

No. 751,625.

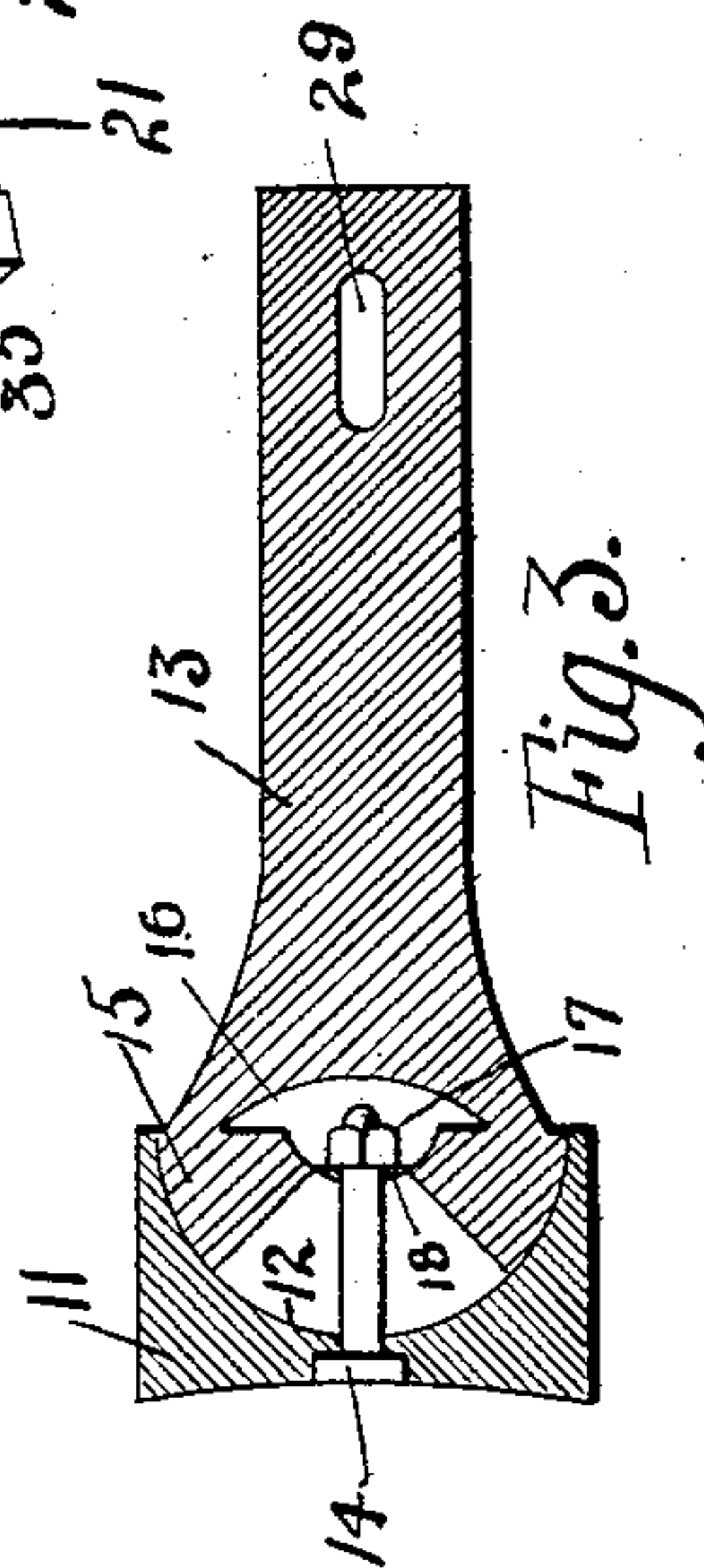
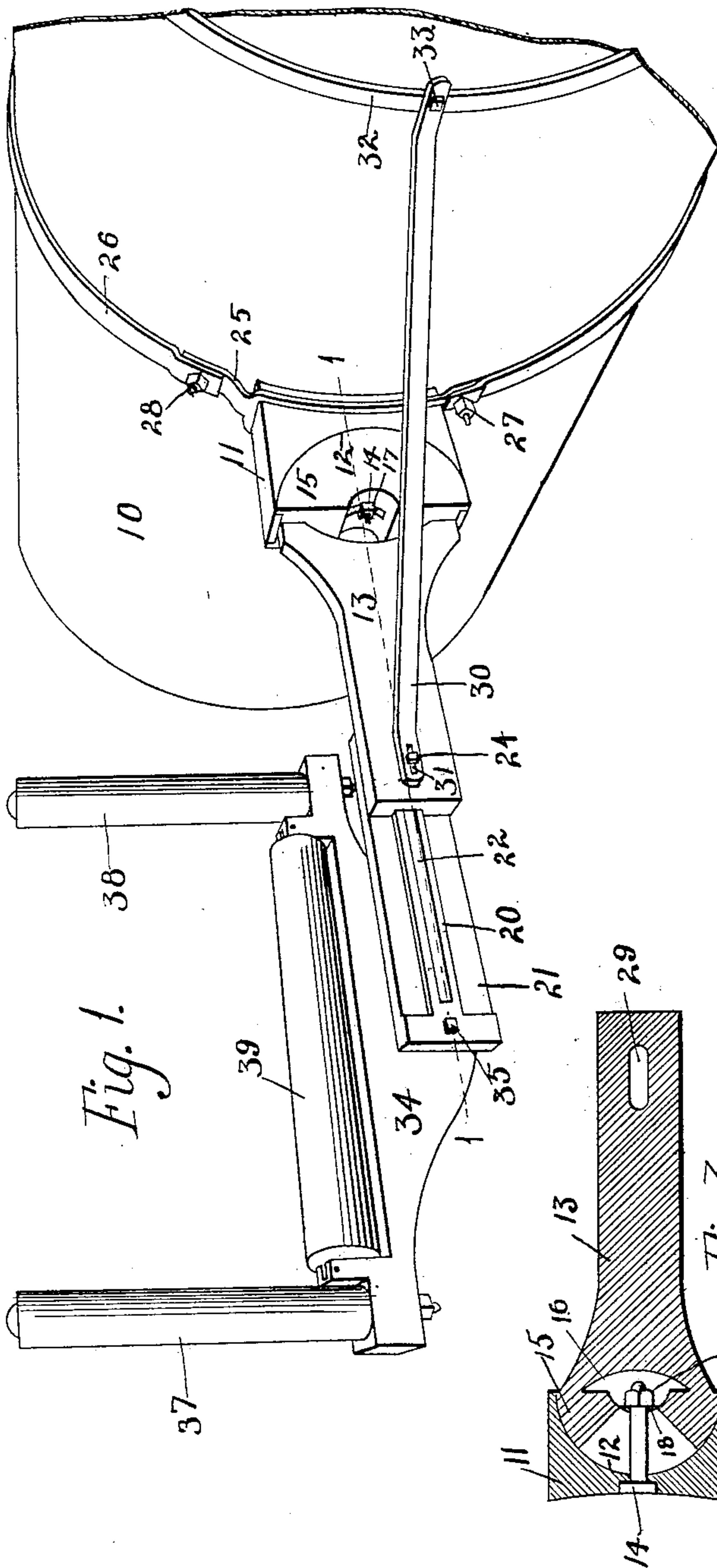
