

No. 615,640.

Patented Dec. 6, 1898.

A. SIROTICH.
WHEEL HUB.

(Application filed May 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

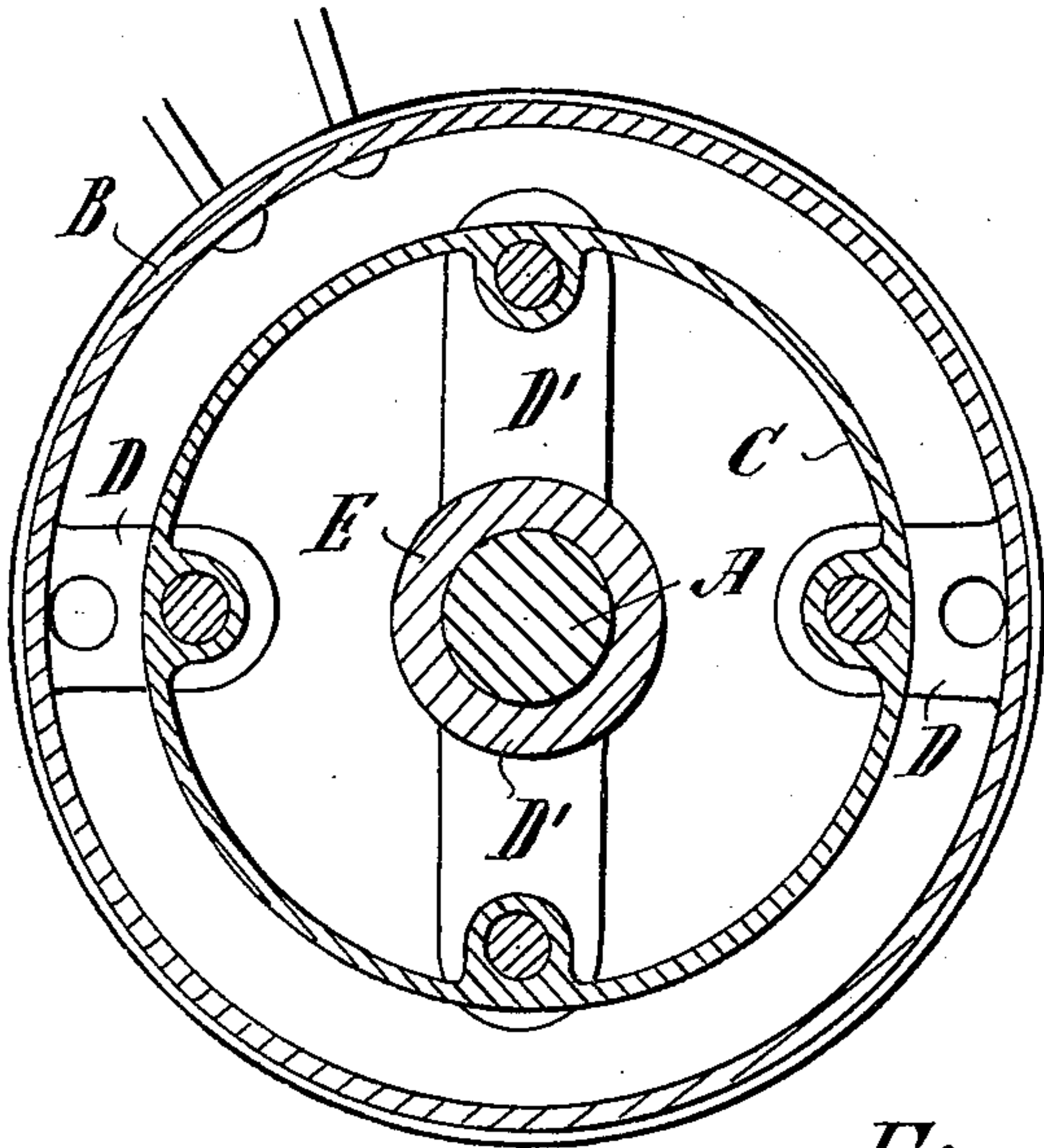


Fig. 2.

