W. O. & J. C. SINGER.

WRENCH.

APPLICATION FILED JULY 31, 1909.

955,004.

Patented Apr. 12, 1910.

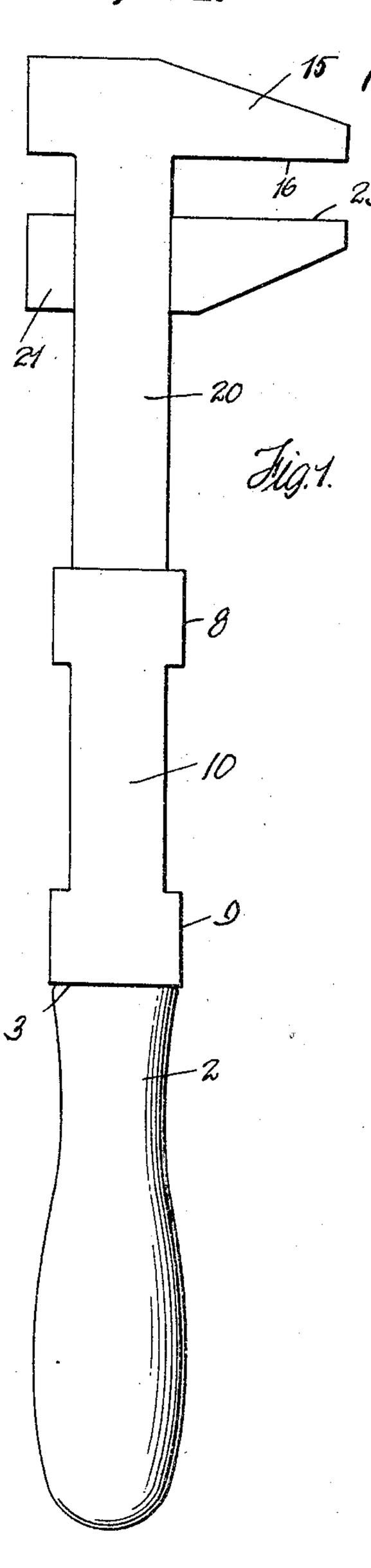

Fig. 1.

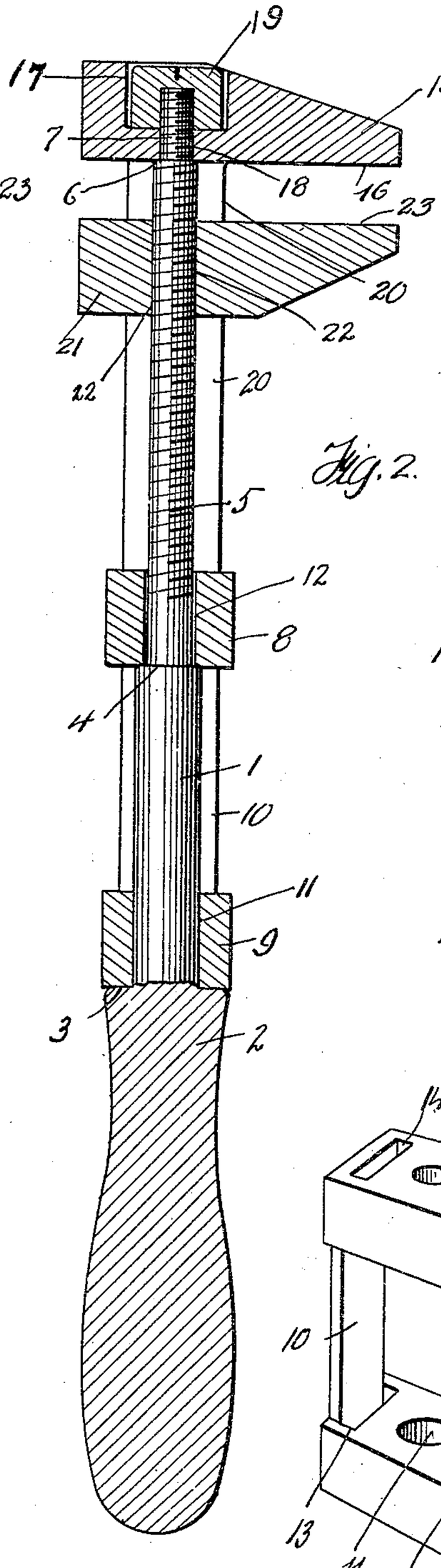

Fig. 2.

