

No. 774,927.

PATENTED NOV. 15, 1904.

L. ZAMBONI.
HUB FOR WHEELS.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

Fig. 1.

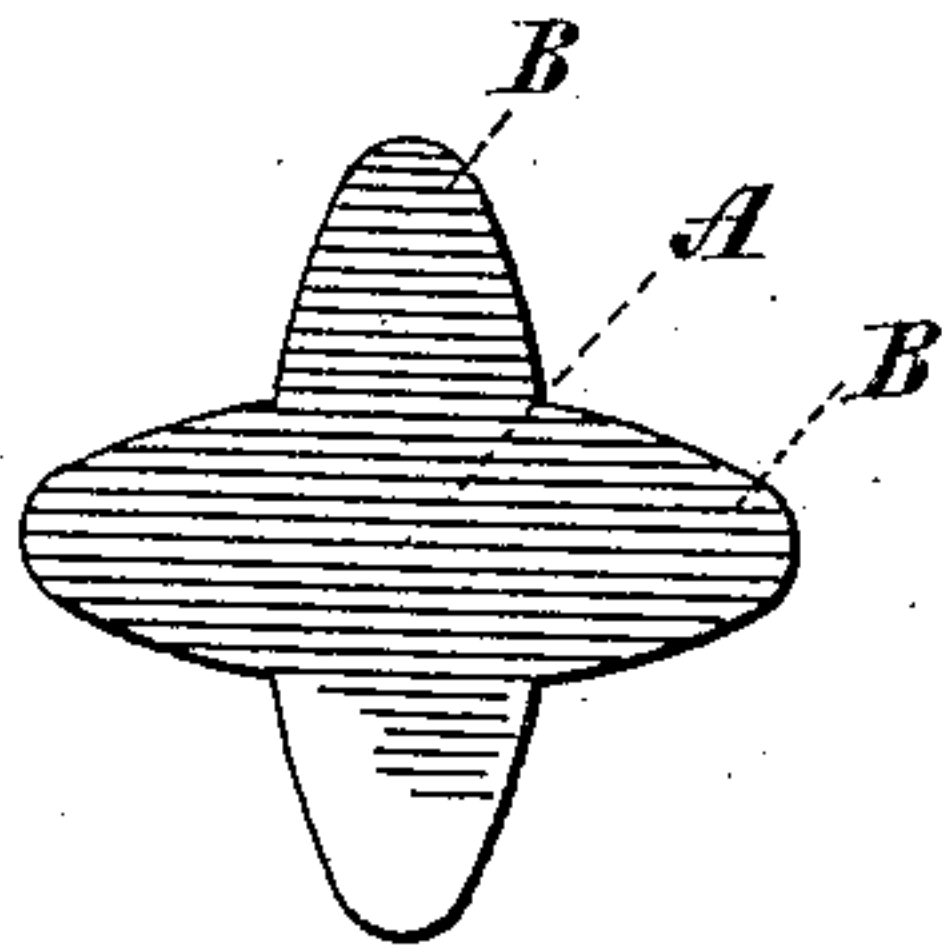


Fig. 2.

