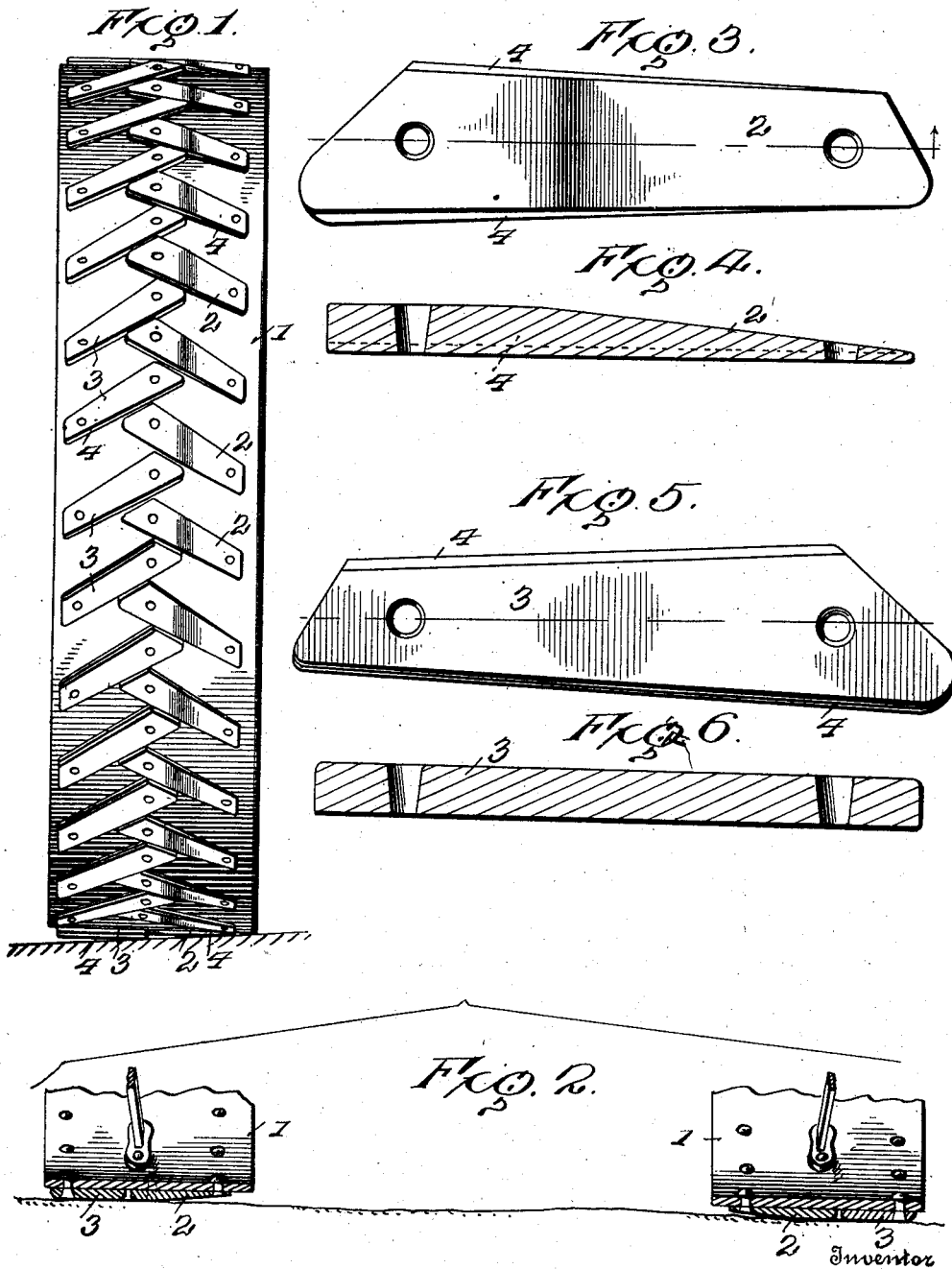


M. J. TODD.
TRACTION WHEEL.
APPLICATION FILED MAR. 9, 1910.

Patented June 6, 1911.
2 SHEETS—SHEET 1.

994,348.



Witnesses
W. W. Williams
F. S. Magnus

M. J. Todd.
Attorney

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2 SHEETS—SHEET 2.

FIG. 7.

