

J. MONTGOMERY.
Car-Wheel.

No. 217,136.

Patented July 1, 1879.

Fig: 1.

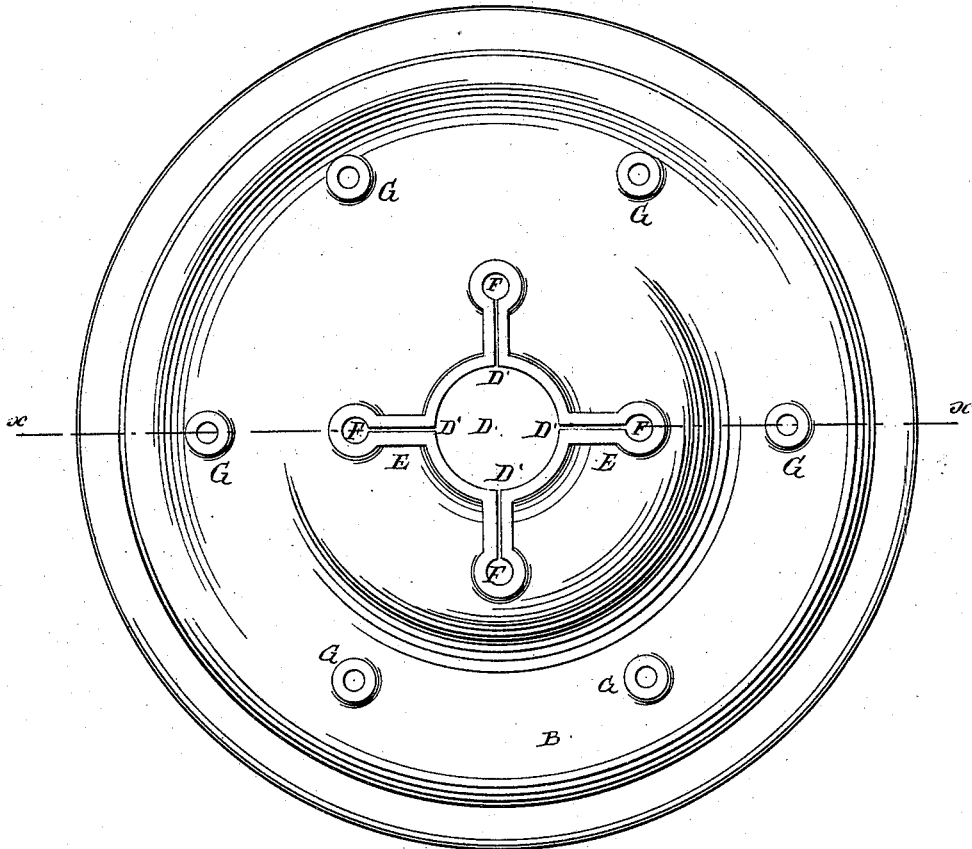


Fig: 2.

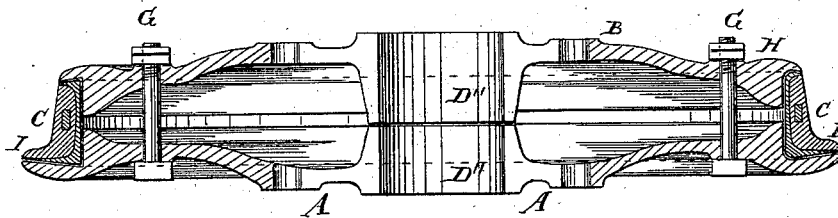
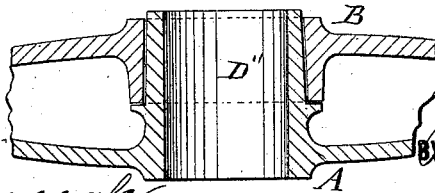


Fig: 3.



WITNESSES:

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Fig: 4.

