(No Model.)

J. W. CALEF.

PIPE CUTTER AND TONGS.

No. 272,526. Patented Feb. 20, 1883.

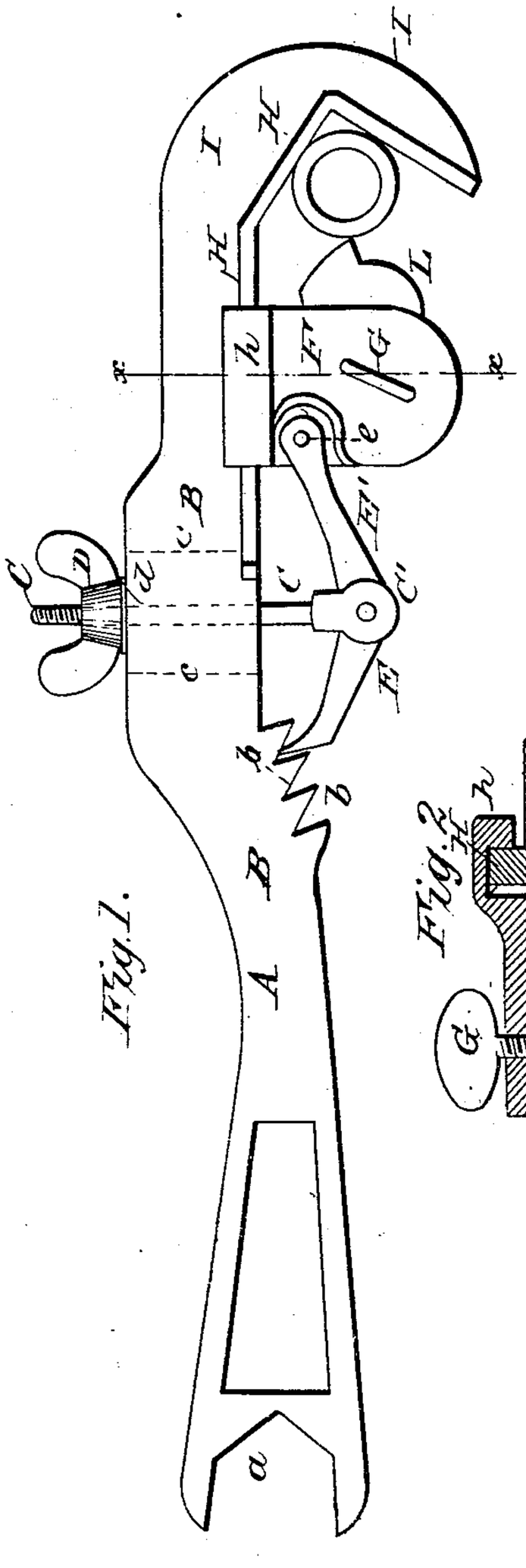

Fig. 1.

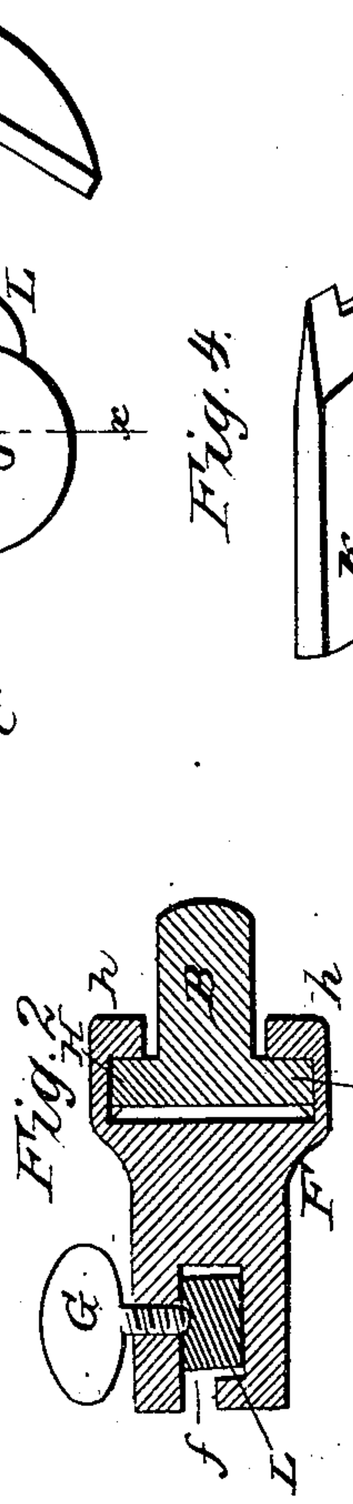

Fig. 2.

