

(No Model.)

W. C. STOKES.
WRENCH.

No. 572,035.

Patented Nov. 24, 1896.

FIG. 1.

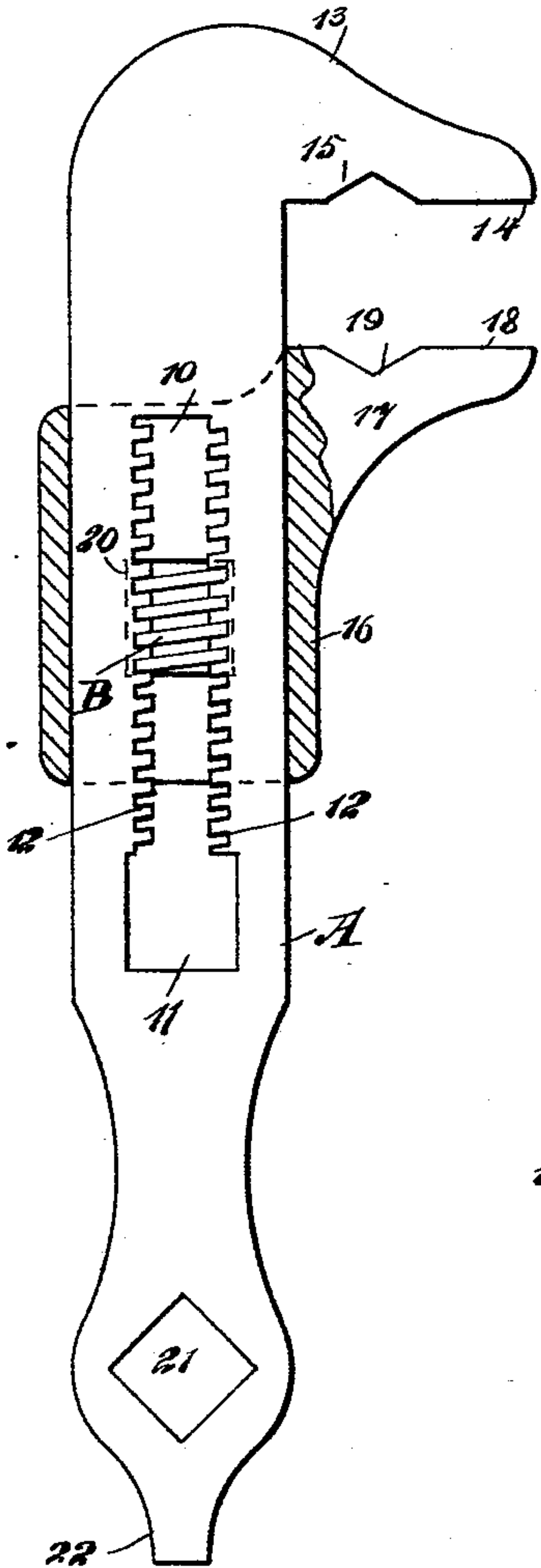


FIG. 2.

