Nov. 18. 1924. 1,516,240

C. T. OSTERBERG

WRENCH

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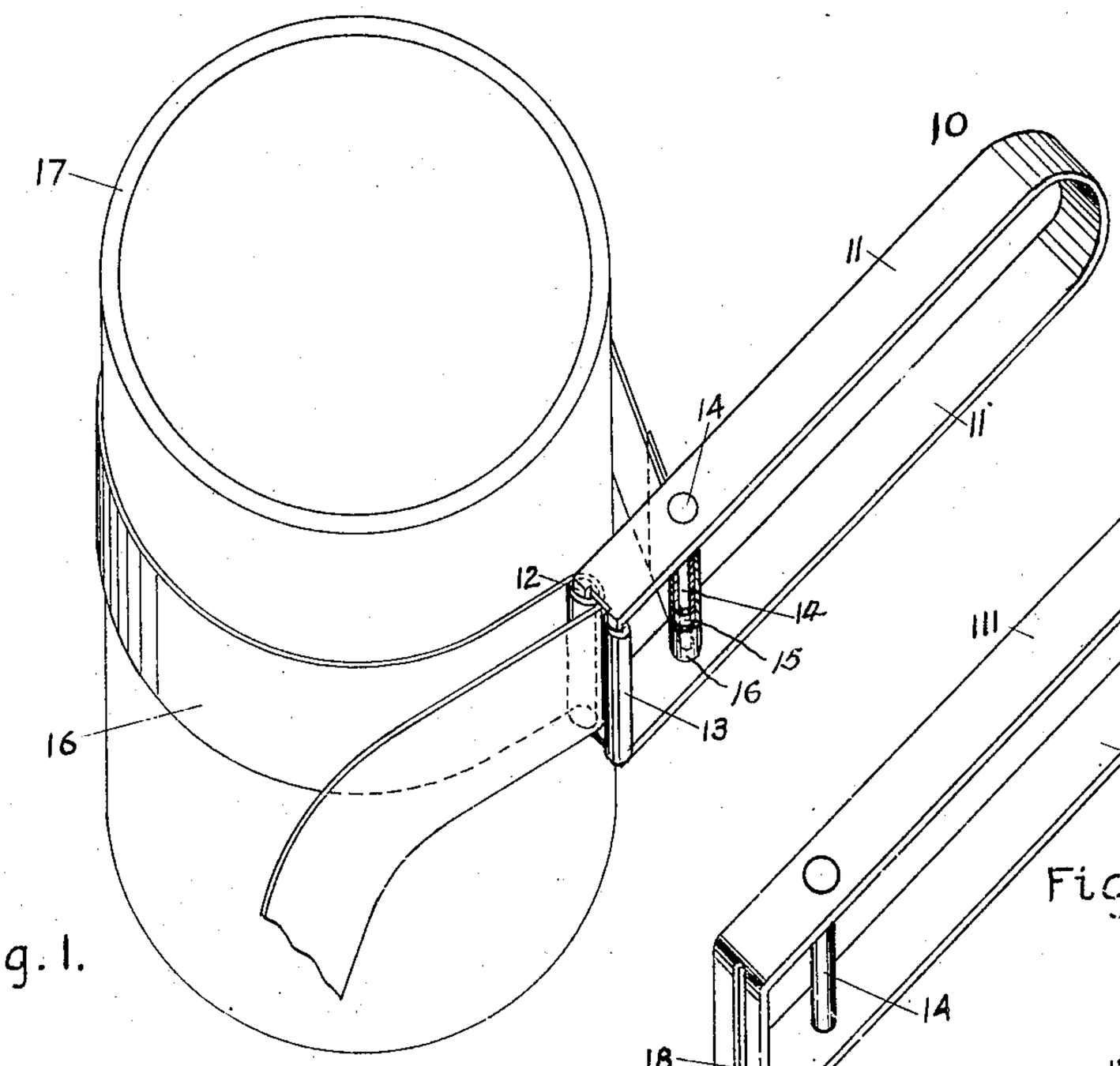

Fig. 1.

Fig. 4.

Fig. 3.

