Dec. 30, 1924. 1,521,342

H. W. THOMAS ET AL

BAND WRENCH

Filed April 14, 1924

Fig. 1.

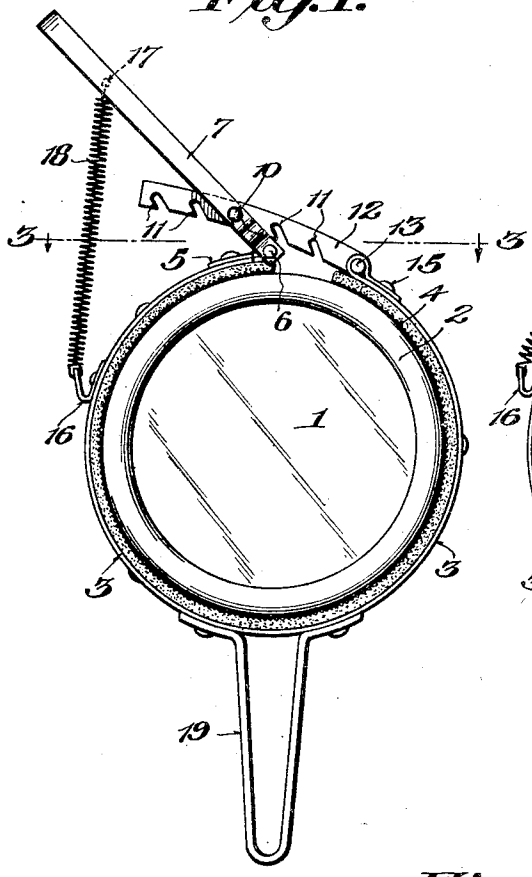


Fig. 2.

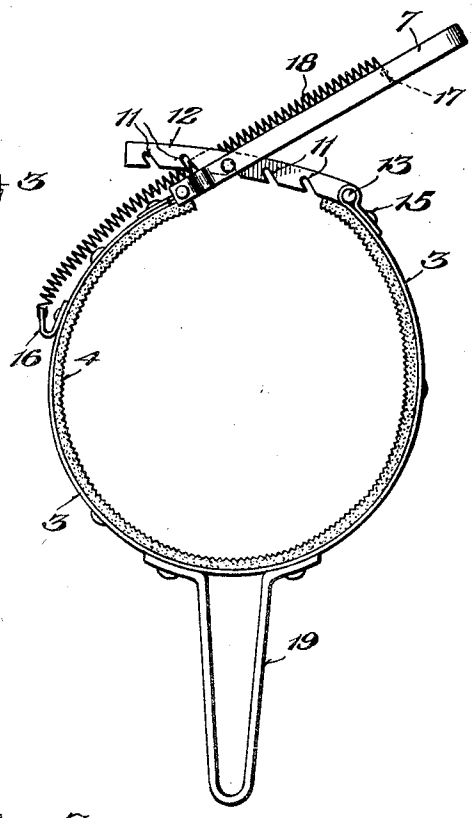
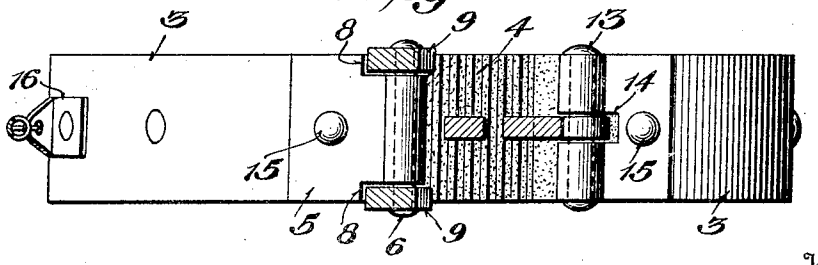


Fig. 3.



Inventors

Harry W. Thomas & George W. Lee

By Mauro, Cameron, Lewis & Kerkam

Attorneys

Patented Dec. 30, 1924.

1,521,342

UNITED STATES PATENT OFFICE.

HARRY W. THOMAS AND GEORGE W. LEE, OF GLEN CAMPBELL, PENNSYLVANIA.

BAND WRENCH.

Application filed April 14, 1924. Serial No. 706,466.

To all whom it may concern:

Be it known that we, HARRY W. THOMAS and GEORGE W. LEE, citizens of the United States of America, and residents of Glen Campbell, Pennsylvania, have invented new and useful Improvements in Band Wrenches, which invention is fully set forth in the following specification.

This invention relates to a band wrench, and particularly to an adjustable tool of this type for use in removing the clamping rims for automobile headlight lenses, jar covers, and the like.

When it becomes necessary to replace lamps in automobile headlights, or to clean the headlight lenses, difficulty is encountered in removing the lens clamping rims due to the accumulation of rust or bending of the parts. Band wrenches have heretofore been proposed for removing lens clamping rims, but such means have either been non-adjustable, adjustable with difficulty, or expensive to manufacture. Moreover, such devices have been so constructed that, after the lens and clamping rims are removed, the wrench will not grip the parts unless it is held in the hands of the operator. As a consequence, lenses are often broken and, if not broken, it becomes necessary to reapply the wrench to the rim before the latter can be reinstalled on the headlight.

