

No. 646,086.

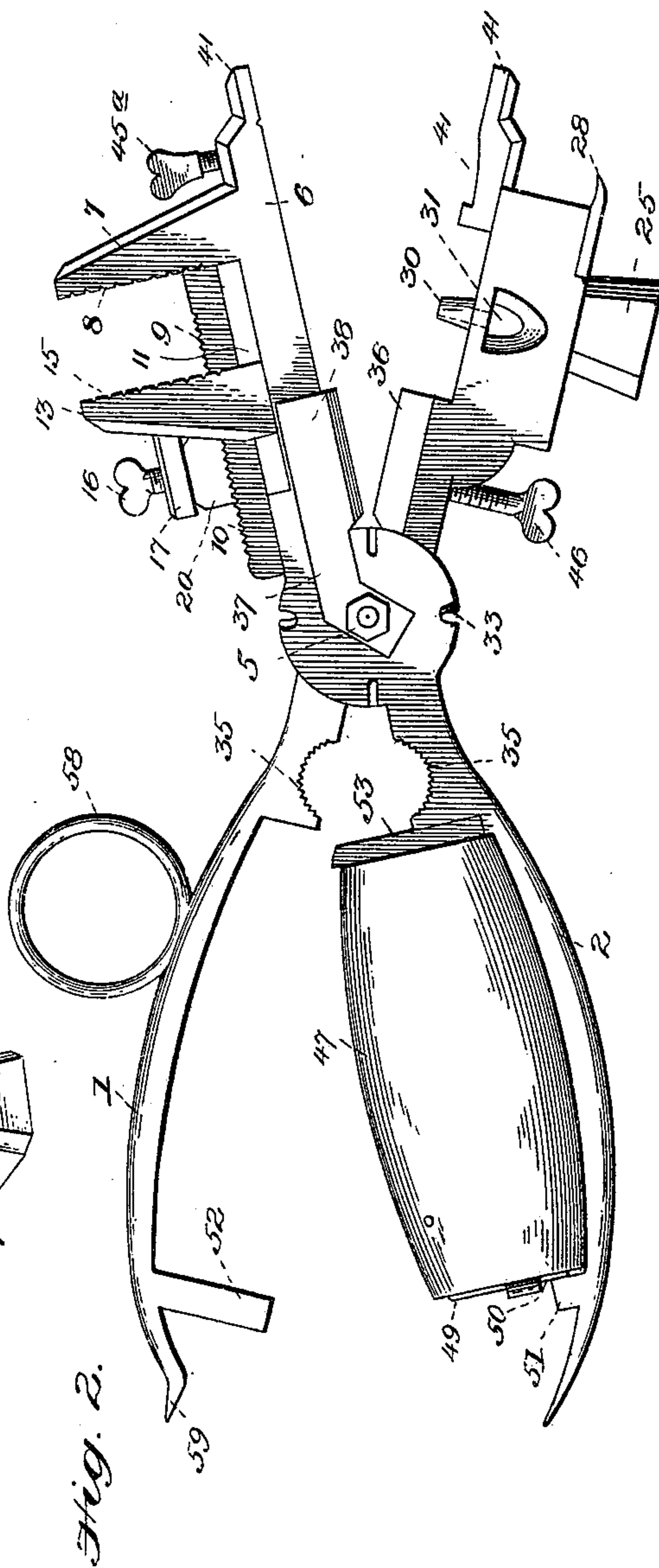
