

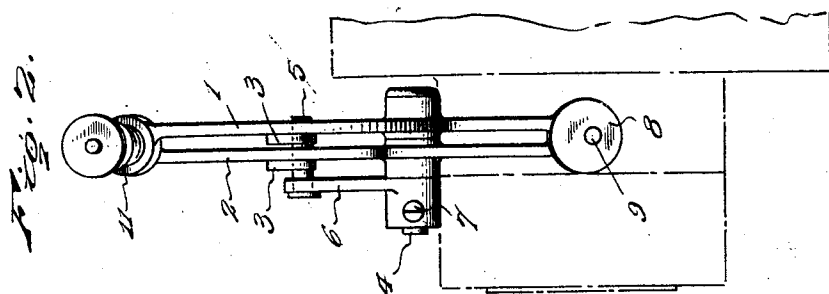
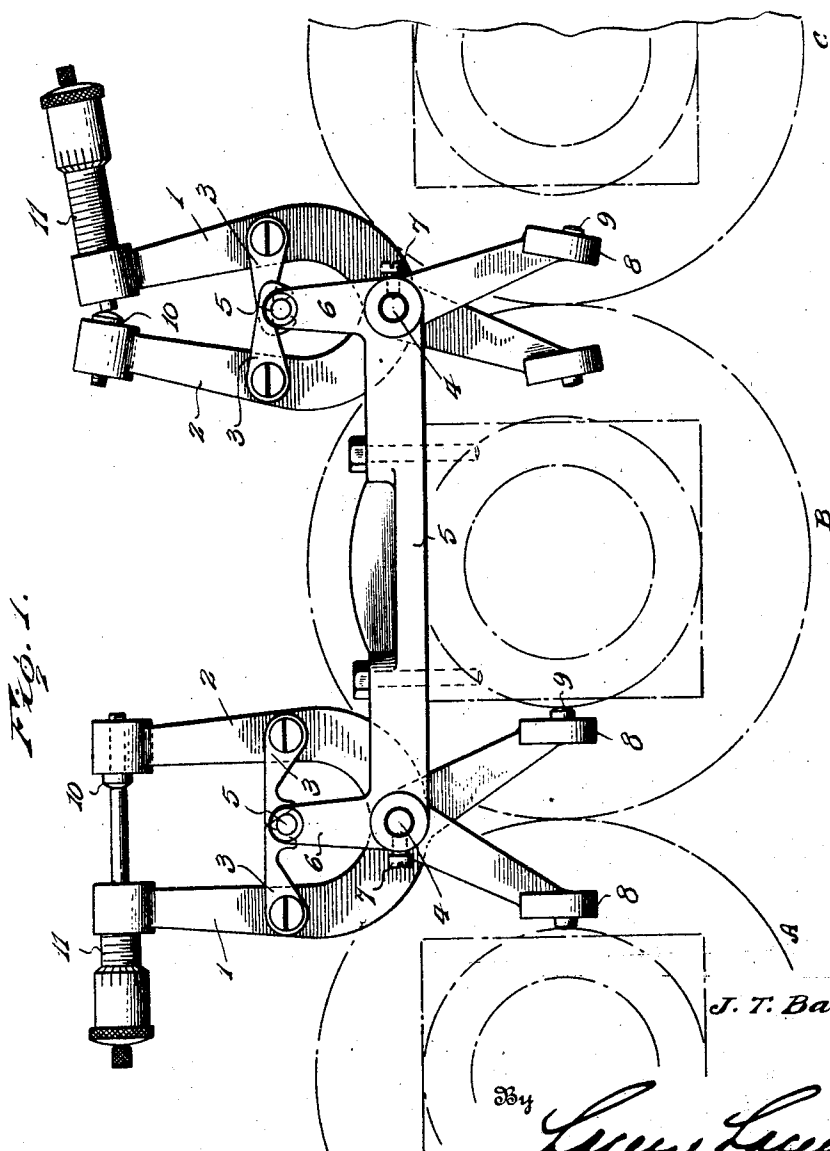
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MICROMETER GAUGE FOR ROLLER MILLS

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MICROMETER GAUGE FOR ROLLER MILLS.

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In roller mills for grinding chocolate, ink and other substance lack of definite knowledge of the previous or present position of the rolls' centers in a horizontal line has necessitated numerous trial runs and subsequent matching of the product to obtain the desired result. This resulted in loss of time and material and was a source of vexation, and not infrequently the cause of an unsatisfactory product.

The present invention provides a micrometer gauge as a part of the mill which may be instantly thrown out of the way or adjusted to operative position to admit of the distance between the centers of cooperating rolls being readily ascertained, thereby avoiding trial runs and assuring uniformity of product without necessitating the loss of time and vexation incident to such trial runs and the matching of the product.

While the drawing illustrates a preferred embodiment of the invention it is to be understood that in adapting the means to meet specific needs and requirements, the design may be varied and such other changes in the minor details of construction may be resorted to within the scope of the invention as claimed, without departing from the spirit thereof.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and the drawing hereto attached, in which,—

Figure 1 is a side view of a roller mill gauge embodying the invention, showing the same applied.

Figure 2 is an end view.

Corresponding and like parts are referred to in the following description and designated in both views of the drawing.