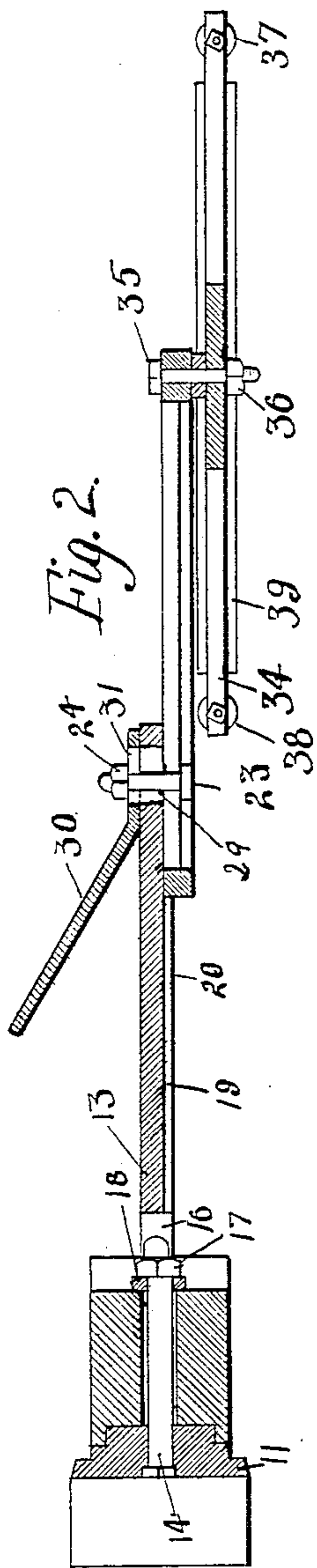
PATENTED FEB. 9, 1904.

