

(No Model.)

H. TIMKEN.
WHEEL.

No. 341,523.

Patented May 11, 1886.

Fig. 1.

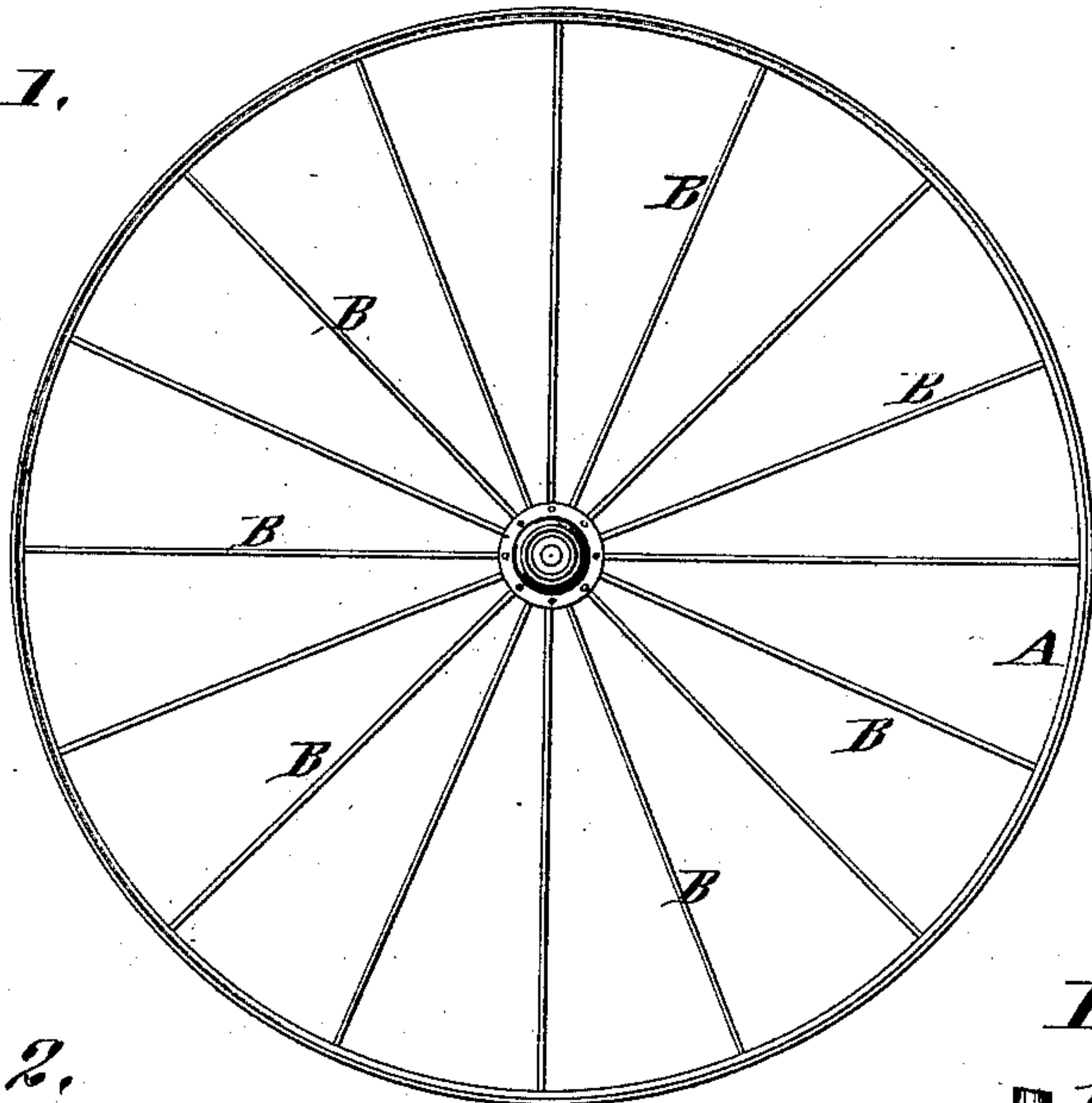


Fig. 2.