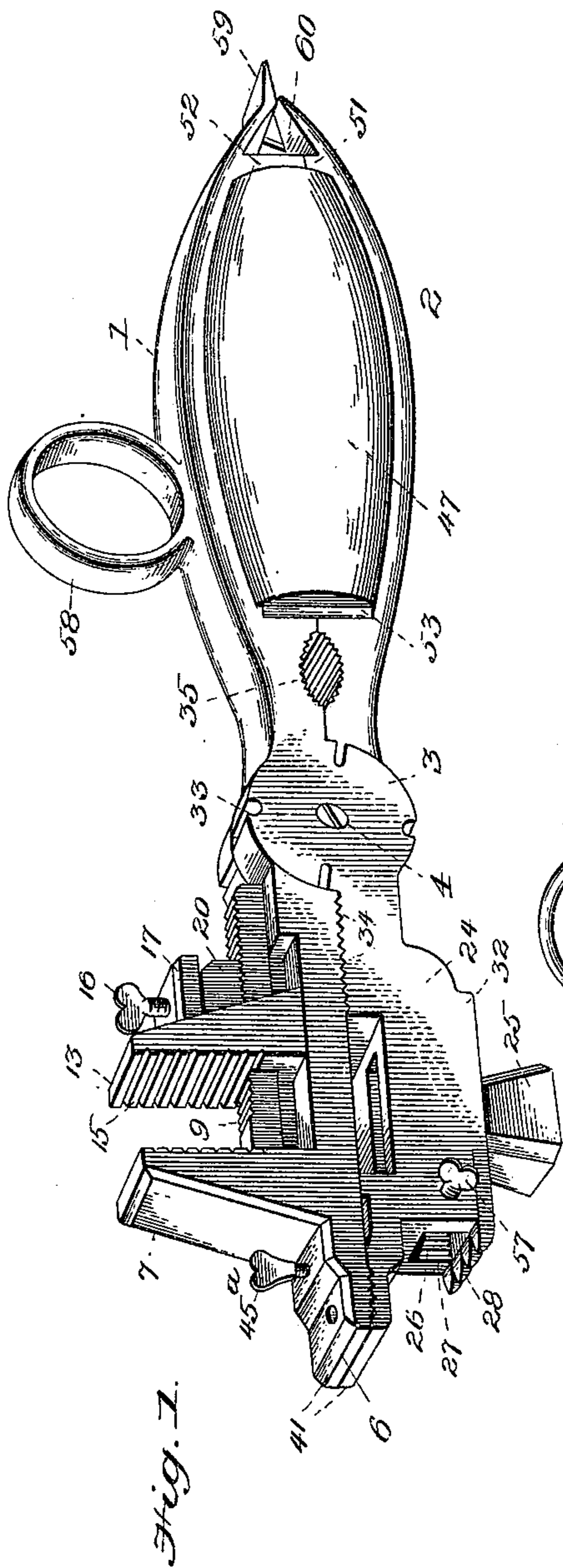
Patented Mar. 27, 1900.

