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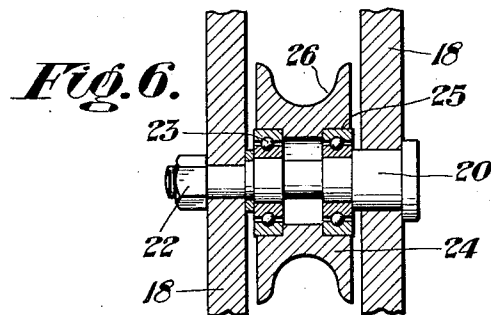
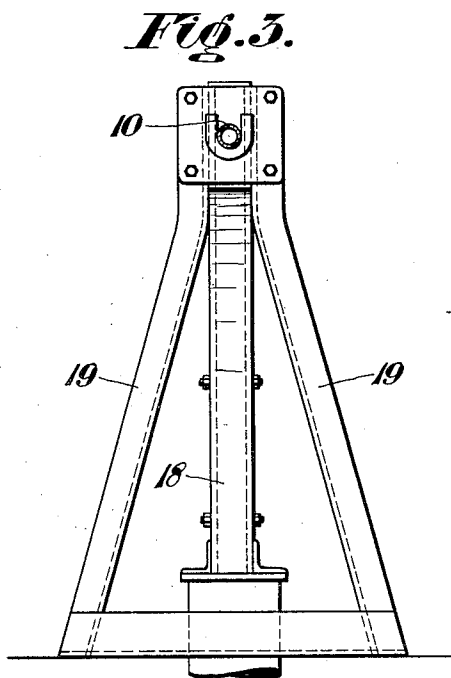
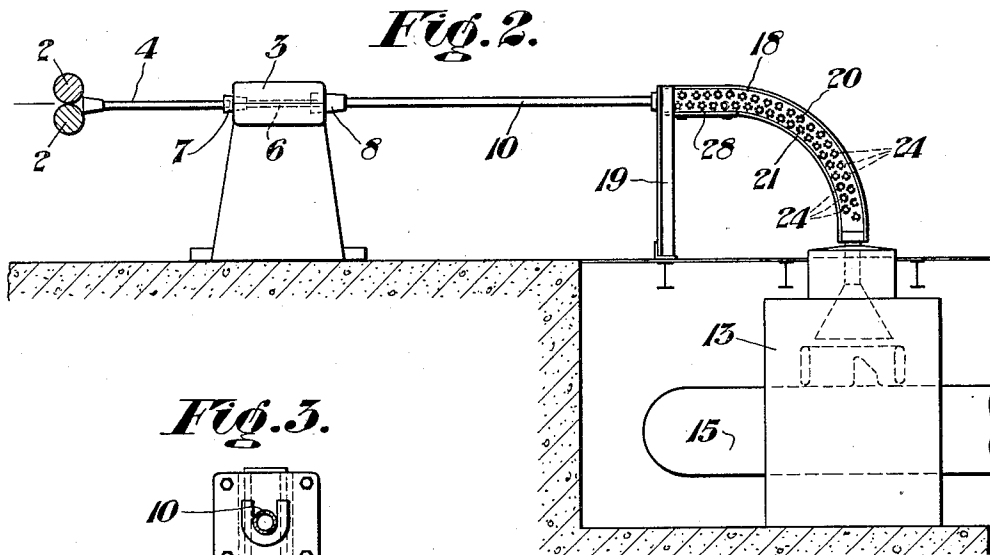
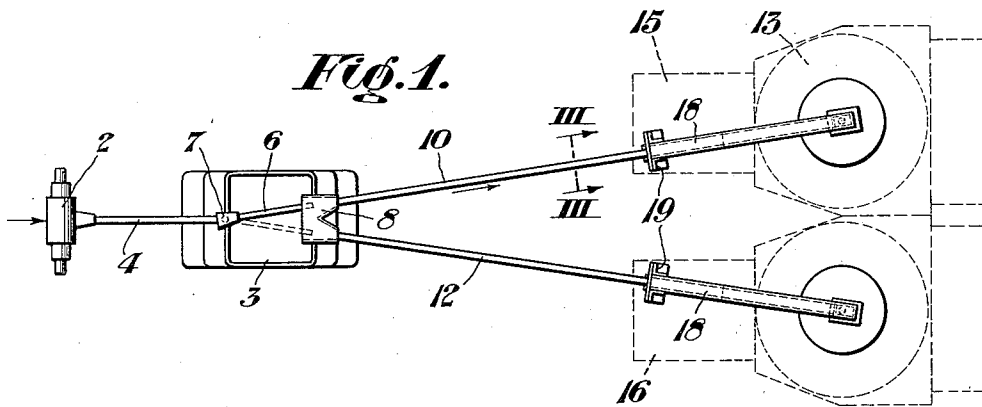
J. STATZ

