

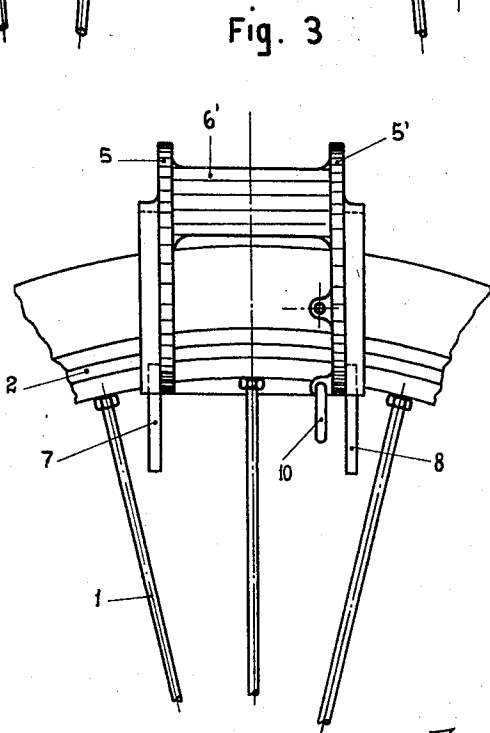
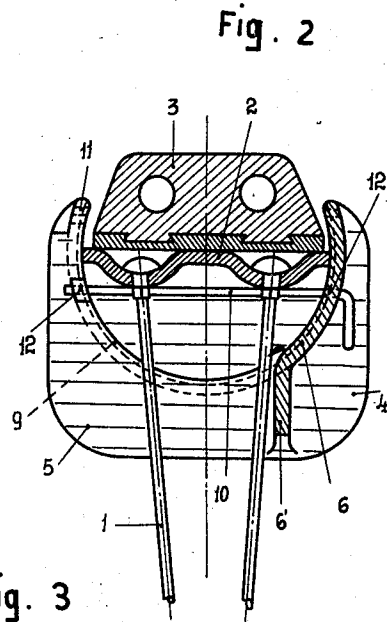
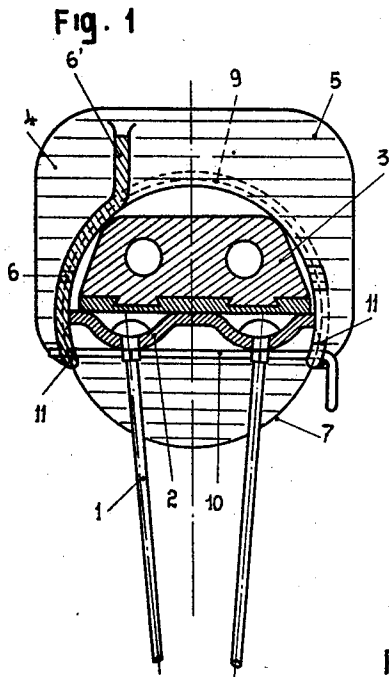
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T. ZERBI

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TRACTION DEVICE FOR WHEELS

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# UNITED STATES PATENT OFFICE

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## TRACTION DEVICE FOR WHEELS

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It has been proposed to provide the wheels of heavy motor vehicles, more particularly of tractors, with contrivances of different types arranged round the circumference of the wheel in order to considerably increase its adhesive powers when passing over uneven ground, while such members are not utilized on ordinary roads on which only the usual wheel tyre works.

The devices which have been most commonly used for the above purpose are those belonging to the movable blade type, in which the blade is pivoted to a fulcrum and capable of rotating to the inside and to the outside and to be caught and held by suitable means either in its working position or in its position of rest.

The known contrivances are open to several objections among which the chief one is that when a blade gets loose on ordinary roads it does not immediately come into its normal position of work but remains displaced in a radial direction. Owing to the relative length of such members, the blade sets into the ground, breaks or causes a dangerous and sudden lifting of the wheel.

Moreover unless the device is made of unusually large size thus considerably increasing the weight, the necessary strength is not ensured.

In order to obviate the above mentioned drawbacks this invention provides a plurality of elements arranged round the circumference of the wheel, each of which has arcuated extensions embracing a portion of the rigid supporting rim, relatively to which it can slide by turning on its axis through 180° passing from the working position, namely the position in which it adheres to the wheel rim, to a position of rest completely tilted backwards.

Moreover for guiding the elements during their rotation rigid supporting sectors are provided conveniently on the inner face of the wheel rim, on which they are capable of rotating, suitable locking means holding the elements in operative and inoperative positions respectively.

Each adhesion or traction member may be provided in the cross direction with two or

more wings or projections, rigidly connected together by means of suitable longitudinal reinforcing ribs.

The accompanying drawings show diagrammatically a constructional form of the invention.

Figure 1 is an axial section showing a wire spoked wheel provided with an adhesion blade in working position.

Figure 2 is a similar section, the blade being shown in its position of rest.

Figure 3 is a front view of the wheel with the blade in a position corresponding to that shown in Fig. 1.

Referring to the drawings, 1 denotes a wire spoked wheel provided with a metallic rim 2 on which a usual solid rubber tyre 3 is fitted.

The traction member or blade 4 consists of two side wings 5 and 5' adapted to grip the ground and to increase the adhesion. These wings are connected together on one side by a curved wall 6, ending above by a reinforcing rib 6'.

In order to enable the blade to turn about its own axis and to pass into the position of rest two guide sectors 7 and 8 are conveniently fitted in a manner not shown on the wheel rim, said sectors reaching within grooves 9 formed in the thickness of the blade body 4.

In order to lock the traction members in their end positions, a slidable bolt 10 is provided for each of them which is capable of engaging in the positions shown in Figure 1 or Figure 2, respectively, in the openings 11, 11 and 12, 12 correspondingly formed on the blade body.

It is clear that for passing e. g. from the working position to the position of rest it will just be necessary to slip said bolt out of engagement with the said openings for rotating the blade on the sectors 7 and 8, and once it has been withdrawn, to slip the bolt again into the other corresponding openings.

The form of the traction member described and illustrated may of course be varied according to requirements and to the type of wheel with which it shall be used and it is to be understood that the construction shown must not be deemed to limit the inven-

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tion except as specified in the appended claims.

What I claim is:

1. Tractor wheel comprising, in combination with the rim, traction members mounted on the rim and capable of transverse rotation about said rim, each of said members being constituted by a pair of wings, having extensions which partly embrace said rim, a curved wall for connecting said wings and a reinforcing rib on said wall, circular sectors secured to the inner face of said rim and adapted to engage with said extensions for guiding said traction members during their rotation about said rim, and locking means for holding said members in their working position outside the rim and in their position of rest inside the rim.

2. Tractor wheel comprising, in combination with the rim, traction members mounted on the rim and capable of transverse rotation about said rim, each of said members being constituted by a pair of wings, having extensions which partly embrace said rim, a curved wall connecting said wings and a reinforcing rib on said wall, circular sectors secured to the inner face of said rim and adapted to engage with said extensions for guiding said traction members during their rotation about said rim, and a bolt for locking each traction member in its working position outside the rim and in its position of rest inside the rim.

In testimony that I claim the foregoing as my invention, I have signed my name.

INC. TRANQUILLO ZERBI.

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