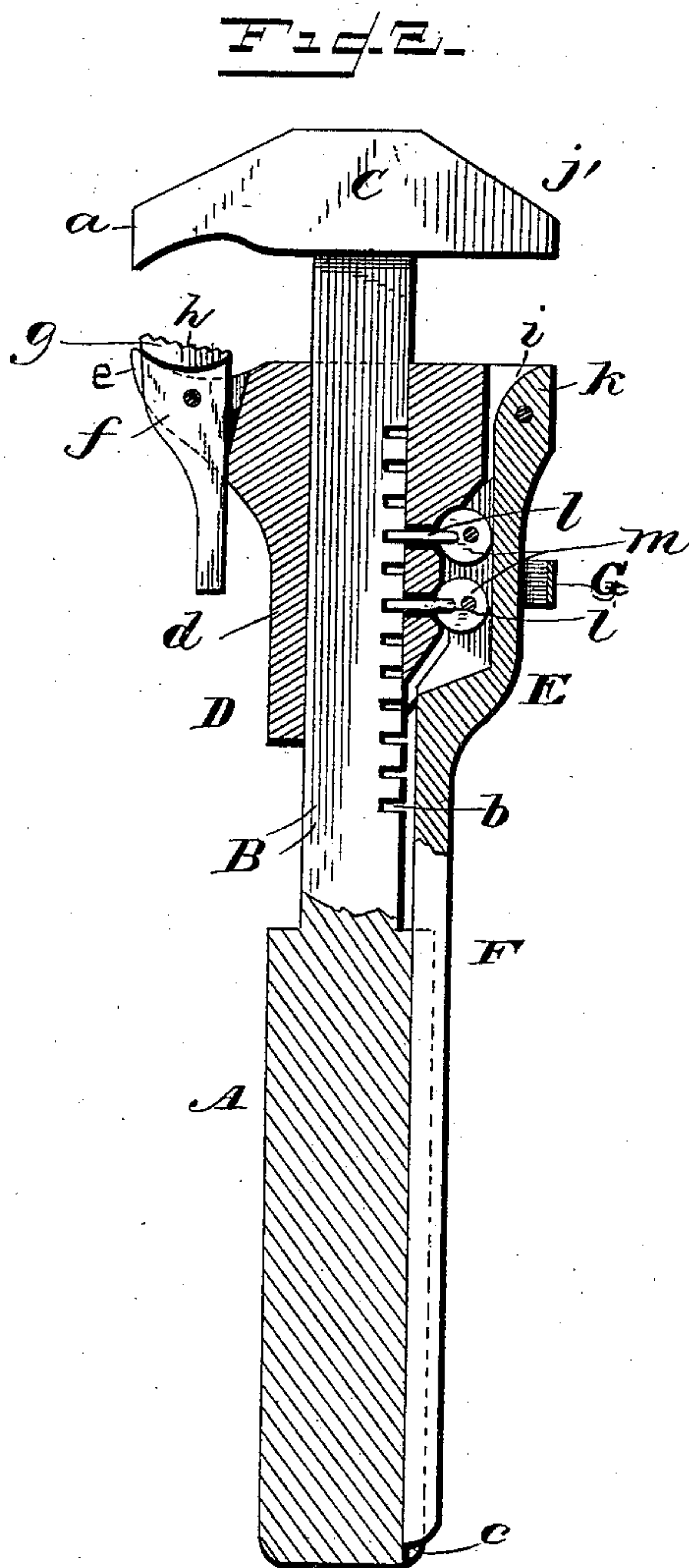
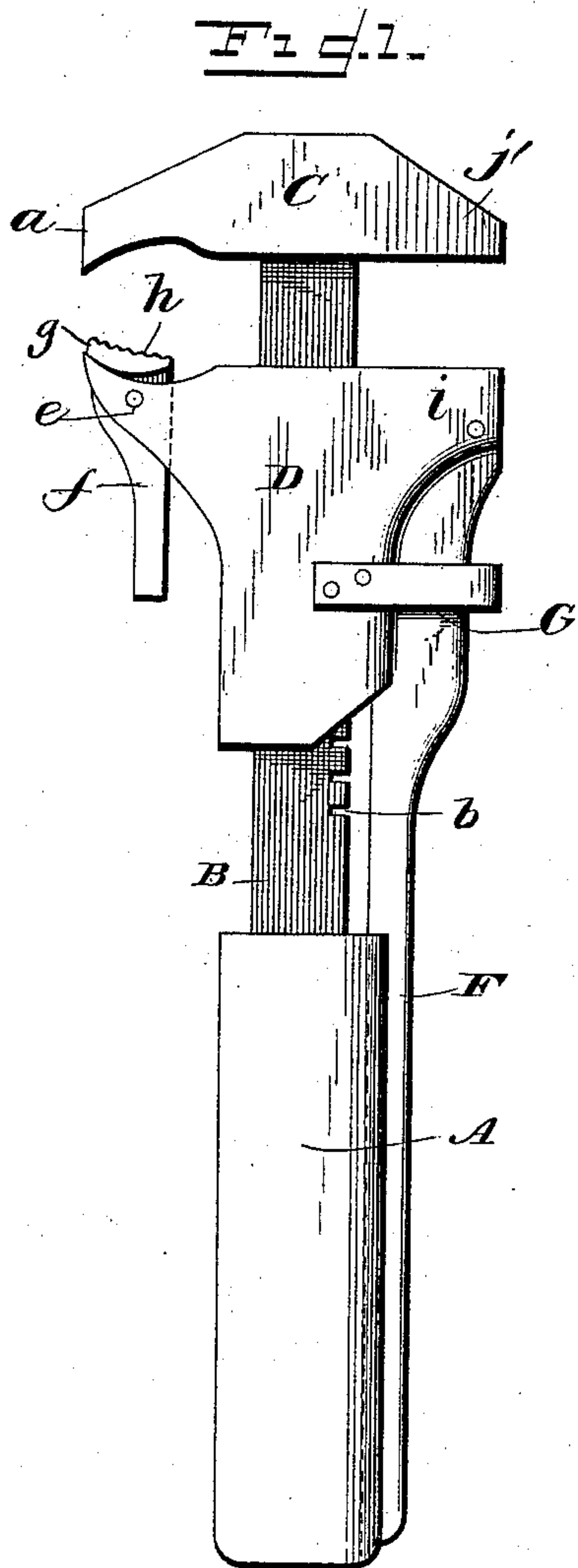


(No Model.)

