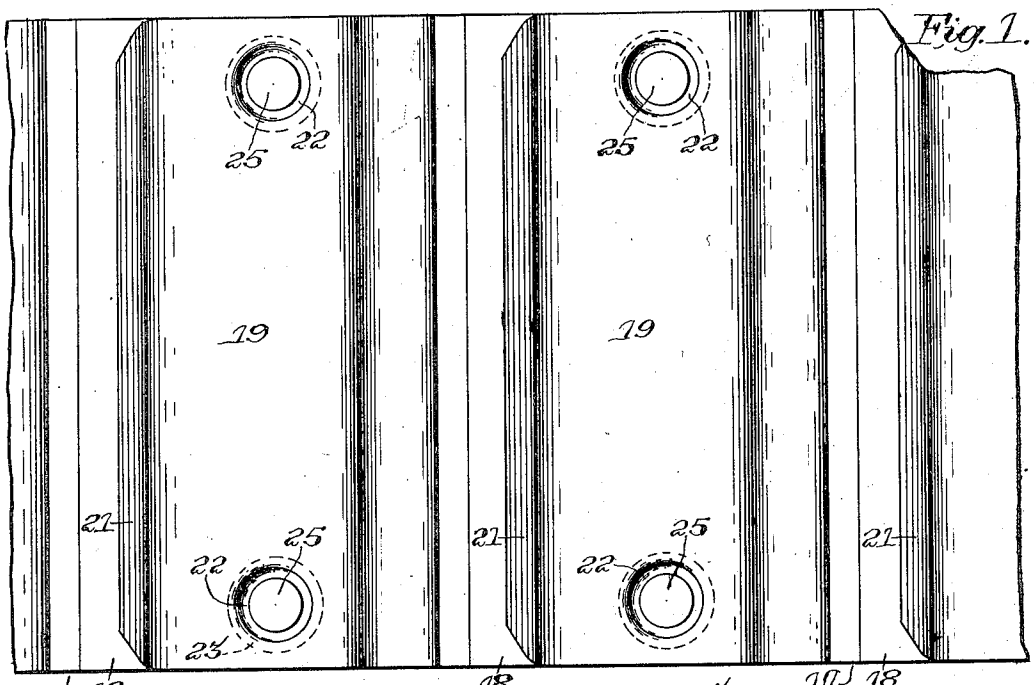
Jan. 21, 1936. N. O. PANZEGRAU 2,028,346

STREET PLATE FOR TRACK SHOES

Filed June 5, 1935

Fig. 1.



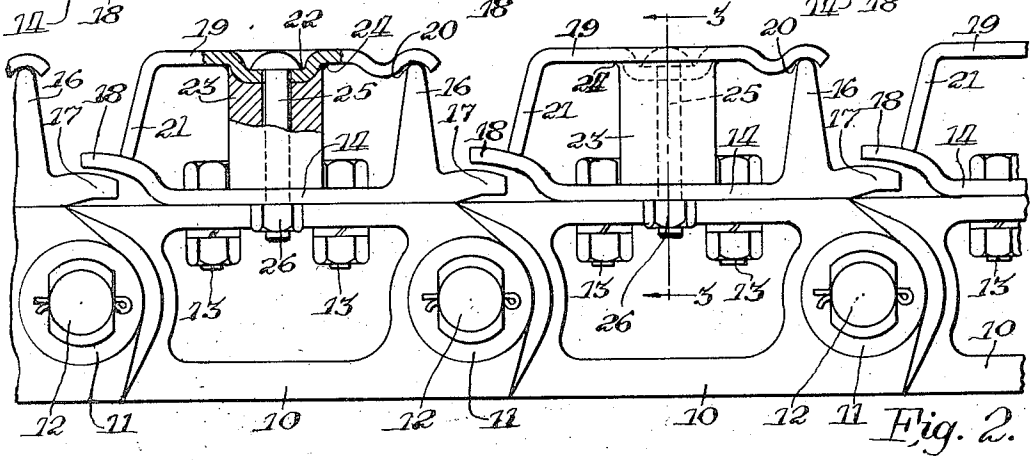
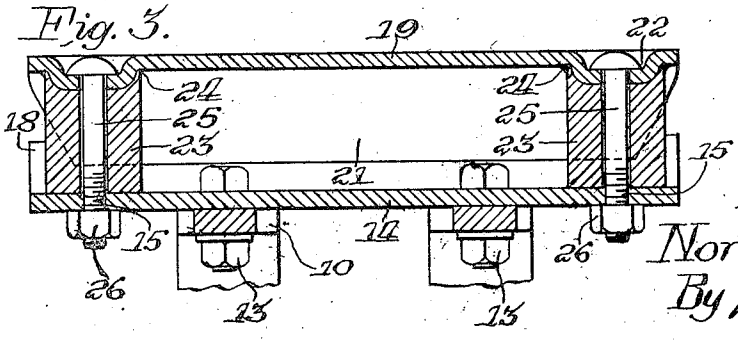