The roller mill illustrated embodies three rolls designated by the letters A, B and C, the same being disposed with their centers in the same horizontal plane. These rolls are relatively adjustable to vary the distances between adjacent elements of cooperating rolls. The gauge which constitutes the vital feature of the present invention, is permanently attached to a convenient part of the mill, and as illustrated, is connected to the bearing of the middle roll B, so that the same supporting frame may be utilized for the gauge provided for coacting rolls.

A gauge is provided for each pair of cooperating rolls. The rolls A and B cooperate, and the rolls B and C cooperate. It will thus

be understood that there are two pairs of cooperating rolls, and in consequence, there are provided two sets of gauges which are mounted upon a single frame. Each of the gauges comprises members 1 and 2 which cross intermediate their ends and are pivoted at the point of crossing. Latches 3 pivoted to a side of each of the members 1 and 2 hold the gauge out of the way, as indicated most clearly at the right in Figure 1. Each of the members 1 and 2 is offset intermediate its ends and is mounted upon a pin 4 which constitutes a pivot. A frame receives the pin 4 and consists of a bar 5 and upstanding arms 6 at the ends of the bar. Binding screws 7 threaded into the frame serve to hold the pins 4 in proper position. The frame is secured to a convenient part of the frame of the mill and, as indicated, is attached to the bearing of the center roll B and projects in opposite directions a like distance to properly position the gauge devices between the cooperating pairs of rolls. A stop pin 5 projects laterally from the upper end of each of the arms 6 and cooperates with the latches 3 to hold the gauge members out of the way, as indicated most clearly to the right in Figure 1 of the drawings.

The lower ends of the gauge members are enlarged, as indicated at 8, and tits 9 project outwardly from the enlarged ends 8 and are adapted to engage the hubs of the rolls when the gauge is set to determine the distance between the centers of coacting rolls. The upper end of the gauge members 1 and 2 are also enlarged and apertured, the one to receive an anvil 10, and the other a micrometer gauge 11 which may be of any approved construction most advantageous for the purpose.

When the gauge is set to determine the distance between the centers of coacting rolls it appears substantially as indicated at the left in Figure 1. The upper ends of the members 1 and 2 are spread, and in consequence, the lower ends of said members are correspondingly spread, whereby to bring the tits or projections 9 in contact with the hubs of the rolls, the distance being indicated by the reading of the micrometer gauge 11. In the initial set of coacting rolls the reading of the micrometer gauge 11 is recorded for future use when resetting the rolls to obtain a given result, thereby obviating the necessity of trial runs, and the loss of time and vexation incident thereto.

It is observed that each pair of cooperating rolls has a gauge at each end for accuracy of adjustment.

Having thus described the invention, I claim:

1. In a roller mill, the combination with coacting grinding rolls, of a gauge, means for mounting said gauge upon the mill adjacent said coacting rolls, said gauge comprising gauge members pivoted intermediate their ends, corresponding ends of the gauge members being disposed to come between coacting rolls and an indicating gauge in cooperative relation with the opposite ends of the said gauge members to designate the distance between the centers of the coacting rolls.

2. In a roller mill, the combination with coacting grinding rolls, of a gauge, means for mounting said gauge upon the mill adjacent said coacting rolls, said gauge comprising gauge members pivoted intermediate their ends, corresponding ends of the gauge members being disposed to come between coacting rolls, and an indicating gauge in cooperative relation with the opposite ends of the said gauge members to designate the distance between the centers of the coacting rolls, and means for holding the gauge members out of the way when not required to indicate the distance between the centers of the rolls.

3. In a roller mill, coacting gauge members pivoted intermediate their ends and having corresponding ends disposed to come between coacting rolls to determine the distance between the centers thereof, a micrometer gauge carried by the opposite end of one of the gauge members and adapted to coact with the corresponding ends of the companion gauge member.

4. In a roller mill, the combination with coacting grinding rolls, of a gauge, means

for mounting said gauge upon the mill adjacent said coacting rolls, said gauge comprising gauge members pivoted intermediate their ends, corresponding ends of the gauge members being disposed to come between coacting rolls and an indicating gauge in cooperative relation with the opposite end of the said gauge members to designate the distance between the centers of the coacting rolls, and latch members mounted upon the gauge members and adapted to coact with a stop to hold the gauge members out of the way when the gauge is inactive.

5. A roller mill gauge comprising a frame having an arm from which projects a stop, gauge members pivoted intermediate their ends to the frame, a micrometer gauge mounted upon an end of one of the gauge members and adapted to coact with the corresponding end of the companion gauge member and latches pivoted to the gauge members and adapted to coact with the said stop to hold the gauge out of action.

6. The combination with a roller mill having three coacting rolls, a frame connected to the mill to form a part thereof, and having arms at opposite ends, stops projecting laterally from the arms, gauge members pivoted intermediate their ends to each end of the frame and having opposite ends enlarged, corresponding ends having tits or projections to come between coacting rolls, an anvil at the opposite end of one of the gauge members, a micrometer gauge at the corresponding end of the other gauge member and latches pivoted to the gauge members and adapted to coact with the stops at the ends of the offstanding arms to hold the gauge members out of the way when the gauge is inactive.

In testimony whereof I affix my signature.

JAMES T. BARBER. [L. s.]