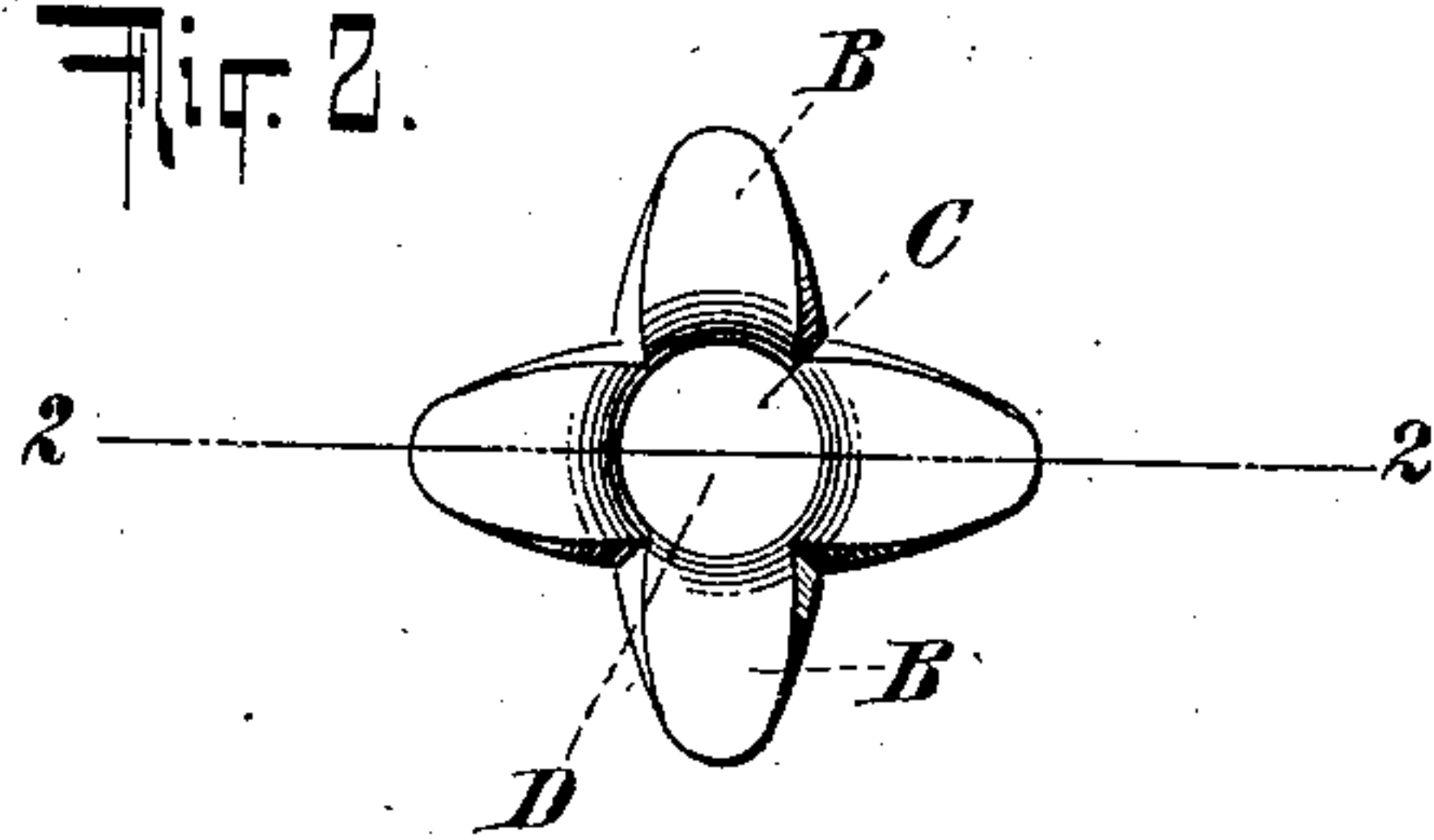


Fig. 3.

