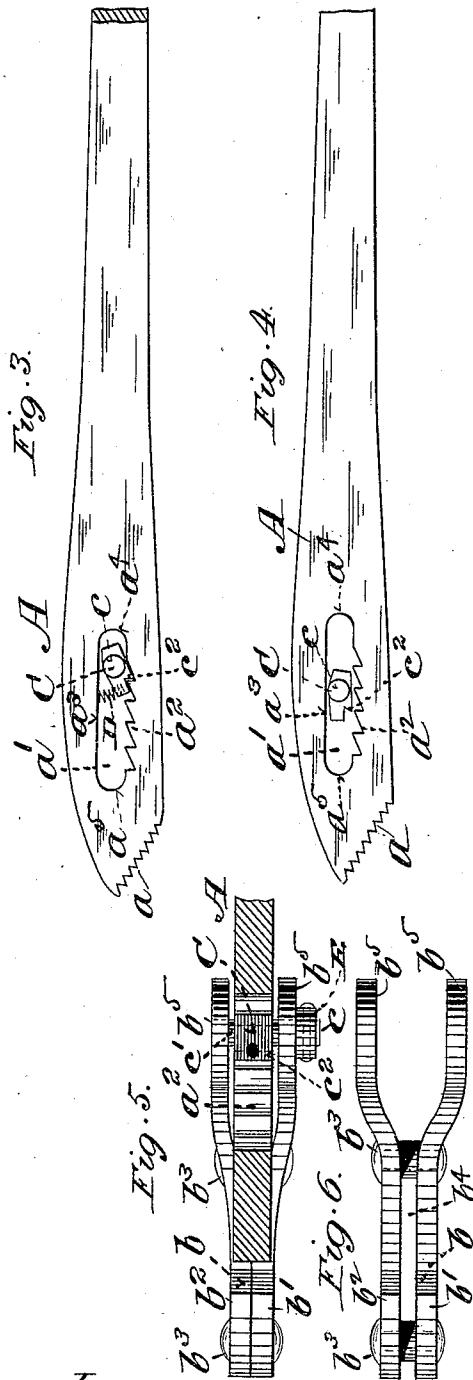
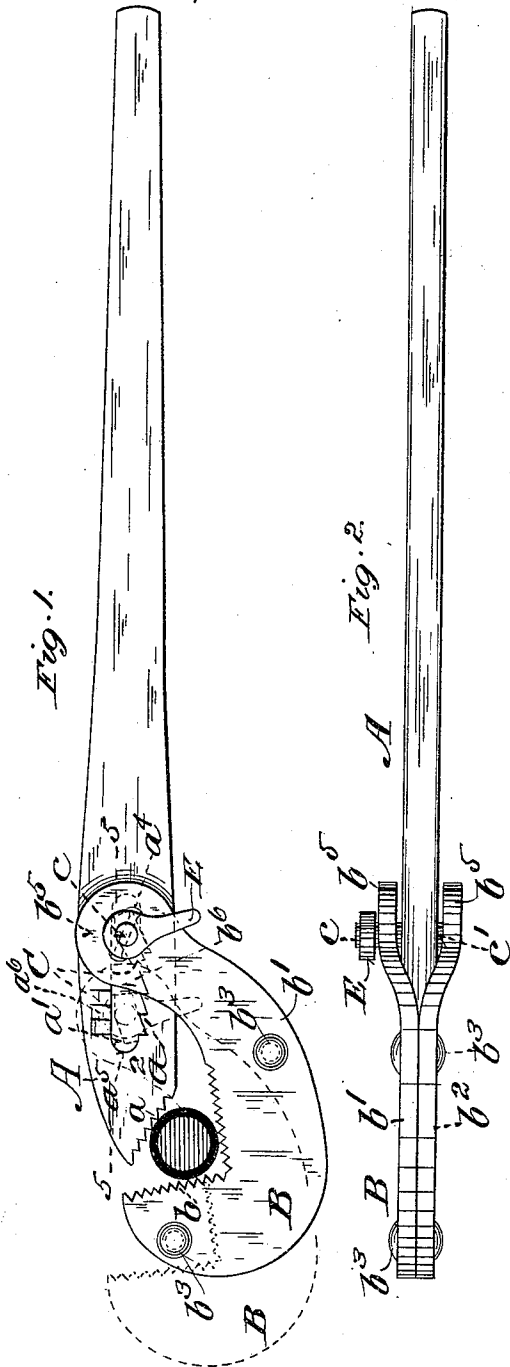


(No Model.)

C. F. SPERY.
PIPE TONGS.

No. 466,195.

Patented Dec. 29, 1891.



WITNESSES
Edward W. Lunnell
A. Bonville

INVENTOR
Charles F. Sperry
by C. D. Moody
his atty

UNITED STATES PATENT OFFICE.

CHARLES F. SPERY, OF HERMANN, MISSOURI.

PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 466,195, dated December 29, 1891.

Application filed October 19, 1891. Serial No. 409,160. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. SPERY, of Hermann, Missouri, have made a new and useful Improvement in Pipe-Tongs, of which the following is a full, clear, and exact description.

