No. 892,395. PATENTED JULY 7, 1908.

H. H. BOYCE.

WHEEL FOR MOTOR VEHICLES.

APPLICATION FILED JUNE 14, 1907.

FIG. 1

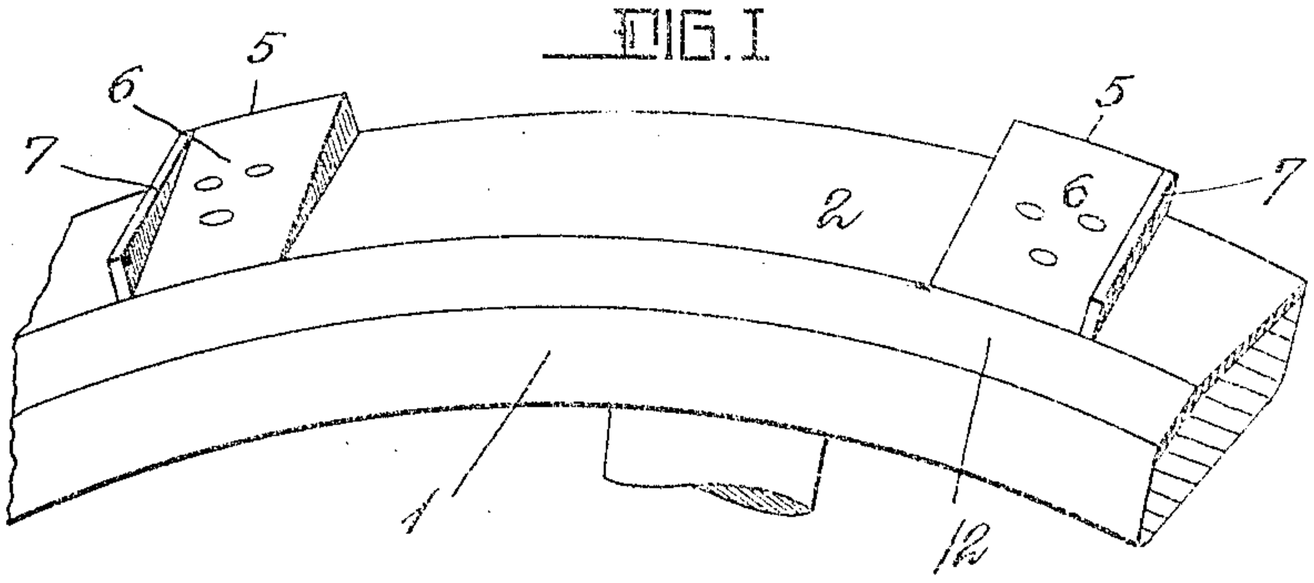


FIG. 2

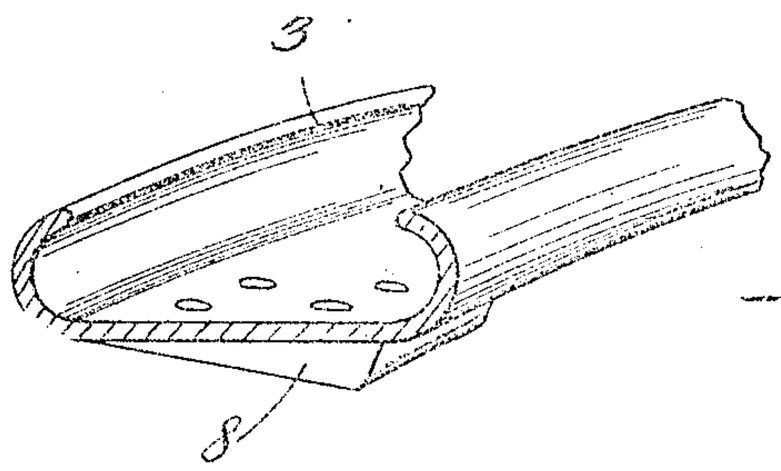


FIG. 3

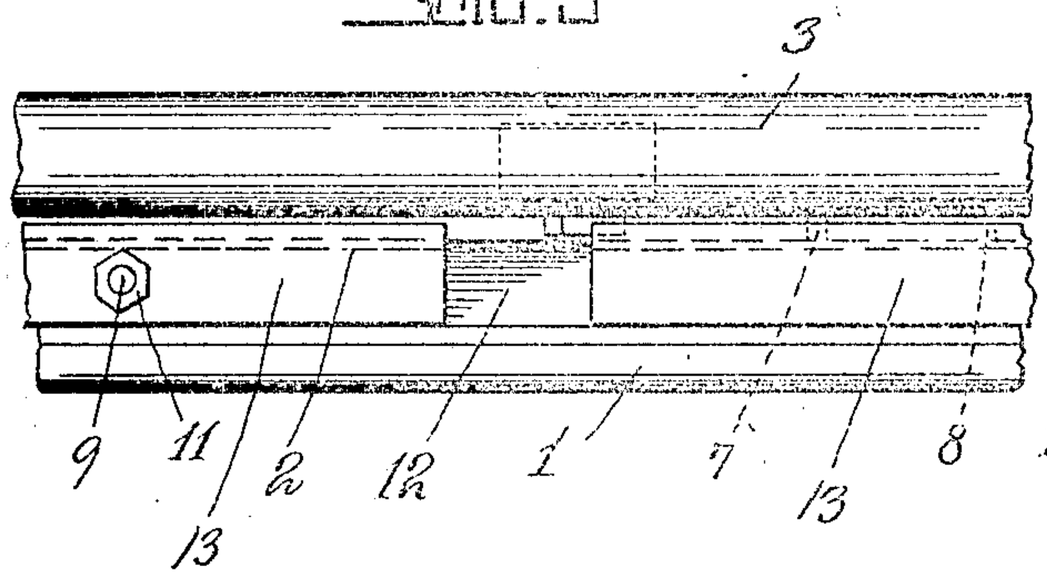
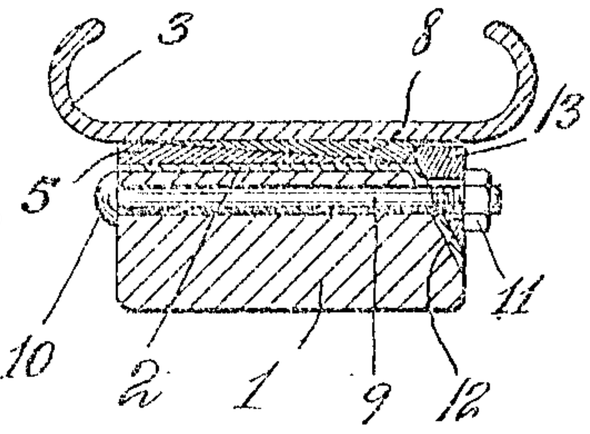


FIG. 4



Witnesses:
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By his Attorneys
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UNITED STATES PATENT OFFICE.

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WHEEL FOR MOTOR-VEHICLES.

No. 892,395. Specification of Letters Patent. Patented July 7, 1908.

Application filed June 14, 1907. Serial No. 378,923.

To all whom it may concern:

Be it known that I, HARRISON HURLBERT BOYCE, a citizen of the United States, residing at Oyster Bay, in the county of Queens and State of New York, have invented certain new and useful Improvements in Wheels for Motor-Vehicles, of which the following is a full, clear, and exact specification.

This invention relates to wheels for motor vehicles, and has particular reference to improvements in the construction and means for securing detachable rims to the felly.

The objects of the invention are to provide improvements whereby the standard forms of channel rims, which are not ordinarily detachable, may be made detachable and mounted on the ordinary felly.

A further object of the invention is to provide an improved form of fastening mechanism which can be operated to clamp and release the rim without requiring the detachment of any of the parts, and also to provide a construction wherein creeping of the rim on the felly is positively prevented.

