

(No Model.)

W. W. LOBDELL.
CHILLED CAR WHEEL.

No. 463,426.

Patented Nov. 17, 1891.

FIG. 1.

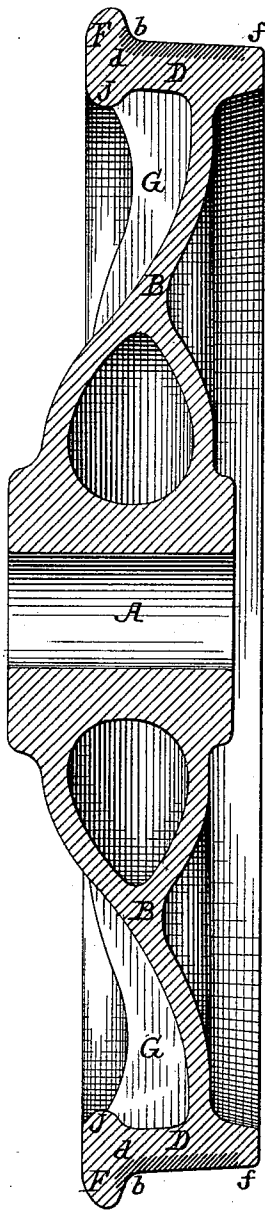
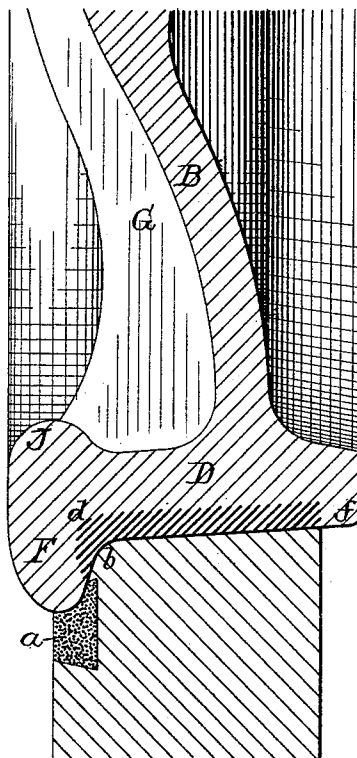


FIG. 2.



Witnesses:

A. V. Groupe.

Murray C. Boyer.

Inventor:

William W. Lobdell

by his Attorneys

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UNITED STATES PATENT OFFICE.

WILLIAM W. LOBDELL, OF WILMINGTON, DELAWARE, ASSIGNOR TO THE
LOBDELL CAR WHEEL COMPANY, OF SAME PLACE.

CHILLED CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 463,426, dated November 17, 1891.

Application filed February 24, 1891. Serial No. 382,393. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. LOBDELL, a citizen of the United States, and a resident of Wilmington, New Castle county, Delaware, have invented certain Improvements in Chilled Car-Wheels, of which the following is a specification.

The object of my invention is to so make a cast-iron car-wheel having a chilled tread as to provide for a proper depth of chill, both at the tread and at the throat of the flange, the outer portion of the flange being unchilled and the wheel possessing greater strength than usual in the flange portion. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a car-wheel made in accordance with my invention, and Fig. 2 is an enlarged section of part of the wheel and of the chill employed in casting the same.

In Fig. 1 A represents the hub of the wheel; B, the web; D, the tread; F, the flange, and G G stiffening-brackets, such as are usually employed in wheels of this class.

In making wheels of this character the rim portion is cast against a chill or iron mold, which forms a chilled surface on the tread of the wheel, the common practice being to chill not only the tread, but also the flange F of the wheel to its point or outer edge. The chilling of all of the flange of the wheel has, however, long been recognized as an objection, and wheels have been made with the outer portion of the flange unchilled, the patent of Wm. Wilmington, No. 85,046, dated December 15, 1868, showing a chill recessed for the reception of a ring *a* of sand bounding the flange F of the wheel along a portion of its inner side and periphery, so as to restrict the chilling to the tread and to the throat *b*, where the flange joins the tread, the outer portion of the flange constituting what is technically known as a "sand-flange." This method of casting, however, sometimes fails to produce a sufficient depth of chill at the throat, while other parts have a sufficient depth of chill. I find that this defect is overcome and a deeper chill made at

the throat of the flange by the use of an internal rib J in connection with the sand-flange, the rib J extending internally beyond the tread D and increasing the radial extent of flange correspondingly. In this case the bulk of the metal behind the throat *b* is such that a deep chill will not injuriously affect the strength of the wheel, the point of the flange not being chilled. I also find it preferable not to chill the rim of the wheel for some distance from the outer edge of the tread, so that a ring or band *f* of unchilled metal extends entirely around the wheel at said outer portion of the tread, as shown in Fig. 1.

I do not claim, broadly, a chilled cast-iron car-wheel having the internal rib J, as such ribs have heretofore been used upon wheels having the treads and flanges chilled throughout. Such rib J, however, when applied to a sand-flange wheel provides for an increased depth of chill at the throat of the flange, and thus materially improves the wearing qualities of the wheel, while the increased bulk of unchilled metal in the flange portion of the wheel enables said wheel to resist breakage much more effectively than a wheel in which the flange is chilled throughout.

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

1. A cast-iron car-wheel having a chilled surface at the tread and at the throat of the flange, but unchilled at the outer portion or point of the flange, said flange also having an internally-projecting rib, substantially as specified.

2. A cast-iron car-wheel having a chilled tread and also chilled at the throat of the flange, the outer portion or point of the flange and the outer edge of the tread being unchilled, and said flange having an inwardly-projecting rib, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM W. LOBDELL.

Witnesses:

CHAS. F. WOLLASTON,
WM. G. TAYLOR.