J. T. VILES
WRENCH.

(Application filed Feb. 15, 1898.)

(No Model.)

2 Sheets—Sheet 1.



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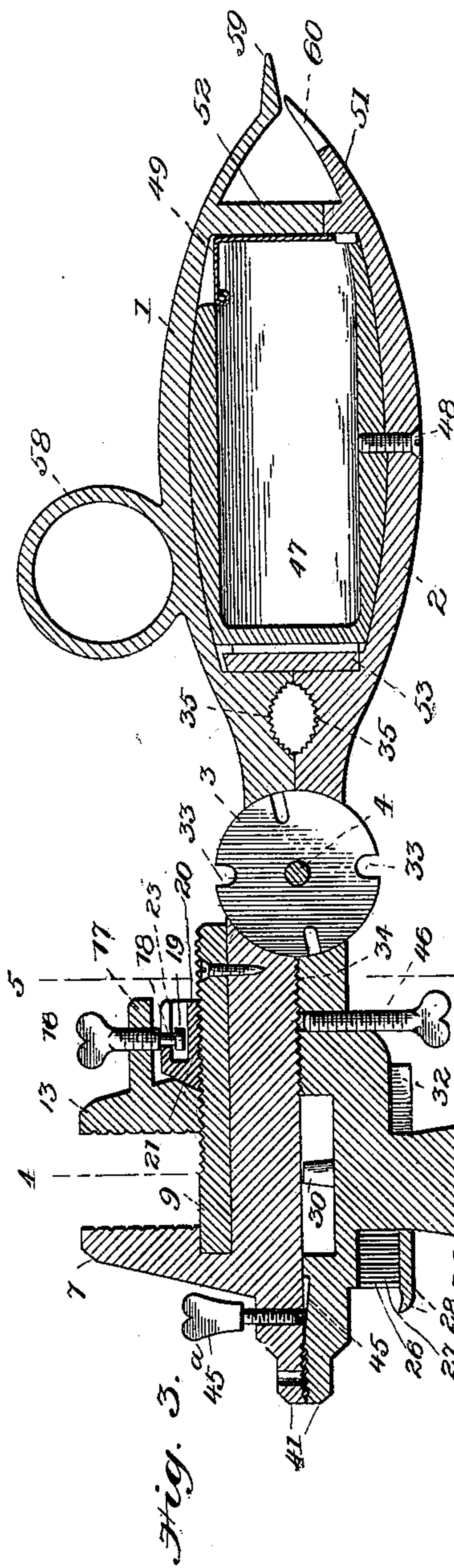


Fig. 3.

