July 6, 1926. 1,591,152

R. BLAGOUE

DEMOUNTABLE RIM RETAINING MEANS

Filed Nov. 12, 1925

Fig: 4.

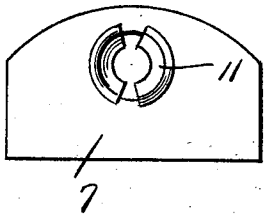


Fig: 1.

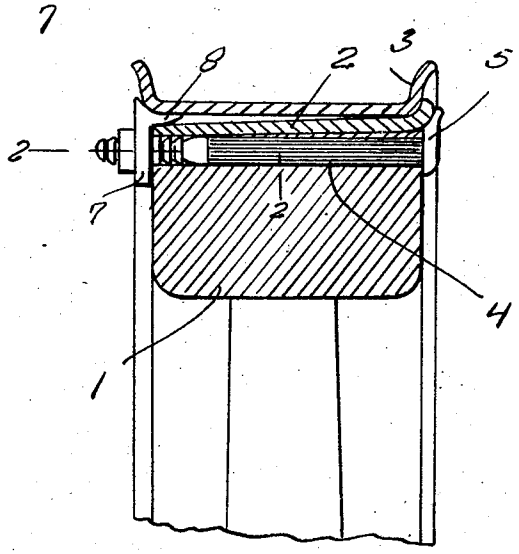


Fig: 2.

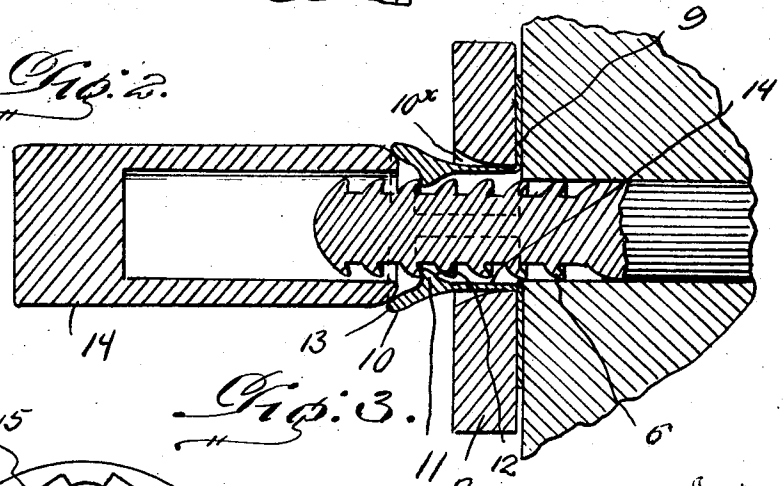
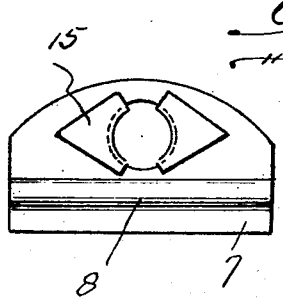


Fig: 3.



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UNITED STATES PATENT OFFICE.

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DEMOUNTABLE-RIM-RETAINING MEANS.

Application filed November 12, 1925. Serial No. 68,571.

My present invention pertains to the retention in position of the lugs ordinarily employed for the holding in working position of a demountable rim of a wheel, and the object of my said invention is the provision of an efficient quick removal means for cooperating with the lugs ordinarily used in direct contact with a demountable rim for the securing of the latter.

Other objects and practical advantages of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:—

Figure 1 is a view partly in diametrical section and partly in elevation illustrating the preferred embodiment of my invention as properly arranged relative to a demountable rim, an inner rim and the felly of a wheel.

Figure 2 is an enlarged section taken in the plane indicated by the line 2—2 of Figure 1 and illustrating in addition to the parts disclosed in Figure 1, the tool for use when the bolt or stud releases the dogs of my improvement.

Figure 3 is an inverted elevation showing the inner side of the rim engaging lugs and also showing the flanges of the dogs as disposed at the inner side of said lugs.

Figure 4 is an elevation illustrative of the outer side of the lugs and showing the outer portions of the dogs on the lugs, Figure 4 also being in inverted position as compared with Figure 1.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The felly 1, inner rim 2, and demountable rim 3, Figure 1, may be and preferably are of the ordinary well known type.

The bolt or stud of my improvement is designated by 4 and is provided with a roughened shank as illustrated for the better retention of the bolt in working position by frictional contact. The head of the bolt is designated by 5, and is preferably shaped as illustrated to conform to and snugly fit against the rounded edge of the inner rim 2. The portion of the shank remote from the head 5 is designed to extend laterally from the wheel, and is provided with a plurality of circumferential ribs 6, said ribs being convex in cross section at their outer sides as clearly shown in Figure 2.

