

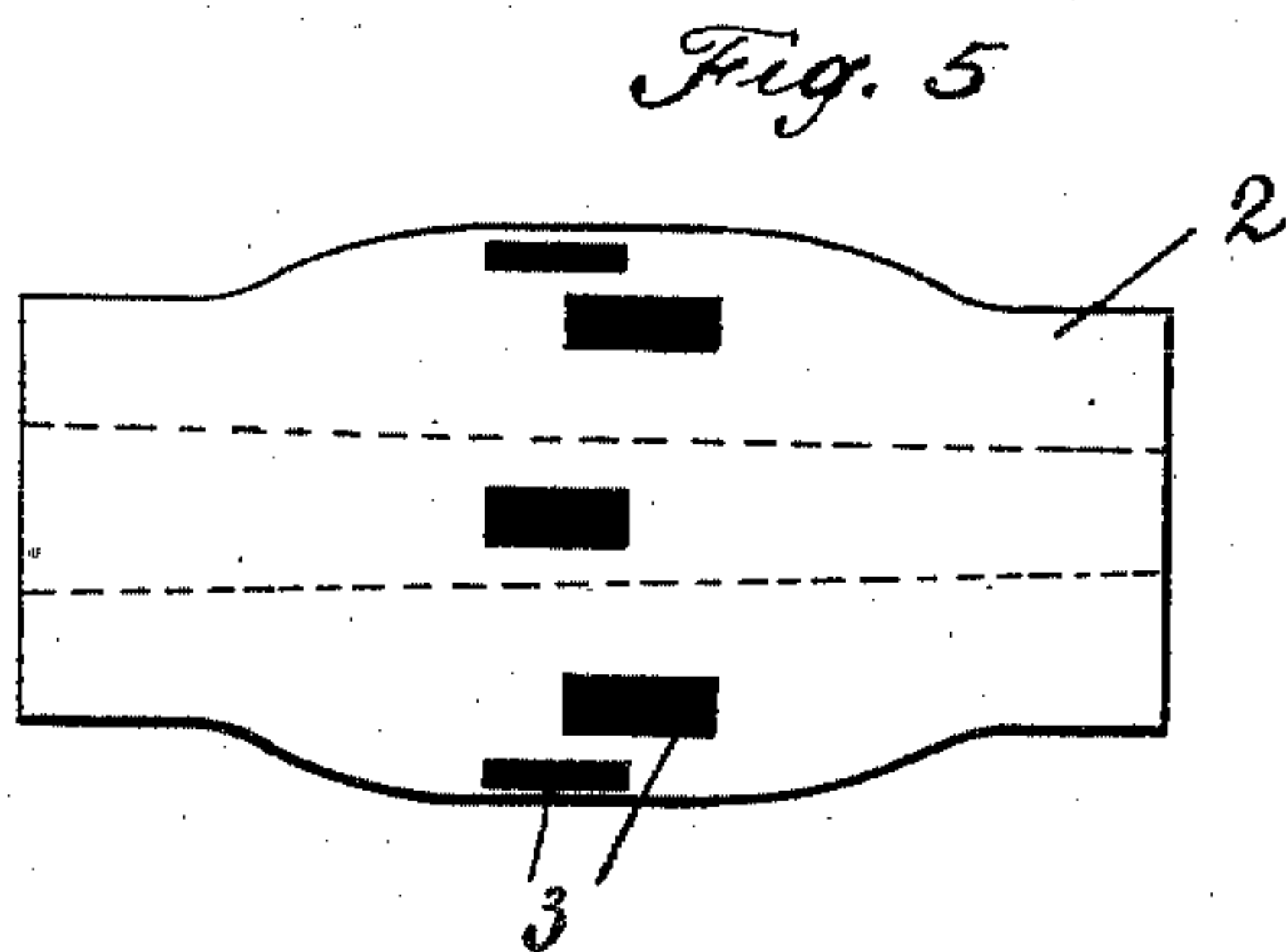
