

No. 719,281.

PATENTED JAN. 27, 1903.

E. R. WAGNER.
METAL WHEEL HUB.

APPLICATION FILED MAY 21, 1902.

NO MODEL.

Fig. 4.

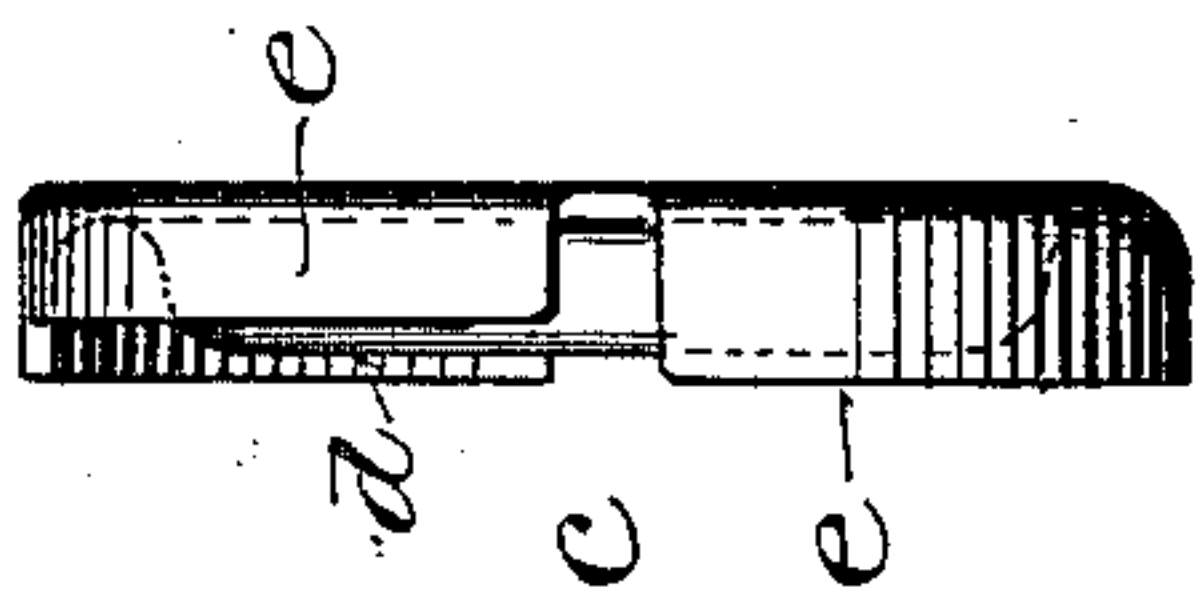


Fig. 3.

