

A. J. McCONE & R. F. ROY.
CHILIAN MILL.
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984,584.

Patented Feb. 21, 1911.

2 SHEETS-SHEET 2.

Fig. 2.

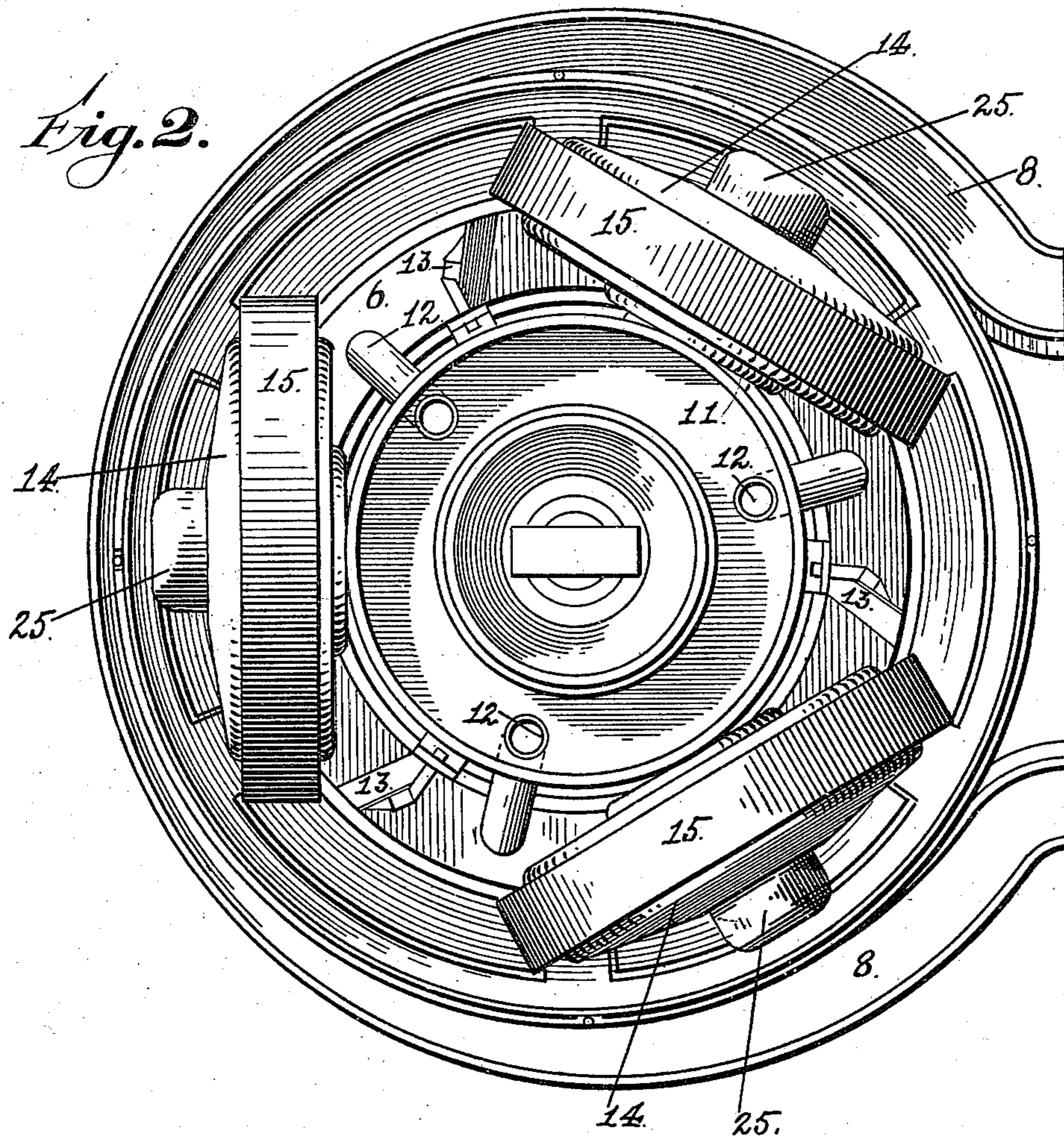
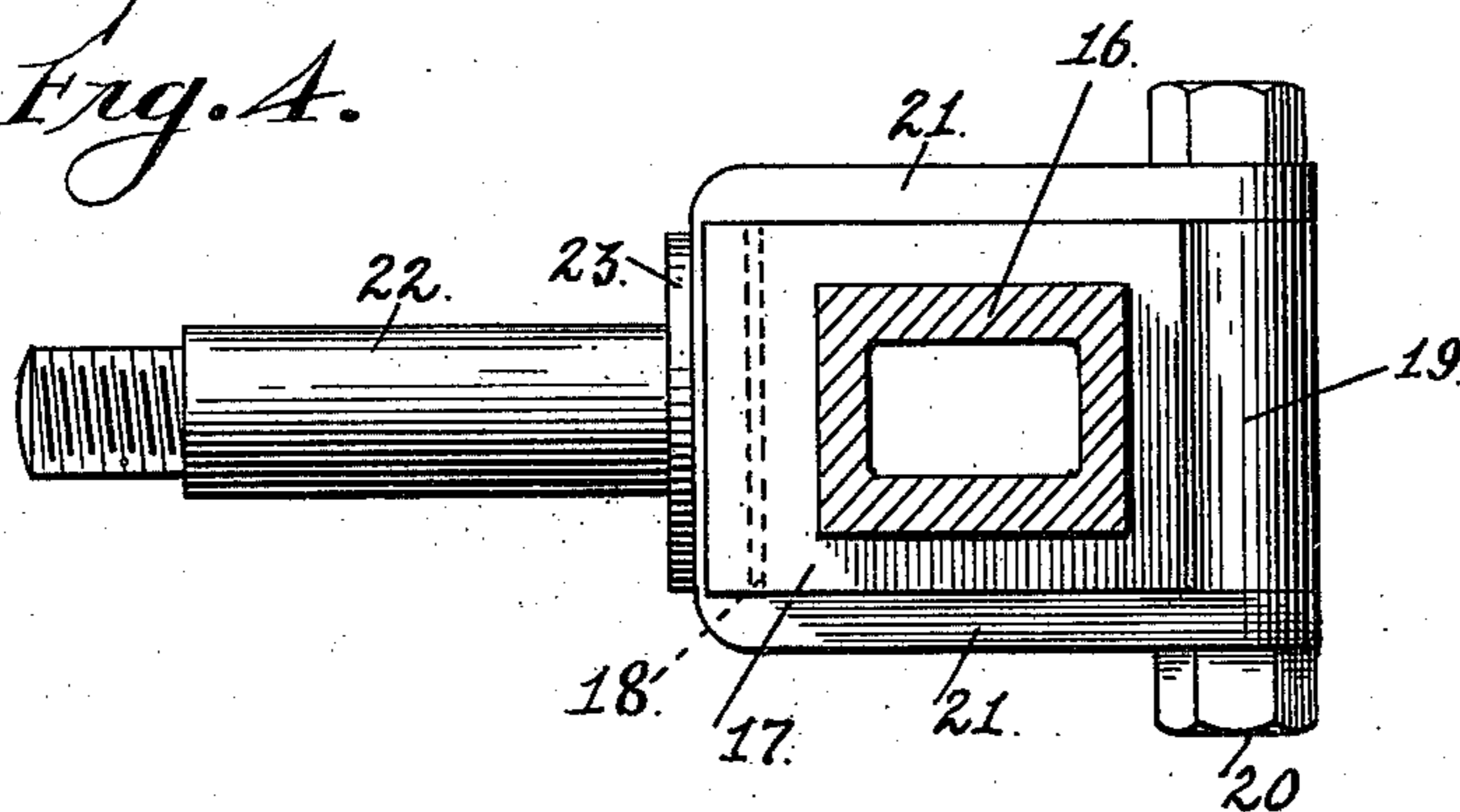