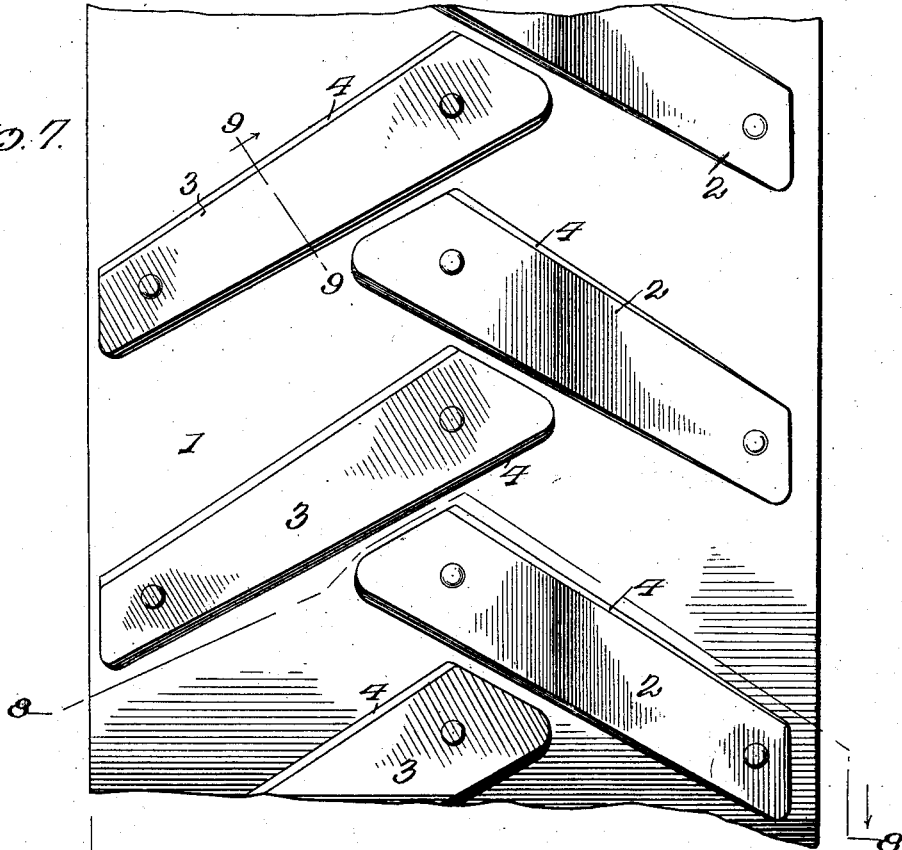


FIG. 8.

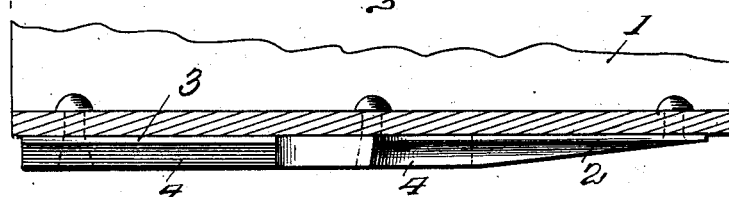
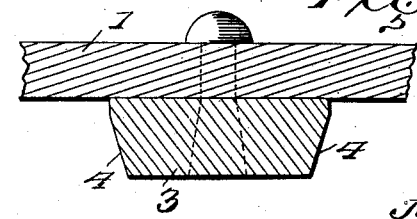


FIG. 9.



Inventor

Witnesses

W. O. Williams

F. S. Maguire

M. J. Todd

By

J. H. ...

Attorney

UNITED STATES PATENT OFFICE.

MARQUIS J. TODD, OF BUFFALO, NEW YORK, ASSIGNOR TO BUFFALO PITTS COMPANY,
OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

TRACTION-WHEEL.

994,348.

Specification of Letters Patent. Patented June 6, 1911.

Application filed March 9, 1910. Serial No. 548,282.

To all whom it may concern:

Be it known that I, MARQUIS J. TODD, of Buffalo, in the county of Erie and State of New York, 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.

The primary object of this invention is to provide a non-yielding lug for traction-engine wheels which will allow the latter to conform to crowning road beds and avoid jarring as the lugs engage the road, and likewise obviate cutting the surface thereof.

A further object is to so form and arrange the lugs of traction-engine wheels that the latter will not only conform to crowning road beds but will present continuous bearing surfaces in traveling over a flat or soft road bed. And a further object is to provide for forcing outwardly from the wheel rim dirt that would otherwise collect between the lugs.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a face view of a wheel equipped with my present improvement, showing a lug engaging with the crown of a road bed. Fig. 2 is a sectional view, with parts broken away, showing the lugs engaging a flat road bed. Fig. 3 is a face view of one of the lugs of the inner series. Fig. 4 is a longitudinal sectional view thereof. Fig. 5 is a face view of one of the lugs of the outer series. Fig. 6 is a longitudinal section thereof. Fig. 7 is an enlarged fragmentary face view of a wheel rim provided with my improvement. Figs. 8 and 9 are sectional views taken, respectively, on lines 8—8 and 9—9, Fig. 7.