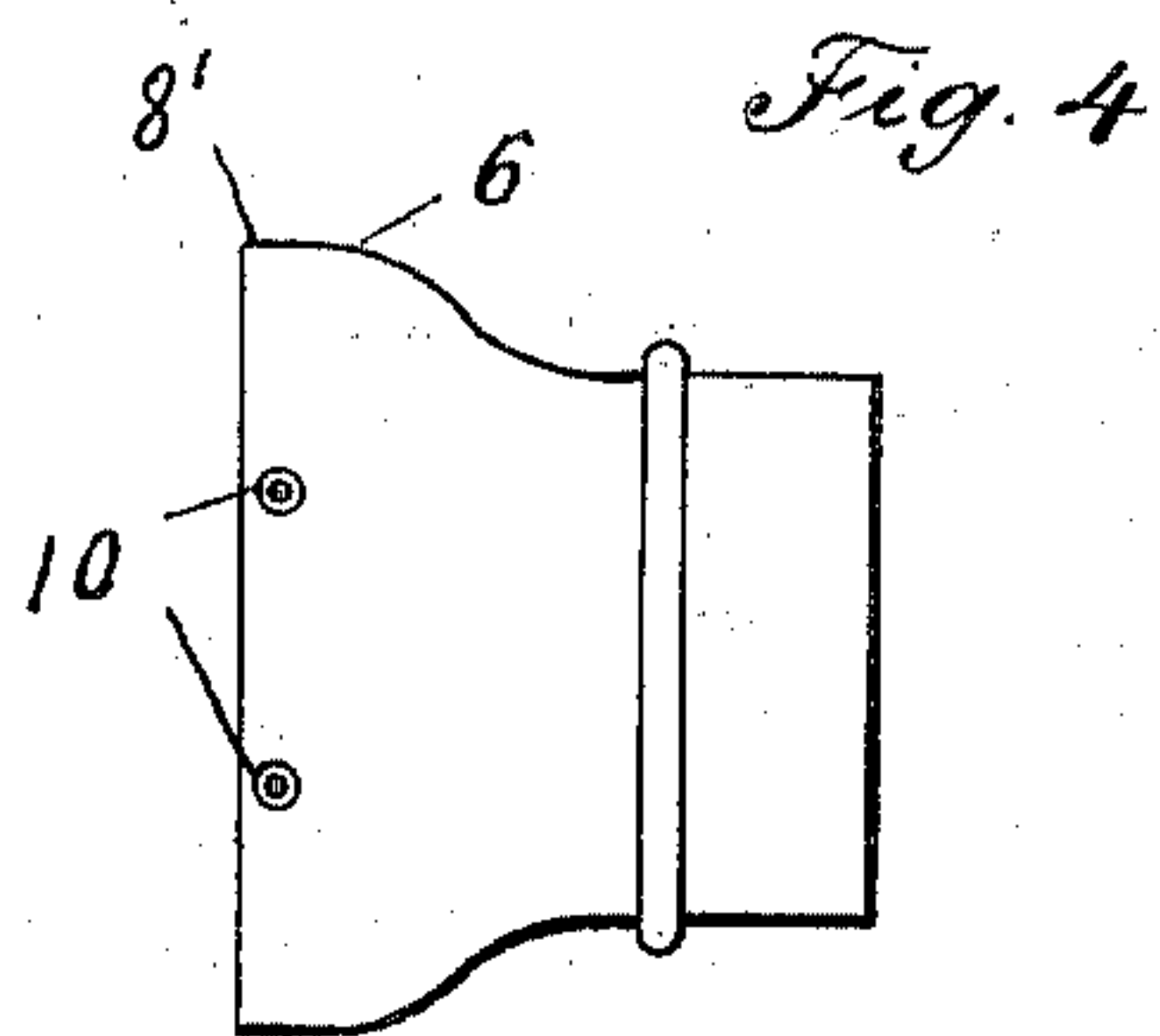
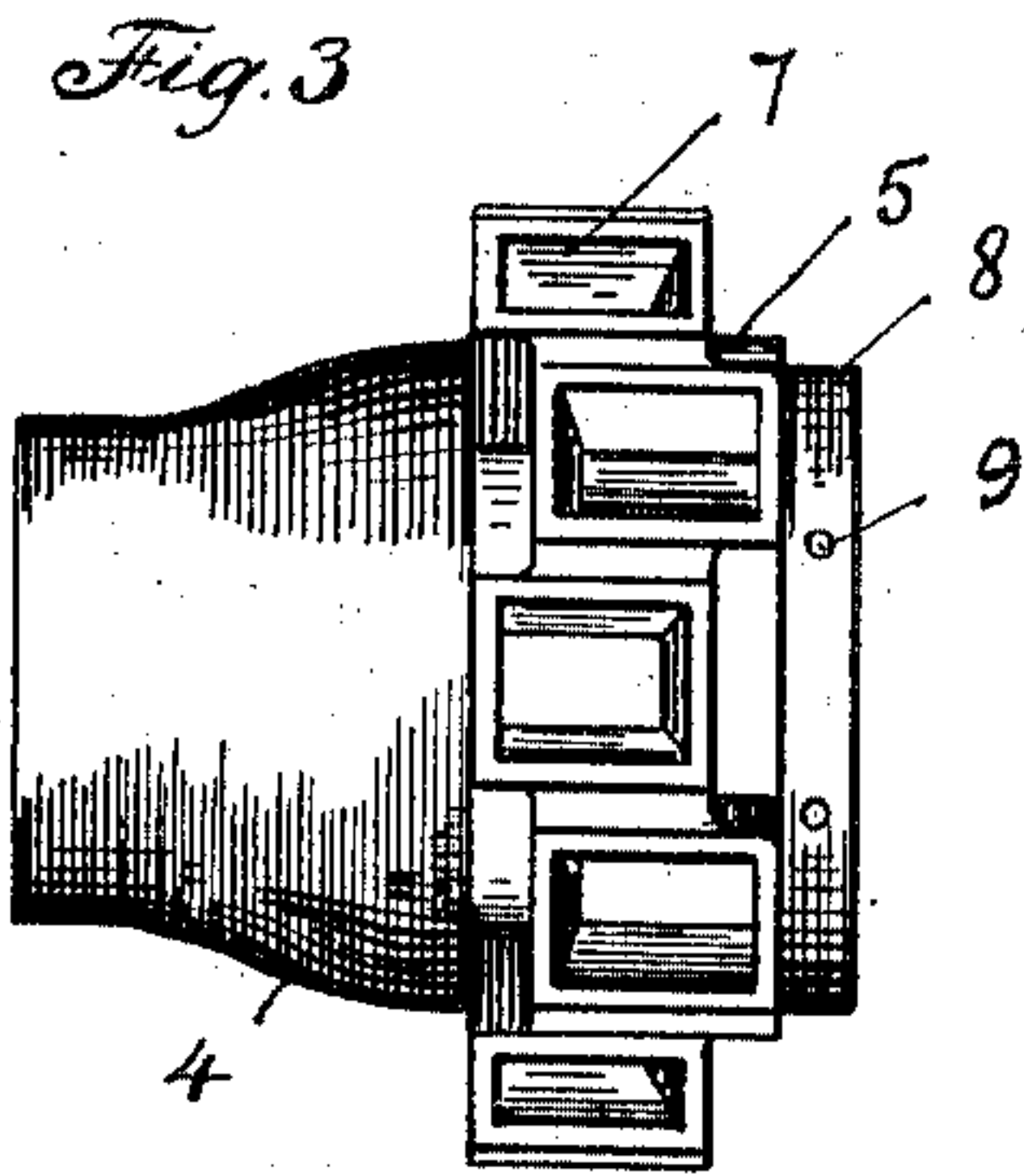
