

(No Model.)

A. E. PRICE.  
TRACTION WHEEL.

No. 555,330.

Patented Feb. 25, 1896.

FIG. 1.

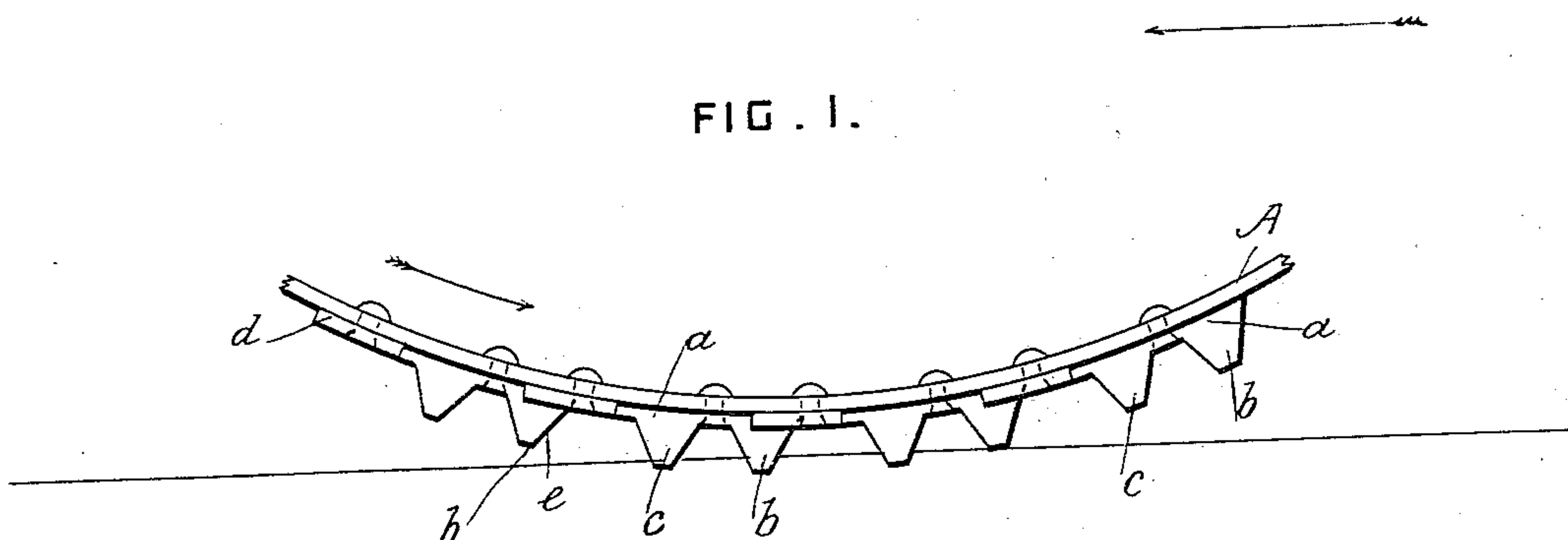


FIG. 2.

