S., F. & L. H. F. ROHE.

DEVICE FOR EXTRACTING TRACTION WHEELS FROM HOLES.

APPLICATION FILED AUG. 6, 1912.

1,067,940. Patented July 22, 1913.

Fig. 1.

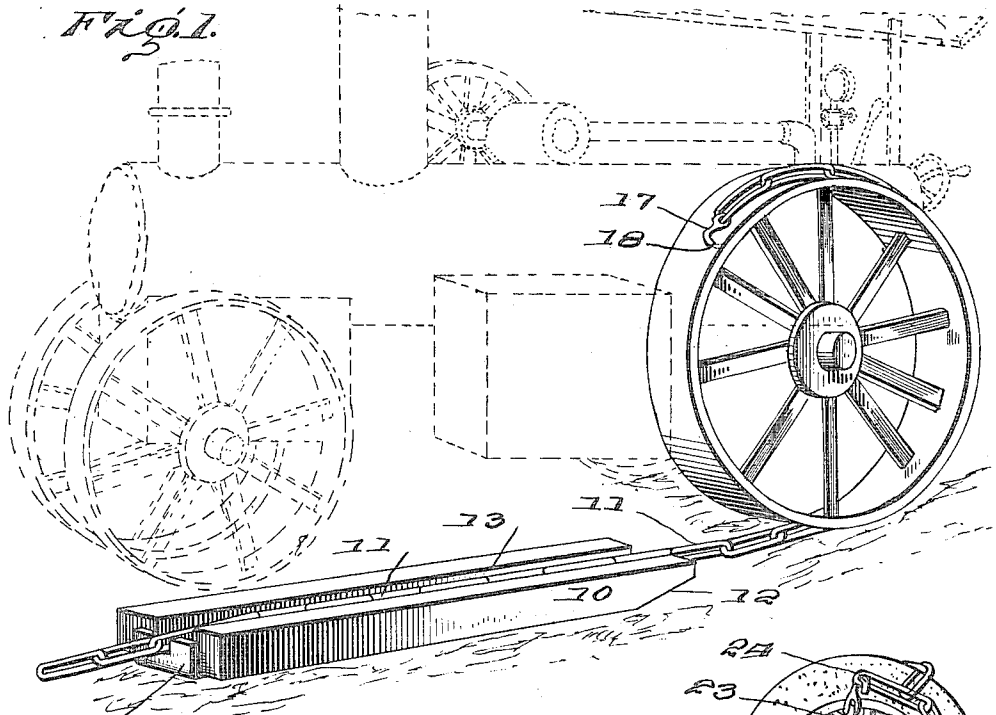
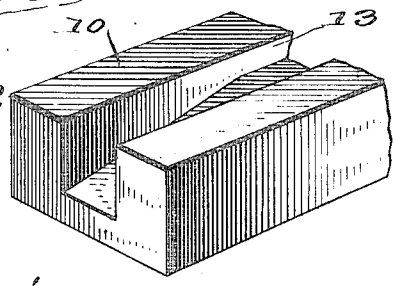


Fig. 2.



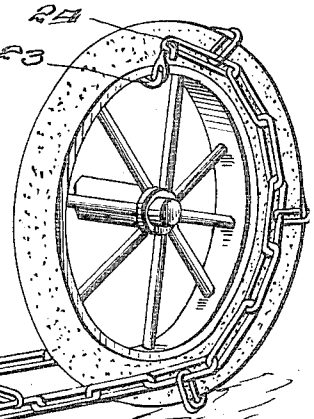


Fig. 4.

