

C. G. GRAY.

Improvement in Hubs for Vehicle Wheels.

No. 128,794.

Patented July 9, 1872.

fig. 1.

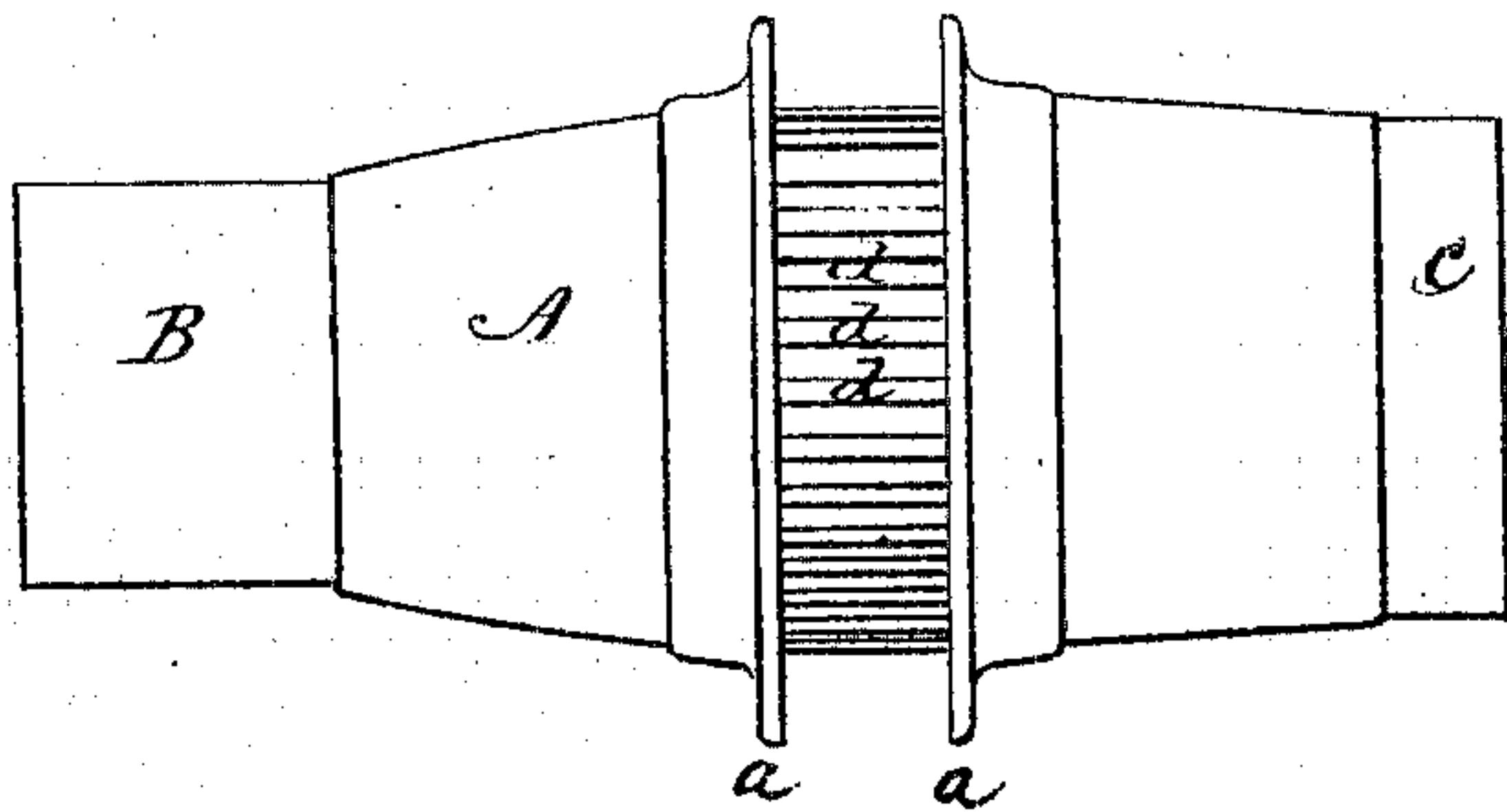


fig. 2.

