The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to us of any royalty thereon.

This invention relates to a track shoe with a replaceable wheel and track pad.

More particularly, this invention relates to an endless track truck comprised of track shoes provided with a molded rubber pad which can be installed in the cavity of the track shoe to form both the wheel pad and road pad. The pad requires no bond to the track shoe, but is mechanically fixed in place.

This invention is in the nature of an improvement over prior art devices, such as that disclosed by the patent to Louis Speidel, Sr., Royal Oak, and Edward J. Gow, Jr., Oak Park, Mich., assignors to the United States of America as represented by the Secretary of the Army filed Apr. 25, 1961, Ser. No. 105,523.

The prior art device discussed above is illustrated in FIG. 1. The endless track of our invention consists of a series of track shoes 2 connected and held together by link pins (not shown) passing through aligned bearings 4 and 6. The track shoes 2 are all identical and each comprises a metal band 8 to which grouser portions 10 and bearing 4 are integrally attached. Bearing 6 is, in turn, integrally attached to grouser 10. The inner walls of metal band 8, as best seen in FIG. 4, the drawings, are tapered toward a horizontal plane through the center of band for a purpose made clear hereinafter.

Although the specific details of the track shoe construction are described and shown, they are not considered part of the invention, and it is to be understood that this invention is not limited to use with a specific track shoe but is to be considered equally useful with track shoes of different designs.

A block 12 of rubber or rubber-like material, having side walls complementary to the band 8, but having a volume slightly greater than that enclosed by band 8, is compressed into band 8. The block is reinforced by an exaggerated T-shaped metal bar 14, bonded to the block at the time the block was formed and vulcanized. The compression fit of the rubber block 12, the tapered walls of band 8 plus the bolts 16, 18, 20, connecting bar 14 to the track shoe 2, all maintain the rubber block 12 in tight engagement with band 8, and make the use of adhesives unnecessary.

The block 12 thus installed within band 8 forms both the wheel pad 22 and the road pad 24 of track shoe 2. The portion 26 shown in FIG. 4 extending past the encircling band 8 is provided to protect the band from abrasive contact with the roadway. Guide members 28 and 30 are located centrally of the shoe, occurring as raised portions of the web 32 which is integral with the body of the track shoe 2.

The fact that block 12 is not utilized as a bearing for the link pins of the endless track, prolongs the life of the block and enables removal of a worn block without the necessity of opening the endless track.

It is understood that various modifications may be apparent to those skilled in the art without departing from the spirit and scope of the invention, and the invention is not to be limited to the illustrated embodiments except as included in the appending claims.

We claim:
1. An endless track, embodying articulated track shoes, each shoe comprising a metal band, a pair of spaced bearings on each longitudinal side of said shoe, corresponding bearings of adjoining track shoes being in alignment when link pins are inserted through aligned bearings of adjoining shoes, a block of rubber or rubber-like material compressed into said band and having its outer and inner parallel surfaces exposed to serve as both a wheel pad and a road pad and a reinforcing bar bonded within said block, the ends of said bar being detachably secured to the inner walls of said band.
2. The endless track of claim 1 wherein the inner walls of said band are tapered from each edge toward a horizontal plane drawn through the center of said band, said block having edges formed with V-grooved channels complementary to the tapered inner walls of said band.
3. The endless track of claim 2 wherein the reinforcing bar is T-shaped.
4. An endless track embodying articulated track shoes, each shoe comprising a metal band enclosing a substantially rectangular area, said band having its inner walls tapered inwardly from each edge toward a horizontal plane drawn through the center of said band, a pair of spaced bearings on each longitudinal side of said band, corresponding bearings of adjoining track shoes being in alignment when link pins are inserted through aligned bearings of adjoining shoes, a block of rubber
or rubber-like material compressed into said band and having its outer and inner parallel surfaces exposed to serve as both a wheel pad and a road pad for said shoe, said block having edges formed with V-grooved channels complementary to the tapered inner walls of said band, said block having a height greater than said band, and a T-shaped reinforcing bar bonding within said block, the three ends of said T-bar being detachably secured to said band, said T-bar lying in a plane perpendicular to said block surfaces.

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