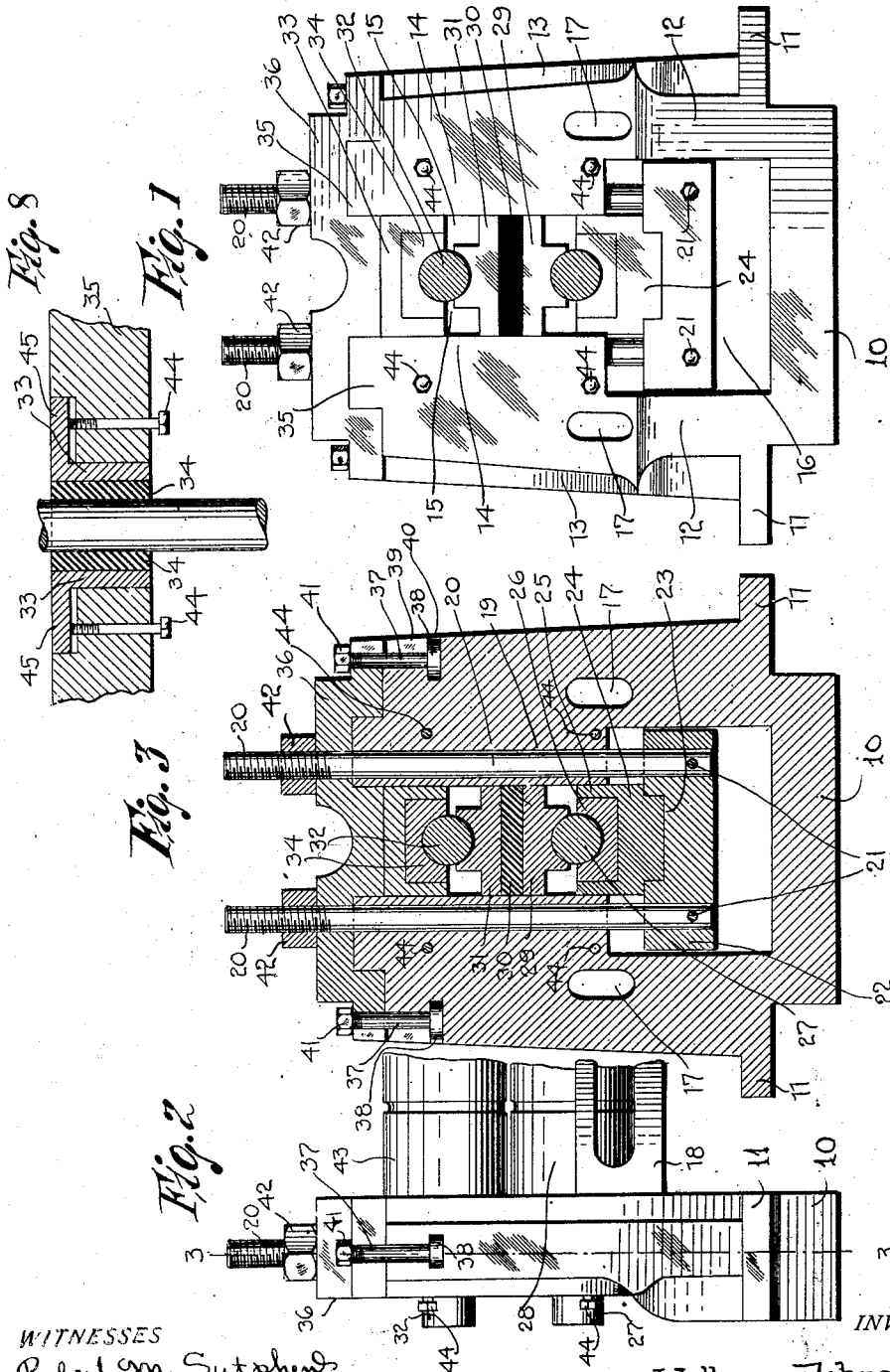


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ROLL HOUSING.
APPLICATION FILED NOV. 20, 1911.

1,054,920.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 1.



