

Jan. 23, 1923.

1,442,944

L. B. HARVEY,
DEMOUNTABLE HUB STRUCTURE,
ORIGINAL FILED NOV. 26, 1919.

Fig. 1

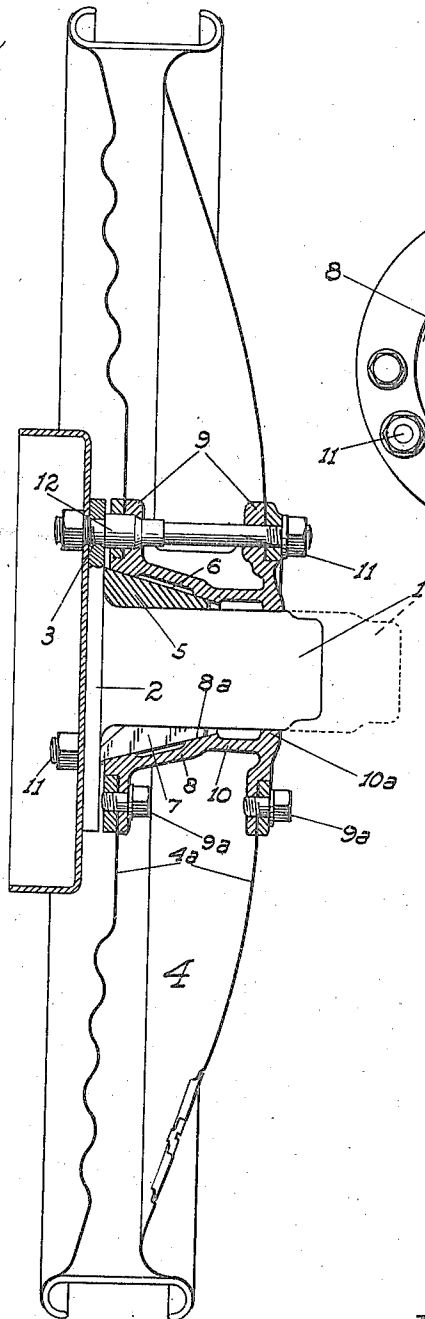


Fig. 2

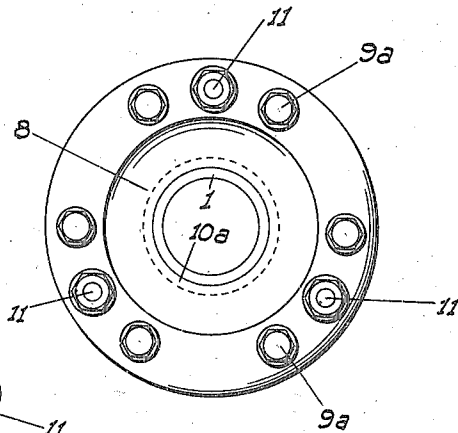
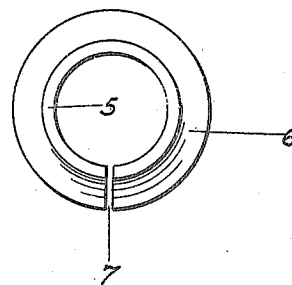


Fig. 3



INVENTOR.
Louis B. Harvey
BY *Benjamin Webster*
ATTORNEY

Patented Jan. 23, 1923.

1,442,944

UNITED STATES PATENT OFFICE.

LOUIS B. HARVEY, OF SACRAMENTO, CALIFORNIA, ASSIGNOR TO HARVEY RIM & WHEEL COMPANY, OF BUFFALO, NEW YORK, A CORPORATION.

DEMOUNTABLE HUB STRUCTURE.

Original application filed November 26, 1919, Serial No. 340,904. Divided and this application filed February 13, 1922. Serial No. 536,102.

To all whom it may concern:

Be it known that I, LOUIS B. HARVEY, a citizen of the United States, residing at Sacramento, county of Sacramento, State of California, have invented certain new and useful Improvements in Demountable Hub Structures; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in demountable hubs for vehicle wheels, and is a divisional part of the application for patent on "disc wheel," Serial No. 340,904, filed November 26th, 1919.

