

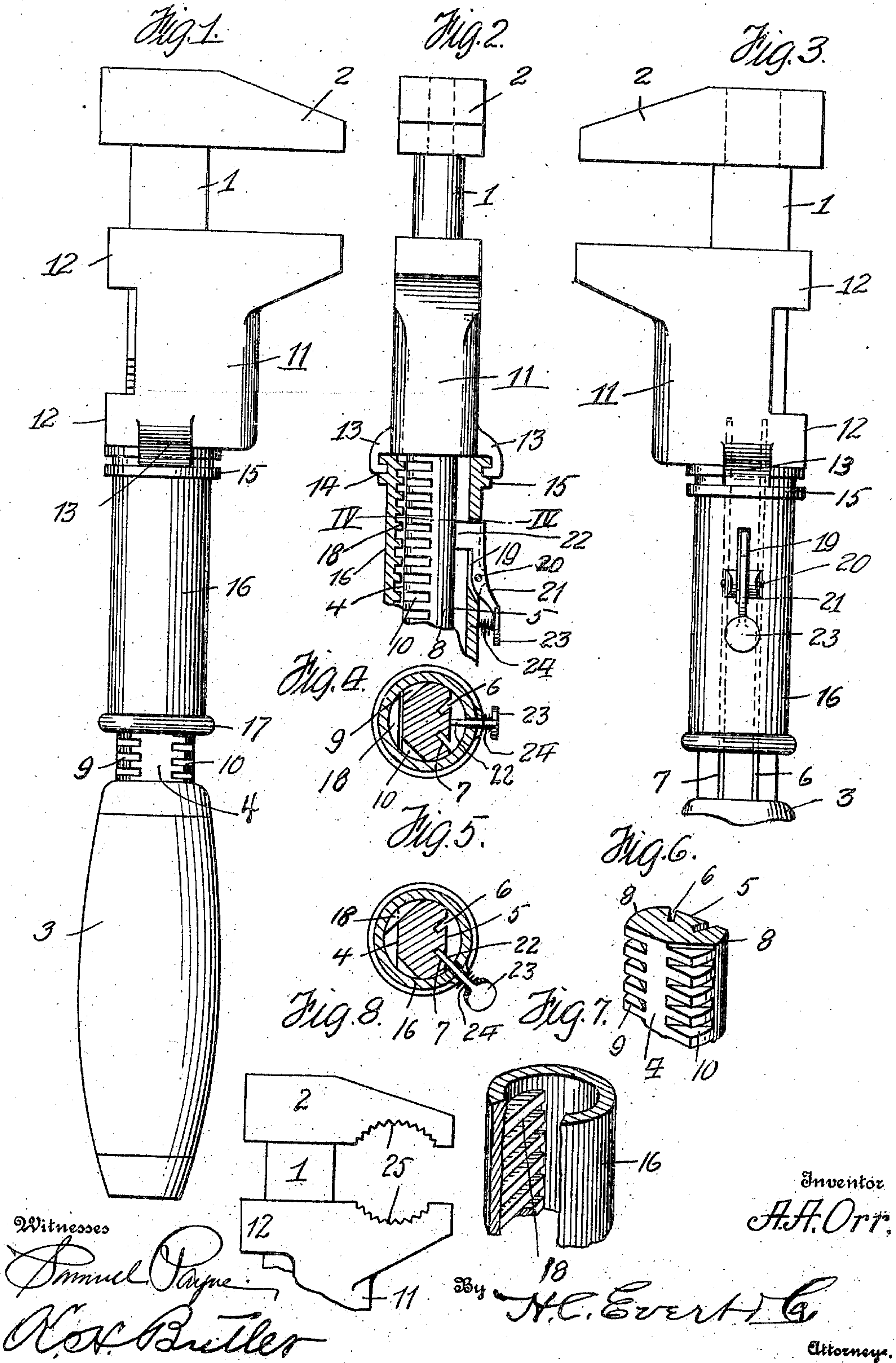
A. A. ORR.

WRENCH.

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947,619.

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To all whom it may concern:

Be it known that I, ASA A. ORR, a citizen of the United States of America, residing at Belle Vernon, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to wrenches, and the invention has for its primary object to provide a quick acting wrench wherein simple and effective means are employed for quickly locking the adjustable jaw in a fixed position relative to the shank of a wrench.

Another object of this invention is to provide a strong and durable wrench that can be either used as a pipe or nut wrench for gripping flat and rounded surfaces.

20 A further object of the invention is to provide a wrench having a novel adjusting mechanism that can be readily operated to set the movable jaw of a wrench in a desired position upon the shank.

25 With the above and other objects in view which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be presently described and then pointed out in the appended claims.

