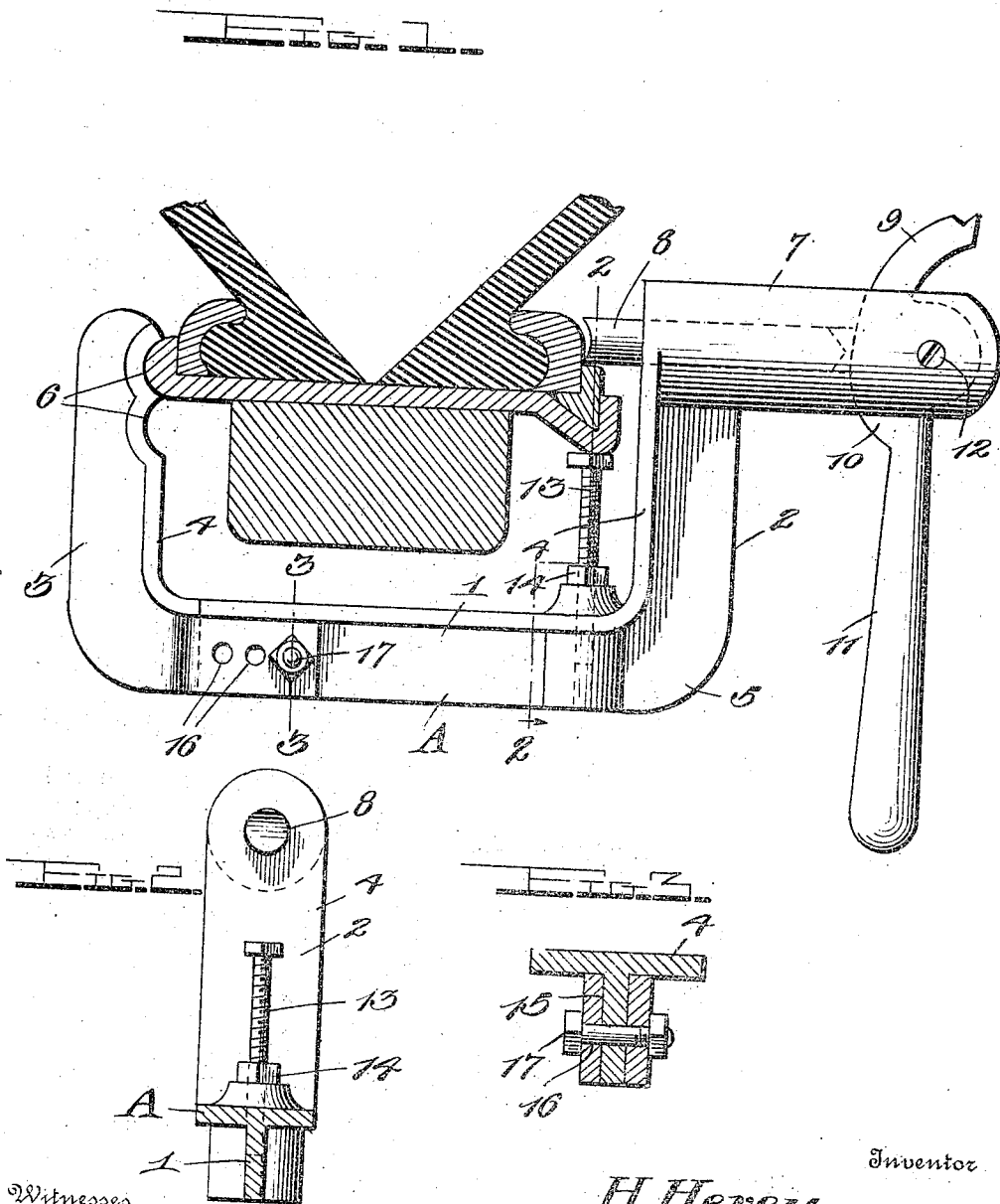


1,043,424.

H. HEVEY.  
TIRE REMOVING TOOL.  
APPLICATION FILED JUNE 15, 1912.

Patented Nov. 5, 1912.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## TIRE-REMOVING TOOL.

1,043,424.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed June 15, 1912. Serial No. 703,964.

*To all whom it may concern:*

Be it known that I, HERMAN HEVEY, a citizen of the United States, residing at Biddeford, in the county of York and State of Maine, have invented certain new and useful Improvements in Tire-Removing Tools, of which the following is a specification, reference being had to the accompanying drawings.

