

(No Model.)

2 Sheets—Sheet 1.

H. R. SHAW.
FEED FOR ROLLER MILLS.

No. 483,983.

Patented Oct. 4, 1892.

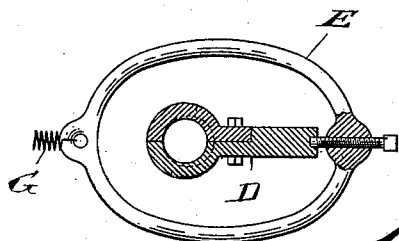


Fig. 2

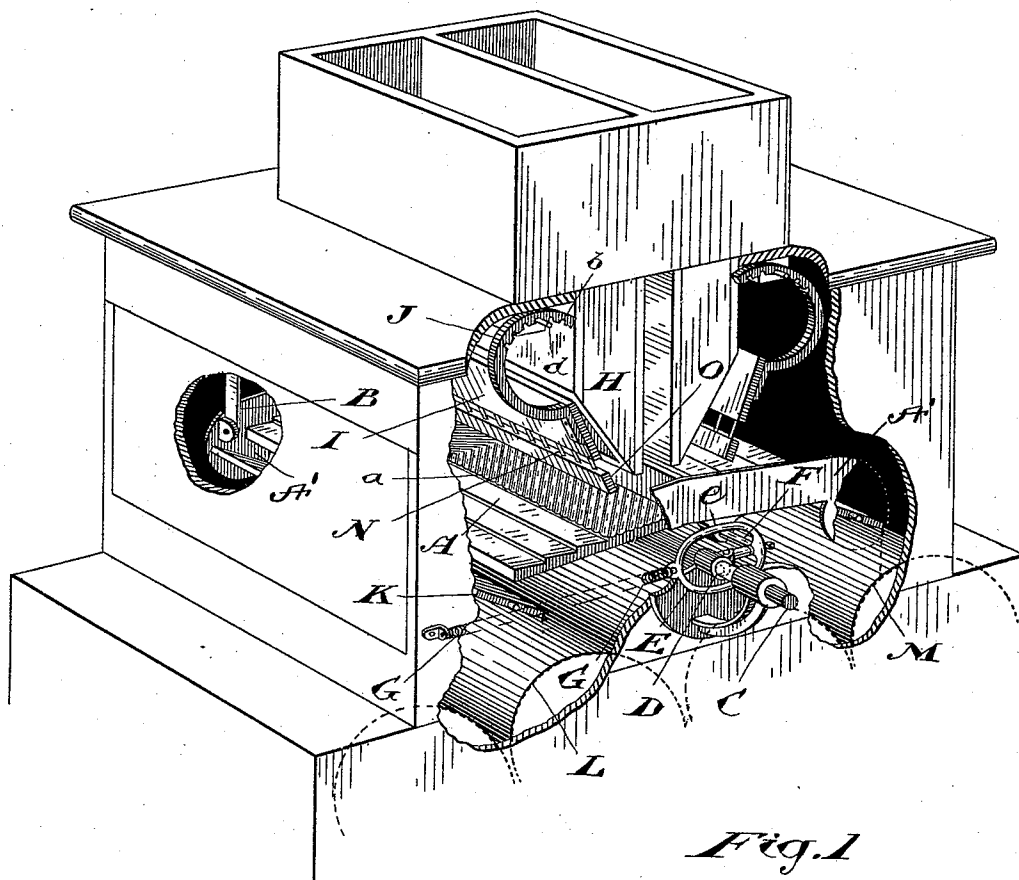


Fig. 1

Witnesses

J. Edw. Maybee
W. G. McMillan

Inventor

Henry R. Shaw
by Donald G. Ridout & Co.
attys.

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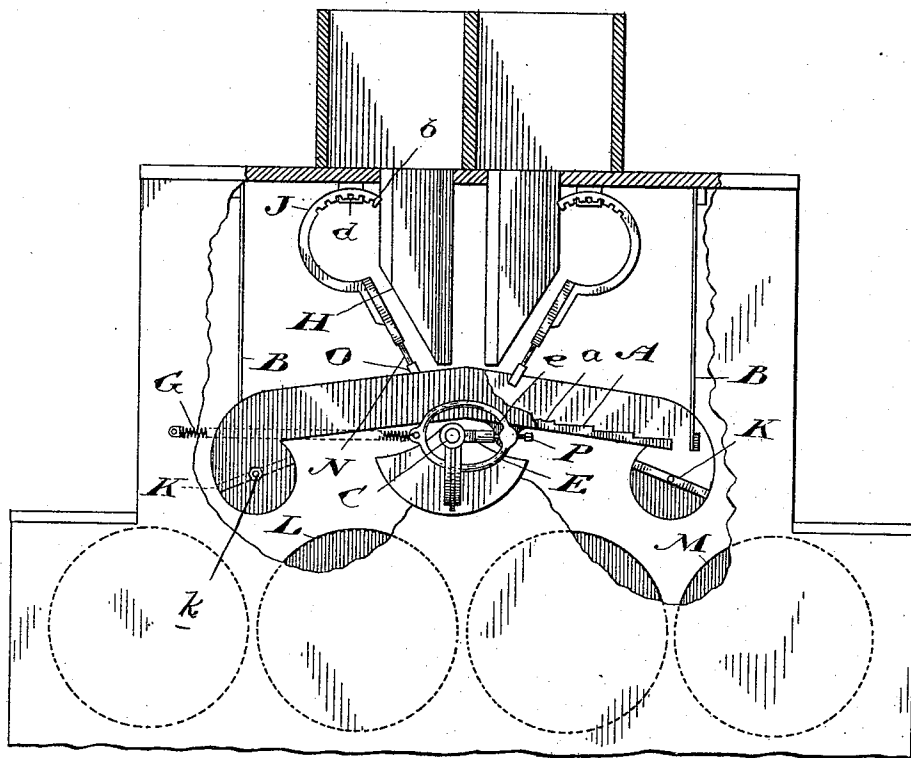


