

J. OESTE.
TRACTION WHEEL.
APPLICATION FILED NOV. 18, 1909.

974,510.

Patented Nov. 1, 1910.

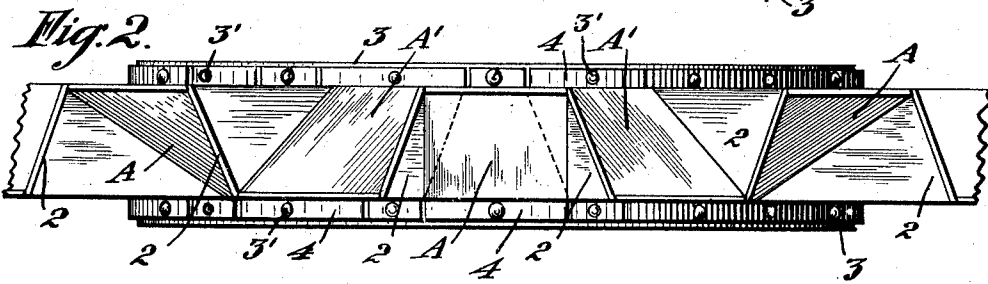
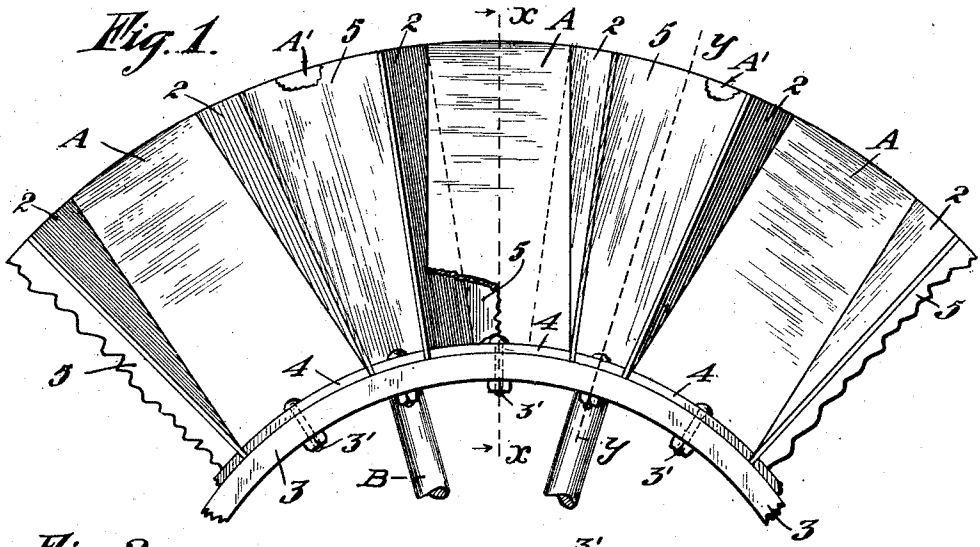


Fig. 3.

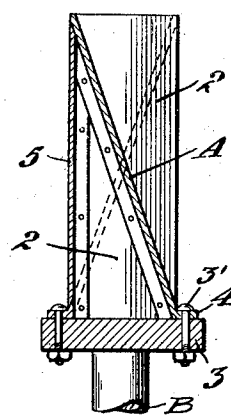


Fig. 4.

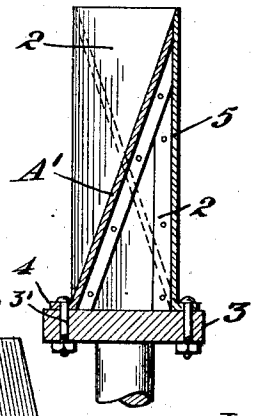
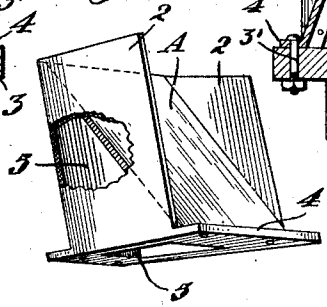


Fig. 5.



Witnesses;

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UNITED STATES PATENT OFFICE.

JULIUS OESTE, OF DAVIS, CALIFORNIA.

TRACTION-WHEEL.

974,510.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed November 18, 1909. Serial No. 528,708.

To all whom it may concern:

Be it known that I, JULIUS OESTE, a citizen of the United States, residing at Davis, in the county of Yolo and State of California, have invented new and useful Improvements in Traction-Wheels, of which the following is a specification.