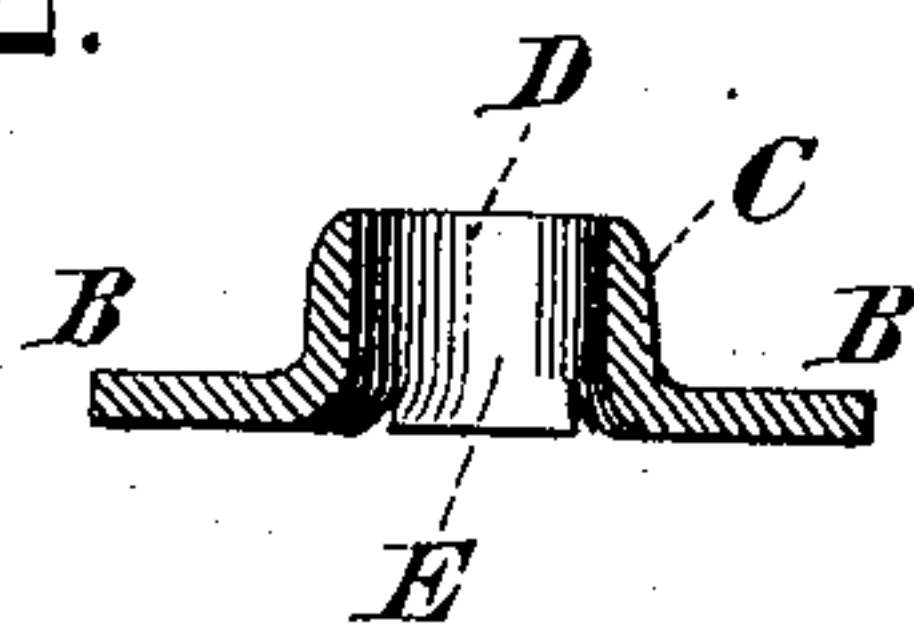


Fig. 4.