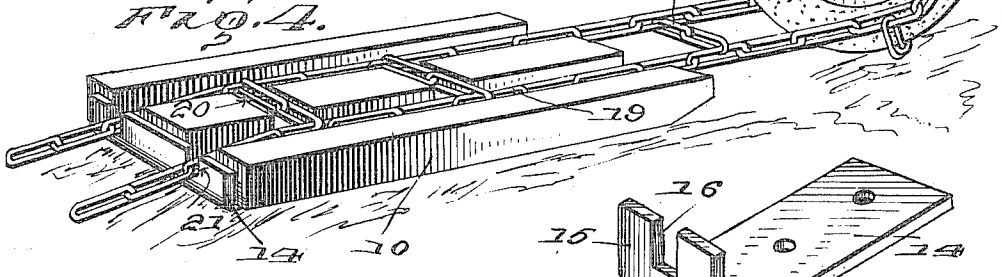


Fig. 3.

Witnesses
Edmund Abbey
[illegible]

Inventors
S. Rohe,
F. Rohe
and L. H. F. Rohe

By [illegible], Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL ROHE, FOSTMAN ROHE, AND LOUIS H. F. ROHE, OF KENMARE, NORTH DAKOTA.

DEVICE FOR EXTRACTING TRACTION-WHEELS FROM HOLES.

1,067,940. Specification of Letters Patent. Patented July 22, 1913.

Application filed August 6, 1912. Serial No. 713,629.

To all whom it may concern:

Be it known that we, SAMUEL ROHE, FOSTMAN ROHE, and LOUIS H. F. ROHE, citizens of the United States, residing at Kenmare, in the county of Ward and State of North Dakota, have invented certain new and useful Improvements in Devices for Extracting Traction-Wheels from Holes, of which the following is a specification.

Our invention relates to new and useful improvements in devices for use in connection with the drive or tractive wheels of traction engines, automobiles and other self-propelled vehicles and the object of our invention is to provide a device which may be attached to a wheel of the character described when the latter becomes embedded in soft soil or mud in such a manner as to slip without giving tractive force, the device being adapted to overcome this slipping of the wheel.

More specifically the object of our invention is to provide a body member which may be positioned in front of the wheel and a flexible member which may be secured to the body member and to the wheel in such a manner that the spinning of the wheel will wind the flexible member about the same, drawing the wheel up on the body member and thus giving it sufficient tractive force to extract the vehicle from the sand pit, bog hole or other difficulty.

A further object of our invention is to so arrange the securing means between the flexible member and the body member that when the wheel passes from the forward end of the body member, the flexible member will be automatically detached from the body member leaving the vehicle free to continue beyond the same.

With these and other objects in view, our invention will be more fully described, illustrated in the accompanying drawing, and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawing: Figure 1 is a fragmentary perspective view of a conventional form of traction engine, showing our device in operation; Fig. 2 is a fragmentary perspective view of one end of the body member; Fig. 3 is a detail perspective view of the locking plate carried by that end of the body member shown in Fig. 2; Fig. 4 is a fragmentary perspective view, showing the manner of employing the device with a self-propelled vehicle, a slightly modified form of device being therein shown.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Our invention embodies a body portion 10 preferably consisting of a strip of wood and a chain or other flexible connection 11 adapted to be detachably secured to one end of the body member and by its free end to the wheel to be extricated. More specifically, the body member, which is substantially rectangular in shape, has its lower face at one end beveled as shown at 12 and is provided throughout its length with a groove or channel 13 formed in its upper face, the channel, as best shown in Fig. 2 of the drawing, being deepened at that end of the body member opposite the beveled end 12.

Secured by bolts or other suitable means to the forward portion of the lower face of the body member 10 and extending in advance of the same, is an L-shaped plate of metal 14, the advanced end of which is extended at right angles as shown at 15 to bear against the forward end of the body member 10. This upwardly directed portion 15 of the plate terminates short of the top of the body member and is provided centrally with a slot 16.