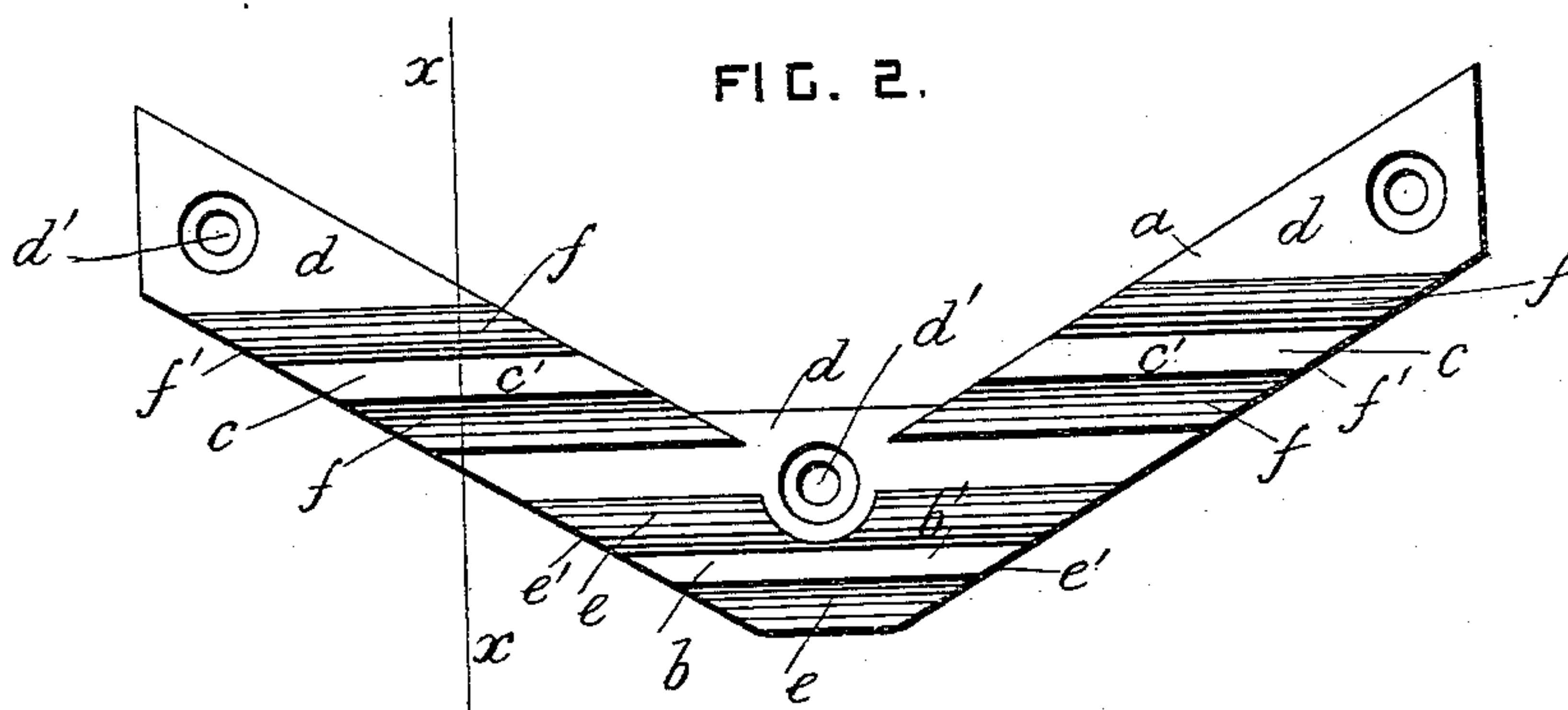


FIG. 3.