In the drawings, Figure 1 is a side elevation of a wrench constructed in accordance with my invention, Fig. 2 is a front elevation of the same, partly broken away and partly in section, Fig. 3 is a side elevation of the wrench illustrating the opposite side from that shown in Fig. 1, Fig. 4 is a horizontal sectional view of a wrench taken on the line IV—IV of Fig. 2, illustrating the adjustable jaw of the wrench released relative to the shank thereof, Fig. 5 is a similar view illustrating the adjustable jaw locked in engagement with the wrench shank, Fig. 6 is a perspective view of a portion of the wrench shank, Fig. 7 is a perspective view of a portion of the locking sleeve of the wrench, and Fig. 8 is a side elevation of the jaws of the wrench designed for gripping a pipe or cylindrical surfaces.

50 To put my invention into practice, I provide a shank 1 with a fixed jaw 2 and a detachable handle 3. The shank 1 for a portion of its length is provided with diametrically opposed flat sides 4 and 5, the flat side 5 having vertical grooves 6 and 7

formed therein, said grooves being radially disposed relative to the longitudinal axis of the shank.

That portion of the shank between the flat sides 4 and 5 has the surface thereof rounded, as at 8, and the rounded surface adjacent to the flat side 4 is cut away, to provide teeth 9 and 10, each tooth being substantially triangular in plan view with the front edges of the teeth 9 in the same plane as that of the teeth 10, this plane forming the flat side 4 of the shank.

Slidably mounted upon the shank 1 is an adjustable jaw 11, having straps 12 embracing the shank 1. The lower end of the jaw 11 is provided with oppositely disposed depending malleable lugs 13 adapted to engage in an annular groove 14 formed in the peripheral collar 15 of a locking sleeve 16 surrounding the shank 1. The collar 15 is located at the upper end of the locking sleeve 16, while the lower end of said sleeve is provided with another collar or flange 17 adapted to prevent the hand from slipping from the sleeve when the same is rotated. The inner side of the sleeve 16 is provided with teeth 18 adapted to mesh with either the teeth 9 or 10 of the shank 1.

The sleeve 16 intermediate the ends thereof and diametrically opposite the teeth 18 is provided with a longitudinal slot 19. Pivotally mounted in said slot 19 by a pin 20 is a lever 21 having the upper end thereof provided with a tooth 22 adapted to engage in either one of the grooves 6 or 7 of the shank. The lower end of the lever 21 is provided with a thumb-piece 23 and interposed between said thumb-piece and the sleeve 16 is a coil spring 24 for normally maintaining the tooth 22 of said lever in one of the grooves 6 or 7 of the shank 1.

To adjust the jaw 11, the locking sleeve 16 is gripped in one hand and the handle 3 in the other hand. By pressing the thumb of the hand gripping the sleeve 16 against the thumb-piece 23, the tooth 22 can be moved out of engagement with the shank 1. With the thumb still against the thumb-piece 23, the sleeve 16 can be turned to move the teeth 18 thereof out of engagement with the teeth 9 and 10 of the shank, as best shown in Fig. 2, and then the jaw 11 and the sleeve 16 can be moved up or down upon the shank. After the jaw 11 has been desirably positioned, the sleeve 16 can be turned either to the right or to the left, whereby the teeth 18 of the

sleeve will mesh with either the teeth 9 or 10 of the shank 1 and the tooth 22 of the lever 21 will engage in either of the grooves 6 or 7, to prevent the sleeve 16 from rotating.

5 The quick acting adjustment of the wrench is applicable to various types of wrenches. For example, the jaws 2 and 11 can be provided with serrated or toothed confronting recesses 25 whereby the wrench
10 can be used for gripping a pipe or a curved surface.

Having now described my invention, what I claim as new, is:—

1. A wrench comprising a shank, a fixed
15 jaw carried by one end of said shank, a detachable handle carried by the opposite end of said shank, a jaw slidably mounted upon said shank, a sleeve rotatably mounted upon said shank, diametrically opposed mal-
20 leable arms carried by the lower end of the slidable jaw and adapted to loosely engage the upper end of said rotatable sleeve, said shank having two oppositely disposed flat
25 faces, one of the flat faces of said shank having longitudinal grooves formed therein, the other flat face of said shank having teeth formed therein, teeth carried by the inner side of said rotatable sleeve for engaging

the teeth of said shank, and a spring pressed lever pivotally carried by said sleeve and 30 having a tooth adapted to engage in one of the longitudinal grooves of said shank for preventing said sleeve from rotating relative to said shank, substantially as described.

2. In a wrench, the combination of a 35 shank having a fixed jaw, said shank having two oppositely disposed flat faces, one of said faces having longitudinal grooves formed therein disposed radially relative to the longitudinal axis of said shank, the 40 other flat face having teeth at the edges thereof, a jaw slidably mounted upon said shank, a rotatable sleeve carried by the lower end of said jaw, teeth arranged upon the 45 inner side of said sleeve for engaging the teeth of said shank, and a lever carried by said sleeve for engaging in the grooves of said shank and locking said sleeve relative to said shank.

In testimony whereof I affix my signature 50 in the presence of two witnesses.

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Witnesses:

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mark