

(No Model.)

J. H. BISSELL.
VEHICLE WHEEL.

No. 310,779.

Patented Jan. 13, 1885.

FIG. 1.

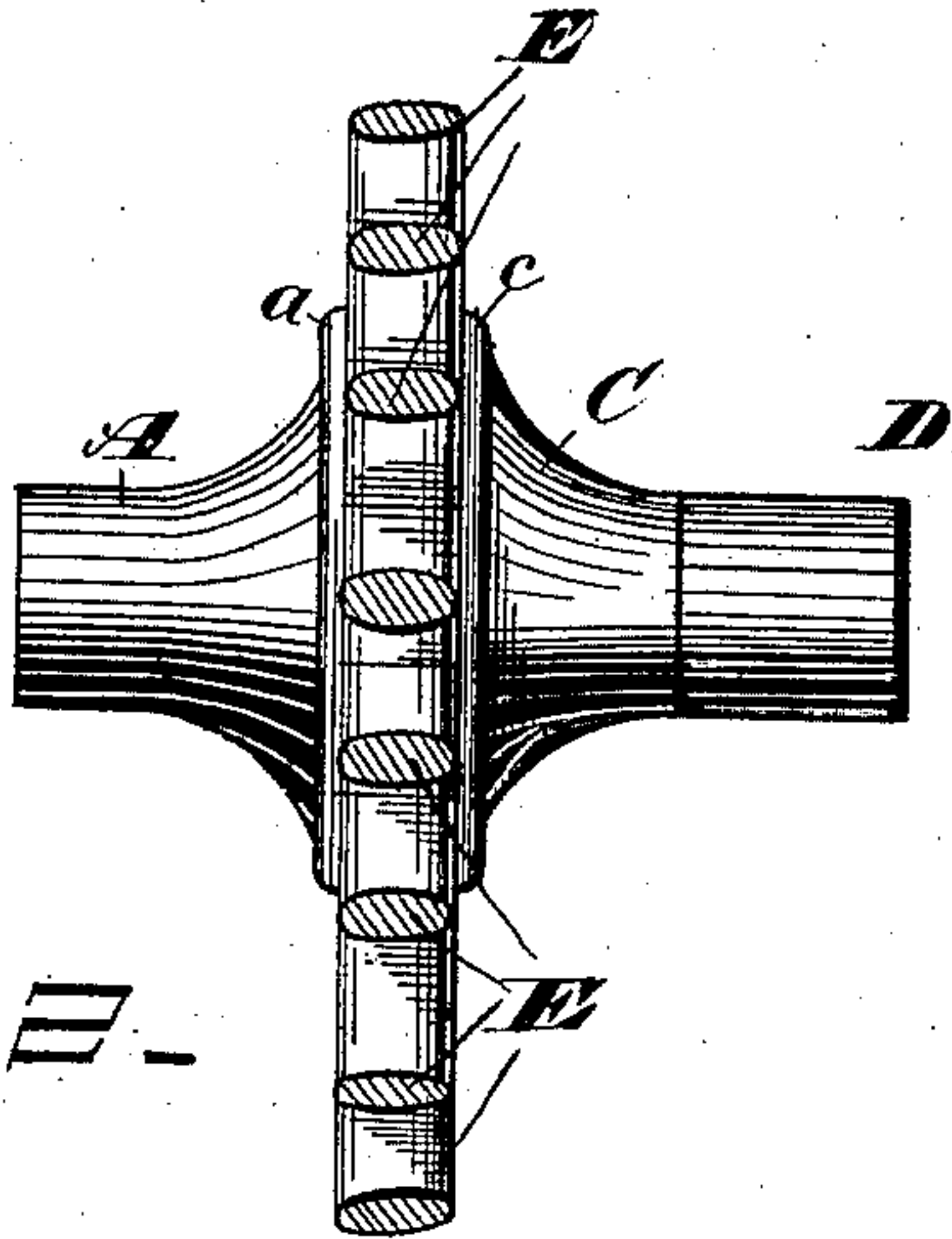


FIG. 2.

