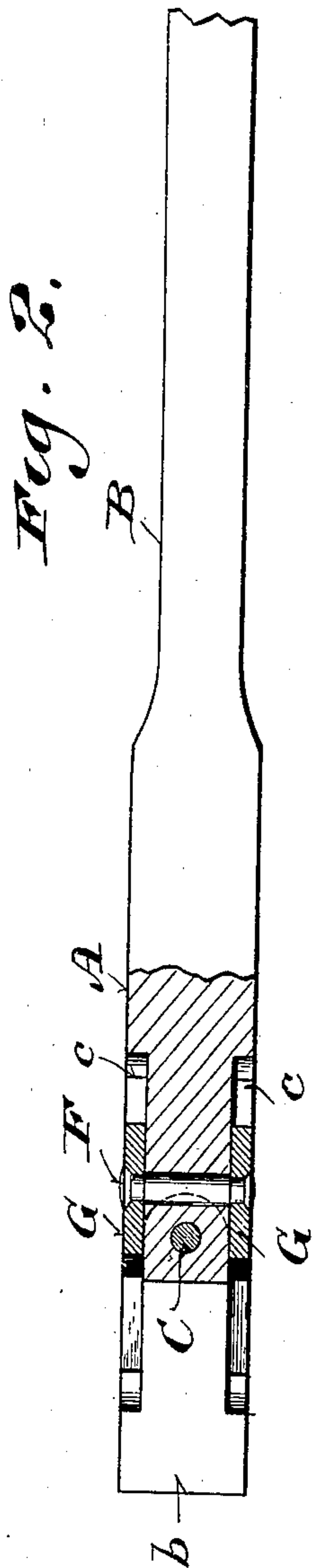
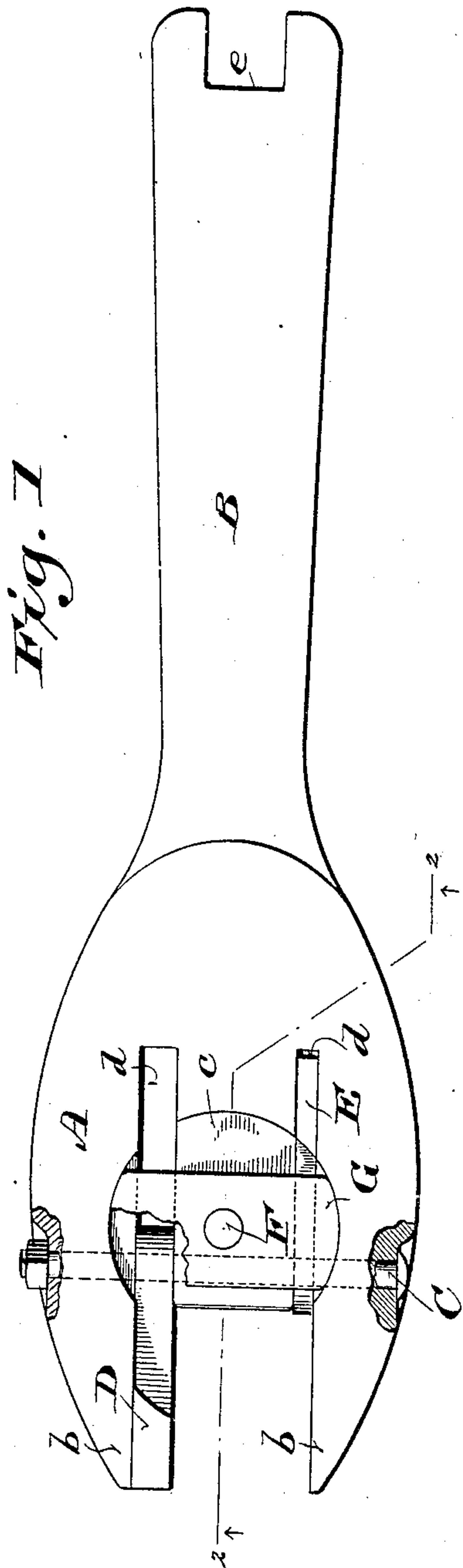


No. 835,254.

PATENTED NOV. 6, 1906.

O. REGNELL.
WRENCH.

APPLICATION FILED JUNE 25, 1906.



Witnesses:
George Felber.
Walter D. Hickman.

Invented:
Otto Regnell.
By Oliphant & Young.
Attorneys.

UNITED STATES PATENT OFFICE.

