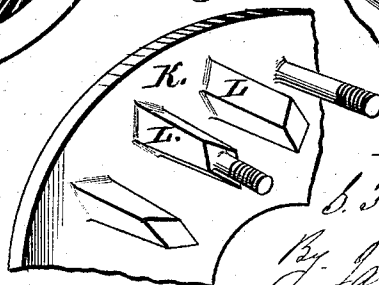
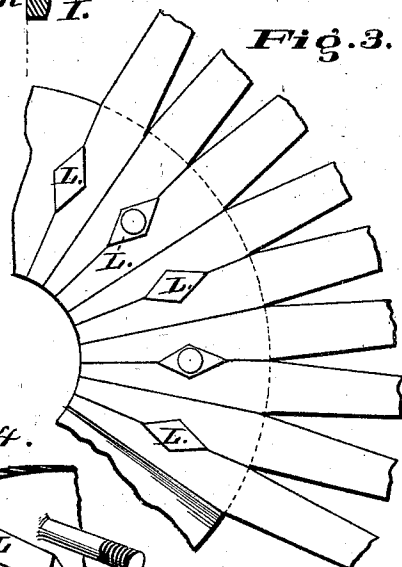
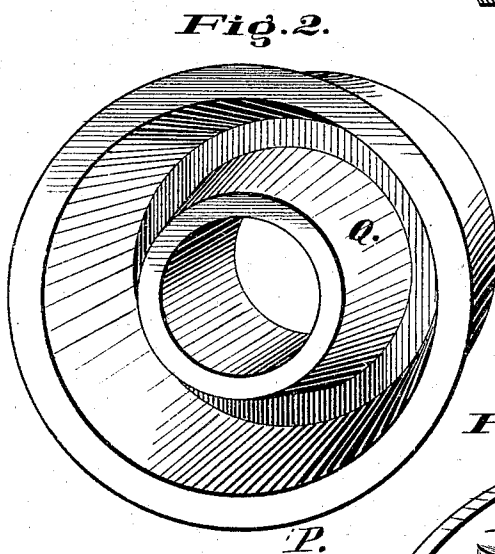
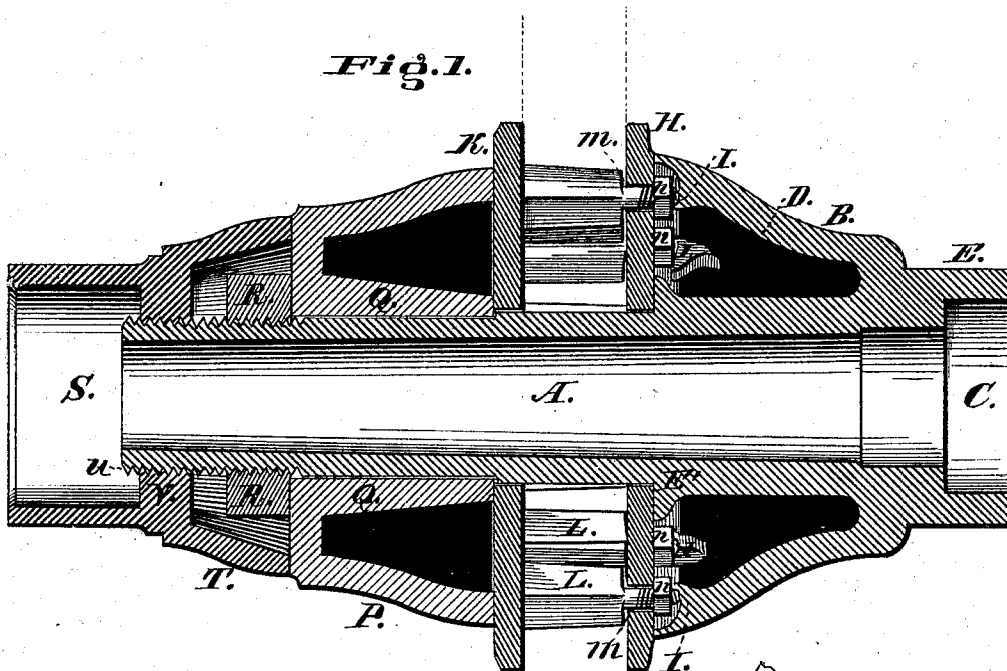


S. T. F. STERICK.

Hubs for Vehicles.