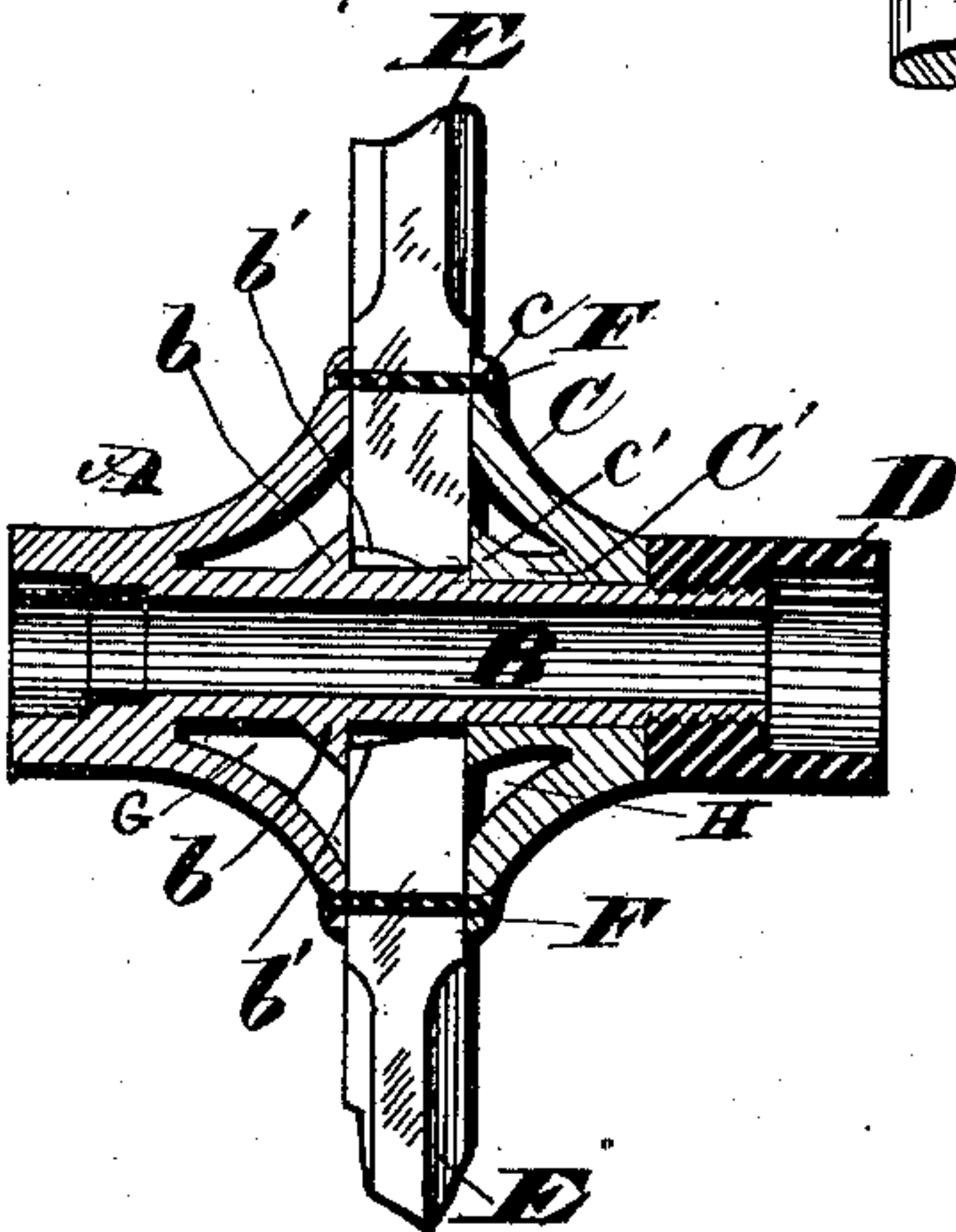


FIG. 3.

