

(No Model.)

J. BUSCH.

FEED MECHANISM FOR ROLLER MILLS.

No. 306,673.

Patented Oct. 14, 1884.

Fig. 1.

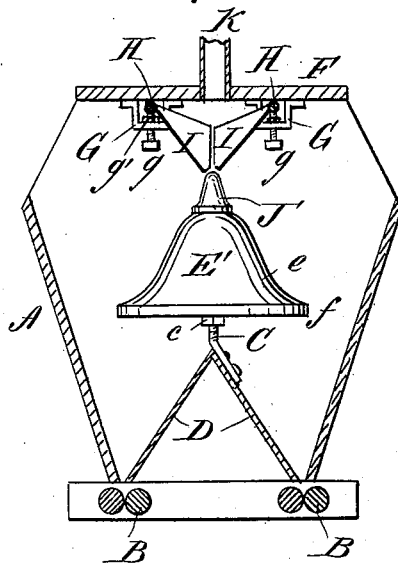


Fig. 2.

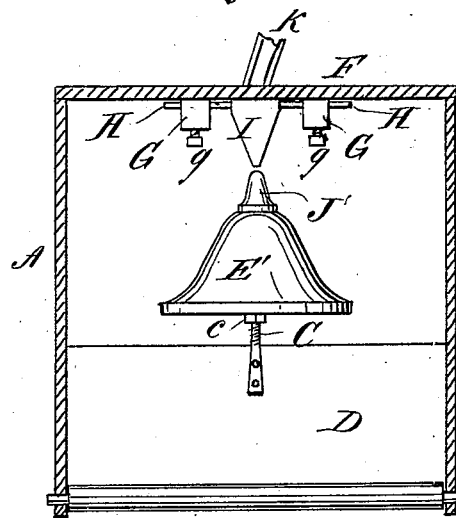


Fig. 3.

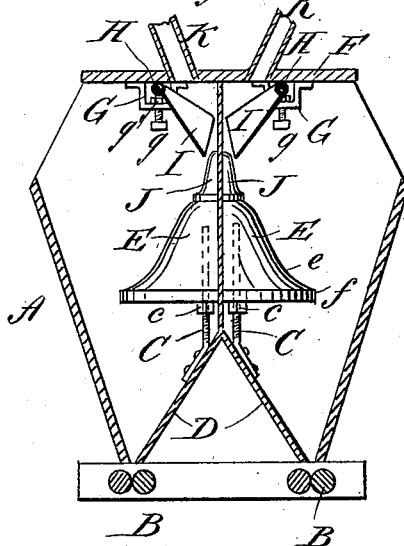
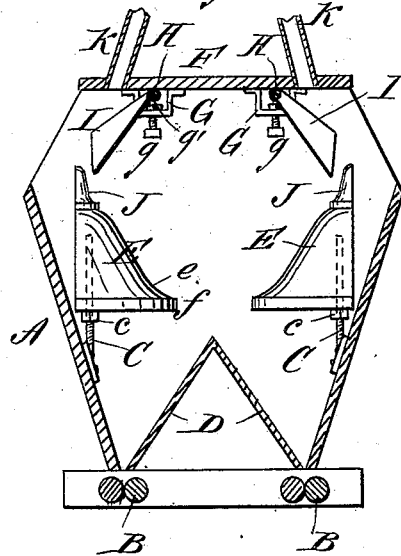


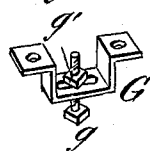
Fig. 4.



WITNESSES:

Donn Twitchell.  
L. Sedgwick

Fig. 5.



INVENTOR:

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# UNITED STATES PATENT OFFICE.

JULIUS BUSCH, OF MARINE, ILLINOIS, ASSIGNOR TO HIMSELF AND JOHN STEVENSON, OF SAME PLACE.

## FEED MECHANISM FOR ROLLER-MILLS.

SPECIFICATION forming part of Letters Patent No. 306,673, dated October 14, 1884.

Application filed May 9, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS BUSCH, of Marine, in the county of Madison and State of Illinois, have invented a new and Improved Feed Mechanism for Roller-Mills, of which the following is a full, clear, and exact description.

