T. BURNETT.
Vehicle Wheel.

No. 202,225. Patented April 9, 1878.

FIG. 1.

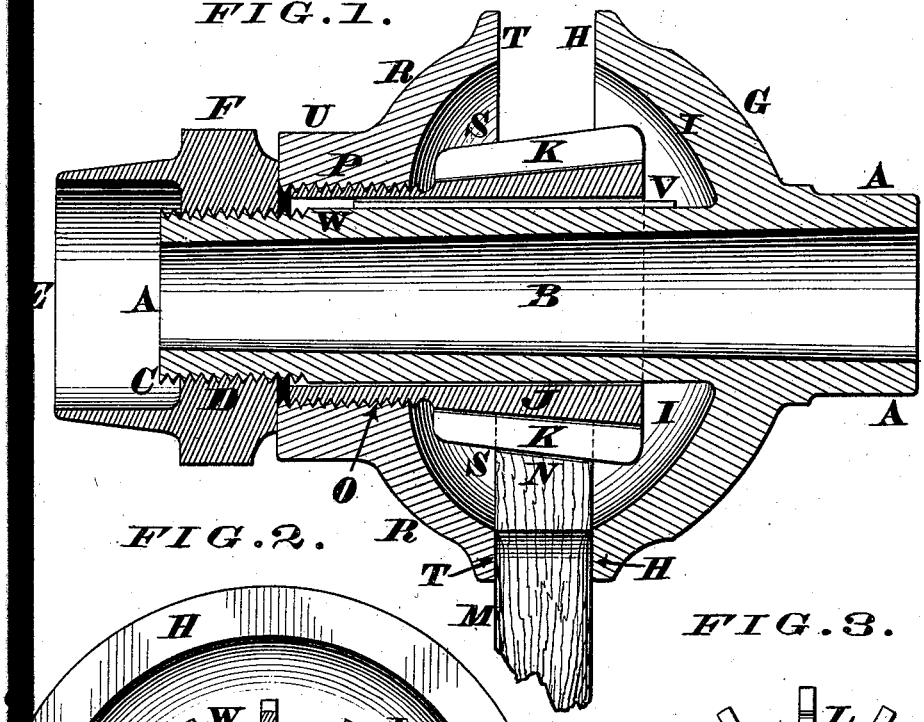


FIG. 2.

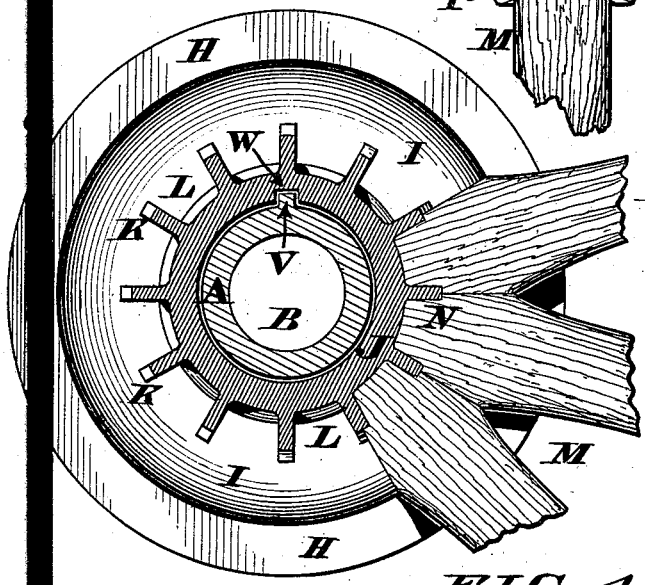


FIG. 3.

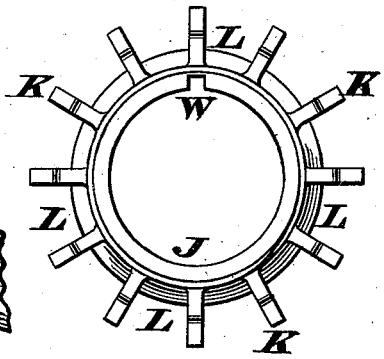
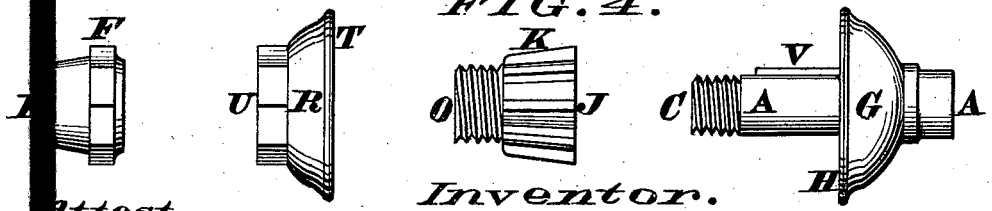


FIG. 4.



