(No Model.)

A. G. ROSE.

TRACTION WHEEL.

No. 500,819. Patented July 4, 1893.

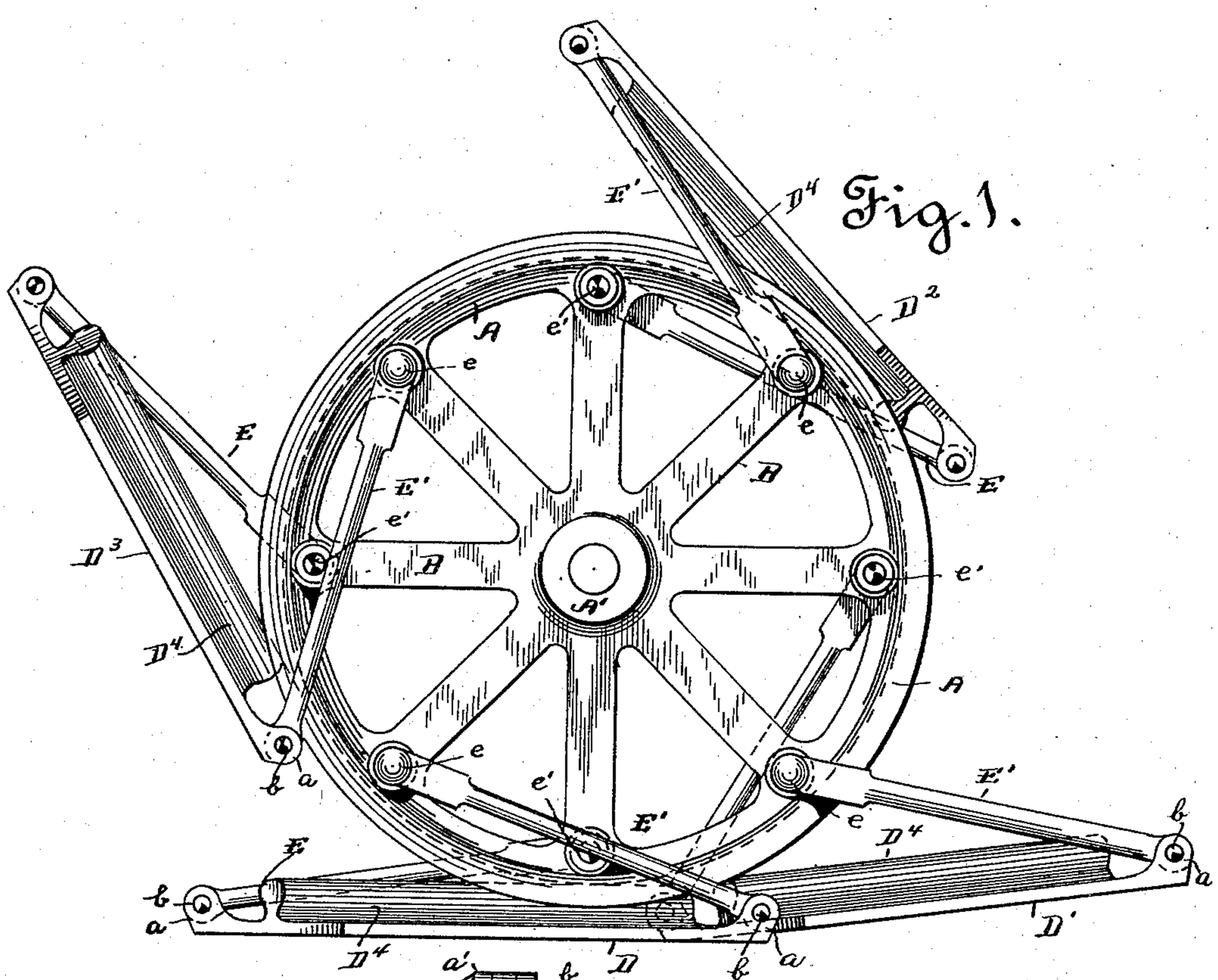

Fig. 1.