Referring to the drawings, 1 designates a traction wheel; 2 an inner series of lugs, and 3 an outer series of lugs, both diagonally arranged with their inner ends overlapping at the center of the wheel rim. The lugs of the inner series 2 are of uniform thickness for approximately one-third their lengths, and are inclined to their outer ends from points about in line with the inner ends of the outer series of lugs. The ends of the lugs 2 do not extend to the inner edge of

the wheel rim but stop short thereof, and the inclined surface of each lug is on a plane which intersects the surface of the inner edge of the rim, so that in traveling over a crowned road bed, as shown in Fig. 1, the inclined surfaces of lugs 2 and the inner edge of the wheel rim will contact with the road bed. If the lugs were not so inclined, or if they were carried to the extreme inner edge of the wheel rim, a jar would occur as each lug engages the road bed, but by inclining the lugs so that they and the inner edge of the wheel rim engage the road I avoid jars, as well as cutting the road.

The lugs of the series 3 are of uniform thickness, as shown in Fig. 6, but these lugs, and also the lugs 3 are tapered longitudinally, that is, they are wider at their inner than at their outer ends so that the spaces between adjacent lugs are widest at the edges of the rim. The lugs of both series are beveled along their longitudinal edges as shown at 4. The purpose of thus beveling the lugs, as well as forming them of gradually decreased width, is to insure the ejection at the side of the wheel of dirt which would otherwise tend to accumulate between the lugs.

In traveling over a flat or soft road bed the lugs 3 and the inner overlapping ends of lugs 2 will contact with the surface, as shown in Fig. 2.

The advantages of my invention will be apparent to those skilled in the art. It will be seen that by inclining portions of the inner series of lugs traction wheels will conform to crowned road beds, and by having such inner series of lugs terminate short of the inner edges of the rims and inclining them so that their planes will intersect such edge all jarring and cutting the road are avoided, and the weight of the engine is taken up mainly at the center of the wheel rim where the overlapping ends of both series of lugs are of uniform thickness. Thus a continuous tread is presented at the center of the rim instead of at the inner edge thereof, thereby placing the strain on the strongest instead of the weakest part of the wheel. It will also be seen that by tapering the several lugs and beveling the edges thereof the accumulation of dirt is avoided.

I claim as my invention:—

1. In combination with a traction-wheel,

a series of non-yielding lugs arranged on the rim thereof inclined on their outer faces toward the inner edge of the rim, and terminating short of such inner edge, the plane
5 of inclination intersecting said edge.

2. In combination with a traction-wheel, two series of lugs arranged obliquely thereon with their inner ends overlapping at the center of the rim, the inner series of lugs
10 being inclined toward their outer ends and terminating short of the inner edge of the wheel rim, the plane of inclination of said lugs intersecting said inner edge of the wheel rim.

3. In combination with a traction-wheel, two series of lugs arranged obliquely thereon with their inner ends overlapping at the center of the rim, both series of lugs being longitudinally tapered toward their outer
20 ends so as to form a divergent space between the lugs of each series, said inner series of lugs being inclined on their outer faces toward the edge of the wheel rim, the outer series of lugs and the inner ends of
25 the inner series of lugs being of uniform thickness.

4. In combination with a traction-wheel, two series of lugs arranged obliquely there-

on with their inner ends overlapping at the center of the rim, the outer series of lugs
30 being of uniform thickness, and the inner series of lugs at their overlapping ends being of the same thickness as the outer series of lugs, said inner series of lugs being inclined on their outer faces toward the edge
35 of the wheel rim.

5. In combination with a traction-wheel, two series of lugs arranged obliquely thereon with their inner ends overlapping at the center of the rim, the outer series of lugs
40 being of uniform thickness, and the inner series of lugs at their overlapping ends being of the same thickness as the outer series of lugs, said inner series of lugs being inclined on their outer faces toward the edge
45 of the wheel rim, the outer reduced ends of said inner series of lugs terminating short of the edge of the wheel rim.

In testimony whereof, I have signed this specification in the presence of two sub-
50 scribing witnesses.

MARQUIS J. TODD.

Witnesses:

FRANCIS S. MAGUIRE,
JOHN A. MURPHY.