Fig. 2.

Fig. 3.



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STREET PLATE FOR TRACK SHOES

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10 Claims. (Cl. 305—10)

This invention relates to a street plate attachment for the track shoes used on the endless track bands in crawler tractors.

These track bands are usually made up of a series of articulately connected links, each set of which carries a track shoe plate which usually is provided with a transverse lug to increase the tractive effort of the endless shoe belt when traversing the ground. When such endless track belt is run over street pavements it is found that the lugs cut into and severely damage the pavement and that, as a consequence, laws have been passed to prohibit the operation of track belts provided with such lugs from operating on pavements.

It is desirable, therefore, that a so-called street plate attachment be provided for these shoes, so as to present a broad, flat surface that will make the lugs inoperative for traction purposes and prevent them from cutting into the pavements. In other words, such street plate will be in the form of a shield to prevent the lugs on the shoes from injuring street pavements and the like.

The main object of the invention is to provide an improved street plate attachment for track shoes employed in crawler tractors.

Another object is to provide such a device which will be simple and inexpensive to produce and practicable in operation.

It is another object to provide such a street plate attachment which can very easily be attached and detached from the shoe on the track band.

Other objects will become apparent to those skilled in this art as the disclosure is more fully made.

These important objects may be achieved by the practicable form of the invention herein chosen for the purposes of the disclosure, and in which form the street plate embodies a flat portion carrying between its ends a pair of sleeves disposed at a right angle to the flat portion and preferably welded thereto to become an integral part of the plate. One end of the plate is provided with a corrugated groove to fit over the lug on the shoe, while the opposite end of the plate is bent at an angle to provide a leg flange, the end of which is adapted to abut the other end of the shoe. Bolts are passed through the plate and its sleeves and also through holes formed in the shoe for securing the plate to the shoe, all as will hereinafter more fully appear.

In the accompanying drawing,—

Figure 1 is a plan view of a section of the track shoe belt used on a crawler tractor, showing the improved street plates connected thereto, the view being taken looking at the ground or street engaging side of the belt;

Figure 2 is a side elevational view of a section of the track shoe band showing the street plates in position with a portion of the drawing shown in section to illustrate the manner of connecting the plate attachment to the track shoe; and,

Figure 3 is a transverse cross sectional view through the track shoe band with the street plate attached, taken along the line 3—3 of Figure 2 looking in the direction of the arrows.

These track shoe bands for crawler tractors have in recent years become quite standard in construction, the same comprising, as shown in Figure 3, pairs of parallel side bars or chain links 10 arranged in spaced relation with the proximate ends of one pair of side-by-side arranged links 10 carrying a bushing 11 passed through apertures formed in the said ends of the links, while the other proximate ends of the links have openings to receive a pivot pin 12. The side bars 10 of one pair of links overlap the ends of the adjacent pair of links, so that the sleeves 11 and pins 12 cooperate for pivotally connecting adjacent ends of the links in adjacent pairs in the usual manner of assembling so-called roller chain. The side bars 10 are formed with openings to receive bolts 13 for securing across each pair of side bars 10 the track shoe 14, which generally comprises a flat plate spanning the space between the side bars 10 and extending laterally at its edges beyond the side bars, as shown in Figure 3, said track shoe having parallel side edges, near which side edges is arranged at each side, a hole 15 outwardly of the links 10 for a purpose later to appear.

Each track shoe 14 adjacent one end is formed with a transversely disposed lug 16 which serves as a traction increasing grouser. This lug 16 is usually several inches deep and obviously does much damage to pavements when operating thereover because of its digging and cutting action.

