

P. J. HARVEY & F. REPPENHAGEN.

VEHICLE WHEEL.

No. 172,626.

Patented Jan. 25, 1876.

Fig. 1

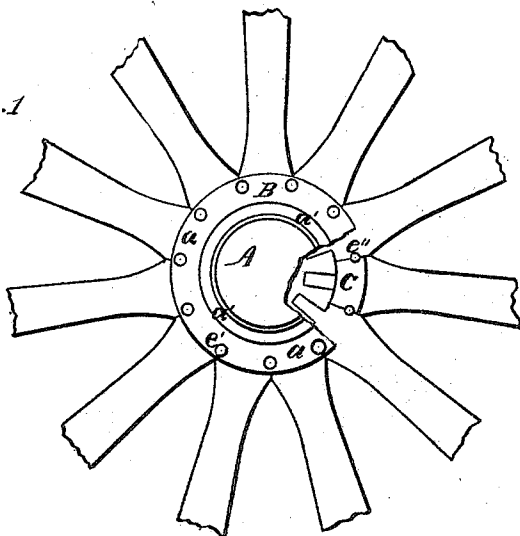


Fig. 2

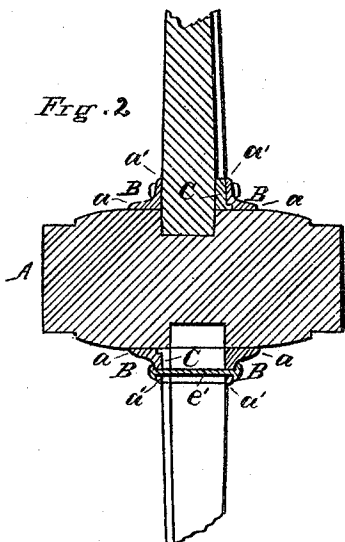


Fig. 3

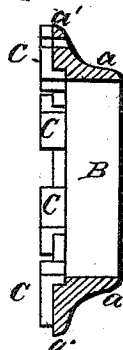


Fig. 4

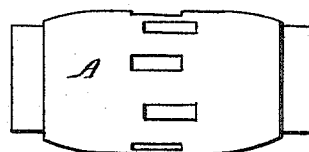
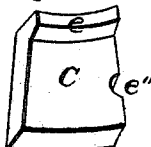


Fig. 5



WITNESSES.

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UNITED STATES PATENT OFFICE.

PERRY J. HARVEY AND FRITZ REPPENHAGEN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN VEHICLE-WHEELS.

Specification forming part of Letters Patent No. 172,626, dated January 25, 1876; application filed November 16, 1875.

To all whom it may concern:

Be it known that we, PERRY J. HARVEY and FRITZ REPPENHAGEN, both of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vehicle-Wheels, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which our invention appertains to make and use the said improvements, reference being had to the accompanying drawing forming a part hereof, and in which—

Figure 1 is a side elevation of our improved wheel, shown partly in section; Fig. 2, a vertical central cross-section thereof; Fig. 3, a like section of one of the metal flanges, showing also the relative position of the removable wedge-shaped separating-blocks; Fig. 4, a representation showing the position of the mortises in the hub, and Fig. 5 a perspective of one of the blocks referred to.

Like letters of reference indicate like parts.

In the drawing, A represents the hub proper. The hub is mortised, as shown, so that the inner ends of the spokes may be set, alternately, nearest the opposite ends of the hub; or, in other words, the mortises are "staggered," so that one-half the spokes shall brace the other half against lateral strains, or form a broad base for the support of the spokes, while the outer ends all lie in the same circle. B B are flanged collars or lugs fitted upon the hub, and arranged for contact with the spokes. The horizontal flanges *a a* of the collars B B prevent the latter from being tilted on the hub, while the vertical flanges *a' a'* prevent the spokes from being tilted. The spokes are tenoned, as shown, to enter the mortises in the hub, and are beveled to bear against each other when arranged therein. By this means the spokes, when driven into the hub, wedge themselves tightly therein, and are spread over a wider base than that occupied by each one. Each collar B B, therefore, will come in

contact with only each alternate spoke, and a space will thus exist between the collars and the lateral faces of the spokes, respectively. These spaces we fill by means of the removable and wedge-shaped blocks C C, and, in order to prevent the accidental removal of these blocks, we flange them, as shown at *e e*, and cut the inner lower edge of the collars B B away to receive the flanges *e e*. After all the parts are properly set, they are firmly held in place by means of the rivets *e' e'*, and in order to admit of these rivets being passed through from one collar to the other, we cut away the spokes and blocks C C sufficiently to receive them, as shown at *e'' e''*. The blocks C C thus aid in wedging and holding the spokes firmly in place.

If a spoke should be broken, and its removal rendered necessary, only the rivet which engages it need be cut. The broken spoke may be then withdrawn and another inserted in its place, the rivet only being removed for that purpose, and another rivet inserted to hold the new spoke.

A very strong and durable wheel is thus made with facility, and repairs may be easily made.

The collars B B should be made of malleable iron, but the blocks C C may be cast.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the hub A, having therein the staggered mortises, the removable wedge-shaped blocks C C, cut to receive the rivets, and flanged, as shown at *e e*, the collars B B, cut to receive the flanges *e e*, and the radially beveled spokes, substantially as and for the purposes specified.

PERRY J. HARVEY.
FRITZ REPPENHAGEN.

Witnesses:

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N. C. GRIDLEY.