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Fig. 1

Fig. 2.

Fig. 3.

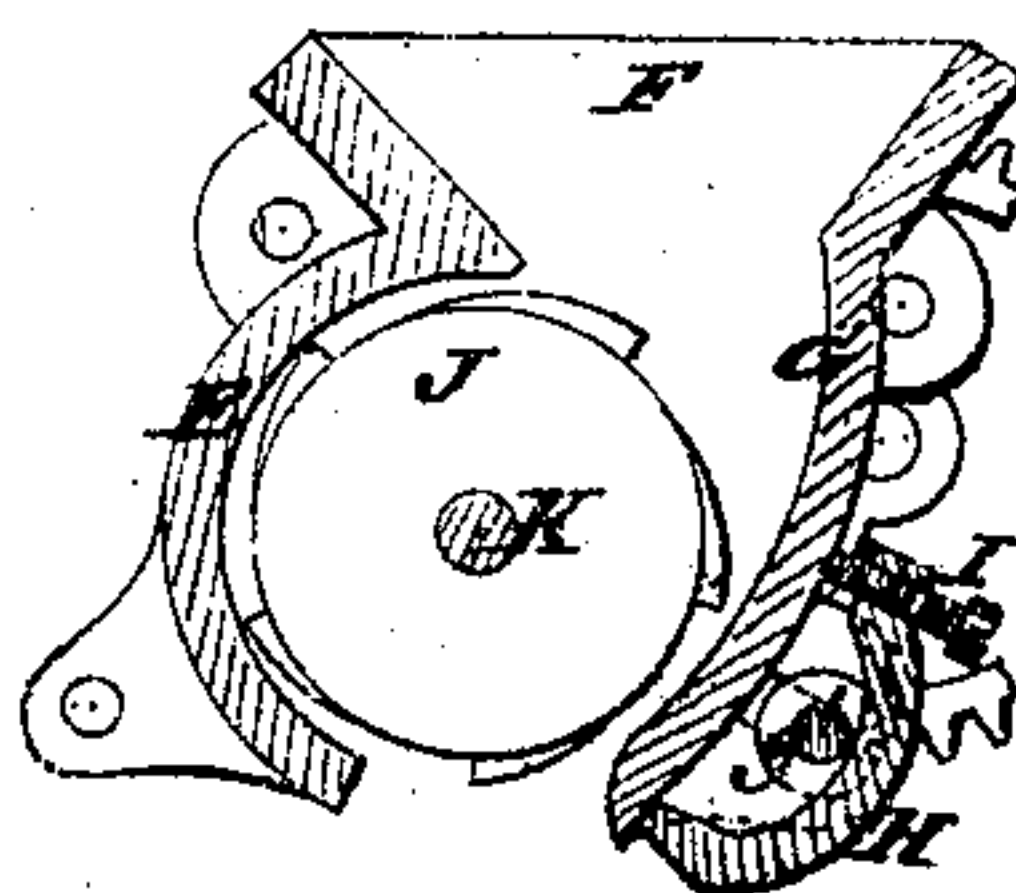
