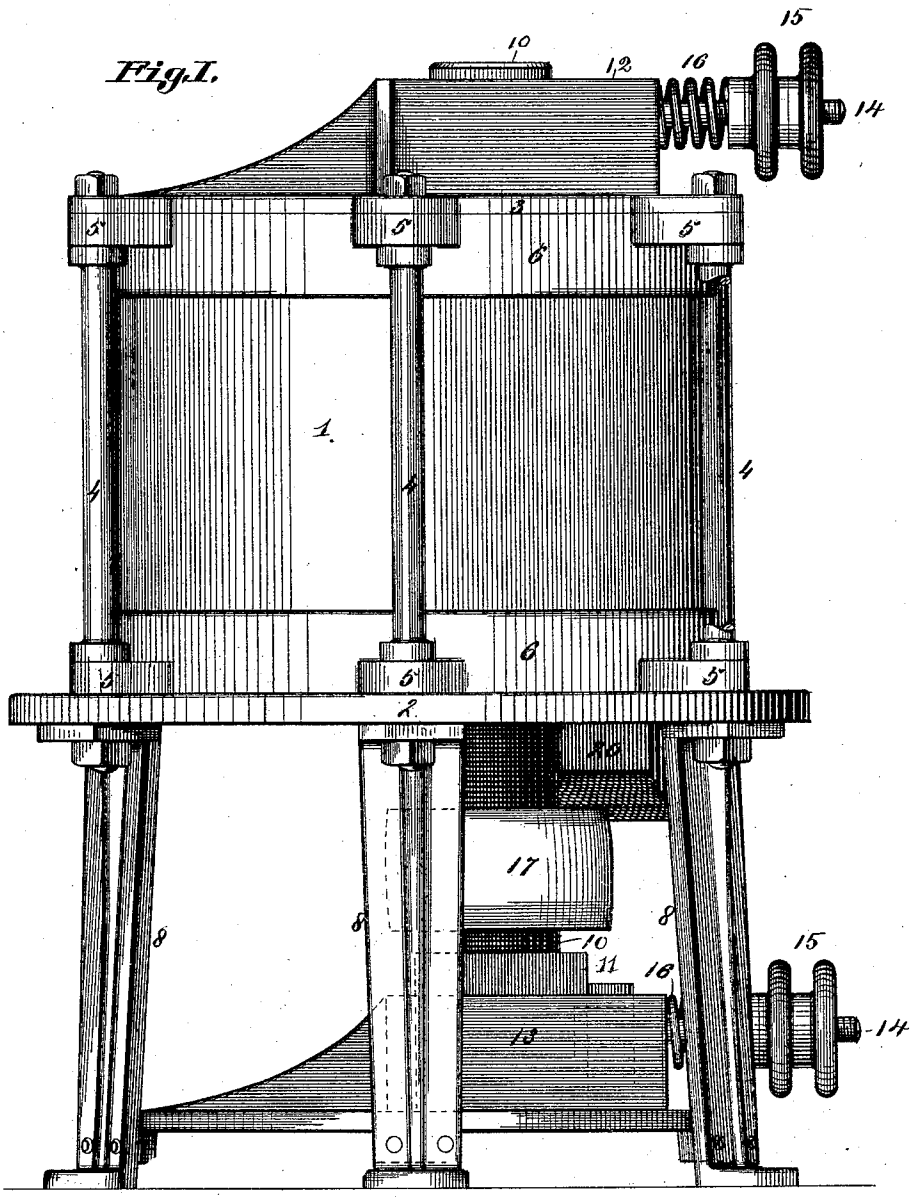
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FLOUR MILL.

No. 410,879. Patented Sept. 10, 1889.

Fig. 1.



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Fig. II.