The object of this invention is to provide a feeding device for roller-mills which will deliver the material evenly to the rolls.

The invention consists in combinations of parts and details of construction, all as will be hereinafter more fully set forth and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a cross-section of a portion of a double-roller mill and a side view of my invention as arranged for feeding one kind of material to both sets of rolls. Fig. 2 is a section at a right angle to Fig. 1, showing a front view of my invention. Fig. 3 shows my invention as applied to a double-roller mill for feeding a different grade of material to each set of rolls. Fig. 4 shows a modified arrangement of the device, and Fig. 5 is a detail of the supporting-bracket for the feed-spout.

A indicates the hopper, and B B the grinding-rolls, of a double-roller mill.

D D are cant-boards for directing the material to the rolls.

Adjustably supported within the hopper from the cant-boards or the sides of the hopper by a threaded rod, C, having an adjusting-nut, *c*, is a half-bell-shaped distributor, E, as shown in Figs. 3 and 4; or, as shown in Figs. 1 and 2, two of these half-bell-shaped distributors may be combined to form a bell-shaped distributor, E'.

To the rod H is fixed the inclined spout I, the lower end of said spout being disposed directly over or nearly over the apex of the distributor to deliver the material upon the latter, while the rod H itself is supported within slotted brackets G, fastened to the under side of a board, F, or to the top board of the hopper, said rod being held firmly against the board, to prevent the turning of said rod, by the action of the screws *g* and their nuts *g'*, resting upon the bottoms of said brackets, the angle of adjustment of the spout to deliver the

material higher or lower having been previously effected. The slots in the bottoms of the brackets permit of the lateral adjustment of the rod H and its attached spout I with relation to the distributor to admit of the outer delivering end of the spout being adjusted farther from or nearer to the distributor, according as said end of spout is raised or lowered. A smaller distributor, J, similar in form to the main distributor E, is adapted, by the insertion through its bottom flange, it may be, of screws entering the distributor E, to be placed upon the apex of the main distributor E when fine soft material is being fed to the rolls, two of which distributors J may be united, as shown at J, Figs. 1 and 2, for use with the distributor E'. The distributor E has its face, as has also the face of the distributor E', provided with a concavity, *e*, and with a flaring lip, *f*, to effect the even spreading and delivery of the middlings upon the cant-boards or sides of the hopper.

K is the delivery spout to the hopper for the material to be fed to the rolls.

The distributor E or E' may be adjusted higher or lower relatively to the cant-boards or sides of the hopper by the nut *c*.

The spout I, for delivering the material upon the distributor, may be adjusted to deliver the material at any point upon the distributor by means of the rod H, the set-screws *g*, and the slotted brackets G.

For coarse sharp middlings the distributor E only will be needed. The middlings from the spout I, striking upon the curved face of the distributor, will be spread in a thin even stream, which, falling upon the side of the hopper or the cant-board, will be delivered in a thin even stream to the rolls. For fine soft middlings the smaller distributor J or J' may be placed upon the apex of the distributor E or E', and the spout I adjusted to deliver the material at or near the apex of the said distributor J or J'.

One of the distributors, E, may be used alone, or they may be combined, for single or double roller mills, in various ways, as shown in the drawings.

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

1. The combination, with the distributor and

hopper, of the spout, the rod or axis, the brackets, binding or holding screws, and nuts, substantially as and for the purpose set forth.

2. The combination of the spout, the rod  
5 or axis, the brackets, the spout binding or holding screws and nuts, the distributor, the distributor-adjusting screw, and the hopper having an inclined bottom, substantially as and for the purpose set forth.

10 3. The distributor having the superposed distributor, in combination with the spout and hopper, substantially as set forth.

4. The combination of the spout, the rod or axis, the brackets, the spout binding or hold-

ing screws and nuts, the distributor having 15 the superposed distributor, adjusting screw, and the hopper having an inclined bottom, substantially as and for the purpose specified.

5. The combination, with the distributor and hopper, of the spout, the rod or axis, the brackets having slots in their bottoms, the binding 20 or holding screws, and the nuts, substantially as and for the purpose set forth.

JULIUS BUSCH.

Witnesses:

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