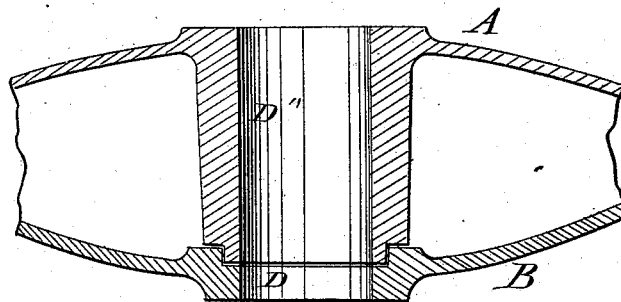
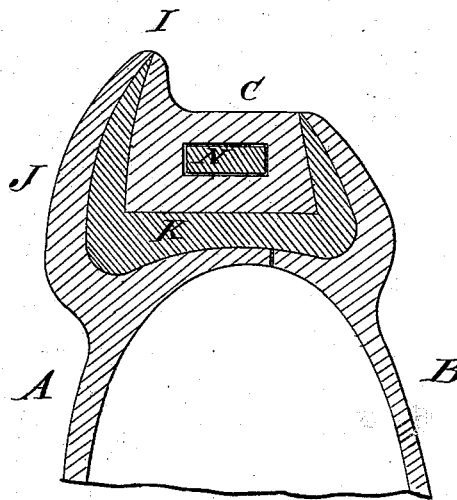


Fig: 5.



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UNITED STATES PATENT OFFICE.

JAMES MONTGOMERY, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN CAR-WHEELS.

Specification forming part of Letters Patent No. **217,136**, dated July 1, 1879; application filed June 11, 1877.

To all whom it may concern:

Be it known that I, JAMES MONTGOMERY, of Jersey City, Hudson county, and State of New Jersey, have invented a new and Improved Car-Wheel, of which the following is a specification.

The invention consists in providing a car-wheel with slots which radiate from the eye, and in re-enforcements around the edges of said slots; also in the construction and application of an elastic packing to inclose three sides of the tread-piece of the wheel and form a bed for said tread in the peripheral groove of the wheel, as hereinafter described and claimed.

In the accompanying drawings, Figure 1, Sheet 1, is an inside view of the wheel. Fig. 2, Sheet 1, is a cross-section of Fig. 1, taken on the line *x x*. Fig. 3, Sheet 1, is a modification of Fig. 2, showing a sleeve or hub on the outer disk, which sleeve extends through the inner disk, and is constructed with an annular shoulder, abutting against the latter. Fig. 4, Sheet 2, is still another modification of the form and construction of the hub. Fig. 5, Sheet 2, is an enlarged cross-section of the peripheral or outer portion of the wheel.

Similar letters of reference indicate corresponding parts.

A designates the outer disk, and B the inner disk. C represents the tread-ring.

The two disks are made of cast or wrought iron, steel, or composition metal, and bolted together substantially as shown in Fig. 2. In some wheels the bolts will pass directly through the packing hereinafter described, or in close proximity thereto, to insure a proper vise-like action on the tread-ring to hold it firmly in position.

D is the central opening or eye for the axle, from which radiate slots D', terminating in holes F. The slots and holes are re-enforced by thickening the disks at these points, as shown at E, Fig. 1. This arrangement of slots and holes prevent the disks from cracking or being unduly strained in cooling after being cast.

G represents bolts by which the disks are confined together, as seen in Fig. 2, and on

these bolts jam-nuts or any nut-locking device may be applied for preventing the set-nuts working loose.

The disk A may be made with a sleeve, D'', substantially as shown in Figs. 3 and 4. The tread ring or piece C has a flange, I, and is made of any suitable material, iron or steel, and is cast around a core, which should be of very tough metal, so as to add great strength and durability to the tread. The core is indicated in Fig. 5, Sheet 2, and it may be of round or prismatic form in cross-section.

The tread-ring C is dovetailed between the flanges J J of the disks A B, so that in case of breakage the pieces will not be so displaced as to interfere with the running of the wheel.

K, Fig. 5, designates a packing which I interpose between the tread-ring or tire C and three sides of the groove in which this tire is confined. This packing is designed to afford a cushion for the tire, and it may be made of hard rope, cotton, oakum, hardened rubber, wood, or a composition of sawdust mixed with glue and pressed into its place under powerful hydrostatic pressure.

I do not claim, broadly, a wheel having slots radiating from its eye for the purpose of preventing cracking from contraction in cooling after being cast.

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

1. The car-wheel having its body provided with slots D, radiating from its eye and terminating in circular openings, and the flanges or re-enforcements E, extending around said slots and openings, as shown and described.

2. The combination, with the two-part wheel having a peripheral dovetail groove, of the tread-piece C, made broadest at the base, and the elastic cushion K, applied so as to inclose three sides of the tread-piece and confine it in the groove, as shown and described.

JAMES MONTGOMERY.

Witnesses:

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ALEX. F. ROBERTS.