Adjacent the lug 16 the plate is formed with a curved flange end 17 and at its opposite end the track shoe 14 is formed with a small curved flange end 18. From this it will be seen that the flange 18 on one shoe overlaps the flange 17 on the adjacent shoe to form what is known as the overlapping type of shoe.

The improved shoe plate attachment is preferably made of heavy sheet metal and embodies a flat street engaging portion 19 of a width substantially equal to the width of the track shoe 14 and having substantially parallel side edges.

One end of the street plate 19 is formed with a transverse corrugation 20, which snugly fits over the free edge of the transverse lug 16 while the opposite edge of the street plate 19 is bent at an abrupt angle, as shown at 21, to form what might be termed a leg flange that is adapted to abut and rest on the outer surface of the curved end 18 of the track shoe 14.

Opposite side edges of the plate 19 in radial alignment with the holes 15 in the track shoe 14 are countersunk to form depressions 22, which depressions are apertured, as shown in Figure 2, and arranged in transverse alignment, as shown in Figure 1. Fitted over these depressions 22 on the inner side of the plate 19 are respective spacer sleeves 23 having countersunk ends to fit over the depressions 22, said sleeves, as shown at 24, being securely welded to the plate 19 and around said depressions 22 whereby said sleeves 23 are securely and integrally attached to and formed as a part of the plate 19. These sleeves 23 act as supporting posts or columns and are adapted to have their inner ends flushly arranged against the outer surface of the shoe plate 14 with the bore in the sleeves 23 registering with the holes 15 in opposite ends of the shoe plate 14. A headed bolt 25 is then inserted through the street plate 19 and the openings therein in the depressions 22, through the sleeves 23 and through the holes 15. Nuts 26 are attached to the bolts 25 from the back side of the track shoe 14 securely to attach the street plates 19 to the track shoes 14. It is to be observed that the heads of the bolts lie in the countersunk depressions 22 with the outer ends of the heads of the bolts lying flush with the street engaging surface of the street plate 19.

From this disclosure it will now be appreciated that the street plate 19 is very simple in construction and that it can be easily attached to and removed from the track shoe 14, as desired, with a minimum of effort. The transverse corrugation 20 serves as a guard for the lug 16 and also cooperates with the lug in holding the street plate securely in place along with the bolts 25, thus thwarting any tendency that the plate 19 might have in practice to creep.

It must now be appreciated that an improved street plate attachment for track shoes of crawler tractors has been provided which achieves the desirable objects of the invention heretofore recited.

It is the intention to cover all such changes and modifications as do not depart from the spirit and scope of the invention as indicated by the definitions thereof constituting the appended claims:

What is claimed is:

1. A street plate attachment for a track shoe having a transverse lug formed thereon adjacent one end, said plate embodying a flat portion having a spacer sleeve secured thereto between its ends and adapted to rest on the shoe over a hole formed in the shoe, a bolt passed through the plate, sleeve, and shoe opening, to secure the plate to the shoe, said plate having one end formed to fit over the lug on the shoe and having its other end bent at an angle to fit against the other end of said shoe.

2. A street plate attachment for a track shoe having a transverse lug formed thereon adjacent one end said plate embodying a flat portion having a right angularly related spacer sleeve welded thereto substantially midway between its ends and adapted to rest on the shoe over a hole formed in the shoe, a bolt passed through the plate, sleeve, and shoe opening, to secure the plate to the shoe, said plate having one end formed to fit over the lug on the shoe and having its other end bent at an angle to form a leg flange resting against the other end of said shoe.

3. A street plate attachment for a track shoe having a transverse lug formed thereon adjacent one end, said plate embodying a flat portion having a spacer sleeve secured thereto between its ends and adapted to rest on the shoe over a hole formed in the shoe, a bolt passed through the plate, sleeve, and shoe opening, to secure the plate to the shoe, said plate having one end curled to form a transverse corrugation to fit over the lug on the shoe and having its other end bent at an angle to fit against the other end of said shoe.

4. A street plate attachment for a track shoe having a transverse lug formed thereon adjacent one end, said plate embodying a flat portion having a spacer sleeve secured thereto substantially midway between its ends and adapted to rest on the shoe over a hole formed in the shoe, a bolt passed through the plate, sleeve, and shoe opening, to secure the plate to the shoe, said plate having one end curled to fit over the lug on the shoe and having its other end bent at an angle to fit against the other end of said shoe, said plate being formed with a depression registering with the sleeve whereby the head of the bolt is located in the depression flush with the ground engaging surface of the plate.