The invention will be more fully explained in connection with the description of the accompanying drawings, wherein

Figure 1 is a perspective view of a portion of the felly of a wheel; Fig. 2 is a perspective view of a portion of the rim; Fig. 3 is a view showing the parts assembled; and Fig. 4 is a cross-sectional view.

1 represents the felly having secured thereto, as by shrinking or other well known means, the band 2.

3 represents the channel tire-carrying rim, of well known construction, which is of a somewhat greater interior diameter than the diameter of the felly and the band. Secured to the band, or felly, at separated points on the periphery, are transversely extending lugs 5, comprising a beveled surface with rounded corners, either with or without one or more side flanges 7, these side flanges where used, being of such height above the surface of the band 2 as to permit the channel 3 to just slip over. The channel 3 is provided with beveled lugs 8 on its inner periphery, which may be riveted thereto and spaced apart correspondingly to the lugs on the felly. Also, the beveled lugs 8 are of such width as to slide between the side flanges 7, it being observed that the side flanges are alternately on opposite sides of the lugs 5, so that part of the flanges will resist creeping in one direction and the remainder will resist creeping in the other direction, though with sufficient frictional engagement of the beveled surfaces of these lugs, the flanges might not be used. The tire will, of course, be fastened to the rim by lugs, and the felly will have a hole for a short or long valve-stem, as may be desired. In some cases it is preferable to use a long valve-stem passing through the felly, which will be pulled through in removing the rim, while in other cases a short valve-stem may be used.

In order to fasten the rim and the felly, through-bolts 9, having heads 10 and nuts 11, are provided, and in order to avoid the necessity of removing the nuts to put the rim off and on, the felly is provided with a beveled surface 12, and the nut is caused to expand a beveled split ring 13 until it engages the lugs on the channel to push them up on the beveled surfaces 6. The ends of the lugs are slightly beveled so that the ring in expanding, will engage the lugs and push the rim on as it spreads out. When the pressure of the nut is relieved, the ring will contract and permit the rim to be drawn off, the bolt-holes through the ring being, of course, slotted to permit the necessary expansion and contraction. The ends of the ring are separated, as shown, to permit a tool to be inserted for springing the ring. Other fastening devices engaging the lugs 8 or the side of the channel itself may be provided, as this invention is not confined to any particular construction of locking means.

By means of the construction herein described, it will be seen that standard channel rims can be cheaply rendered detachable by attaching the beveled lugs to their inner surface and the beveled lugs to the surface of the iron band, permitting the invention to be applied to constructions now in use. By this construction, involving beveled supports for the rim at separated points, there will be a saving in weight, and the rim will not flatten between the points of support.

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

1. The combination with a felly having a plurality of separated transversely beveled lugs raised above the surface of the felly, of a channel having a plurality of separated beveled lugs projecting inwardly from its inner surface, and clamping means for engaging said respective lugs.

2. The combination with a felly having a

plurality of separated transversely beveled surfaces, of a channel having a plurality of separated beveled lugs projecting inwardly from its inner surface, and clamping means for engaging said respective lugs.

3. The combination with a felly having a plurality of separated transversely beveled lugs having alternately arranged stop shoulders, of a rim having inwardly projecting beveled lugs contacting therewith at separated points.

4. The combination with a felly having a plurality of separated, transversely beveled surfaces, and a rim having its inner periphery adapted to engage therewith, and having engageable projections to prevent creeping, of an expansible ring for securing the rim to the felly.

5. The combination with a felly having a plurality of separated, transversely beveled surfaces, and a rim having its inner periphery adapted to engage therewith, and having engageable projections to prevent creeping, of an expansible ring for securing the rim to the felly, and through-bolts for expanding the ring.

In testimony whereof I affix my signature, in presence of two witnesses.

HARRISON HURLBERT BOYCE.

Witnesses:

JULIAN S. WOOSTER,

GEO. A. HOFFMAN.