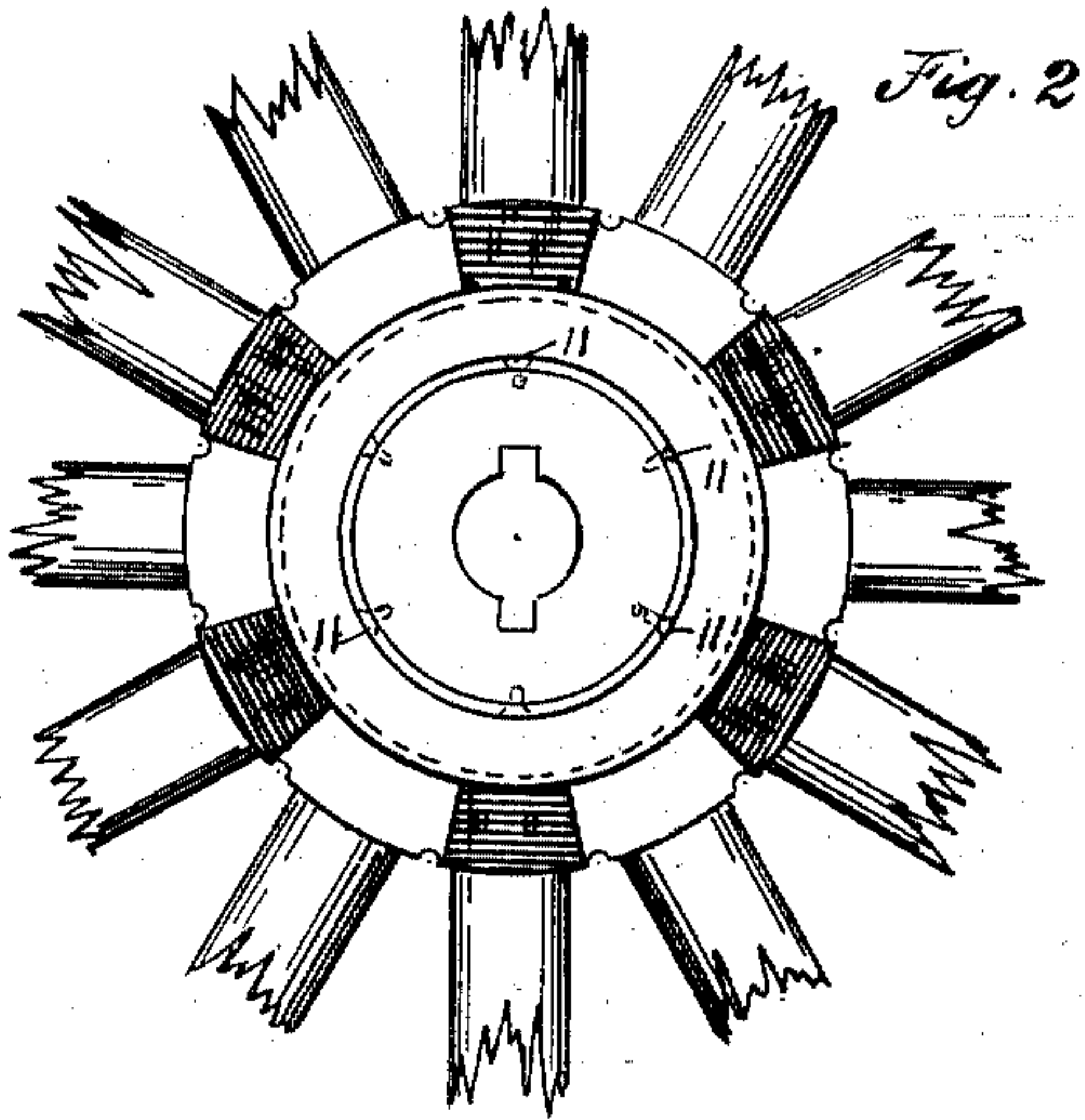
