

D. OTTINGER.
Wheel for Vehicles.

No. 213,297

Patented Mar. 18, 1879.

Fig. 1.

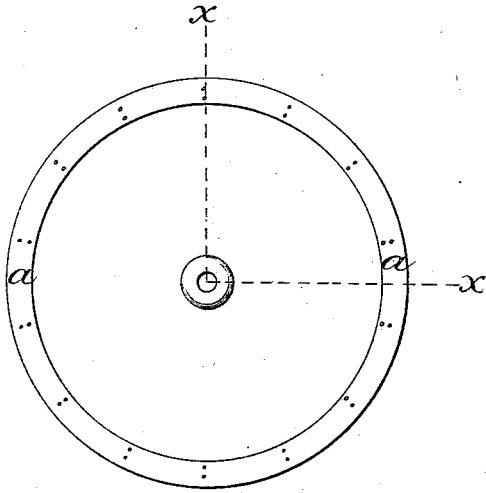


Fig. 2.

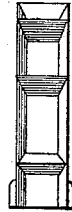


Fig. 3.

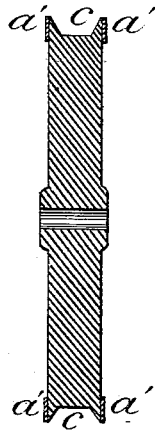
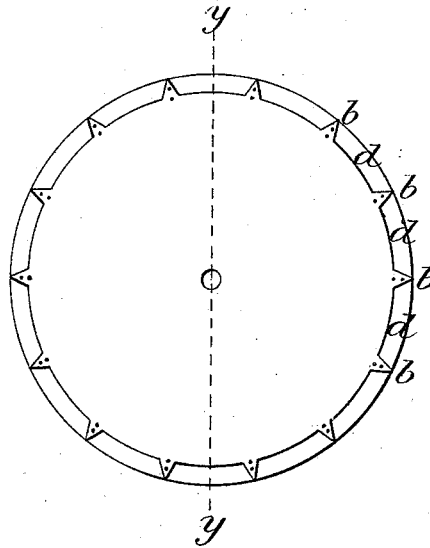


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

DOUGLASS OTTINGER, OF ERIE, PENNSYLVANIA.

IMPROVEMENT IN WHEELS FOR VEHICLES.

Specification forming part of Letters Patent No. **213,297**, dated March 18, 1879; application filed July 15, 1878.

To all whom it may concern:

Be it known that I, DOUGLASS OTTINGER, of Erie, in the county of Erie and State of Pennsylvania, have invented a new and useful Improvement in Wheels for Running Over the Surface of Sand or Soft Ground, of which the following is a specification:

The object of my invention is to produce the rim of a wheel with which carts, wagons, or carriages can be moved over sand or soft ground with a comparatively small application of draft or force. The invention is specially designed to facilitate the transportation of the life-saving apparatus on the lake and sea coasts.

The invention consists of a spoke or solid wheel with broad rim, double flanges, and the groove made by the double-beveled flanges divided into spaces by cross-angular pieces.

Figure 1 is a side view of the wheel. Fig. 2 is a vertical view of the rim. Fig. 3 is a cross-section through the center of the wheel. Fig. 4 is a section through the middle of the rim, at right angles to the axis of the wheel.

The tread of the wheel is about eight inches; the diameter, three to six feet. There are fastened to the sides of the felly the metal protecting-flanges A A. Inside of these are the flanges, extending about two and a half inches from the face of the wheel at an angle, *c*, of

about forty-five degrees, so as to press the sand inward under the rim to make a solid bed for the pressure of the wheel. Between these flanges are angular cross-strips *b b*, Fig. 4, placed about twelve inches apart from center to center. These prevent the sand from rising up before the wheel as the vehicle is moved.

The essential difference between my wheel and all others known to me is in its having a sectional flanged surface or edge, not to guide it upon any track, but solely and exclusively for catching and holding, by means of the flanged sections of its periphery, the loose sand over which it passes, so as to support the wheel from that excessive sinkage to which wheels, though flanged, are subjected, its sectional surface being indispensable to its successful use to accomplish my purpose in its invention.

What I claim is—

A wagon-wheel provided with a double-flanged tread, with its groove divided into sections *d d* by the angular pieces *b b*, substantially as described, and for the purpose specified.

DOUGLASS OTTINGER.

Witnesses:

T. J. HOSKINSON,
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