

(No Model.)

H. W. AVERY.
CAR WHEEL.

No. 429,407.

Patented June 3, 1890.

Fig1.

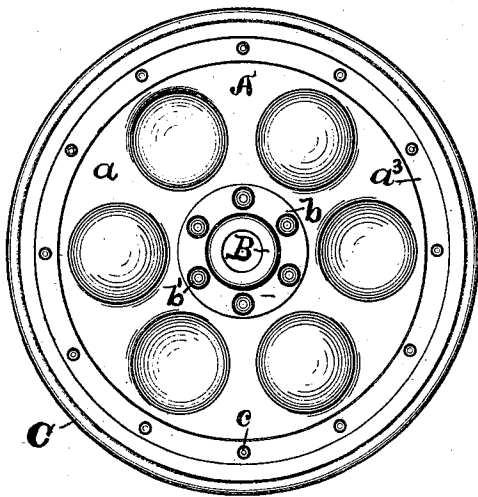


Fig4.

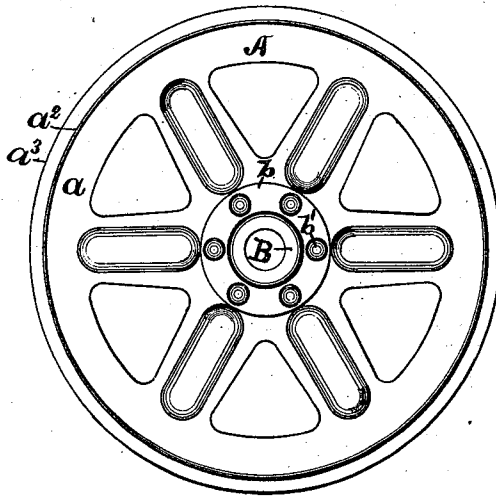


Fig 2.

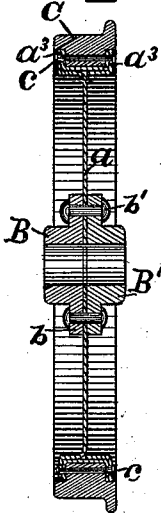


Fig 3.

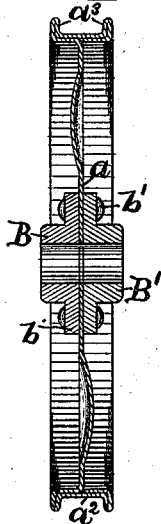


Fig 5.

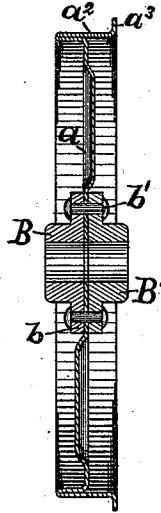
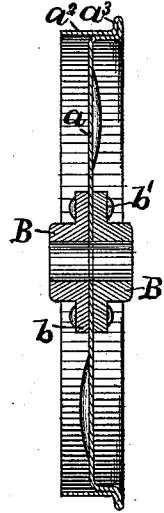


Fig 6.



WITNESSES.

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CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 429,407, dated June 3, 1890.

Application filed October 31, 1889. Serial No. 328,742. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. AVERY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

Referring to the drawings, Figures 1 and 4 are side elevations of slightly-modified forms of my improved car-wheel, and Figs. 2, 3, 5, and 6 are central vertical sectional views of said wheels, showing several slight variations in the construction of their rims.

Referring to the parts by letter, A represents the wheel-body, which comprises the following parts integral with each other: a web *a* and a folded rim *a'*, extending on both sides of said web and having a flange *a''* turned up on the edge of said rim. In Fig. 4 a portion of the web is shown cut away, forming thereby what would perhaps properly be called "spokes;" but for uniformity of expression I have termed that part of both wheels inside the rim the "web." In Figs. 3, 5, and 6 the web is shown to be formed with corrugations, which are bent alternately in opposite directions. This construction is especially serviceable in a car-wheel, as it furnishes that amount of resilience which is necessary in car-wheels. In Fig. 5 the flange *a''* is formed of a single thickness of metal. In Fig. 6 the flange is doubly thick; but in both these last-mentioned forms the rim is double on one side and single on the other side of the web. In

Fig. 3 the rim is formed by so folding the metal that it is doubly thick on both sides of the web, and two flanges are shown turned up from the outside edges of the rim. In Fig. 2 this last form of wheel is shown combined with a separate tire C, which in manufacture would be placed around the wheel before one of the flanges *a''* was turned up, and this tire is held in place by rivets *c* or other suitable means. Any suitable form of hub-pieces may be combined with this wheel-body, those shown in the drawings being intended to represent cast-iron pieces B B', formed with an annular flange *b*, and these pieces are secured to the web of the wheel-body by rivets *b'*.

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

1. A bent sheet-metal car-wheel body having as integral parts thereof a web, a folded rim extending to both sides of said web, and a flange on one edge of said rim, substantially as and for the purpose specified.

2. In a sheet-metal car-wheel, a bent body having as integral parts thereof a web, a folded rim extending to both sides of said web, which rim has annular flanges at both its edges, combined with a tire lying between said flanges and suitably secured to said wheel-body, substantially as and for the purpose specified.

HENRY W. AVERY.

Witnesses:

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