No. 134,945.

Patented Jan. 14, 1873.



Witnesses:
Wm. J. Bayton
Wm. J. Bayton

Inventor.
S. T. F. Sterick.
By James E. Norris
Atty

UNITED STATES PATENT OFFICE.

SYLVESTER T. F. STERICK, OF GEORGETOWN, DISTRICT OF COLUMBIA,
ASSIGNOR TO WILLIAM M. KING.

IMPROVEMENT IN HUBS FOR VEHICLES.

Specification forming part of Letters Patent No. **134,945**, dated January 14, 1873.

To all whom it may concern:

Be it known that I, SYLVESTER T. F. STERICK, of Georgetown and District of Columbia, have invented certain new and useful Improvements in Metallic Hubs for Vehicles, of which the following is a specification:

My invention relates to improvements in metallic hubs for carriages, wagons, and other vehicles, whereby great strength and simplicity of construction are attained, the fastenings or connections between the several parts concealed from view, and the exterior of the hub rendered capable of a high degree of ornamentation; and to attain these ends my invention consists, first, in the employment of a metallic back cap secured to the inner end of the axle-box and provided, near its outer periphery, with lugs or projections against which abut nuts on the shouldered ends of projecting pieces, the spaces between which serve as seats for the spokes, and which projections connect together metallic disks, which laterally support and bind the spokes, by means of which construction the parts are securely bound together, and the nuts concealed from view. My invention also consists in the employment of metallic disks, perforated at their centers for the introduction of the axle-box, and connected together by shouldered projections, cast with or otherwise secured to one of said disks, and provided with dovetailed or double inclined faces between the disks, with wedge-shaped openings between them for the insertion, horizontally, of the spokes, the said projections connecting the disks having their ends constructed in the form of screw-threaded bolts, which pass through perforations in the inner metallic disk, to which they are securely fastened by nuts, as hereinafter more fully set forth. My invention also consists in the employment of a cap-piece, preferably of the form of a frustum of a cone, perforated at its center to receive the axle-box, and having its larger base resting on the outer metallic disk, which supports the spokes, the said conical cap being provided with an inner cylindrical sleeve for the axle-box, whereby the strain of the latter at the perforations in the metallic disks is relieved and an auxiliary support made for the axle-box, as hereinafter set forth. My invention also consists in the em-

ployment, preferably, of an octagonally-shaped nut, screwed on the exterior of the axle-box, and bearing on the outer face of the conical cap-piece, by means of which the parts are firmly bound together, and compensation readily made for the wear of the parts. My invention also consists in the employment of a combined nut and hub-band for screwing upon the exterior of the axle-box, which serves as an ordinary hub-band, prevents the octagonal nut from turning, binds all the parts together, and admits compensation from wear of the parts, as hereinafter more fully set forth. My invention further consists in a combination of the parts above enumerated, which together form a metallic hub of great strength and simplicity of construction, which is capable of a high degree of ornamentation on its exterior, and in which all the nuts, bolts, and other fastenings are concealed from view.

In the drawing, Figure 1 is a longitudinal central section of my improved hub for carriages, wagons, and other wheels. Fig. 2 is a perspective view of the interior construction of my supporting-cap. Fig. 3 is a side view of a series of spokes arranged between wedge-shaped tenons. Fig. 4 is a portion of a disk with the wedge-shaped tenons wider apart.

A represents an axle-box, screw-threaded at its outer end and provided at its inner end with the back cap B, securely fastened to the axle-box. The back cap B has an annular recess, C, for the reception of a shoulder on the axle when the latter is inserted in the axle-box. The back cap B has a cavity, D, extending from the outer end of the axle-box A to the flange E' on the former, on which the inner metallic disk H rests at its center, the outer circumference of the inner disk H resting on the base of the back cap B. I I are lugs attached to the inner side of the disk H, and projecting into the back cap, the object of which will presently be explained. H K are two metallic disks, perforated at their centers for the reception of the axle-box A. To the outer disk K is cast with or firmly secured thereto the projections L L, which preferably have each alternate one formed at its end with a screw-threaded bolt, which bolts pass through perforations *m m* in the inner disk H, and are securely fastened thereto by nuts *n n*.