WITNESSES

Robert M. Sutphen

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Fig. 7

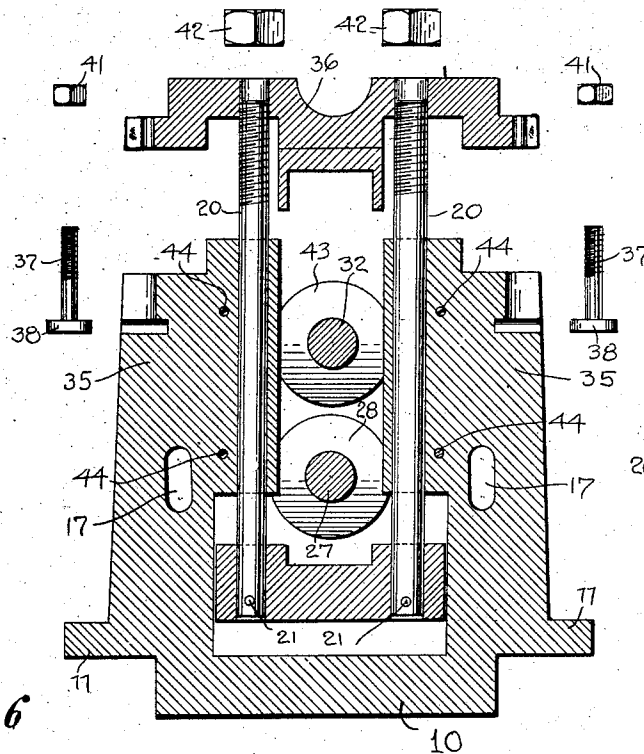


Fig. 5

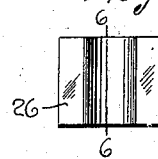


Fig. 6

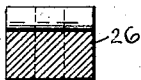
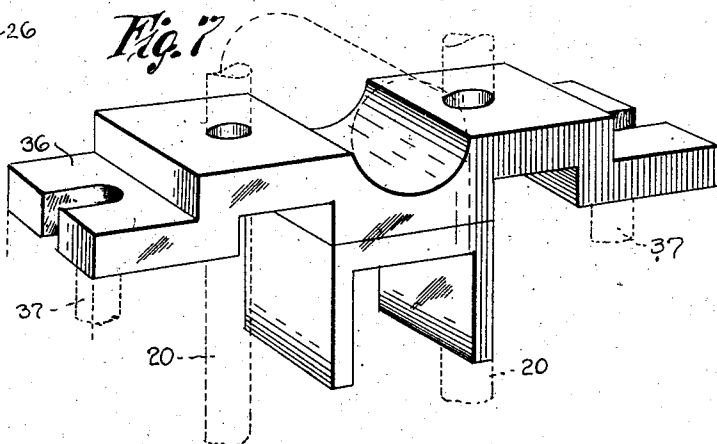


Fig. 7



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ROLL-HOUSING.

1,054,920.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed November 20, 1911. Serial No. 661,231.

To all whom it may concern:

Be it known that I, WILLIAM JOHNSON, a citizen of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Roll-Housings, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to roll housings and has special reference to that type of roll housing which is used in rod mills.

The principal object of the invention is to provide means for adjusting the top and bottom rolls of roll mills which will prevent such rolls from getting out of alinement, said means having improved adjustment wherein the bottom roll constitutes the movable roll and the top roll remains stationary, the bottom roll being drawn upward, thus preventing the driving roll from getting out of alinement.

Another object of the invention is to provide a convenient means of improved character whereby the rolls may be readily assembled or disassembled so that the rolls themselves can be quickly changed.

With the above and other objects in view, the invention consists in general of certain novel features of construction, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawings, and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and Figure 1 is an end elevation of a roll housing constructed in accordance with this invention. Fig. 2 is a side elevation thereof. Fig. 3 is a section on the line 3—3, Fig. 2. Fig. 4 is a detail section with the parts in their disassembled position. Fig. 5 is a face view of one of the bearings. Fig. 6 is a section on the line 6—6, Fig. 5. Fig. 7 is a detail perspective view of the cap. Fig. 8 is a section taken in a horizontal plane through one of the bearings showing the manner of adjusting the same laterally.

