(No Model.)

2 Sheets—Sheet 1.

J. A. McANULTY.

FEED REGULATOR.

No. 526,254. Patented Sept. 18, 1894.

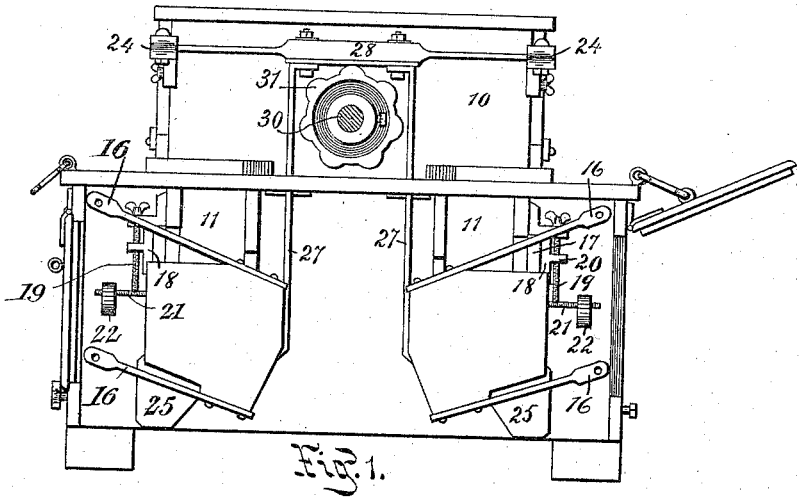

Fig. 1.

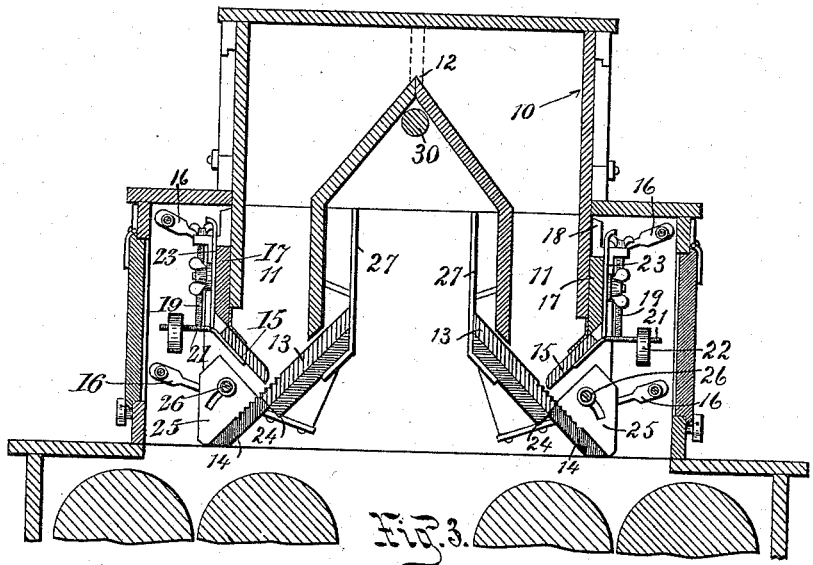

Fig. 3.

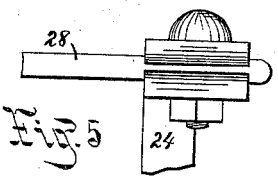

Fig. 5

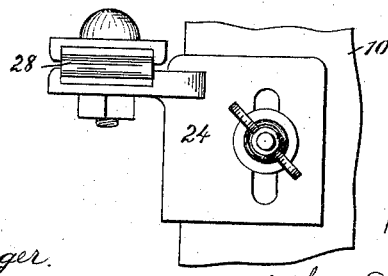

Fig. 6.

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BY

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(No Model.)

2 Sheets—Sheet 2.

J. A. McANULTY.

FEED REGULATOR.

No. 526,254.

Patented Sept. 18, 1894.

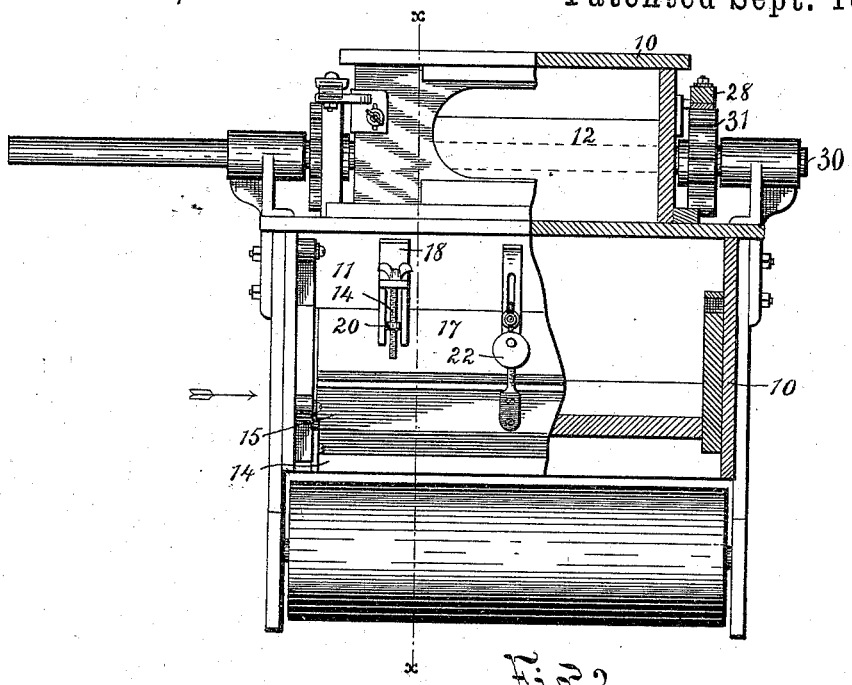

Fig. 2.

