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HEADLAMP WRENCH

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Fig. 1.

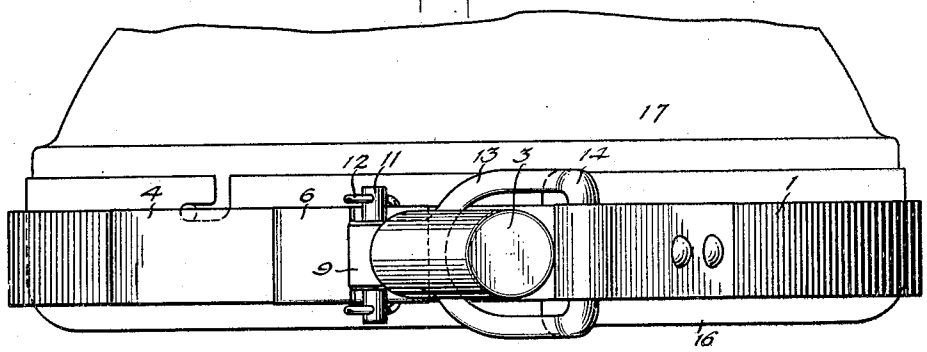
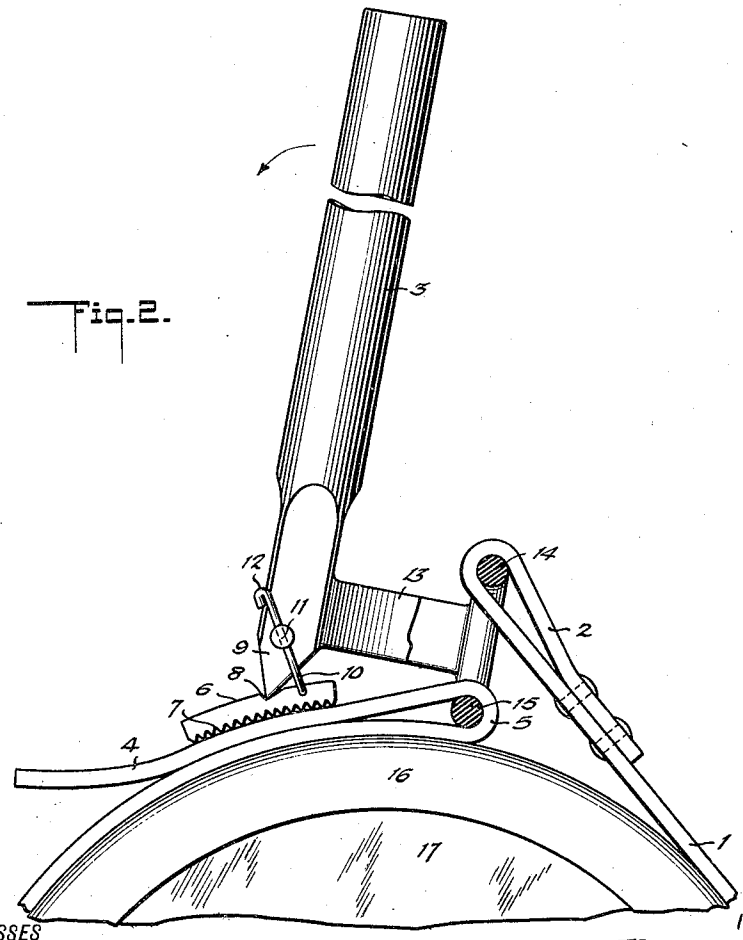


Fig. 2.



WITNESSES

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HEADLAMP WRENCH.

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To all whom it may concern:

Be it known that I, THOMAS I. GAW, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Headlamp Wrench, of which the following is a full, clear, and exact description.

This invention relates to a head lamp wrench, and particularly relates to one involving the use of a flexible strap or gripping member.

An object of the invention is to provide a strap wrench which can be very quickly and easily applied to the object upon which it is to work.

Another object concerns the provision of means whereby after the strap is applied it can be quickly adjusted in place.

A further object relates to the provision of means whereby after the strap has been adjusted in place there is no possibility of its slipping because of the increased grip caused by the increase of application of pressure to the wrench.

A still further object relates to the provision of means whereby the strap and its cooperating parts can be very quickly removed from the object to which it is applied.

The invention is illustrated in the drawings, of which—

Figure 1 is a plan view of the wrench applied to a head lamp casing for the purpose of removing the front cover therefrom; and

Figure 2 is a partial front elevation of the wrench.

The form of the invention shown in the drawings is a preferred form, although it is understood that modifications in the construction and arrangement of the parts and in the character of the materials used may be adopted without departing from the spirit of the invention.

