

(No Model.)

A. MECHWART.

ROLLER MILL.

No. 267,557.

Patented Nov. 14, 1882.

Fig. 1.

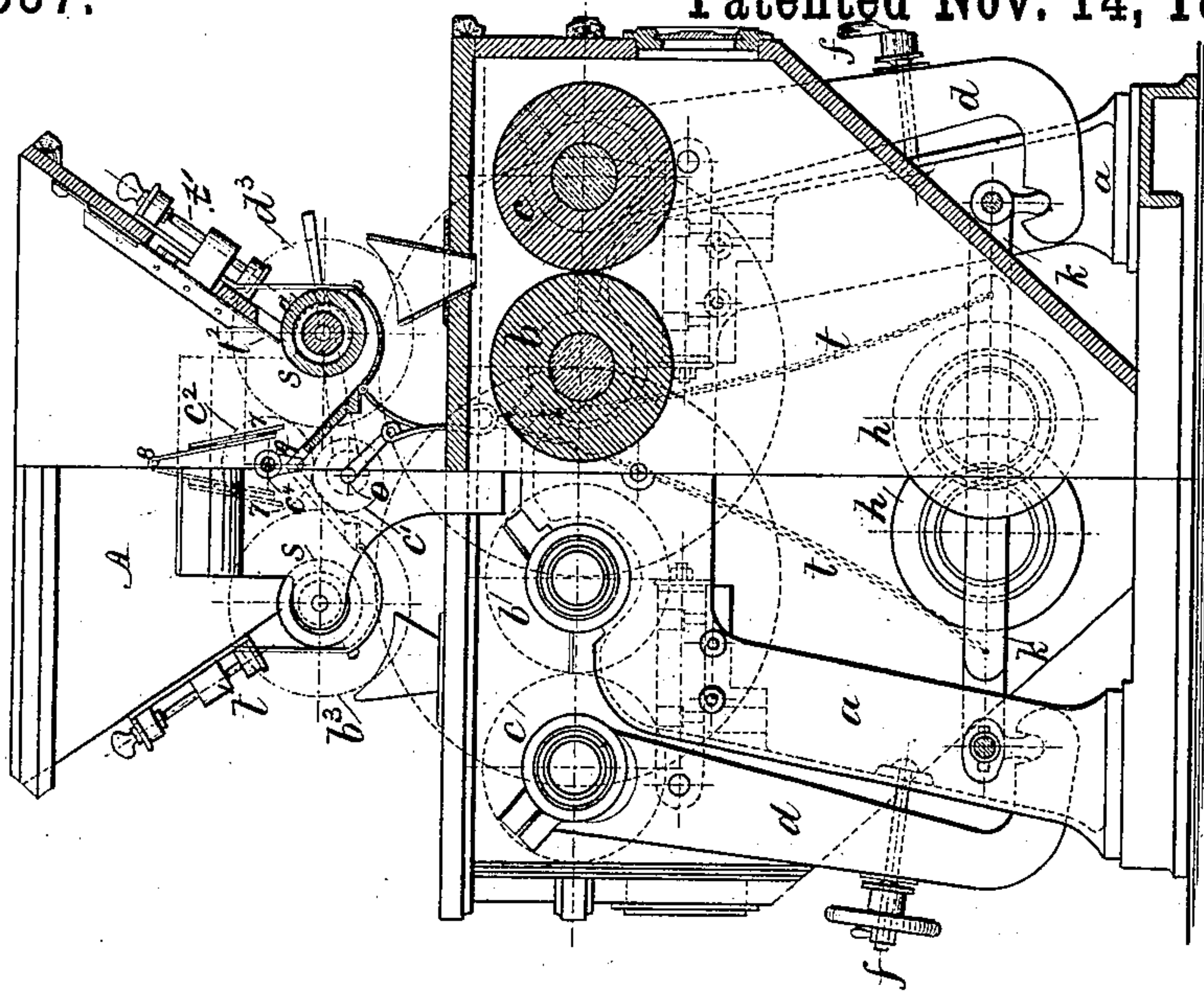
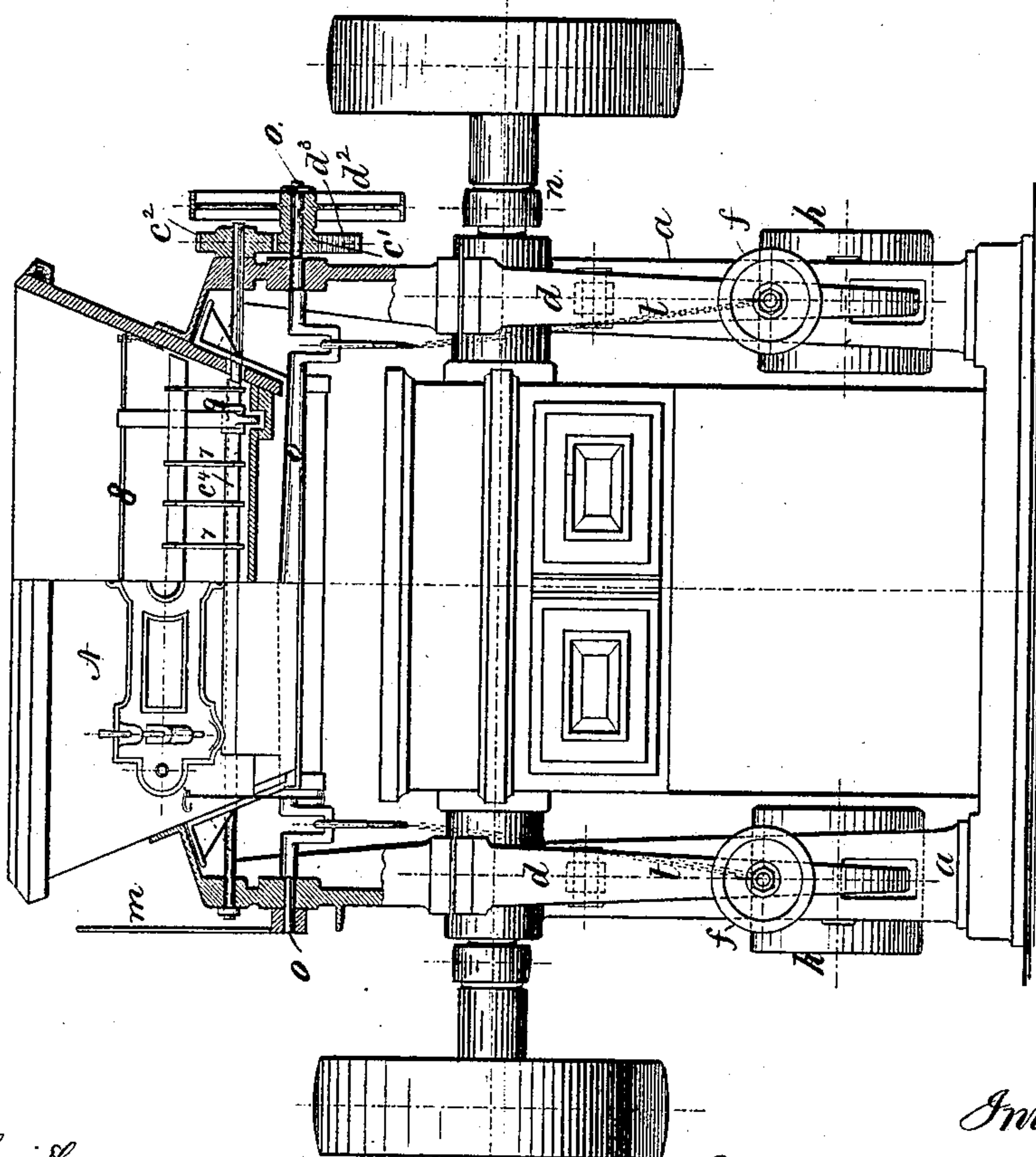