A roll housing constructed in accordance with this invention comprises a base portion 10 wherefrom extend flanges 11 by means of which the housing is bolted to a suitable foundation. Legs 12 extend upward from the base and are provided with reinforcing ribs 13. These legs have inwardly extend-

ing portions 14 the inner faces of which are in vertical parallel relation and which overhang the inner portion of the base 10 as can be readily seen by reference to Figs. 1 and 3. By means of this construction there is provided a guide slot 15 between the legs, and this guide slot is provided with an enlarged lower portion 16. Extending transversely through the legs 12 are openings 17 which are arranged for the reception of the crown bars which support the guide boxes 18 whereto suitable guides, not deemed necessary here to be shown, can be secured. Extending vertically through each leg is an opening 19, and it will be noted that these openings extend through the overhanging portions of the legs so that bolts 20 can pass through the openings and enter the enlarged portion 16 of the guide slot.

Secured upon the lower ends of the bolts 20 by means of tapering pins 21 is a bottom block 22 which is recessed as at 23 for the reception of a lower roll bottom guide block 24. This guide block is recessed on the upper side as at 25 for the reception of a journal bearing 26 of bronze or other suitable metal. In the journal bearing 26 is held the journal 27 of the bottom roll 28. On top of this journal 27 is a cap 29 which serves to hold the journal in place in its bearing. On top of this member 29 is a rubber pad 30 whereon rests the upper roll bottom bearing 31 upon which revolves a journal 32.

At 33 is shown the upper roll cap which is recessed for the reception of the journal bearing 34 preferably of bronze or other like material.

The members 12 have the overhung portions 14 extending upwardly as at 35 so as to form a shoulder on the outside of each of these portions. On the upper end of these members 12 is fitted a frame cap 36 provided with suitable openings for the reception of bolts 20. This cap fits closely on the upper ends of the members 12 and is held in place by bolts 37 having enlarged heads 38, the said bolts sliding laterally into slots 39 having enlarged bottoms 40 which are formed in the respective members 12. These bolts 37 pass through suitable openings in the frame cap 36 and are held therein by means of nuts 41 so that when the bolts are slid into position the nuts 41 may be tightened very slightly and yet hold the frame cap on the frame. When

it is necessary to remove the frame cap a half turn may be given to the nuts and the bolts slid out of position when the cap may be removed. Upon the bolts 20 are
5 nuts 42 by means of which the distance between the roll 28 which has the journal 27 and the roll 43 having the journal 32 may be varied. It will, of course, be obvious that in order to remove the frame cap,
10 the nuts 42 are loosened until the bottom block 22 rests upon the bottom of the enlarged opening 16. The nuts 42 are then entirely removed from the bolts and the nuts 41 loosed as previously described. It
15 will be obvious that by raising the lower roll in this manner there will be no tendency to crowd the same to one side or the other as is frequently the case when a compression screw is used on the upper roll. The
20 rolls will thus maintain proper position with relation to each other and this will be greatly aided by the interposition of the rubber block 30.

At 44 are shown certain bolts which are
25 used for eliminating the end movement or lash of the rolls. These bolts 44 have their ends bearing against flanges 45 formed on the bearings as can be seen by reference to Fig. 8 so that these bearings can be moved
30 transversely of the housings to hold the rolls in proper position.

There has thus been provided a simple and efficient device of the kind described
35 and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction

thereof without departing from the material principles thereof and it is therefore not wished to confine the invention to the exact form herein shown and described, but
40 it is wished to include all such as properly come within the scope of the appended claim.

Having thus described the invention, what is claimed as new, is:—
45

A roll housing comprising a frame having side arms positioned in spaced relation to provide a slot between the arms, the lower portions of the arms being reduced to provide an enlarged pocket at the lower
50 end of the slot, a supporting block slidably mounted in said pocket, adjusted rods extending from said supporting block and passing vertically through said arms, a guiding block carried by said supporting block
55 and passing between said arms, a bearing carried by said guiding block, a second bearing positioned above said first mentioned bearing, a resilient pad resting upon said
60 second bearing, a third bearing resting upon said resilient pad, a cap mounted in the upper portion of the slot between said arms, a bearing carried by said cap, and means for vertically adjusting said supporting
65 block to hold said bearings in operative relation.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM JOHNSON.

Witnesses:

MYRON H. PAST,
MABEL HEINOLD.