H. E. FREIBERG.

BELT GUIDE.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY E. FREIBERG, OF DEXTER, IOWA.

BELT-GUIDE.

SPECIFICATION forming part of Letters Patent No. 751,625, dated February 9, 1904.

Application filed February 20, 1903. Serial No. 144,242. (No model.)

To all whom it may concern:

Be it known that I, HARRY E. FREIBERG, a citizen of the United States, residing at Dexter, in the county of Dallas and State of Iowa, have invented certain new and useful Improvements in Belt-Guides, of which the following is a specification.

The objects of my invention are to provide a belt-guide which can be easily and readily attached to the ordinary boiler of a traction or other engine and which can be adjusted so as to fit an engine where the belt runs close to the boiler or some distance away from it by means of an adjustable arm which is connected with the engine.

It is also my object to provide means for raising and lowering the guiding mechanism, so as to allow the belt to operate in my guide whether a large or small driving-wheel is used on the traction-engine.

It is further my object to provide a belt-guide which can be attached at any desirable position on the boiler of the engine and can be easily removed therefrom.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows in perspective the complete device attached to a boiler of a traction-engine, a portion only of the boiler being shown in this view. Fig. 2 shows a longitudinal sectional view of the complete device cut through the line 1 1 of Fig. 1. This view is an inverted view of the device; and Fig. 3 is a detail sectional view of the arm which is nearest the boiler of the engine and shows the way in which that arm is rocked in the block which is attached to the engine.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the boiler of any ordinary engine, the numeral 11 to indicate a block which is designed to fit against the side of the boiler. Said block has a semicircular portion 12 cut away from its outer extremity, designed to receive the

rocking arm 13. In the back portion of the block 11 and extending through said back portion into the central portion is the retaining-bolt 14. Mounted in the block 11 in such a way that its rear end extends into the semicircular opening in the front of the block 11 is the arm 13, having the semicircular rear end 15 and having a body portion extending forwardly from said semicircular portion 15. A slot is cut into the semicircular portion 15 of the arm 13 to allow the bolt 14 to pass through the semicircular portion 15 and allow it to swing in the semicircular groove of the block 11. I have cut away a small opening transversely of the arm 13 and have designated this opening by the numeral 16. The outer end of the bolt 14 is designed to pass into said opening and allow the nut to be screwed up on the screw-threaded portion of the nut, thus holding the arm 13 firmly in position relative to the block 11 when the nut is screwed upon the bolt 14 sufficiently. Between the nut 17 and the rear edge of the opening 16 I have provided a washer 18, having a semicircular inner face so arranged that when the nut 17 is loose upon the bolt 14 the arm 13 can be readily and easily rocked, so that its outer end can be raised and lowered without difficulty.

Extending longitudinally of the arm 13 is a groove 19, designed to admit into it the projection 20 on the sliding member 21. Through this sliding member and extending through the projection 20 is a longitudinal slot 22, designed to admit through it the bolt 23, which bolt extends through the arm 13 also. When the nut 24 is loose upon the bolt 23, the sliding member 21 can be moved longitudinally of the arm 13, and when the nut 24 is screwed toward its inner limit of movement upon the bolt 23 the sliding member 21 and the arm will be drawn into close contact with each other and held firmly relative to each other. Attached to the inner end of the block 11 is a retaining-lug 25, said retaining-lug being so attached to the block 11 that when the band 26 is attached to it and passed over the boiler the block 11 will be held firmly in place relative to the boiler. The band 26 is attached to the lug 25 by means of the bolts 27 and 28. It

will be seen that by removing these bolts 27 and 28 the belt-guide can be easily removed from the boiler of the engine, so far as these bands are concerned. In the outer end of the arm 13 is a small slot 29, through which the bolt 23 passes. On the side of the arm 11 which is away from the sliding member 21 is the bar 30, having a slotted portion 31 in that end of it which is nearest the arm 13. This slotted portion 31 is of substantially the same size as the slotted portion 29, and it is also designed to receive through it the bolt 23. The other end of this bar 30 is attached to the boiler by means of the band 32 to the bar 30. The slotted portions 29 and 31 in the arm 13 and the bar 30, respectively, are designed to allow the outer end of the arm 13 to be raised upwardly and downwardly a slight distance by rocking said arm in the semicircular portion of the block 11. These slots 29 and 31 are not necessarily very long, as the upward-and-downward movement of the outer end of the arm 30 is usually not very great.