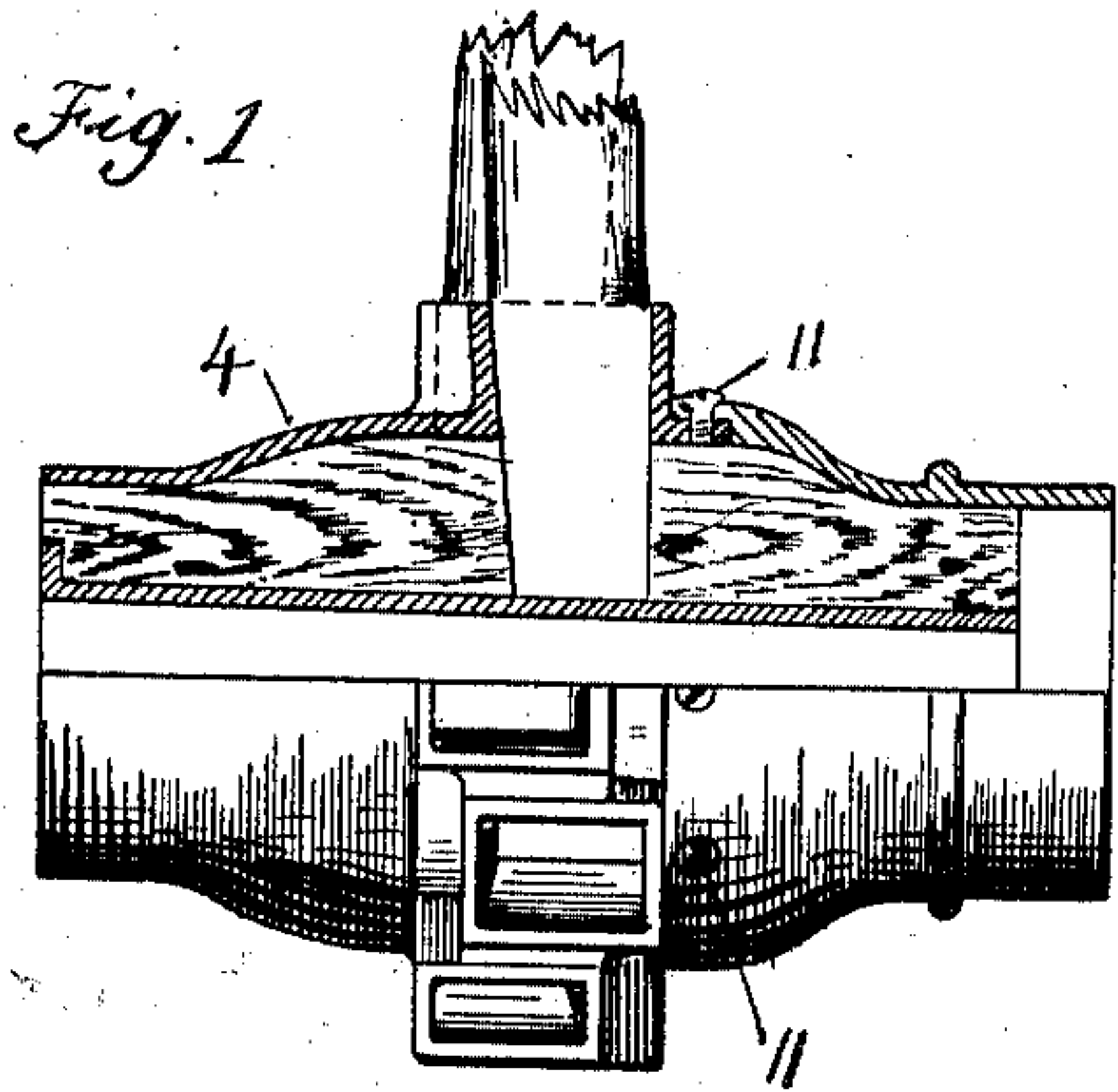
No. 760,252.