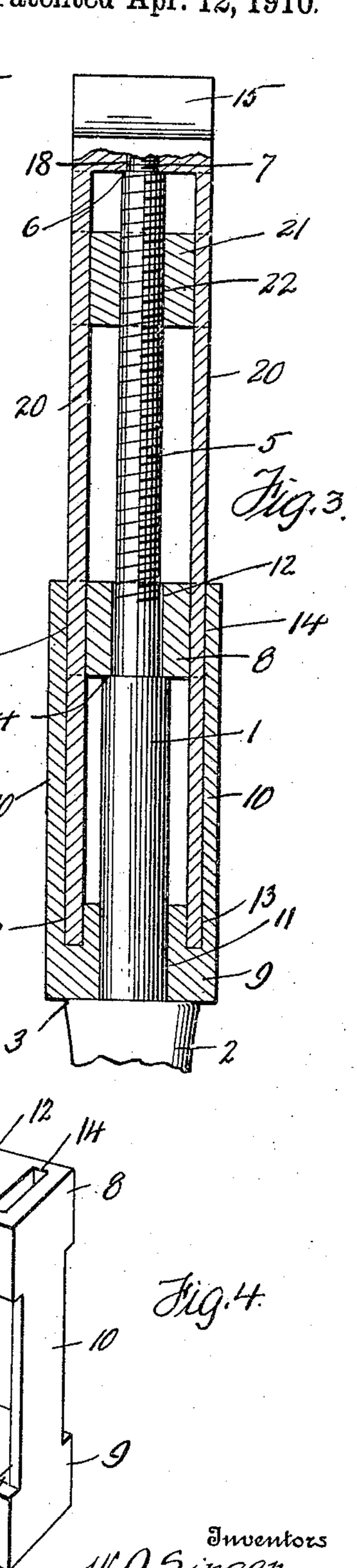

Fig. 3.

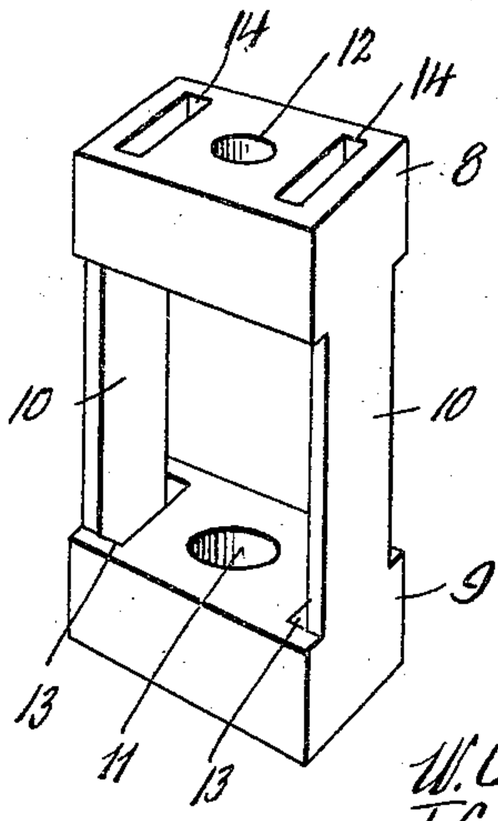

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM O. SINGER AND JOHN C. SINGER, OF CRESSON, PENNSYLVANIA.

WRENCH.

955,004. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed July 31, 1909. Serial No. 510,599.

To all whom it may concern:

Be it known that we, WILLIAM O. SINGER and JOHN C. SINGER, citizens of the United States of America, residing at Cresson, in the county of Cambria 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.

This invention relates to wrenches, more particularly designed for machinists and artisans for rotating nuts and similar objects having flat surfaces.

The primary object of our invention is to provide a wrench that can be easily and quickly adjusted to grip a nut, the adjustment in some instances being accomplished by manipulating the wrench with one hand.

Another object of our invention is to provide a wrench of the above type wherein the adjusting mechanism is safely housed and protected, thus permitting of the wrench being roughly handled without breaking.