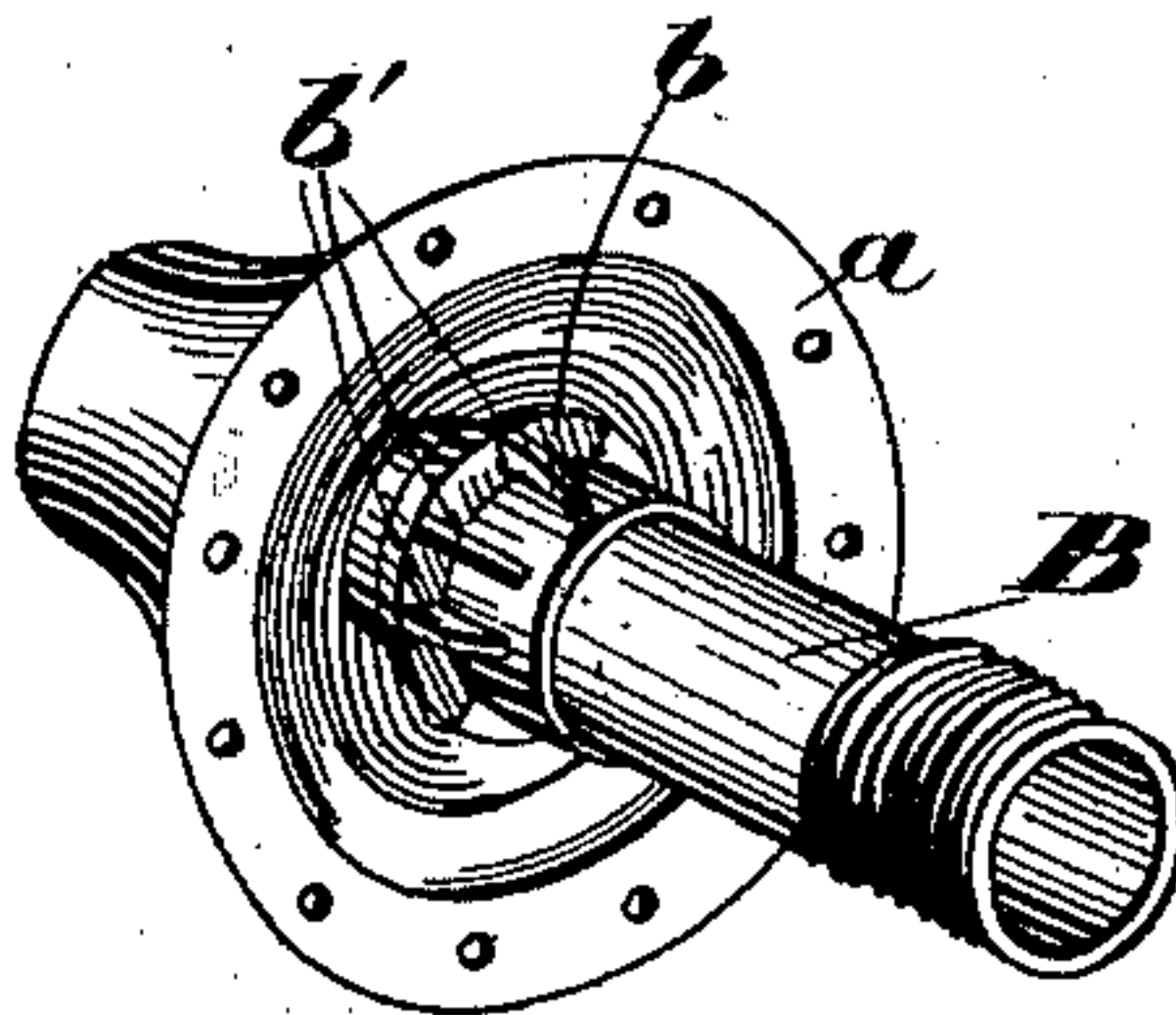