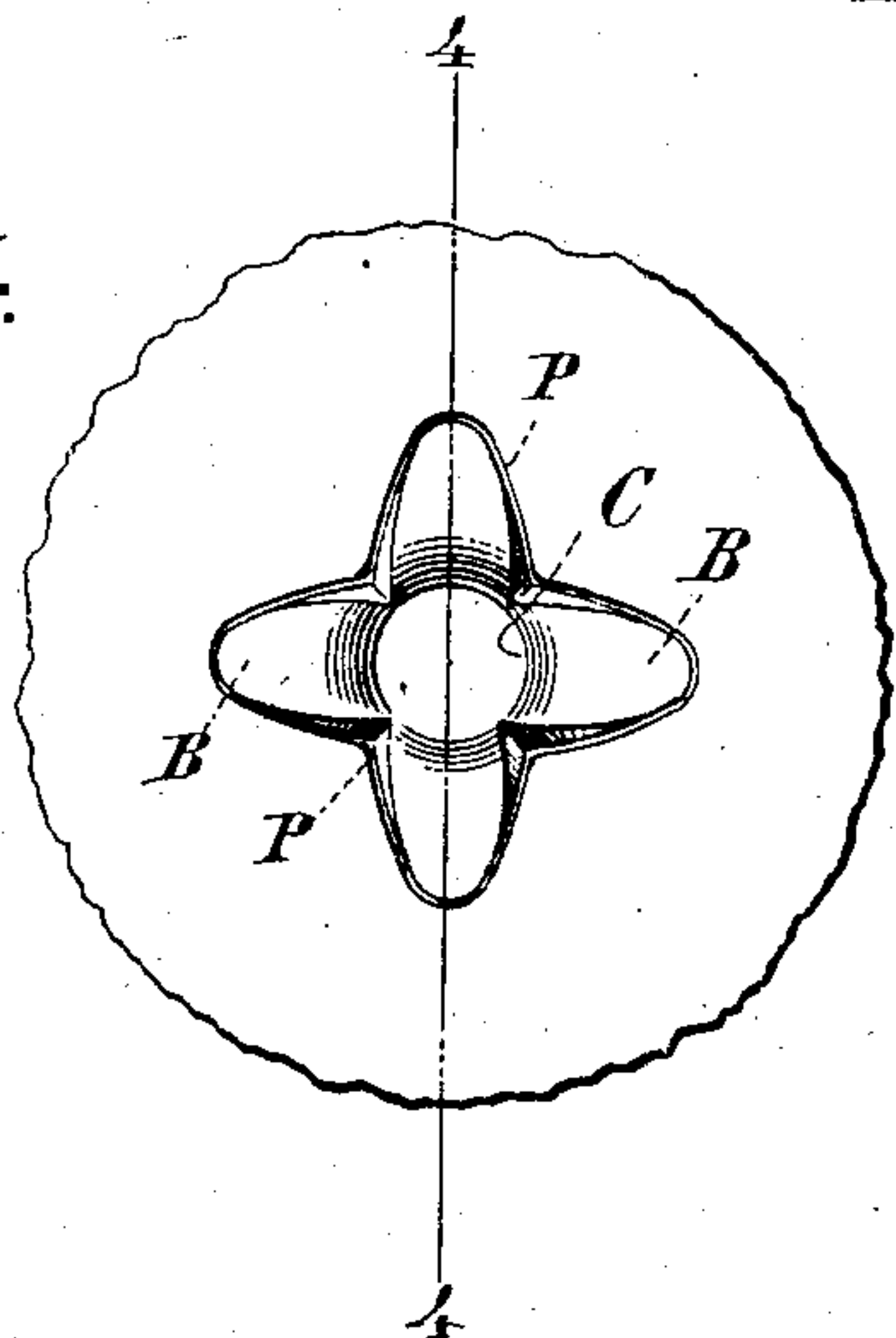
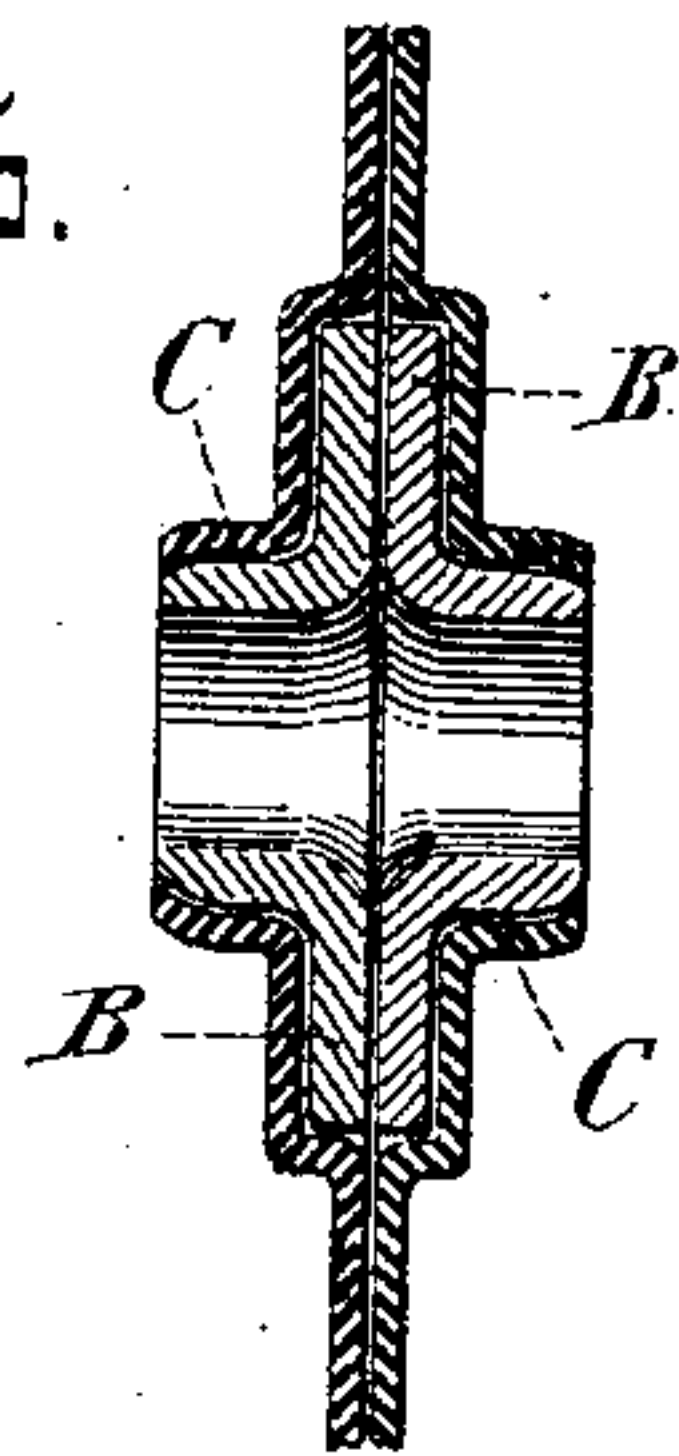


Fig. 5.



WITNESSES:

Gustave Dietrich

Edwin H. Dietrich

INVENTOR

Lawrence Zamboni

BY

Bird T. Stryker
his ATTORNEYS

UNITED STATES PATENT OFFICE.

LAWRENCE ZAMBONI, OF NEW YORK, N. Y., ASSIGNOR TO PRESSED METAL MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

HUB FOR WHEELS.