Fig. 4.



Witnesses:
Arthur L. Slee.
S. Constine.

Inventors.
Alexander J. McCone
and Roland F. Roy.
by Wm F. Booth
Their Attorney.

UNITED STATES PATENT OFFICE.

ALEXANDER J. McCONE AND ROLAND F. ROY, OF RENO, NEVADA, ASSIGNORS TO
NEVADA ENGINEERING WORKS, OF RENO, NEVADA, A CORPORATION OF NEVADA.

CHILIAN MILL.

984,584.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ALEXANDER J. McCONE and ROLAND F. ROY, citizens of the United States, residing at Reno, in the county of Washoe and State of Nevada, have invented certain new and useful Improvements in Chilian Mills, of which the following is a specification.

Our invention relates to the class of Chilian-mills.

The object of our invention is to provide, by simple and effective means, for the driving of the rollers and for their necessary adjustments and crushing effect, independent of the driver and of each other.

To these ends our invention consists in the novel construction and arrangement of parts which we shall hereinafter describe and claim.

Referring to the accompanying drawings—Figure 1 is a vertical section of our mill. Fig. 2 is a plan of the same. Fig. 3 is a vertical section, enlarged of the mounting-means for the rollers. Fig. 4 is a plan of the same, the driver-post being in cross-section.

1 is the mill bottom with a central column 2 in which is keyed the non-rotating shaft 3.

4 is the center cone, with face liner 5.

6 is the die, 7 the screens and 8 the launder.

9 is the driver mounted to rotate about the shaft 3, and driven from above through the gear 10.

11 is the feed trough and 12 are the feed pipes.

13, in Fig. 2, are the scraper arms.

14 are the crushing rollers. We have shown three in the present case. Each roller has a tire 15 to run on the die 6.

The means for mounting each roller being the same, a description in the singular will suffice. Bolted up to the driver is the depending driver-post 16 which, though it may be of any shape in cross section, is best of a rectangular section. Upon this post is mounted with a sliding fit the post-box 17, which in its outer face has a socket 18 and on its inner side it is formed with an ear 19 to receive a horizontal yoke pin 20.

21 is the driver yoke, the arms of which pass on either side of the post-box 17 and are pivotally connected therewith by the

yoke pin 20. The yoke 21 has a spindle 22 which is the axle for the roller, the inner end of the spindle where it joins the yoke having a collar 23 which finds a relatively loose seat in the socket 18 of the post-box 17.

The outer end of the spindle receives a nut 24 and is covered by an oil-guard 25. From this construction it will be seen that each roller, while carried around by the driver, is independently mounted. Each roller can, to meet inequalities and adjust itself thereto, move up and down with the slidable post-box 17, due to the seating of the collar 23 in the socket 18 of the box; and may also rock about the yoke-pin 20, to the safe limit of the loose seat which said collar 23 has in said socket 18 of the box. The construction is simple and effective and the connections are such that the mill may be readily dismembered in relatively light instalments to reach any part for cleaning or repairs. Each roller is dependent on itself alone for its necessary adjustments while operating, and being so does not receive from or impart to the other rollers the strains and stresses of its adjustments, as is the case where, through the driver, all the rollers are affected by the adjustments of any one roller, such, for example, in those mills in which the driver itself is intended to form part of the crushing weight.

Having thus described our invention what we claim as new and desire to secure by Letters Patent is—

1. In a Chilian-mill, the combination of a driver; a plurality of posts secured to the driver; a plurality of crushing rollers; a slidable connection of each roller with its post to permit the parallel movement of each individual roller with respect to its post independently of the other rollers; and a pivotal connection between each roller and post to permit the rocking adjustment of each individual roller relatively to its post, and independently of the other rollers.

2. In a Chilian-mill, the combination of a driver; posts secured to the driver; crushing rollers; a slidable box on each post; a yoke embracing each box and pivoted horizontally thereto; an axle of each yoke upon which the roller is journaled; and a relatively loose bearing between the axle and the box adapted to permit the movement of the

roller with the slidable box parallel with the post, and to permit the rocking movement of said roller relatively to the box and post.

3. In a Chilian-mill, the combination of
5 a driver; posts secured to the driver; crushing rollers; a slidable box on each post, having in its outer face a socket; a yoke embracing each box and pivoted horizontally to the back of the box; an axle of each yoke
10 upon which the roller is journaled; and a collar on the axle loosely seating in the

socket of the box, whereby each roller may independently adjust itself vertically with its box and may rock relatively to said box.

In testimony whereof we have signed our 15 names to this specification in the presence of two subscribing witnesses.

ALEXANDER J. McCONE.

ROLAND F. ROY.

Witnesses:

EDWIN L. BRIDE,
JOSEPH LE DUC.