June 10, 1947. J. J. FRIEDMAN 2,422,006

TRACTION DEVICE

Filed Sept. 19, 1945

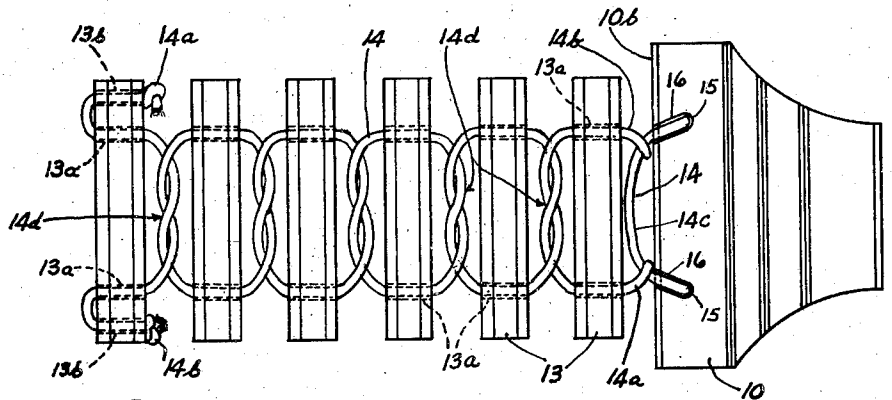


Fig. 1

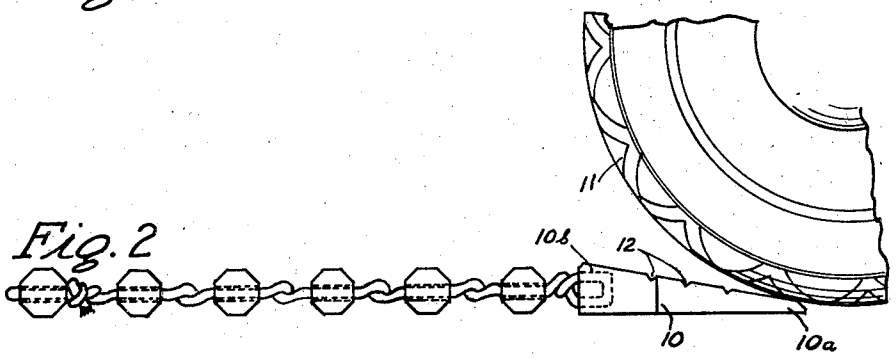


Fig. 2

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TRACTION DEVICE

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3 Claims. (Cl. 238—14)

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This invention relates to a traction device useful in aiding a power vehicle to obtain traction in case there is a tendency for one of the drive wheels to spin.

An object of the present invention is to provide a cheap, readily portable device which is efficient for the purpose intended.

Other features of my underlying idea are shown in the drawings and described in the specification and the essential features thereof will be defined in the appended claims.

In the drawings,

Fig. 1 is a top plan view of one form of my device; while

Fig. 2 is a side elevational view of the same, with a portion of a vehicle wheel added.

I have discovered that when one of the drive wheels of an automotive vehicle is spinning without traction, as for instance when it is resting upon snow, ice, mud, or sand, that traction may be obtained for a limited distance by the use of my improved device, and this is generally sufficient to extricate the vehicle from its difficulties. In general, my device comprises a shoe upon which the vehicle is adapted to ride and a plurality of substantially rigid bars alined in front of the shoe along the path which the wheel will travel with means holding the bars spaced from each other and connected to the shoe so that the entire device becomes a unit.

In the form shown in Figs. 1 and 2, the shoe 10 is of wood for the sake of cheapness and is generally wedge shape as viewed in side elevation in Fig. 2. The shoe has a thinner edge 10*a* adapted to rest on the ground or other supporting surface in a position so that a vehicle wheel 11 may ride up readily upon the shoe. If desired, the upper face of the shoe may be provided with grooves 12 or other non-skid surface, although this is not absolutely essential. The bottom of the shoe may be provided with prongs or other devices adapted to bite into the surface beneath the shoe, not shown, but I find that a flat block as shown in Fig. 2 will operate under most circumstances.