The present invention overcomes the above difficulties by providing a band wrench which is inexpensive to manufacture, which may be quickly adjusted throughout a wide range of diameters without the necessity for removing and reinserting pins or other parts, and one which will securely hold the clamping rim and lens after the same have been removed from the headlight. These and other objects will appear more fully in the description hereafter.

The invention will be readily understood by reference to the accompanying drawings illustrating one embodiment of the invention, and wherein—

Fig. 1 is a side elevation of the band wrench in clamping position on a headlight rim;

Fig. 2 is a similar view of the device illustrating the same in expanded position; and

Fig. 3 is a top plan view, partly in section, taken on the line 3—3 of Fig. 1.

Referring to the drawings, wherein like reference numerals indicate like parts throughout the several views, and particularly to Fig. 1, 1 is a headlight lens of the usual type mounted in a clamping rim 2. Surrounding the clamping rim and in gripping engagement therewith is a band 3 which is preferably lined with corrugated rubber 4 or any other suitable material such as felt, leather, etc. One end of band 3 is bent upon itself as at 5 to form a bearing loop for a pin 6 which is rigidly secured to the lower end of a U-shaped pressure lever 7. If desired, the looped end of band 3 may be provided with notches 8 in order that the arms 9 of lever 7 will not project materially beyond the opposite edges of the band. At a suitable distance along the length of lever 7 is positioned a pin 10 adapted for engagement with any one of a plurality of notches 11 formed in a pivoted adjusting member or arm 12 which is secured at its inner extremity by means of a pin 13 to the other end of band 3 which is bent back upon itself to form a bearing for pin 13. Preferably, adjusting arm 12 is pivoted at its inner end centrally of the band 3, a notch 14 being provided for this purpose in the bent-back portion of band 3. Rivets 15 or any other suitable means may be employed for securing the bent-back portion of ends of the band to the band proper.

Secured at one end to an ear 16, riveted to band 3, and at its opposite end to an opening 17 formed near the outer end of lever 7, is a spring 18 for retaining the parts in clamping position.

In order to secure the proper leverage for rotating the band when in clamping position, we prefer to provide a handle 19 positioned substantially diametrically opposite the pivotal point of lever 7. Preferably, this handle comprises a substantially V-shaped member riveted to band 3, but any other form of handle may be employed.

The operation of the device is as follows:—

Lever 7 having been swung to the right as illustrated in Fig. 2 against the tension of the spring 18, the adjusting member 12 is moved to bring pin 10 into engagement with any one of the desired notches 11, the selected notch depending on the diameter of the lens rim or other member which it is desired to rotate. Lever 7 is then swung to the left to force the band into gripping engagement with the rim, and pressure is then applied by means of handle 19 and lever 7 to rotate the parts, the corrugated rubber

lining insuring that the band 3 will not slip.

Any suitable number of notches may be formed in the adjusting member to provide the necessary increments of adjustment, but the resilience of band 3 and the position of pins 10 and 6 obviate the necessity for exact adjustment of the band. The notches are preferably cut at an angle, but this is not essential as spring 18 will prevent pin 10 from being accidentally disengaged from the selected notch. The pin and notch arrangement is particularly adapted for quick adjustment. Obviously, band 3 may be formed of metal or any other suitable flexible material.

Spring 18 insures that the parts will be retained in the relative positions illustrated in Fig. 1 after the rim and lens are removed, thereby enabling the removed member and wrench to be handled as a unit. This provides against breakage of the lens and avoids the necessity for reapplying the wrench to the rim when it is desired to reinstall the latter in place.

While the wrench has been described as being particularly adapted for use in removing clamping rims for headlight lenses, it will be seen that the device is adapted for other uses, such as removing fruit jar covers and the like. Only one embodiment of the inventive idea has been described herein and illustrated in the accompanying drawings, but it is to be expressly understood that the drawings are for purposes of illustration only and are not designed as a definition of the limits of the invention, reference being had for this purpose to the appended claims.

What is claimed is:—

1. A band wrench comprising a band, a lever pivoted to one end of said band, a notched adjusting member pivoted to the opposite end of said band and adapted to engage said lever, and resilient means secured to said lever and band.

2. A band wrench comprising a band, a U-shaped lever pivoted to one end of said band, a pin extending between the arms of said lever, a notched adjusting member pivoted to the opposite end of said band and adapted to engage said pin, and resilient means maintaining such engagement.

3. A band wrench comprising a band, a bifurcated lever pivoted to one end of said band, a pin extending between the furcations of said lever, a notched adjusting member pivoted to the opposite end of said band and adapted to engage said pin, and resilient means secured at one end to said band and at its opposite end to said lever.

4. A band wrench comprising a resilient band, a corrugated rubber lining therefor, a U-shaped lever pivoted to one end of said band, a pin secured to said lever, a notched adjusting member pivoted to the opposite end of said band and adapted to extend through the arms of the lever into engagement with said pin, resilient means secured to said lever and band, and a handle secured to said band.

5. A band wrench comprising a band, a lever pivoted to one end of said band, a notched adjusting member pivoted to the opposite end of said band and adapted to engage said lever whereby the parts may be adjusted in clamping position, and means maintaining said parts in said clamping position.

In testimony whereof we have signed this specification.

HARRY W. THOMAS.
GEORGE W. LEE.