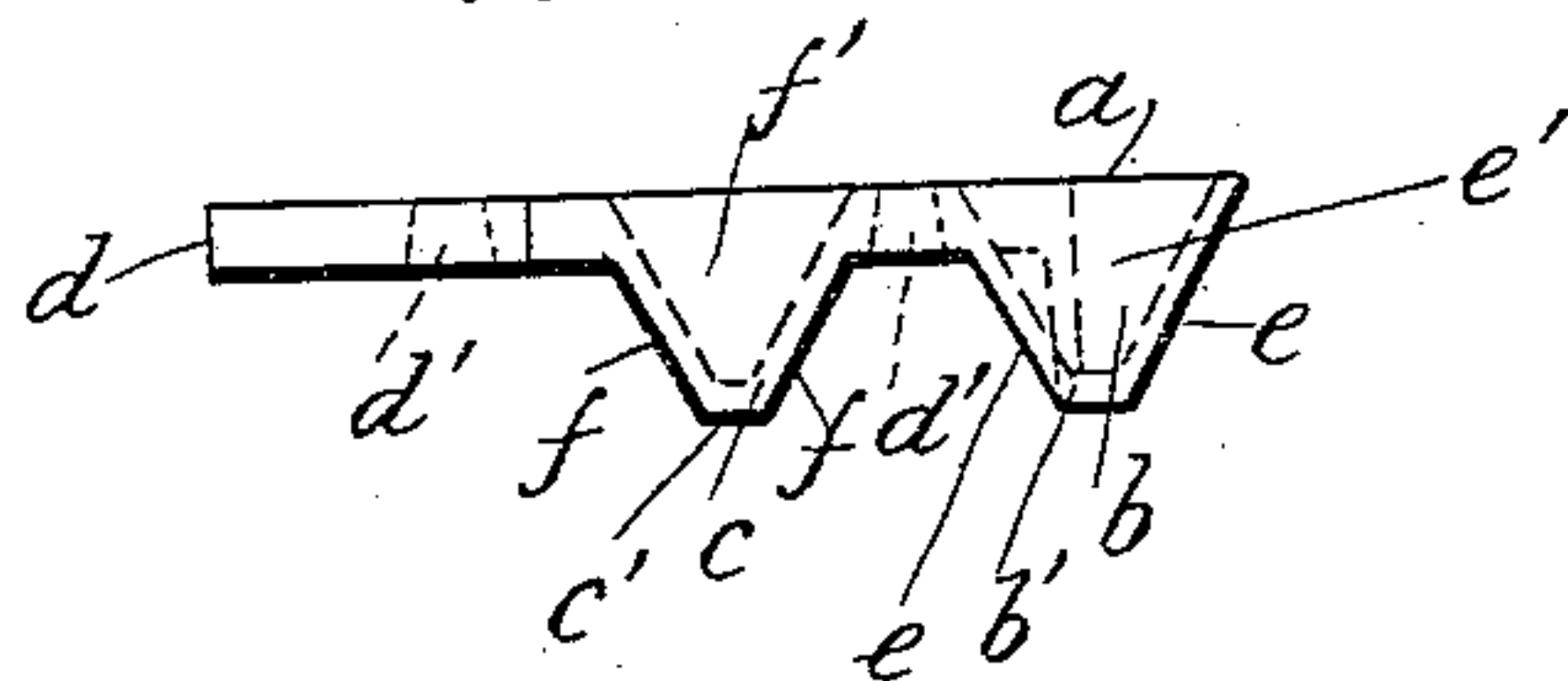
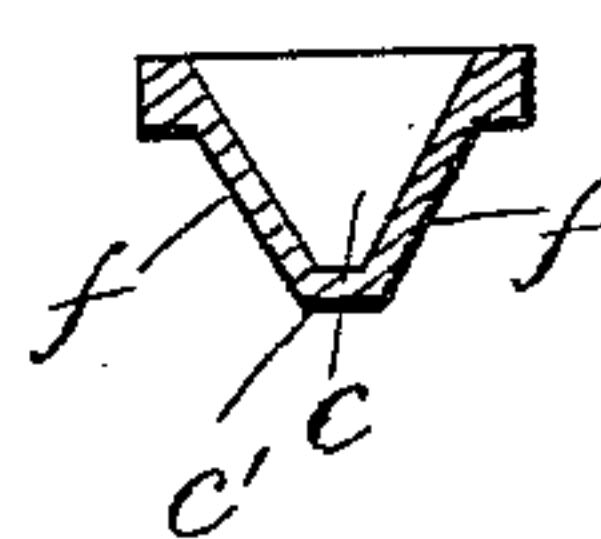


FIG. 4.



Witnesses  
J. L. M. G. P. O. W.  
George A. Bliss.

Inventor  
Abraham E. Price.  
By Attorneys Herbert W. Jenner.

# UNITED STATES PATENT OFFICE.

ABRAHAM E. PRICE, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR TO  
THE GEISER MANUFACTURING COMPANY, OF SAME PLACE.

## TRACTION-WHEEL.

SPECIFICATION forming part of Letters Patent No. 555,330, dated February 25, 1896.

Application filed December 18, 1895. Serial No. 572,553. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM E. PRICE, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, have invented certain new and useful Improvements in Traction-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 road-wheels of traction-engines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of a portion of the rim of a wheel provided with cleats according to this invention. Fig. 2 is a plan view of a cleat. Fig. 3 is a side view of the same. Fig. 4 is a cross-section taken on the line  $x x$  in Fig. 2.

