(No Model.)

M. B. TITLOW.

AUTOMATIC FEEDING DEVICE FOR ROLLER MILLS.

No. 306,365. Patented Oct. 7, 1884.

FIG. 1.

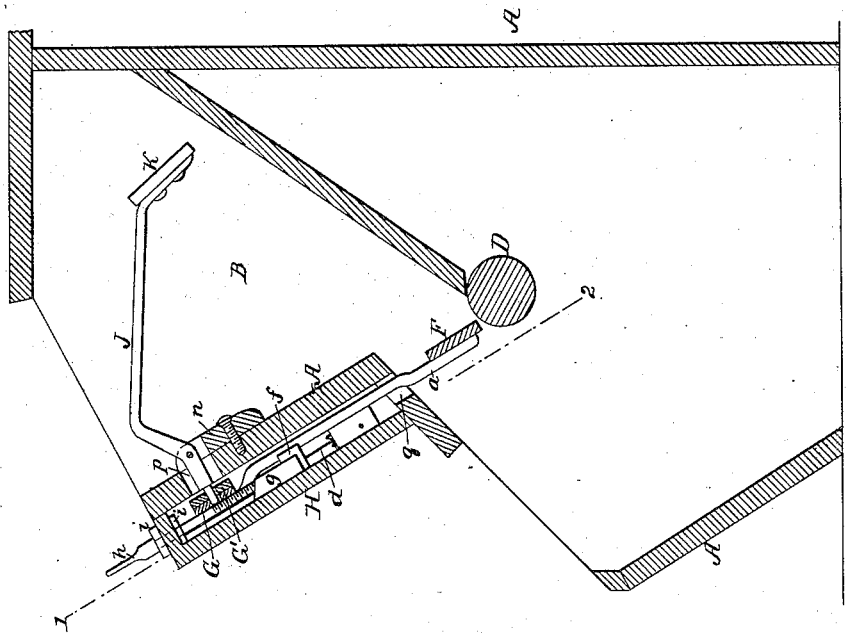
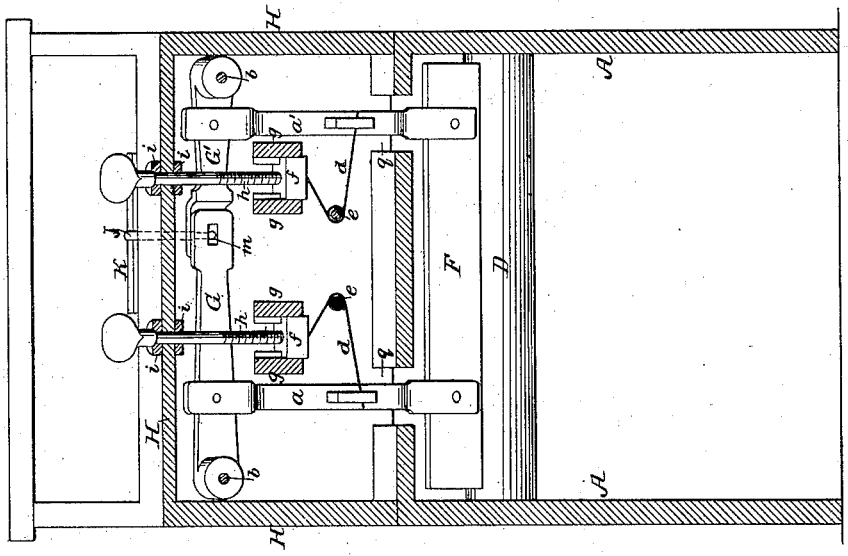


FIG. 2.



Witnesses:—
John M. Clayton.
James T. Johns

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by his Attorneys.
Howson and Sons

UNITED STATES PATENT OFFICE.

MONROE B. TITLOW, OF TREICHLER, ASSIGNOR OF ONE-HALF TO AUGUSTUS WOLF AND DAVID L. HAMAKER, BOTH OF ALLENTOWN, PA.