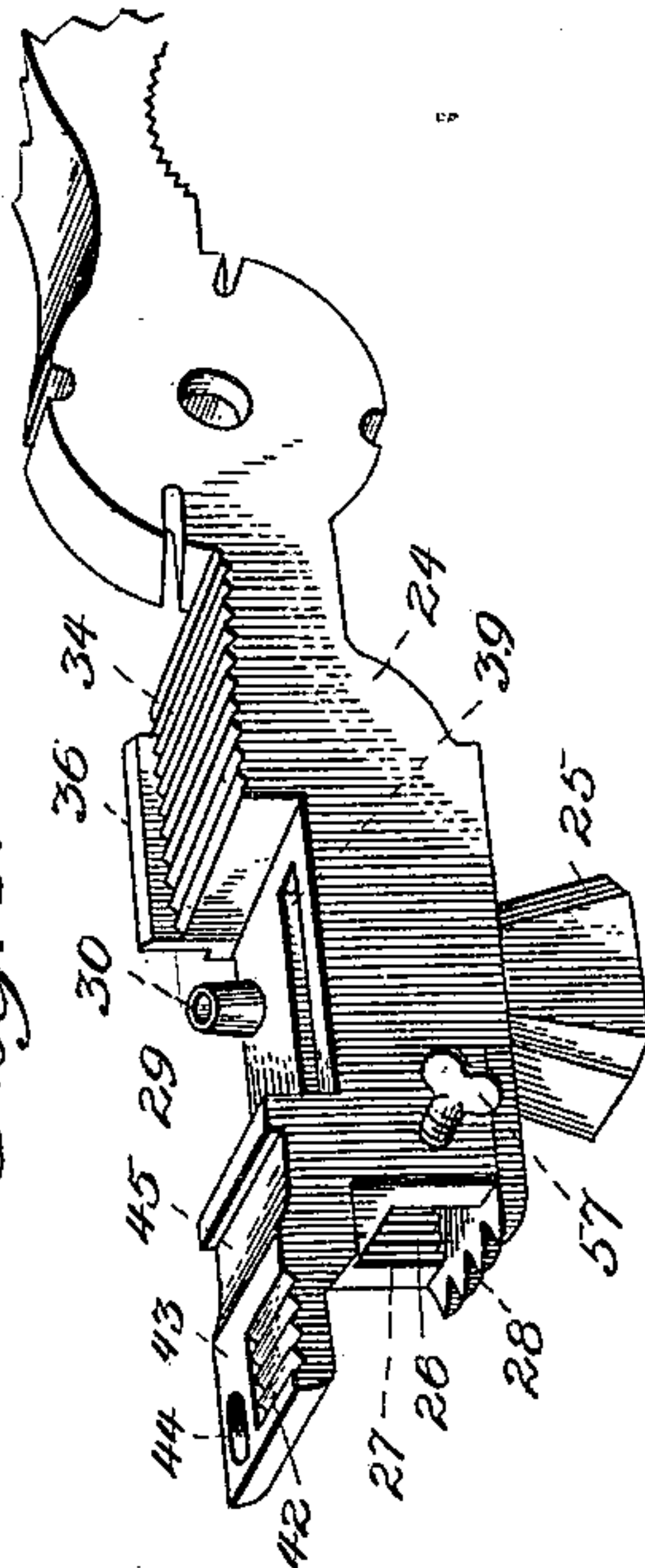


Fig. 6.

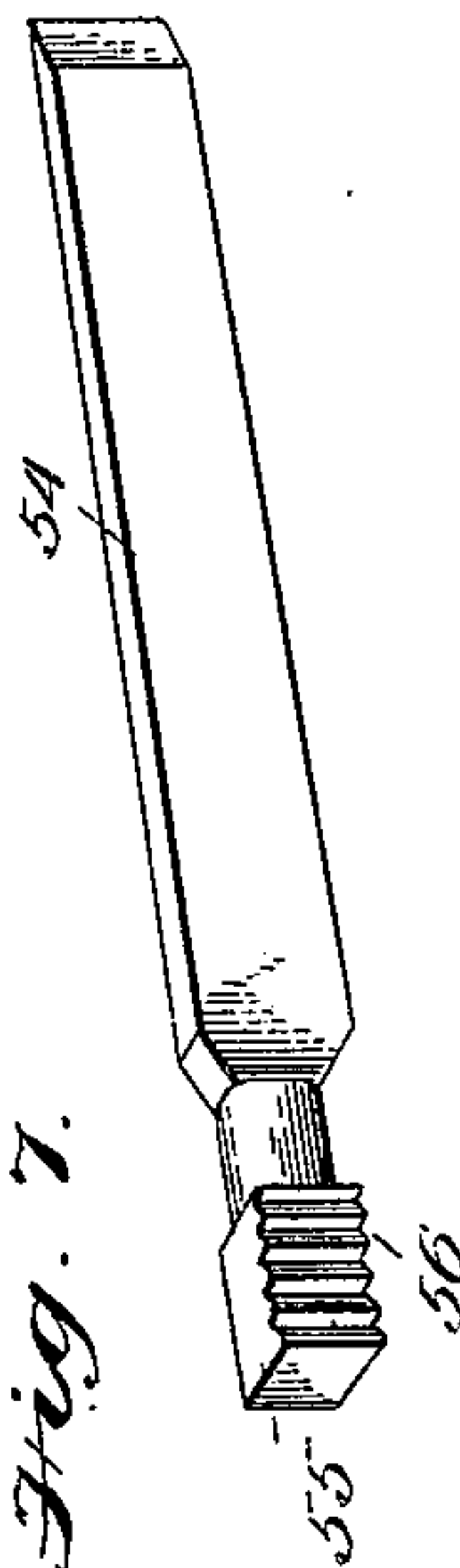


Fig. 7.

Fig. 5.