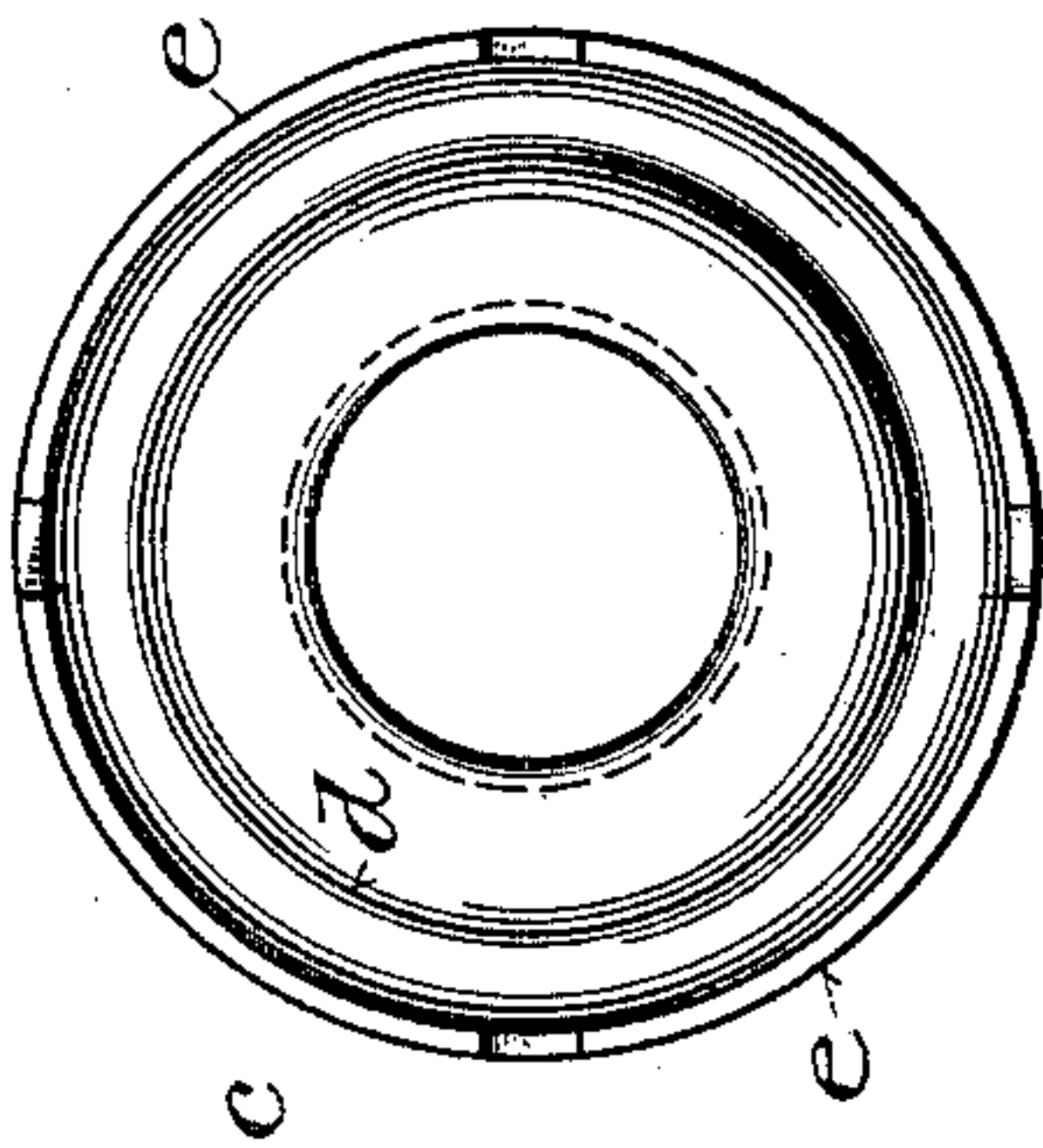


Fig. 2.

