(No Model.)

H. BEACH.

TIRE LEVER.

No. 602,252. Patented Apr. 12, 1898.

FIG. 3.

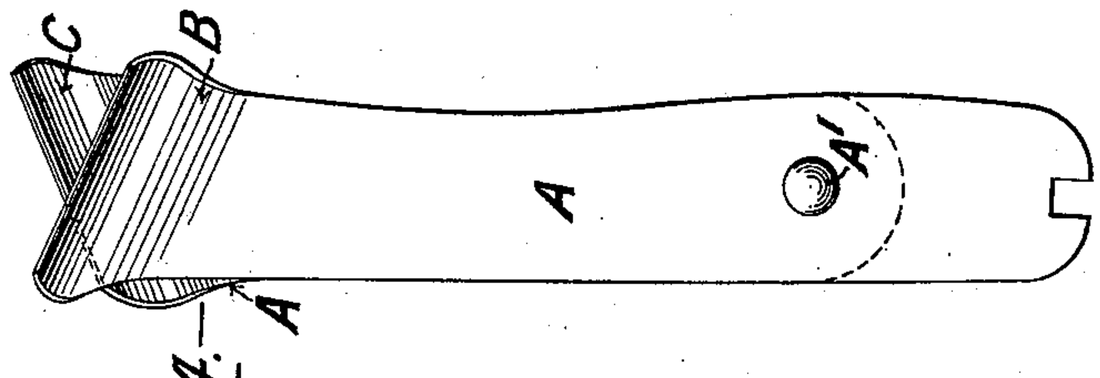


FIG. 4.

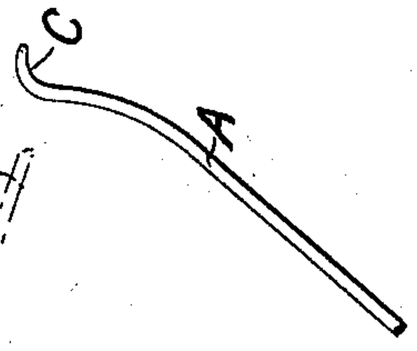


FIG. 5.

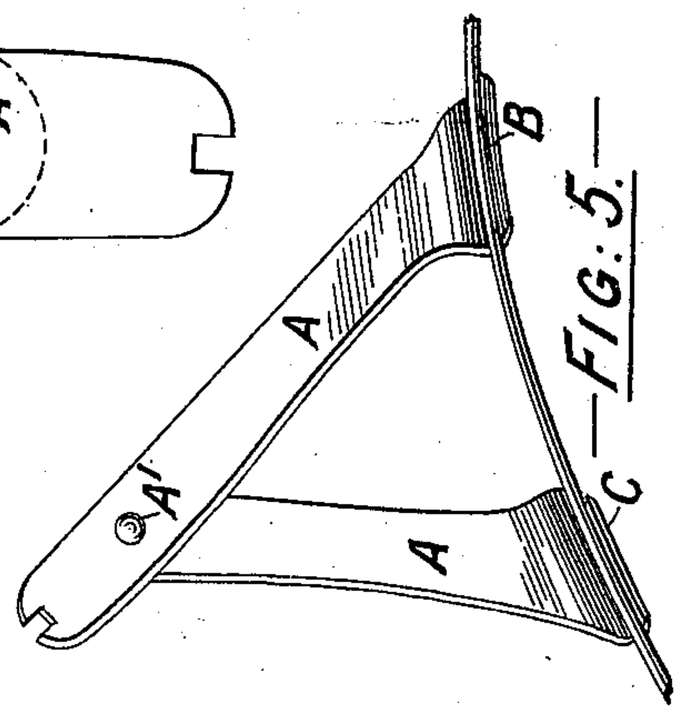


FIG. 1.