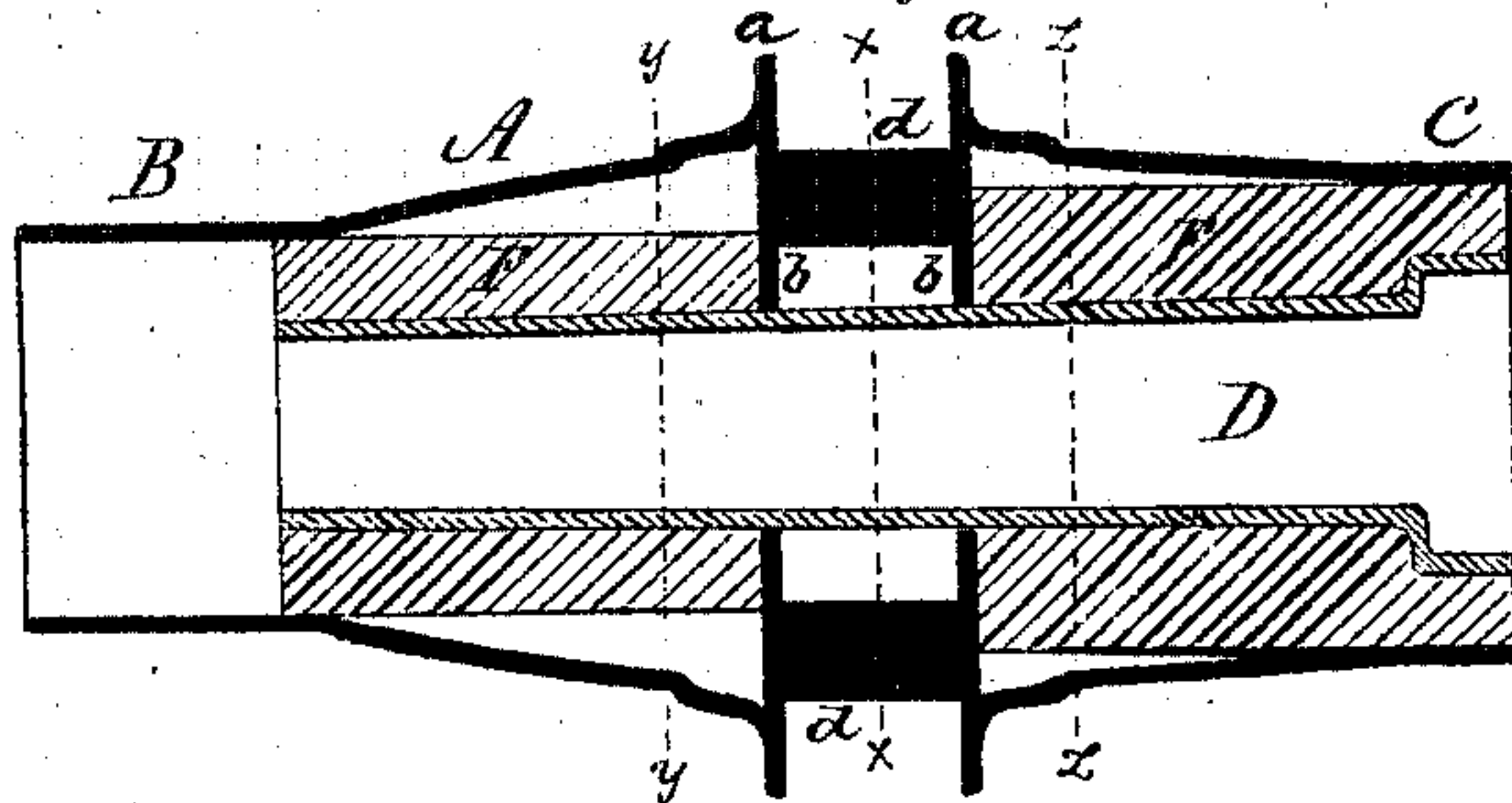


fig. 3.