AUTOMATIC FEEDING DEVICE FOR ROLLER-MILLS.

SPECIFICATION forming part of Letters Patent No. 306,365, dated October 7, 1884.

Application filed June 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, MONROE B. TITLOW, a citizen of the United States, and residing in Treichler, Northampton county, State of Pennsylvania, have invented certain Improvements in Automatic Feeding Devices for Roller-Mills, of which the following is a specification.

The object of my invention is to construct an automatic feed-regulator of such a character that it can be readily applied to the hoppers of roller-mills as now constructed, and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse section of sufficient of a roller-mill hopper and casing to illustrate my invention; and Fig. 2, a longitudinal section on the line 1 2, Fig. 1, some of the parts being shown in elevation.

A is the casing of the mill; B, the hopper; D, the usual feed-roll, and F the valve, which, in conjunction with the roll D, serves to regulate the feed of the grain from the hopper to the rollers in the casing A. This valve F is suspended by rods *a a'* from levers G G', hung by pins *b* to a box, H, secured to the outside of the hopper-casing, the rods being acted upon by springs *d*, hung to pins *e* on the box, and the tension of these springs being regulated by the adjustment of nuts *f*, guided by lugs *g* on the box, and adapted to the threaded portions of the screw-stems *h*, which have collars *i*, whereby they are vertically confined to bearings in the top of the box, so that by turning the stems the nuts will be raised or lowered. Each lever has formed in it a slot, *m*, and to these slots is adapted the short arm of a lever, J, which is pivoted to a block, *n*, inside of the hopper, said short arm of the lever projecting through an opening, *p*, in the hopper-casing, and the long arm of the lever extending into the hopper, and being furnished with a float, K. This float rests upon the mass of grain in the hopper, and as the level of the grain falls the levers G G' will be operated so as to raise the valve F to an extent proportionate to the decreased pressure of grain thereupon, a uniform feed being thus automatically maintained.

It will be observed, on reference to Fig. 2, that the lever G' is shorter than the lever G, so that the lever J may be placed at one side of the center of the hopper, and thus not interfere with the usual automatic shut-off mechanism with which the valves of most roller-mills are provided, and which is arranged centrally in the hopper. The rods *a a'* are so connected to the levers in respect to the fulcrums of the latter, however, that the lift of the valve will be uniform.

It will be observed that all of the regulating devices, with the exception of the lever J, are carried by the box H, which can be readily secured in position on the casing A by an ordinary mill-hand without the aid of a carpenter, the only cutting of the casing which is necessary being the formation of the opening *p* for the lever J and the openings *q* for the rods *a a'*.

The valve F is not radially in line with the center of the feed-roll D, but is a little on one side of the center of the roll, as shown in Fig. 1, this location enabling me to feed coarse grain with greater facility than when the valve is directly in line radially with the center of the feed-roll.

I claim as my invention—

1. The combination of the hopper, feed-roll, and valve of a roller-mill, with a lever, J, extending into the hopper and carrying a float, K, a pair of levers, G G', engaging with the short arm of the lever J, and rods *a a'*, whereby said levers G G' are connected to the valve, as set forth.

2. The combination of the hopper, feed-roll, and valve, the lever J, having float K, the levers G G', connecting-rods *a a'*, springs *d d*, nuts *f*, and screw-stems *h*, as specified.

3. The combination of the hopper, feed-roll, and valve, with the lever J, having float K, and the levers G G', connected to the valve,

and of different lengths, as described, whereby the lever J is arranged at one side of the center of the hopper, as set forth.

4. The combination of the casing A, hopper, feed-roll, valve F, and lever J, having float K, with regulating devices connected to the valve F and lever J, and a box, H, detachably secured to the outside of the casing A, as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MONROE B. TITLOW.

Witnesses:
D. L. HAMAKER,
HENRY T. KLECKNER.