

G. ELMSLIE.
Car-Wheels.

No. 144,195.

Patented Nov. 4, 1873.

FIG. I.

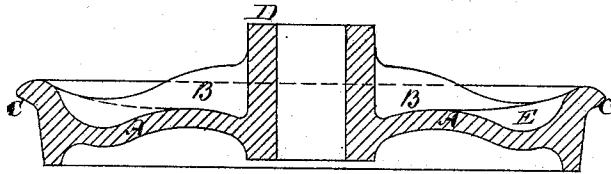
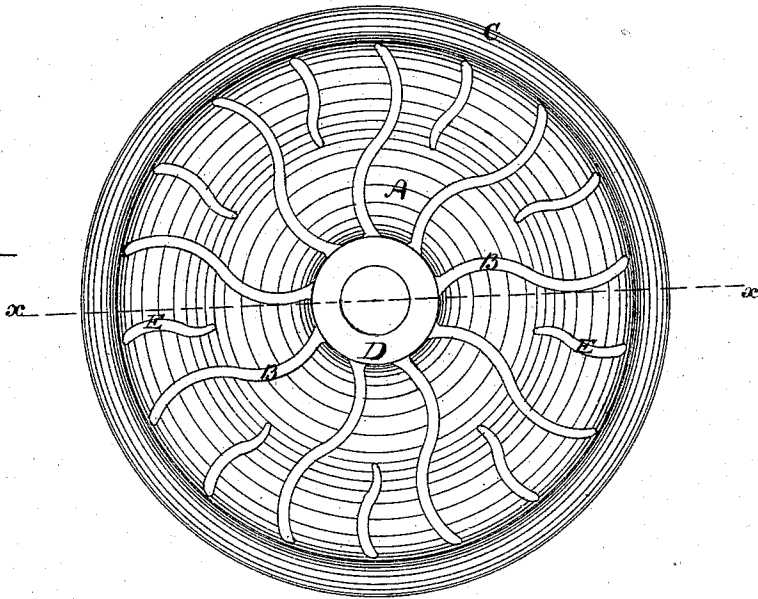


FIG. II.



WITNESSES.

J. Herbert Bartlett.
W. Sheppard.

INVENTOR.

Gordon Elmslie.
per
Donald C. Ridout & Co.
his attorneys.

UNITED STATES PATENT OFFICE.

GORDON ELMSLIE, OF TORONTO, CANADA.

IMPROVEMENT IN CAR-WHEELS.

Specification forming part of Letters Patent No. **144,195**, dated November 4, 1873; application filed March 27, 1873.

To all whom it may concern:

Be it known that I, GORDON ELMSLIE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Car-Wheels, of which the following is a specification:

The object of my invention is to reduce the weight and cost of molding car-wheels without diminishing their strength.

Figure 1 is a cross-section through the line *x x*. Fig. 2 is a plan.

In the design illustrated by the accompanying drawing I have attained this desideratum, which, after a practical test, has fulfilled my highest hope, and enables me to assert my claim with confidence.

A is the web, curved sufficiently to give it lateral strength without diminishing its crushing strength. The large rib B extends from the inside edge of the rim C to the hub D, thus increasing the strength of the web A, not only near the rim C, but more particularly at what would otherwise be its weakest point, viz., where it connects with the hub D. E are small intermediate ribs placed between the larger ones, B, for the purpose of resisting the lateral strain acting upon the web A and rim C. The ribs B and E are placed alternately. Neither set of ribs are placed opposite to each

other on a line through the center, as is usually the case, but are arranged as shown in Fig. 1, each rib being curved, so that, while not being sufficiently curved to diminish its crushing strain, it would at the same time be impossible to draw a straight line on the surface of the rib. This point has been found to be most important, as straight ribs almost invariably crack when the metal is cooling, while my curved ribs merely bend more as the body of the metal shrinks.

I am aware that single-plate wheels have been made; but the ribs are nearly straight, and no intermediate or small ribs like E are used; nor do the ribs extend from the hub to the rim, as in my design. I do not claim a single-plate car-wheel as my invention, nor the simple addition of ribs for strengthening the same; but

What I do claim is—

A car-wheel having the outer surface of the web A plain, large curved ribs B extending from the rim C to the hub D, and small curved ribs E, arranged and formed substantially as and for the purpose specified.

Toronto, March 19, 1873.

GORDON ELMSLIE.

Witnesses:

J. HERBERT BARTLETT,
WM. SHEPPARD.