SPECIFICATION forming part of Letters Patent No. 774,927, dated November 15, 1904.

Application filed March 14, 1904. Serial No. 197,972. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE ZAMBONI, a citizen of the United States, residing in the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and useful Hub for Wheels, of which the following is a specification.

My invention relates to improvements in hubs for metal wheels, particularly those stamped from sheet metal; and the objects of my invention are to provide a hub which can be readily and rigidly secured to the wheel, so that it will not turn or loosen, which will materially strengthen and stiffen the wheel, and one which can be simply, quickly, and economically made and assembled with the other parts of the wheel; and to accomplish these objects it is constructed in the manner and form and of the component parts as hereinafter more fully described and claimed, and shown on the drawings accompanying this specification, in which—

Figure 1 is a plan view of a blank cut from a sheet of suitable metal from which the hub-piece is pressed. Fig. 2 is a plan view of one of the hub-pieces in its completed form. Fig. 3 is a cross-section on the line 2 2 of Fig. 2. Fig. 4 is a plan view of one side of a wheel embodying my invention, showing the portion of the web of the wheel around the hub. Fig. 5 is a cross-section on the line 4 4 of Fig. 4 of a completed wheel.

Similar letters refer to similar parts throughout the several views.

A represents a four-pointed-star-shaped blank cut from sheet-steel or other desirable sheet metal, from which my device is formed, though it may be cast or molded. By pressure the central portion is forced or drawn so as to form the cylinder E, the metal being punched out at the end to form the aperture D. The outside of this cylinder, as shown, is in appearance a truncated conoid—that is, curving slightly outwardly and downwardly from the opening D and also curving at its base into the arms B. The lines of the inside surface, however, are substantially parallel, only curving outwardly at the base into the

arms B. The arms B radiate from the base of the conoid substantially at right angles to the axis of the cylinder E and are preferably wedge shape, having rounded points. The complete hub is formed by placing two of these pieces thus formed back to back, the arms B of one piece abutting the arms B of the other, as shown in Fig. 5. These hub-pieces are secured in position in the wheel by means of pockets P in the webs of the wheel, which pockets receive the arms B.

In completing a wheel embracing my invention a hub-piece is pressed into a side piece of a sheet-metal wheel, the pockets P taking the form of the arms B, so that the arms fit snugly therein, and the opening D being coincident with the central opening in the side piece of the wheel. Two side pieces having been thus fitted with hub-pieces, they are fastened together into a wheel and the hub-pieces become immovably secured therein and thereto, the cylindrical openings E forming a bearing for a pin-axle.

Heretofore in all forms of metal wheels which have not been cast great difficulty has been experienced in fitting the wheel with suitable bushings or bearings for use in connection with pin-axles. It has usually been accomplished by means of a cast tube or one formed by rolling a sheet of metal into the form of a tube and fastening the same to the wheel by turning the sides of the wheel over the ends of the tube or otherwise securing the same to the wheel. The methods employed have proven very uncertain, the bearings being insecure and the operations expensive and laborious. These objections are all overcome by my invention, as above described, which forms a hub as rigid with the wheel as though an integral part thereof.

Obviously many features may be varied without substantially departing from my invention; but, without naming all such modifications or equivalents,

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A hub for wheels, consisting of two members having central apertures for a bearing

or an axle, and a plurality of arms or lugs for securing said members to the side plates of the wheel.

2. A hub for wheels, consisting of two members, each formed from a single piece, having central apertures for a bearing or an axle, and a plurality of arms or lugs for securing said members to the side plates of the wheel.

3. A hub for wheels, consisting of two members, each formed from a single piece, having central cylindrical apertures for a bearing or an axle, and arms or lugs adapted to rigidly engage the webs of the wheel.

4. The combination with the webs of a metal wheel of two hub members having central ap-

ertures for a bearing or an axle, and means for securing said members to said webs.

5. In combination with a sheet-metal wheel having pockets in the webs thereof, two hub members having cylindrical openings to form a bearing, and lugs or arms adapted to engage the pockets in said webs, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LAWRENCE ZAMBONI.

Witnesses:

WM. R. SIMPSON,
JOSEPH ENTWISLE.