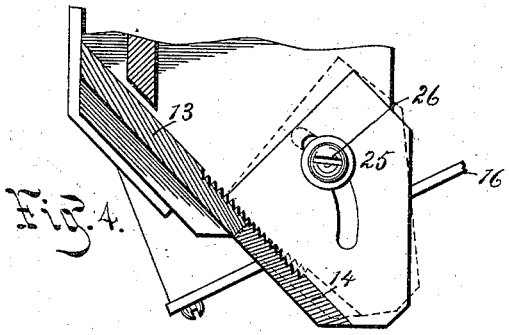

Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN ARMSTRONG McANULTY, OF MANHEIM, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WILLIAM T. NELSON AND J. HAMILTON SMALL, OF YORK, PENNSYLVANIA.

FEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 526,254, dated September 18, 1894.

Application filed October 13, 1893. Serial No. 488,099. (No model.)

To all whom it may concern:

Be it known that I, JOHN ARMSTRONG McANULTY, a citizen of the United States, residing at Manheim, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Feed-Regulators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in feed regulators and is adapted to all kinds of mill machinery in which any material is required to be spread out into a wide sheet and delivered to grinding rolls, scalping machines or to blast or suction machines, and the objects attained are a more uniform delivery of the material free from any intermittent action and to perform such work with the least possible amount of power and speed required and the least vibration of the machine. These objects I attain by means of devices shown in the accompanying drawings forming part of this specification, in which—

Figure 1 is an end elevation of the machine, with one end of the casing removed, as adapted to a double roller mill; Fig. 2, a front view of the machine as it appears having the front walls partially removed and showing the spring bars in section. Fig. 3 is a sectional view on line *x x* of Fig. 2. Fig. 4 is a detail showing the construction of the shoes. Figs. 5 and 6 are detail views of spring bar supports.

Similar figures refer to similar parts throughout the several views.

The casing 10 constitutes the frame work of the machine and may be constructed in any suitable shape to conform to any of the various roller mills, purifiers or other machines with which it can be used. Within the casings are secured hopper legs 11 which extend the full length of the case and where the same kind of material is required to be fed to both pairs of a double roller mill the hopper legs are joined at their upper ends and are provided with a dividing comb 12 for directing to either pair of rolls its proper quantity of the material being fed. The hopper legs are closed at their lower ends by means of shoes formed of the closing pieces 13 and 14, and yielding gates 15. The closing pieces 13 and 14 are suspended in position by means of spring hangers 16. Yielding gates 15 are adjustably suspended to the outer walls of the hopper leg and the holders 18, through an extension of which passes a threaded rod 19, which connects with standard 20 and is attached to the bar 17, the turning of the rod 19 operating to raise and lower the feed gate 15.

The yielding gates 15 are provided with rods 21 threaded to receive weights 22 which are bored slightly out of their centers and threaded to traverse the rods 21 and which being bored out of the centers remain on the rod at any position required to compensate for the amount of material resting against the back of the gate, which in practice is a sufficient amount to reach to both end walls of the shoe. Stop bars 23 are attached to the bars 17 which may be set to limit the movement of the feed gate. The shoes forming the closing parts of the hopper legs may be made plain for free running materials, but are preferably made having the lower part hinged at 24 and provided with end pieces 25 having segment slots through which screws 26 are placed to retain the lower extremity in any desired position.

Vertical or tangential reciprocating motion is imparted to the shoes by means of the straps 27 connected at their upper ends to spring bars 28 which have their outer ends secured to the walls of the machine by means of adjustable fastenings 29. Under the central parts of the bars 28 are mounted, on the shaft 30, segment cams 31 which have their points rounded and made smooth and when put in motion strike upward against the spring bars 28 and impart to the shoes a vertical movement.

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

1. In a feed regulator for roller mills and other machines the combination with casing 10 provided with a hopper 11 of the closing-boards 13 and 14, a connecting bar 27 a flexi-

ble bar or bars 28 and means for fastening and agitating said bar or bars, substantially as described.

2. A casing containing hopper legs and having closing shoes flexibly suspended therein by means of forwardly inclined spring bars 16, and upwardly inclined connecting bars 27, and the flexible cross bars 28, adjustably attached to the casing, as described.

3. In a feed regulator for roller mills and other machines the combination with the casing 10 provided with the hopper 11 of the closing-boards 13 and 14 the connecting bars 27 the flexible bar 28 means for fastening the said bar the inclining spring hangers 16 means for vibrating or agitating said hangers and means for adjusting the closing-boards 13, 14 and 15 substantially as described.

4. In a feed regulator, the combination with a shoe composed of the closing boards 13 and 14, and end boards having springs 16 attached thereto and to the casing, the connecting bars 27, the spring bars 28, and adjustable fastenings 29, as described.

5. The combination with a casing and a revolving shaft carrying segment cams, the shoes flexibly supported within the case by spring bars 16, attached to the casing and bars 27 connecting with the spring bars 28, adjustably attached to the casing, as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ARMSTRONG McANULTY.

Witnesses:
FRANK E. KEIFFER,
AMOS G. HAMAKER.