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2 SHEETS--SHEET 1.

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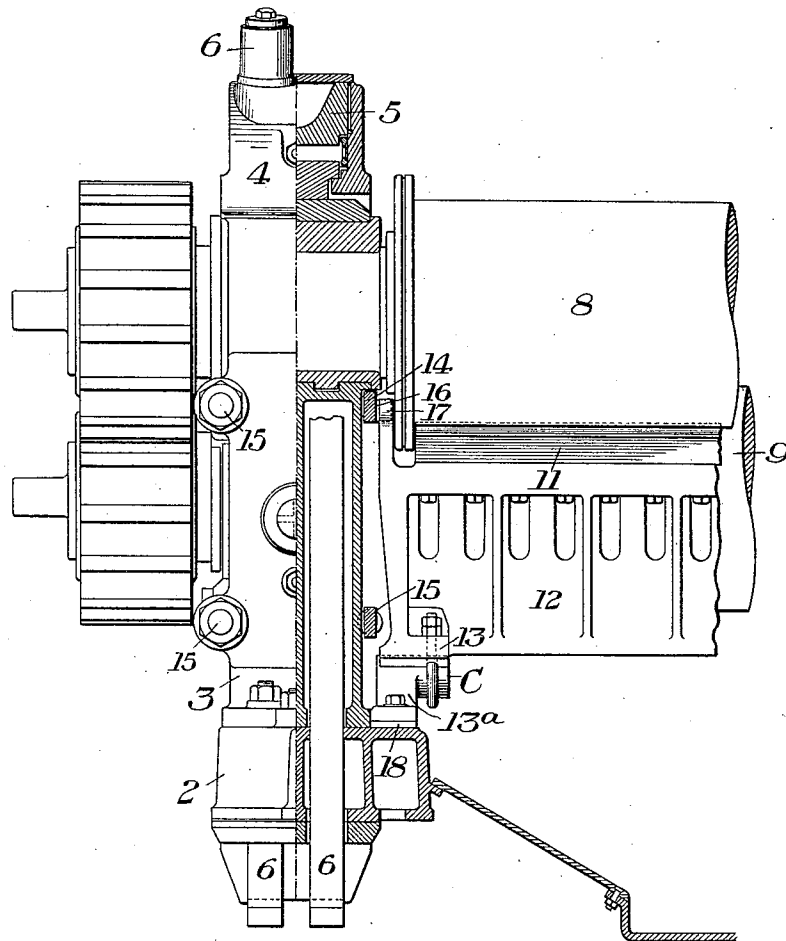
F. A. MONROE, JR. & N. A. HELMER.
CANE GRINDING MILL.
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1,064,362.

Patented June 10, 1913.

2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK A. MONROE, JR., AND NICOLAS A. HELMER, OF CLEVELAND, OHIO, ASSIGNORS
TO THE DYER COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

CANE-GRINDING MILL.

1,064,362.

Specification of Letters Patent.

Patented June 10, 1913.

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To all whom it may concern:

Be it known that we, FRANK A. MONROE, JR., and NICOLAS A. HELMER, residents of Cleveland, Cuyahoga county, Ohio, have invented a new and useful Improvement in Cane-Grinding Mills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view partly in side elevation, and partly in vertical section of a cane grinding mill embodying our invention; and Fig. 2 is a view of the same partly in end elevation and partly in vertical section.

Our invention has relation to crushing mills, particularly for the treatment of sugar cane and the like, and has for an object the provision of novel means for the exact and facile adjustment of that member of the mill which is known as the "turn plate," "dumb turner," or "trash knife," hereinafter referred to as the turn plate.

A further object of the invention is to provide means whereby the frame bolts holding the side caps of the mill frame in position, may be utilized for securing the adjustment of this turn plate.

The nature of our invention will be best understood by reference to the accompanying drawings, in which we have shown the preferred embodiment thereof, and which will now be described, it being premised, however, that various changes can be made in the details of construction and arrangement of the several parts by those skilled in the art, without departing from the spirit and scope of our invention as defined in the appended claims. In these drawings, the numeral 2 designates the base of the mill upon which the housing or roll frame 3 is suitably mounted.