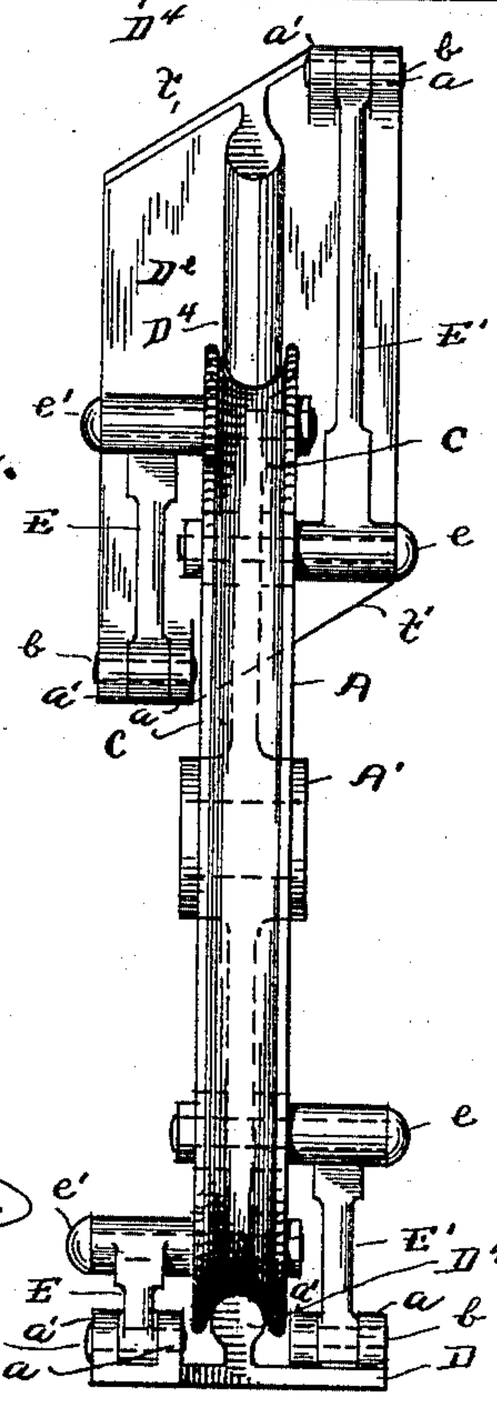

Fig. 2.

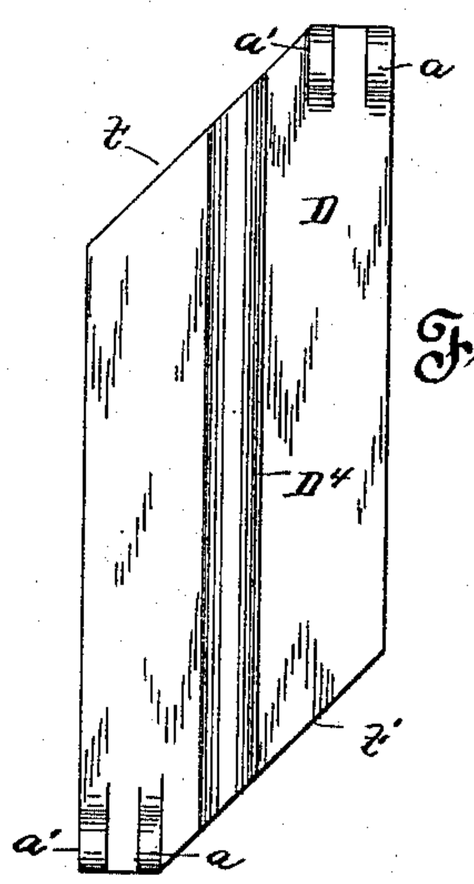

Fig. 3.

Witnesses.

H. Montevercle.

W. H. Cook.

Inventor.

Arlone G. Rose,

By Wadsworth Atty

UNITED STATES PATENT OFFICE.

ANTONE G. ROSE, OF FRESNO, CALIFORNIA.

TRACTION-WHEEL.

SPECIFICATION forming part of Letters Patent No. 500,819, dated July 4, 1893.

Application filed September 28, 1892. Serial No. 447,145. (No model.)

To all whom it may concern:

Be it known that I, ANTONE G. ROSE, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Wheels for Traction-Vehicles; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to an improved wheel for traction engines, wagons, &c., which consists in the arrangement of parts and details of construction as will be hereinafter more fully set forth in the drawings, described and pointed out in the specification.

The object of my invention is to provide a wheel, for use in connection with traction vehicles, which shall be formed with a peripheral groove, and have movably secured thereto a series of shoes, each of which shall be provided with a track which fits within peripheral groove of wheel as same rotates, and each shoe being so secured that as wheel is rotated same will fall by gravity into such position as to lie upon the ground directly in front of wheel, consequently forming a continuous rotating trackway for travel of wheel thereon.