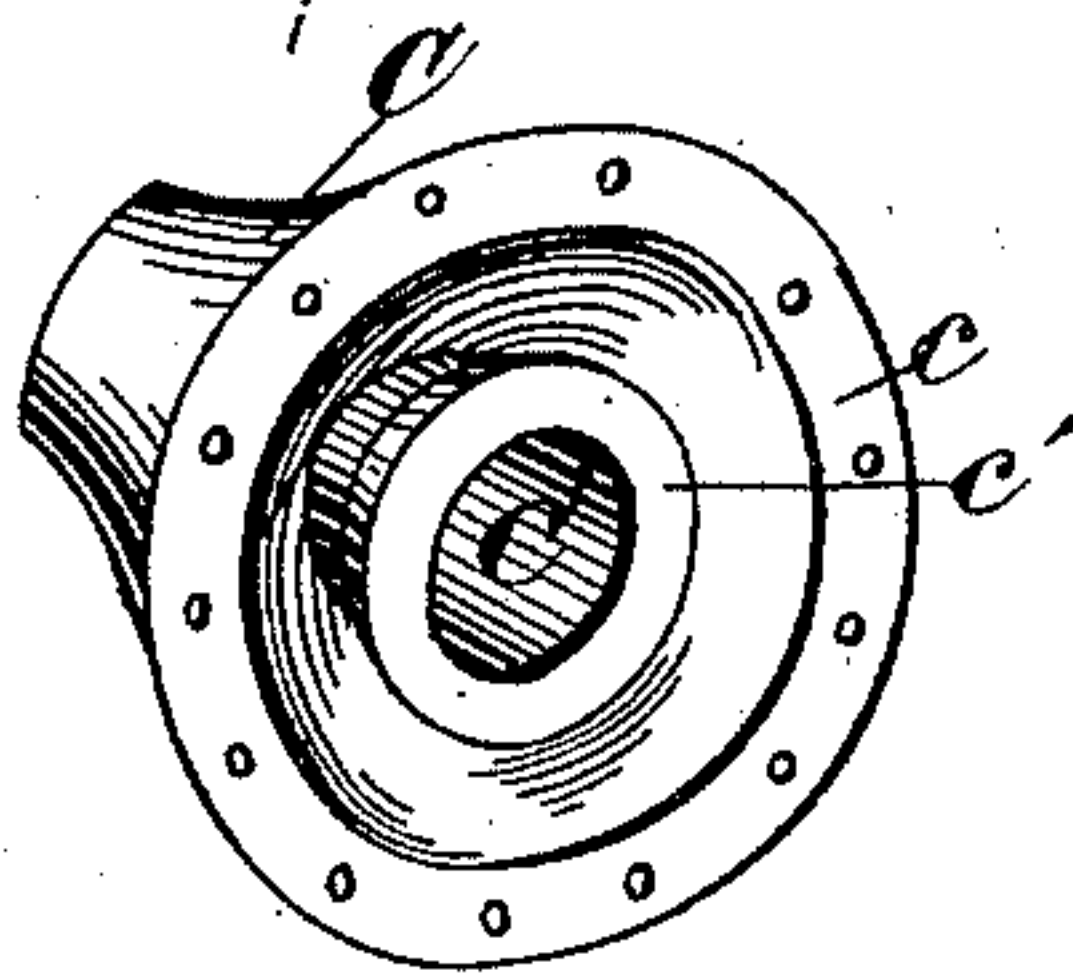