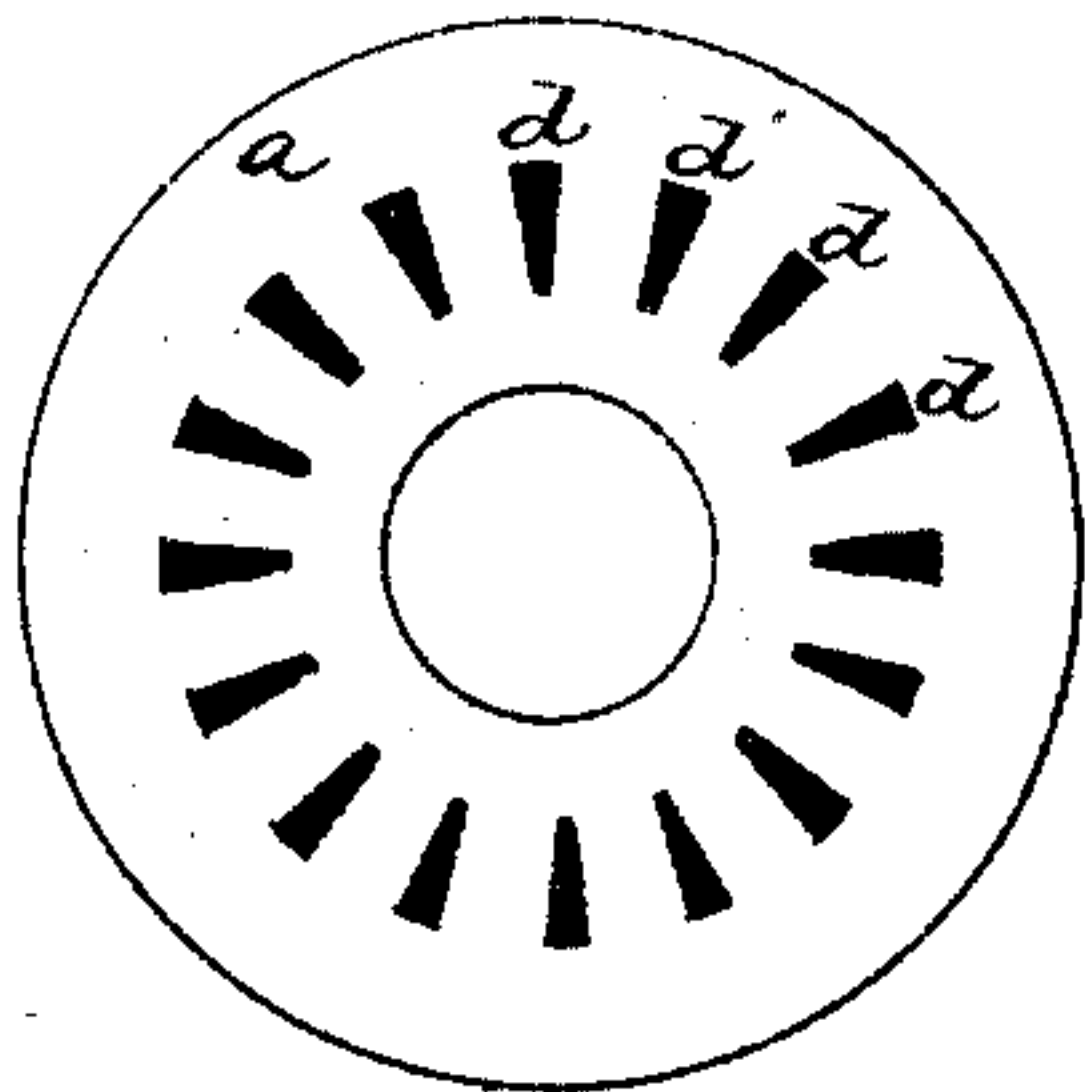


fig. 4.

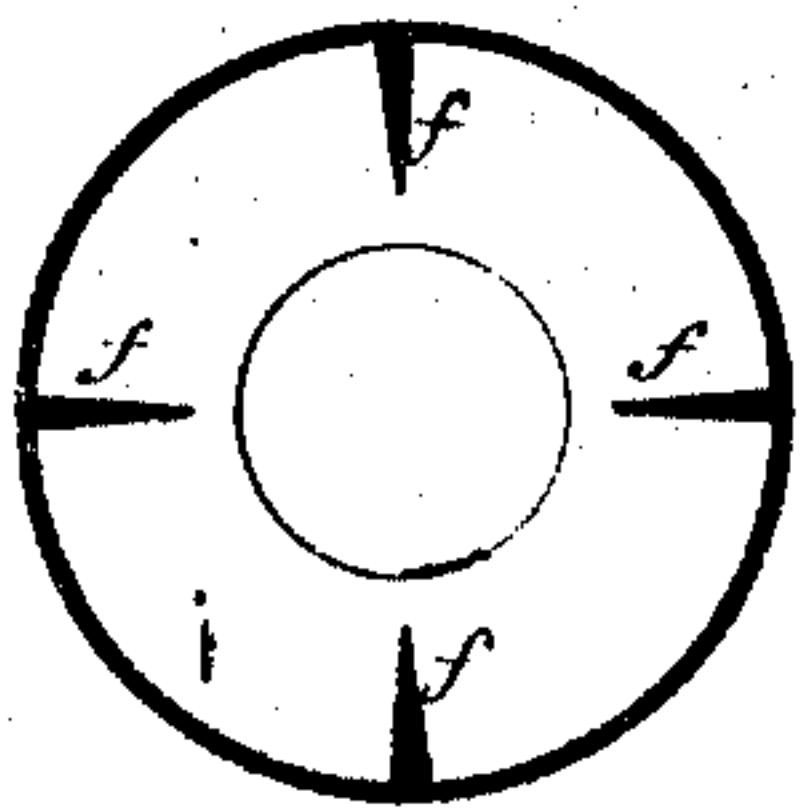
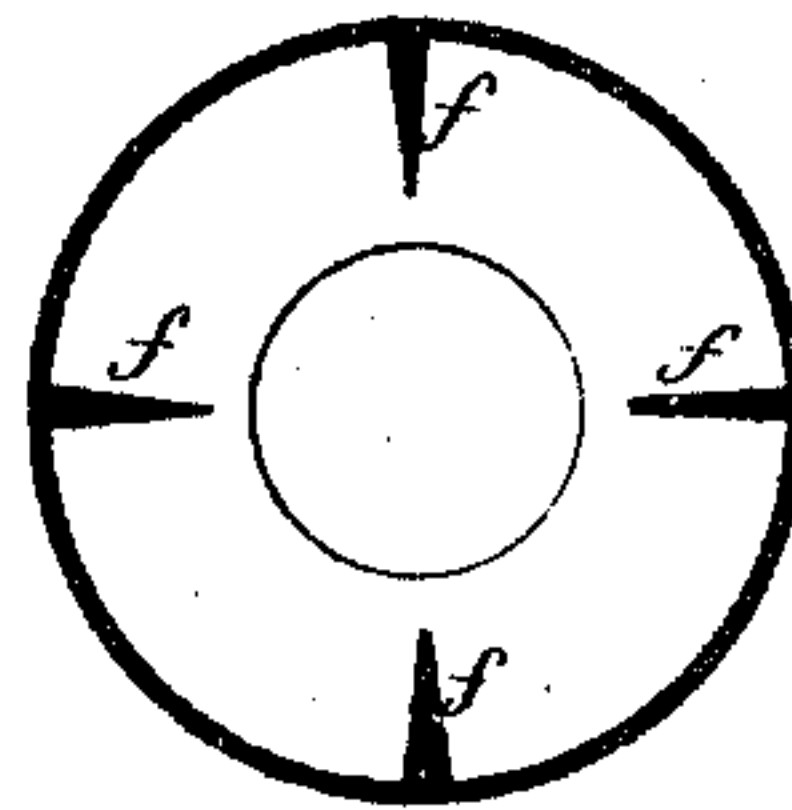


