No. 647,462. Patented Apr. 17, 1900.

T. A. BAINBRIDGE.

CAR WHEEL.

(Application filed Jan. 15, 1900.)

(No Model.)

Fig. 1.

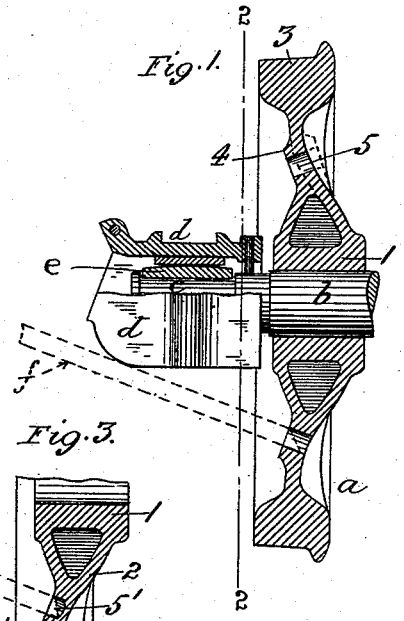


Fig. 2.

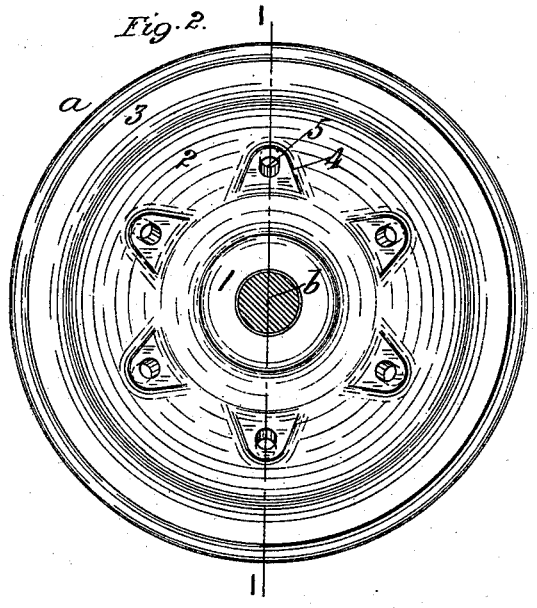


Fig. 3.

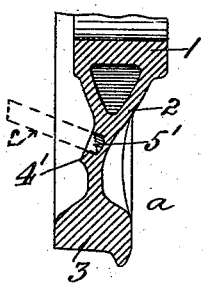


Fig. 4.

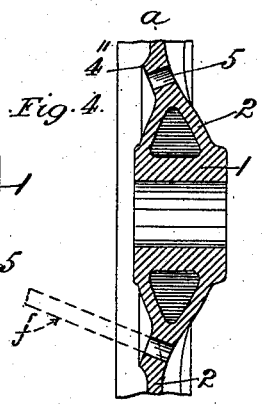


Fig. 5.

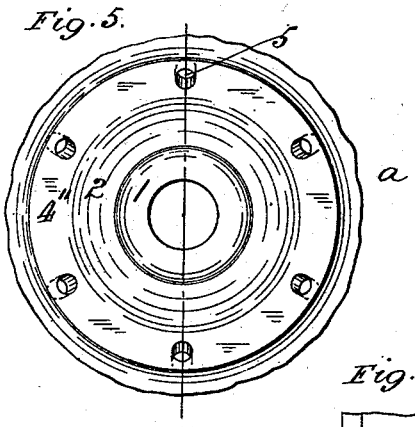


Fig. 8.

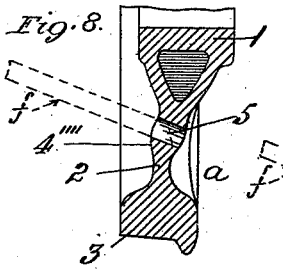


Fig. 9.

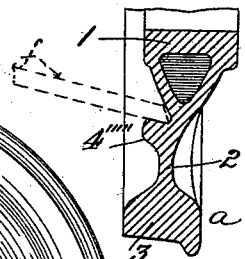


Fig. 6.

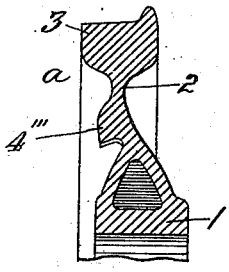


Fig. 7.

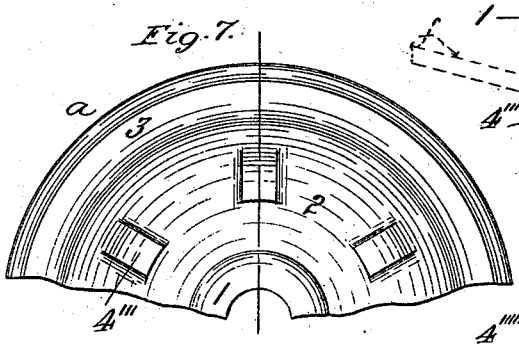
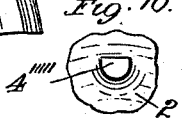


Fig. 10.



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His Atty

UNITED STATES PATENT OFFICE.

THOMAS A. BAINBRIDGE, OF ST. LOUIS, MISSOURI.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 647,462, dated April 17, 1900.

