No. 895,622. PATENTED AUG. 11, 1908.

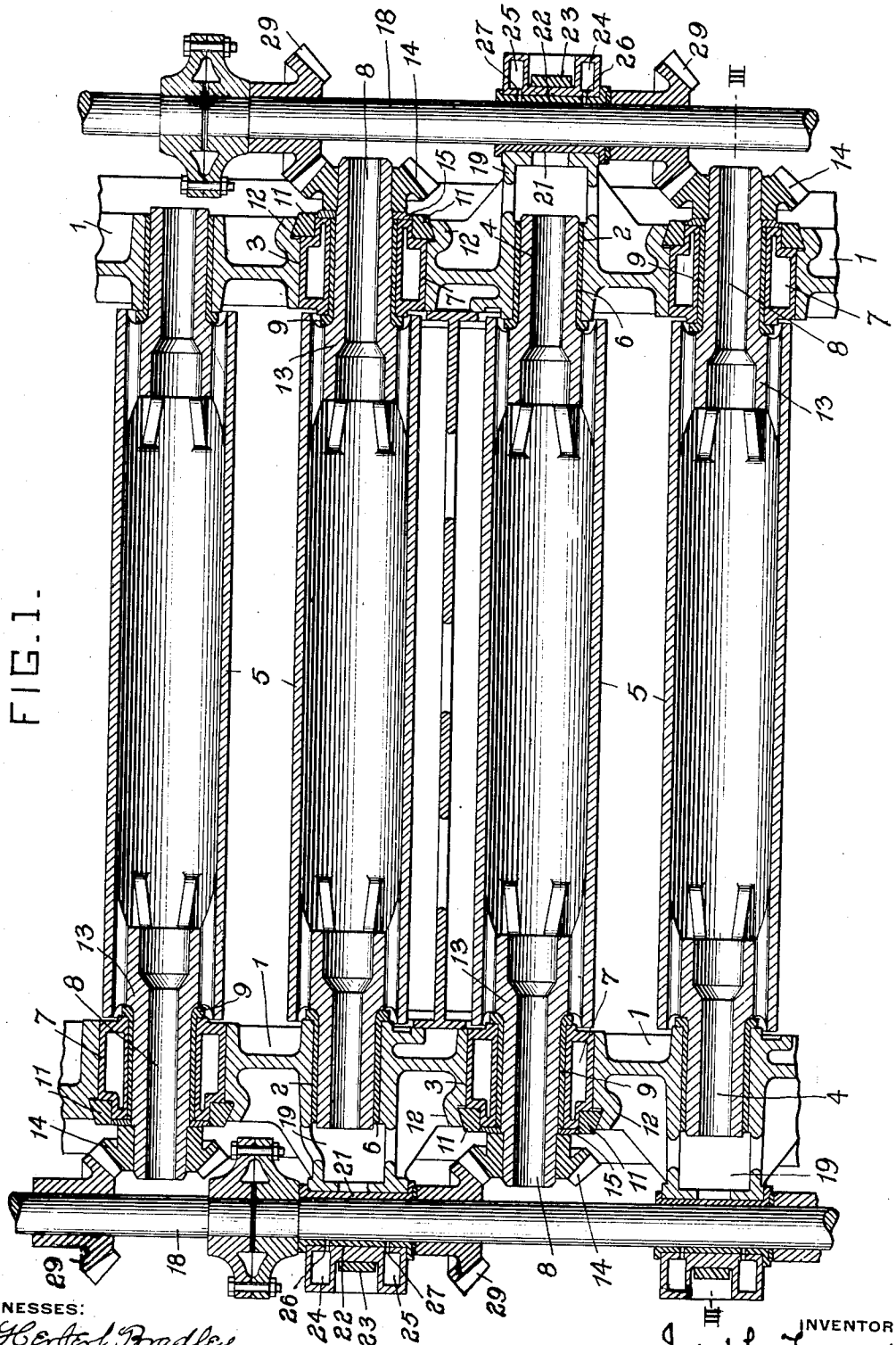
J. FAWELL.

TABLE FOR ROLLING MILLS, &c.

APPLICATION FILED APR. 3, 1908.

3 SHEETS—SHEET 1.

FIG. 1.