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THEODORE BURNETT, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN VEHICLE-WHEELS.

Specification forming part of Letters Patent No. **202,225**, dated April 9, 1878; application filed March 7, 1878.

To all whom it may concern:

Be it known that I, THEODORE BURNETT, of Springfield, Clarke county, Ohio, have invented certain new and useful Improvements in Wheels for Vehicles, of which the following is a specification:

This invention relates to that class of vehicle-wheels whose spoke butts or feet are seated on a cone, which latter is capable of being adjusted longitudinally of the hub in either direction so as to effect a simultaneous advancement or retraction of all the spokes radially without shifting their feet either toward the outer or inner end of the hub; and my invention comprises a novel combination of devices wherewith such radial adjustments can be readily effected by the simple rotation of a clamping-plate, and without the bodily removal of any of the component members of the wheel, the details of my combination being hereinafter fully described.

In the annexed drawings, Figure 1 is a longitudinal section through my improved hub. Fig. 2 is a transverse section of the same, a portion of the spokes being shown in position. Fig. 3 is an elevation of the shiftable cone upon which the feet of the spokes rest; and Fig. 4 is an elevation on a reduced scale, showing the various parts of the hub detached from each other.

The principal member of my hub is the box A, which is traversed with an axial bore, B, to receive the spindle in the usual manner. The outer end of this box has a male screw, C, that engages with the female screw D of hub band or nut E, whose square or non-circular collar F facilitates the rotation of said nut. Cast with this box is a hemispherical shell, G, having a smooth annular wall, H, which shell is about perpendicular to the axis of said box. Furthermore, this shell G is chambered out at I to admit the larger end of a cone, J, that fits snugly but not tightly on the smooth exterior of box A. This cone is provided with radial ribs or flanges K and spaces L, constituting sockets, within which are fitted the feet of the spokes M, as seen in Fig. 2, said spokes being shouldered at N to rest snugly against the peripheries of said flanges.

The outer or cylindrical portion of cone J is provided with a male thread, O, that screws into the female thread P of a clamping-plate, R, chambered at S to receive the smaller end of said cone, which plate R has a smooth annular wall, T, precisely like the wall H, and facing the latter. U is the non-circular collar of said clamping-plate. Box A has a feather, V, which enters the longitudinal groove W of cone J, and thereby prevents any rotation of the latter around said box.

When the wheel is first constructed the feet or butts of spokes M are seated within the sockets L, so as to cause the shoulders N to bear against the peripheries of radial ribs K, and the plate R is then screwed upon the thread O until the spokes are securely clamped between the smooth or annular faces H T, as seen at the bottom of the hub in Fig. 2. Nut E is then engaged with screw C of box A B, so as to prevent any accidental shifting of clamping-plate R. A wheel thus constructed is light, secure, and durable; but in case the spokes should shrink or becomes loose from any cause whatever, the wheel can be uniformly tightened by simply rotating clamp R in such a manner as to advance the cone J toward the outer end of the hub. By thus advancing said cone a simultaneous radial adjustment of all the spokes is effected, and without shifting the feet or butts of the spokes either toward the outer or inner end of the hub, and consequently the spokes are maintained in precisely the same position as when originally fitted in the wheel.

The absence of lugs or other projections from the walls H T is another feature peculiar to my hub, as these smooth walls leave the spokes entirely free from their tenon ends to their feet, and therefore the spokes are not liable to be bent or sprung by resting against bearings interposed between the cone J and the felly of the wheel.

Another advantage is that a broken or injured spoke can be removed in a few minutes and a new one inserted in its place by simply unscrewing the clamp R, so as to obtain access to the feet of the spokes.

It will also be noticed that my hub is composed of but four members, thus insuring the

utmost simplicity and economy of construction, and rendering it less liable to derangements of any kind.

Finally, it is evident that by simply retracting the cone J to any desired extent the tension of the spokes will be reduced accordingly.

In this specification, where the expression "smooth walls" occurs it is not to be understood as referring to a polished or finished surface, but the term is employed simply to indicate that the members H and T have no lugs or other devices projecting laterally from them.

I claim as my invention—

The combination of box A B C, shell G I, shiftable cone J K L O, clamping-plate R S, and nut D E, said shell and plate being provided, respectively, with smooth walls H T that bear against the spokes, substantially as herein described, and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

THEODORE BURNETT.

Witnesses:

THOS. KIZER,

W. H. DUGDALE.