Application filed January 15, 1900. Serial No. 1,490. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. BAINBRIDGE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Car-Wheels, of which the following is a specification.

My invention relates to a car-wheel, and is in the nature of an improvement on the car-wheel for which I have obtained Letters Patent of the United States, dated June 6, 1899, No. 626,517, for an improvement in car-wheels.

This invention has for its object to provide a car-wheel with means by which when mounted on its axle, journaled in an axle-box in the usual manner, the wheel may be depressed for releasing the journal-brasses from the axle-box readily and quickly in an emergency; and it consists in features of novelty, as hereinafter described and claimed, reference being had to the accompanying drawings, forming part of this specification, whereon—

Figure 1 represents a vertical cross-section through my improved car-wheel, on line 1 1 in Fig. 2, mounted on its axle, broken away, and combined with an axle-box, shown partly in longitudinal vertical section and partly in side elevation; Fig. 2, a cross-section through the axle on line 2 2 in Fig. 1, showing the wheel in outside elevation and omitting the axle-box; and Figs. 3, 4, 5, 6, 7, 8, 9, and 10, views of the wheel, broken away, corresponding to Figs. 1 and 2, respectively, and showing modifications in the configuration of parts of my improvement.

Like letters and numerals of reference denote like parts in all the figures.

In the ordinary construction of a single or double plate car-wheel, with its axle and axle-box, when the journal-brasses become broken or worn and have to be removed it is necessary to raise the axle-box by a jack or other suitable means until the wheel is clear of the rail and then to depress the wheel, with its axle, until the axle-journal and collar are clear of the brasses, so that the latter can be withdrawn, and in this operation considerable difficulty and loss of time are experienced in depressing the wheel and axle, owing to the absence of any provision on the outside of the wheel for obtaining a purchase thereon.

a represents my improved car-wheel, which may be of any well-known pattern having the hub 1, the plate or web 2, and rim 3 and fixed on its axle *b*, having the journal *c*, which is mounted in the axle-box *d*, having the usual brass *e*. On the face (preferably the outer face) of the plate or web 2 of the wheel *a* is formed one or more bosses or analogous projections 4, which are preferably integral with the plate or web 2, and through each boss or projection 4 and corresponding part of the plate or web 2 is a hole 5, which is located at such a distance from the axle *b* that when the wheel *a* is turned so as to bring the hole 5 to its lowest position, or immediately beneath the axle *b*, the hole 5 will be beyond and in proximity to the under side of the axle-box *d*, whereby when the wheel *a*, with its axle *b* and axle-box *d*, has been raised until the wheel *a* is clear of the rail the free end of a bar *f* (indicated by dotted lines) may be inserted in the hole 5 of the boss 4, and the bar *f* being then pressed against the under side of the axle-box *d* as a fulcrum (or against suitable packing intermediate thereto) the bar *f* will act as a lever to pry the wheel *a*, with its axle *b*, downward until the journal *c* is clear of the brass *e*, when the latter can be easily removed and renewed without loss of time, an advantage of considerable importance in case of accident while the car is running.

The boss or projection 4, with its hole 5, may be modified in various ways without departure from the principle of my invention. For instance, in Fig. 3, in lieu of a hole passing entirely through the boss 4 and corresponding part of the plate 2, as seen in Figs. 1 and 2, the boss 4′ is formed with an indentation or recess 5′. In Figs. 4 and 5 the boss or projection 4″ is annular in form, with holes 5 at intervals therethrough and through the corresponding parts, respectively, of the plate 2. In Figs. 6 and 7 the boss or projection 4‴ is rectangular in form and adapted on one side, opposite to the hub 1, for engagement by the end of the bar *f*. In Fig. 8 the boss or projection 4⁗ is formed as a convex thickening of the plate 2 thereat, having the hole 5 therethrough, and in Figs. 9 and 10 the boss or projection 4⁗′ is stud-

like, of circular (oval or polygonal) contour, having one part of its perimeter, opposite to the hub 1, flattened for engagement by the end of the bar *f*. In other words, I do not limit myself to the particular shape of the projection on the outer face of the plate or web 2, nor to forming the boss or projection shown in Figs. 1 and 2, and 4 and 5, respectively, on the outer face of the plate or web 2, as they may be formed on the inner face thereof, as indicated by dotted lines in Fig. 1, or on both faces, as found most suitable.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A car-wheel provided with an axle and axle-box, and having a boss or projection on its plate or web, the said boss and corresponding part of the plate having a hole therethrough, which when at its lowest position beneath the axle, is beyond and adjacent to the under side of the axle-box for engagement by the end of a hand-lever bearing against the axle-box, substantially as described.

2. A car-wheel provided with an axle and axle-box, and having a boss or projection on the outer face of its plate or web, the said boss having an indentation or recess, which when at its lowest position beneath the axle, is beyond and adjacent to the under side of the axle-box, for engagement by the end of a hand-lever bearing against the axle-box, substantially as described.

3. A car-wheel provided with an axle and axle-box, and having a boss or projection on the outer face of its plate or web, one side or part of the perimeter of the said boss when at its lowest position beneath the axle, being beyond and adjacent to the under side of the axle-box and adapted for engagement by the end of a hand-lever bearing against the axle-box, substantially as described.

THOS. A. BAINBRIDGE.

Witnesses:
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L. A. LAWSON.