The improvement relates more especially, but not exclusively, to that class of pipe-tongs or wrenches in which a movable and a relatively fixed jaw are used; and it has reference mainly to the means whereby the tool is readily adjusted to smaller or larger pipes, all substantially as is hereinafter described and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the improved tool; Fig. 2, an edge elevation of the same, looking toward the back of the movable jaw; Fig. 3, a side elevation of the fixed jaw, including the pawl used in locking and unlocking the jaw, the view showing the pawl in engagement with the jaw; Fig. 4, a view similar to that of Fig. 3, but showing the pawl adjusted to free the jaw; Fig. 5, a sectional plan on the line 5 5 of Fig. 1, showing the pawl in top view and the adjacent parts in section; and Fig. 6, a modification of the movable jaw.

The same letters of reference denote the same parts.

Saving as modified or supplemented by the improvement under consideration, the tool is of the usual construction. The fixed jaw A is finished in the usual manner at that part a of it which is applied to the pipe, but at a' it is slotted, the slot extending sidewise through the jaw and in the direction of the length of the jaw sufficiently to provide for the various adjustments of the movable jaw with relation to the jaw A, substantially as shown, and being ratcheted at a^2 , substantially as shown. The movable jaw B is connected with the jaw A by means of the pawl C, said pawl at its ends c c' being journaled in the jaw B, and its tooth or point c^2 , working within the slot a' , and being adapted to coact with the ratchet a^2 , and so that when the pawl is turned to engage with the ratchet the movable jaw is held from longitudinal movement in the slot a' of the fixed jaw; but when the pawl is turned out of the

ratchet the movable jaw is free to be shifted upon the fixed jaw to provide for a wider or a narrower opening, as may be desired, between the faces a and b , respectively, of the jaws. While I prefer the precise construction shown in the respect immediately under consideration, I desire not to be restricted thereto nor to any particular form of pawl-and-ratchet mechanism, so long as the movable jaw can be adjusted to be pivotally held at any point along the length of the slot in the fixed jaw.

A spring D or other equivalent means may be used to insure the engagement of the pawl with the ratchet, saving when it is desired to adjust the movable jaw. In the present instance one end of the spring presses upon the point of the pawl and the opposite end of the spring against the opposite side a^3 of the slot.

Any suitable means—such as the handle E, applied to the end c of the pawl—may be used in turning the pawl when it is desired to hold its point out of engagement with the ratchet.

The movable jaw B is of a suitable form to coact with the fixed jaw for the purposes of a pipe-wrench, and it is journaled, as stated, upon the part which connects it with the fixed jaw to enable that jaw to coact with the movable jaw in grasping and releasing the pipe or other object being operated upon. Instead, however, of making it of a single piece, it is preferably composed of two plates b' b^2 , of substantially similar shape, placed side by side and secured together by means of rivets b^3 or other suitable fastenings. Several advantages accrue from this mode of construction. It is important that the metal of which the movable jaw is composed be as free as possible from defects, and by making the jaw in layers, so to speak, defects in the metal, such as referred to, can be more readily detected than when the jaw is composed of a single piece. The jaw can also be readily widened more or less by placing said layers or plates closer together or farther apart, as indicated by the spacing b^4 in Fig. 6, without materially altering the weight of the jaw. The jaw can also be readily adapted to the fixed jaw A by simply spreading the portions b^5 b^5 of the plates b' b^2 , respectively, apart, so as to enable the jaw A to be received between

them. Furthermore, the cost of manufacturing the movable jaw is materially reduced when made in the manner described.

Fig. 1 illustrates the operation of the device. When it is desired to use the tool upon a smaller pipe or object, the jaws are relatively adjusted as shown in the full lines—that is, with the movable jaw connected with the fixed jaw at or toward the end a^4 of the slot in the fixed jaw—and when it is necessary to operate upon a larger pipe or object the jaws are relatively adjusted as indicated in the broken lines in that figure—that is, with the movable jaw connected with the fixed jaw at or toward the end a^5 of the slot. To facilitate the described relative adjustment of the jaws, the jaw A may have a graduation or marking a^6 thereon, whose lines conform, respectively, with the different openings possible between the faces a and b , respectively, of the jaws. By moving the jaw B upon the jaw A to bring, say, the edge b^6 of the jaw B opposite a certain line in the graduation re-

ferred to the operator has thereby adjusted the jaw to the opening corresponding to the line in question and similarly with regard to the other lines of the graduation.

I claim—

1. The combination of the fixed jaw having the ratcheted slot, the pawl, and the movable jaw, said movable jaw being journaled upon said pawl, substantially as described.

2. The movable jaw having a pawl journaled therein, in combination with the fixed jaw having a ratchet for said pawl to engage in, for the purpose described.

3. The combination of the movable jaw, the pawl, and the fixed jaw, said last-named jaw having the ratcheted slot, and the marking, substantially as described.

Witness my hand this 10th day of October, 1891.

CHARLES F. SPERY.

Witnesses:

CHAS. D. MOODY,
A. BONVILLE.