(No Model.)

J. W. EDWARDS & C. L. BECKER.

FEED REGULATOR FOR ROLLER MILLS AND PURIFIERS.

No. 367,608. Patented Aug. 2, 1887.

Fig. 1.

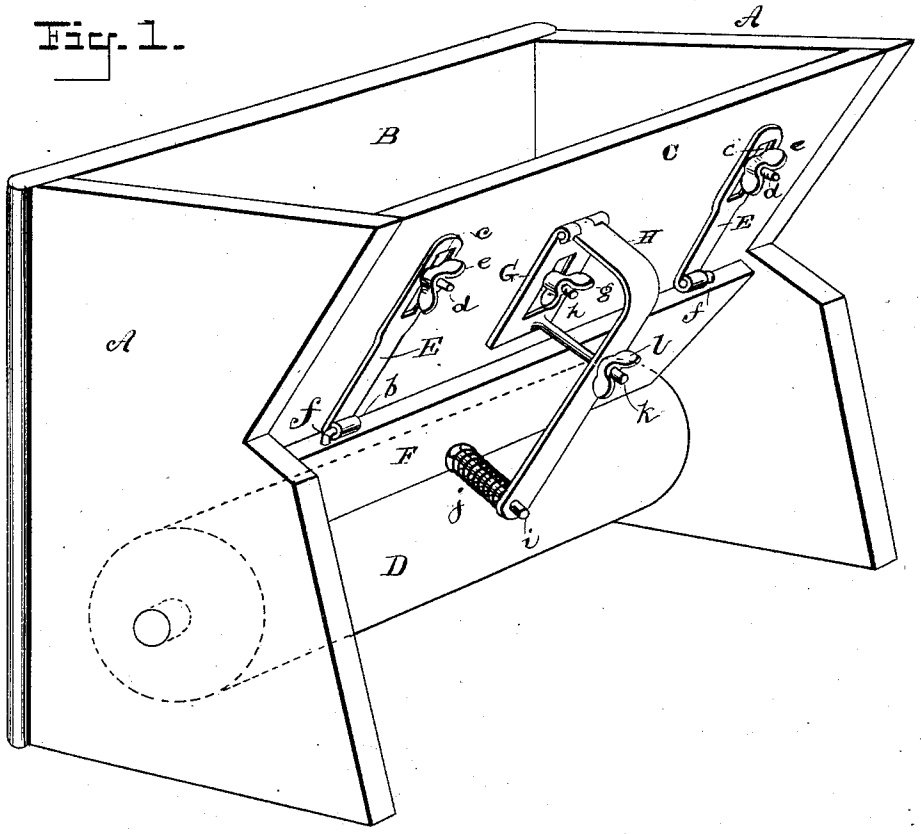
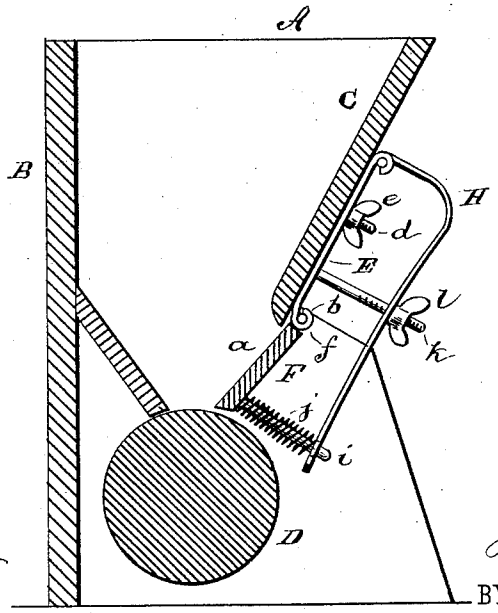


Fig. 2.



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JOHN W. EDWARDS AND CHAUNCEY L. BECKER, OF WATERLOO, NEW YORK.

FEED-REGULATOR FOR ROLLER-MILLS AND PURIFIERS.

SPECIFICATION forming part of Letters Patent No. 367,608, dated August 2, 1887.

Application filed July 26, 1886. Serial No. 209,112. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. EDWARDS and CHAUNCEY L. BECKER, of Waterloo, in the county of Seneca and State of New York, have invented a new and Improved Feed-Regulator for Roller-Mills and Purifiers, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a perspective view of a hopper to which our improvement has been applied, and Fig. 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures of the drawings.

The object of our invention is to provide a simple device for feeding stock to rolls and purifiers.

The hopper A is provided with a vertical back, B, and an inclined front, C, which terminates some distance above the feed-roll D, leaving a space, *a*, between its lower edge and the top of the feed-roll.

To the outer face of the inclined front C are secured adjustable straps E, having eyes *b* on their lower ends, and provided with slots *c* for receiving the screw-threaded studs *d*, projecting from the front of the hopper. Upon the studs *d* are placed wing-nuts *e*, by means of which the straps E are clamped firmly in their places. A valve, F, is arranged to cover the opening *a*, and is provided with pintles *f*, which enter the eyes of the straps E and support the upper edge of the valve F pivotally.

To the middle of the front of the hopper is secured a slotted plate, G, by means of the wing-nut *g*, received on the threaded stud *h*, projecting through the slot of the plate G. To the upper end of the plate G is hinged an angle-arm, H, which extends outwardly, then downwardly parallel with the front of the hopper, the same being, by reason of its capability of springing or yielding, adapted to supplement the action of the spring, presently referred to, to render the action of the valve more sensitive. Its lower end is apertured to receive the rod *i*, which is pivoted to the lower edge of the valve F, and between the extremities of the spring angle-arm H and the valve a spiral spring, *j*, is placed on the rod *i*. The stud *k*, projecting from the plate G, near its lower end, extends through a hole in the arm H, and receives a wing-nut, *l*, by means of which the pressure of the free end of the arm H upon the spring *j* may be varied.

By shifting the straps E and the plate G up or down the space between the valve F and the roller D may be adjusted, and this adjustment, together with the adjustment of the arm H and straps E, permits of arranging the parts so that the pressure of the material in the hopper will act upon the valve F to automatically regulate the amount of material discharged from the hopper by the action of the feed-roll D.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the hopper, of valve-straps pivotally connected with the valve and applied to the hopper, the hinged spring-arm, the plate, also applied to the hopper, the rod connected with the valve and extending through one end of the said spring-arm, the spring applied to said rod, and the screw-threaded stud projecting from the said plate through the said spring-arm and provided with a nut, substantially as and for the purpose set forth.

2. The combination, with the hopper A, provided with the opening *a*, of the valve F, the adjustable straps E, pivotally connected with the valve, the adjustable plate G, the angle-arm H, hinged to the plate G, the rod *i*, connected with the valve F and extending through the end of the arm H, the spiral spring *j*, placed between the extremity of the arm H and the valve F and surrounding the rod *i*, the stud *k*, projecting from the plate G through the arm H, and the adjusting-nut *l*, received on the stud *k*, substantially as shown and described.

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