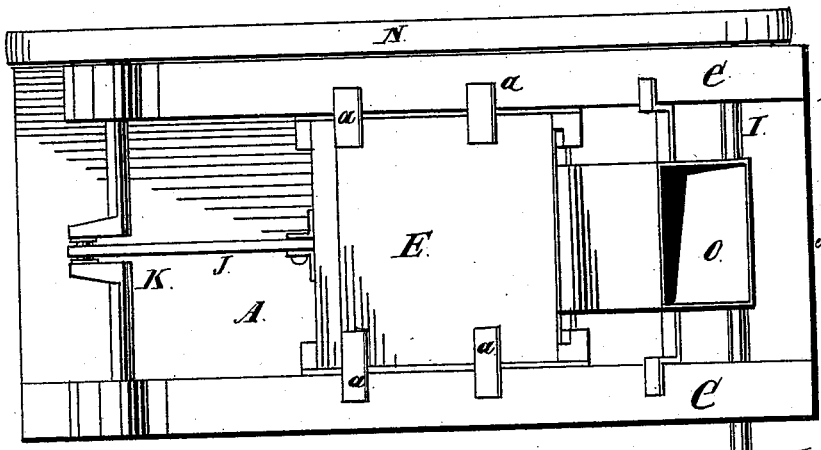

Fig. 2.

Witnesses
L. L. Bond
O. W. Bond.

Inventor:
David Oliver

2 Sheets—Sheet 2.

D. OLIVER.
Oatmeal-Machine.

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Fig. 3.

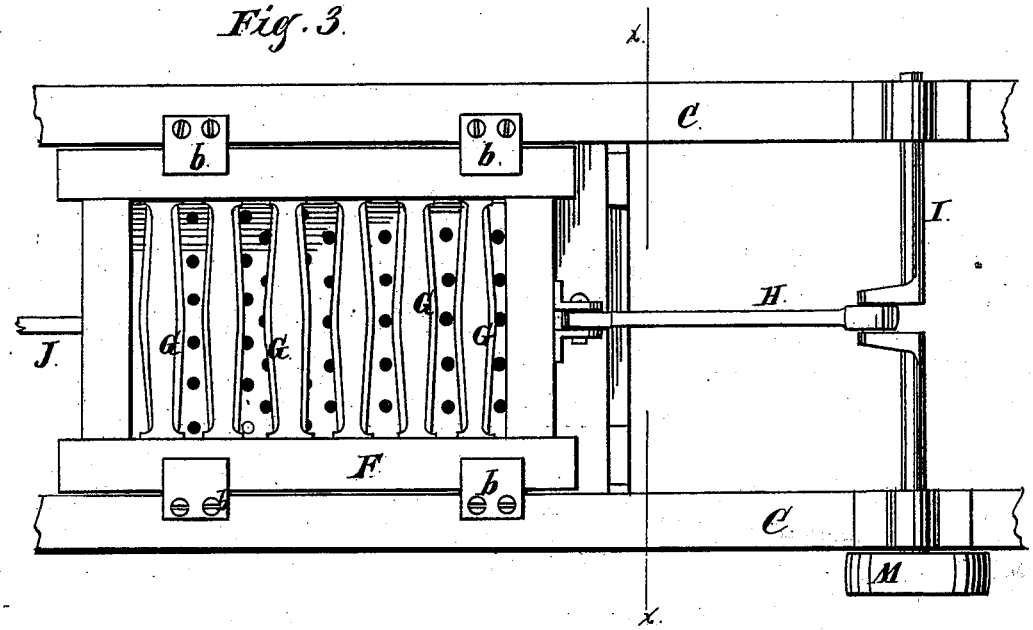
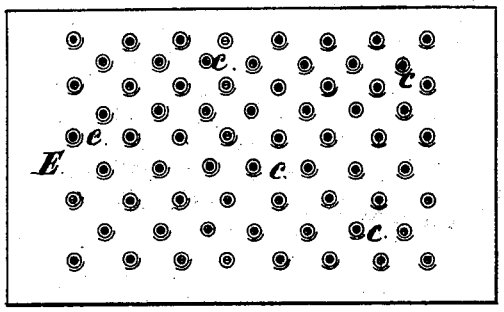


Fig. 5.