fig. 5.



Witnesses,

J. H. Humwag  
A. J. Tibbitts

Charles G. Gray  
Inventor

By his Atty.?

John O. Farley

# UNITED STATES PATENT OFFICE.

CHARLES G. GRAY, OF ANSONIA, CONNECTICUT, ASSIGNOR OF ONE-HALF HIS RIGHT TO GEORGE O. SCHNELLER, OF SAME PLACE.

## IMPROVEMENT IN HUBS FOR VEHICLE-WHEELS.

Specification forming part of Letters Patent No. 128,794, dated July 9, 1872.

*To all whom it may concern:*

Be it known that I, CHARLES G. GRAY, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Carriage-Hubs; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents in—

Figure 1, a side view; Fig. 2, a longitudinal central section; Fig. 3, a transverse section on line *xx*; Fig. 4, a transverse section on line *yy*; and in Fig. 5, a transverse section on line *zz*.

This invention relates to an improvement in metal carriage-hubs, the object being to construct the hub with a metal center to receive the spokes, with a wood filling to sustain the box, and, with the bands, a part of the shell which forms the exterior of the hub; and the invention consists of a metal shell, forming the mortises for the spokes and the bands complete in one and the same piece, combined with a wood filling to sustain the box, all as more fully hereinafter described.

A is a metal shell, forming the exterior of the hub, and with the band C cast in the same piece. At the center two flanges, *a*, are formed around the shell, and between these bars *d* are arranged, as seen in Figs. 1, 2, and 3, between which are the mortises for the spokes, these bars being formed below the edge of the flanges *a*. The shell, band, and bars *d* are all cast in

one and the same piece, and the flanges extend inward, as denoted in Fig. 2, to form a center to receive the box D; thus a chamber is formed between the central or mortised portion and each end. These chambers are constructed with sharp-edged inwardly-projecting flanges *f*, as seen in Figs. 4 and 5, and into these blocks of wood F are driven to fill the space within the hub, or nearly so, and driven onto the sharp-edged flanges. These blocks are, by the said flanges, held firmly in position, and through the center of these blocks the box D is inserted, and secured therein in substantially the usual manner.

The shell of the hub may be made very light, as denoted in Fig. 2, and, combining therewith the bands B and C, all loosening of the bands is avoided; and by the use of the wood filling the box is set in the usual manner; thus I combine all the advantages of a solid metal or a solid wood hub.

I claim as my invention—

The herein-described hub for carriage-wheels, consisting of the shell A, provided at its center with the two flanges *a*, and these connected by bars *d*, to form the mortises to receive the spokes, the internal flanges or ribs *f*, and with the bands B C, all cast in one and the same piece, and filled with the wood blocks F F, in the manner described, to support the box D.

CHARLES G. GRAY.

Witnesses:

GEO. O. SCHNELLER,  
SYLVESTER BARTON.