2,017,378

GUIDE

Filed Dec. 29, 1933

2 Sheets-Sheet 1



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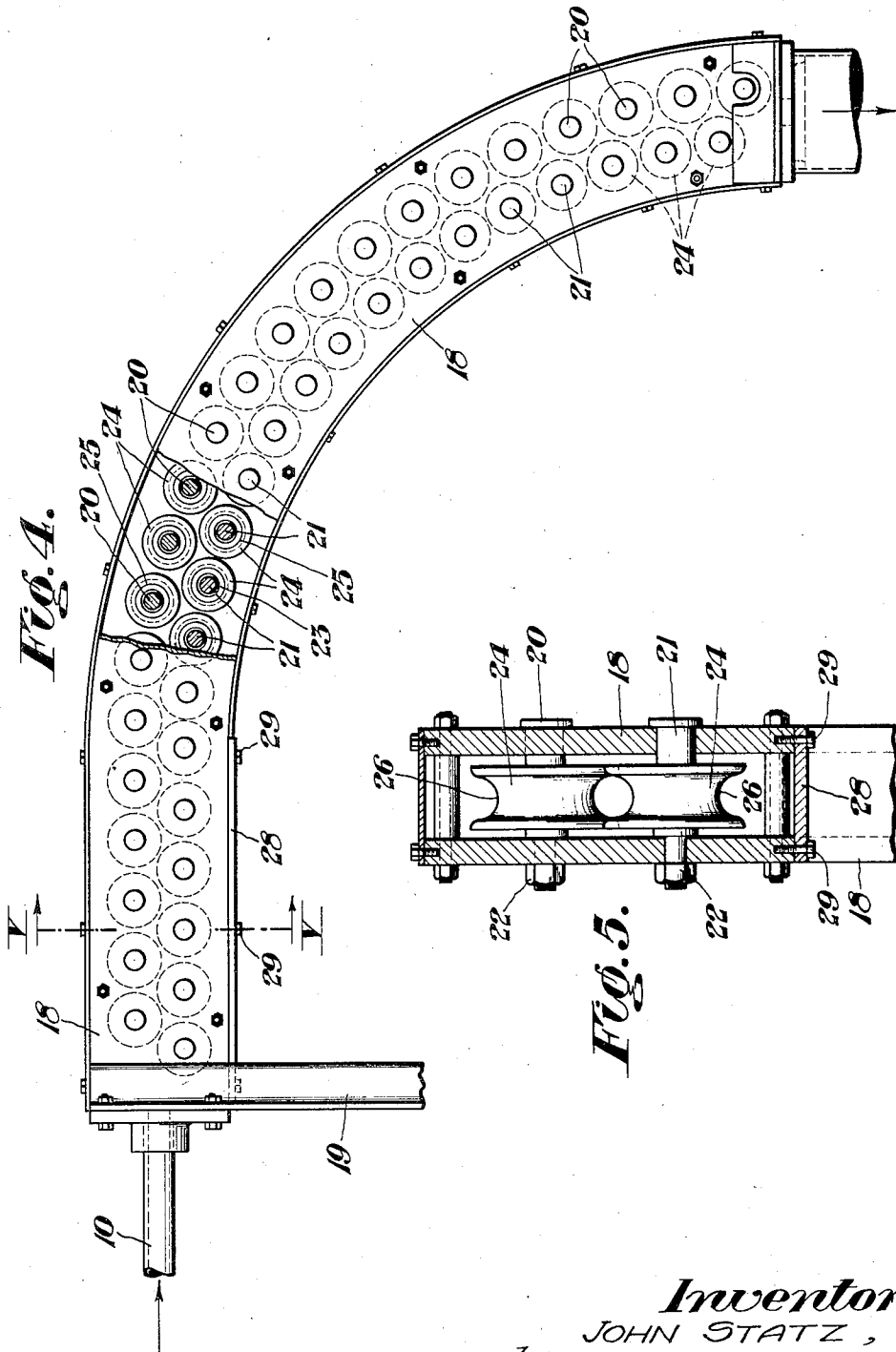
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,017,378