Fig. 2.



Witnesses

Charles Smith

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UNITED STATES PATENT OFFICE.

ANDREAS MECHWART, OF BUDA-PESTH, AUSTRIA-HUNGARY.

ROLLER-MILL.

SPECIFICATION forming part of Letters Patent No. 267,557, dated November 14, 1882.

Application filed March 27, 1882. (No model.) Patented in Austria July 5, 1881, No. 24,544; in Hungary July 5, 1881, No. 23,866, and in Denmark January 24, 1882, No. 2,476.

To all whom it may concern:

Be it known that I, ANDREAS MECHWART, of Buda-Pesth, Austria-Hungary, have invented an Improvement in Roller-Mills, of which the following is a specification.

Letters Patent have been granted to me for this invention in the following countries, viz: Austria, July 5, 1881, No. 24,544; Hungary, July 5, 1881, No. 23,866; Denmark, January 24, 1882, No. 2,476.

This invention relates to the roller-mill containing two pairs of rollers, side by side, as in my Patent No. 251,124. I make use of an eccentric shaft and gearing, in combination with the pairs of rollers, levers, and weights, and connections whereby the roller-feeds are stopped simultaneously with the separation of the rollers; and I also employ a vibrator in the hopper, that prevents the material becoming clogged.

In the drawings, Figure 1 is an elevation endwise of the rollers, partially in section, and Fig. 2 is a side view, with the hopper and side frames partially in section.

The pairs of rollers $b\ c\ b\ c$, the frame a , the levers $d\ d$, supporting at their upper ends the rollers $c\ c$, the adjusting-screws f , the levers $k\ k$, and weights $h\ h$ are similar to those shown in my said Patent No. 251,124.

There are adjusting-screws t' outside the hopper A , the nuts of which pass through slots in the hopper, and are connected with the gates or slides t^2 inside the hopper, so that such gates or slides can be adjusted for giving more or less space between the lower edge of each gate and the roller s , and thereby regulating the feed. Two feed-rollers are shown with a gate to each, so that the respective pairs of rollers $b\ c$ are properly supplied.

The bottom of the hopper is made as a curved shoe at each side extending below the respective rollers. The shaft o , with cranks and chains t to the ends of the respective levers k , is similar to the device shown in my said patent for raising the levers k and separating the rollers by a motion given to the handle m at the end of the crank-shaft o . I avail of the same movement for stopping the roller-feed when the pairs of crushing-rollers are sepa-

rated, and for bringing the same into action when the crushing-rollers are brought together. This is accomplished by means of a toothed wheel, c' , and belt-wheel d^2 upon the eccentric end of the shaft o . This wheel c' gears into the wheel b^3 on the shaft of one of the feed-rollers, and also into the wheel c^2 at the end of a shaft that passes across the lower part of the hopper, near the middle thereof. The wheel c^2 gears into the wheel d^3 on the shaft of the other feed-roller, s , so that when b^3 , c' , c^2 , and d^3 are in gear the parts will all be revolved by the belt from n leading to the belt-wheel d^2 ; but when the shaft o is turned to raise the weighted levers k the eccentric end of said shaft o will move the wheel c' out of gear with b^3 and c^2 and the roller-feeds will stop. The reverse movement connects the gear c' with the gears c^2 and b^3 and brings the roller-feeds into action, and at the same time the weighted levers are lowered and they apply pressure to the pairs of guiding-rollers.

Within the hopper A there are agitators 7 , formed of vertical fingers or cross-bars, that are hung by straps that extend to the cross-shaft 8 , and the cams 9 upon the revolving shaft c^4 come into contact with these agitators and give motion to the same, so as to prevent the material in the hopper becoming clogged. When the gear c' is separated from the gear c^2 , as aforesaid, the shaft c^4 ceases to revolve and the agitators are not moved.

This improvement may also be used where there is only one pair of rollers and one roller-feed, the parts remaining unchanged, except to dispense with one pair of rollers and their levers and one of the feed-rollers on the hopper.

I claim as my invention—

1. The combination, with the pair of rollers in a roller-mill and the levers and weights, of a feeding-hopper and feeding-roller, a gear-wheel for the same, a crank-shaft, o , and chains to the weighted levers for relieving the crushing-rollers, an eccentric on the crank-shaft o , and a gear-wheel on the same for driving the feed-roller gear, whereby the roller-feed is stopped when the crushing-rollers are

separated, and the reverse, substantially as set forth.

5 2. The combination, in a hopper having a roller-feed, of the cross-shaft 8, agitators 7, suspended from said cross-shaft, the revolving shaft e^4 , and cams 9 within the hopper and acting against the lower part of the agitators 7, substantially as set forth.

Signed by me this 1st day of March, A. D. 1882.

ANDREAS MECHWART.

Witnesses:

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P. ZSIGMONDZ.