

(No Model.)

T. M. HAMMOND.
VEHICLE WHEEL.

No. 320,932.

Patented June 30, 1885.

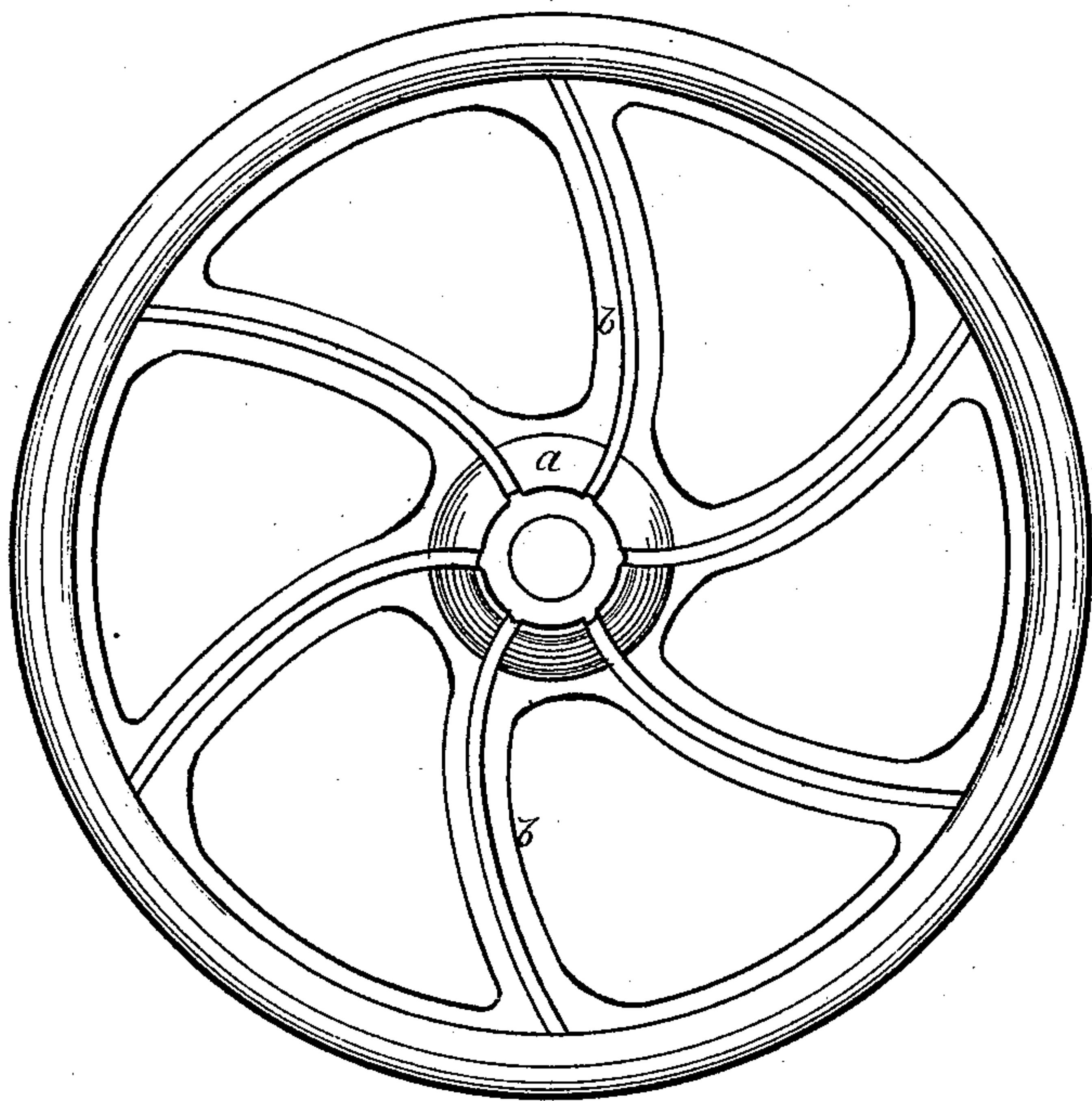


Fig. 1.