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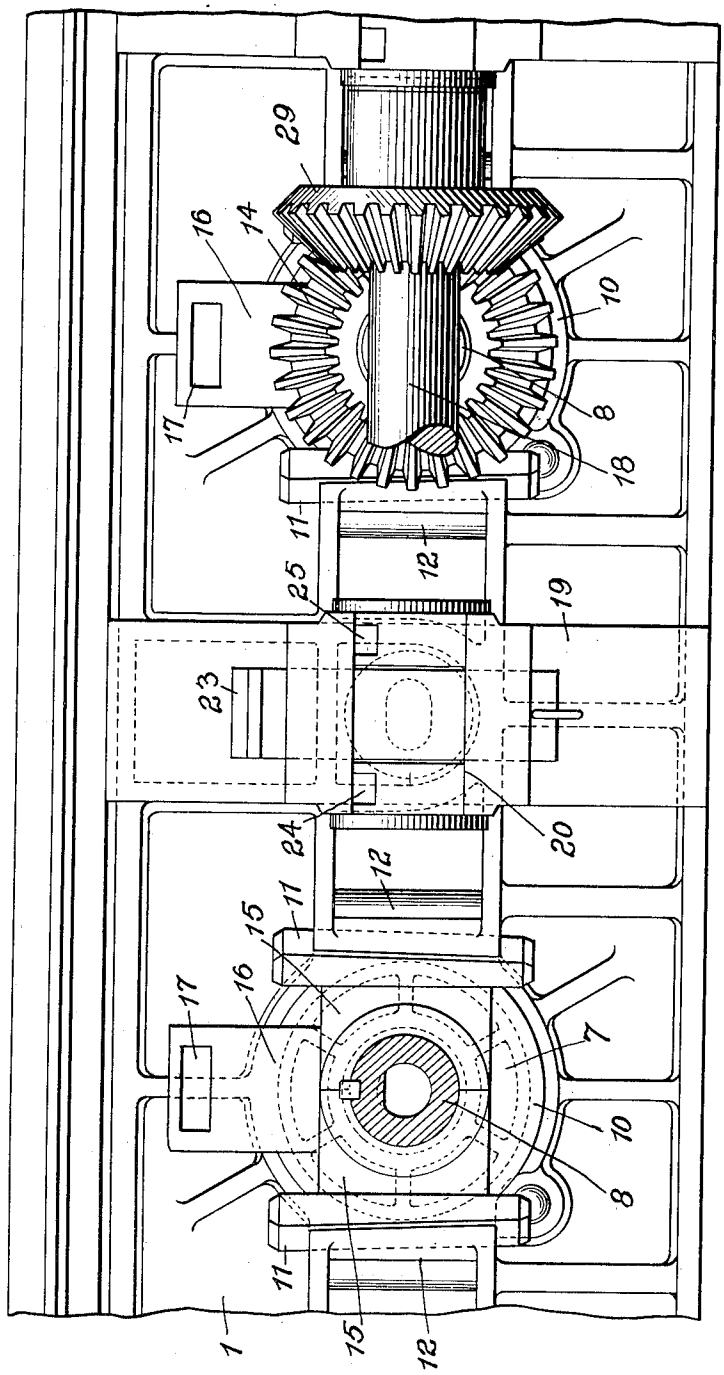
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3 SHEETS—SHEET 2.

FIG. 2.



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3 SHEETS—SHEET 3.

FIG. 3.

