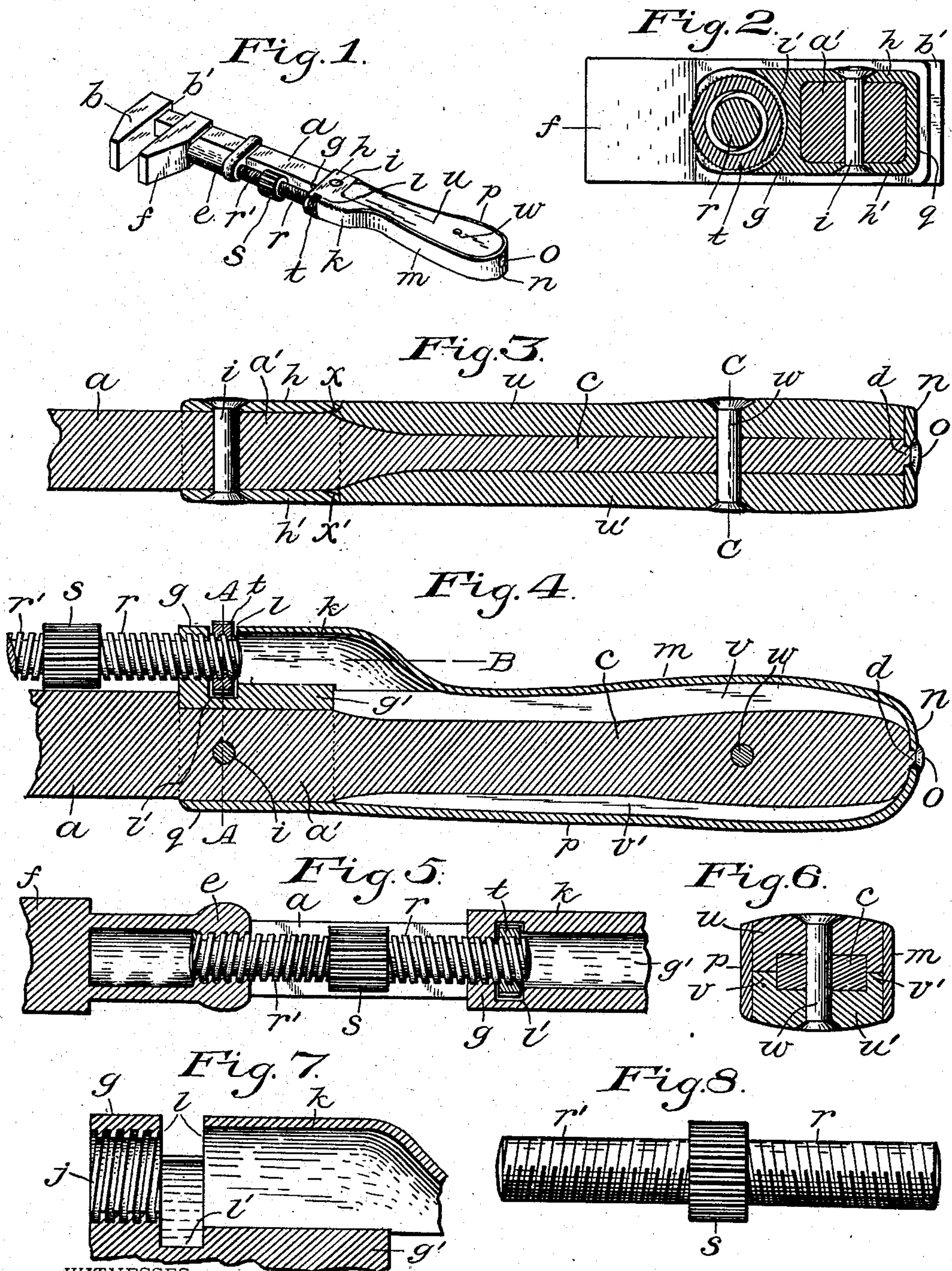


J. C. BURGESS.  
ADJUSTABLE WRENCH.  
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900,828.

Patented Oct. 13, 1908.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE WRENCH.

