

(No Model.)

H. E. WEST.
METAL WHEEL.

No. 483,703.

Patented Oct. 4, 1892.

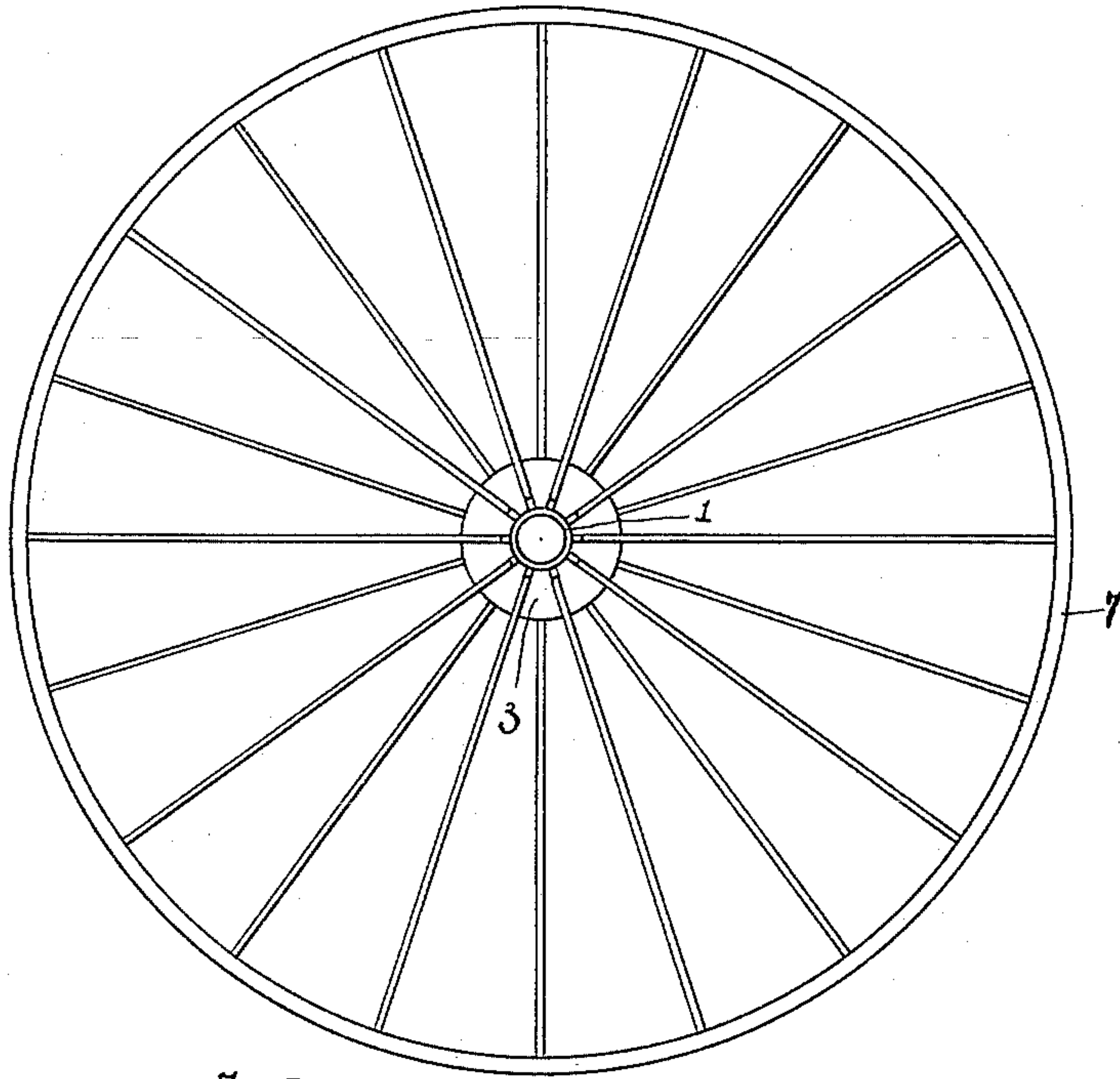


Fig. 1.

