

(No Model.)

G. A. ANDERSON.
TRACTION WHEEL.

No. 543,075.

Patented July 23, 1895.

FIG. 1.

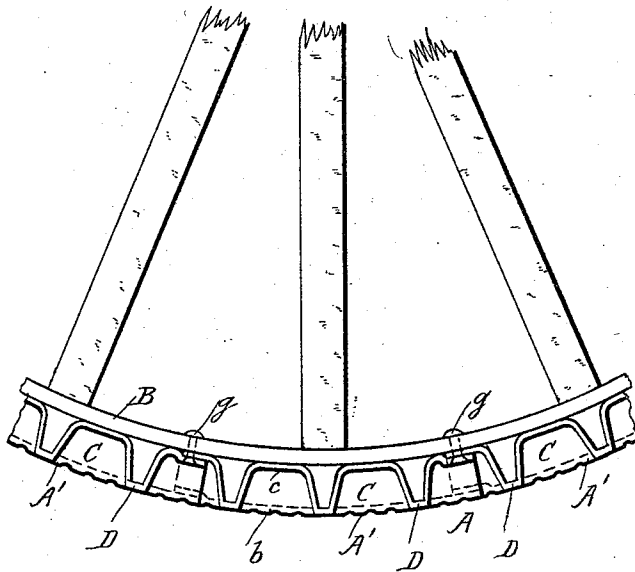
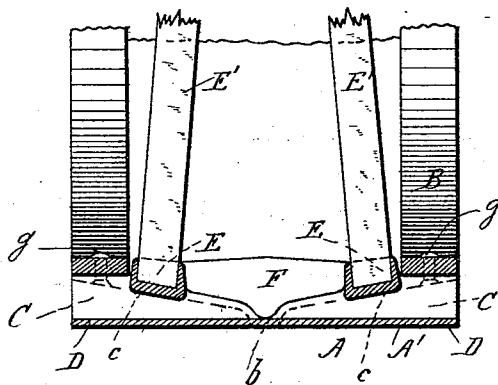


FIG. 2.



WITNESSES:

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GUSTAF ARVID ANDERSON, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR
TO THE GEISER MANUFACTURING COMPANY, OF SAME PLACE.

TRACTION-WHEEL.

SPECIFICATION forming part of Letters Patent No. 543,075, dated July 23, 1895.

Application filed December 1, 1894. Serial No. 530,611. (No model.)

To all whom it may concern:

Be it known that I, GUSTAF ARVID ANDERSON, a subject of the King of Sweden and Norway, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the driving-wheels of traction or road engines; and it consists in the construction of the rim of the wheel, as hereinafter fully described and claimed, permitting the wheel to work with equal advantage upon hard and soft roads without slipping or sinking.

In the drawings, Figure 1 is a side view of a portion of the rim of the wheel. Fig. 2 is a cross-section through the rim.

A is the rim of the wheel, which is formed of a series of similar sections A'. These sections are securely riveted or otherwise secured to two rings B, one at each edge of the wheel. Each section A' has a rib *b*, preferably arranged to come at the middle of the wheel. The ribs *b* make a circumferential ring around the wheel and are preferably provided with small cross-grooves, so that the ring may be better enabled to run on hard ground without slipping.

D are a series of laterally-arranged ribs, and C are pockets between the ribs. The tops of the ribs D are level with the top of the rib *b*, and the pockets C have downwardly and outwardly inclined bottom portions *c*.

E are pockets on the under side of the sections A' for the reception of the ends of the spokes E', which are preferably of wood and are secured to the hub of the wheel in any approved manner.

F is a cross-rib between the pockets E, on the under side of each section, for the purpose of stiffening it; but this rib may be left out, if desired.

The ribs D are preferably hollow on their

under side, and all parts of each section are made of as nearly equal thickness as possible, so that the sections can be made of cast-steel or cast malleable iron and not suffer distortion from shrinkage in manufacture.

The rivets *g*, which join the sections to the rings, preferably have their heads let into countersunk holes in the bottoms of the pockets C, and the ends of the sections are preferably arranged to overlap each other, so that they are rigidly secured together as well as to the rings B.

The ribs D may be arranged crosswise of the face of the wheel, as shown, or they may be arranged diagonally or spirally on its face. The sides of the ribs D are preferably inclined, as shown in Fig. 1, and they may be curved like the teeth of a toothed gear-wheel, if desired. The sides of the ribs D may also be inclined laterally, if desired, so that the ribs become wedge-shaped; and the form of the ribs may be varied in many other ways to better enable the wheel to engage with the roads of different localities.

When the wheel is running on a hard road the tops of the ribs *b* and D bear on the road and are not pressed into it; but when the wheel passes onto a soft or muddy road the ribs sink in and the ribs D engage with the surface of the road to a greater or less extent, according to the softness of the road. The bearing-surface of the wheel, when in contact with the soft road, is greatly increased, and the wheel is thereby prevented from sinking. The inclined bottoms of the pockets, together with the inclined sides of the ribs and the absence of projecting rivet-heads, permit the wheel-rim to clear itself as it passes over the road, and the dirt does not accumulate in the pockets and adhere in large quantities to the rim.

What I claim is—

1. A wheel rim provided with a circumferential rib, lateral ribs on each side thereof, and pockets formed between the lateral ribs and having their bottom portions inclined downwardly and outwardly in opposite direc-

tions upon opposite sides of the circumferential rib, whereby the tread of the wheel engages with the surface of a road to a greater or less extent proportionate to the softness of the surface, substantially as set forth.

5 2. The combination, with the two supporting rings B, of the wheel rim secured to the said rings and provided with ribs and pock-

ets on its periphery for engaging with the surface of the road, substantially as set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

GUSTAF ARVID ANDERSON.

Witnesses:

HERBERT W. T. JENNER,
DANIEL S. BEARD.