No. 900,828.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed April 20, 1908. Serial No. 428,185.

*To all whom it may concern:*

Be it known that I, JAMES C. BURGESS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Adjustable Wrenches; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to adjustable wrenches that have screws for adjusting and holding the movable jaws, the invention having reference particularly to a type of wrench that has a quick action screw and also means for locking the screw to prevent accidental movement of the screw after the jaw is adjusted, the invention relating also to an improved handle for adjustable wrenches.

An object of the invention is to provide an improved and quick action wrench to enable the jaw to be quickly adjusted, a further object being to provide improved means for holding the jaw in the desired position after adjustment thereof, and a still further object is to provide an improved handle, all to the end that a relatively simple, strong, durable and economical quick acting adjustable wrench may be provided that will be convenient and reliable in use.

The invention consists in an improved adjustable wrench comprising a movable jaw with a relatively fixed jaw, a double acting screw for adjusting and holding the movable jaw and provided with a locking device for locking the screw to prevent rotation thereof and an improved built up handle; and the invention consists further in certain novel features of construction and in the combinations and arrangements of parts, as hereinafter particularly described and set forth in the claims appended hereto.

Referring to the drawings, Figure 1 is a perspective view of the improved wrench constructed substantially in accordance with the invention; Fig. 2, a transverse sectional view (corresponding to the plane of the line A A in Fig. 4); Fig. 3, a fragmentary longitudinal sectional view; Fig. 4, a fragmentary longitudinal sectional view on a plane at

right angles to the plane of the section in the preceding figure; Fig. 5, a fragmentary longitudinal sectional view on a plane corresponding approximately to the plane at the line B in Fig. 4; Fig. 6, a transverse sectional view approximately on the line C C in Fig. 3; Fig. 7, a fragmentary sectional view on an enlarged scale showing a portion of Fig. 4 without the adjusting screw, and Fig. 8, a side view of the adjusting screw showing the general shape thereof.

Similar reference characters in the several figures of the drawings designate like elements or features of construction.

The improved wrench comprises a bar *a* having a jaw *b* fixed on one end thereof that has a hammer *b'* which may be of well known forms of construction, the bar serving as a guide and also as a lever, the opposite end portion of the bar being flattened and forming a handle member *c* adapted to sustain the application of all the power that may be necessary to be applied thereto, the member being relatively broad in the required direction, and it has a rivet-stud *d* formed on its end. The middle portion *a'* of the bar between the handle member and the guide portion, or bar *a* proper, is adapted to support an abutment with which the adjusting screw is connected. The bar *a* has a slide *e* mounted movably thereon in the usual manner and it carries a jaw *f* as usual opposite to the jaw *b*.

A novel form of abutment *g* is provided that has a long and substantial bearing part *g'* on the portion *a'*, the abutment having two side flanges *h* and *h'* extending across opposite sides of the portion *a'* and are rigidly secured thereto by a rivet *i*, the abutment having screw threads *j* therein to receive a portion of the screw, and having also a casing *k* for inclosing and protecting an end of the screw. The casing has a slot *l* formed therein and the abutment has a recess *l'* therein at the rear of the abutment proper to receive a lock-nut. A handle-band member *m* extends from the casing opposite to one side of the handle member *c* at a suitable distance therefrom, and is bent to form an end-cap *n* that is secured to the member *c* by forming a head *o* on the stud *d* that extends through a suitable hole in the cap part,



a band member  $p$  extending from the cap part along the opposite side of the handle member  $c$  at a suitable distance therefrom and to the flanges  $h$  and  $h'$  to which the end  $q$  of the member is suitably joined as by welding. The band members  $m$  and  $p$  and cap part  $n$  are relatively thin and somewhat broader than the member  $c$ . Obviously the band members may be cast integrally with the abutment and casing.