GUIDE

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Application December 29, 1933, Serial No. 704,567

1 Claim. (Cl. 80—51)

This invention relates to guides, and more particularly to those used for guiding hot rod from the end of a mill to an adjacently disposed reel, although not limited thereto.

5 In the manufacture of hot rod, considerable difficulty is met in satisfactorily guiding the work-piece to a reel, largely for the reason that the velocity of its trailing end is retarded by the usual curved tubular guide. While the rod is in
10 the rolls of the mill they force it through the curved tube to the reel, but as the trailing end leaves the rolls it has to be pulled along by the rotation of the reel. This results in the formation of small diameter coils, and a "pigtail" at
15 the end thereof. In addition to this, certain grades of high-carbon material have to be rolled at increased temperatures, otherwise they will stick in the curved tubular guide.

20 One object of the present invention is the provision of a novel guide for rod mills which will completely overcome the usual friction encountered, and thereby obviate the difficulties referred to.

25 Another object is to provide a novel device of the class described which may be cheaply and easily manufactured and installed on existing types of rod mills.

30 These and further objects of the invention will be apparent after referring to the drawings, in which:

Figure 1 is a plan of the apparatus of the invention as used on the exit end of a rod mill.

Figure 2 is a side elevation.

Figure 3 is an end elevation.

35 Figure 4 is an enlarged side elevation.

Figure 5 is a sectional view on the line V—V of Figure 4.

Figure 6 is a fragmentary sectional end elevation.

40 Referring more particularly to the drawings, the numeral 2 designates the exit rolls of a conventional rod mill. A rod shifter housing 3 is positioned adjacent the rolls 2, and provided with a feed-in tube 4. A rod shifter 6 is pivoted on
45 the upper portion of the housing 3, as at 7. The housing also carries a manifold 8 which is provided with rod outlet tubes 10 and 12, which convey the rods from the shifter 6 to reeling devices, as at 13 and 14. Each of the reels 13 and 14 is
50 provided with a conventional bundle conveyer, as at 15 and 16, respectively.

According to the present invention, a curved conduit 18 of substantially rectangular cross-section is mounted between the end of the delivery tubes 10 and 12 and their respective reels 13 and 14, and are each held in position by means
5 of a vertical support 19. A plurality of bolts 20 are arranged along the upper edge of the curved conduit 18 in a line conforming substantially to its axis, while a similar series of bolts 21 are disposed along the lower edge of the conduit 18 in
10 curved spaced relationship.

The bolts 20 and 21 are held against movement by means of nuts 22 on their ends, and each carries a pair of ball bearings 23 suitably maintained in spaced relationship. A plurality of rollers 24
15 are counterbored on their sides, as at 25, to receive the ball bearings 23 and thus be mounted one on each of the bolts 20 and 21. Each of the rolls 24 is provided with a grooved periphery, as at 26. It is found, in practice, that best results
20 are obtained by locating the bolts 20 and 21 in offset relationship with respect to each other.

When processing high-carbon steels, it is especially important that rods are not coiled while in contact with water from the mill. In order
25 to obviate this possibility, the under sides of the curved and substantially rectangular housings 18 are each provided with a removable plate 28, which is disposed relatively adjacent its vertical
30 support 19. The plate 28 is held in position by means of capscrews 29, which may be quickly removed when necessary.

While I have shown and described one specific embodiment of my invention, it will be understood
35 that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of my invention, as defined in the following claim.

I claim:

40 In a guide for rod mills, a support adjacent the reel for said mill, a conduit disposed between said support and said reel, a plurality of upper and lower shafts secured to said conduit and defining
45 a curved path between them, at least one anti-friction bearing on each of said shafts, and a grooved roller mounted on each of said bearings, said upper shafts being offset with respect to vertical planes through said lower shafts.

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