

R. W. ASHLEY & F. OBERKIRCH.
 LOCKING APPARATUS FOR DEMOUNTABLE RIMS.
 APPLICATION FILED SEPT. 21, 1912.

1,058,401.

Patented Apr. 8, 1913.

Fig. 1.

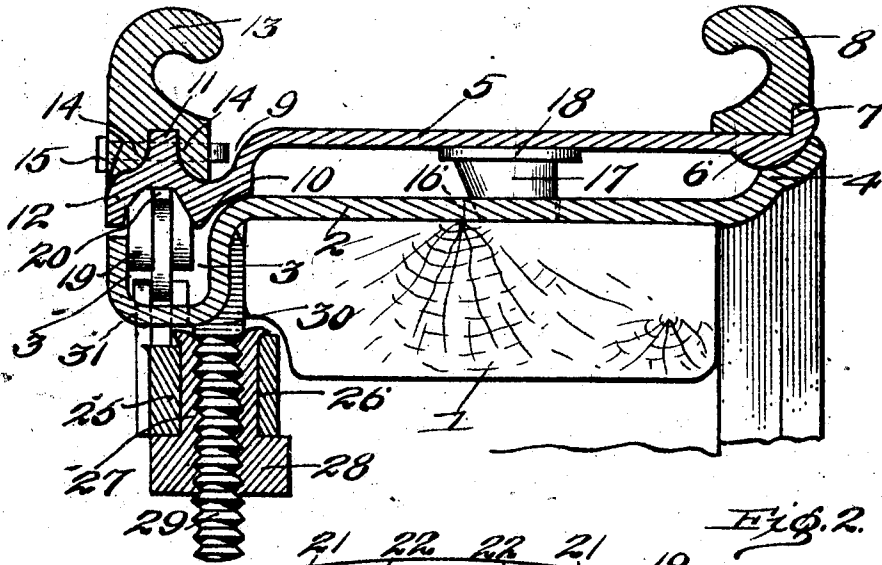


Fig. 2.

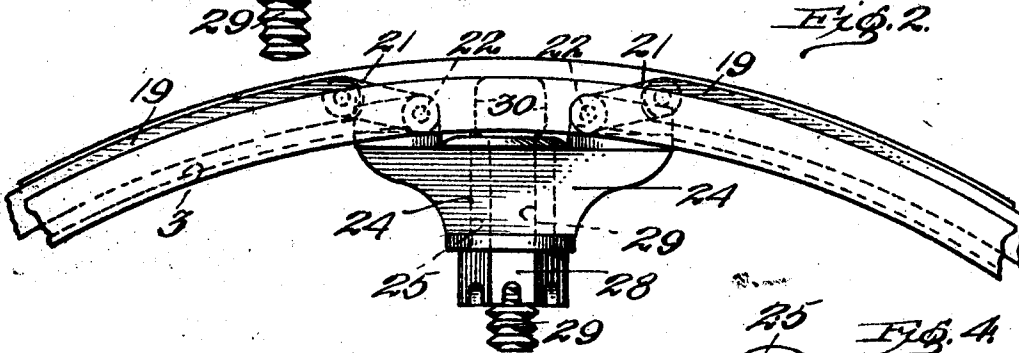


Fig. 4.

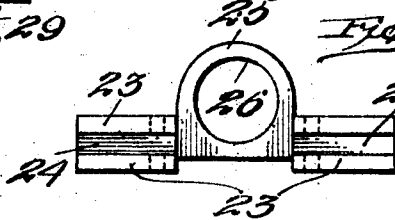


Fig. 5.

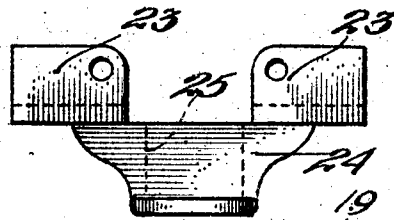
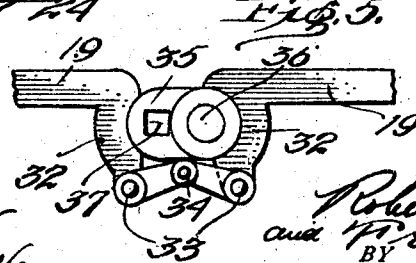


Fig. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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LOCKING APPARATUS FOR DEMOUNTABLE RIMS.

1,058,461.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed September 21, 1912. Serial No. 721,710.

To all whom it may concern:

Be it known that we, ROBERT W. ASHLEY and FRANK OBERKIRCH, citizens of the United States, and residents of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Locking Apparatus for Demountable Rims, of which the following is a specification.

The invention relates to improvements in demountable rim locking apparatus and has particular reference to a lock provided with a supporting means rigidly mounted on a fixed annular rim, a means mounted in said rim and engaging said lock for placing into position a float ring capable of expansion and contraction for holding permanently into position a demountable rim structure.

In the following is described in connection with the accompanying drawings one embodiment of the invention the features thereof being more particularly pointed out hereinafter in the claims.

In the drawings Figure 1 is a cross sectional view of the fixed rim and demountable rim and a vertical sectional view partly in elevation of the locking means thereof; Fig. 2 is a face elevation of said locking means illustrating the position the same assumes in connection with the fixed rim; Fig. 3 is a detailed face elevation of the locking head; Fig. 4 is a plan view of said locking head, and Fig. 5 is a detailed elevation of a modified form of floating ring locking means.

