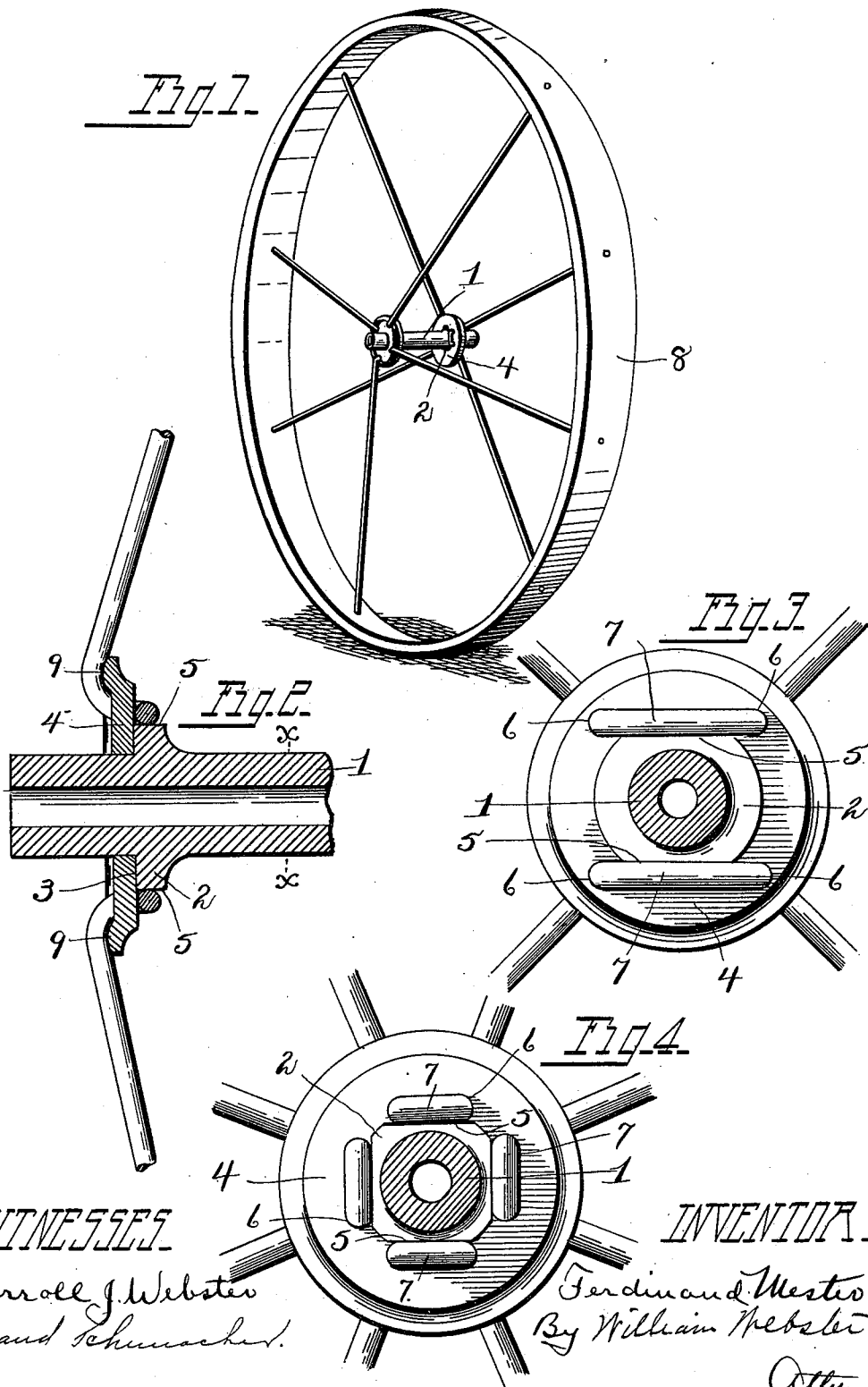


(No Model.)

F. MESTER.
METAL WHEEL.

No. 582,868.

Patented May 18, 1897.



UNITED STATES PATENT OFFICE.

FERDINAND MESTER, OF TOLEDO, OHIO, ASSIGNOR TO AUGUSTA MESTER,
OF SAME PLACE.

METAL WHEEL.

SPECIFICATION forming part of Letters Patent No. 582,868, dated May 18, 1897.

Application filed January 23, 1897. Serial No. 620,322. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND MESTER, 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 a metal wheel of that character combining strength, simplicity, and cheapness, especially adaptable as a wheel for use in wheelbarrows, &c.

The invention consists in a spindle provided with shoulders near each end, having squared portions around the periphery thereof, and disks arranged upon the spindle and adapted to bear against the shoulders thereof, each disk being provided with perforations through which the spokes are threaded, the bend of the spokes resting against the squared portions of the enlargement upon the spindle, which prevents rotary movement of the disk with reference to the spindle, the disk being held from longitudinal movement thereon by means of the tension of the spokes, the outer ends of which are secured in the rim.

The invention further consists in the parts as shown, described, and claimed.

In the drawings, Figure 1 is a perspective view of a metal wheel constructed in accordance with my invention. Fig. 2 is a detail longitudinal sectional view of the spindle, disk, and spokes. Fig. 3 is a sectional elevation of one of the hubs, taken at a point indicated by lines *x x*, Fig. 2, illustrating more particularly the squared portion of the enlargement of the spindle and the relation of the bend of the spokes thereto. Fig. 4 is a like view to Fig. 3, illustrating a modification in which there are a greater number of spokes employed than in that illustrated in Figs. 1, 2, and 3.

1 designates a spindle having near each end thereof enlargements 2, which form shoulders

3, against which the disks 4 abut, which are arranged upon the outer ends of the spindle.

If an eight-spoked wheel is desired, the enlargements 2 are squared upon opposite sides of the periphery thereof, as at 5.

Arranged at regular intervals around the disks 4 are orifices 6, which pass entirely through the disks, there being four orifices in each disk for a spoked wheel, as shown in Fig. 3, and threaded through these orifices are two spoke-wires, the bends 7 of which are arranged parallel to each other to abut against the squared portions 5 of the shoulders 2. By this construction the disks 4 are held rigid with the spindle, as the parallel portions 7 of the spokes engaging with the squared sides 5 of the enlargements 2 effectually prevent movement of the disks with reference to the spindle. The outer ends of the spokes are secured to the rim 8 and are riveted thereto, which exerts a tension upon the spokes to hold the disks against the shoulders 3 of the enlargement.

9 designates a substantially circular annular projection upon the outer side of each disk around which the spokes bend, which prevents the necessity of a sharp curve in the spokes.

In Fig. 4 is illustrated a modification in which an eight-spoked wheel is shown. In this construction, instead of the two enlargements 2 being provided with two oppositely-squared portions there are four squared portions, and instead of four orifices in the hubs 4 there are eight orifices, the arrangement of the spokes being the same.

It will readily be seen that any number of spokes may be employed, it only being necessary to change the form of the enlargement of the spindle. It will thus be seen that I have provided a wheel which is of few parts, inexpensive in its manufacture, and which is of great strength.

What I claim is—

In a metal wheel, a spindle formed with enlargements near each end thereof, a plurality of squared portions upon the periphery of the enlargement, disks secured upon the spindle

and bearing against the enlargements, each provided with a plurality of perforations, and return-bend spokes passed through the perforations, the bend of the oppositely-arranged
5 spokes being parallel with each other to abut against the squared portion of the enlargements upon the spindle to prevent movement of the disks upon the spindle.

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

FERDINAND MESTER.

Witnesses:

WILLIAM WEBSTER,
CARROLL J. WEBSTER.