

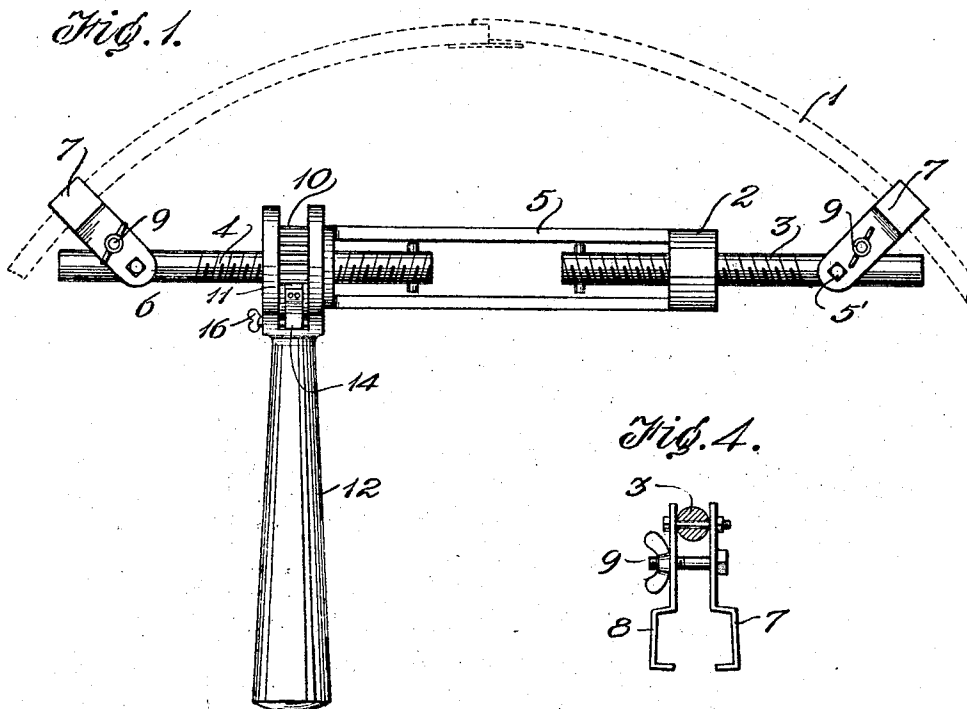
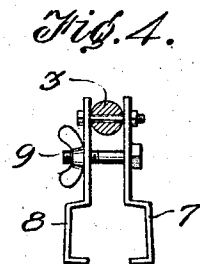
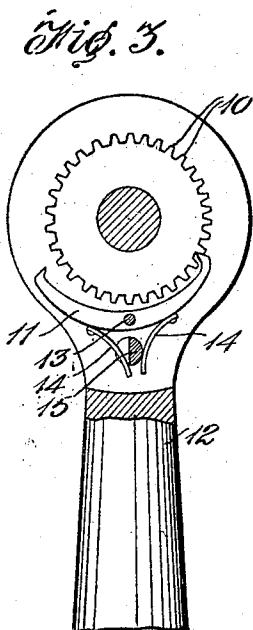
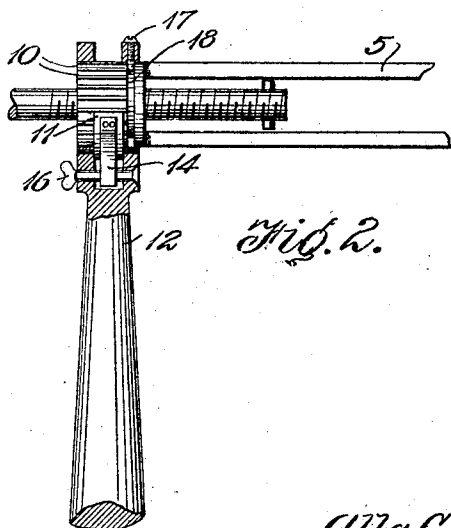
April 22, 1924.

1,490,954

A. C. BELL

DEMOUNTABLE RIM TOOL

Filed April 13, 1923



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By

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UNITED STATES PATENT OFFICE.

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DEMOUNTABLE-RIM TOOL.

Application filed April 13, 1923. Serial No. 631,899.

To all whom it may concern:

Be it known that I, ALLA C. BELL, a citizen of the United States, residing at Grafton, in the county of Taylor and State of West Virginia, have invented certain new and useful Improvements in Demountable-Rim Tools, of which the following is a full, clear, and exact description.

My invention relates to a tool for either expanding or contracting wheel rims for the purpose of applying or removing a tire, and has for its object the provision of such a device including a novel ratchet mechanism by means of which the operating screws may be readily contracted or expanded at will.

Another object of the invention resides in the location of the rim-gripping members at points removed from the outer ends of the bolts, thereby permitting the bolts to engage the rim when expanding the latter.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings, in which:

Figure 1 is a side elevation of the tool applied to a rim, the latter being shown in dotted outline.

Figure 2 is a fragmentary sectional view through a portion of the ratchet mechanism.

Figure 3 is a sectional view through the ratchet mechanism, and

Figure 4 is an elevational view of one of the rim-gripping members.

Referring to the drawing more in detail, the numeral 1 indicates in dotted outline any well known type of demountable rim to which my tool, indicated generally by the numeral 2, may be applied. The tool comprises essentially the right and left hand screw bolts 3 and 4 and threaded sleeve 5 which form a turnbuckle.

Pivotally connected to each of the screw bolts 3 and 4, as indicated by numerals 5' and 6, is a rim-gripping clamp comprising the two angularly bent members 7 and 8 and adjusting screw 9. It should be here noted that the rim-gripping members are positioned at a substantial distance from the outer ends of the bolts 3 and 4. The purpose of this construction being that the ends or extensions of the bolts may directly engage the rim when expanding the latter, thereby placing the direct pressure of the turnbuckle on the rim.

To facilitate the operation of the turnbuckle I have provided the sleeve 5 with the teeth 10 which are adapted to be engaged by either end of the double pawl 11. The pawl 11 is pivoted within the handle 12, as indicated at 13, and has suitably secured thereto, as by rivets or the like, a pair of leaf springs 14. These springs are located at equal distances on opposite sides of the pivot 13, and have extending between the free ends thereof a cam 15, which is provided with a lateral extension and operating handle 16.

For the purpose of securing the handle to the turnbuckle the latter is provided with a set-screw 17 which is adapted to seat in the annular groove 18 formed in the body of the sleeve 5.

In the operation of the device in removing a tire the clamps 7—8 are secured to the rim on opposite sides of the free ends thereof and the turnbuckle is then operated by means of the handle 12 of the ratchet mechanism, thereby contracting the rim. After the tire has been replaced the turnbuckle is turned in the opposite direction and the ends of the bolts 3 and 4 will engage the inner periphery of the rim and thereby expand the same to its operative position.

In accordance with the patent statutes, I have described what I now believe to be the best embodiment of the invention, but I do not wish to be understood thereby as limiting myself or the scope of the invention, as many changes and modifications may be made without departing from the spirit of the invention; all such I aim to include in the scope of the appended claim.

What I claim as new and desire to secure by Letters Patent is:

In a demountable rim tool a ratchet mechanism comprising a ratchet wheel a double pawl pivoted intermediate its ends and adapted for cooperation with said wheel, a pair of leaf springs each having one end secured to the back of said double pawl and a rotatable cam interposed between the free ends of said leaf springs whereby a tension may be selectively placed on said springs.

ALLA C. BELL.