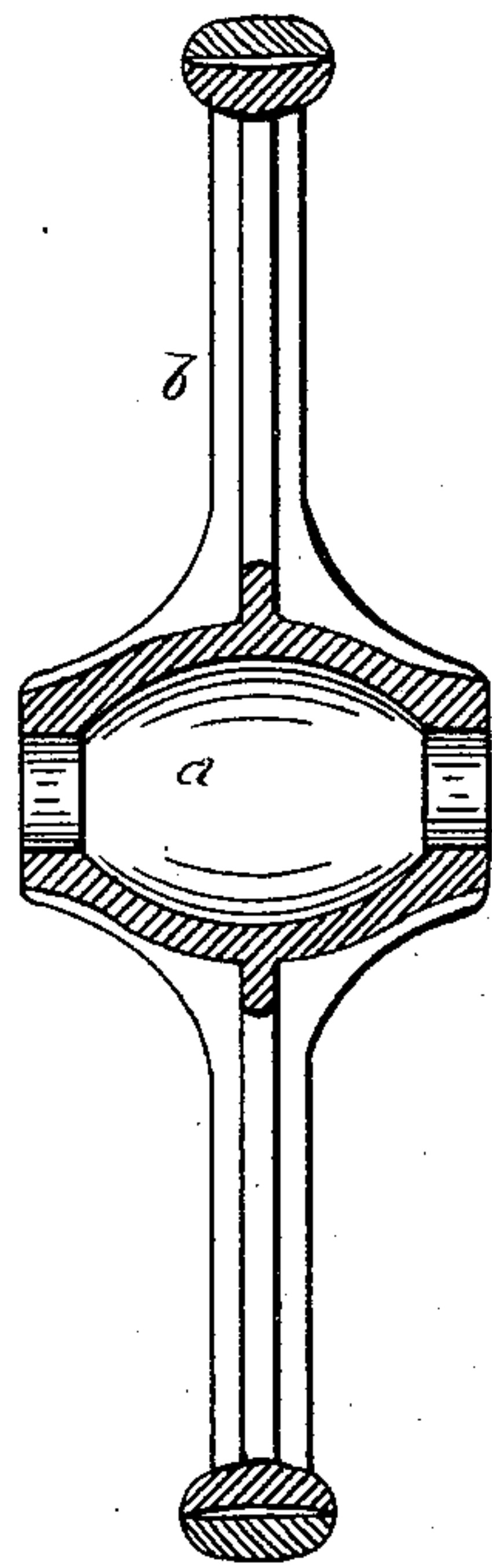


Fig. 2.

WITNESSES:

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THOMAS M. HAMMOND, OF CLEVELAND, OHIO.

VEHICLE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 320,932, dated June 30, 1885.

Application filed July 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. HAMMOND, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Malleable - Iron Wheels, of which the following is a specification.

The object of my invention is the production of a cast-iron wheel for uses requiring strength and durability, with lightness in weight, capable of withstanding great strain without breaking.

In the accompanying drawings, Figure 1 is a side elevation of a wheel of my new construction. Fig. 2 is a vertical section of the same.

The production of malleable-iron wheels has been attended with great difficulty, and was unprofitable by reason of cracking and breaking in the annealing process; but this danger I have overcome, and am enabled to produce a perfect wheel at very little cost in labor and material. I accomplish this by the peculiar construction of the wheel--*i. e.*, by the uniformity of size or thickness in the several parts comprising the wheel. Usually the hub is thick and heavy, so that when cooling the casting or after annealing the lighter parts are liable to crack. To remedy this I make a hollow hub, *a*, to the wheel, having its walls of the same thickness and weight as the spokes and rim or felly, whereby when the metal is cool-

ing down there shall be a uniform and corresponding shrinkage of the metal in all the parts. The hub is cast with a core with its bearings in the open ends, making the hub in a double conical shape. This form enables the shrinkage in the hub to take place without drawing on the spokes to any extent, and the spokes being curved are enabled to resist such strain. The spokes, too, are reduced in weight by having ribs *b* along their sides from the hub to the felly, and are in the form of a cross (+) in their cross-section. The periphery of the felly is slightly curved in its face, and there is a wrought-iron tire shrunk on outside of that.

This wheel may be subjected to the annealing process without danger of cracking or breaking.

These wheels are specially adapted for wheelbarrows and other heavy work requiring lightness, strength, and durability.

Having described my invention, I claim—

The improved iron wheel consisting of the hollow conical hub *a*, curved ribbed spokes *b*, and concave felly, each of said parts being of equal bulk, whereby said wheel may be annealed without liability to cracking or breaking, as and for the purpose specified.

THOMAS M. HAMMOND.

Witnesses:

E. W. LAIRD,
GEO. W. TIBBITTS.