4 designates the top cap; 5 a suitable hydraulic pressure arrangement for the top cap.

6 designates the vertical retaining bolts; and 7 the side caps.

8 designates the upper roll, and 9 and 10 the lower rolls.

The particular construction of the mill frame or casing, together with the general design of the mill itself, and of the housing and their attached portions, forms no part

of the present invention, and may be of the usual construction or any of its modifications.

11 designates the turn plate between the rolls 9 and 10 and below the roll 8. This turn plate is bolted or otherwise suitably secured to a supporting beam 12 extending between the rolls 9 and 10 and seated and secured at its lower portion at each end in a gudgeon or trunnion plate 13 mounted on and secured to the base 2. The side caps 7, which close the lateral openings in the roll frame or housing 3, are secured in position by the bolts 14 and 15. The upper bolts 14 are each provided with the lateral jaws 16, which receive between them upward end extensions 17 of the beam 12, for the purpose of holding the beam and turn plate rigidly in the fixed position and to permit it being moved around the gudgeon C as an axis to and from the surface of the roll 9. The jaws 16 and extensions 17 are preferably so shaped that there will be a rolling fit between the parts without lost motion. The turn plate may be moved in a direction to or from the roll 9, and the surface thereof may be given more or less inclination, by moving the gudgeon or trunnion plates 13 in a horizontal plane; while the relation of said turn plate to the upper roll 8 may be changed by the insertion of suitable liners underneath the members 13^a which carry the gudgeons. One of these liners is shown at 18. By utilizing the bolts 14 to actuate the turn plate, we obviate the necessity of introducing openings in the roll frame for the use of wedges, cams, shafts, or other mechanical means of imparting motion to and for restraining and retaining the turn plate in its adjusted position.

We do not limit ourselves to the precise manner of supporting the turn plate, which we have herein shown and described, since it is obvious that it may be supported on the frame in various ways and be actuated and adjusted by the tie bolts in the manner described.

Various other changes may be made in the details of construction and arrangement of the parts; and, as before stated, our invention is not limited to the particular construction of mill herein shown and described.

We claim:

1. In a crushing mill, the combination of a base, a roll frame or housing mounted thereon and having side caps, a turn plate support, and transverse tie bolts for the side caps, said bolts engaging the turn plate support; substantially as described.

2. In a crushing mill, a mill frame housing having side caps, transverse bolts securing the side caps, and a turn plate support having projections engaged by some of said bolts, the latter forming means for actuating and holding the turn plate support and turn plate; substantially as described.

3. In a crushing mill, the combination of a roll frame having side caps, transverse bolts securing said caps, some of said bolts having lateral projections, and a pivotal turn plate support engaged by said projections; substantially as described.

4. In a crushing mill, the combination with a base and roll frame supported thereby, of gudgeon or trunnion members mounted on the base, a turn plate supporting beam carried by the trunnion or gudgeon plates, and transverse tie bolts engaging the turn plate support and forming

means for adjusting the same; substantially as described.

5. In a crushing mill, the combination with a base and roll frame supported thereby, of gudgeon or trunnion members mounted on the base, a turn plate supporting beam carried by the trunnion or gudgeon plates, and transverse tie bolts engaging the turn plate support and forming means for adjusting the same; together with means for effecting a vertical adjustment of the turn plate support and turn plate; substantially as described.

6. In a crushing mill, a bed plate or pedestal carrying a roll frame or housing, a turn plate supported thereby, transverse securing bolts for the roll frame or housing, and connections between said bolts and the turn plate for adjusting the turn plate and rolls with reference to each other; substantially as described.

In testimony whereof, we have hereunto set our hands.

FRANK A. MONROE, JR.
NICOLAS A. HELMER.

Witnesses:

FLORENCE M. WOLKE,
PHELPS CRUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."