The principal object of the present invention is to provide a demountable hub structure particularly intended to be used in connection with the standard wheel-hubs of Ford cars.

Another object of the invention is to provide a hub structure of the above stated type which may be applied and connected to either the front or rear standard hubs of the car, without necessitating any changes being made to either the Ford hubs or to my improved hub structure.

As a further object I have provided a structure which may be easily and quickly applied or mounted, and as easily removed.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes a hub of the type provided on Ford cars, which has a flange 2 at its inner end, provided with a plurality of bolt holes 3. As ordinarily constructed and equipped, the wooden wheel is slipped over the hub and held in place against the flange 2 by means of bolts through the flange 2, there being an outer flange corresponding to the flange 2 through which the bolts pass.

When equipping a car with my improved hubs this outer flange, and the original wooden wheel are discarded, a steel disc wheel 4 of the type shown in the copending application No. 340,904 being preferably used instead.

My improved hub structure comprises a bushing 5 adapted to be pressed over the hub 1, and to fit snugly against the flange 2, said bushing tapering outwardly toward said flange on its outer surface as at 6, and being radially split for its entire length as at 7.

Adapted to be wedged onto the bushing is the actual demountable hub 8, which has outwardly projecting and spaced annular flanges 9 adjacent its outer and inner ends, to which the discs 4^a of the wheel are secured in any suitable manner, as by cap screws 9^a.

The bore of the hub 8 is tapered as at 8^a for a necessary portion of its length to conform to the degree of taper of the bushing. The outer end of the bushing projects beyond the bushing as at 10, and is open at that end, so as to allow for the projection of the hub 1 therefrom, the standard rear hub being of a different length than the front hub.

The bore of the portion 10 is greater than that of the hub 1 and the bushing 5 at that end, except at the outer end of said portion, where an inwardly projecting annular flange 10^a is formed which has a neat fit with the hub 1.

The hub 8 is pressed firmly onto the bushing and held in such position by bolts 11 which pass through both flanges 9 and the holes 3 in the flange 2.

Outwardly of the flange 2 the bolts are shouldered as at 12, these shoulders being adapted to abut against the flange 2 when the hub has been drawn as tight as possible onto the bushing.

By reason of the bushing being split, the cinching up of the bolts causes the bushing to bind on the hub 1, and the hub 8 being likewise firmly bound on the bushing by reason of the contacting taper faces, the majority if not all of the driving strain is taken directly by the bushing and hub 8 rather than by the bolts 11, the latter serving more to prevent loosening up of the parts and the strain thereon is therefore ten-

sional rather than shearing, rendering the use of a few and relatively small bolts practicable.

The bushing being split also allows the latter to accommodate itself to the axle hub, regardless of the exact diameter of the latter, which cannot always be depended on as being constant.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A demountable hub structure including a wheel-hub member adapted to be removably mounted over the fixed hub of the vehicle, bolts connecting the wheel-hub to the fixed hub structure to hold the former against lateral displacement, and means whereby the turning strain of the axle-hub will be taken directly by the wheel-hub rather than by the bolts.

2. A demountable hub structure including a wheel-hub member adapted to be removably mounted over the fixed hub of the vehicle, bolts connecting the wheel hub to the fixed hub structure to hold the former against lateral displacement, and a split taper-bushing over the fixed hub and onto which the wheel-hub is adapted to be forced with the tightening up of the bolts.

3. A demountable hub structure for a fixed hub having an outwardly projecting flange on its inner end, comprising a taper-bushing adapted to be fitted over the fixed hub, a wheel-hub having a taper-bore to fit the bushing adapted to be driven thereover, and means between the wheel hub and flange to hold the wheel hub and bushing in driving engagement and prevent relative lateral movement of the wheel-hub on the fixed hub.

4. A demountable hub structure for a fixed hub having an outwardly projecting flange on its inner end, comprising a taper-bushing adapted to be fitted over the fixed hub, a wheel-hub having a taper-bore to fit the bushing adapted to be driven thereover, a flange on the wheel hub parallel to the fixed-hub flange, and bolts through said flanges.

In testimony whereof I affix my signature.

LOUIS B. HARVEY.