It is well known to those versed in the art to which this invention appertains that one of the greatest inconveniences experienced by automobilists is in removing a damaged tire for the purpose of replacing the inner tube or outer casing or shoe, it being necessary, in removing tires of the so called quick detachable clencher type, to compress the base flanges of the casing after the inner tube has been deflated, so as to free the locking ring from the rim and thereby release the detachable flange so as to permit the detachment of the latter.

With a knowledge of these conditions, my invention has for its primary object a simple, durable and efficient construction of implement, whereby the detachable flange may be easily and quickly pressed inwardly so as to permit the locking ring to be removed, and the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which,

Figure 1 is a side elevation of my improved tire-removing tool, a portion of a tire and rim being shown in section with the device in applied position. Fig. 2 is a transverse sectional view, the section being taken approximately on the line 2—2, of Fig. 1, and, Fig. 3 is a detail sectional view on the line 3—3, of Fig. 1.

Corresponding and like parts are referred to in the following description and designated in the accompanying drawing by like reference characters.

Referring to the drawing, the letter A designates the body portion of my improved tire-removing tool, the same being formed in inverted arch shape with a cross bar 1 from which angularly disposed and substantially parallel arms 2 and 3 extend. The body portion of the device in order to possess lightness and at the same time the

characteristic of strength, is preferably formed with an inner laterally elongated marginal flange 4 from which a web 5 projects, as clearly indicated in Fig. 1. The arm 3 of the body portion of the device is formed on its inner edge with any desired number of preferably curved sockets or recesses 6, designed to engage one side of the wheel rim, when the device is in its operative position.

The arm 2 of the device carries a casing 7 which is preferably formed integral therewith and which is provided with a bore in which a plunger 8 is slidingly mounted. The rear or inner end of the plunger 8 is designed for engagement by the cam surface 9 which is formed on an actuating lever 10, said lever being provided with a handle 11 of any desired construction and being fulcrumed in the casing 7 on a screw 12 or similar pivot device. It will be noted that the cam surface 9 is provided adjacent one end with the notch 9' which, when the handle 11 is positioned in longitudinal alignment with the casing 7, engages the inclined faces 8' and locks the plunger in its projected position. The locking engagement between the cam surface 9 and the plunger 8 may be easily broken when desired by jarring the handle 11.

In order to brace the tool and to prevent the plunger 8 from slipping from the clencher detachable flange of the rim, I have provided an adjustable brace rod 13 which, in the present instance, is screw threaded, as clearly illustrated in Figs. 1 and 2, to work in an opening formed in the body portion A, the head or end of the brace rod being adapted to bear against the rim, as shown in Fig. 1 and being held in adjusted position preferably by a lock nut 14.

In order to adapt the device for rims of different widths, the body portion A is constructed in two sections. In the present embodiment of the invention, the joint is made in the cross bar 1, a portion of which is bifurcated, as indicated at 15, to receive the adjoining portion, the overlapping ends being formed with registering apertures 16 designed to receive a bolt 17 or similar fastening device by which the two parts may be held in different adjusted positions relative to each other.

From the foregoing description in connection with the accompanying drawing, the operation and practical application of

my improved tire-removing tool will be apparent. In the practical use of the device, the arm 3 is engaged with one side of the rim and the plunger 8 is applied to the detachable flange which it is designed to remove. The brace rod 13 is adjusted so as to engage the adjoining portion of the rim so as to prevent the plunger from slipping when being pressed inwardly. The actuating lever 10 is then manipulated to force the plunger 8 laterally or outwardly against the detachable flange so that said ring will be pressed inwardly toward the opposite ring or side flange of the rim, whereupon the locking fillet or ring may be easily detached and the tire removed. It will thus be seen that I have provided a simple and efficient device for the purpose of removing tires and one that may be cheaply manufactured, the parts readily assembled and not liable to get out of order and which will possess the characteristic of adjustability for rims of different widths.

While the accompanying drawing illustrates what I believe to be the preferred embodiment of my invention, it is to be understood that the invention is not limited thereto, but that various changes may be made in

the construction, arrangement and proportions of the parts without departing from the scope of the invention, as defined in the appended claim.

What I claim is:—

A tire tool for use in removing tires, including a body portion provided with spaced arms, one of which is designed to engage one side of a rim, the other arm being provided with a casing; a plunger mounted in said casing and movable toward the first named arm, the rear end of said plunger being formed with oppositely inclined faces, and an actuating lever fulcrumed in the outer end of said casing and provided with a cam surface adapted to bear against the rear end of said plunger, the cam surface being notched adjacent one end for engagement with the inclined faces of the plunger for the purpose of locking said plunger in its projected position.

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

HERMAN HEVEY.

Witnesses:

GEDEAN GARVIN.

MILLER F. VERRELL.