The flexible member 11, which is preferably a chain having square shouldered links, is positioned in the channel 13 of the body member and with one of its links disposed in the slot 16 of the plate in such a manner that the next link engages against the plate at the sides of the slot, thereby preventing rearward movement of the chain through the groove of the body member. The free end of this chain is provided with a hook 17 of any suitable design and is attached to the traction wheel when the device is in use by inserting its bill through a suitable perforation 18 formed in the tread of the wheel. When the device is so applied, the spinning of the wheel upon the application of power will wind the chain 11 about the periphery of the wheel drawing the body member 10 toward the wheel until it passes beneath the same when the wheel will ride over the body member advancing the traction engine and bringing the wheel to solid ground. As soon as the wheel passes from the forward end of the body

member, that link of the chain engaging in the slot 16 is automatically lifted from the slot and the chain therefore freed from the body member.

By beveling the rear end of the body member, the latter is adapted to tilt somewhat as the wheel passes on to it, thus offering less resistance to the movement of the wheel and at the same time greatly relieving the strain upon the chain. By deepening the channel at the forward end of the body member, the chain at that end lies at an angle and is much more readily disengaged from the lock plate 14.

When the device is to be employed with an automobile or other vehicle having a pneumatic tire or a tire of circular cross section, the body member is made wider and provided with a pair of longitudinally extending spaced grooves 19, connected at intervals by transversely extending grooves 20 and the locking plate 14 is also widened and provided at the end of each groove with a slot 21. In this case, the flexible connection comprises a double chain including a pair of chains connected in parallel spaced relation by one or more connecting links 22 at spaced intervals, the chain being practically identical with certain types of tire chains employed in preventing the skidding of automobile wheels. This double chain is positioned upon the body member in identically the same manner as the single chain, the connecting links 22 being seated in the transversely extending grooves or channels 20 of the body member. The free end of this chain is provided with any suitable means for attaching the same to the automobile wheel, a suitable device being shown in Fig. 4 including a short chain 23 secured by one end to the terminal link of one of the chains and provided at its opposite end with a hook 24 for engagement in the terminal link of the opposite chain, this chain being passed over the rim and secured in such a manner that under strain it will engage against one of the wheel spokes and lock the device in place.

It will of course be understood that the device may be constructed either as shown in Fig. 1 or Fig. 4 of the drawing without in the slightest degree departing from the spirit of our invention. However, the form of body member shown in Fig. 4 is preferable to that shown in Fig. 1 as it may be employed interchangeably with either chain with traction engines and motor vehicles alike.

Having thus described the invention, what is claimed as new is:

1. A device of the character described including a grooved body member, and a flexible element detachably secured to one end of the body member and lying in the groove thereof and provided at its other end with means for connection with a traction wheel.

2. A device of the character described including a body member provided with a longitudinally extending groove, a chain seating in the groove and provided at one end with wheel engaging means, and means for locking the other end of the chain to the body member.

3. A device of the character described including a body member, the rear end of which is beveled, said body member being provided with a longitudinally extending groove, the forward end of which is deepened, a chain seating in said groove, means for detachably securing one end of the chain in the deepened portion of the groove, and means for attaching the free end of the chain to a wheel.

4. A device of the character described, including a body member provided with a longitudinally extending groove, a metal plate bearing over the end of the body member and provided with an open slot in alinement with the groove, a chain seating in the groove and adapted to be detachably secured therein by the engagement of one of its links in the slot of the plate, and wheel engaging means carried by the free end of the chain.

5. A device of the character described including a body member provided with longitudinally extending parallel spaced apart grooves in its upper face and spaced apart transversely extending grooves connecting the longitudinal grooves, a plate secured against one end of the body member and provided with open slots in alinement with the longitudinal grooves and a flexible element seating in said grooves and adapted for attachment by one end to a wheel, said element including a pair of chains seating in the longitudinal grooves and engaging by certain of their links with the slots of the plate, and a plurality of spaced apart links of chains connecting the first mentioned chains and maintaining the same in spaced relation, a portion of said connecting chains seating in the transverse grooves of the body member.

In testimony whereof we affix our signatures in presence of two witnesses.

SAMUEL ROHE. [L. S.]
FOSTMAN ROHE. [L. S.]
LOUIS H. F. ROHE. [L. S.]

Witnesses:
J. M. ROHE,
R. M. HANSEN.