OTTO REGNELL, OF MILWAUKEE, WISCONSIN.

WRENCH.

No. 835,254.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed June 25, 1906. Serial No. 323,210.

To all whom it may concern:

Be it known that I, OTTO REGNELL, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein shown, described, and claimed, its object being to provide simple, economical wrenches, each having adjustable parts by which the maximum space between the jaws may be variously reduced, whereby the same wrench may be used on nuts or bolt-heads of different sizes.

Figure 1 of the accompanying drawings represents a side elevation of wrench in accordance with my invention, partly broken, and Fig. 2 a section view of the major portion of the wrench, this view being indicated by lines 2 2 in Fig. 1.

Referring by letter to the drawings, A indicates the head, and B the handle, of my improved wrench, said head and handle being integral and of suitable metal cast or forged. The head of the wrench is longitudinally recessed back of the space between the jaws *b*, one boundary of each recess being a continuation of the face-line of the adjacent jaw, and the sides of said head are provided with recesses *c*, each struck from a center in the solid middle portion of the tool between the longitudinal recesses *d* thereof. Extending through the wrench-head back of the jaws thereof is a pivot-bolt C, having a countersunk head, and a nut is run on the bolt into a countersink of said head. The pivot-bolt also extends through plates D E, that are normally wholly within the longitudinal recesses of the wrench-head, and these plates are recessed to correspond with the side recesses of said head.

A pivot-pin F turns in the solid portion of the wrench-head between the longitudinal recesses thereof, and preferably fast on the ends of this pivot-pin are turn-buttons G, engaging the side recesses *c* of said head, said pivot-pin being central of said recesses.

The jaws *b* of the wrench herein shown are one inch and one-quarter of an inch apart, and the pivotal plates D E are respectively one-quarter of an inch and one-eighth of an inch thick. The plate D being adjusted to the position shown in Fig. 1, the opening in the wrench-head is one inch wide; but if said

plate be in normal position and the plate E swung parallel to the adjacent jaw of the tool the opening aforesaid will be one inch and one-eighth of an inch in width. If both plates be swung on the pivot-bolt to be parallel to the jaws of the tool, the head-opening in said tool will be seven-eighths of one inch wide. The turn-buttons G are moved to stand longitudinally of the tool when either or both of the plates D E are to be adjusted, and said turn-buttons are moved back to their normal position in the side recesses of the wrench-head to lock said plates in adjusted position, either or both plates being in normal position or parallel to the jaws *b* aforesaid.

As shown in Fig. 1, the end of the wrench-handle B may be provided with a squared recess *e*, designed for the engagement of a nut or bolt-head of less size than can be grasped in the wrench-head A when both of the plates D E are adjusted and held parallel to the jaws *b* of the tool.

I claim—

1. A wrench having the head thereof longitudinally recessed back of the jaws and provided with side recesses each struck from a center between the former recesses, plates in pivotal connection with the wrench-head to normally engage the longitudinal recesses of same and provided with recesses corresponding to the side recesses of said head, each plate being adjustable to position parallel to a jaw of the wrench, and turn-buttons engageable with the side recesses of the aforesaid head and the recesses of said plates to hold the latter in adjusted position.

2. A wrench having the head thereof longitudinally recessed back of the jaws and provided with side recesses, a pivot-bolt crossing said longitudinal recesses, plates loose on the bolt to normally engage the longitudinal recesses of the wrench-head and provided with recesses corresponding to the side recesses of said head, each plate being adjustable to position parallel to a jaw of the wrench, a pivot-pin loose in the aforesaid head, and turn-buttons fast on the pivot-pin central of the side recesses of the aforesaid head.

3. A wrench having an integral head and handle, the handle being provided with a squared end recess and the head longitudinally recessed back of the jaws thereof and provided with side recesses each struck from a center between said longitudinal recesses,

plates in pivotal connection with the wrench-
head to normally engage the longitudinal re-
cesses of same and provided with recesses
corresponding to the side recesses of said
5 head, each plate being adjustable to position
parallel to a jaw of the wrench, and turn-
buttons engageable with the side recesses of
the aforesaid head and the recesses of said
plates to hold the latter in adjusted position.

In testimony that I claim the foregoing I 10
have hereunto set my hand, at Milwaukee, in
the county of Milwaukee and State of Wis-
consin, in the presence of two witnesses.

OTTO REGNELL.

Witnesses:

N. E. OLIPHANT,
GEORGE FELBER.