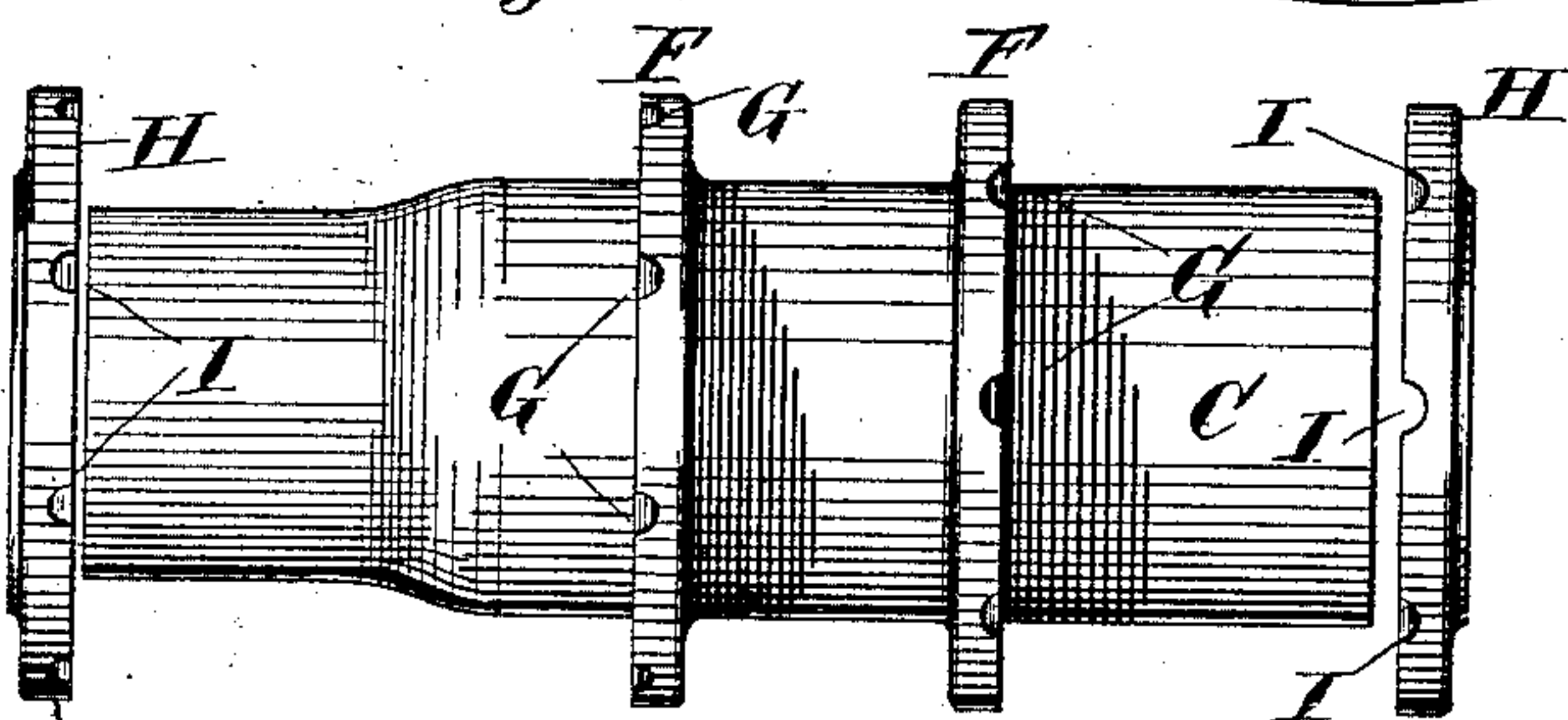


Fig. 3.