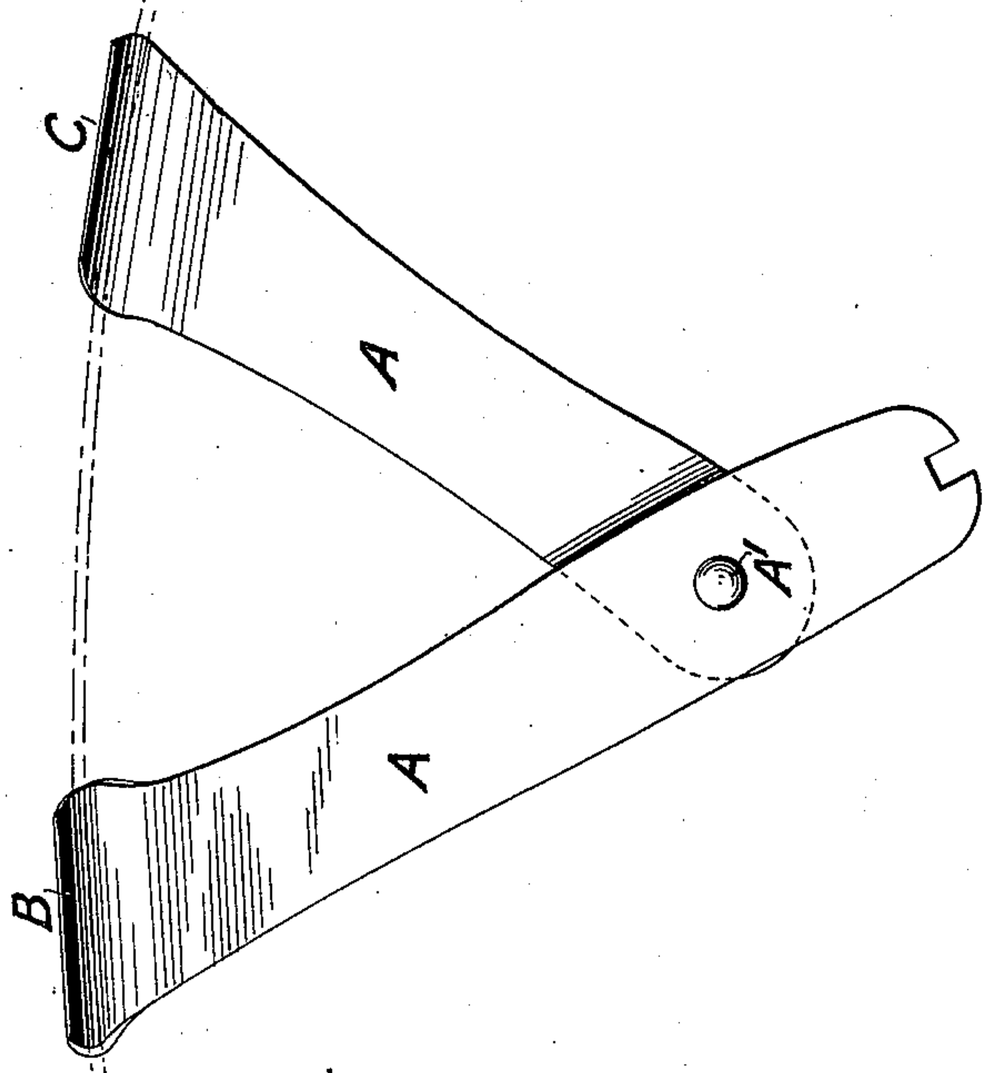
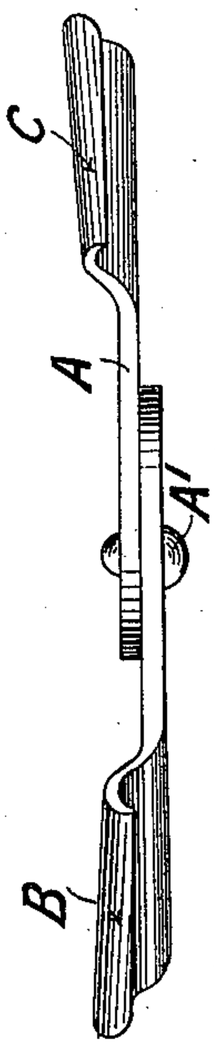


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY BEACH, OF LONDON, ENGLAND.

TIRE-LEVER.

SPECIFICATION forming part of Letters Patent No. 602,252, dated April 12, 1898.

Application filed December 15, 1897. Serial No. 661,980. (No model.) Patented in England November 2, 1897, No. 25,370.

