

(No Model.)

H. HAIRE.

FEED MECHANISM FOR GRINDING MILLS.

No. 348,205.

Patented Aug. 31, 1886.

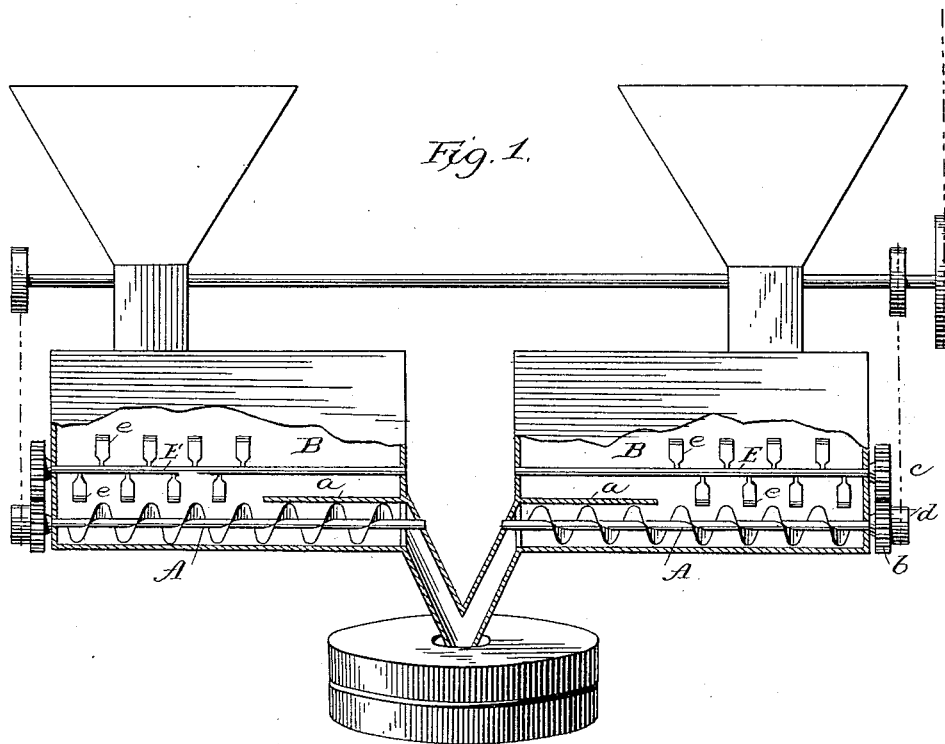


Fig. 2.



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FEED MECHANISM FOR GRINDING-MILLS.

SPECIFICATION forming part of Letters Patent No. 348,205, dated August 31, 1886.

Application filed December 3, 1885. Serial No. 184,552. (No model.)

To all whom it may concern:

Be it known that I, HERBERT HAIRE, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Feed Mechanism for Grinding-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement upon the feed-regulator for grinding-mills shown in Letters Patent of the United States granted on the 13th day of June, 1882, and numbered 259,490. In that patent the feed-screw is shown as working in the bottom of a chamber or garner, with one part covered and the other open to the chamber or garner, the cover, fitted closely to the screw, preventing the excess of the goods from passing to the discharge-orifice. The apparatus shown in said patent works satisfactorily in certain kinds of goods—such as ordinary calcined plaster not ground fine; but if the plaster be ground very finely, or if the mechanism be used for fine dry paints, or for goods in a damp condition or of a damp nature, such goods will pack in the chamber or garner and will allow the screw to bore quite through the goods without disturbing the mass above it. The action of the screw in connection with its case is such that an ordinary stirrer has no effect thereon; but I have found that a set of revolving arms set upon a shaft and arranged close to the screw, so as to pull down the goods and pack them against the screw, will obviate the difficulty and cause the screw to feed uniformly under all circumstances.

My invention is illustrated in the accompanying drawings, in which Figure 1 represents the feed mechanism in side elevation, with the supplemental feed or loosening and packing

arms, the casing being broken away to show the interior. Fig. 2 represents an end view of the shaft and the loosening and packing arms.

In the drawings, A represents the feeding-screw in the bottom of the garner or box B, and covered a part of its length by the tube a. The operating-gearing is shown at b c d. Just above the screw and parallel therewith is a revolving shaft, E, having arms e set at right angles to the shaft. I prefer to make these arms in the form of paddles, of metal, with the shanks threaded to screw into the shaft and to set them spirally about the shaft. The arms are bent, some forward and others backward, as shown in Fig. 2. Those bent forward act to pull down the goods, and those bent backward pack them upon the screw. It will be observed that the arms must move with the revolving shaft very closely to the screw. At any considerable distance therefrom they are without material effect. The arms are set on that part of the shaft opposite the uncovered portion of the screw.

I claim—

In combination with the garner or chamber, a feed-screw and its case partially covering said screw located in the said garner or chamber, and a revolving shaft arranged above the said screw and having bent arms set thereon adapted to pull down the goods and to pack them upon the screw, substantially as described.

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

HERBERT HAIRE.

Witnesses:

C. S. STURTEVANT,
I. E. MIDDLETON.