(No Model.)

J. B. WHEATLEY.

FEED REGULATOR.

No. 400,720. Patented Apr. 2, 1889.

Fig. 1.

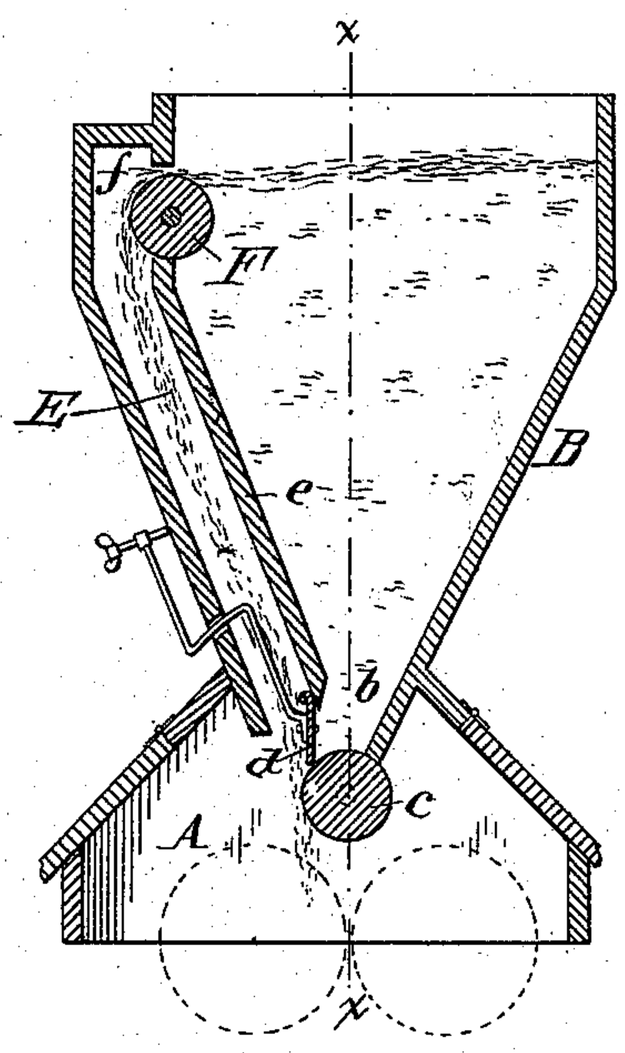


Fig. 2.

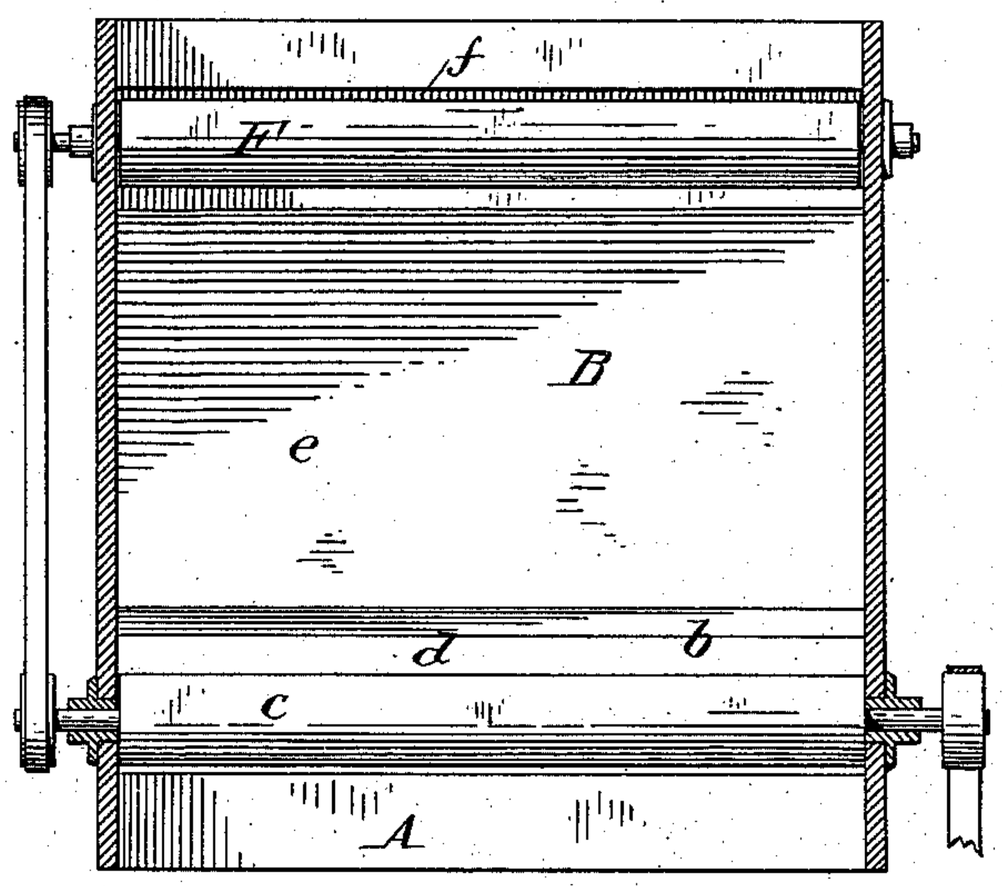
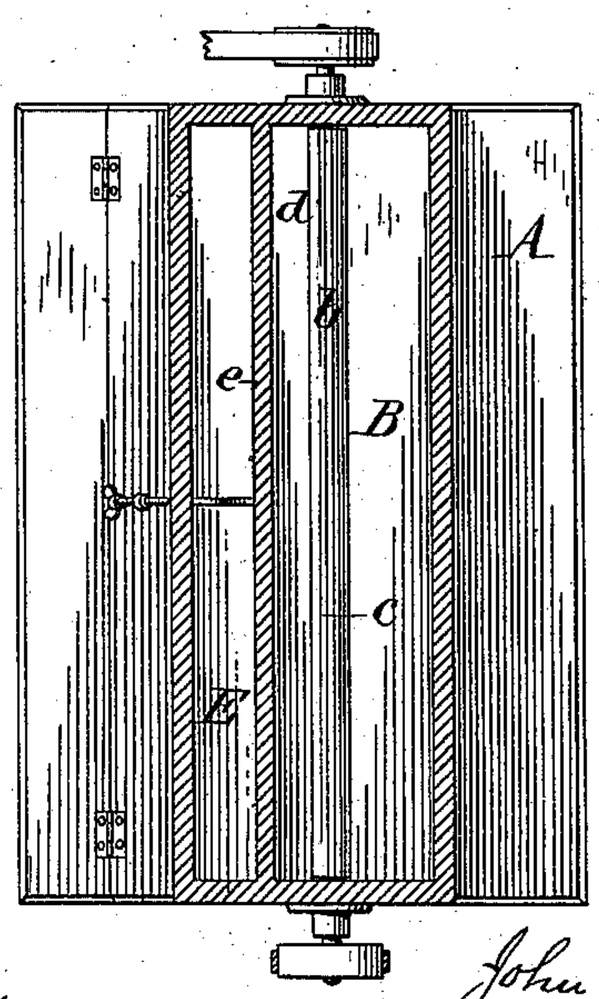