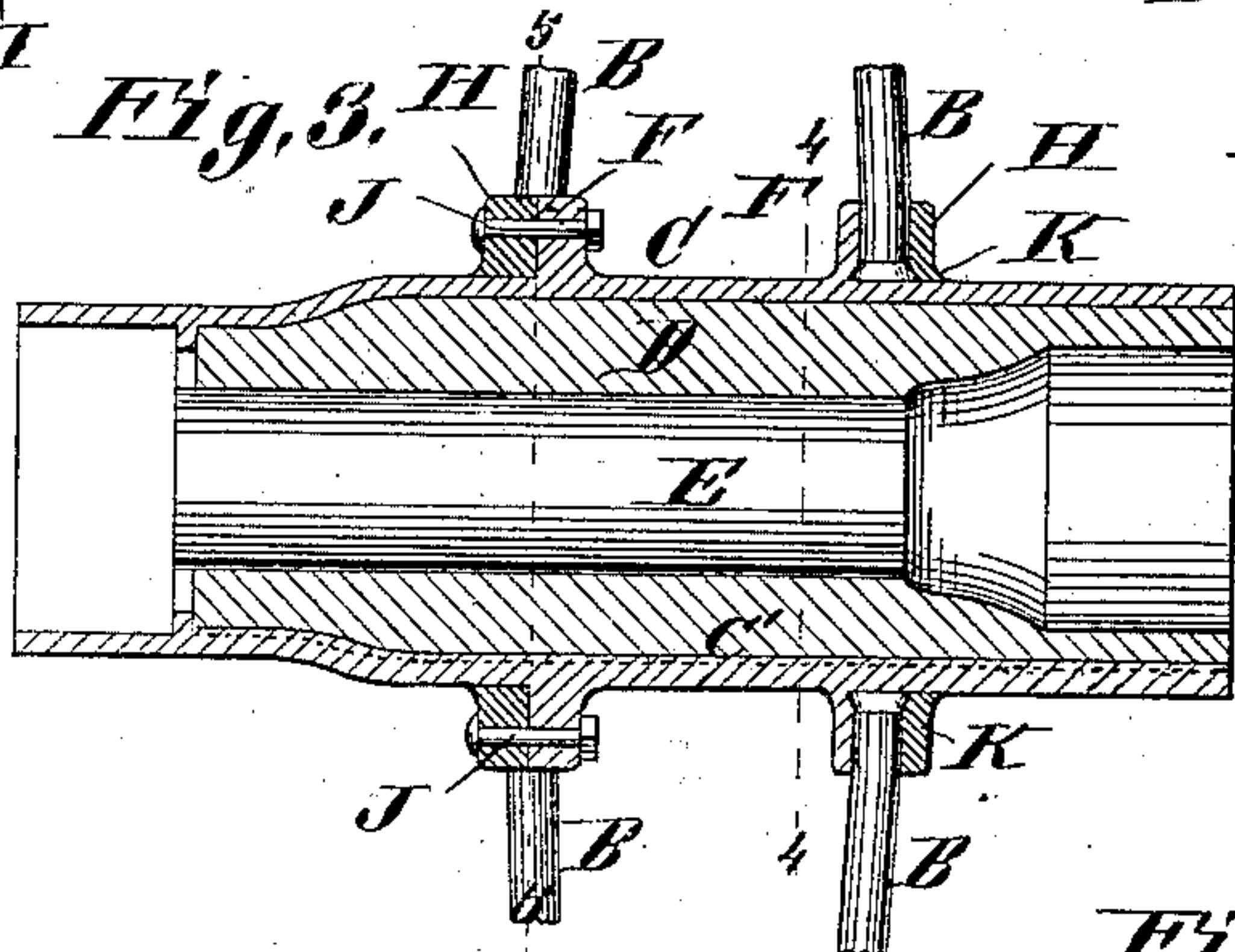


Fig. 5.