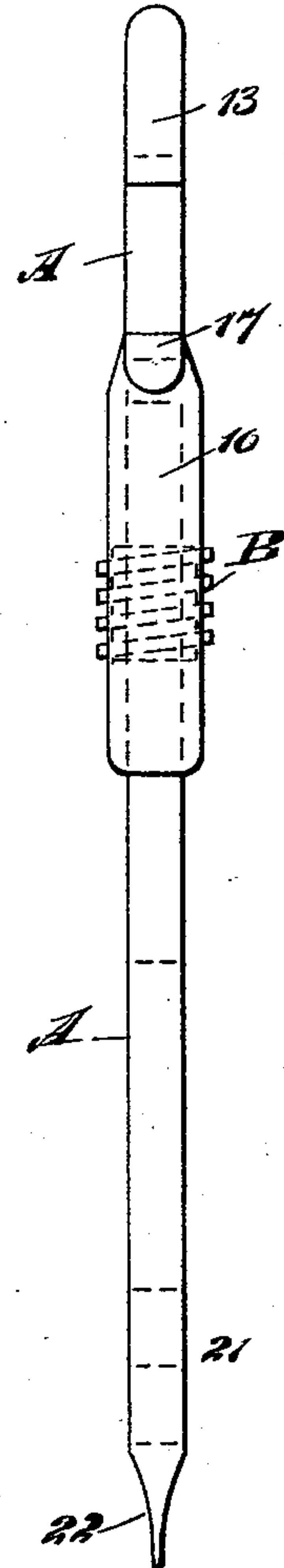
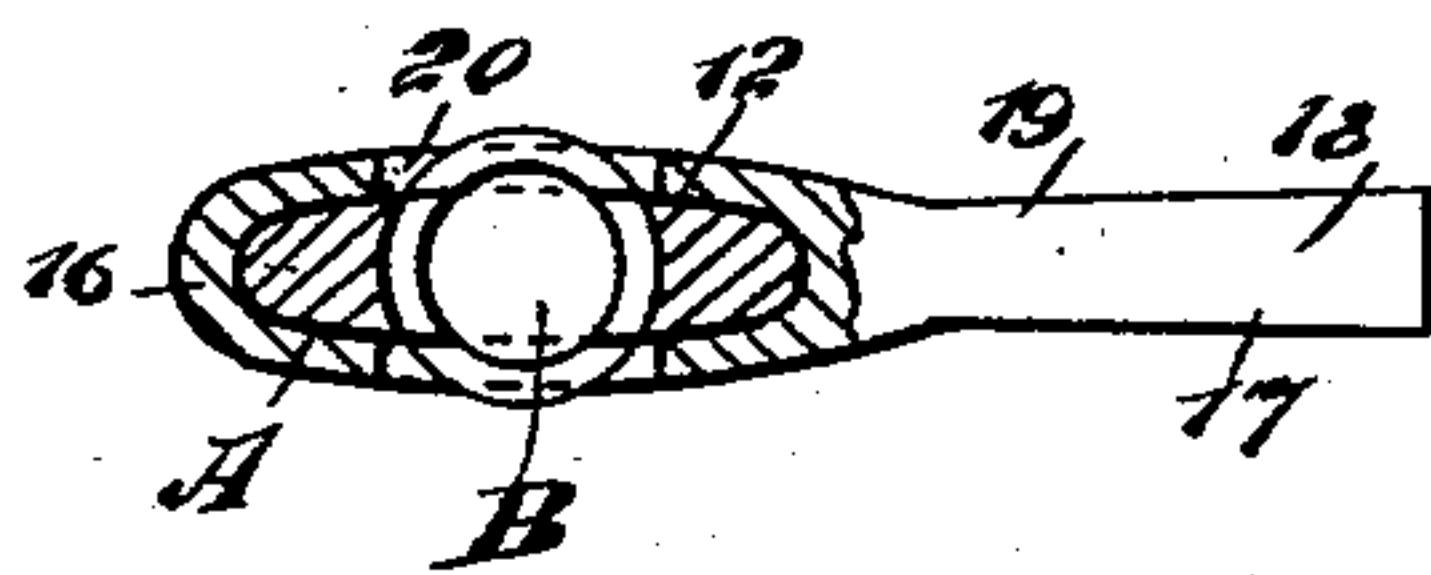


FIG. 3.



WITNESSES:

Donn Twitchell
John A. Ken.

INVENTOR

W. C. Stokes
BY *muny*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WALTER C. STOKES, OF NEW YORK, N. Y.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 572,035, dated November 24, 1896.

Application filed August 14, 1896. Serial No. 602,760. (No model.)

To all whom it may concern:

Be it known that I, WALTER C. STOKES, of New York city, in the county and State of New York, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

The object of my invention is to provide a simple and durable, light, and economic wrench adapted to take nuts of different sizes and of different shapes.

A further object of the invention is to combine a screw-driver with the wrench and to provide for a speedy and easy adjustment of the movable jaw to and from the fixed jaw, and, further, to provide the two jaws with recesses, each recess being adapted to receive a portion of two sides of a hexagonal or polygonal nut.

Another object of the invention is to provide a centrally-located adjustment for the movable jaw which will not detract from the strength of the body of the wrench to any appreciable extent.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved wrench, a portion of the movable jaw being in section. Fig. 2 is a front edge view of the wrench, and Fig. 3 is a transverse section taken through the movable jaw and through the body portion of the wrench.

In carrying out the invention the shank or body A of the wrench is made ovate in cross-section, as shown in Fig. 3, and is provided with a substantially centrally located longitudinal opening 10, the lower portion 11 whereof is enlarged in width, and at each side of the reduced portion of the aforesaid slot threads 12 are produced. At the upper end of the body of the shank A a jaw 13 is formed, having a flat under face 14, which may be roughened if desired, and in the aforesaid flat under face, at a point near the body, an angular recess 15 is produced, the said recess being preferably of a triangular form.

A sleeve 16 is mounted to slide on the body

or shank A, and the said sleeve at its upper forward end is provided with a jaw 17, and the upper surface of this jaw is provided with a flat surface 18, opposing the corresponding surface 14 of the fixed jaw, and the sliding jaw is further provided with an angular recess 19, opposing and corresponding in formation to the recess 15 in the fixed jaw.