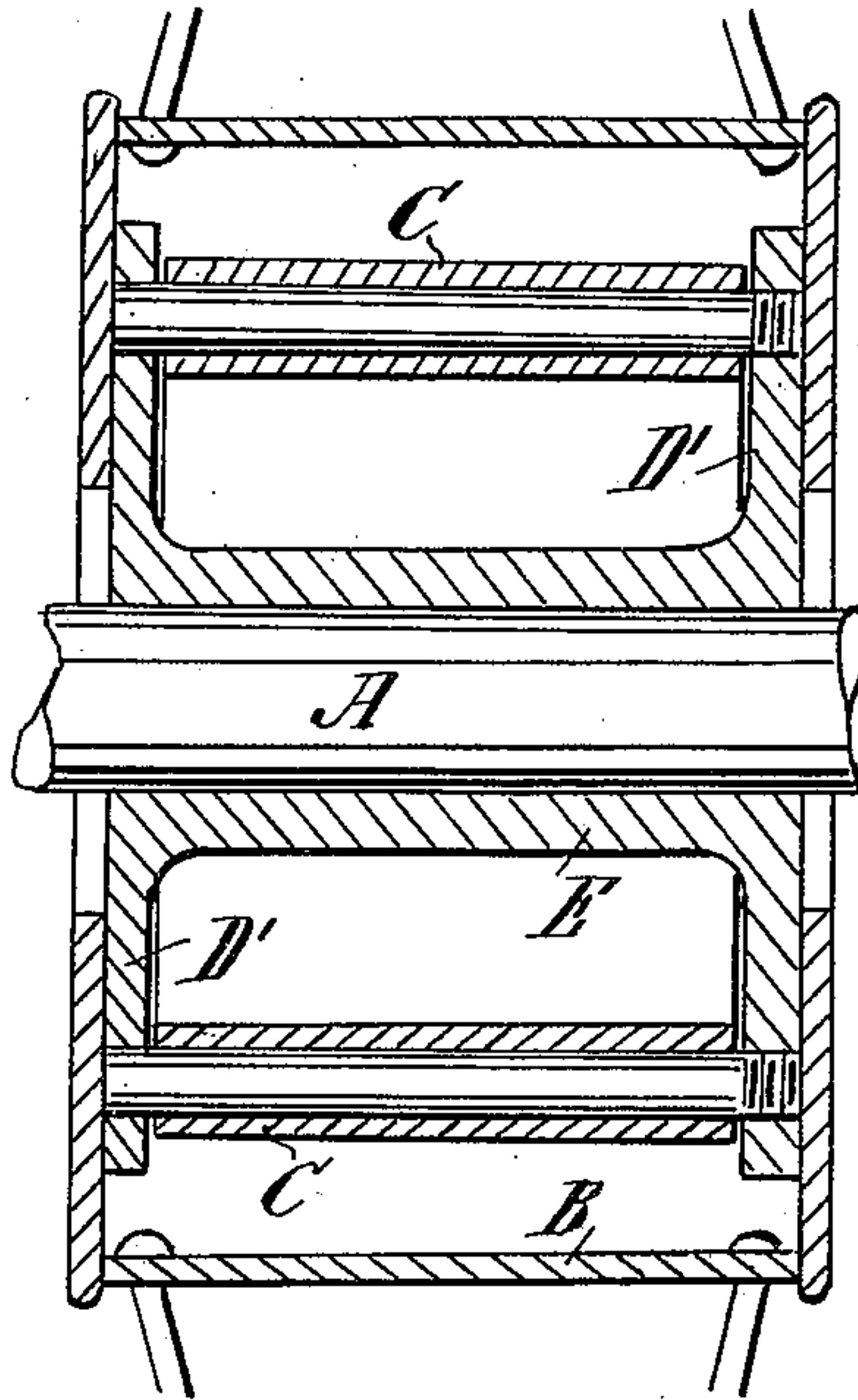