The projecting pieces L L, connecting the disks H K together, are formed with double-inclined dovetailed or double-mitered faces, to receive the spokes, which have corresponding openings made in them. The spokes are driven or slid horizontally into the opening between the projections L L after the nuts *n n* and the disk H are removed. The openings between the projections L L are of a wedge-form, being larger at top than bottom, in order to render the fastening more secure. The bolt ends of the projections L L may be dispensed with, and headed bolts may be employed to fasten the disks together, having nuts on their ends, which project into the cavity D in the back cap B, though I preferably employ the construction first described. The spokes are wider than the dovetail faces on the side of the disk H, so that the nuts may be screwed up should there be any contraction of the spokes. Each alternate projection also may be dispensed with, and the inner ends of two of the spokes may be made to bear against each other near their inner ends. It is obvious that this construction of the dovetailed or double-mitered faces for the projections L L connecting the disks with the corresponding indentations or openings in the spokes, to receive them together with the wedge-shaped form of the opening between the projections, will, in connection with disks, firmly secure the spokes in their seats, while compensation can readily be made for contraction or wear of the parts, and at the same time the spokes are readily removed or inserted. In the rotation of the disk H the nuts *n n* will be brought in contact with or abut against the lugs I I, thus preventing the turning of the said disk H, while the nuts *n n* will be concealed from view by reason of their situation in the cavity D in the back cap B. P is a cap, perforated at its center for the reception of the axle-box A. The cap P is preferably made in the form of a frustum of a cone, to have an extended bearing on the outer disk K on which its base rests. Q is a cylindrical bearing or sleeve for the axle-box, for supporting and strengthening the same, and acting as an auxiliary support for the disk K, as shown in Fig. 1. The bearing Q for the axle-box is cylindrical, so as to closely fit the axle-box for which it acts as a supporting-sleeve. The inner end of the bearing Q is flush with the base of the cap P, and rests, as does the cap P, on the outer face of the disk H. This construction affords an auxiliary support for the axle-box, and relieves the perforation in the outer disk K from the strain from the axle-box, which otherwise would be exerted at the perforation in the disk. This construction in a word distributes the strain over the face of the disk. R is a nut, prefera-

bly made octagonal in form, which is screwed on the outer end of the axle-box, there being, as before described, a screw-thread cut for that purpose on the exterior of the outer end of the axle-box, by means of which construction the parts may be securely bound together, and compensation readily made for any wear of the parts. S is a combined nut and hub-band, the inner end of which, T, is a cap formed to cover and embrace the octagonal nut R, and prevent it from turning. The upper vertical sides of the perforation U is screw-threaded, so that the combined nut and hub-band may be screwed on the axle-box to prevent the octagonal nut R from turning. The part V of the combined nut and hub-band is the hub-band proper, into which the outer end of the axle passes.

By my construction of hub great strength and simplicity are attained, and all the fastenings of the several parts are concealed from view, while at the same time the exterior of the hub may, if desired, be highly ornamented.

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

1. A back cap, B, secured to the inner end of the axle-box, and concealing from view the nuts *n n*, substantially as described.

2. The metallic disks H K connected by the double inclined faces of the projections L L, in combination with the back cap B provided with lugs I I, which abut against the concealed nuts *n n*, substantially as described.

3. The perforated cap P provided with the interior cylindrical bearing Q, for surrounding the axle-box and supporting the spoke-disk K, as and for the purpose set forth.

4. The combination of the perforated cap P provided with the bearing Q for the axle-box, and the octagonal-shaped nut R screwed on the exterior of the axle-box, whereby the parts are bound securely together, and compensation may be made for the wear of the parts, as set forth.

5. The nut and hub-band S formed in one piece, in combination with the nut R and cap P, substantially as described.

6. The combination of the axle-box A, back cap B provided with lugs I I, metallic disks H K connected by projections L L, conical cap P having the cylindrical bearing Q for the axle-box, octagonal nut R, and combined nut and hub-band S, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of November, 1872.

SYLVESTER T. F. STERICK.

Witnesses:

WM. J. PEYTON,
ALBERT H. NORRIS.