The bolt or stud 4 is shown as extending through a lug 7 for retaining in position the demountable rim 3. The said lug 7 is preferably, though not necessarily, provided with the usual flange 8 at its inner side for interposition between the inner rim 2 and the outer rim 3, and is also provided with a transverse aperture 9 flared outwardly as designated by $10^{\times}$ in Figure 2.

My invention resides more particularly in the dogs 10, Figures 1, 2 and 4, the said dogs being provided with the teeth portions 11, beveled at their inner sides as designated by 12, and being also provided with the divergent or outwardly flared projections 13, the said projections 13 being for use in conjunction with the implement 14, Figure 2, designed to be used when the dogs are to be disengaged from the bolt or stud for the ready removal of the lugs 7.

The dogs 10 have shanks 14, designed to extend through the opening in the lugs 7 and the said shanks are joined at their inner ends to flanges 15, designed to rest against the inner side of the lugs 7 after the manner shown in Figures 2 and 3. The flanges 15 are preferably of sheet metal, and in the preferred embodiment of my invention are welded to the back of the lug 7 so that said lug 7 and the dogs 10 may be conveniently handled as a unit. I would also have it understood that I prefer to temper the lug 7 and the dogs or catches 10 in oil with a view to rendering the dogs or catches 10 resilient or springy, and when deemed expedient, the bolt or stud 4 is also tempered in oil.

It will be apparent from the foregoing that with the parts of my improvement positioned as shown in Figure 1, the dogs or catches 10 by cooperation with the bolt 4 will strongly retain the lug 7 on the bolt so that accidental displacement of the demountable rim 3 will be precluded. When, however, removal of the demountable rim 3 is desired, it is simply necessary for an operator to position the implement 14 as shown in Figure 2 and strike the outer end of the implement 14 with a hammer, whereupon the dogs or catches 10 will be moved outwardly or in opposite direction, and the said dogs or catches being in that way disengaged from the bolt, the lug 7 may be readily removed for the release of the demountable rim 3.

Notwithstanding the practical advantages ascribed to my improvement, it will be ap-

preciated that the improvement is simple and inexpensive in construction and is to be relied upon for the strong retention of the lug on the stud or bolt, and this without interfering with the prompt removal of the lug when the same is desired.

I have specifically described the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear and exact understanding of the said embodiment. I do not desire, however, to be understood as confining myself to the construction and relative arrangement of the parts as disclosed, my invention being defined by my appended claims within the scope of which structural changes and changes in arrangement may be made without departure from my invention.

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

1. The combination of a lug having a transverse aperture with an outer flared portion, and dogs secured in the aperture of the lug and extending outwardly through said aperture and having teeth at their inner sides, and also having divergent outer projections.

2. The combination of a lug having a transverse aperture with an outer flared portion, and dogs secured in the aperture of the lug and extending outwardly through said aperture and having teeth at their inner sides and also having divergent outer projections; the said teeth of the dogs describing parts of circles.

3. The combination of a lug having a transverse aperture with an outer flared portion, and dogs secured in the aperture of the lug and extending outwardly through said aperture and having teeth at their inner sides and also having divergent outer projections; the dogs also having shanks of arcuate cross section positioned in the aperture of the lug and further having inner portions opposed and fixedly connected to the inner side of the lug.

4. The combination of a bolt or stud having circumferential ribs convex in cross section at their outer sides, and dogs for cooperation with said bolt or stud; said dogs having arcuate teeth to engage the ribs of the bolt or stud, said teeth being rounded to permit the ribs to ride past the same on movement of the dogs in one direction, and the dogs also having divergent projections.

5. The combination of a bolt having circumferential ribs rounded at their outer sides, a lug apertured for the reception of the bolt and having the outer portion of the aperture flared, and dogs having shanks in the aperture of the lug and also having arcuate beveled teeth and divergent outer projections, and means at the inner ends of the dog shanks for holding the dogs in working position relative to the lug.

6. Means for securing a demountable rim on a fixed rim of a wheel, comprising a bolt having a head opposed to one edge of the inner rim and also having its portion remote from the head circumferentially ribbed, the outer sides of the ribs being beveled, a lug having a portion for opposed relation to the portion of the demountable rim remote from the bolt head and also having a transverse aperture the outer portion of which is flared, and dogs secured in position by the lug, and having shanks extending through the lug aperture and also having beveled teeth and divergent outer projections; the said dogs being possessed of resiliency.

In testimony whereof I affix my signature.

RICHARD BLAGOUE.