

No. 770,699.

PATENTED SEPT. 20, 1904.

O. S. RANDALL.
WRENCH.

APPLICATION FILED NOV. 21, 1903.

NO MODEL.

Fig. 1.

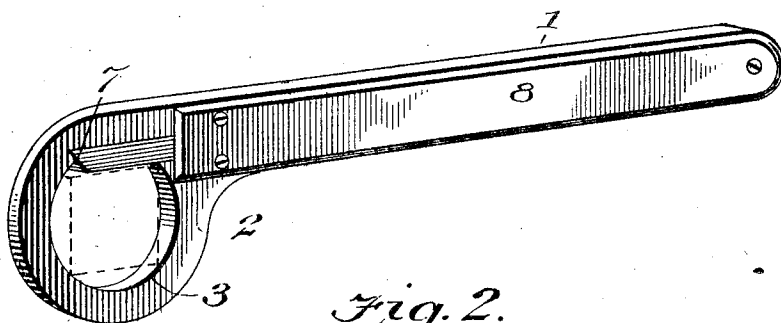


Fig. 2.

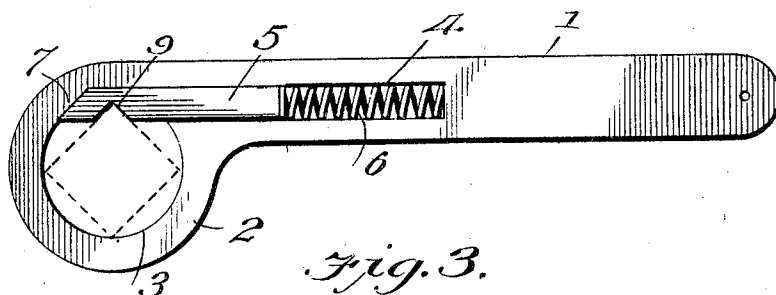


Fig. 3.

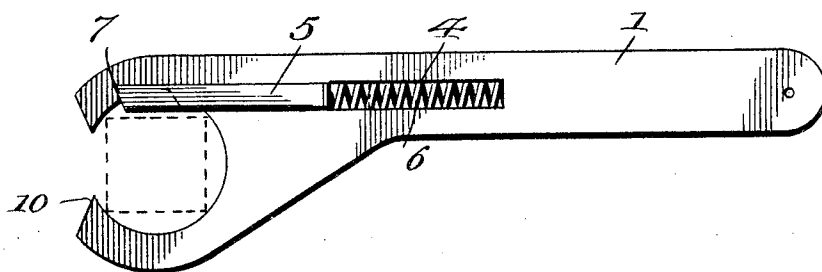


Fig. 4.

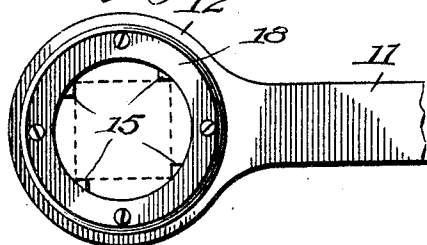
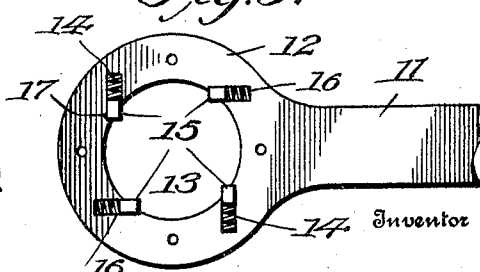


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 770,699, dated September 20, 1904.

Application filed November 21, 1903. Serial No. 182,147. (No model.)

To all whom it may concern:

Be it known that I, OSCAR S. RANDALL, a citizen of the United States, residing at Newark Valley, in the county of Tioga and State of New York, have invented new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to new and useful improvements in wrenches; and its object is to provide a simple and inexpensive device of this character which can be used upon burs of different forms.

A further object is to provide a wrench of this character which can be used as a ratchet-wrench.

With the above and other objects in view the invention consists in providing a wrench having a head in which is preferably formed a circular aperture. In one wall of this aperture is slidably mounted a spring-pressed catch, which is adapted to bear upon the bur when the wrench is turned in one direction, but which will slip over the bur when the rotation of the wrench is reversed.

