

J. WATERHOUSE.
Flock Grinder.

No. 124,463.

Patented March 12, 1872.

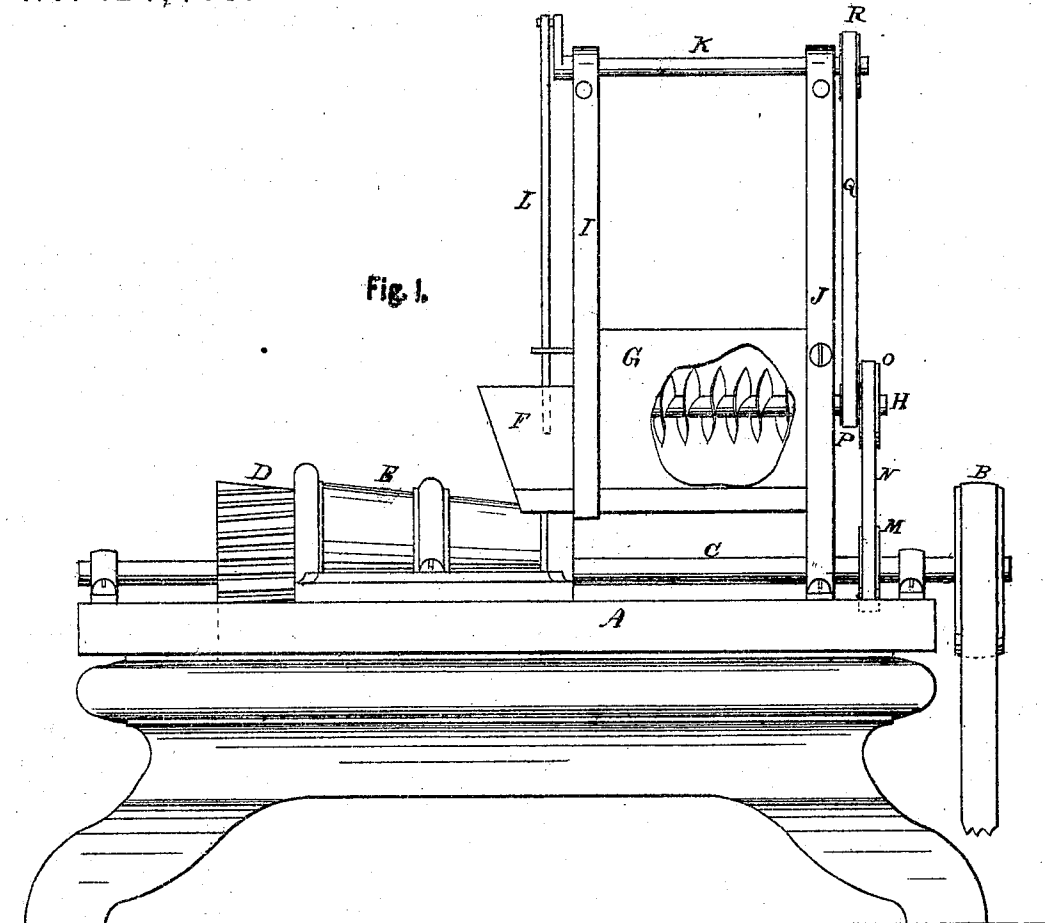
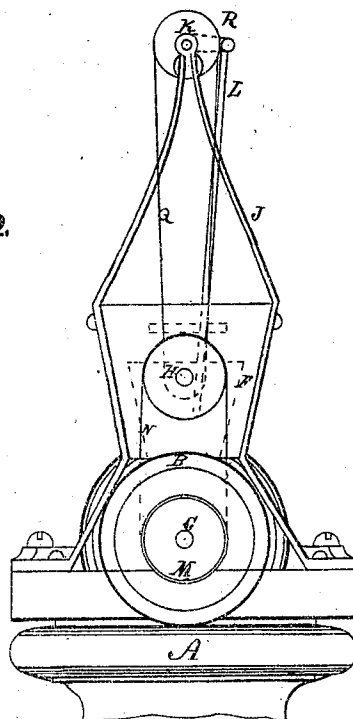


Fig. 2.



Witnesses:
Frederick Lowe
John H. Hull

Inventor:
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per
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UNITED STATES PATENT OFFICE.

JAMES WATERHOUSE, OF PASSAIC, NEW JERSEY.

IMPROVEMENT IN FLOCK-GRINDERS.

Specification forming part of Letters Patent No. 124,463, dated March 12, 1872.

I, JAMES WATERHOUSE, of Passaic, in the county of Passaic and State of New Jersey, have invented certain Improvements in "Flock-Grinders," of which the following is a specification:

My invention relates to the combination, with a "flock-grinder," of a screw-conveyer and a reciprocating forwarder or plunger, together with the proper trough and hopper, for the purpose of carrying forward and forcing the material to be ground against the grinding-surfaces.

Figure I is a side elevation of a flock-grinder embodying my invention. Fig. II is an end elevation of the same.

A is the frame of the machine, which frame should be substantially constructed to resist the vibrations of the operating parts. B is the driving-pulley, which is hung on the main shaft C of the machine, from which latter motion is communicated to the operating parts. D, fast on the shaft C and rotating therewith, is the solid cone fitted in the usual manner with steel blades, and, together with the hollow cone or shell E, similarly provided with blades, forming the grinding-surfaces of the machine. The shaft C is hung in proper bearings which are securely fastened to the frame-work. F is the hopper for receiving the material and feeding the same into the grinding-cones. G is a trough or box of any convenient length, connected, by a proper opening, with the hopper F, and within

which, driven by proper bands or gear-wheels, revolves in suitable bearings a screw or helical conveyer H. I and J are standards which carry the trough or conveyer-box, and also the crank-shaft K, with its plunger or pitman L. The lower end of the latter works loosely within the hopper F, and, by its reciprocating motion, crowds or presses down the material within and against the grinding-surfaces. M is a pulley on the shaft C, which, by the belt N, conveys motion to the conveyer-shaft by the pulley O. P is a pulley on the conveyer-shaft, which, by the belt Q and pulley R, gives motion to the crank-shaft K.

The material intended to be ground is placed in the conveyer-trough G, and, by the rotary action of the screw, forced forward in the direction of the hopper, which it enters through the proper opening, and is then forced downward upon the grinding-surfaces of the cones D and E by the action of the plunger or pitman L.

I claim as my invention—

The combination of the cones D and E with the trough G and conveyer H, crank-shaft K, plunger L, and hopper F, substantially as and for the purposes hereinbefore set forth.

JAMES WATERHOUSE.

Witnesses:

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