FIG. 4.



WITNESSES

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JAMES H. BISSELL, OF ROCHESTER, OHIO.

VEHICLE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 310,779, dated January 13, 1885.

Application filed August 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BISSELL, of Rochester, in the county of Lorain and State of Ohio, have invented certain new and useful
5 Improvements in Carriage-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 My invention relates to improvements in carriage-wheels, the object being to provide a metallic hollow hub with flanges projecting outwardly to embrace the spokes, and secured thereto with rivets, and inside shoulders on
15 the respective parts of the hub to embrace the inner ends of the spokes, and provided with lugs to engage notches in the spokes and prevent them from turning in the hub. A further object is to provide a space between the out-
20 side flanges and the inside shoulders, where the spokes may expand laterally, to the end that the spokes are more firmly held in the hub. A further object is to provide a hub cheap in initial cost, and light, strong, and of
25 graceful contour.

With these objects in view my invention consists in certain features of construction, and in combination of parts hereinafter described, and pointed out in the claims.

30 In the accompanying drawings, Figure 1 is a side view in elevation of my improved hub, showing the spokes in position. Fig. 2 is a longitudinal section through the center of the hub. Fig. 3 is a view in perspective of the
35 rear portion of the hub with the attached thimble-box. Fig. 4 is a view in perspective of the front portion of the hub.

A represents the rear outer portion of the hub that is integral with the sleeve B, that
40 forms a thimble-box for the spindle of the axle. The part A curves outward, as shown, and terminates in the flange *a*, with an inner perpendicular face that abuts against the spokes. Around the part B is a raised annular
45 portion *b*, the front side of which forms a perpendicular shoulder in line with the inner face of the flange *a*. Lugs *b'* are provided that engage corresponding notches in the spokes. The part C is similar in form to the corre-
50 sponding part of the part A, and has an outside flange, *c*, of the same diameter and form as the flange *a*. The part C has a sleeve, *C'*,

that fits over the part B, the end of which at *c'* is enlarged, and is in line with the inner face of the flange *c*. The forward end of the
55 part B is threaded to engage the band D, that extends outward some distance to cover the end of the axle-spindle and nut. The spokes E are set radially, in the usual manner, and come in contact with each other from a solid
60 core from the part B to the outside of the flanges *a* and *c*. Grooves are made in the lower end of some of the spokes to engage the V-shaped lugs *b'*. The part C is forced with
65 great pressure against the spokes, and is secured by the band D and by rivets F, that pass through the flanges *a* and *c*, and through the spokes at alternate joints, so that each spoke engages the half-size of a rivet. The
70 flanges *a* and *c* may be countersunk, and the rivet-head dressed off flush with the flanges, or the rivets may have rounded ornamental heads outside of the flanges. When the spokes
75 are compressed between the metal bearings, as aforesaid, the wood between the outside flanges and the internal shoulders expands, and the spokes are held more firmly than
80 would be the case if the spokes received an equal pressure at all parts. The open spaces or chambers G and H between the external bands and the internal shoulders are therefore
85 an essential feature in my improved hub. These hubs may be made at a small initial cost, are light and strong, and are exceedingly graceful in outline.

What I claim is—

1. In a carriage-wheel, hollow metal hubs with the rear outer portion integral with the pipe or thimble-box for the axle-spindle, and the front outer portion integral with an inside
90 thimble adapted to fit over the pipe-box, and the front and rear portion provided, respectively, with outside flanges, and inside shoulders adapted to embrace the spokes, with intermediate vacant spaces or chambers between
95 the outside and inside surfaces that engage the spokes, substantially as set forth.

2. In a carriage-wheel, a hollow metal hub consisting, essentially, of the part A, terminating in the flange *a*, and integral with the part B,
100 that forms the box for the axle-spindle, and provided with a shoulder, *b*, perpendicular with the inner face of the flange *a*, and with the lug *b'*, and the part C, provided with the flange

c and integral with the sleeve *C'*, adapted to fit over the part *B*, and the inner end thereof perpendicular with the inner surface of the flange *c*, and the parts provided, respectively,
5 with vacant spaces or chambers between the outer and inner surfaces that engage the spokes, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 29th day of July, 1884.

JAMES H. BISSELL.

Witnesses:

CHAS. H. DORER,
ALBERT E. LYNCH.