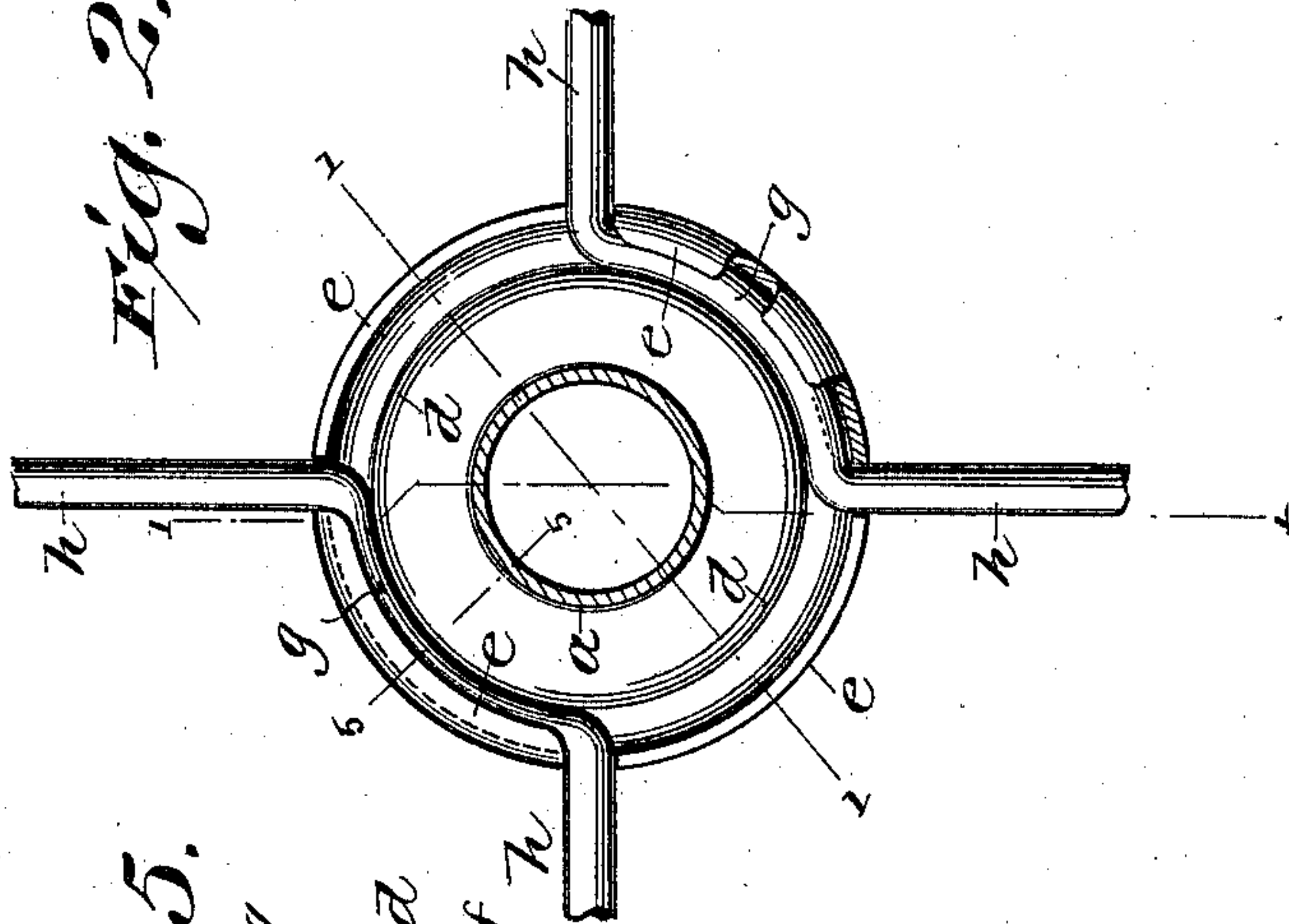


Fig. 5.

