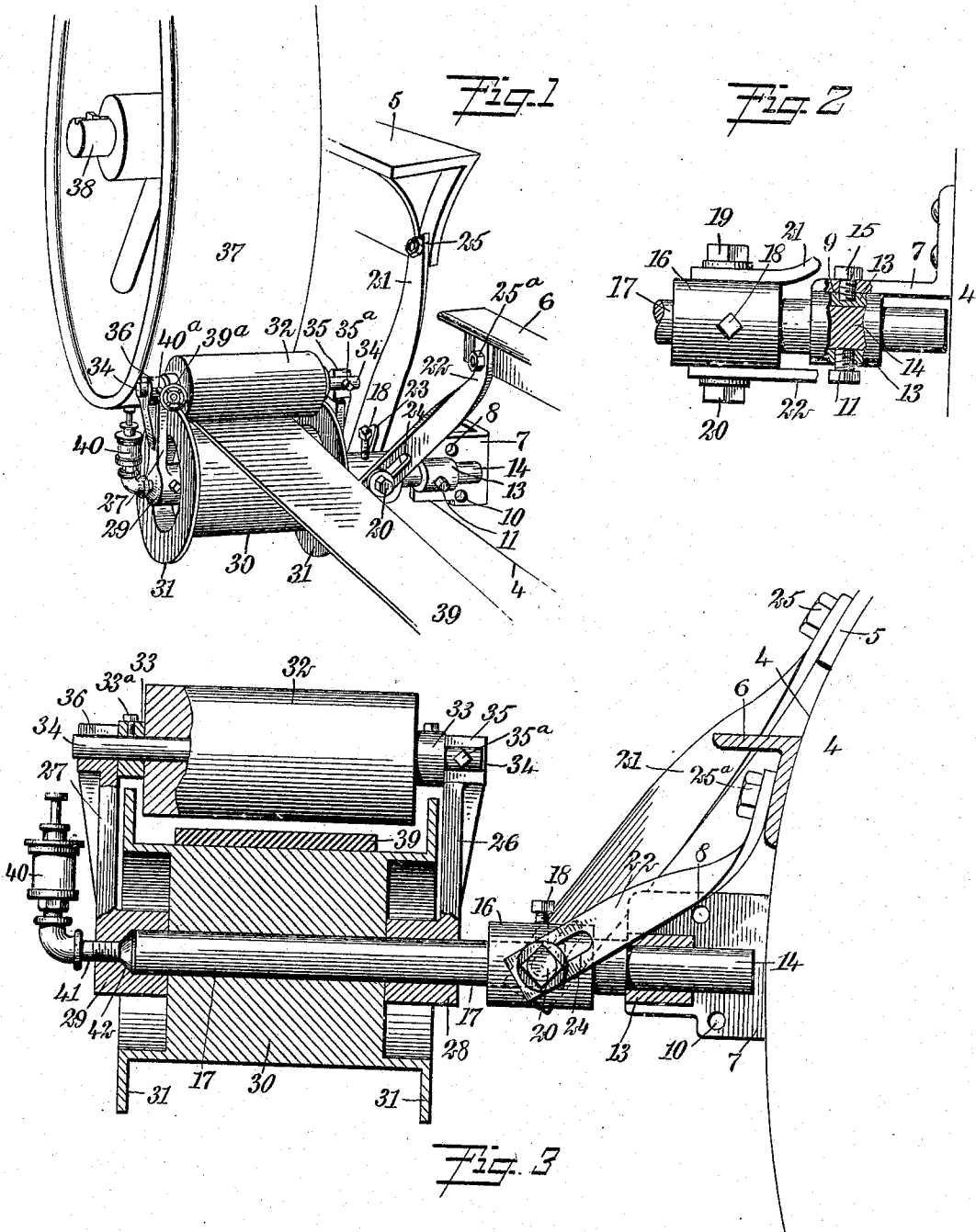


G. H. TENPAS.
BELT GUIDE.
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936,830.

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GARRET HENRY TENPAS, OF SHERMAN, NEW YORK.

BELT-GUIDE.

936,830.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GARRET H. TENPAS, a citizen of the United States, and a resident of the town of Sherman, in the county of Chautauqua and State of New York, have invented a new and Improved Belt-Guide, of which the following is a full, clear, and exact description.

My invention relates to belt guides, my more particular purpose being to provide an efficient form of belt guide for use in connection with portable engines and including means whereby, in a few minutes of time, various adjustments may be made relative to the position occupied by the moving belt.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective showing my improved belt guide in use; Fig. 2 is an enlarged fragmentary plan view, partly broken away and in section, of the spindle for carrying the guiding pulley, this view also showing some of the mountings for said spindle; and Fig. 3 is an enlarged cross section through the guiding belt and its accompanying parts.

A boiler is shown at 4 and is provided with a supporting plate 5 and with a running board 6. A bracket 7, of substantially L shape, is secured rigidly upon the side of the boiler and is provided with bolt holes 8, 9, 10. A bolt 11 extends into a collar 13 and against a supporting rod 14, which sustains a cylindrical head 16, these parts being integral. Another bolt 15 extends through the bracket 7 and from the back side, that is, through any one of the holes 8, 9, 10, and holds the collar 13.