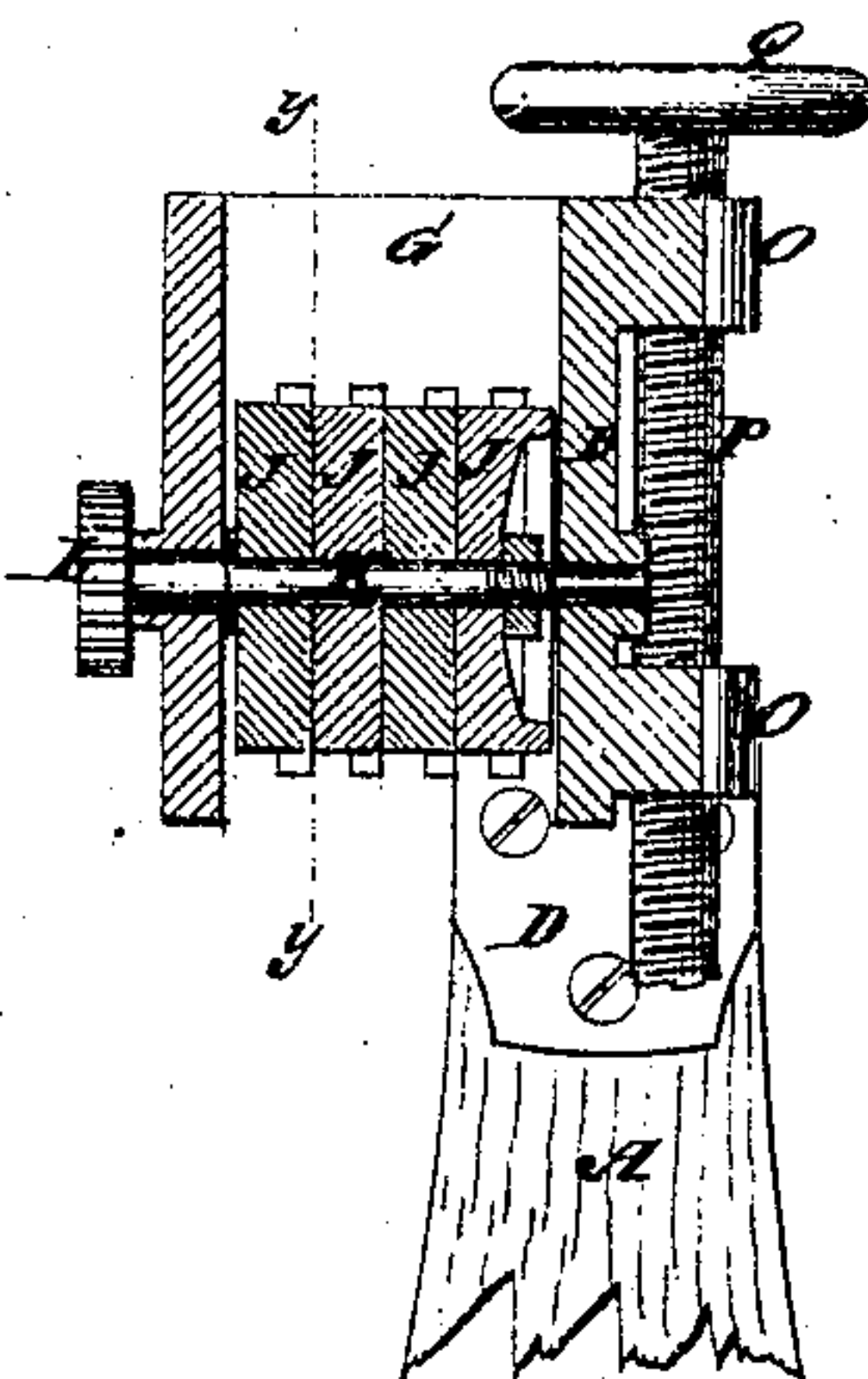
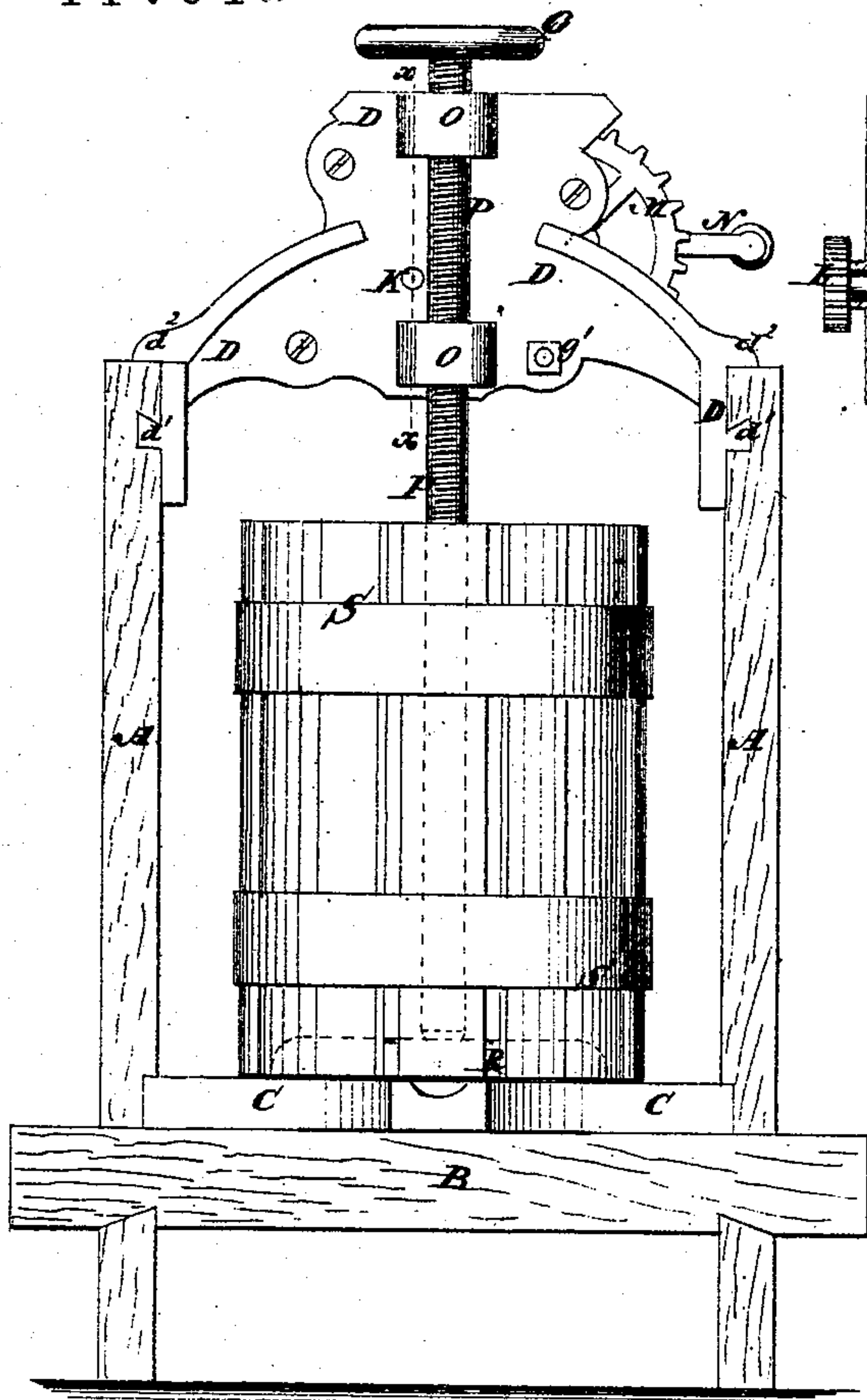