My invention relates to an improvement in wheels, and especially that class of wheels which is designed for tractional purposes when running upon the ground.

It consists in the combination of a rim composed of a series of diagonal surfaces adapted to engage with the ground, said surfaces being also so arranged as to continually clear themselves of earth and mud which may adhere to them.

It also comprises the combination of parts and details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of the upper portion of my traction-wheel. Fig. 2 is a plan view of same. Fig. 3 is a cross section on the line $x-x$ Fig. 1. Fig. 4 is a cross section on the line $y-y$ of Fig. 1. Fig. 5 is a perspective view of a rim section as formed in one piece.

The central portion B may be constructed in any usual or suitable manner, the detail not being here shown, not being a part of my present invention.

The rim is composed of alternate series of inclined plates A—A', and diagonal radially disposed plates 2 which connect these first named plates. These plates may all be cast or formed of wrought metal as may be found most satisfactory. The plates A—A' are secured to the rim 3 of the inner portion of the wheel, by means of bolts 3'. As shown in the drawings, each of these plates has a base flange 4 forming an obtuse angle with the main portion of the plates A, these base flanges being riveted or otherwise secured to the outer surface of the rim 3, the plates A—A' will then incline diagonally with relation to the wheel rim.

The plates A A' are substantially rectangular in form; the plates 2 are substantially rectangular in form, and they are interposed between and connect the contiguous edges of the plates A—A'.

The width of the plates A taken altogether is so much less than the entire circumference of the wheel that the connecting plates 2 will also stand at an angle with the plates

A—A' so that looking at any one of the sections at right angles with a plate A or A', the sides 2 will be seen to diverge from the bottom of one of the plates, and connect with the bottom of the other plate. This divergence is apparently equal, looking at the wheel from either side, and the edge view of the wheel shows a zigzag periphery, as shown in Fig. 2.

The union of the plates A A' and 2 may be made by means of any suitable overlapping flanges at their meeting edges, and retaining rivets, so that when completed the rim is a stiff, solid structure having a depth radial from its inner surface to the periphery, which is very considerable, amounting to as much, in some cases, as a half diameter of the inner portion of the wheel, or as a whole, making the wheel double the diameter of the inner portion.

The operation will then be as follows: The wheel being mounted upon the vehicle to which it is to be applied will, when moving over soft ground, sink into the ground to a certain depth. The inclination of the plates A—A' and the connecting plates 2 will however limit the depth to which the wheel will sink, and will form a surface which will be sufficient to support the weight carried by the wheel. As traction engines, plowing engines, etc., are used upon comparatively soft ground, the material is apt to stick to the wheels, and in the ordinary construction of wheels having radial plates fixed to the rims, the spaces between these plates soon become filled with the earth, and the tractional effect is to a great extent lost. In the present construction however, the pressure upon the earth which has been carried into the trough-shaped channels of the wheel rim, will act as each portion of the wheel again arrives upon the ground, and will force out the earth which is already in the channels. Thus as the wheel revolves, the sinking of the wheel into the ground acts to continually clean the channels, and to leave them in condition to take a firm hold on the ground when power is applied to revolve the wheel. The space formed behind each inclined plate A—A' above the rim 3, and between the radially disposed rectangular plates 2 may be inclosed by a vertically arranged tapered plate 5, which is secured to the rim 3, and to the outer edges of the plates 2. This prevents earth packing on the outer periphery of the rim 3, or upon the back of the inclined plates

A—A'. The rectangular plates 2 are radially disposed axially upon the periphery of the rim 3, but are arranged so as to stand obliquely or diagonally thereon, in alternate directions.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A wheel rim composed of transversely inclined plates with alternate plates oppositely inclined from opposite edges of the rim, and intermediate uniting plates extending edgewise across the rim between adjacent plates.

2. A wheel rim composed of transversely inclined plates with alternate plates oppositely inclined from opposite edges of the rim, and intermediate substantially rectangular plates projecting radially from the rim and being diagonally disposed across the

rim and having their edges united to the first-named plates.

3. The combination in a wheel, of a rim composed of plates alternately inclined to opposite sides of a radial plane transverse to the axis of the wheel, said plates having out-turned base flanges, and means to secure said flanges to the inner wheel rim, substantially rectangular plates projecting radially from the rim and diagonally disposed and extending between the contiguous edges of the first named plates, and means for uniting said plates.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JULIUS OESTE.

Witnesses:

CHARLES EDELMAN,
C. C. COOK.