The invention also consists in forming a wrench of sheet metal, the parts being so constructed as to be readily cut into proper shape and subsequently assembled to form a light, durable, and attractive tool.

The invention also consists in the novel construction and arrangement of the several parts, which will be more fully hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a wrench constructed in accordance with my invention. Fig 2 is a side elevation thereof with one of the face-plates removed, a modified form of catch being illustrated. Fig. 3 is a side elevation of a modified form of wrench having its face-plate removed. Fig. 4 is a side elevation of the head of another modified form of wrench. Fig. 5 is a similar view thereof with the face-plate removed.

Referring to the figures by numerals of reference, 1 is the handle, having a head 2 formed integral therewith, and this head has a preferably circular aperture 3 therein, into which the bur to be turned is adapted to be insert-

ed. A slot 4 is formed longitudinally within the handle 1 and opens into the aperture 3, at one side thereof. A sliding catch 5 is mounted within the slot 4, and a spring 6 is interposed between the inner end of said catch and the end of the slot 4. This spring serves to hold the outer end of the catch normally in contact with the wall of the aperture 3. As shown at 7 in Figs. 1 and 3, the wall of the aperture 3 may be cut away to receive the outer end of the catch 5. If desired, however, this recess may be dispensed with and the outward movement of the catch limited by the same coming in contact with the wall of the aperture, as shown in Fig. 3. Face-plates 8 are fastened in any suitable manner upon the sides of the handle 1 for the purpose of retaining the catch 5 and the spring 6 in position within the slot 4.

In using the wrench herein described the head 2 is placed around the bur to be turned, and one side of the bur will, as is obvious, bear upon the adjoining face of the catch 7. When the wrench is rotated in one direction, the bur will be caused to rotate therewith; but when the movement of the wrench is reversed one of the corners of the bur will contact with the end of the catch 5 and force it longitudinally within the slot 4, thereby compressing the spring 6 and permitting the catch to slip over the corners of the bur. It will thus be seen that by oscillating the wrench backward and forward the bur can be rotated in one direction only. While the catch is preferably constructed as shown in Fig. 1, I may, if desired, form the same with a recess 9 in its inner face, as shown in Fig. 2, said recess being adapted to engage one corner of the bur. Where the head of the wrench can not be placed completely around the bur, the same may be cut away, as shown at 10 in Fig. 3.

In Figs. 4 and 5 I have shown a modified form, which is substantially similar to the wrenches referred to in Figs. 1, 2, and 3, with the exception that a series of slides are employed instead of one. By referring to these figures it will be seen that the handle 11 has a head 12, provided with a circular aperture 13. Slots 14 are formed within the head and

extend from the wall of the aperture at a tangent thereto. Slides 15 are slidably mounted within these slots and are held normally projected into the aperture 13 by means of coiled
5 springs 16, arranged within the slots. The outward movement of the slides 15 is limited by the same coming in contact with shoulders 17, formed at points of conjunction between the slots 14 and the aperture 13. Rings 18
10 are secured in any suitable manner upon the faces of the head, so as to extend over the slides 15 and springs 16 and hold them in position within the slots 14. By using a wrench of this character when a bur is placed in po-
15 sition therein more than one side thereof will be engaged at the same time during the rotation of the bur; but when the wrench is moved backward the slides 15 will be simultaneously retracted by the faces of the bur.
20 It will be seen that a wrench constructed as herein described is very simple and inexpensive and possesses all the desirable features of a ratchet-wrench without necessitating the employment of complicated mechanism.
25 In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any
30 of the advantages thereof, and I therefore

reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus fully described the invention, what is claimed as new is—

1. In a wrench, the combination with a han- 35 dle having a head provided with an aperture and slots communicating with the aperture, of shoulders adjacent the slots, slides mounted within the slots, springs within the slots holding the slides normally in contact with 40 the shoulders and projected into the aperture, and retaining-rings secured upon the head and over the slides and springs.

2. In a wrench, the combination with a han- 45 dle having a head provided with a nut-receiving aperture, and a slot communicating with said aperture; of a nut-engaging slide mounted within the slot, a spring within the slot and adapted to normally project the slide into 50 the aperture, means for limiting the outward movement of the slide, and a retaining device for holding the slide and spring within the slot.

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

OSCAR S. RANDALL.

Witnesses:

B. W. GREEN,
C. W. SHAFFER.