The preferred form of the invention, which is shown in the drawings, includes a strap member 1 adapted to be passed around any object to which the wrench is to be applied. One end of this strap is formed in a loop 2 which is, in a manner hereinafter to be described, connected fixedly to part of an operating member or handle 3. The other end 4 of the strap is loose and is adapted temporarily to be adjusted in the form of a loop 5 which is temporarily gripped or held or clamped by a clamping member or foot 6 having on its lower face teeth 7 whereby a more effective clamping or gripping action may be achieved. The rear face of this clamping foot or member is provided with a recess or groove 8 into which the sharp pointed lower end 9 of the operating member or handle 3 is disposed. The handle or operating member 3 is somewhat loosely but, nevertheless, positively connected to the clamping foot 6 by means of a pair of pivoted links 10 which pass through apertures in the ends of a pin 11 and have their other ends 12 turned over to prevent the links 10 from being removed from the apertures in the pin 11. In this way the particular angular relation between the handle 3 and the clamping foot 6 can be varied within the limits of movement permitted by the links 10, but the clamping foot is prevented from being entirely separated from the handle 3. The handle 3 is adapted to be moved in the direction indicated by the arrow in Fig. 2, and on the side of the handle or operating member opposite the direction of clamping movement thereof there is provided a lateral extension 13, which may be a slotted member or a pair of arms as shown. These arms at their outer ends are provided with transverse bars 14 and 15 disposed substantially one over the other. To the upper crossbar 14 the fixed end or loop 2 of the strap is fastened. To the lower crossbar 15 of the lateral extension the temporary loop 5 of the strap is fastened.

It will be observed that the movement of the handle in the direction of the arrow shown in Fig. 2 will cause the rotation of the crossbars 14 and 15 in an anticlockwise direction around the pivot point formed at the bearing between the pointed ends 9 and the groove 8. Furthermore the pressure of the handle downward will be exerted through the clamping foot 6, whereby the more pressure there is applied to tighten the strap, the tighter will the clamping member hold the temporary loop 5 of the free end of the strap. Furthermore, the rotation of the crossbars 14 and 15 will tend to pull the ends of the straps in opposite directions to tighten the straps on the head lamp cover, so that the gripping action between the straps and the cover will be very firm, permitting the proper application of force and causing the removal of the cover from the casing. Of course, this same action can take place for any objects around which the strap 1 can be passed provided it

is long enough, the size of the objects, within these limits, not having any particular bearing on the effective operation of the device. It will be understood and it is intended that the side of the operating member from which the extensions 13 extend should be called the rear side, because it is on the side away from the direction in which the operating member is moved to tighten the wrench.

In operating the device, the strap is passed around the object on which it is to be applied and the free end is looped around the crossbar 15 and passed beneath the clamping foot 6. The foot of the lower end of the operating member is then disposed in the groove 8 and further movement of the handle or operating member is effective. In this way it will be seen that the strap can be in a preliminary manner fastened as tight as possible on the object before any real or great amount of pressure is applied. This avoids any unnecessary movement of the wrench before it begins to grip the object. The foot 6 has the additional function of providing a bearing surface for the bottom of the lever, spreading the pressure of said lever on the cover of the head lamp over a larger area so as to prevent injury to this cover because of the downward pressure on the handle when removing said cover.

What I claim is:—

1. A strap wrench which includes a flexible strap to be passed around an object, an operating member or handle to which one end of the strap is fixed, and a clamping foot pivotally connected with the lower end of said handle and adapted to be pressed by said handle against the free end of the strap as the handle is operated to tighten the strap on the object.

2. A strap wrench which includes an operating member, a flexible strap, one end of which is fixed to the operating member, the free end of said strap being looped temporarily around another portion of said operating member, and a clamping foot pivotally connected with the lower end of the operating member and adapted to be pressed against the free end of the strap as said member is operated to tighten the strap on the object.

3. A strap wrench which includes an operating handle and a clamping foot associated with the lower end of said handle and having teeth on its lower edge, said foot having a notch in its upper edge, the lower end of the handle being pointed to bear in said notch.

4. A strap wrench which includes an operating handle and a clamping foot associated with the lower end of said handle and having teeth on its lower edge, said foot having a notch in its upper edge, the lower end of the handle being pointed to bear in said notch, and a link connection between the handle and the foot to loosely connect the foot with the handle.

5. A strap wrench which includes an operating handle having a pointed lower end, a clamping foot adjacent the lower end of the handle and having a notch in its rear face in which the lower end of the handle is adapted to lie, said handle having a direction of clamping movement, an extension laterally disposed at right angles to the handle and to the rear thereof relative to the direction of clamping movement, a pair of crossbars on said extension disposed one above the other, a flexible strap passing around an object, one end of said strap being fixed to the upper of said crossbars, the other end of said strap being looped around the lower of said crossbars, the free end of said strap passing beneath the clamping foot.

6. A strap wrench which includes an operating handle having a pointed lower end, a clamping foot adjacent the lower end of the handle and having a notch in its rear face in which the lower end of the handle is adapted to lie, said handle having a direction of clamping movement, an extension laterally disposed at right angles to the handle and to the rear thereof relative to the direction of clamping movement, a pair of crossbars on said extension disposed one above the other, a flexible strap passing around an object, one end of said strap being fixed to the upper of said crossbars, the other end of said strap being looped around the lower of said crossbars, the free end of said strap passing beneath the clamping foot, and an adjustable link connection between the clamping foot and the lower end of the operating handle.

THOMAS I. GAW.