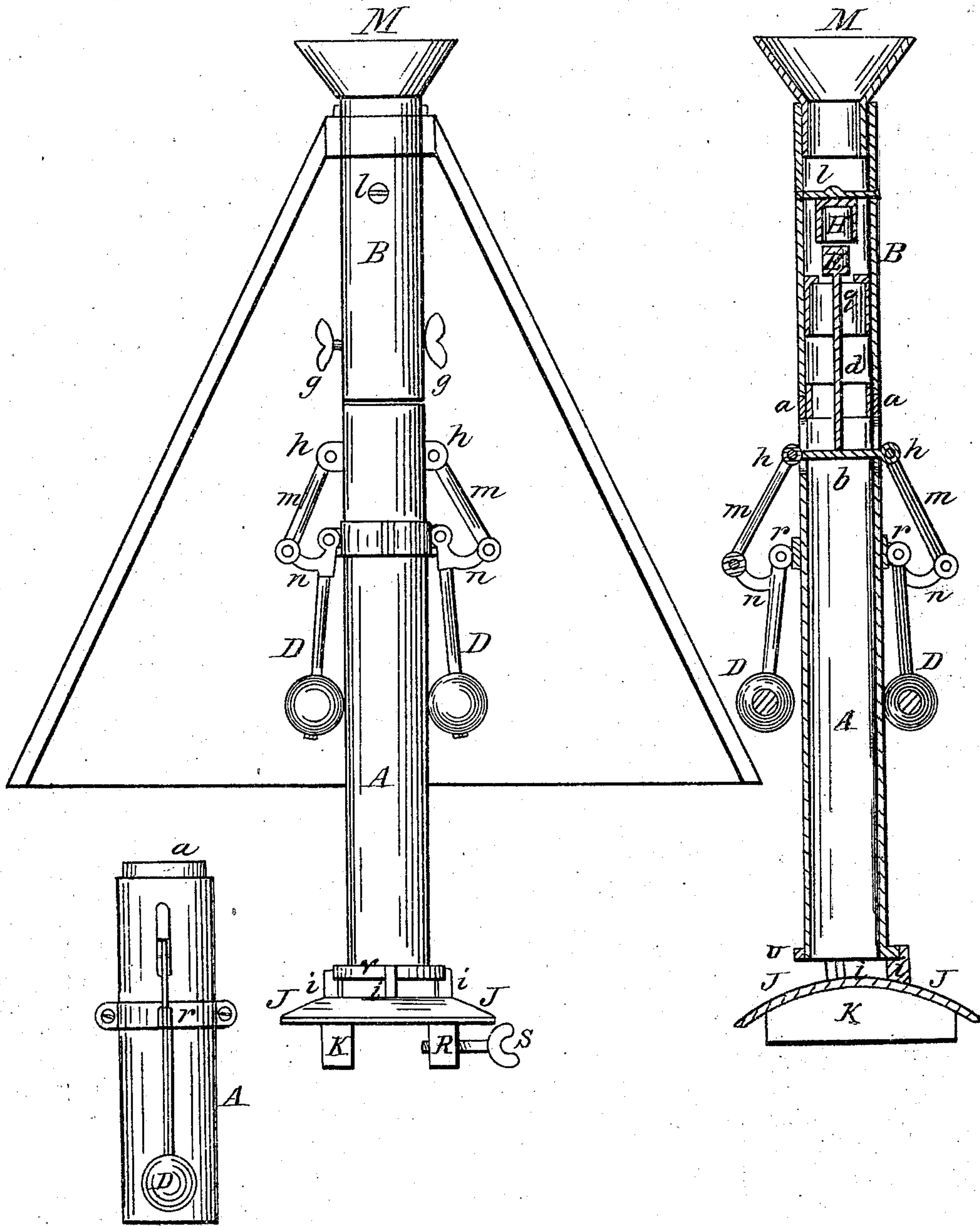


*E W Hitchings*

*Grain Regulator*

*Patented Feb 25/1868*

*No. 74824*



*Witnesses*  
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# United States Patent Office.

E. W. HITCHINGS, OF POTSDAM, NEW YORK.

Letters Patent No. 74,824, dated February 25, 1868.

## IMPROVEMENT IN GRAIN-REGULATORS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, E. W. HITCHINGS, of Potsdam, in the county of St. Lawrence, and State of New York, have invented new and useful Improvements in Grain-Regulators for Grist-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention.

Figure 2 is a central vertical section of the same.

Figure 3 is a detail side view of the governor.

Similar letters of reference indicate corresponding parts.

This invention refers to an attachment to grist-mill stones for the purpose of regulating the supply of grain passing into the stone. It consists of a cylinder carrying a governor, which regulates the opening through which the grain falls, according as the stone is driven fast or slow, together with other devices perfecting the whole, as will be hereinafter more fully set forth.

In the drawings, A is the lower cylinder, which is provided with a shoulder, *a*, fig. 3, for the purpose of fitting a corresponding recess in the cylinder B, which latter, being supported by the braces C, as shown, forms, with the said recess, a bearing for the revolving cylinder A. These braces are shown in red, and support the cylinder B firmly.

The supply of grain is regulated by the piston E, which closes the hole in the feed-collar *q*, as shown, when the stone is at rest, but when it is revolving, the governors D are thrown outward, which causes the piston E to be raised above the feed-collar *q*, thereby opening the orifice of the same, and permitting the grain to be fed into the stone faster. The governors are pivoted to the cylinder at *r*, and, by arms *n* and links *m*, are connected with the cross-bar *b*, from which arises the spindle *d* of the piston E, as shown. *q* is the feed-collar, forming a diaphragm in the cylinder B.

The piston E works more or less within a cylindrical guide, H, suspended centrally in the cylinder B by a cross-bar *b*, as shown. The feed-collar *q* is the head of a short cylinder fitting within the cylinder B, and the set-screws *g* serve to hold the cylinder and permit its adjustment up or down.

The cylinder A is attached to a scattering-disk, J, by a flange, *v*, which fits on to the shoulders of the projections *i*, as shown. Underneath the scattering-disk, and projecting downward from it, are two side-plates, *k*, one of which is fitted with a set-screw, S. These plates are for the purpose of fitting on each side of the bail, (so called,) which suspends the millstone, and the curved part of the disk between the plates conforms to the curve of the bail aforesaid, whereby the parts fit upon the bail and are clamped firmly by the screw S.

In operation, the grain is conducted by a spout into the hopper M, and passes into the stone, being regulated, as to quantity, by the piston E and feed-collar *q*, before described.

This invention is simple, cheap, and durable, and can be attached to the millstones now in use with but slight alteration of the adjacent parts.

The scattering-disk serves to distribute the grain equally upon the stone.

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

1. The combination of the revolving cylinder A and stationary cylinder B, governor D, cross-bar *b*, spindle *d*, piston E, and collar *q*, substantially as set forth, for the purpose specified.

2. In combination with the above, I claim the distributing-plate J, side-pieces K, and screw S, said plate being attached to the revolving cylinder A, substantially as shown and described.

3. The hopper M, substantially as shown and described, in combination with the cylinder B, revolving cylinder A, and piston E, all as set forth.

4. The guide H, or the equivalent thereof, substantially as shown and described, in combination with a piston, E, of a cylindrical grain-regulator, all as and for the purpose set forth.

5. The adjustable feed-collar *q*, substantially as shown and described, in combination with the cylinder B and piston E, all as and for the purpose set forth.

E. W. HITCHINGS.

Witnesses:

A. B. WALKER,

A. N. TUPPER.