(No Model.)

M. McDOWELL.

WHEEL.

No. 386,332. Patented July 17, 1888.

Fig. 1.

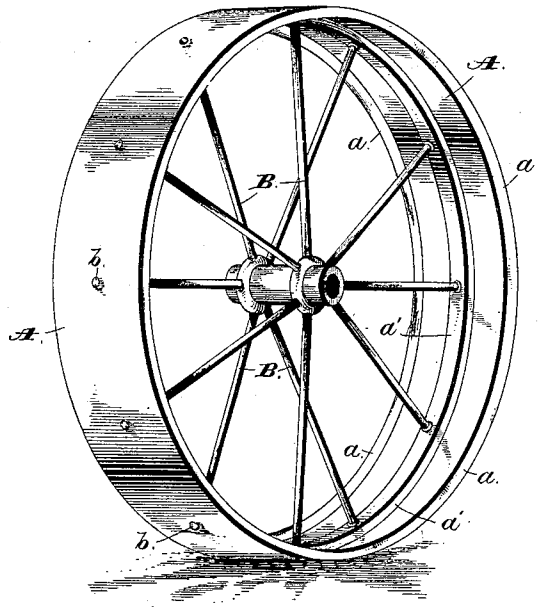


Fig. 2.

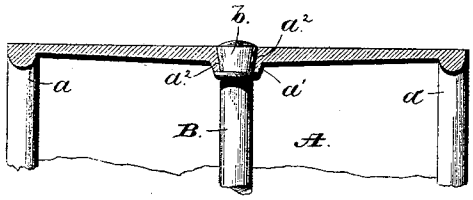


Fig. 3.

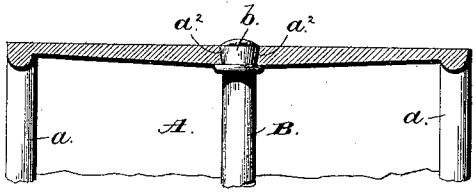
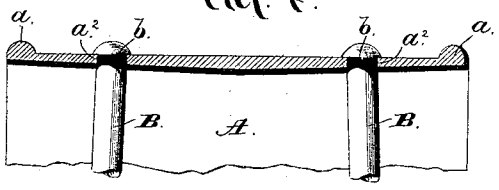


Fig. 4.



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UNITED STATES PATENT OFFICE.

MALCOLM McDOWELL, OF PLANO, ASSIGNOR TO THE QUINCY METAL WHEEL COMPANY, OF QUINCY, ILLINOIS.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 386,332, dated July 17, 1888.

Application filed February 25, 1884. Renewed September 24, 1885. Again renewed June 6, 1887. Serial No. 240,441. (No model.)

To all whom it may concern:

Be it known that I, MALCOLM MCDOWELL, of Plano, in the county of Kendall and State of Illinois, have invented certain new and useful Improvements in Rims of Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a wheel provided with my improved rim. Fig. 2 is an enlarged cross-section of said rim at a point where the same receives the end of a spoke, and Figs. 3 and 4 are like views of the same and show modifications in the form of the rim.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to produce a wheel which shall have the least practicable weight that is consistent with the necessary strength; and to this end said invention consists in the construction of the rim, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ a wheel-rim, A, which at its edges has such thickness only as will prevent it from being indented while passing over stones and other like obstructions, and from such edges to its center gradually increases in thickness until at the latter point said rim has nearly twice the thickness of its edges.

At each edge of the rim A is provided a rib, *a*, which extends along said edge and operates to stiffen the same and enable it to resist any strain which would be caused by the ordinary use of a wheel. Said marginal bead is preferably arranged upon the inner face of said rim, as shown in Figs. 1, 2, and 3, but will perform its office equally well if placed upon the outer face of the same, as seen in Fig. 4. At the transverse center of the rim A is a third rib, *a'*, which extends lengthwise of the inner face of the same and operates to strengthen such part—the arch of said rim—and to contain the usual mortises, a^2 and a^2, for the reception of the outer ends or tenons, *b* and *b*, of the spokes B and B. The rim thus constructed possesses greatest strength at its transverse center, at which point it receives the greatest strain, and also furnishes a firm and substantial bearing for the spokes, while from such point, laterally outward in each direction, the thickness diminishes to correspond to the diminishing strains, by which means a materially less weight of metal is required than would be necessary were any other form of rim employed.

If desired, the central rib, *a'*, may be omitted and the general thickness of the rim A increased at its transverse center, as shown in Fig. 4, such form being considered preferable for wheels where the distribution of metal in the rim is not specially important.

Having thus described my invention, what I claim is—

1. A metal wheel in which the rim is provided with circumferential marginal ribs that are formed upon and integral with the same, substantially as and for the purpose specified.

2. A metal wheel in which the rim is provided with a circumferential central rib and two circumferential marginal ribs, substantially as and for the purpose shown.

3. A metal wheel in which the rim is provided with a central circumferential rib and two circumferential marginal ribs, and between each of the latter and said central rib has an inwardly-increasing thickness, substantially as and for the purpose shown and described.

MALCOLM MCDOWELL.

Witnesses:
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