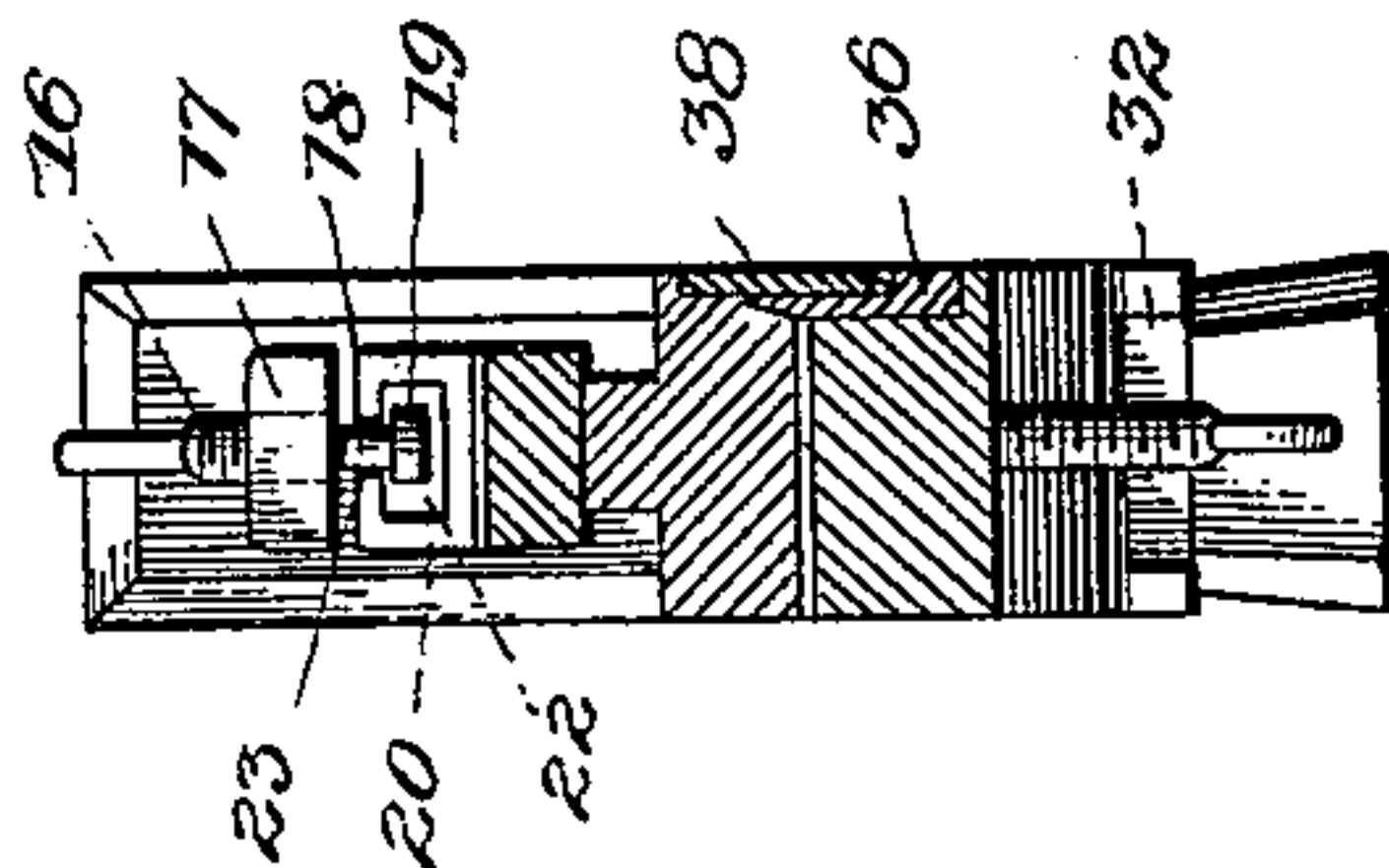