5. A street plate attachment for a track shoe having a lug formed thereon, said plate embodying a flat portion having a spacer sleeve secured at substantially a right angle thereto and adapted to rest on the shoe over a hole formed in the shoe, a bolt passed through the plate, sleeve, and shoe opening, to secure the plate to the shoe, said plate having a corrugation therein to fit over the lug on the shoe and also having formed therein a depression to receive the bolt, said sleeve having its end adjacent the plate countersunk to receive said depression.

6. A street plate attachment for a track shoe having substantially parallel side edges with a transverse lug formed at one end and with its opposite end bent to form a curved portion, said shoe having a hole therethrough adjacent each side edge, the street plate attachment embodying a flat portion having substantially parallel side edges with countersunk depressions arranged one adjacent each side edge of the plate and substantially midway between the ends of the plate, spacer sleeves respectively secured to the plate at said depressions, bolts passed respectively through holes formed in the depressions, the sleeves, and the holes in the shoe to secure the plate to the shoe, the one end of the plate being bent to form a transverse corrugation adapted to fit snugly over the lug on the shoe and the other end of the plate being bent to form a leg flange adapted to rest on the curved end portion of the shoe.

7. A street plate attachment for a track shoe having substantially parallel side edges with a transverse lug formed at one end and with its opposite end bent to form a curved portion, said shoe having a hole therethrough adjacent each side edge, the street plate attachment embodying a flat portion having substantially parallel side edges with transversely aligned countersunk depressions arranged one adjacent each side edge

of the plate and substantially midway between the ends of the plate, spacer sleeves respectively secured to the plate in transverse alignment at said depressions, bolts passed respectively through holes formed in the depressions, the sleeves, and the holes in the shoe to secure the plate to the shoe, the one end of the plate being bent to form a transverse corrugation adapted to fit snugly over the lug on the shoe and the other end of the plate being bent to form a leg flange adapted to rest on the curved end portion of the shoe.

8. A street plate attachment for a track shoe having substantially parallel side edges with a lug formed thereon and with one end bent to form a curved portion, said shoe having a hole therethrough adjacent each side edge, the street plate attachment embodying a flat portion having substantially parallel side edges with countersunk depressions arranged one adjacent each side edge of the plate and between the ends of the plate, spacer sleeves respectively welded to the plate at said depressions, bolts passed respectively through holes formed in the depressions, the sleeves, and the holes in the shoe to secure the plate to the shoe, the plate being bent to form a corrugation adapted to fit snugly over the lug on the shoe and one end of the plate being bent to form a leg flange adapted to rest on the curved end portion of the shoe.

9. A street plate attachment for a track shoe having substantially parallel side edges with a transverse lug formed at one end and with its opposite end bent to form a curved portion, said shoe having a hole therethrough adjacent each side edge, the street plate attachment embodying a flat portion having substantially parallel side edges with countersunk depressions arranged one adjacent each side edge of the plate and between the ends of the plate, spacer sleeves respectively welded to the plate at said depressions, bolts passed respectively through holes formed in the depressions, the sleeves, and the holes in the shoe to secure the plate to the shoe, the one end of the plate being bent to fit snugly over the lug on the shoe and the other end of the plate being bent to form a leg flange adapted to rest on the curved end portion of the shoe.

10. A street plate attachment for a track shoe having substantially parallel side edges with a transverse lug formed at one end and with its opposite end bent to form a curved portion, said shoe having a hole therethrough adjacent each side edge, the street plate attachment embodying a flat portion having substantially parallel side edges with countersunk depressions arranged one adjacent each side edge of the plate end substantially midway between the ends of the plate, spacer sleeves disposed at a right angle to the plate and formed with countersunk end portions respectively secured to the plate with the countersunk portions of the sleeves fitting said depressions, the other ends of the sleeves adapted to rest flush on the shoe, bolts passed respectively through holes formed in the depressions, the sleeves, and the holes in the shoe to secure the sleeves and plate to the shoe, the one end of the plate being bent to form a transverse corrugation adapted to fit snugly over the lug on the shoe and the other end of the plate being bent to form a leg flange adapted to rest on the curved end portion of the shoe.

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