A stationary shaft 17, having generally the form of a solid cylinder is extended into the head 16 which has generally the form of a hollow cylinder for the purpose of receiving it. A bolt 18 extends into the head 16 for the purpose of engaging the stationary shaft 17 and holding the latter rigid in relation to the supporting rod 14. Bolts 19, 20 engage the head 16 and for this purpose extend through the brackets 21, 22 which are provided with slots 23, 24, to accommodate the bolts. The purpose of the bolts 19, 20 is to hold the brackets 21, 22 tightly against the head 16 while the belt is running, so as to maintain the shaft 17 exactly in a pre-

termined position, and to prevent the shaft from swaying. The slots 23, 24 allow shifting of the bolts 19, 20 to permit the adjustment of the head 16, and once adjusted the head remains rigid. The holes 8, 9, 10 in the bracket 7 are for the purpose of raising or lowering the belt guide as a whole, thus accommodating my device, when once constructed, to any size or type of engine.

The brackets 21, 22 are held in position by aid of bolts 25, 25^a which engage the lower portions of the supporting plate 5 and the running board 6. Brackets 26, 27 are provided with bearings 28, 29 which engage the shaft 17. A guide pulley 30 is provided with flanges 31 and is revolvably supported upon the shaft 17. An idle roller is shown at 32 and is mounted upon a stationary shaft 34 by aid of set collars 33 and bolts 33^a. The idle roller 32 extends a little distance intermediate the flanges 31 carried by the guide pulleys 30, as indicated in Fig. 3. This arrangement effectively prevents the belt 39 from traveling edgewise beyond certain limits. One end of the shaft 34 is pivotally mounted upon a bolt 35^a supported by a head 35 which is integral with the bracket 26. The bracket 27 is provided with a slot 36 which serves as a bearing for the other end of the shaft 34, and said end of the shaft is held stationary by means of a hand wheel 39^a having a stem 40^a entering the head of the bearing 27 and engaging the shaft 34.

The main pulley of the engine is shown at 37 and is keyed upon a revoluble shaft 38. A belt 39 engages this pulley and is in operative relation to the same. At 40 is an oil cup which by aid of a pipe 41 is connected with the bearing 29, the latter having a conical oil space 42 into which the oil gravitates from the cup 40 so as to lubricate the pulley 30 and the portion of the shaft 17 upon which said pulley runs.

The operation of my device is as follows: The parts, except the belt, being arranged as above described, the engineer brings the belt into engagement with the pulley 37 and secures the belt between the rollers 32, 30. This holds the belt, and the engine is now backed up so that the belt is tightened. The engine being in operation, the belt turns the pulley 30 constantly, the flanges 31 preventing the belt from moving sidewise to any great extent relatively to the pulley 37. If a strong wind be blowing against the belt

it naturally has a tendency to shift the belt relatively to the pulley 37, but such tendency is counteracted by the device above described. By shifting the bolt 15 and consequently shifting the position of the sleeve 13, the position of the rollers 30, 32, considered as a unitary structure, may be varied within proper limits and the belt thus adjusted relatively to the pulley 37.

10 From the above description it will be seen that the belt guide, as a whole, can be brought into the same plane with the engine drive pulley, no matter if the size or type of the engine may be considerably different
15 from the one shown in the accompanying drawings. In some engines, the drive pulley is farther away from the boiler than in other engines, and notwithstanding this fact, my belt guide can be adjusted to practically
20 any engine.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a belt guide, the combination of a
25 roller provided with flanges, a second roller disposed parallel to said first-mentioned roller and extending intermediate said flanges so as to confine a belt between said rollers, connections from one of said rollers
30 to the other for supporting one of said rollers, and means for supporting the other of said rollers.

2. In a belt guide, the combination of a normally stationary shaft adapted to be
35 shifted bodily so as to alter the general position of the axis of rotation thereof, a pulley mounted upon said shaft and loose relatively thereto, brackets secured upon said shaft and extending laterally therefrom, a
40 second shaft mounted upon said brackets, and a roller mounted upon said second shaft for the purpose of engaging a belt disposed intermediate said rollers.

3. The combination of a normally fixed

shaft, brackets mounted upon said shaft and
45 extending laterally therefrom, a roller revolvably mounted upon said shaft intermediate said brackets, said roller being provided with flanges, another shaft journaled upon said
50 brackets, and a guide roller mounted upon said shaft and extending intermediate said flanges.

4. The combination of a stationary bracket mounted upon a boiler or the like, a normally stationary shaft supported by aid of
55 said bracket, a plurality of other brackets extending toward said shafts and provided with slots, bolts extending through said slots, a sleeve encircling said shaft and engaged by said bolts for the purpose of
60 steadying said shaft, brackets mounted upon said shaft, a roller mounted upon said shaft and disposed intermediate said last-mentioned brackets, an idle roller revolvably supported by said last-mentioned brackets, and
65 a belt disposed intermediate said first-mentioned roller and said idle roller.

5. The combination of a stationary bracket to be mounted upon a boiler or the like, said stationary bracket being provided with a
70 plurality of holes, a collar to be mounted upon said bracket, a bolt for extending through any one of said holes chosen at will and engaging said collar for the purpose of supporting the latter in different positions,
75 a shaft mounted upon said collar and extending outwardly from said bracket, a guide pulley journaled upon said shaft and adapted to engage a belt, and brackets for bracing
80 said shaft in order to render the same steady.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GARRET HENRY TENPAS.

Witnesses:

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