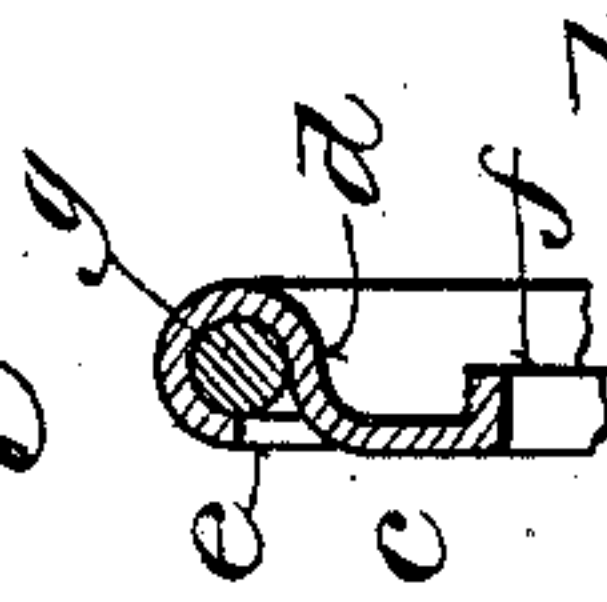
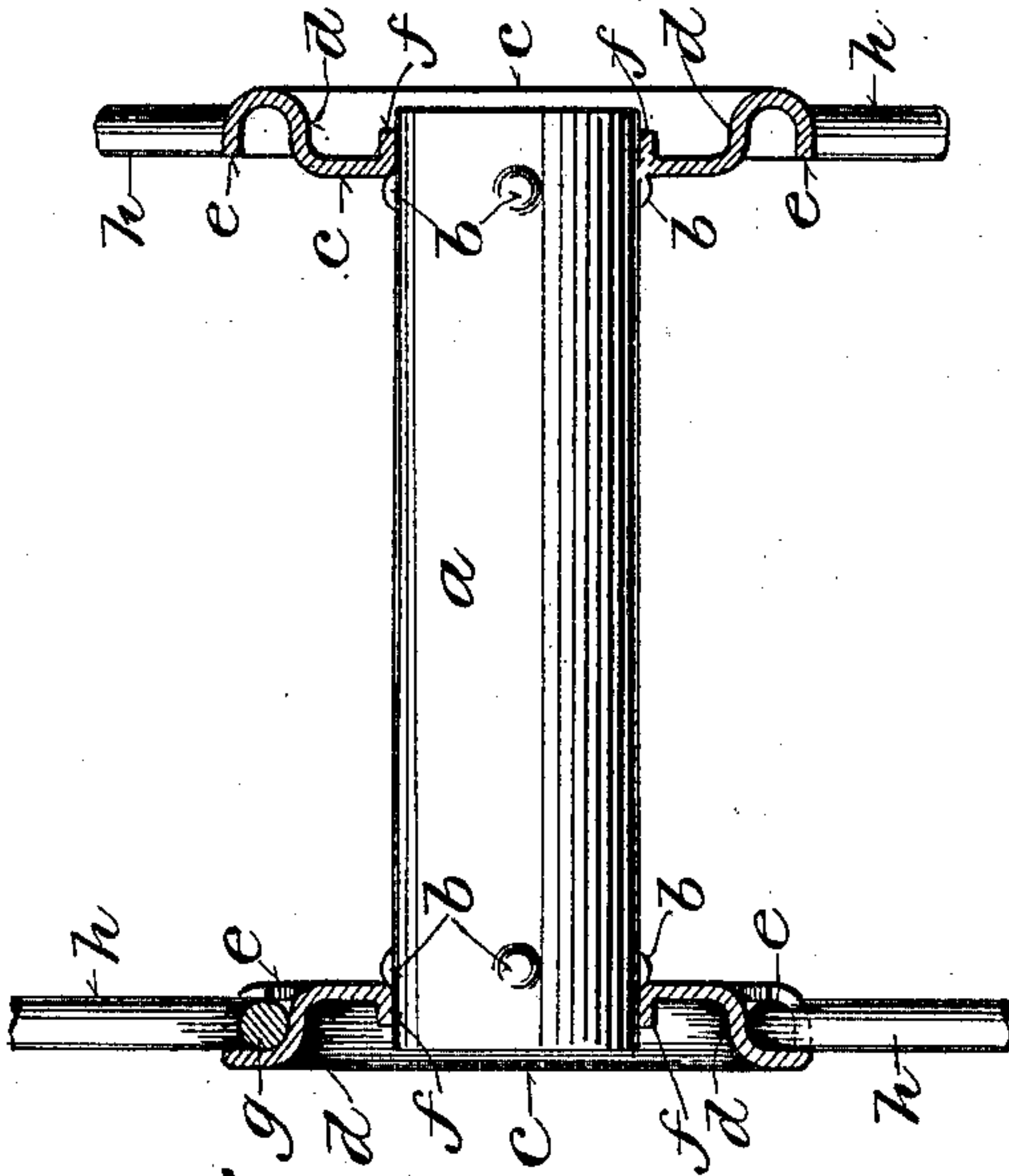


Fig. 1.



Witnesses:
Geo. W. Young,
Chas. L. Fox.

Inventor:
Edward A. Wagner.

By *Wm. H. Flanders* *Smith* *Booth* *Wiley*
Attorneys.

UNITED STATES PATENT OFFICE.

EDWARD R. WAGNER, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO E. R. WAGNER MANUFACTURING COMPANY, OF NORTH MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

METAL WHEEL-HUB.

SPECIFICATION forming part of Letters Patent No. 719,281, dated January 27, 1903.

Application filed May 21, 1902. Serial No. 108,299. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. WAGNER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Metal Wheel-Hubs, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

10 This invention relates particularly to means for attaching wire spokes to hub-barrels.

The main object of the invention is to produce a simple and effective hub-flange and spoke-fastening in a single piece from sheet metal.

15 It consists in certain novel features of construction, and in the peculiar arrangement of parts hereinafter particularly described, and pointed out in the claims.

20 In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 is a side elevation and section of a wheel-hub embodying my invention, the plane of the section of the left-hand flange being indicated by the vertical dotted line 1 1 and the plane of the right-hand flange being indicated by the oblique dotted line 1 1, Fig.

