June 27, 1933. R. L. VAN DERVEER 1,915,561

TRACTION DEVICE

Filed Aug. 31, 1931

FIG. 1

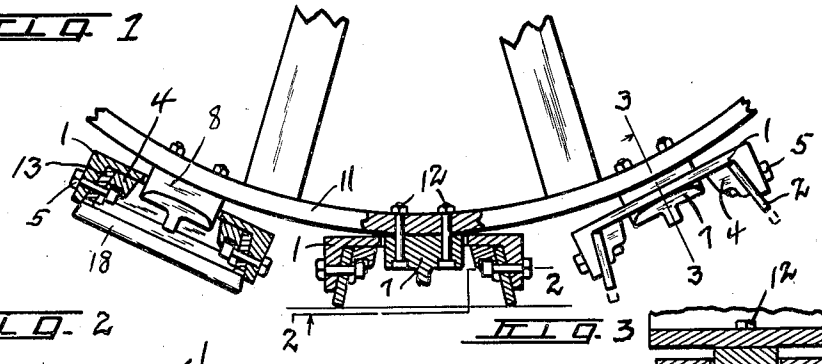


FIG. 2

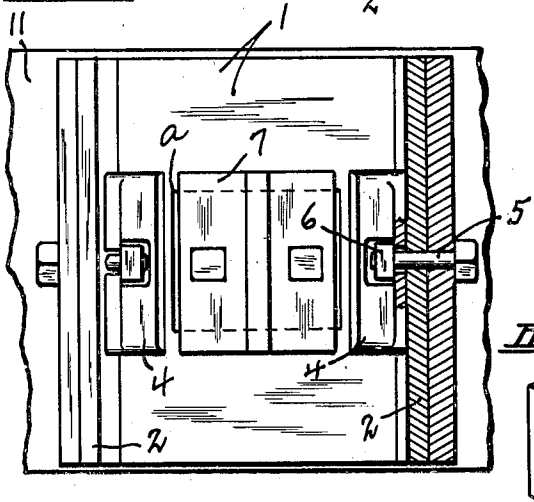


FIG. 3

FIG. 4



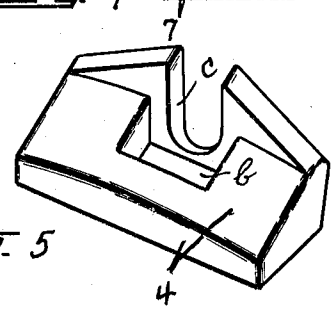


FIG. 5

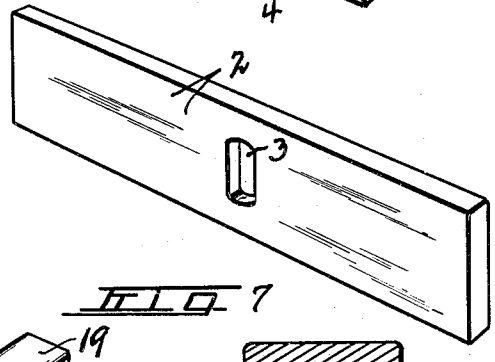


FIG. 6

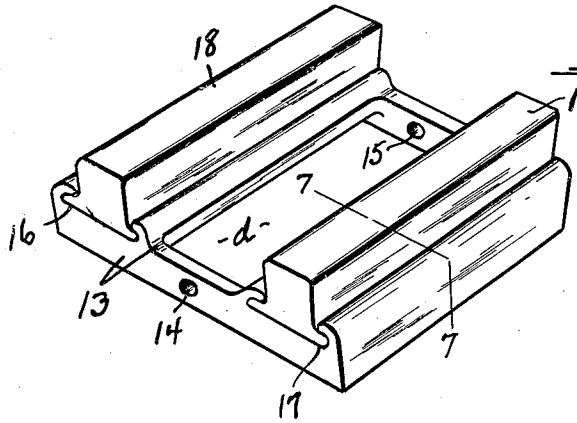
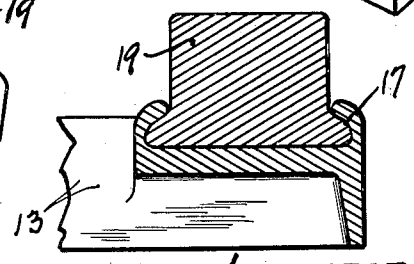


FIG. 7



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UNITED STATES PATENT OFFICE

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TRACTION DEVICE

Application filed August 31, 1931. Serial No. 560,404.

This invention relates to a new and improved traction device.

The main object of my invention is to provide a traction device for tractors and other vehicles which will be not only efficient in use, but which is so constructed that the wearing parts of the device may be replaced without removing the main body thereof from the felly of a wheel.

Another object of my invention is to provide a traction device of such a design that it may be used on hard roads without danger of injury to the road.

Another object is to provide a traction device of such a design that different sizes and shapes of traction blades may be used depending upon the terrain on which the vehicle is used.

Other objects and advantages relate to the size, shape and arrangement of parts, all as will more fully appear from the following description taken in connection with the accompanying drawing, in which:—

Figure 1 is an elevation, partially broken away and partially in section, showing my improved traction device in position on the felly of a wheel.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a perspective view of a wearing block used on the traction device.

Figure 5 is a perspective view of a wearing blade used on the lug.

Figure 6 is a perspective view of a frame and traction members used in a modified form of my traction device.

Figure 7 is a section on line 7—7 of Figure 6.