A further object of our invention is to accomplish the above results by a wrench of a simple and inexpensive construction.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts to be hereinafter described in detail and then claimed.

Reference will now be had to the drawing forming part of this specification, wherein there is illustrated a preferred embodiment of our invention, but it must be understood that the structural elements thereof can be varied or changed without departing from the spirit of the invention.

In the drawing:—Figure 1 is a side elevation of the wrench, Fig. 2 is a vertical longitudinal sectional view of the same, Fig. 3 is a vertical transverse view of the wrench partly broken away, and, Fig. 4 is a perspective view of a detached housing forming part of the wrench.

In the embodiment of our invention herein illustrated, 1 denotes a cylindrical shank, the inner end of which terminates in a handle 2, which handle may be integral with the shank or attached thereto in any desired manner. The shank 1 at a point some distance from the outer end of the handle is reduced in diameter, said reduced portion extending to the outer end of the shank, this reduced portion forming a rod 5 provided with threads for a purpose as will hereinafter appear. The rod 5 has a reduced threaded outer end 7, on which the fixed jaw is mounted and to which it is secured, the inner face of said jaw abutting against the shoulder 6 formed by providing the reduced portion 7 on the rod.

The reducing of the shank to form the rod 5, produces a shoulder 4 at the inner end of said rod, and the enlarging of the shank 1 to produce the handle 2, forms an annular shoulder 3 at the inner end of the shank 1 and outer end of the handle 2.

Loosely mounted upon the shank 1 and resting upon the annular shoulder 3 is a housing, comprising an outer rectangular head 8, an inner rectangular head 9 and parallel side straps 10 connecting the heads 8 and 9, preferably at the sides of said heads. The inner head 9 is provided with a central opening 11 for the shank 1, while the outer head 8 is provided with a central opening 12 for the rod 5, said head 8 loosely resting upon the annular shoulder 4. The inner rectangular head 9 adjacent to the straps 10 is provided with sockets 13, and the outer head 8 is provided with oppositely disposed openings 14, said openings corresponding in sectional area to the cross sectional area of the sockets 13.

Mounted upon the threaded end 7 of the rod 5 is a stationary jaw 15 having a gripping surface 16. The jaw 15 is provided in its outer face with a recess 17 communicating with an opening 18 provided for the threaded end 7 of the rod 5. Screwed upon the threaded end 7 of the rod 5 is a nut or cap 19, and this nut or cap is adapted to fit in the recess 17 and hold the stationary jaw 15 in engagement with the shoulder 6 of the rod 5. The threaded extension 7 of the rod 5 rotates in the opening 18 in the jaw 15. The stationary jaw 15 is also provided with parallel side frames 20 adapted to extend through the openings 14 of the head 8 into the sockets 13 of the head 9. These side frames serve functionally as guides for a movable jaw 21 arranged between said side frames and having an interiorly threaded opening 22 for the adjusting rod 5. The jaw 21 is provided with a gripping surface 23 coöperating with the gripping surface 16 of the stationary jaw 15 in gripping nuts or similar objects.

It will be observed that it is only necessary to rotate the handle 2 to adjust the

jaw 21, after the jaw 15 has been placed against a nut or similar object, or the jaw 21 can be adjusted by holding the housing in one hand and rotating the handle with the other.

The wrench in its entirety is made of strong and durable metal and can be made of various sizes.

Having now described our invention, what we claim as new, is:—

A wrench comprising a shank, intermediately reduced in cross-sectional area, with the portion of lesser diameter threaded, a housing embodying two spaced and rigidly connected heads, each of which is provided with a centrally disposed smooth opening to receive the shank, and one with sockets and the other with rectangular channels, a frame comprising two members disposed in parallelism, the inner portions of which project through the channels and engage the sockets, a stationary jaw carried by the outer portions of the members and provided with a recess and with an orifice to receive the outer end of the shank, a nut threaded on the latter end of the shank and housed within the recess, a movable jaw engaging the threaded portion of the shank and held in operative relation relative to the stationary jaw by the frame members, and a handle connected with the shank for rotating the same.

In testimony whereof we affix our signatures in the presence of two witnesses.

WILLIAM O. SINGER.
JOHN C. SINGER.

Witnesses:
KARL H. BUTLER,
MAX H. SROLOVITZ.