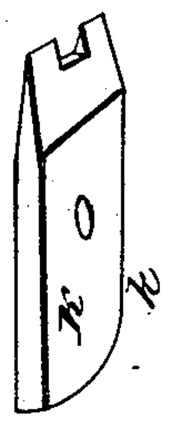

Fig. 4.

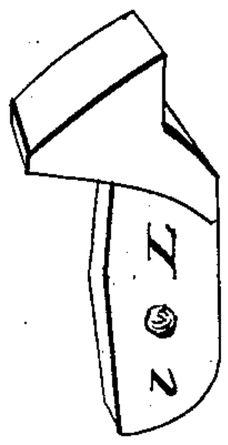

Fig. 5.

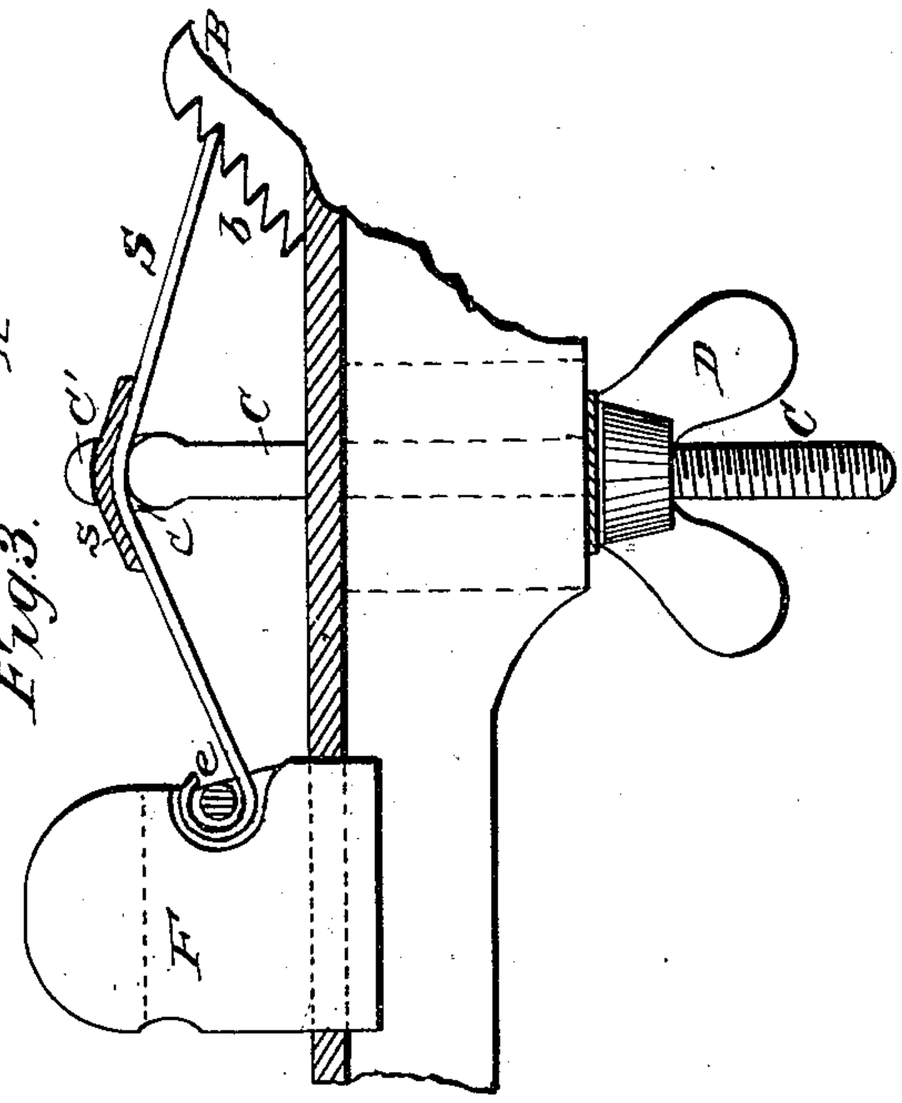

Fig. 3.

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JOSEPH W. CALEF, OF NORTH EASTON, MASSACHUSETTS.

PIPE CUTTER AND TONGS.

SPECIFICATION forming part of Letters Patent No. 272,526, dated February 20, 1883.