The adjusting screw is double ended and has right-hand and left-hand screw portions  $r$  and  $r'$ , so as to practically form two screws, one having continuous right-hand threads, and the other one continuous left-hand threads, the middle portion of the screw having a knurled enlarged portion  $s$  for turning the screw by hand. One end of the screw is fitted into the slide  $e$ , and the other end of the screw is fitted to the threads  $j$  in the abutment  $g$ , and has a knurled lock-nut  $t$  thereon that is arranged in the slot  $l$  and partially in the recess  $l'$  and has space in the slot to move slightly along the screw portion  $r$ , so as to permit the screw portion to be moved freely when adjusting the movable jaw.

Two wooden counterpart handle members  $u$  and  $u'$  are suitably shaped to fit against the member  $c$  and between the members  $m$  and  $p$ , each wooden member having a projection  $v$  or  $v'$  at one side thereof that extends against a similar projection on the companion member between the member  $c$  and the member  $p$ , the opposite sides of the wooden members having similar projections  $v$  or  $v'$  that extend between the member  $c$  and the member  $m$ , the wooden members therefor surrounding the member  $c$  and being protected by the members  $m$  and  $p$  which serve as a band for the wooden handle members, the latter being secured to the member  $c$  by a rivet  $w$ , the members  $u$  and  $u'$  being further secured by means of extensions  $x$  and  $x'$  extending under the edges of the flanges  $h$  and  $h'$ .

In practical use, after having adjusted the jaw  $f$  with respect to the jaw  $b$ , to suit the required size of the nut, the lock-nut  $t$  should be turned so as to be seated against the rear side of the abutment  $g$  and lock the screw against accidental movement, and obviously when the lock-nut is slackened the adjusting screw may be turned freely by hand to readjust the jaw  $f$ , which may be accomplished very rapidly by reason of the reverse screw portions.

The improved handle will afford the most convenient handle hold for handling the wrench, being designed to be grasped comfortably by the hand of the operator, the wooden members preventing the hand from becoming excessively cold in winter seasons,

while having the protection of the metallic members to prevent injury to the handle when roughly handled or thrown among other tools.

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

1. An adjustable wrench comprising a bar with an integral jaw thereon, a screw-threaded abutment on the bar having two opposing flanges engaging opposite sides of the bar, a rivet extending through the bar and the flanges, a slide carrying a jaw movably on the bar, a double-acting screw having one end screwed into the slide and its other end screwed into the screw-threaded abutment and provided with a lock-nut thereon movable into engagement with the abutment.

2. An adjustable wrench comprising a bar with an integral jaw thereon, a screw-threaded abutment having a bearing part on the bar and having also two opposing flanges engaging opposite sides of the bar, the abutment having also a recess in the bearing part, a casing connected to the abutment and having a slot therein, a rivet extending through the bar and the flanges, a slide carrying a jaw movably on the bar, a double-acting screw having one end screwed into the slide and its other end screwed into the screw-threaded abutment and extending into the casing thereof, and a lock-nut partially in the slot of the casing and partially in the said recess and screwed onto said screw-end.

3. In an adjustable wrench, the combination with a bar, an integral jaw on the bar, a slide carrying a jaw on the bar, and a double-acting screw having one of its ends screwed into the slide, of an abutment on the bar and having two opposing flanges engaging opposite sides of the bar, there being screw-threads in the abutment that are engaged by the opposite end of the screw, and a rivet extending through the bar and said two flanges and securing said abutment rigidly to said bar, substantially as shown and described.

4. In an adjustable wrench, the combination with a bar that has a shank thereon, an integral jaw on the bar, a slide carrying a jaw on the bar, and a screw connected to the slide, of an abutment on the bar and having two opposing flanges engaging opposite sides of the bar, the abutment being engaged by the screw which extends through the abutment, a rivet extending through the bar and said two flanges, a casing extending from said abutment over the end of the screw that extends therethrough, two handle members extending from said casing opposite to but at a distance from said shank, and two handle members engaging the inner sides of said first-described handle members and also two opposite sides of said shank,



each one of said counterpart members having two portions that extend over against two other opposite sides of said shank to the like portions of the companion counterpart member, substantially as shown and described.

in presence of two witnesses, on the 15th day of April, 1908.

JAMES C. BURGESS.

Witnesses:

J. H. GARDNER,

E. T. SILVIUS.

In testimony whereof, I affix my signature