PATENTED MAY 17, 1904.

J. ROSENBERG.
WHEEL HUB.

APPLICATION FILED OCT. 10, 1903.

NO MODEL.



WITNESSES:
Robt. Klotz
Wm M. Kingsley

INVENTOR
Joseph Rosenberg
BY *J. Warner Peckstrom*
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH ROSENBERG, OF CHICAGO, ILLINOIS.

WHEEL-HUB.

SPECIFICATION forming part of Letters Patent No. 760,252, dated May 17, 1904.

Application filed October 10, 1903. Serial No. 176,577. (No model.)

To all whom it may concern.

Be it known that I, JOSEPH ROSENBERG, a citizen of Hungary, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Wheel-Hubs, of which the following is a specification.

This invention relates to wheel-hubs, and has particular reference to means for increasing their spoke-retaining qualities and for
10 strengthening the hub generally, as well as prolonging its life.

Wheel-hubs have heretofore been constructed of either wood or metal. The former material has been employed chiefly because of its compressibility and spoke-holding tenacity and also because of its cheapness and light weight. Metal hubs have found favor because of their durability and strength. Both
20 wooden and metal hubs have been open to serious objections, however, the former because of its liability to crack and loosen the spokes when exposed to the weather and the latter because of the absence of elasticity and inherent spoke-retaining qualities.
25

The object of my invention is to secure the advantages of both wood and metal as hub material without retaining their disadvantages by combining the two in a novel manner, so
30 as to obtain great strength, lightness, comparative permanency of the hub as a spoke-retainer, metal-proof against the actions of the weather, &c.

To this end my invention consists in a hub
35 constructed out of a tough compressible material, such as wood, into the spoke-apertures of which the spokes may be tightly wedged, and an outer coat or shell for said hub made out of rigid and comparatively unyielding material, such as iron, steel, and other metals.
40

The invention further consists in a hub having expansible hub-apertures and a shell for said hub inclosing same circumferentially, having comparatively unyielding spoke-apertures
45 registering with said first-mentioned apertures.