A is a portion of the rim of a traction-engine road-wheel of approved construction, consisting of a plain flat plate bent to cylindrical form and having its ends welded together.

A series of cleats is secured upon the periphery of the wheel to prevent it from slipping on the road. Each cleat  $a$  consists of a  $\nabla$ -shaped bar having its arms arranged at an angle of about one hundred and twenty degrees. The bar  $a$  has a central projection  $b$  at its apex, and two projections  $c$  arranged in line with each other and parallel with and behind the projection  $b$ .

The cleat has flanges  $d$ , which form its base, and it is secured to the rim of the wheel by rivets or bolts which pass through the holes  $d'$  in the said flanges. The front projection  $b$  has a flat top  $b'$  and upwardly-inclined front and rear portions  $e$  extending at right angles crosswise of the rim of the wheel. The front projection has also end portions  $e'$ , which are outwardly inclined with respect to the central plane of the wheel at an angle of about sixty degrees and conform to the inclination of the arms of the cleat. The rear projections  $c$  are rhomboidal at their bases, and have flat tops  $c'$  and upwardly-inclined front and rear portions  $f$  extending at right angles crosswise of the rim of the

wheel. The end portions  $f'$  of the projections  $c$  are inclined in a similar manner to the ends of the front projection. The projections  $c$  are arranged at such a distance behind the projection  $b$  that they will enter the ground before the projection  $b$  leaves it. The cleats are secured at such a distance apart that the front projection of one cleat enters the ground before the rear projections of the next cleat in advance leave it.

The projections  $b$  and  $c$  are preferably hollow to insure lightness and strength, and the cleats are preferably formed of cast malleable iron.

The inclined front portions  $e$  of the projection  $b$  strike the ground first, so that the pressure comes first upon the center of the rim over the spokes of the wheel, and there is no tendency to break or bend the edges of the rim. The inclination of the front and rear portions  $e$  and  $f$  of the projections is arranged so that the projections will not strike the ground in a manner likely to shear off the rivets, and so that they will clear themselves on leaving the ground.

The front inclined portions  $e$  and  $f$  thrust against the ground and prevent slip, and the outwardly-inclined ends  $e'$  and  $f'$  also thrust against the ground, but engage with it more gradually than the portions  $e$  and  $f$ , thus giving an increased grip on the ground and avoiding shock. The outward inclination of the ends  $e'$  and  $f'$  with respect to the central plane of the wheel causes the wheel to clean itself and prevents dirt from packing in solid masses between the cleats. The strain on the rim of the wheel is distributed laterally from its center in equal proportions as each successive cleat engages with the ground.

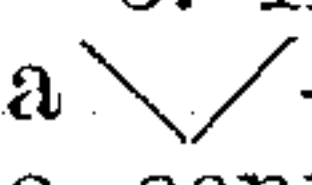
What I claim is—

1. In a traction-wheel, the combination, with a wheel-rim, of a series of cleats secured to the said rim, each cleat comprising a  $\nabla$ -shaped bar provided with a central projection at its apex, and two projections, on its arms, arranged in line with each other and behind and parallel with the said central projection, substantially as set forth.

2. A cleat for a traction-wheel, comprising a  $\nabla$ -shaped bar provided with a central projection at its apex, and two projections, on its



arms, arranged in line with each other and behind and parallel with the said central projection, substantially as set forth.

3. A cleat for a traction-wheel, comprising  
5 a -shaped bar provided, at its apex, with a central projection having upwardly-inclined front and rear portions *e* and outwardly-inclined end portions *e'*, and provided,  
10 on its arms, with two similar rhomboidal projections having upwardly-inclined front and

rear portions *f* and outwardly-inclined end portions *f'*, the said rhomboidal projections being arranged parallel with the said central projection, substantially as set forth.

In testimony whereof I affix my signature 15  
in presence of two witnesses.

ABRAHAM E. PRICE.

Witnesses:

CAL. KROME,

ALF. N. RUSSELL.