Similar numerals of reference indicate similar parts throughout the several views.

In the drawings (1) indicates a felly having rigidly mounted thereon a fixed rim (2) having formed therein at its front edge an annular groove (3) and at its rear edge a compound retaining wall (4).

(5) indicates the base member of a demountable rim provided at its rear edge with a reinforcing flange (6) engaging retaining wall (4) on fixed rim (2) and said demountable rim (5) having formed thereon adjacent to said reinforcing flange (6) a supporting or retaining shoulder (7) adapted to receive a supporting tire retaining ring (8). Said rim (5) has formed therein at its forward edge a depending channel (9) provided with a lower engaging locking surface (10) resting on the edge of rim (2) at a point where said rim (2) depends into groove (3) and immediately adjacent to

said depending channel (9) an upwardly projecting annular rib (11) and at the extreme outer edge of said rim (5) an overlapping flange or housing (12). Said upwardly projecting annular rib (11) receives separable tire retaining ring (13) which is provided with two depending flanges (14); one of said flanges (14) being adapted to project into channel (9) and the other of said flanges being adapted to engage the upper outer surface of the overlapping flange or housing (12) of rim (5). This type of structure provides a means of not only strengthening the supporting facilities of the separable tire ring (13), but further insures the supporting facilities of the rib (14) as well as the outer body of rim (5) in its entirety.

Separable ring (13) is split and at such split ends a spring pin (15) is inserted through suitable apertures therein engaging a corresponding aperture in rib (11) for holding the same permanently into place on the base member (5) of the demountable rim. Fixed rim (2) has formed therein an aperture adapted to receive the depending end (17) of lug (18) which is spot welded on the under surface of the base member (5) of the demountable rim, the object of which is to prevent the circumferential creeping of the demountable rim structure as a whole. Annular groove (3) has mounted therein and free to move annularly with relation thereto a floating ring (19) provided with free ends having cut therein a slot adapted to receive one end of levers (21) which are pivotally mounted therein the other ends of said levers (21) being pivotally mounted as at (22) in the flanges (23) of locking head (24).

The locking head (24) has formed there-with a laterally projecting supporting body (25) having cut therein an aperture (26) adapted to receive a locking sleeve (27) provided with a hexagonal head (28) said sleeve being internally threaded to engage the threaded supporting stud (29) the upper end of said stud being flattened out as a (30) and spot welded to the inside surface of the wall of groove (3) at which point said threaded stud becomes a rigidly supporting means as associated with the fixed rim.

The base wall of groove (3) has cut therein apertures (31) through which the flanges

(23) on locking head (24) project when said lock is in its locked position and said floating ring is in its said expanded locked position; the movement of the locking head and locking sleeve on stud (29) being so arranged as to close said apertures (31) and sub-seal the inside engaging surfaces of both the fixed rim and demountable rim, as well as the locking means therefor.

10 With reference to Fig. 5 of the drawings the floating ring (19) has formed on its respective ends thereof depending lugs (32) having mounted in their lower ends thereof levers (33) pivotally mounted together at their ends (34), one of said lugs (32) having pivotally mounted therein a cam lock (35) at (36). Said cam lock (35) has formed therein an aperture (37) adapted to receive the end of a suitable tool for expanding and contracting the floating ring (19) with relation to a fixed rim and demountable rim.

It is obvious that the devices herein shown and described may be widely varied without departing from the spirit of the invention.

What we claim and desire to secure by Letters Patent of the United States is—

1. A device of the character described comprising a fixed rim having formed therein at one edge an annular groove and at its opposite edge a retaining reception shoulder, a floating ring mounted in said annular groove and free to move circumferentially with relation thereto, links mounted in the ends of said floating ring, a supporting stud rigidly mounted on the outer surface of groove of said fixed rim, a locking sleeve movable on said stud, a locking head carried by said locking sleeve provided with flanges adapted to project into said annular groove having associated therewith means for receiving the opposite ends of said links carried by said floating ring.

2. A device of the character described

comprising a fixed annular rim provided at one edge with a depending annular groove, and at its opposite edge with a retaining supporting shoulder, a floating ring provided with free ends mounted in said annular groove and movable circumferentially with relation thereto, links pivotally mounted in the free ends of said floating ring, a supporting stud rigidly mounted on the outer surface of said annular groove, a locking sleeve mounted on said stud and movable vertically thereon, and a locking head carried by said locking sleeve provided with upwardly projecting flanges provided with means adapted to receive the opposite ends of said links carried by said floating ring, said locking head being adapted to cover the apertures of said fixed rim when in its locked position.

3. A device of the character described including a locking means for demountable rims comprising a supporting stud rigidly mounted on the outer surface of a fixed rim, a locking sleeve movable vertically on said supporting stud, a locking head carried by said locking sleeve movable vertically therewith having formed thereon vertically projecting flanges, a floating ring mounted in said fixed rim and free to move circumferentially a limited distance with relation thereto and provided with free ends, links pivotally mounted in the free ends of said ring, the opposite ends of said links being pivotally mounted in said vertically projecting flanges on said locking head.

In testimony whereof we have hereto signed our names in the presence of two subscribing witnesses.

ROBERT W. ASHLEY.
FRANK OBERKIRCH.

Witnesses:

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