Pivotaly mounted to the outer end of the sliding member 21 and on the side of it which is away from the arm 13 is the roller-support 34. Said roller-support is secured to the sliding member 21 by means of the bolt 35. This roller-bearing support can be maintained in any position by having the nut 36 upon the bolt 35 screwed firmly against the roller-support 34, and thus cause the roller-support and the sliding member to be held firmly together. To adjust it, the nut 36 is unscrewed a slight distance and when the exact position is obtained the nut is screwed toward the roller-support to thus hold it firmly in position to the sliding member 21. Extending upwardly from the ends of the roller-support 34 are the rollers 37 and 38, which may be rotatably mounted upon the roller-support or not, at the pleasure of the operator. Mounted longitudinally of the roller-support 34 and between the rollers 37 and 38 is the roller 39. Said roller can be easily detached from the roller-support 34 at the pleasure of the operator, and a roller of greater or less diameter can be used in its place. This roller 39 is rotatably mounted. The belt of the traction-engine is passed over the roller 39 and between the rollers 37 and 38, and it will be prevented from being thrown off the driving-wheel when in operation. Should it be desirable to remove the belt from the traction-wheel, the nut 36 upon the bolt 35 could be loosened and the roller-bearing support given a quarter-turn upon its bearing and the belt will be thrown off from the driving-wheel.

In practical use the operator attaches the block 11 to the boiler by means of the band 26 and the bolts 27 and 28 in the manner above described and adjusts the arm 13 in

position, the bar 30 to the arm 13 and to the boiler, and places the sliding member in position, adjusts the roller-bearing support, and the device is ready for use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. In a belt-guide, the combination of a support, a band which is capable of being passed around the boiler of an engine for holding the support in position relative to the boiler of the engine, said support having a semicircular portion thereto cut away, an arm capable of a rocking movement, having a semicircular rear end designed to fit in the semicircular opening and capable of rocking movement therein, rollers mounted on said arm for the purposes stated.

2. In a device of the class described, the combination of a supporting-block detachably connected with the boiler of an engine, said block having a semicircular portion thereof cut out of its forward end, an arm capable of a rocking movement, having a semicircular rear end designed to fit in the block, means for holding the rocking arm to the block and maintaining it in any position throughout its limited movement, belt-guiding rollers mounted on said arm for the purposes stated.

3. In a belt-guide, the combination of a supporting-block having a portion cut away to form a semicircular opening at its forward end, an arm capable of a rocking movement, having a semicircular rear end designed to fit in the portion of the block which is cut away, means for holding said arm in position with the block and sliding member attached to said arm, means for holding the sliding member and the block together, and to maintain the sliding member in any position throughout its limited movement, a roller-bearing support pivotaly mounted at the outer end of said sliding member, for the purposes stated.

4. In a belt-guide the combination of a supporting-block having a portion cut away to form a semicircular opening at its forward end, an arm capable of a rocking movement, having a semicircular rear end designed to fit in the portion of the block which is cut away, means for holding said arm in position with the block and sliding member attached to said arm, means for holding the sliding member and the block together, and to maintain the sliding member in any position throughout its limited movement, a roller-bearing support pivotaly mounted at the outer end of said sliding member, means for detachably connecting the supporting-block to the boiler of an engine, for the purposes stated.

5. In a device of the class described, the combination of a supporting-block having a portion thereof cut away to form a semicircular opening at its forward end, an arm capable of a rocking movement having a semi-

circular rear end to fit in the supporting-block, and sliding member adjustably mounted to the arm and roller-bearing support pivotally attached to the sliding member and a band for detachably connecting the block with the boiler of a machine for the purposes stated.

6. In a device of the class described, the combination of a supporting-block having a portion thereof cut away to form a semicircular opening at its forward end, an arm capable of a rocking movement having a semicircular rear end to fit in the supporting-block and sliding member adjustably mounted on the arm, and roller-bearing support pivotally attached to the sliding member, two vertical rollers mounted on the roller-bearing support, at each end thereof and a horizontal roller mounted between said vertical rollers, for the purposes stated.

7. In a device of the class described, the combination of a supporting-block having a portion thereof cut away to form a semicircular opening at its forward end, an arm capable of a rocking movement having a semicircular rear end to fit in the supporting-block and sliding member adjustably mounted on the arm, and roller-bearing support pivotally attached to the sliding member, two vertical rollers mounted on the roller-bearing support, at each end thereof a horizontal roller mounted between said vertical rollers, and a band for detachably connecting the block to the boiler of an engine, for the purposes stated.

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