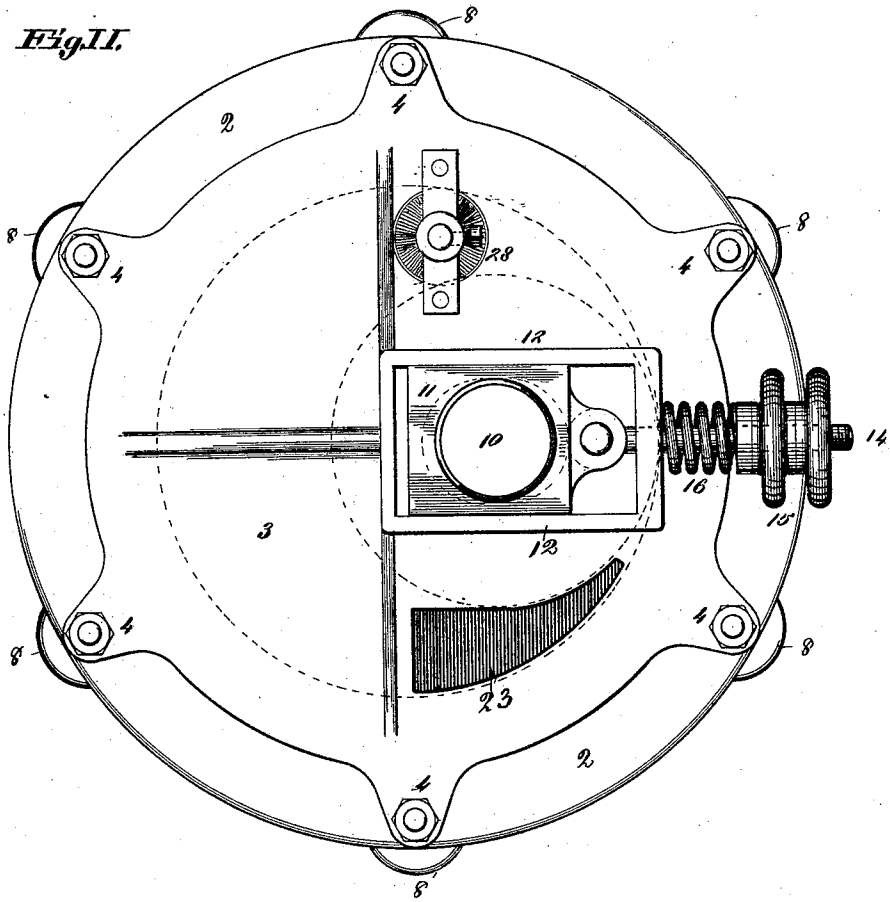
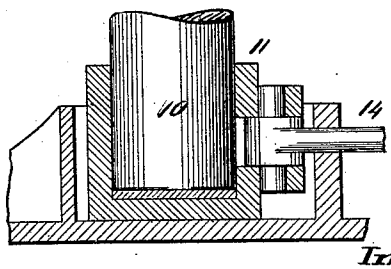


Fig. III.



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Fig. IV.

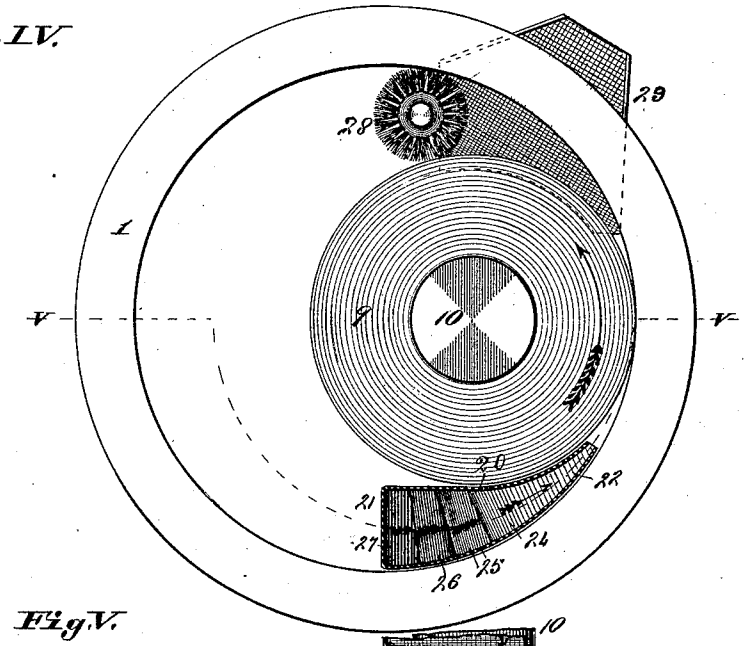


Fig. V.

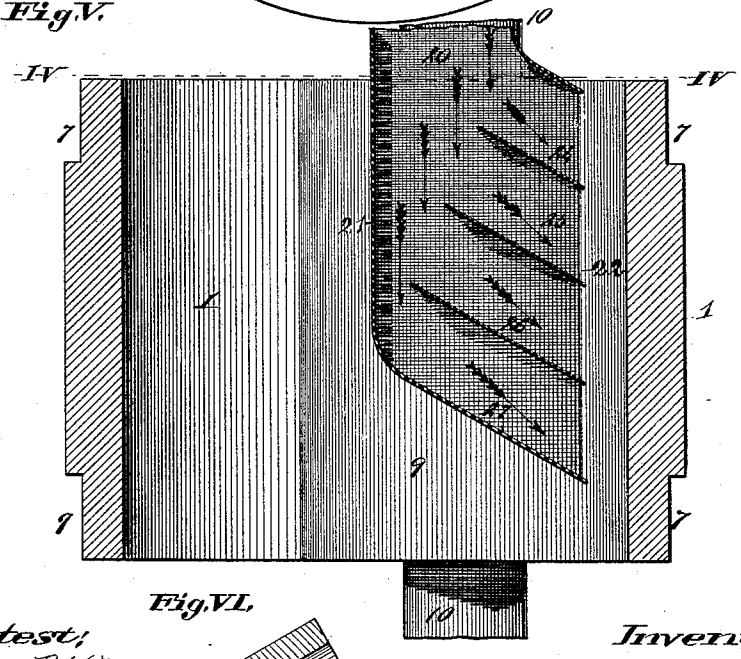
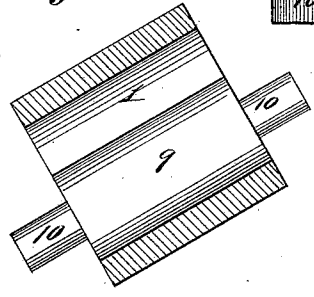


Fig. VI.