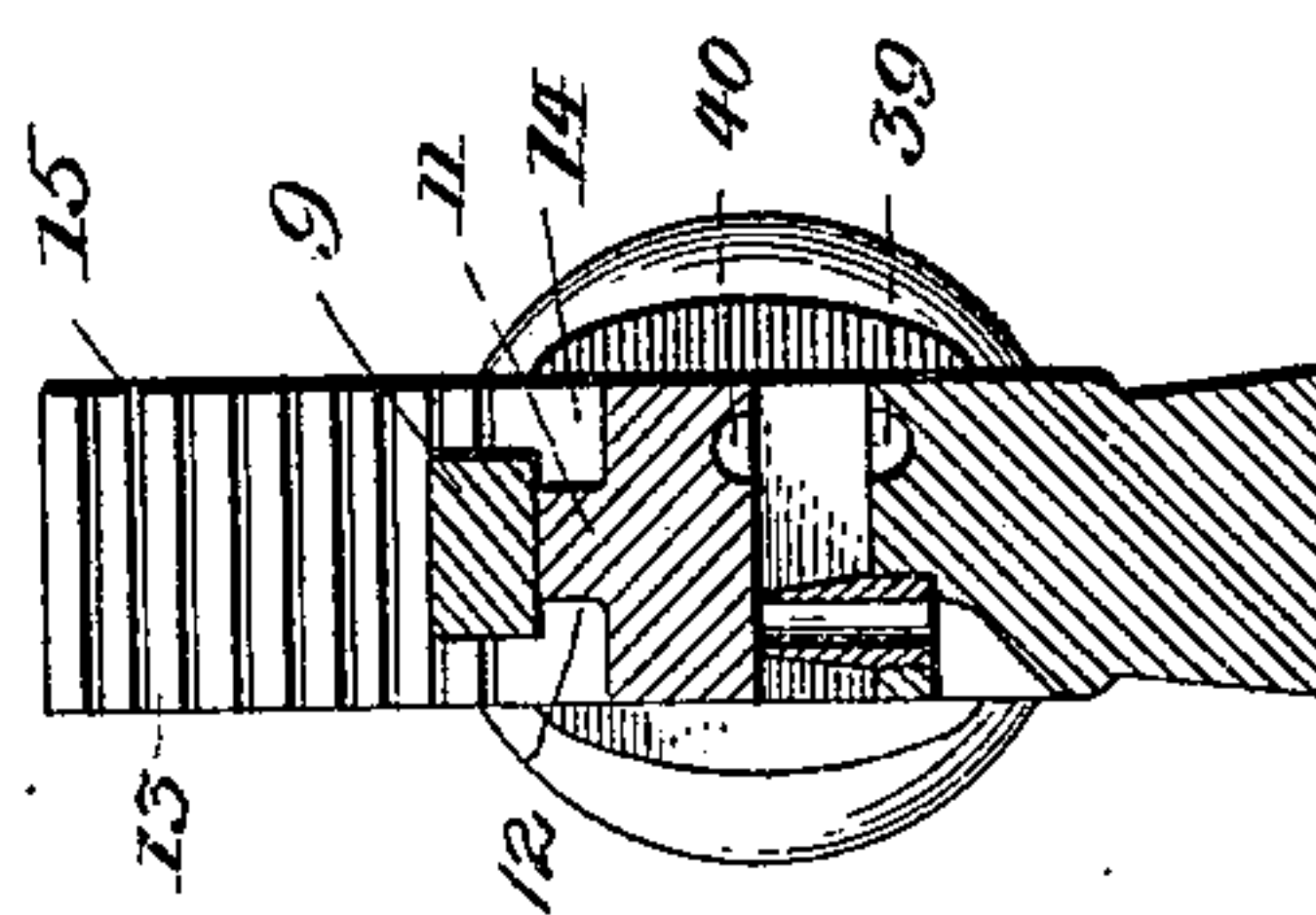