Fig. 4.



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UNITED STATES PATENT OFFICE.

ORVILLE M. BROCK, OF MONROETON, PENNSYLVANIA.

IMPROVEMENT IN COMBINED CIDER-MILLS AND PRESSES.

Specification forming part of Letters Patent No. 117,041, dated July 18, 1871.

To all whom it may concern:

Be it known that I, ORVILLE M. BROCK, of Monroeton, in the county of Bradford and State of Pennsylvania, have invented a new and useful Improvement in Combined Cider-Mill and Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side view of my improved mill and press. Fig. 2 is a detail sectional view of the same taken through the line *xx*, Fig. 1. Fig. 3 is a detail sectional view of the same taken through the line *yy*, Fig. 2. Fig. 4 is a detail section of the follower.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish a simple, convenient, efficient, and inexpensive machine for making cider; and it consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A are the sides of the frame, which are made solid and with dovetailed grooves in the lower part of their side edges to receive the cross-bars B, the ends of which project to serve as handles for convenience in moving the machine. The inner sides of the sides A are grooved transversely just above the cross-bars B to receive the side edges of the bottom C, which also rest upon the upper edges of the cross-bars B. In the inner sides of the top of the sides A are formed dovetailed grooves to receive the dovetailed flanges *d*¹ formed upon the ends of the beam or plate D which supports the mill and the pressing-screw, and which forms the forward side of the hopper. Upon the ends of the beam or plate D is formed a second flange, *d*², which overlaps the top of the sides A. The ends of the beam D are further secured to the sides A by bolts or screws, as shown in Fig. 2. E is the stationary end plate of the hopper, which is made curved, as shown in Fig. 3, and which has ears formed upon the outer side of its upper and lower parts to receive the bolts by which it is secured to the plate or beam D and to the rear-side plate F of the hopper. G is the adjustable end plate of the

hopper, which has ears formed upon the outer side of its upper part to receive the bolts by which it is secured to the upper part of the plates D F. The plate G has slotted ears formed upon the outer side of its lower part to receive the rod *g'*, by which said lower part is secured adjustably to the plates D F. H is a curved lever, which is pivoted to the rod *g'*, and the lower end of which rests against the lower part of the adjustable plate G. Through a screw-hole in the upper end of the lever H passes a set-screw, I, the forward end of which rests against the plate G, so that, by turning the screw I in or out, the lower end of the plate G may be moved in or out to adjust the mill to produce a finer or coarser pomace, as may be desired. J are the sections of the grinding-cylinder, which are placed upon the shaft K and are secured in place by a collar and nut, as shown in Fig. 2. The sections J have projecting teeth, spurs, or knives formed upon their faces or edges to grate, crush, or shear the apples as they pass down between the said sections and the adjustable end plate G. The shaft K revolves in bearings in the front and rear plates D F of the hopper, and to its projecting rear end is attached a small gear-wheel, L, into the teeth of which mesh the teeth of the gear-wheel M, pivoted to the rear-side plate F of the hopper, and to which the crank N is attached. Upon the front side of the plate D are formed two projections, O, through which are formed screw-holes to receive the pressing-screw P, thus giving to said screw two bearings. To the upper end of the screw P is attached a hand-wheel, Q, which may have holes formed in it for the attachment of a lever when it is desired to apply great power to the screw. The lower end of the screw P is made tapering to fit into a tapering hole in the center of the follower R to force the said follower down squarely. The follower R is made dish-shaped or concave upon its lower side to tend to force the pomace toward the center of the hoop while being pressed. S is the hoop, which is made cylindrical in shape, and is formed by attaching vertical staves to two or more hoops, narrow spaces being left between the staves to allow the juice to escape freely. The bottom C is grooved to guide the juice into a receiver.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The rotary knife-sections J and shaft K, with spur-wheel on one end, combined with the hopper and screw P, as and for the purpose specified.

2. The flange d^2 and dovetailed flange d^1 , in combination with the ends of the plate D and with the upper ends of the sides A, constructed

as herein shown and described, and for the purpose set forth.

ORVILLE M. BROCK.

Witnesses:

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