The invention further consists of a hub made of wood and the like highly-porous material having spoke-holes of smaller dimensions than
50 the socket ends of the spokes and a metallic

shell encircling all of said hub between its ends, said shell having projecting hub-sockets of larger capacity than said spoke-holes.

The invention further consists in a hub having an inner porous or wooden portion adapted to firmly hold spokes wedged thereinto
55 against withdrawal therefrom and an outer shell of metal provided with spoke-sockets supporting said spokes laterally; and the invention further consists in the novel details
60 of construction and combinations of parts hereinafter fully described in detail, illustrated in the drawings, and incorporated in the claims.

In the drawings, Figure 1 is a partly-sectional view of a hub embodying my invention. Fig. 2 is an end view of the hub with fragments of spokes inserted therein. Figs.
65 3 and 4 represent, respectively, the two sections of the outer metallic shell. Fig. 5 is a view of the inner or wooden portion of the hub.
70

Referring to the drawings, 2 represents an ordinary wooden hub with the spoke-holes 3 shown arranged in staggered order.
75

4 is the outer metallic shell, composed of the spoke-socket portion 5 and its complementary portion 6. The socket piece or portion 5 is shown as provided with a series of projecting hopper-like sockets or spoke-apertures 7, enlarged outwardly and registering when placed over the hub 2 with its spoke-holes 3. The larger part of the portion 5 is provided with a reduced ring 8, fitting into the large end 8' of the member 6. Small
80 screw-holes 9 and 10 in the portions 5 and 6, respectively, adapted to register with each other, provide means for fastening the metal portions to each other and to the wooden portion 2 by means of screws 11, as clearly shown
85 in Fig. 1. The spoke-holes 3 are considerably smaller than the sockets 7, and the latter are designed to accommodate the spokes' unreduced dimensions outside of the socket ends fitting into the spoke-holes 3, thereby obtain-
90 ing a maximum of strength where the greatest lateral strains are imposed. When the spokes are wedged into the apertures or spoke-holes 3, the latter being in the wood portion will expand in the usual manner and hold the
100

spokes firmly against withdrawal, while the projecting metal sockets support the spokes rigidly against lateral movement. The shell 4 also protects the wooden hub against undue expansion when the spokes are driven home, which would cause the hub 2 to burst or split. Said shell is also a protection against swelling and contraction from the effects of the weather—heat and dampness—the principal 10 causes of destruction of wooden spokes.

I have shown the alternate spokes inclined in intersecting planes for the purpose of bracing the wheel in both directions laterally. This arrangement, however, forms no part of 15 my invention, and same is equally serviceable in connection with any preferred inclination or relative arrangement of spokes.

It is obvious that the minor details of construction in a hub embodying my invention 20 may be varied without departing from the spirit of my invention, which I therefore do not wish to confine to the specific construction herein shown and described.

Having thus described my invention, I claim 25 as new and desire to secure by Letters Patent—

1. The combination with a hub made of wood or like material, provided with suitable spoke-holes, of two overlapping metallic shells covering the periphery of said hub, one of said 30 shells being provided with raised hub-sockets adapted to register with said spoke-holes and a flange covered by the other shell.

2. The combination of an ordinary wooden hub having spoke-holes therein, of a metallic

shell made in two parts forming an outer cov- 35 ering for said hub, one part of said shell being provided with integral projecting spoke-sockets of larger diameter than said spoke-holes and a male flange, and the other part of said shell fitting over said male flange, said 40 interfitting parts having registering apertures for screws or the like passing through said parts into the hub.

3. The combination of a hub of porous, compressible material such as wood and the 45 like and a shell fitting over said hub, said shell consisting of two interfitting parts, one thereof having integral projecting spoke-sockets adapted to unyieldingly support the spokes against lateral movement and the other part 50 overlapping a portion of said first-mentioned member.

4. The combination of an integral wooden hub having suitable spoke-holes therein, an outer metallic shell for said hub made in two 55 overlapping parts completely inclosing the periphery of said hub, one of said parts having complete spoke-sockets and a flange and the other part fitting into said first-mentioned part and means common to said hub and parts 60 for securing same together.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH ROSENBERG.

Witnesses:

ROBT. KLOTZ,

IGNATZ ROSENBERG.