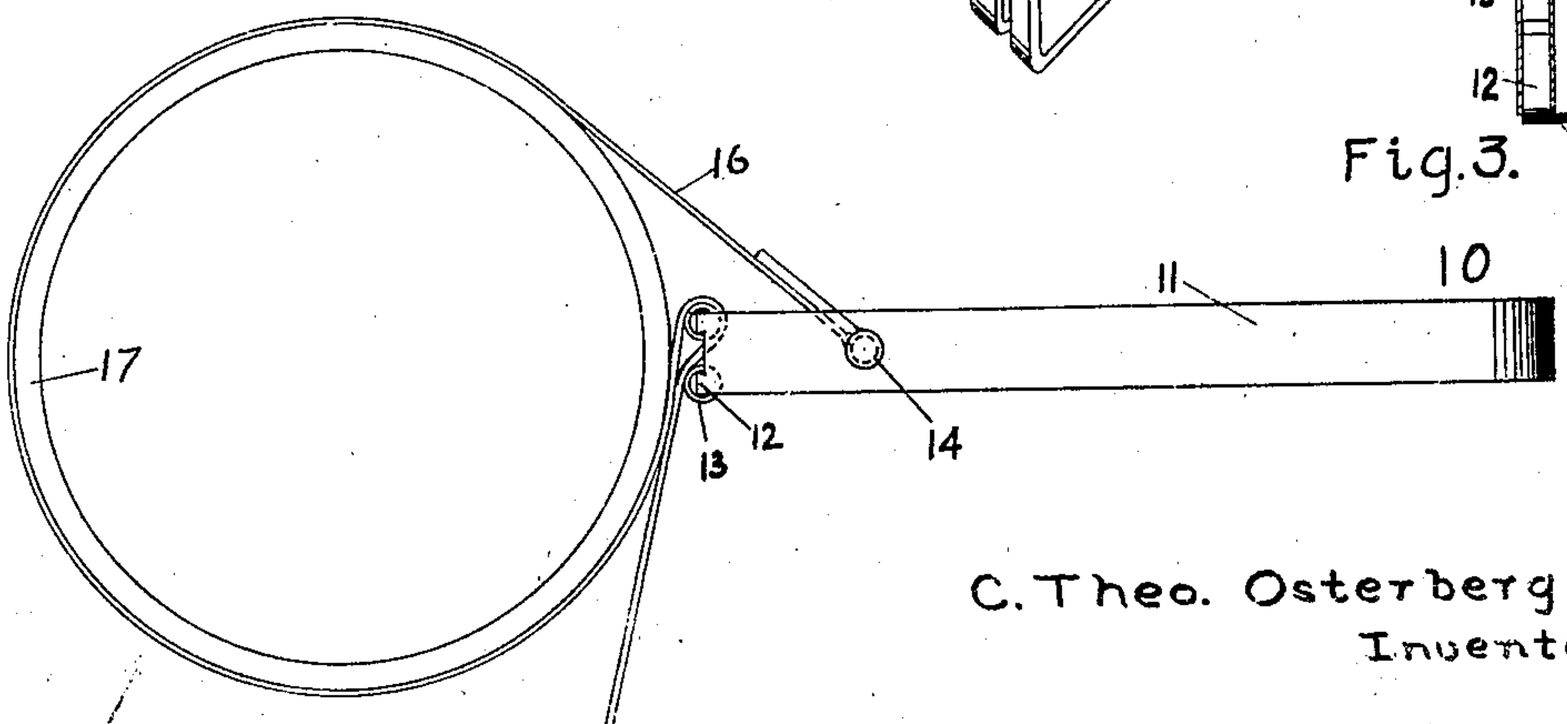

Fig. 2.

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UNITED STATES PATENT OFFICE.

CARL THEO. OSTERBERG, OF MILWAUKEE, WISCONSIN.

WRENCH.

Application filed March 30, 1922. Serial No. 547,992.

To all whom it may concern:

Be it known that I, CARL THEODOR OSTERBERG, a citizen of the United States, and a resident of the city of Milwaukee, county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Wrenches; and I do declare the following to be a clear, exact, and complete description thereof, such as will enable persons skilled in the art to which the invention relates to make and use the same, reference being had to the accompanying drawing, as showing a practical embodiment of my invention.

My invention relates particularly to wrenches suitable for gripping and holding cylindrical objects. It has been my object to produce a wrench which can be used with, and without damage to, such articles as fruit jars, finished or nickel plated pipes used in connection with plumbing fixtures, etc.

I have illustrated some forms of construction, suitable for a wrench to be used for holding fruit jars, etc., but it will be understood that this may be modified in order to secure sufficient strength or better adaptability for other uses.

In the drawing which accompanies this specification,

Figure 1 is an isometric perspective showing the wrench in inoperative position, as applied to a jar or other cylinder.

Fig. 2 is a plan view showing the wrench in operative position.

Fig. 3 is an end view in elevation of the wrench showing the angular extensions of the handle with the sleeves encircling the same, spaced so as to provide a slot in the end of the wrench.

Fig. 4 is a perspective view of a modified form of construction in which the slot is formed in the front end of the wrench, without using the sleeves shown in Fig. 3.

In the drawing, referring to Figs. 1, 2 and 3, a handle 10 made from a metal strip bent at its middle into U shape with parallel members 11, is provided with spaced projections 12. These projections are bent at a right angle to the plane of the members 11, and their free ends approach each other in the manner shown in Fig. 3, the projections from each member being encircled by a sleeve 13 to cover the joint at the meeting ends and present a smooth surface over which the flexible strap, to be later referred to, may move without engagement of the strap with the ends of the said angular projections. The projections and their enclosing sleeves stand transversely aligned with respect to the handle to present a widened front end, and a vertical slot opening in the direction of the length of the handle is formed between the said aligned parts.