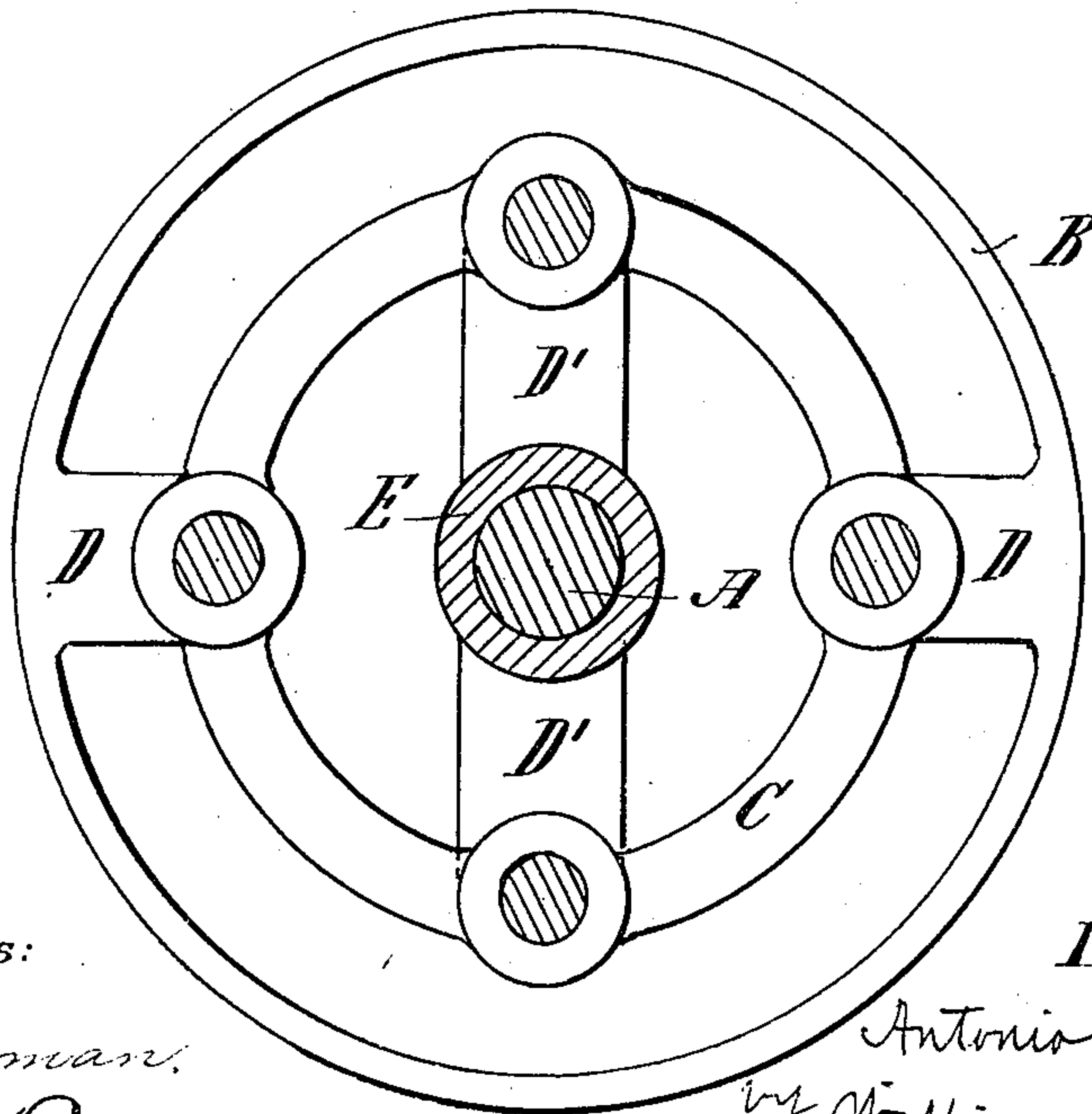