25 2. Fig. 2 is a cross-section of the hub next to one of its flanges, which is seen as viewed from the center of the hub. Fig. 3 is an inside view of one of the hub-flanges and spoke-fastenings detached. Fig. 4 is an edge view thereof; and Fig. 5 is a section on the line 5 5, Fig. 2.

35 *a* is the hub-barrel, which consists of a straight metal tube or sleeve, formed near the ends with external protuberances *b* to determine the position of the flanges and to assist in holding them in place thereon.

40 *c c* are the flanges for the attachment of the spokes to the barrel *a*. The flanges herein shown and described are designed to be used in connection with what are known as "return-bend" spokes—that is, wire spokes which are connected in pairs at their inner ends by loops or bends. Each flange *c* consists of a single piece of sheet metal having a central flanged opening, an outward bend *d*, con-

centric with said opening, and an inturned 50 notched rim *e*, forming with said bend a sand band or guard on the outer side, and an annular spoke abutment and seat on the inner side, of the flange. The flange *b* around the central opening of the spoke-fastening is preferably turned outward and is made of sufficient width to afford a firm bearing upon and efficient attachment to the barrel *a*.

The connecting bends or loops *g* at the inner ends of the spokes *h* are curved to correspond with and fit into the annular seats in the flanges or fastenings *c*, and the adjacent parts of the inturned rims *e*, which are preferably wider or extend beyond the remaining intermediate parts of said rim, are clasped inwardly over the loops or bends *g* of the spokes, as shown in Figs. 2 and 5, thereby holding them securely in their seats against the opposing bends *d*. It will be understood that all parts of the notched rims *e* are primarily 70 bent inward parallel with the axis of the hub, as shown in Figs. 3 and 4, and after the spokes are placed in position, with their loops or bends *g* in the annular seats of the flanges, the wider or adjacent parts of said rims are 75 bent toward the center of the hub and clasped over the loops or bends of the spokes.

The notches in the rims *e*, through which the spokes pass radially outward from their connecting-bends *g*, prevent any possibility 80 of the slipping of said bends in their annular seats and the circumferential displacement of the spokes in the flanges or fastenings *c*.

The construction herein shown and described admits of the hub-flange and spoke- 85 fastening being economically stamped in a single piece from sheet metal and affords a neat and effective device for the purpose.

I claim—

1. A metallic hub-flange and spoke-fastening for wheels consisting of a single piece having a flanged central opening for attachment to a hub-barrel, an outward annular bend concentric with said central opening and forming a sand band or guard on the outer 95 side and a spoke seat or abutment on the inner side of the flange, and an inwardly-bent rim notched to receive radiating spokes, parts

of said rim being adapted to fold over the looped inner ends of the spokes and to clasp and hold them against said seat or abutment, substantially as described.

- 5 2. A metallic hub-flange and spoke-fastening consisting of a single piece having a flanged central opening, an outward annular bend forming a guard on one side and a spoke-seat on the other side of the flange, concentric
10 with its central opening, and an inwardly-bent notched rim, parts of said rim projecting beyond remaining alternate parts and adapted to be clasped over the inner looped ends of wheel-spokes, substantially as described.
- 15 3. In a metal wheel-hub the combination with a tube or barrel, of two spoke-fastening flanges each consisting of a single piece of sheet metal having a central flanged opening in which one end of said tube or barrel is
20 fitted and secured, an outward annular bend and an inturned notched rim forming a sand-band on the outer side and a spoke-seat on the inner side of the flange, and return-bend wire spokes having their connecting bends or
25 loops fitted in said seat and clasped therein

by inturned portions of said rim, substantially as described.

4. A hub-flange and spoke-fastening consisting of a single piece of metal having a central opening, an annular bend and a reversely-bent notched rim concentric with the central opening and forming a spoke-seat on one side and a corresponding annular projection on the other side of the flange and fastening, substantially as described. 30

5. A hub-flange and spoke-fastening consisting of a single piece of metal having a central opening, an annular bend and a reversely-bent notched rim concentric with the central opening and forming a spoke-seat on one side, and a corresponding annular projection on the other side of the flange and fastening, substantially as described. 35 40

In witness whereof I hereto affix my signature in presence of two witnesses.

EDWARD R. WAGNER.

Witnesses:

CHAS. L. GOSS,
ALICE E. GOSS.