Application filed January 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. CALEF, of North Easton, in the county of Bristol and State of Massachusetts, have invented certain new and useful improvements in Pipe Cutters and Tongs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to implements for cutting gas and other pipe, which are also adapted to be used as pipe-tongs as well as wrenches for turning nuts; and it consists in the detailed construction and combination of parts of a tool or implement of that class as hereinafter more fully set forth, whereby I obtain very considerable "purchase" on the pipe or nut operated upon, besides constructing the entire implement in a simple and inexpensive manner.

In the accompanying drawings, Figure 1 is a side view of my combined pipe cutter and tongs. Fig. 2 is a cross-section through the same on line *x x*, Fig. 1. Fig. 3 is a sectional detail view, representing a somewhat modified construction of the tool or implement. Fig. 4 is a perspective detail view of the cutter-bit, and Fig. 5 is a similar view of the pipe-tongs bit.

Like letters of reference indicate corresponding parts in the several figures.

A is the handle, the lower end of which is cut out at *a* to form a wrench or spanner with fixed jaws, adapted to engage a square or hexagonal nut.

B is the stem or shank of the wrench, which is, by preference, cast or forged in one piece with the handle, and has a series of offsets or steps, forming notches *b*, on one side. The wide part of the stem above these offsets is slotted longitudinally, as indicated by the dotted lines *c c* in Figs. 1 and 3, forming an opening for the insertion of a bolt, C, the outer threaded end of which is provided with a thumb-nut D and washer *d*, while its inner end has a bifurcated head, C′, in which are pivoted the two arms of a toggle-joint, E E′. The upper arm, E′, is articulated in the sliding bit-block F at *e*, while the free end of the lower arm, E, is adapted to engage any one of the notches *b*. Block F is slotted vertically to form a recess, *f*, adapted to receive a removable bit or jaw of suitable construction, which is held in place by a thumb-screw, G, inserted through one of the sides of the block. The latter is made with wings or flanges *h*, which slide upon guide-flanges H on the body of the wrench, said flanges being continued along the top part or head, I, of the wrench for the purpose of re-enforcing the same, as well as forming a broader bearing-surface than that afforded by the thickness of the head itself. I prefer to construct the head of the shape shown in the drawings, so as to form an angular fixed jaw above and adapted to engage with the adjustable bit-block F.

If desired, a spring (shown at S in Fig. 3) may be substituted for the toggle-joint E E′, in which case bolt C C′ is articulated to the middle part of the spring by inserting the latter through the slotted head C′ and holding it in place by a bent plate or cap-piece, *s*, which is firmly wedged or otherwise fastened in slot *c* back of the spring. The upper part of the spring is bent to form an eye or hinge around the pin *e* in the lower part of the bit-block, while its free end is adapted to engage the notches *b* in like manner as the free arm E of the toggle-joint.

In the accompanying drawings I have shown two forms of bits—viz., a cutter-bit, K, (shown in Fig. 4,) and a jaw-bit, L, (shown in Fig. 5;) but as it is obvious that bits of different construction and varying greatly in construction, according to the purposes for which the implement is to be employed, may be used, I do not limit myself to any particular shape or style of bit. The shanks *k* and *l* of the several bits should, however, be of the same size, so as to fit the bit-recess *f* in the adjustable bit-block F.

From the foregoing description, taken in connection with the drawings, the manner of using the implement will readily be understood. The position of the bit-block with its jaw or bit is adjusted, in the first instance, by loosening the thumb-nut D and placing the lower arm of the toggle joint or spring, as the case may be, in its appropriate notch, after which it is further adjusted by turning thumb-nut D until the jaw or bit, as the case may be,

engages or bites the pipe, rod, or nut held between the fixed head or jaw I and the bit-block. There is no possibility of the bit and bit-block "slipping" after it has once been properly adjusted, and this adjustment may be effected with the greatest nicety and accuracy in a moment of time, and in such a manner as to obtain the greatest possible amount of force or pressure against the pipe or nut operated upon.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The wrench-stem B, having notches *b*, handle A, angular head I, flanges H, and a slotted part or "breast" between the notches *b* and lower end of the flanges H, substantially as and for the purpose herein shown and described.

2. The combination of the slotted wrench-stem A B, having notches *b*, threaded bolt C C′, thumb-nut D, sliding bit-block F, adapted to receive a removable bit or jaw, and toggle-joint E E′ or its described equivalent, constructed and combined substantially as and for the purpose herein shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOSEPH WARREN CALEF.

Witnesses:

CHARLES F. DARLINGTON;

BENJAMIN F. EDSALL.