The block 10 has a thicker edge 10*b* to which is secured a plurality of bars 13, of which six are shown in Figs. 1 and 2, but the exact number of which is immaterial. These bars are alined in front of the shoe 10 along the path which the wheel 11 will travel. Means is provided for holding these bars substantially in parallel relationship and substantially parallel to the edge 10*b* of the shoe.

The means connecting the bars 13 as shown

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in Figs. 1 and 2 comprises a pair of tension members each of which might be connected separately with the shoe 10, but for cheapness and simplicity I have illustrated the use of a single flexible tension member 14, the two ends of which perform the functions of two separate tension members. As shown in Figs. 1 and 2, the bars 13 are of wood, hexagonal in shape with holes 13*a* drilled through them to take the tension member, although it will be understood by those skilled in this art that bars of other material and of different shape might be used and the tension members might be connected thereto in a different manner, several of which will be later described.

As shown in Figs. 1 and 2, holes 15 are drilled through the block 10 and grooves 16 are cut in the top and bottom faces of the block running from holes 15 to the edge 10*b* of the shoe and about of the same depth or thickness as the tension member 14 so that the tension member does not extend above the top of the shoe 10 and is thereby protected from wear. The tension member 14 shown in Figs. 1 and 2 is a cable, cord, or rope, a length of sash cord being both satisfactory and cheap. Each end of this cord is passed downwardly through one of the holes 15 leaving a bight 14*c* extending forwardly from the upper portion of the edge 10*b*. The end 14*a* is then brought upwardly inside of the bight, over the top thereof and then passed through the lower hole 13*a* of the first bar as viewed in Fig. 1. This end of the cord then passes in zig-zag fashion through the upper end of the second bar, the lower end of the third bar, the upper end of the fourth bar, the lower end of the fifth bar, and then to the upper end of the last bar passing through the opening 13*a* of that bar and back again through another opening 13*b* where a securing knot is formed in the end of the cord. In similar fashion the end 14*b* of the cord passes upwardly through the inside of the bight then over the bight and through the opening 13*a* at the upper end of the first bar. It then travels in zigzag fashion through the opposite ends of adjacent bars until it passes through the opening 13*a* in the last bar, back through an opening 13*b* and is held in place by a knot in the end of the cord.

Preferably, but not necessarily, the cord portions 14*a* and 14*b* are interlooped or intertwined where they cross each other between adjacent shoes as indicated at 14*d* in Fig. 1.

In use, when a vehicle drive wheel like that shown at 11 tends to slip or skid on any type of

surface. The shoe 10 is placed with the thin edge thereof in front of the vehicle tire and when the vehicle starts up it tends to draw the shoe beneath the tire after which the tire rides up on the shoe and then on to the series of parallel bars. The action seems to be that the bars are pressed into the slippery surface, or one having poor traction properties, and if one of the bars is pushed out from beneath the tire 11, another bar replaces it so that the wheel quickly attains traction to get out of the difficulty.

What I claim is:

1. A traction device comprising a shoe upon which a wheel is adapted to ride, a plurality of bars in general alinement with the path of travel of said wheel, said bars extending transversely of said path, said bars forming a series generally parallel to and spaced from each other, a flexible cable member extending from each side of said shoe, each cable member passing in zig-zag fashion first through one end of one bar and then through the opposite end of the next bar in the series, said cable members providing the sole connecting means between said bars, and said cable members loosely connecting said bars so that each bar may move in any direction relative to an adjacent bar.

2. The combination of claim 1 wherein two of said cable members cross and are interlooped between adjacent bars which they connect.

3. The combination of claim 1 wherein a single length of cable member has its central portion connected with said shoe, and the ends of said member pass through said bars in zig-zag fashion.

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