

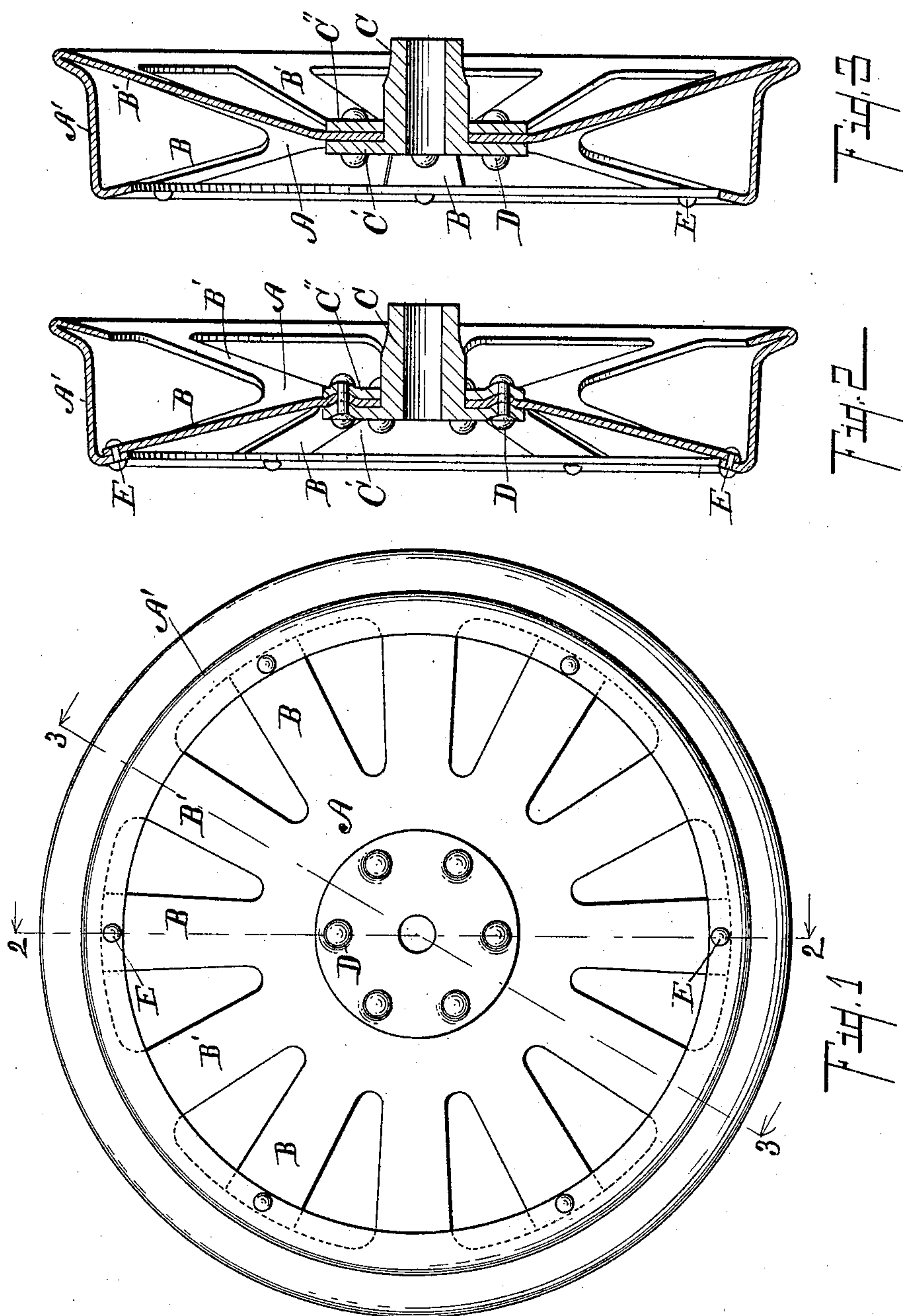
No. 616,024.

Patented Dec. 13, 1898.

C. P. SMITH.  
CAR WHEEL.

(Application filed Feb. 14, 1898.)

(No Model.)



Witnesses:

*W. S. Wood*  
*Otis R. Earl*

Inventor,

*Christian P. Smith*  
By *Fred L. Chappell*  
Att'y.



# UNITED STATES PATENT OFFICE.

CHRISTIAN P. SMITH, OF THREE RIVERS, MICHIGAN.

## CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 616,024, dated December 13, 1898.

Application filed February 14, 1898. Serial No. 670,319. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTIAN P. SMITH, a citizen of the United States, residing at the city of Three Rivers, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Car-Wheels, of which the following is a specification.

This invention relates to improvements in car-wheels, and more particularly to car-wheels which are made up principally of sheet metal.

The objects of this invention are, first, to provide a very strong and stiff sheet-metal car-wheel; second, to provide a wheel that is perfectly flanged; third, to provide a flange wheel wherein the sheet-metal portion is in a single piece; fourth, to provide in a sheet-metal wheel an improved formation of web.

Further objects will definitely appear in the detailed description to follow.

I accomplish these objects of my invention by the devices and means described in this specification.

The invention is definitely pointed out in the claims.

The structure is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a car-wheel, taken from the flange side, embodying the features of my invention. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is also a sectional view taken on line 3 3 of Fig. 1.

In the drawings similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, it will be observed that the tread of the wheel A', with its flange and web A, are all formed of a single piece of sheet metal. The metal is first formed in the form of a flat wheel, with the web secured in a single flat piece on the flanged side, with an inwardly-projecting flange on the outward side. Spokes B are then punched out free from the sheet metal of the flange side at their outer ends and the ends of them attached to the inwardly-projecting flange on the opposite side, where it is secured by suitable rivets E, as appears in Fig. 2, or by welding or otherwise. All the spokes B' are thus formed integral with the

rim and the web at both ends, only the spokes B are punched free and riveted. The hub C is secured in place at the center by the flange C', projecting onto the web, and by plate C'' on the opposite side, which are secured by suitable rivets D. At the point of the attachment of the rivets D the flange is depressed or struck up. The web of the wheel is made to correspond to prevent any shearing strain on the rivets. It will be observed from this that the entire sheet-metal portion of the wheel is constructed of a single piece and is so formed that it has spokes extending from each side of the tread, thus bracing the same and securing great strength. The bending of the spokes thus formed also corrugates the remainder of the width of the web of the wheel, so that it is greatly strengthened.

The wheel might be constructed exactly the reverse of what is here shown without departing from my invention—that is, the spokes B' might be formed integral with that side and the spokes B could be riveted to an inwardly-projecting flange on the flange side of the wheel. It is needless to remark there might be a solid hub instead of the hollow hub, as shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car-wheel, the combination of the tread A', of the flange thereon and a web of the wheel all formed of a single piece, the web having punched therefrom spokes riveted to an inwardly-projecting flange on the outside and a hub secured by suitable bolts or rivets at the center of the web for the purpose specified.

2. A sheet-metal car-wheel having the web formed integral with the flange having spokes punched therefrom and secured at their outer ends to the opposite side with suitable hub secured to the center as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

CHRISTIAN P. SMITH. [L. S.]

Witnesses:

O. F. BEAN,

CHAS. R. LINN.