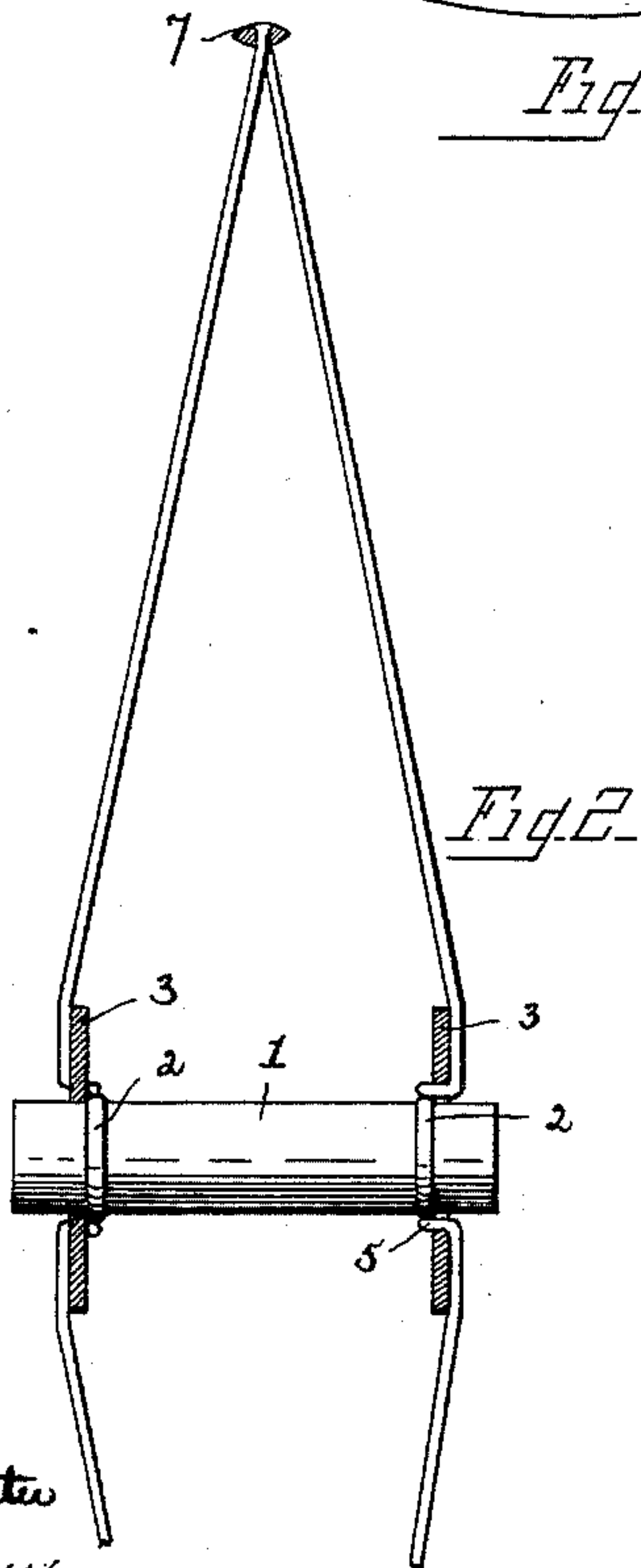


Fig. 2.

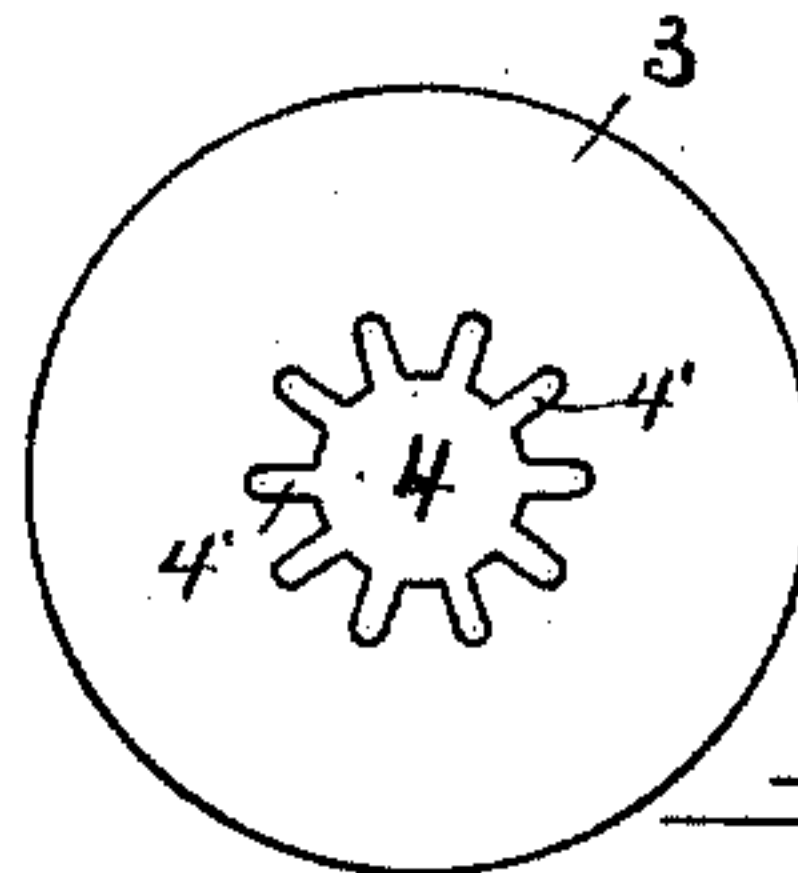


Fig. 3.

