

N. WASHBURN.

Car-Wheel.

No. 7,710.

Patented Oct. 8, 1850.

Fig. 1.

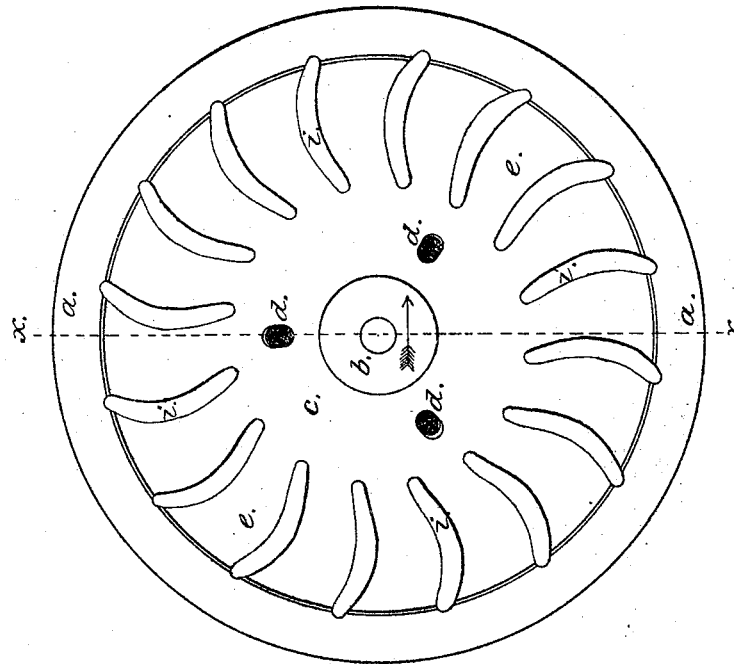


Fig. 3.

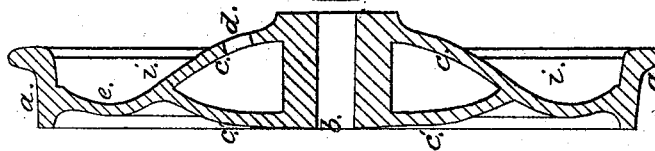
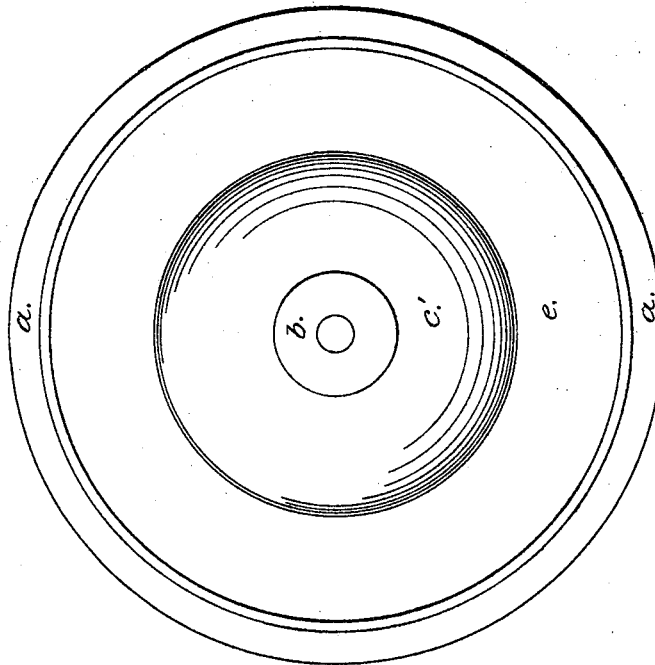


Fig. 2.



UNITED STATES PATENT OFFICE.

NATHAN WASHBURN, OF WORCESTER, MASSACHUSETTS.

CAST-IRON CAR-WHEEL.

Specification of Letters Patent No. 7,710, dated October 8, 1850.

To all whom it may concern:

Be it known that I, NATHAN WASHBURN, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Cast-Iron Car-Wheels, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawing in which—

Figure 1, is a side elevation of the wheel.
Fig. 2, is an elevation of the opposite side.
Fig. 3, is a section in the plane of its diameter.

My improvements consist in the manner of disposing of the metal in the wheel, so as to produce great strength, and relieve the wheel from strain when cast and properly chilled, thus avoiding most of the defects to which ordinary wheels are liable when cast whole.

The rim (*a*,) of the wheel is of the ordinary form, and is cast in a chill; the hub (*b*,) is also similar to wheels now in use, but with less thickness of metal; from each end of the hub two arch-shaped plates, (*c*, *c'*,) project radially outward all around, and join at a point half the semi-diameter of the wheel from the center, or a little beyond it; to form this part of the wheel, a core is necessary, the application and construction of

which is well known to persons engaged in the manufacture of other wheels, where cores are used; the openings (*d*,) being for the purpose of sustaining the core; from the front junction of the two plates there is an extension of a single plate (*e*,) curved in its radial section, and forming an ogee with the front plate (*c*); on the concave face of this extension (*e*,) curved arms or brackets (*i*,) are affixed perpendicular to the face of the plate, and gradually tapering from the rim (*a*,) to the junction above named of the plates (*c*, *c'*); the outer face of these brackets are nearly flush with the face of the wheel, as clearly shown in the cross section, Fig. 3.

I have found that a wheel of the above described construction, is capable of standing the severest tests to which car wheels are ever subjected; they are also lighter and stiffer than any other wheel with which I am acquainted.

Having thus fully described my improved cast iron wheel, what I claim therein as my invention and for which I desire to secure Letters Patent is—

The combination of the arch at the center with the curved plate and arms or brackets connecting the hub and rim in the manner and for the purpose set forth.

NATHAN WASHBURN.

Witnesses:

J. J. GREENOUGH,
J. H. GODDARD.