After the projections 12 have been entered in the sleeves and the members 11 brought into parallelism, the said members are permanently connected so as to fix the structure by means of a rivet or post 14. A sleeve 15 may be placed about the rivet 14, and serve as a distance piece for the members 11 when the ends of the rivet 14 are upset.

A flexible strap 16 is looped about and attached to the post 14, and the free end of said strap is passed from the rear through the vertical opening or slot between the sleeves 13 at the front end of the handle. A loop will be formed in the slack portion of the strap between the sleeves 13 and the post 14, such loop then being placed over a jar or container 17, when the wrench is used to hold a jar or container. In using the wrench to grip a pipe or other object so located that the loop in the strap 16 cannot be slipped over the end thereof, it will be necessary first to loop the strap about the object before passing the free end through the space between the sleeves.

After being applied in either of the manners described the projecting free end of the strap is pulled taut, with the wrench in the relative position shown in Fig. 1. Thereupon the handle 10 will be given a movement of rotation about the object encircled by the strap, into the position shown in Fig. 2, so that the strap will be tightly drawn about the object for almost its entire circumference. In such movement, the rear sleeve 13 will be encircled by the strap. Pressure applied to the handle 10 to effect the rotative movement described will cause the front sleeve 13 to pinch the layers of the strap, in the manner illustrated in Fig. 2, so that slipping thereof is prevented. In such position the front sleeve 13 acts as a fulcrum for the handle 10, so that the frictional engagement of the strap with the object is increased by the further rotation of the handle. The engagement thus effected is sufficient to cause rotation of the object, or to prevent its rotation in case a contrary force be applied.

Fig. 4 shows a modified construction of the wrench. In this form, the metal strip

forming the handle is provided with a perforated slot 18 at its middle portion, the metal strip being bent transversely at points in proximity to the ends of the slot, and extended to form parallel members 111 of the handle, the free ends of the strip being curved toward each other and brought together at 20, the said free ends being provided with locking projections to prevent displacement, when the members 111 are secured in fixed position by means of the rivet 14 as before. The application and use of the flexible strap in connection with this modified construction is the same as that which has already been described.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

1. In a wrench, a handle formed from a strip bent upon itself to provide parallel members which terminate at their front ends in spaced angular extensions, transversely aligned sleeves arranged upon the said extensions and spaced to provide a vertical slot, a post connecting the members in the rear of the slot and parallel thereto, an adjustable strap connected at one end to the post and passing through the slot from the rear, whereby when the strap is looped about a circular object and the handle rotated the strap will have frictional engagement with the said object.

2. In a wrench, a handle formed from a strip bent upon itself to provide parallel members with a slotted formation at the front end of the handle, the slot thereof opening in the direction of the length of the handle, a post connecting the members in the rear of the slot and parallel thereto, an adjustable strap connected at one end to the post and passing through the slot from the rear, whereby when a loop of the strap between the post and the slotted end is passed about a circular object and the handle rotated the strap will have frictional engagement with the said object.

3. In a wrench, a handle comprising separated parallel members with a slotted formation connecting the said members at the front end of the handle, the slot thereof opening in the direction of the length of the handle, a post connecting the members in the rear of the slot and parallel thereto, an adjustable strap connected at one end to the post and passing through the slot from the rear, whereby when the strap is looped about a circular object and the handle rotated the strap will have frictional engagement with the said object.

4. In a wrench, a handle comprising separated parallel members with a slotted formation connecting the said members at the front end of the handle, the slot thereof opening in the direction of the length of the handle, a flexible strap connected to the handle with the free end of the said strap passed from the rear through the slot in the front end of the handle, whereby when that portion of the strap extending from the slot to the attached end is looped about a circular object and the handle rotated the strap will have frictional engagement with the said object.

5. In a wrench, a handle having an end comprised of parallel members aligned transversely of the handle and having a slot between said members, the said slot opening in the direction of the length of the handle, and a post fixed in the handle in the rear of the said slot and parallel thereto, in combination with a strap connected to the said post and having its free end passed through the said slot from the rear, whereby when a loop of the strap between the said post and the slotted end is passed about a circular object and the handle rotated, the strap will encircle one of the said members and be pinched by the other, to cause the strap to have a frictional engagement with the said object.

6. In a wrench, a handle having an end formed with transverse members separated by a slot which opens in the direction of the length of the handle, in combination with a flexible strap attached at one end to the handle in the rear of the said slot and having its free end passed through the said slot from the rear, whereby when a loop formed in the strap between its attached end and the slotted end of the handle is passed about a ciroular object and the handle rotated, the strap will be pinched by the end of the handle and caused to have frictional engagement with the said object.

In testimony whereof I have signed my name at Milwaukee this 27th day of March, 1922.

C. THEO. OSTERBERG.

Witnesses:
W. F. WOOLARD,
W. E. REUSS.