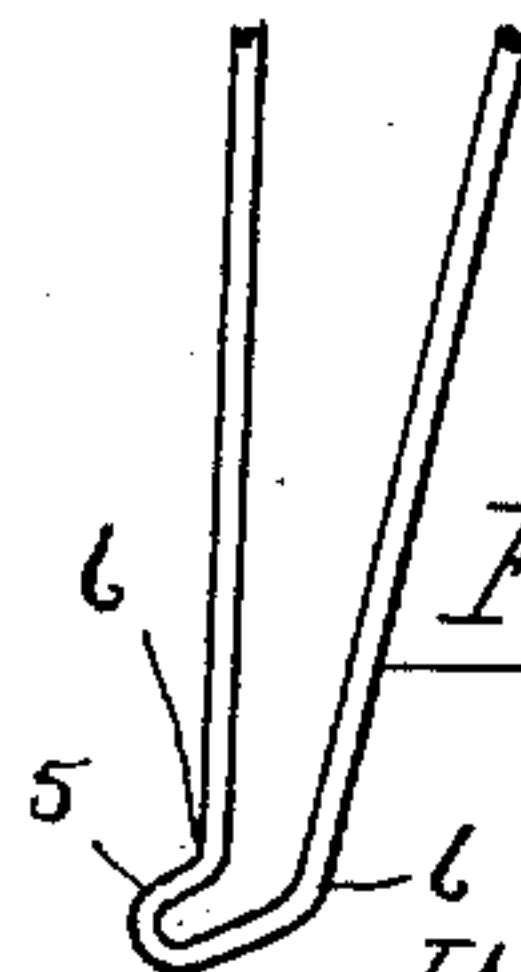


Fig. 4.

WITNESSES

Carroll J. Webster
Grace C. Lohamy

INVENTOR
Harley E. West.
By William Webster
att'y

UNITED STATES PATENT OFFICE.

HARLEY E. WEST, OF TOLEDO, OHIO, ASSIGNOR OF ONE-FOURTH TO MICHAEL V. WALL, OF SAME PLACE.

METAL WHEEL.

SPECIFICATION forming part of Letters Patent No. 483,703, dated October 4, 1892.

Application filed January 18, 1892. Serial No. 418,411. (No model.)

To all whom it may concern:

Be it known that I, HARLEY E. WEST, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Metal Wheels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to metal wheels, and more especially to wheels of that character used upon bicycles, tricycles, children's wagons, &c., and has for its object to construct a wheel of great rigidity, economy of construction, and simplicity of parts. As is well known, the use to which wheels of this character are put requires that they shall withstand all the rough usage incident to children's sport. It then becomes necessary that the construction shall be such that the wheel shall not only be simple, but durable. I have provided a wheel of this character in which the invention consists in securing the return-bend of the spokes to projections formed upon a central disk and at the outer ends to the rim.

In the drawings, Figure 1 is a side elevation of a wheel constructed in accordance with my invention. Fig. 2 is a vertical section of the wheel, the front half being removed. Fig. 3 is a plan view of one of the hub-disks, and Fig. 4 is a section of the return-bend spoke.

1 designates the ordinary thimble, formed with an annular enlargement 2 at each end.

3 designates disks formed with a central orifice, 4 of a diameter to closely fit upon the end of the thimble and bear against the annular enlargement. Each disk 3 is formed with radial recesses 4, which form a seat for the wire of the return-bend 5 of the spoke, which engages with that portion of the disk

between the recesses, the diverging ends of the spoke being secured in the rim. 45

The economy and manner of construction will be readily understood, the thimbles being of any of the well-known forms. It is also necessary to stamp the disks out of sheet metal, which can be done at a nominal expense, or they may be of malleable cast-iron, if desired. The wire is cut the desired length, and bent centrally to form two spokes, and at the point of the loop is bent at an acute angle to the body portion, as at 6. The loops are now engaged with the projections upon the disks and the disks are placed upon the thimble, when the outer ends of the spokes are secured in the rim 7 of the wheel. 55

It will be seen that in the construction of the wheel the parts are reduced to a minimum and that, the tension of the spoke being directly upon the disk, great rigidity is secured. 60

What I claim is—

1. In a metal wheel, a thimble, disks thereon formed with recesses diverging from the thimble radially, and spokes formed with a return-bend in engagement with the disks, the wire resting in the recesses, the outer ends being secured to the wheel-rim. 65

2. In a metal wheel, a hub comprising a thimble, and disks upon each end thereof, formed with projections concentric from the thimble and diverging therefrom, in combination with return-bend spokes angled at the loop and engaged with the projections, the free ends of the spokes being secured to the wheel-rim. 70

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses. 75

HARLEY E. WEST.

Witnesses:

WILLIAM WEBSTER,
CARROLL J. WEBSTER.