An ordinary or square nut is to be received between the flat surfaces of the two jaws, while a hexagonal or polygonal nut is received in the recessed portions 15 and 19 of the jaws, whereby a portion of two sides of such a nut will be engaged by both the upper and the lower jaw. A slot 20 is made at or about the central portion of the sleeve 16, and the said sleeve is fitted somewhat snugly to the body A. An adjusting-nut B is employed for raising and lowering the movable jaw, and this adjusting-nut is provided with an exterior thread adapted to enter the side threads 12 in the slot 10. The adjusting-nut is placed in position by bringing the sleeve 16 downward, so that its opening 20 will be in registry with the larger end portion 11 of the slot 10. The nut is then placed in these registering openings, a portion of the nut extending beyond each side of the wrench, and by moving the nut upward and turning it at the same time its thread will be brought in engagement with the threads at the sides of the slot 10, enabling a person by manipulating the exposed surface of the nut to readily move the sleeve 16 upward or downward, as desired. It will therefore be observed that the wrench may be readily dismantled and that each and every part may be duplicated should it become broken.

The threads in the walls of the longitudinal slot or opening 10 are concaved, thus serving to hold the adjusting-nut from dropping out of position. In some instances it may be found desirable to make the threads at the opening 10 straight, in which event a pin will be passed loosely through the adjusting-nut and secured at the top and bottom of the opening.

One or more rectangular openings 21 are made in the lower or handle portion of the body, and these openings may be used to receive a nut which could not be conveniently reached and operated by the jaws, and the

handle end of the shank or body A terminates in a screw-driver 22. All the parts are preferably made of steel.

By giving the body the ovate cross-sectional shape shown and the sleeve a corresponding formation a maximum of strength is provided without rendering the tool excessively heavy or cumbersome to handle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A wrench, the shank or body of which is provided with a slot or opening having threads formed along its longitudinal wall, which threads have their contact-faces concaved, a sliding sleeve, carrying a jaw and provided with an opening arranged to register with that in the shank and an adjusting-nut held in the opening in the sleeve and adapted to engage with the threads at the opening in the shank, substantially as shown and described.

2. In a wrench, the combination, with a body having a fixed jaw, the said body being provided with a longitudinal slot, enlarged at one end and provided at its reduced portion with threads in its side walls, of a sleeve held to slide on the body and provided with a jaw, the said sleeve having an opening extending through from side to side, corresponding in size to the enlargement of the slot in the body, and an adjusting-nut held to turn in the opening in the said sleeve, its threads being in engagement with the threaded walls of the body-slot, the adjusting-nut being of such size as to extend outward beyond the sides of the said sleeve, as and for the purpose set forth.

3. In a wrench, the combination, with a body or shank having a jaw formed at one end, which jaw is provided with an angular recess and with a straight surface adjacent to the recess, the opposite end of the body terminating in a screw-driver, the said body being further provided with a longitudinal slot, enlarged at one end and provided with threads in its side walls, of a sleeve held to slide on the body, being provided with a jaw

having the face opposed to the fixed jaw provided with an angular and with a straight surface, the said sleeve being further provided with a slot extending through from side to side, and an adjusting-nut carried by the sleeve and engaging with the threaded walls of the body-slot, as and for the purpose set forth.

4. A wrench, the shank of which is provided with a longitudinal slot having a mutilated screw-thread formed on its side walls, a sleeve carrying a jaw adapted to slide on the shank, and an adjusting-nut engaged at both ends of the sleeve, the nut being held against side displacement by its bearing in the mutilated threads and its insertion and removal being effected from one end of the threads with an enlargement in the slot, substantially as described.

5. A wrench having a shank with a fixed jaw and with a longitudinal slot, one end of which slot is enlarged and the remaining portion of which is provided with a mutilated screw-thread the threaded walls of the slot being curved, a jaw sliding on the shank and provided with an opening registering with the slot, and a nut the screw-threads of which coact with the screw-threads of the slot, a portion of the nut fitting in the opening of the jaw whereby the jaw is connected with the nut, and the nut being capable of passing through the enlarged end of the slot, substantially as described.

6. A wrench having a shank with a jaw at one end and with a longitudinal slot, the walls of which slot are curved and provided with a mutilated screw-thread, a jaw sliding on the shank and having an opening registering with the slot and a nut projecting through the slot and coacting with the threads thereof, the nut being held in place by the curved walls of the slot and a portion of the nut fitting in the opening in the jaw, substantially as described.

WALTER C. STOKES.

Witnesses:

J. FRED. ACKER,
JNO. M. RITTER.