My improved traction device comprises a main shoe 1 formed from a channel iron and having a central aperture as —*a*—. In each of the vertical side portions or flanges of the shoe 1, I provide a central aperture.

A wearing blade 2 having a central aperture 3 is placed in position against the inner face of each of the vertical sides of the shoe with the aperture 3 in registration with the aperture in such side.

A wearing block 4 having a square recess as —*b*— in communication with a U-shaped recess —*c*—, is placed in position against each of the wearing blades 2 with the recess —*c*— in registration with the aperture 3.

Bolts 5 are inserted through the apertures in the sides of the shoe 1 and through the apertures 3 in the wearing blades and the recesses —*c*— in the wearing blocks 4, and are threaded into nuts 6 which are positioned in the recesses —*b*— and which are held from turning by the walls of such recesses —*b*—.

The wearing blades 2 are preferably of the same length as the sides of the shoe 1, although they may be shorter or longer as occasion may demand.

The wearing blades 2 are higher than the sides of the shoe 1 so that the wear will be taken by them and not by the shoe 1.

Referring to Figure 1, it will be noted that the inner faces of the sides of the shoe 1 are tapered inwardly so that when the wearing blades 2 are in position they will be in angular relation to the base of shoe 1 with the result that the end of the wearing blades 2 will contact with the ground at an angle which will cause them to cut into the ground more effectually than if they were in a vertical position.

It will also be appreciated that when the edges of the wearing plates 2 wear down to a sufficient degree to loose their angular biting effect, it is merely necessary to remove such wearing blades and reverse them end to end, and they will again present a sharp edge to the ground.

With this construction, the wearing blades 2 are self-sharpening.

For the purpose of securing the shoe 1 to the felly of a wheel, I provide a center block 7 having a main body 8 which extends through the aperture —*a*— and which is of a size to fit loosely therein.

The lower end of center block 7 is provided with opposed flanges 9 and 10 which overlie the shoe 1 to prevent the center block 7 from passing completely through the aperture 1.

When the center block 7 is assembled in

the shoe 1, it is securely fastened to the wheel felly 11 as by bolts 12.

The main body 8 of the center block 7 is sufficiently long to permit considerable play between the shoe 1 and the felly 11 so that as the wheel revolves, the shoe 1 is permitted to rock on the felly 11.

When the device is in use, there will be friction between the ends of the aperture —*a*— and the center block 7, which will tend to enlarge the aperture —*a*— but after a certain amount of wear has taken place, the center block 7 will contact with the opposed wearing blocks 4 so that they will limit the movement of shoe 1 on the center block 7.

When and if the wearing blocks 4 are worn down a sufficient amount so that there is too much play of the shoe 1 on the center block 7, the worn wearing blocks 4 may be removed and new ones placed in the device.

It will also be apparent that when the wearing blades 2 are worn down to a point where they lose any considerable degree of effectiveness, they may also be replaced by new ones.

Under certain conditions, I prefer to equip my device with wearing blades having a certain degree of resiliency and to effect this result, I provide a frame 13 having a central aperture —*d*— and with apertures 14 and 15 in opposite ends of the frame.

In the opposite ends of the frame 13, I provide parallel clincher slots 16 and 17 in which are removably positioned traction members 18 and 19 formed of a material, such as rubber, of some degree of resiliency.

The traction members 18 and 19 are removably positioned in clincher slots 16 and 17 by sliding them in from one end. The bottom portions of the traction members 18 and 19 carry opposed flanges which snugly fit the clincher slots 16 and 17.

When it is desired to use the frame 13 in my device, the wearing blades 2 are removed and the frame 13 is placed in position on the shoe 1 with the apertures 14 and 15 in registration with the apertures in the sides of shoe 1.

The wearing blocks 4 are then placed in position against the opposite ends of frame 13, and the bolts 5 are inserted through the apertures in the sides of shoe 1, the apertures 14 and 15 and the wearing blocks 4 to lock the assembly together.

If and when the traction members 18 and 19 are worn away so that they lose a considerable degree of their efficiency, they may be removed from frame 13 and new ones inserted therein.

It will be understood that the length, height, and thickness of the wearing blades may be varied as desired to meet varying conditions of use, as may the traction members 18 and 19.

It will also be understood that the size and shape of the shoe may be varied as may be the size, and shape of the wearing blocks, for although I have shown and described a specific structure and form and relation of parts as an exemplification of an embodiment of my invention, I do not desire to restrict myself to the exact size, shape or relation of parts, as various changes may be made within the scope of the appended claims.

I claim:

1. In a traction device, an apertured shoe having a pair of opposed flanges, holding means extending through the aperture of said shoe for securing the shoe to the felly of a wheel to permit rocking of the shoe on said felly, a pair of wearing blades, means for removably securing a blade to each flange whereby the blade will extend beyond the face of said flange and including a wearing block, said block having one edge positioned adjacent the aperture to reinforce the shoe and adapted to contact with the holding means during the rocking of the shoe for preventing wearing of the shoe at said aperture by the holding means.

2. In a traction device, an apertured shoe having a pair of opposed flanges, means extending through the aperture of said shoe for securing the shoe to the felly of a wheel to permit rocking of the shoe on said felly, a wearing blade adjacent the inner face of each flange, a wearing block adjacent each blade for reinforcing the shoe and having one edge positioned adjacent said aperture adapted to contact with the holding means during the rocking of the shoe for preventing wearing of the shoe at said aperture by the holding means, and unitary means for removably securing a blade and block to a respective flange.

In witness whereof I have hereunto set my hand this 5th day of August, 1931.

RALPH L. VAN DERVEER.