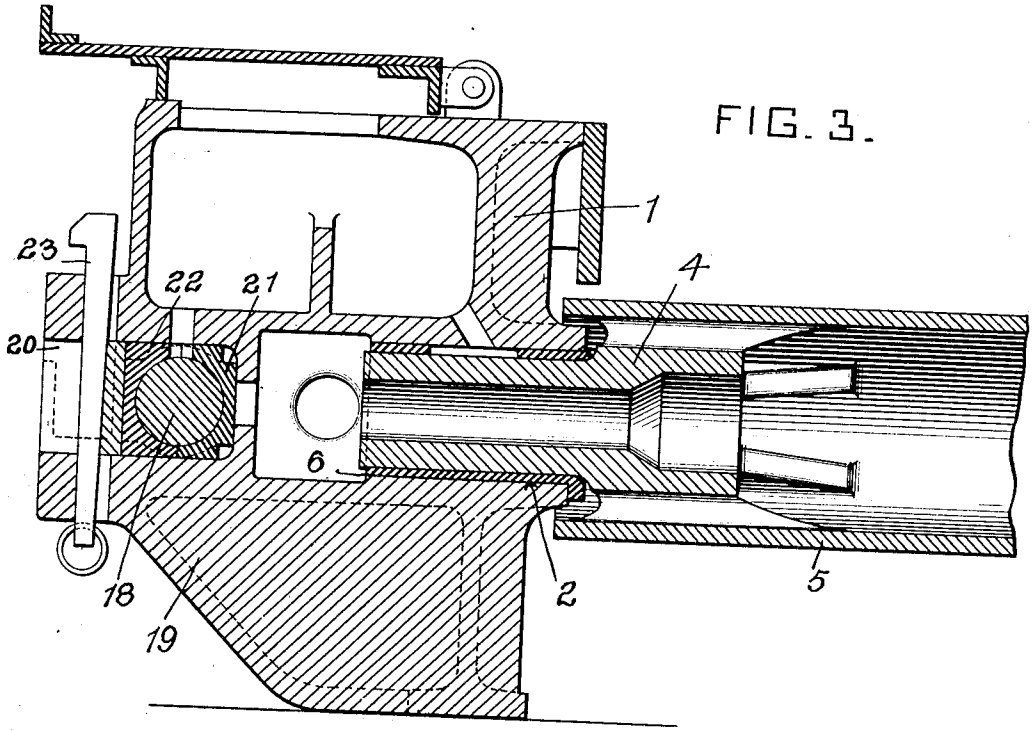
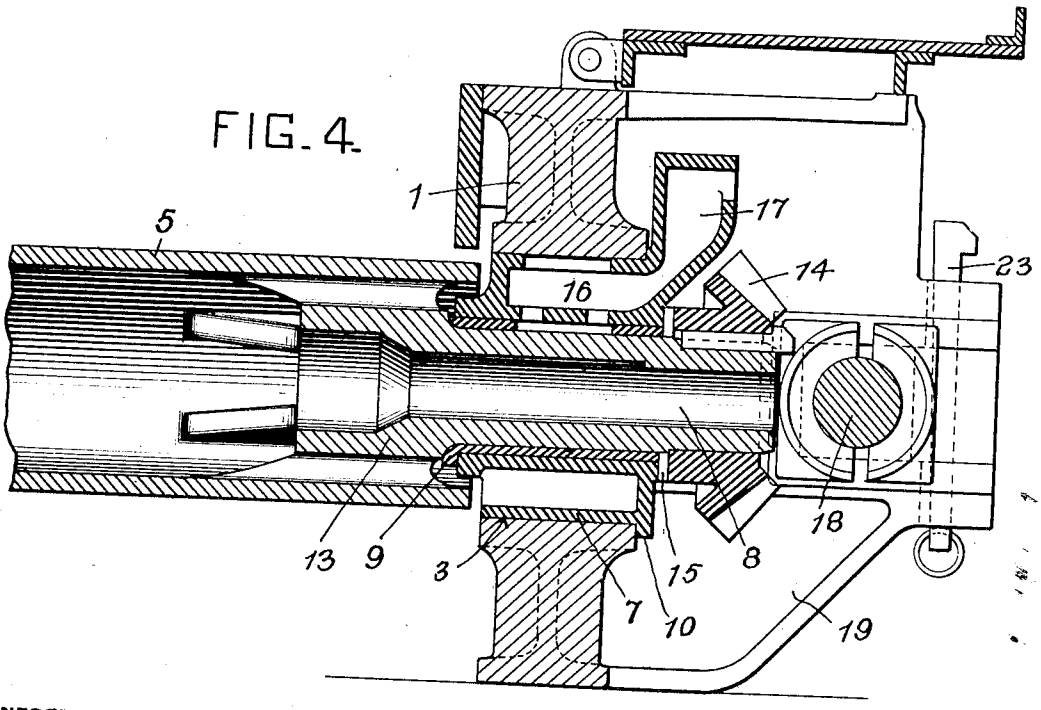


FIG. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH FAWELL, OF PITTSBURG, PENNSYLVANIA.

TABLE FOR ROLLING-MILLS, &c.

No. 895,622. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed April 3, 1908. Serial No. 424,857.

To all whom it may concern:

Be it known that I, JOSEPH FAWELL, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Tables for Rolling-Mills, &c., of which improvement the following is a specification.

Application Serial No. 381,177, filed June 27, 1907, describes and claims certain improvements in feed tables for rolling mills, said improvements consisting generally stated in a construction permitting of the withdrawal of the feed rollers in a direction substantially parallel with the axes of the rollers.

The invention described herein relates to certain further improvements in that style or kind of feed table, and is hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification Figure 1 is a sectional plan view of a portion of a feed table embodying my improvements; Fig. 2 is a side elevation on an enlarged scale of a portion of the feed table; Figs. 3 and 4 are sectional elevations of opposite ends of a feed roller and its bearings, the plane of section being indicated by the line III—III Fig. 1.

The side plates or frames 1 are preferably provided at suitable intervals with openings 2 and 3 for the reception of the journals of the rollers. As shown in Fig. 1 alternate openings 2 are sufficiently larger than the journals 4 at one end of the rollers 5 for the reception of a bushing or wearing sleeves 6. The openings 3 however are made sufficiently large to permit of the longitudinal removal of the rollers through such openings in placing the rollers in position or removing them from the feed table. Annular blocks 7 are fitted in the openings 3 the openings through the blocks being made slightly larger than the journals 8 of the rolls to permit of the insertion of the bushings 9.