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UNITED STATES PATENT OFFICE.

NICHOLAS CORNELIUS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS TO HENRY STANLEY AND EMIL C. TEUSCHER, BOTH OF SAME PLACE.

FLOUR-MILL.

SPECIFICATION forming part of Letters Patent No. 410,879, dated September 10, 1889.

Application filed March 28, 1889. Serial No. 305,096. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS CORNELIUS, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Flour-Mills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a side elevation illustrative of my invention. Fig. II is a top view. Fig. III is a detail section showing the manner of adjusting the roller. Fig. IV is a horizontal section taken on line IV IV, Fig. V. Fig. V is a vertical section taken on line V V, Fig. IV; and Fig. VI is a view, part in section and part in elevation, illustrating the cylinder and roller on an incline or out of a vertical position.

My invention relates to that class of flour-mills in which is employed a cylinder and an eccentrically-arranged roller within the cylinder—as, for instance, as shown in the patent granted to Clayton S. Wenger on the 5th day of October, 1880, No. 232,863, and the patent granted to Henry Stanley, Emil C. Teuscher, and myself on the 15th day of November, 1887, No. 373,342.

My present invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, 1 represents a cylinder having a lower head 2 and an upper head 3, connected by tie-rods 4, which also pass through lugs 5 on upper and lower rings 6, which fit around the cylinder, the latter being recessed, as shown at 7, Fig. V, to receive the rings. The head 2 may be placed on supporting-legs 8, as shown in Fig. I.

Within the cylinder is an eccentrically-arranged roller 9. (See Fig. IV.) This roller is provided with journals 10 on its respective ends, which fit in boxes 11, the upper box being held between flanges 12 on the head 3, and the lower box being held in a guide 13, secured to the legs 8. The boxes are made adjustable in their supports for the purpose of adjusting the roller to or from the cylinder; and as a means for adjusting them I have shown threaded rods 14, secured to the boxes (see Figs. II and III) and having nuts 15 on their outer ends, so that by tightening or loosening the nuts the boxes, and accordingly the roller, may be moved in or out.

To give an elastic effect to the roller, I employ springs 16, surrounding the rods 14, between the nuts and the supports of the sliding boxes. These are illustrated in Figs. I and II.

One of the journals of the roller 9 is provided with a driving-pulley 17, and the central portion of the cylinder 1 is formed to receive a belt, and the manner of driving and controlling the operation of the roller and cylinder is the same in this case as fully described and explained in the patent last referred to.

20 represents a conveyer for delivering the grain between the roller and cylinder. My preferred manner of constructing this is illustrated in Figs. IV and V, and consists of a casing 21, narrowed down to a point 22 at its forward end, as shown in Fig. IV, and into which the grain is delivered from a chute 23. Within the casing are a number of inclined ways or partitions 24, 25, and 26, which extend farther back toward the rear of the casing from the top toward the bottom. The grain falling onto these and also onto the bottom 27 of the casing, as illustrated by the arrows in Fig. V, is delivered to the action of the roller and cylinder uniformly.

Other forms of conveyers might be designed for accomplishing the same purpose.

28 represents a brush for cleaning the outer surface of the roller and the inner surface of the cylinder.

The stuff as it is ground may fall onto a discharge spout or conveyer 29 (see Fig. IV) and is delivered into a suitable receptacle.

The gist of this invention consists in arranging the roller and cylinder out of a horizontal position, either into a vertical position, as shown in Figs. I, IV, and V, or into a position inclined from the horizontal, as shown in Fig. VI, the object being to have the parts at such a pitch toward the vertical that they will be self-delivering and avoid the necessity of a discharge-conveyer.

I claim as my invention—

1. The combination, with the cylinder and eccentrically-arranged roller, of a feeding device delivering the material at different

heights between the grinding-surfaces, substantially as described.

2. The combination, with the cylinder and eccentrically-arranged roller, of a feeding device delivering the material at different heights between the grinding-surfaces, consisting of a casing 21, narrowed down to a point at its forward end, having a number of inclined ways or partitions 24 25 26, extending rearwardly from top to bottom, the lower beyond the one above, substantially as described.

3. A feeding device for delivering material to an eccentric roller-mill, consisting of the casing 21, having a chute 23 and inclined bottom 27, and narrowed down to a point 22, and the inclined ways 24 25 26, the ways extending farther back from the top toward the bottom, substantially as described.

NICHOLAS CORNELIUS.

In presence of—
GEO. H. KNIGHT,
EDW. S. KNIGHT.