Fig. 3.



Witnesses:

C. A. Bateman,

Percy C. Bowen.

Inventor:

Antonio Sirotich,
by Wilkinson & Fisher,
Attorneys.

No. 615,640.

Patented Dec. 6, 1898.

A. SIROTICH.

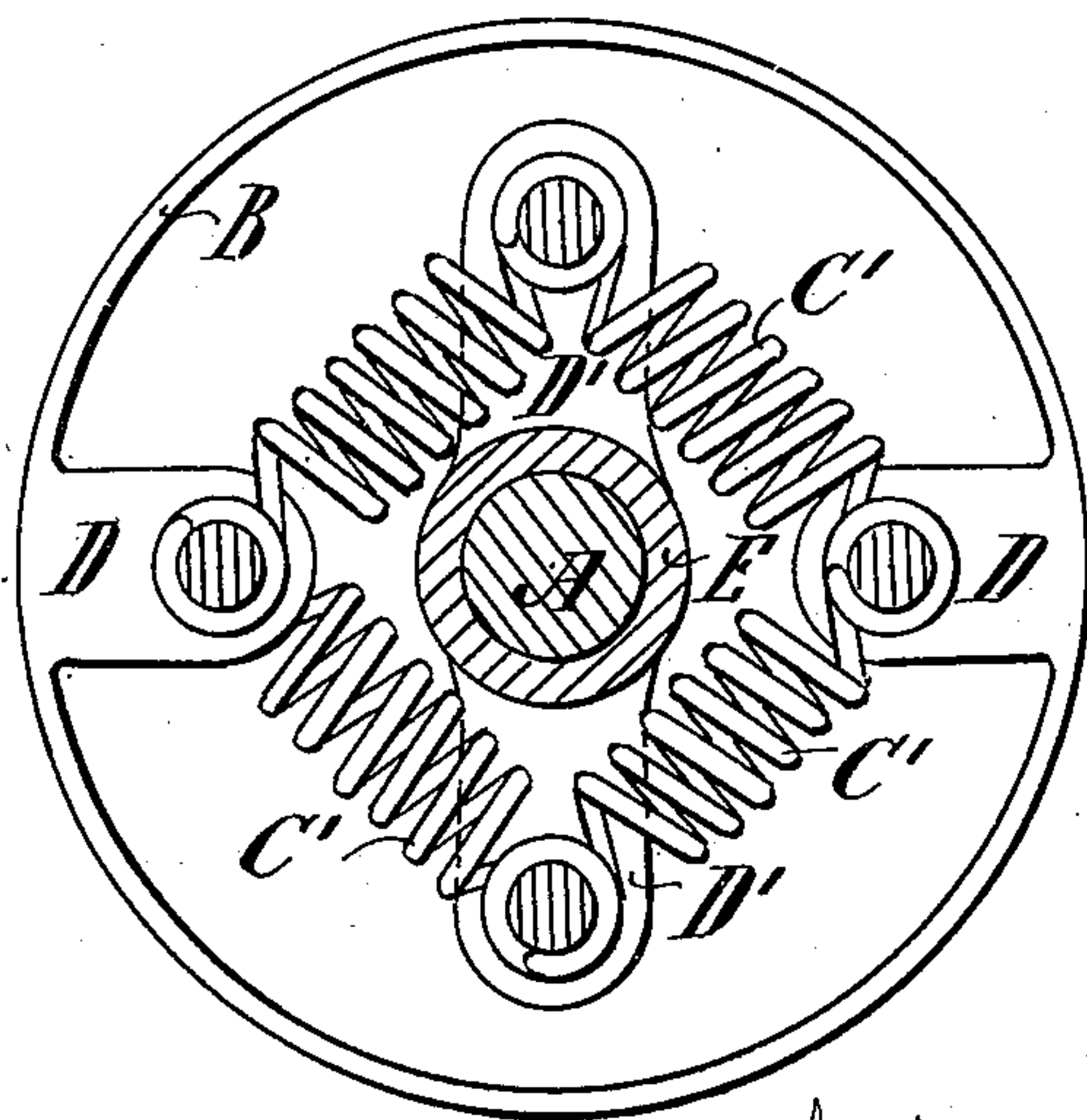
WHEEL HUB.

(Application filed May 16, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 4.



Witnesses:

C. A. Bateman.

Rey C. Bowen.

Inventor:

Antonio Sirotich,
by (Wilkinson) & Fisher,

Attorneys.

UNITED STATES PATENT OFFICE.

ANTONIO SIROTICH, OF VIENNA, AUSTRIA-HUNGARY.

WHEEL-HUB.

SPECIFICATION forming part of Letters Patent No. 615,640, dated December 6, 1898.

Application filed May 16, 1898. Serial No. 680,836. (No model.)