J. H. BOWERS.
PIPE AND NUT WRENCH.

No. 347,157.

Patented Aug. 10, 1886.



WITNESSES
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JOHN H. BOWERS, OF MOUND CITY, MISSOURI.

PIPE AND NUT WRENCH.

SPECIFICATION forming part of Letters Patent No. 347,157, dated August 10, 1886.

Application filed May 27, 1886. Serial No. 203,442. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BOWERS, a citizen of the United States of America, residing at Mound City, in the county of Holt and State of Missouri, have invented certain new and useful Improvements in Pipe and Nut 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to pipe and nut wrenches; and it consists in the tool adapted to perform the functions of both, and constructed substantially as hereinafter set forth.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of my improved pipe and nut wrench, and Fig. 2 is a central vertical section of the same.

The body of the tool comprises a handle, A, extension or neck B, a rigid jaw, C, extending at either side of said neck, and recessed at one of its extended portions, *a*, to adapt said portion for use as one of the grasping portions of the pipe-wrench. One of the faces of the extension B is provided with a series of recesses, *b*, while the corresponding face of the handle A has formed thereon a vertical groove, *c*.

D refers to a casting mounted upon the neck B and designed to form the body portion for the movable jaw or jaws. The said casting is closed on its side *d*, on which end it has a projecting portion, *e*, recessed, as shown in Fig. 1, to coact with the pipe-jaw *a*, and vertically slotted for the reception of a dog, *f*, located in said slot and pivoted therein, the said dog *f* being serrated upon its upper projecting portion, *g*, in order to insure the pipe-jaws a firm grasp upon the article. By reference more particularly to Fig. 1 it will be noted that the projecting serrated portion *g* of the dog is of a greater transverse width than the slot in which said dog is pivoted, and the laterally-extending portions of the said serrated part are curved on their under face, as indicated at *h*, so that as said dog is vibrated upon its pivot the under curved faces of the serrated portion will at all times have a bearing upon

the curved faces of the projection *e*, so as to prevent any strain from being brought on the pivot of the dog. The said casting D is provided on its opposite side, at its upper part, with a projection, *i*, which forms the straight jaw, and is designed to coact with the straight jaw *j'* above. The said straight jaw is provided with a vertical slot, in which is pivoted the tongue *k*, formed upon the upper end of a vertical lever, F, the upper end of which is provided with a vertical recessed portion, in which are pivotally attached the enlarged ends of the catches *m*, each of said catches having plates *l l*, which extend therefrom and pass through openings formed parallel with each other in the adjacent face of the casting D. The lower end of the lever F is so formed that it can readily enter the vertical slot *c* in the handle A.

A metal yoke or strap, G, has its ends secured to the sides of the casting D, and passes around the upper portion of the lever F, so as to limit the vibration of the latter upon its pivot.

In operation the lever is swung outward upon its pivot, causing the catches *m* to be withdrawn flush with the inner face of the end portion of the casting D, which limited movement is insured by the arrangement of the yoke G, which only permits the outward movement to such an extent as is required to effect the said withdrawal of the plates *l l*. The casting D, with its lever, may then be adjusted to any required position upon the neck B, after which the lower part, *f*, of the lever may be pressed into the recess *c*, causing the catches *m* to be projected beyond their slots, so as to enter and engage two of the recesses *b* on the adjacent face of the neck B, thereby firmly and positively locking the casting upon said neck. As will be readily noted from the figures in the drawings, the end portion, F, of the lever occupies the slot *c*, so as to enable said end portion and the handle A to be grasped by one hand and held firmly together, so as to resist any tendency of the catches from being forced out of engagement with the notches *b*.

It will be obvious that I may employ as many catches *m* as desired, in order to strengthen the locking devices.

I claim—

1. The combination, in a wrench, of the handle provided with a neck-extension, notched, as described, a rigid jaw located at the end of said neck-extension, a casting mounted on said neck-extension, and having a recessed lever pivoted to said casting, catches *m*, pivotally mounted in the recess of said lever and adapted to pass through openings in the casting to engage the notches on the neck, substantially as set forth.

2. The combination, in a wrench, of a handle having a neck-extension, notched, as described, and provided at its end with a rigid jaw, of a casting presenting a movable jaw, and having a lever pivoted thereto, a recess formed in said lever, plates pivoted in said recess and extending into slots formed in the casting, and a yoke, *G*, secured to the casting

to limit the movement of said lever, substantially as set forth.

3. The combination, in a wrench, of a handle having a notched neck-extension, provided at its upper end with a rigid jaw, of a casting presenting a movable jaw and having parallel slots, a lever pivotally secured to said casting, and plates pivotally attached to said lever and extending into said slots to engage the notches of the neck, and a vertical slot, *c*, formed in the handle to receive the lower end of the lever, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. BOWERS.

Witnesses:

JAMES A. CRISNELL,
SAML. GLICK.