

(No Model.)

W. O'CONNELL, Jr.

WRENCH.

No. 253,089.

Patented Jan. 31, 1882.

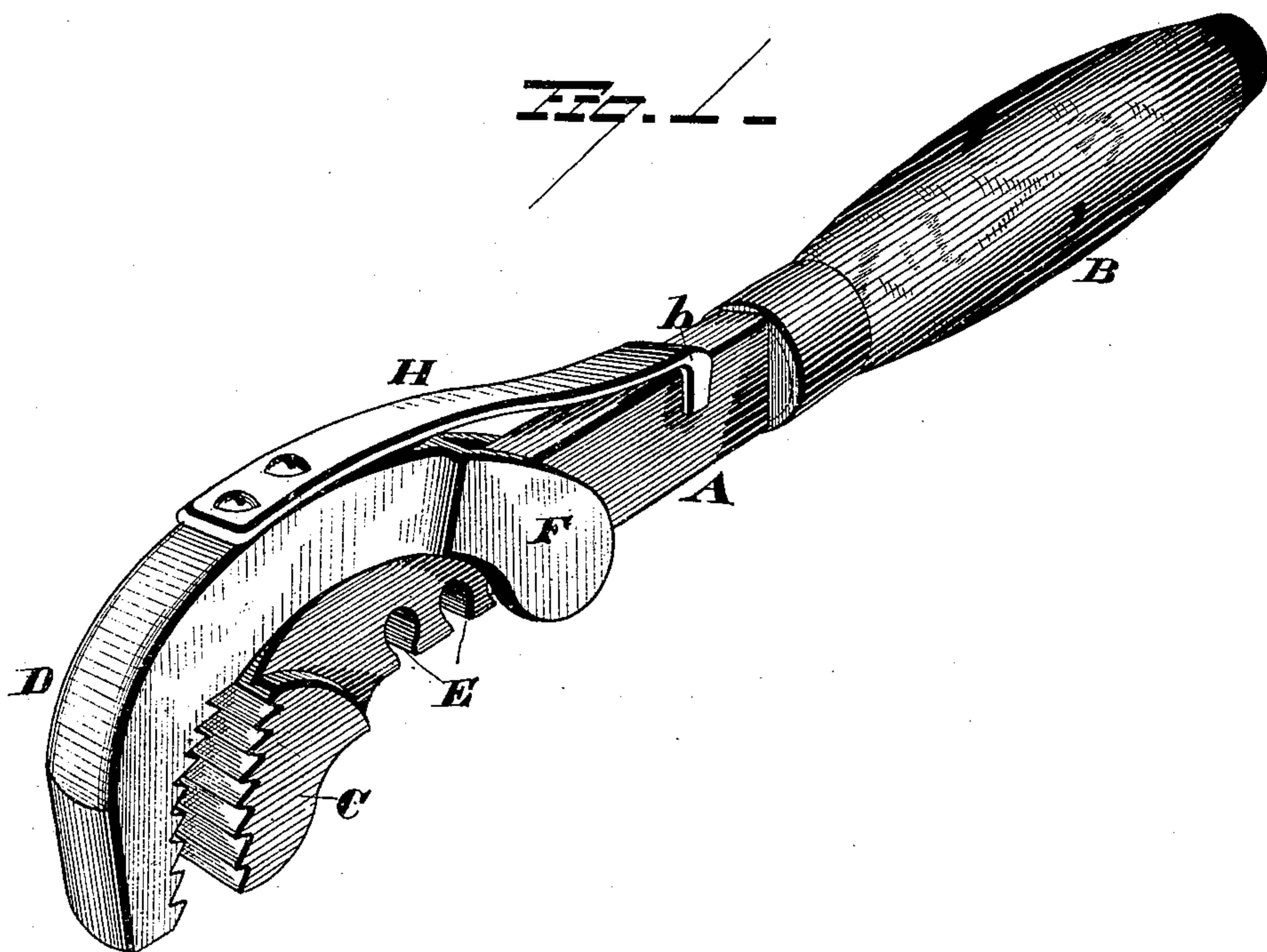
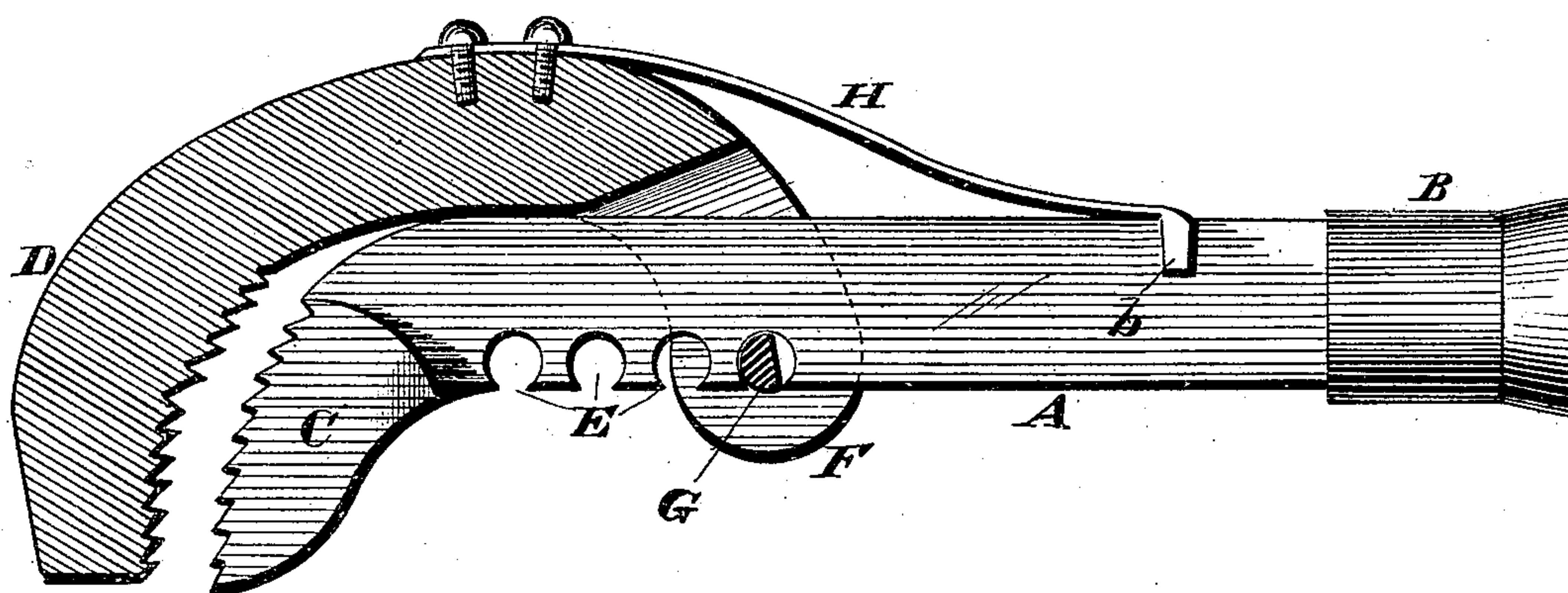