It will be observed by reference to Fig. 1 that openings 2 in one side plate or frame are opposite the openings 3 in the plate or frame so that alternate rollers will be inserted or removed from opposite sides of the table.

By reference to Figs. 1 and 2 it will be seen that the annular blocks are provided with flanges 10 fitting against the outer face of the side plates adjacent to the openings 3 thereby limiting the inward movement of the blocks. The annular blocks are held from movement out of the openings in the side plates or flanges by keys 11 engaging undercut lugs 12 on the frames and extending laterally into angular notches or recesses in the outer ends of the blocks as shown in Figs. 1 and 2.

By reference to Figs. 1 and 4 it will be observed that the rollers are provided at the inner ends of the journals 8 with shoulders 13 which bear against the flanged ends of the bushings 9, preventing movement of the rollers in one direction. Movement of the rollers in the opposite direction is prevented by the pinions 14 which are keyed on extensions of the journals after the annular blocks have been slipped onto the journals. Washers 15 formed in two sections are placed between the inner ends of the hubs of the pinions 14 and the faces of the annular blocks. These sections can be easily replaced as they are held in position by the locking keys 11 as shown in Figs. 1 and 2. The annular blocks are recessed for the lightness and also to provide an oil receptacle 16 in the upper portions of the blocks, which have filling necks 17 formed integral with the portions of the blocks having the oil receptacles.

As shown in Fig. 1 alternate rollers are driven from opposite ends by pinions 29 on the shafts 18. These shafts are supported by brackets 19 on the frames or side plates in line with the non driven ends of alternate rollers. These brackets are provided with horizontal recesses or slots 20 into which the shaft sections are inserted laterally one of the brasses 21 being first inserted. After the shaft section has been adjusted to position the other brasses 22 are inserted and the holding blocks slid into the slots. These blocks are secured in position by wedge-like keys 23 which pass through openings through the upper and lower walls of the slots 20 as clearly shown in Figs. 1, 2 and 3. These brackets are provided with pockets 24 and 25 forming oil receptacles from which passages 26 and 27 extend to the bearings for the shaft and the journals of the rollers.

In the construction shown herein, the pinions 14 can be secured in position on the extension of the journals before the rollers are placed in position in the side frames. When it is necessary to replace a roller of a feed table while in use the section of the shaft is uncoupled and the wedge keys 23 and locking keys 11 removed when the shaft section and the roller can be easily removed, and another

roller having an annular block thereon and a pinion key thereto can be inserted. It will be observed that new washers 15 can be inserted by removing the locking keys 11, without disturbing other parts of the feed table.

I claim herein as my invention:

1. A feed table having in combination, a series of two or more rollers, side frames for supporting the rollers and constructed to permit of the longitudinal removal of adjacent rollers in opposite directions.

2. A feed table having in combination a series of two or more rollers, pinions secured to one journal of each roller, side frames for supporting the rollers and constructed to permit of the simultaneous removal of the rollers and pinions from operative position adjacent rollers being moved in opposite directions parallel with the axis of the rollers.

3. A feed table for rolling mills having in combination feed rollers side plates or frames provided with openings for the reception of bearings for the roller journals, alternate openings being greater than the diameter of the journals or portions of the roller between the journals, the other openings being smaller than said parts and adapted to receive and support the journals of the rollers, annular blocks adapted to fit over the roller journals and means for securing the blocks in the larger openings in the side frames.

4. A feed table for rolling mills having in combination feed rollers side plates or frames provided with openings for the reception of bearings for the roller journals, alternate openings being greater than the diameter of the journals or portions of the roller between the journals, the other openings being smaller than said parts and adapted to receive and support the journals of the rollers, annular blocks fitting said larger openings and adapted to receive the journals of the rollers and keys engaging the blocks and frame for locking the blocks as against movement longitudinal of the rollers.

5. A feed table for rolling mills having in combination feed rollers side plates or frames provided with openings for the reception of bearings for roller journals, alternate openings varying in dimensions, the larger being greater than the diameter of the roller journals or portions of the roller between the journals to permit of the longitudinal removal of the journals or rollers through such openings, brackets arranged on the side frames in line, or approximately with the smaller openings in the frames and a roller driving shaft supported by said brackets.

6. The combination of a roller for feed tables, an annular bearing block having transverse dimension a little greater than the diameter of the roller journals or parts of the roller intermediate of the journals and mounted on one of the roller journals and a pinion secured to said journals and holding the block in position thereon.

In testimony whereof, I have hereunto set my hand.

JOSEPH FAWELL.

Witnesses:

J. HERBERT BRADLEY,

CHARLES BARNETT.