Fig. 3

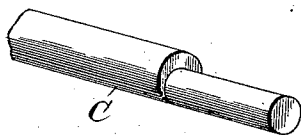


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

HENRY R. SHAW, OF ST. CATHARINES, ONTARIO, CANADA, ASSIGNOR OF TWO-THIRDS TO EMERSON WRIGHT AND JAMES CUNNINGHAM, OF SAME PLACE.

FEED FOR ROLLER-MILLS.

SPECIFICATION forming part of Letters Patent No. 483,983, dated October 4, 1892.

Application filed April 4, 1892. Serial No. 427,719. (No model.)

To all whom it may concern:

Be it known that I, HENRY RICHARD SHAW, of the city of St. Catharines, in the county of Lincoln, in the Province of Ontario, Canada, have invented a certain new and Improved Feed for Roller-Mills, of which the following is a specification.

The object of the invention is to provide simple means for distributing the stock upon the shoe, and, secondly, to provide means to direct the stock onto either the inner or outer rollers; and it consists, essentially, of a shoe suspended on hangers and deriving a vibratory motion from a revolving eccentric, as hereinafter more particularly described and then definitely claimed.

In the accompanying drawings, Figure 1 is a perspective view of my improved feed for roller-mills partially in section to expose its interior construction. Fig. 2 is a detail showing the eccentric for imparting the vibratory movement. Fig. 3 is an elevation partially in section; and Fig. 4 is a detail of my eccentric shaft.

In the drawings, A represents a shoe having the ends A' and brackets e, and is supported by flexible hangers B.

C is a shaft suitably journaled in the frame of the machine and deriving motion from the main shaft of the roller-mill.

The shoe is given a vibratory movement by means of an eccentric, which is made by cutting away part of the shaft C, as shown in Fig. 4. Around this eccentric portion of the shaft is fitted the eccentric-strap D, which derives a vibratory movement from the eccentric shaft, in a manner well understood.

E is a ring, which is connected at one end to the shoe-bracket e by the spindle F. The other end of this ring is connected to the frame of the machine by the spring G. The ring E is connected to the eccentric-strap D by means of the screw P. The end of this screw loosely fits in the end of the eccentric-strap E, and of course the position of said ring E may be readily changed by adjusting said screw P, which will change the position of the shoe in relation to the eccentric. The spring G is necessary to keep the end of

screw P in contact with the eccentric-strap D. The eccentric moves the ring in one direction, while the spring gives it its return movement. The above parts are of course provided on each end of the shoe G, but as the parts on one end are merely duplicates of those on the other it is not necessary to refer to both of them specifically.

I is a gate provided with a circular-hanger J at each end. These hangers have teeth b made on their inner circumference, between which teeth the pivot-pins d fit.

It will be readily observed that owing to the shape of the hangers J the gate I will hang heavier against the stock when the teeth b, near the end of the hanger, fit over the pivot-pin d than when the teeth farther from the end fit over them. In this way it will be noticed that the gate I may readily be adjusted to suit either light or heavy stock. The object of making these hangers curved instead of straight is to keep the bar O substantially the same distance from the shoe A when changed from one tooth to another.

A series of pins N project from the gate I, and on these pins I fit a bar O, which may be brought closer to or carried farther from the top of the shoe A, according to the nature of the stock being fed into the rolls, the bars being held on the pins simply by friction. The object of this bar is to still further regulate the feed. By adjusting it up or down greater or less freedom of feed may be given, as may be necessary to suit the stock being operated on.

In order to illustrate the application of the pivoted boards K, I set one board to throw the stock upon the inner roll L and the outer board to direct the stock upon the outer roll M, as shown by dotted lines in Fig. 1. Both are capable of being adjusted to throw the stock upon whichever roll the miller may desire, and as they can be adjusted instantaneously the desired change may be readily effected. The boards K are held as adjusted by jam-nuts k on the ends of their pivots, as shown in Fig. 3.

What I claim as my invention is—

1. In a roller-mill feed, a gate provided

with curved hangers having teeth formed on their inner circumference to fit over pivot-pins, substantially as and for the purpose specified.

5 2. In a roller-mill feed, a gate suspended on curved hangers and provided with a bar adjustably held to the bottom of the gate upon projecting pins, substantially as shown and described.

10 3. In a roller-mill feed, a series of grinding-rollers, in combination with a shoe provided with the pivoted boards K, arranged to feed

material to different rollers, substantially as and for the purpose specified.

4. The ring E, connected to the shoe and 15 provided with a set-screw on the point of which the eccentric-strap is pivoted, substantially as and for the purpose specified.

St. Catharines, January 16, 1892.

HENRY R. SHAW.

In presence of—

W. H. MCCLIVE,
G. B. BURGON.