FIG. 1.



WITNESSES

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 253,089, dated January 31, 1882.

Application filed December 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O'CONNELL, Jr., of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain
5 new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the
10 same.

My invention relates to an improvement in wrenches; and it consists in certain details in construction and combinations of parts, as will be more fully explained, and pointed out in the
15 claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved wrench, and Fig. 2 is a side view, partly in section.

A represents the lever, provided at its lower
20 end with the handle B, and at its upper end with the convex jaw C, which latter is of greater width than the remaining portion of the lever, so as to present an enlarged bearing-surface of the pipe or bolt being operated on, and also
25 to form a stop or limit of the upward movement of the movable jaw D. This lever A is also provided with any desired number of slots E, which latter are situated on the front edge thereof, and instead of being in the shape of
30 half-circle, as generally made, they are formed at about two-thirds of a circle, and are adapted for the reception and retention of the fulcrum-pin G, of the same form. The movable jaw D is provided at its lower end with the arms F,
35 which latter are adapted to embrace the lever A and be secured thereon by the fulcrum-pin G, which latter is made in the shape of a two-thirds circle and of the same size as the slots E in the lever A, but capable of being forced
40 out of said slots. The movable or upper jaw is connected to the lever A, as above described, and instead of the biting portion thereof being concave to conform to the convex stationary jaw C, it is formed angular, as shown in the
45 drawings, so as to grasp the pipe or bolt at three distinct points, instead of at the center, which prevents the crushing of the pipe when more than ordinary force is required to be exerted thereon. This sliding jaw D is also pro-

vided with the flat spring H, which latter is
50 secured to the back of the movable jaw, and is adapted to bear and slide on the back edge of lever A. This spring H is provided with the ears or keeper b to hold it in proper position on the lever.

In order to adjust the wrench it is simply
55 necessary to force the upper end of the movable jaw D upward from the lever A, and at the same time exert sufficient downward pressure on the lower end of the same to force the ful-
60 crum-pin out of the notch in the lever when the smallest diameter of said pin is turned opposite the opening of the slots. When the pin G has been withdrawn from the slot in the lever the movable arm D is free to be moved up
65 or down until the proper position has been reached, when by releasing the said arm D the pin will be forced into the adjacent slot.

By means of my improvements the movable
70 jaw D is constantly kept in working position, and is not allowed to swing independently on its fulcrum, while the peculiar construction of the fulcrum-pin and slots renders it impossible for the fulcrum-pin to become accidentally
75 disengaged from the slot.

It is evident that slight changes in the construction of the different parts might be resorted to without departing from the spirit of my invention, and hence I would have it understood that I do not limit myself to the ex-
80 act construction of parts shown and described, but consider myself at liberty to make such changes as come within the spirit and scope of my invention.

Having fully described my invention, what I
85 claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the lever A, provided with the jaw C and slots E, the latter approximating a circle in form, of the movable
90 jaw D, having the arms F, adapted to embrace the lever A, and supporting the fulcrum-pin G, the latter being constructed with a short diameter to adapt the pin for insertion in said slots, and with a longer diameter to lock the
95 pin against removal, substantially as set forth.

2. The combination, with the lever A, having the jaw C and slots E, of the removable

jaw D, provided with the arms F, adapted to embrace the lever, the fulcrum - pin G, constructed to be inserted and turned within said slots, and thus locked therein, and the spring
5 H, secured at one end to the jaw D, while its opposite end bears upon the lever A, substantially as set forth.

In testimony whereof I have signed this

specification in the presence of two subscribing witnesses.

WM. O'CONNELL, JR.

Witnesses:

JOHN O'CONNELL,

WM. GOSMAN TROTTER.