To all whom it may concern:

Be it known that I, HENRY BEACH, a subject of the Queen of Great Britain, residing at Kentish-Town, London, England, have invented a new or Improved Tire-Lever, (for which I have obtained a patent in Great Britain, dated November 2, 1897, No. 25,370,) of which the following is a specification.

The majority of pneumatic tires now in use are of what is known as the "wired-on" type—that is, the tire is held within the rim by means of annular rings of wire, one such, for example, being connected to each edge of the tire, while the diameter of each annulus of wire is such that it will not pass over the outer peripheral edge of the rim until one part of the diameter of the annulus is placed at the base of the interior of one side of the rim, when the side of the annulus diametrically opposite thereto can be lifted over the said peripheral edge of the rim. To effect the operation of lifting this part of the wire annulus over the edge of the rim, it has been found convenient, and in some cases necessary, to employ a lever the end of which can be inserted under the wire. The outer edge of the rim is then utilized as a fulcrum, and this part of the wire is lifted or "prized" over the said rim edge, and levers for this special purpose have been manufactured and are well known. Difficulties and disadvantages have, however, been experienced in the employment of such a lever, because when the wire has been thus lifted at one part over the rim edge there has not been sufficient length so lifted to enable the operator to grasp the edge of the tire to farther remove it from the rim, and it is common to employ some other instrument to aid in completing the removal of the wired edge, and even when this expedient is resorted to it is difficult, if not impossible, for a single operator to manage both instruments at the same time. Moreover, the fact of employing a single lever to effect the raising of the wire causes the latter to be distorted from its true circular shape by the pressure of the lever acting upon one point of the wire.

Now the object of my invention is to overcome these difficulties and disadvantages, to which end I provide an instrument having two lifting-arms at a distance apart, the acting ends of such arms having hooked surfaces which I arrange at such angles that the wire at these two points can lie therein while being lifted at both points simultaneously.

Figure 1 of the drawings shows my improved appliance or tool in elevation; Fig. 2, in plan; Fig. 3, with one member folded on the other for convenience of transport. Fig. 4 is a detail view. Fig. 5 is a perspective view showing the application of the hooked ends to a circular wire.

A A, Fig. 1, are the two arms or members, which I generally pivot together at A′ in order that the arms A A may be folded on each other, as shown at Fig. 3, when not required for use, although I would have it understood that I do not limit myself to so jointing the parts, as in use the instrument would be equally effective if both the diverging arms were made from a single piece of metal.

The ends B C of the arms A A are formed of somewhat hook shape with a double curvature, as shown especially at Fig. 4, which is an edge view of one of the arms at the hook end thereof. The groove of the hooked end, as at Fig. 1, is adapted to the curvature of the wire in the tire, the wire and a portion of the tire being indicated by dotted lines, and also I make the hooked ends B C extend at an angle to the plane of the flat portions of the arms A A, as shown at Fig. 2. By this construction the hooked ends of the arms, Fig. 1, upon being inserted beneath the wire fit and are adapted to the curvature thereof, as at Fig. 5, and the wire can be raised by the leverage of the arms against the edge of the rim as a fulcrum, and this without distorting the wire. When raised in this manner over the edge of the rim, the operator can conveniently seize with his disengaged hand that part of the wired edge extending between the hooked ends B C of the instrument and pull the said edge over the rim with the greatest ease, thereby detaching the tire from the rim.

The tire may be replaced by reversing the instrument so as to rest the hooked parts B C upon the edge of the rim.

The instrument can be closed up and placed in the pocket or tool-bag.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A tire-lever for removing wired-on elastic tires from wheel-rims, composed of two

arms, a joint-pin connecting the arms near the ends thereof, to allow the arms to diverge at their free ends, and hook-shaped parts formed at the free ends of the arms adapted to be inserted beneath the wire of the tire to lift same at two points simultaneously over the rim edge, and to allow the operator to seize the wire extending between the two hook parts.

2. In tire-levers, the combination with the two arms, and a joint-pin connecting the arms near the ends thereof, of hook-shaped parts at the free ends of the arms at proper relative angles to coincide with the curvature of the wire as set forth.

HENRY BEACH.

Witnesses:
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WM. A. MARSHALL.