Referring to the drawings forming a part of this application, wherein similar letters of reference are used to denote corresponding parts throughout the entire specification and several views, Figure 1, is a side elevation of the wheel, showing the shoes in the various positions assumed during rotation of the wheel; Fig. 2, a front elevation of the wheel, showing fully peripheral groove cut therein and position of top and bottom shoe, the front shoe being removed; and Fig. 3, detail top plan of one of the shoes.

The letter A, is used to indicate the rim of the wheel, which is connected to hub A′, by means of spokes B, Fig. 1. In said figure I have shown an open wheel, but the same may be constructed solid. Within periphery of wheel is cut or cast groove C, Fig. 2, which is of sufficient diameter to fit over track of shoe. To the wheel I secure a number of shoes, D, D′, D^2, D^3, preferably four, by means of arms E, E′, which arms are movably attached to the wheel through the medium of bolt or pins *e*, *e′*. Each of the shoes have their ends cut upon an opposite incline or angle, as shown at *f*, *f′*, and are cast with upwardly projecting ears *a*, *a′*, between which ears outer ends of arms E, E′, are movably secured by means of bolt or pin *b*. The shoes I make of greater width than the wheel, consequently giving an exceedingly broad tread to the wheel when the shoe is placed upon the ground. These shoes are each provided with a raised track or rail D^4, which extends the entire length of the shoe, said rail being of such width and height as to fit within peripheral grooves of the wheel. This rail may be removably secured to the shoe or made integral therewith. If made removable, I am enabled to insert others in place thereof in case one becomes broken, thus avoiding necessity of destroying entire shoe, which would result if track is made integral. The broad tread furnished by the traveling track shoes will be found of great importance when working over sandy or soft soil, inasmuch as sinking of the wheel is overcome. By so securing the shoes in proper place during rotation thereof, the one just traveled over by the wheel will commence to lift or raise from the ground just as the wheel begins to bear upon the shoe last laid for wheel to travel over, as fully shown in Fig. 1. In other words, these shoes should be so attached to the wheel as to permit the traversed shoe to commence rising just as outer end of arm E′, of the last laid section of track or shoe falls under center of pin *e′*, as shown in Fig. 1, of the traversed shoe. By oppositely beveling or inclining ends of the shoes, or track section, forming what may be termed mitered ends, each shoe is allowed to form a close joint with the other when brought together. By thus constructing and securing my shoes to the wheel, the entire weight of the same is caused to bear directly upon the shoe, or track section, and not upon the attaching arms, consequently providing a solid tread or bearing for the wheel.

In order to maintain the shoe in its true line with periphery of wheel and to prevent track thereof moving from within peripheral groove of wheel, I pivot or movably secure inner ends of arms E, E′, to opposite side of the

wheel. Consequently each arm acts to hold the shoe against the other and in this manner serves to maintain same in proper place. However these arms do not hold the shoe rigidly nor are they intended so to do, but permit of slight lateral play in order to allow of the shoe adjusting itself to hillsides or uneven soil as well as to level ground. These shoes are made of any metal possessing sufficient strength to stand the hard usage to which they must of necessity be subjected, and may be of any suitable size I provide the shoes with a rail in order to maintain the wheel a given distance above the level of the soil, but, if so desired, the rail may be dispensed with and the wheel be permitted to bear direct upon the shoe and travel thereover. However by use of the rail there is no danger of the loose soil interfering with travel of the wheel.

Having thus described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

1. The combination with the wheel, of the peripheral groove provided therein, of the shoe movably secured to the wheel and rotating therewith, and of the track projecting above the shoe and fitting within peripheral groove of the wheel.

2. The combination with the wheel, of the bearing shoes movably secured thereto and rotating therewith, each of said shoes having its ends cut upon an opposite incline in order to permit of each shoe making joint with advanced one during rotation and travel of the wheel.

3. The combination with the wheel, of the bearing shoes secured thereto and rotating therewith, of the rail or track projecting above the shoe and upon which the wheel bears and runs, and of the arms movably connected to the shoe and wheel.

4. The combination with the wheel, of the shoes secured thereto, of the rail or track projecting thereabove, of the ears formed at each end of the shoes, and of the arms pivotally secured within the ears and to the wheel.

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

ANTONE G. ROSE.

Witnesses:
W. A. ACKER,
LEE D. CRAIG.