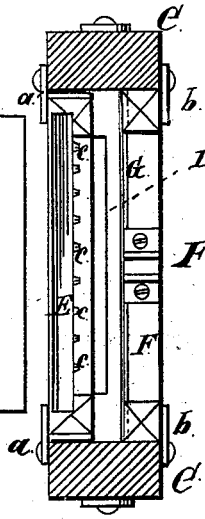


Fig. 4

Witnesses:
L. L. Bond
A. W. Bond

Inventor:
David Oliver

UNITED STATES PATENT OFFICE.

DAVID OLIVER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN OATMEAL-MACHINES.

Specification forming part of Letters Patent No. **204,165**, dated May 28, 1878; application filed March 11, 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 new and useful Improvements in Grain-Grits Machine, of which the following is a full description, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal vertical section; Fig. 2, a plan or top view; Fig. 3, an underside view of the cutters and plate; Fig. 4, a cross-section on line *x x* of Fig. 3; and Fig. 5, an under view of the agitator or rubber plate.

The object of this improvement is to improve the operation of machines for cutting oaten grits by making its action more rapid; and its nature consists in applying a rubber over the perforated plate; in making the perforated plate stationary and reciprocating two-edged cutting-blades beneath it, and in the several combinations of parts hereinafter more fully described and claimed.

In the drawings, A B C represent a triangular frame-work; D, the fixed perforated plate; E, the agitator; F, the reciprocating cutter-frame; G, the two-edged cutters, made wider at the middle than at the ends to give a slight draw-cut; H, pitman; I, crank-shaft; J, the agitator-pitman; K, crank-shaft; L M, pulley or belt wheels; N, belt; *a b*, guide blocks or ways, and *c* points or projections on the under face of the agitator.

The frame A B C is made triangular in its side elevation, so as to give the operative parts an inclined position, which position tends to facilitate the passage of the grain over the perforated plate, and to its better distribution over the whole body thereof. Between the bars or rails C the perforated plate D is permanently fixed, as shown. This plate, in its best form, is made of steel and drilled or punched full of holes large enough to permit the passage of the oats and small enough to keep them in an upright or partly upright position. It will improve the action of this plate to ream the holes on the upper surface of the plate.

A cheaper plate may be made of iron punched full of holes. The agitator E may be made of wood or cast-iron, or partly of both. It is provided with a frame or border coming nearly or quite in contact with the plate D, while its central or middle part is raised, so as to form a small space or distributing-chamber, as shown at Fig. 1, extending over the perforated plate. This agitator is held in place by suitable ways formed in the side rails C, or in guide-blocks attached thereto, and it is operated by the pitman J and crank-shaft K. The knives or cutters G are attached to the upper side of the frame F, and are sharpened on both edges, so as to cut when moving in either direction, and they move in close contact with the perforated plate D. The frame F is supported in ways or guide-blocks similar to those supporting and guiding the agitator, and it is operated by the pitman H and crank-shaft I.

A rapid movement is given to the knives or knife-frame, while a much slower one is given to the agitator. As the agitator lifts the grain in its upward movement, time must be allowed for it to fall back; and by this movement of the grain in falling back down the incline by gravity it does not become compact, but is left measurably free to assume a suitable position for passing into the perforations.

The knobs *c* may be applied to facilitate this operation or not, as may be desired; but as one great objection to this kind of machines has been their slowness of operation it will be well to apply them. The hopper O connects with the space between the agitator and the perforated plate, which space is open at the top or upper end, and the mouth of the hopper extends into this space sufficiently far to prevent its being uncovered by the receding movement of the agitator or moving cover E.

In operation, power is applied to the shaft I, as indicated by the crank or winch, and the shaft K is driven by the pulleys M L and belt N, or by other suitable gearing.

I have described the machine as adapted to cutting oats or making oaten grits; but it is obvious that it may be used for other grains.

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

1. The agitator or rubber E, in combination with the perforated plate D, substantially as specified.

2. The combination of the fixed plate D with the agitator E, frame F, and knives G, all constructed and operating substantially as specified.

3. The hopper O, with space between the agitator and perforated plate, in combination with frame F and knives G, constructed and arranged substantially as and for the purpose set forth.

DAVID OLIVER.

Witnesses:
L. L. BOND,
O W BOND