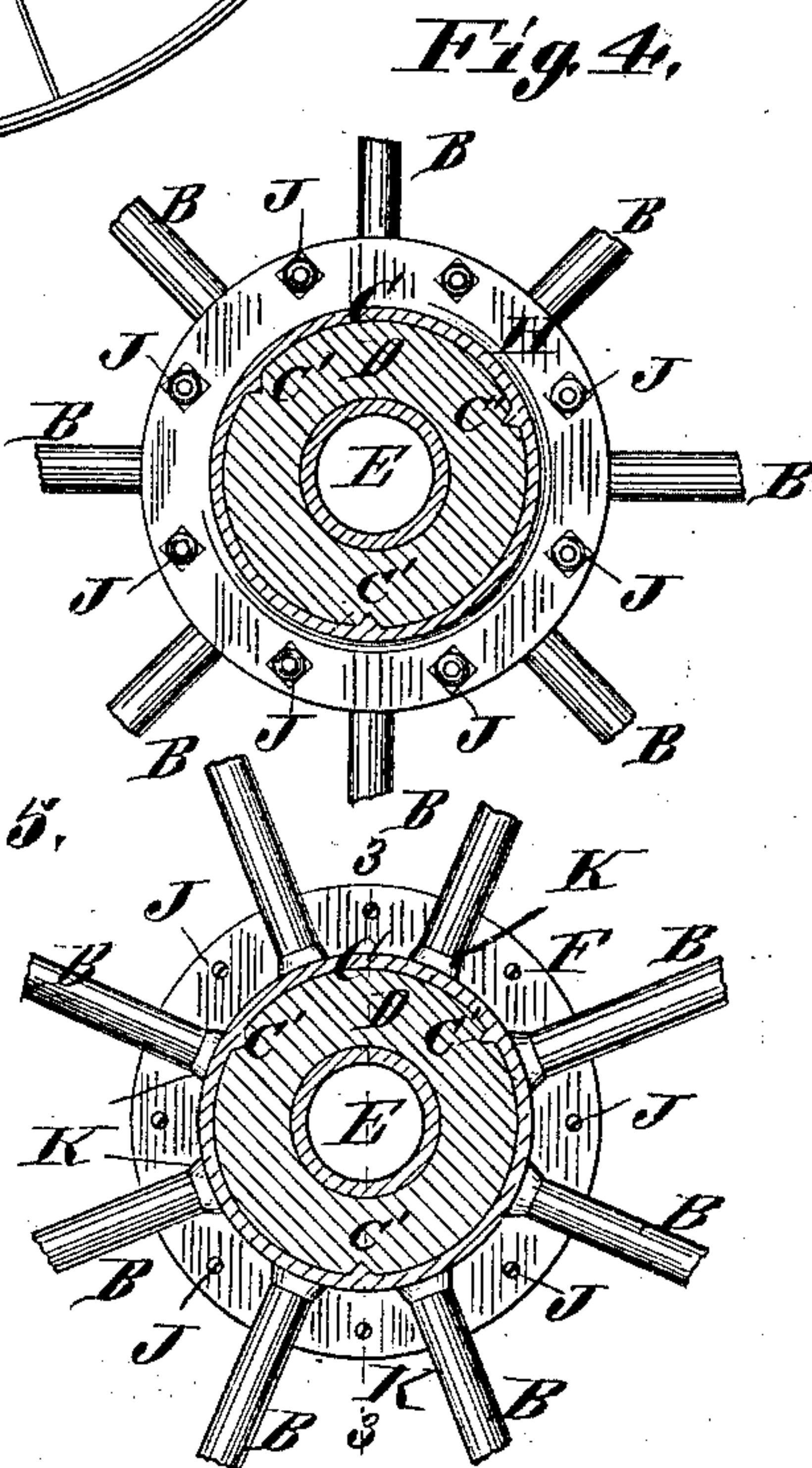


Fig. 6.

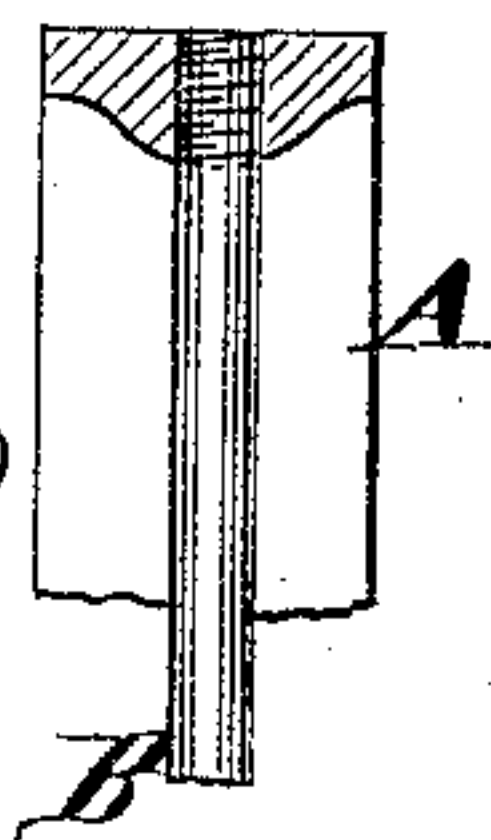
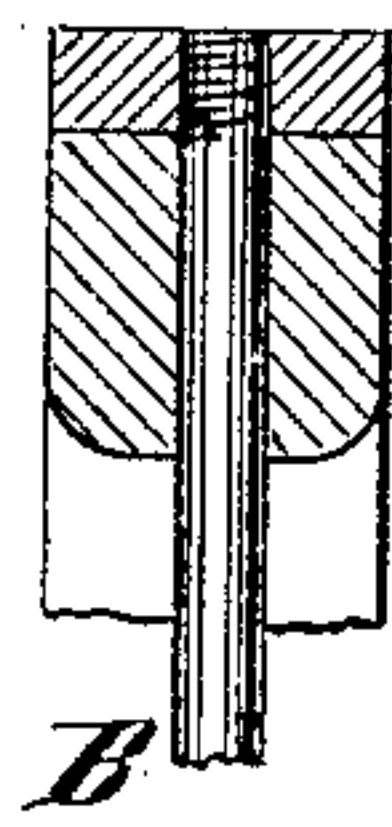


Fig. 7.