To all whom it may concern:

Be it known that I, ANTONIO SIROTICH, engineer, a subject of the Emperor of Austria-Hungary, residing at No 15 Schleifmühlgasse, in the city of Vienna, Empire of Austria-Hungary, have invented certain new and useful Improvements in Wheel-Hubs; 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 appertains to make and use the same.

My invention relates to improvements in wheel-hubs, and more particularly to hubs for wheels of cycles or automobile vehicles; and it consists in a peculiar construction of yielding hub adapted to take up the jars and shocks of uneven ground and, where desirable, to take the place of pneumatic tires now in use.

My invention will be understood by reference to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 is a transverse section through an elastic hub constructed according to one form of my invention. Fig. 2 is a central longitudinal section of the hub shown in Fig. 1. Fig. 3 is a transverse section of a hub constructed according to another form of my invention, and Fig. 4 is a transverse section of a wheel-hub constructed according to still another form of my invention, wherein coil-springs are used.

In all the figures of the drawings, A represents the axle. B represents the outer band of the hub, to which the spokes are connected, and E represents the inner sleeve, mounted upon the axle A. At opposite points rigid radial arms D D extend inwardly from the said outer band or ring, and from opposite sides of the said sleeve E rigid radial arms D' D' extend outwardly therefrom. Said sleeve and surrounding band are arranged concentrically and, further, in such relative positions that the inwardly-extending arms on the said surrounding band are in line of one diameter, while the outwardly-extending arms on the inner sleeve are in line of another diameter at right angles to the first diameter, as will be seen in the drawings. These radial arms are connected together by a yielding connection forming a closed figure about the central sleeve.

In Figs. 1 and 2, C represents a resilient band or ring of spring metal connected at opposite points to the arms upon the surrounding band B and also connected at intermediate points to the arms upon the inclosed sleeve. These portions of the said resilient band between each point of connection and its adjacent points of connection constitute spring members which supply the desired yielding effect.

In Fig. 3 the ring C, to which the radial arms D D and D' D' are connected in like manner as herein described with reference to Figs. 1 and 2, is of rubber and is a substitute for the metal ring shown in said figures.

In Fig. 4 I show the radial arms D D and D' D' connected by coil-springs C', the arrangement of these springs being in the form of a hollow square about the central sleeve and the corners of the square being the points of connection between the ends of said coil-springs and the said radial arms.

In all cases the wheel can move radially relative to the inner hub against the yielding resistance of the elastic connections between the said inner hub and the surrounding band, the shocks produced when the wheel runs over uneven ground being thereby deadened, and the hub above described serving as a substitute for the pneumatic tires commonly used. Besides, when the wheel is mechanically driven the driving power is applied to the inner hub—as, for instance, in cycles and motor-carriages (automobiles).

In starting the wheel first the inner hub is turned, while the outer hub still holds stationary by the resistance the rim of the wheel meets with until the tension upon the yielding connections of the hub caused by the turning of the inner hub relatively to the outer band is so far increased as to overcome the resisting forces acting on the wheel, and then the wheel will be started. Thus the shocks and heavy strains on the driving-gear, as also the increased exertion of power usually met with in starting, are notably eliminated or avoided.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a wheel-hub, the combination with an inner sleeve fitting the axle, having rigid arms

extending in opposite directions therefrom in the line of one diameter thereof; of a band surrounding said sleeve, and having rigid arms extending inwardly from opposite sides thereof in the line of a diameter at right angles to the arms on said sleeve; and springs connecting the arms on said sleeve to the arms on said surrounding band, forming a closed figure about said sleeve, substantially as described.

2. In a wheel-hub, the combination with an inner sleeve fitting the axle, having rigid arms extending in opposite directions therefrom in the line of one diameter thereof; of a band surrounding said sleeve, and having rigid arms extending inwardly therefrom in the line of a diameter at right angles to the arms on

said sleeve; and coil-springs connecting the arms on said sleeve with the arms on said surrounding band in the form of a hollow square in which the points of connection between said coil-springs and the arms on the said sleeve are at diagonally opposite corners, while the points of connection between said springs and the arms on said surrounding band are at the intervening diagonally opposite corners, substantially as described.

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

ANTONIO SIROTICH.

Witnesses:

H. C. CARPENTER,
CHAS. E. CARPENTER.