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN B. WHEATLEY, OF DETROIT, MICHIGAN, ASSIGNOR TO AUGUST HEINE, OF SILVER CREEK, NEW YORK.

FEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 400,720, dated April 2, 1889.

Application filed October 20, 1888. Serial No. 288,635. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. WHEATLEY, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Feed-Regulators, of which the following is a specification.

This invention relates more particularly to an improvement in the feed-hoppers of roller or grinding mills, and has for its object to provide means whereby the material in the hopper is prevented from overflowing the hopper or clogging the feed-spout in case the material is fed in excessive quantities to the hopper.

The invention consists of an overflow-passage communicating with the upper end of the feed-hopper and a distributing device whereby the material is allowed to escape from the hopper when it rises to a certain height and is uniformly distributed in the overflow-passage.

In the accompanying drawings, Figure 1 is a vertical cross-section of a feed-hopper provided with my improvement. Fig. 2 is a vertical longitudinal section thereof in line *x x*, Fig. 1. Fig. 3 is a horizontal section of the hopper.

Like letters of reference refer to like parts in the several figures.

A represents the inclosing-casing of a roller-mill, B the feed-hopper surmounting the same, and *b* the discharge-opening at the lower end of the hopper.

c is a feed-roller arranged in the discharge-opening *b*, and *d* an adjustable gate whereby the feed is regulated.

E represents an overflow-passage arranged on one side of the feed-hopper B and extending from the upper portion of the hopper to the lower end thereof. The passage E is preferably formed by a partition, *e*, arranged within the hopper parallel with the adjacent side wall thereof, and the passage communicates with the feed-hopper by means of an opening, *f*, arranged in said partition near the upper end thereof and extending across the entire width of the hopper. The lower end of the overflow-passage E is open and terminates within the casing A at or near the discharge-opening *b* of the hopper.

F represents a distributing device arranged in the overflow-opening *f*, and consisting, preferably, of a revolving roller, as shown. This roller serves to distribute the material as it flows through the opening *f* and delivers the same upon the grinding-roller below in a uniform stream.

Should an excessive quantity of material be accidentally fed into the hopper B by opening the slide in the feed-spout to an undue extent or from some other cause, the material will rise in the hopper until it reaches the overflow-opening *f*, when it will escape through said opening into the passage E and pass from the latter into the casing A upon the grinding-rollers.

By providing a distributing-roller in the overflow-opening *f* the material passing through this opening is delivered to the grinding-rollers in uniform sheets in the same manner as at the discharge-opening *b* of the hopper, thereby effecting an even grinding of the material flowing through the passage E.

The distributing-roller F is driven from the feed-roller *c* by a belt running around pulleys mounted on said rollers or by other means.

I claim as my invention—

1. The combination, with the feed-hopper provided with a discharge-opening, of a partition forming an overflow-passage communicating with the upper end of the feed-hopper and a distributing-roller whereby the material is uniformly discharged from the upper end of the feed-hopper into the overflow-passage, substantially as set forth.

2. The combination, with a feed-hopper provided with a discharge-opening, of a partition arranged within the hopper and forming an overflow-passage on one side of the hopper, an opening arranged near the upper end of said partition between the hopper and overflow-passage, and a distributing device arranged in said opening, substantially as set forth.

Witness my hand this 28th day of September, 1888.

JOHN B. WHEATLEY.

Witnesses:
H. W. ALLEN,
I. D. MERRITT.