Attest:
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UNITED STATES PATENT OFFICE.

HENRY TIMKEN, OF ST. LOUIS, MISSOURI.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 341,523, dated May 11, 1886.

Application filed January 14, 1886. Serial No. 188,586. (No model.)

To all whom it may concern:

Be it known that I, HENRY TIMKEN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Wheels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of my improved wheel. Fig. 2 is an enlarged side view of the hub removed, and showing the spoke-rings also removed. Fig. 3 is a vertical longitudinal section through the hub, showing the inner ends of the spokes. This section is taken on line 3 3, Fig. 5. Fig. 4 is a vertical transverse section taken on line 4 4, Fig. 3. Fig. 5 is a similar view taken on line 5 5, Fig. 3. Figs. 6 and 7 illustrate one means of securing the spokes to the rim of the wheel, Fig. 6 showing a metal rim-wheel, and Fig. 7 showing a wooden felly and a metal tire.

My invention relates to certain improvements in vehicle-wheels intended for wagons, carts, buggies, carriages, bicycles, tricycles, and other conveyances; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Referring to the drawings, A represents the rim of the wheel, and B the spokes. The spokes are preferably secured to the rim at their outer ends by a screw-threaded connection, as shown in Figs. 6 and 7, but they may be secured to the rim in any other suitable manner.

C represents the outside shell or body of the hub, within which is tightly fitted wood or other suitable bushing, D, and within this bushing tightly fits the box E. The shell or outside of the hub has formed upon or secured to it flanges F, which are recessed or turned out, forming half-sockets G, to receive one-half of the inner ends of the spokes B. I prefer to cast these flanges upon the outside or shell of the hub, but do not wish to confine myself thereto, as any means employed whereby they will be held from movement on the hub will answer the purpose.

H represents rings that fit over the hub and have recesses I to receive the other half of the ends of the spokes, these recesses matching with the recesses G in the flanges F, so

that when the two are brought together and connected by bolts or rivets J they hold the inner ends of the spokes firmly between them. 55

The inner ends of the spokes are preferably flared outward, as shown at K, so that this portion fits in enlargements at the inner ends of the recesses I and G, and effectually prevent any outward movement of the spokes. 60

In putting the wheel together the bolts J would not be tightened up until the spokes were screwed into the rim of the wheel, thus permitting the spokes to be turned, and as soon as the spokes have been screwed into the rim of the wheel the bolts will then be tightened, holding the spokes from turning back. 65

I have shown a bolt, J, between each pair of spokes, but any number may be used, either more or less than I have shown. 70

The inner ends of the spokes fit against the body or shell of the hub, as shown in Figs. 3 and 5, so that they are held from the slightest inward movement, while at the same time they are held from the slightest outward movement by means of the sockets, in which they fit, and their enlarged heads K. 75

The inside of the shell of the hub is provided with ribs C', fitting in the bushing to prevent the bushing from turning within the shell. 80

I am aware that it is old in a wheel to use rotatable spokes screw-threaded at their outer and enlarged at their inner ends. I am also aware that rotatable spokes and clamping-rings held in place by nuts and adapted to retain said spokes are old. These features I do not claim; but 85

I claim as my invention—

The combination, with a wheel having rotatable spokes screw-threaded at their outer ends, whereby they are adapted to enter the felly, and conically enlarged at their inner ends and bearing against the hub, of recessed flanges on the hub and removable recessed rings adapted to clamp said spokes by means of bolts entering the rings and flanges between the spokes, whereby any one of the spokes may be turned by loosening two of the bolts, substantially as and for the purpose set forth. 90 95 100

HENRY TIMKEN.

In presence of—

GEO. H. KNIGHT,
EDW. S. KNIGHT.