Oct. 31, 1939. J. H. ESTERS 2,177,936

TRACK SHOE

Filed June 7, 1937

Fig. 1

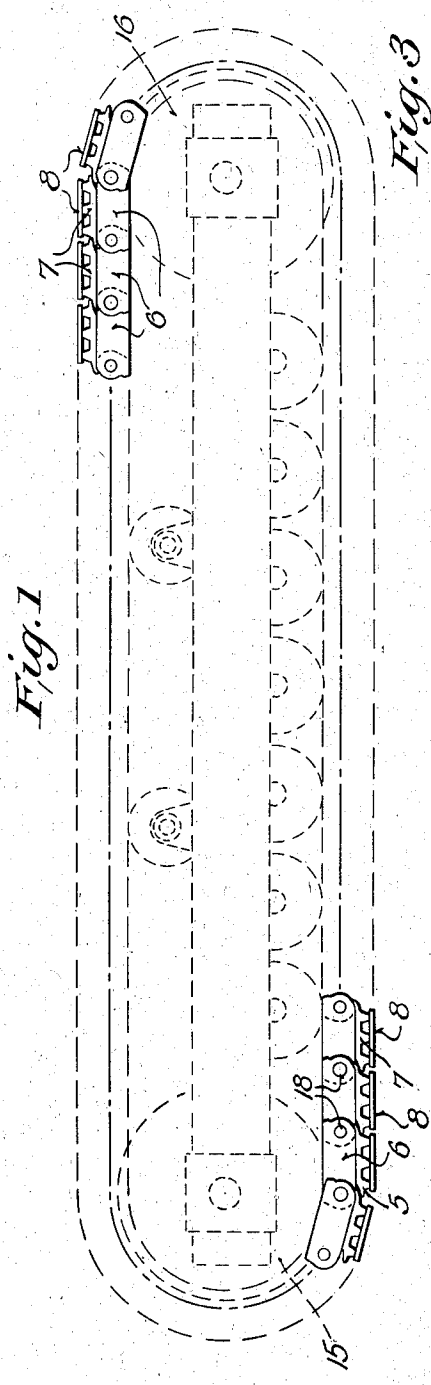


Fig. 3

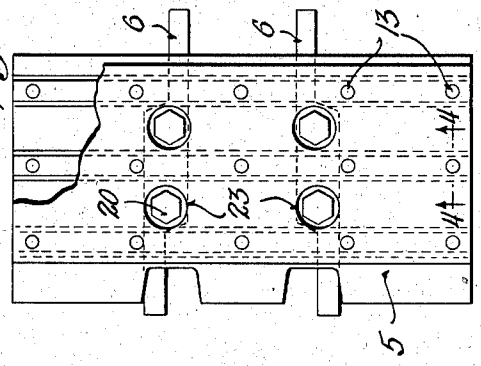


Fig. 4

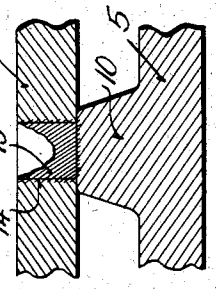
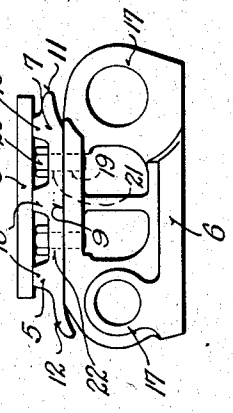


Fig. 2



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UNITED STATES PATENT OFFICE

2,177,936

TRACK SHOE

Joseph H. Esters, Milwaukee, Wis., assignor to Harnischfeger Corporation, Milwaukee, Wis., a corporation of Wisconsin

Application June 7, 1937, Serial No. 146,886

1 Claim. (Cl. 305—10)

The invention relates to track shoes for endless treads for vehicles such as excavators.

The main object of the invention is to improve on that type of track shoe in which transversely extending spaced ribs are provided with means passing through the webs between the ribs for fastening the shoe to the links forming part of the endless chain that passes over the guide and drive sprockets of the tread structure. According to the present invention a shoe of the above type is modified and made capable of use on heavy excavator machinery by integrally attaching to the tops of the ribs a plate which is welded thereto by plug welding at spaced points along said ribs, the plate also being provided with openings in line with the means for fastening the shoe body to its carrying link.

The invention further consists in the several features hereinafter set forth and more particularly defined by the claim at the conclusion hereof.

In the drawing:

Fig. 1 is a side elevation view of a portion of the track structure embodying the invention with other portions shown in dotted;

Fig. 2 is a detail side elevation view of one of the track units;

Fig. 3 is a plan view of the unit with parts broken away;

Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3.

Referring to the drawing, the endless tread track structure comprises a plurality of units, each having a shoe 5 and a pair of side bars or links 6 secured thereto.

Each shoe 5 is formed of a member 7 and a member 8. The member 7 is of rolled steel having a flat bottom 9 and channelled upper surface providing spaced transversely disposed ribs 10, there being a centrally disposed rib and ribs at the ends of said member and transversely disposed tongues 11 and 12, the tongue 11 of one shoe intermeshing with a tongue 12 of the other shoe in the assembled condition of the track.

The member 8 of the shoe is in the form of a flat plate coextensive with the ribbed portion of the member 7 and secured thereto by plug welds 13, the welding metal being deposited in openings 14 formed in the plate and being in welding contact with the sides of said openings and the top portions of said ribs 10.

The side bars 6 have apertured end portions 17 offset relative to each other and carrying pins 18 which extend beyond said links and are adapted to engage the teeth of the drive and guide sprockets 15 and 16.

The tops of the bars 6 are provided with spaced tapped holes 19 to receive the shoe fastener bolts 20 that pass through spaced openings 21 in the web portions 22 of the member 7 and are insertable through enlarged openings 23 in the top tread member 8, said bolts providing for the ready removal and replacement of the shoe.

With the above construction the shoe is greatly reinforced over the type in which the member 7 alone forms the shoe which was only suitable for light weight tractors whereas the present structure is well adapted for supporting heavy excavating machinery, such as cranes and shovels.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claim.

What I claim as my invention is:

In a track shoe construction, the combination with carrying means, of a shoe having a part provided with spaced transversely disposed ribs, a plate coextensive with the tops of said ribs and integrally connected with the tops of said ribs and provided with openings, bolts insertable through said openings and extending through openings in the first named part of said shoe between said ribs and having threaded engagement with said carrying means.

JOSEPH H. ESTERS.