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH T. VILES, OF ST. JOSEPH, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOHN V. SWEARINGEN, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 646,086, dated March 27, 1900.

Application filed February 15, 1898. Serial No. 670,341. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. VILES, a citizen of the United States, residing at St. Joseph, in the county of Champaign and State of Illinois, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to improvements in wrenches, and has for its object to improve this class of devices.

10 With the above object in view the invention consists of the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the appended claims.

15 In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

25 Figure 1 is a perspective view of my improved device. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a vertical transverse sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a similar view taken on the line 5 5 of the same figure. Fig. 6 is a detail perspective view of one of the jaws, and Fig. 7 is a detail view of a screw-driver adapted to be carried by the device.

Like numerals of reference mark the same parts wherever they occur in the various figures of the drawings.

35 Referring to the drawings by numerals, 1 and 2 indicate, respectively, the handle portions of the two members of the tool, having at the forward ends thereof the circular plates 3, through which the screw-bolt 4 passes and pivotally secures said members together, said bolt receiving the nut 5 on its opposite end. A jaw 6 is carried by the plate 3 on the opposite side of the pivotal point from handle 2, said jaw 6 having on its outer side a transversely-extending jaw 7, which is serrated at 8, said jaw constituting the fixed jaw of the monkey-wrench.

45 Secured upon the outer side of jaw 6 is a longitudinally-extending bar 9, provided on its upper surface with the transversely-extending teeth or serrations 10, said bar pro-

jecting at its edges beyond the edges of the raised portion 11, to which it is secured, so as to form guideways 12. A movable jaw 13 is slotted to receive the bar 9, upon which it is movable, and is formed with the inwardly-extending lugs 14, which move in the guideways 12, said jaw being serrated on its inner face, as illustrated at 15. For retaining this movable jaw in the desired position I provide the set-screw 16, which extends through an arm 17, carried by the outer side of jaw 13, said screw being reduced adjacent its lower end, as illustrated at 18, and provided with the head 19.

20 is a clamp-block having its under surface serrated, as illustrated at 21, and contacting with the serrated surface of the bar 9 and formed with a recess 22 to receive the head 19 of the screw and with a slot 23 for the reception of the reduced portion 18 of said screw. It will be understood that the sliding jaw may be clamped in any desired position by adjusting the screw 16 to force the clamping-block into engagement with the notched bar. This construction constitutes a very simple and convenient monkey-wrench.

Formed on the plate 3, carried by the handle portion 1, is a jaw 24, having on its outer side the hammer portion 25 and in its outer end having the inwardly-extending recess 26, which has one of its walls serrated, as illustrated at 27. Extending from the forward portion of said jaw at the outer wall of the recess are the teeth 28, which constitute a tack-drawer, the hammer being used as a fulcrum when the tack-drawer is operated. The jaw 24 is cut out on its inner side intermediate its ends, as illustrated at 29, and positioned in said cut-out portion is the tubular punch 30, which communicates with a recess 31, formed in the side of the jaw, so that the leather cut out by said punch passes into the recess in the jaw and falls therethrough, so that said punch does not become clogged up.

Formed on the outer side of jaw 24 and extending rearwardly through the hammer portion are the flanges or lugs 32, which constitute a wrench which may be used with small nuts.

The plates 3 are provided about their pe-

ripheries with different-sized slots or openings 33, the meeting edges of the openings in the respective plates being sharpened, so that when said plates are moved to cause the openings to register and wire placed within the registering openings said wire may be cut by operating the handle portions so that the openings in one of the plates are moved across those in the other. The openings or slots being of different sizes, different sizes of wire may be accommodated thereby, the above construction constituting a very simple construction of wire-pliers.

The flat portions of the jaws of the wrench adjacent the plates are serrated, as illustrated at 34, and constitute pincers, while the meeting surfaces of the handle portions adjacent said plates are formed with curved serrated recesses 35 to engage and hold bolts or small pipes, the same constituting a pipe-wrench.

Secured to the jaw 24 at the upper edge thereof and at one side of the pincer portion 34 is a cutting-blade 36, while plate 3 of jaw 6 is formed with a recess to receive the stem 37 of the removable cutting-blade 38, which coacts with the cutting-blade 36 and constitutes shears to be used in cutting tin or other material. The pivotal bolt 4 passes through the stem of the removable cutter, and the nut 5 of said bolt secures said cutter in position, so that the bolt serves a twofold purpose—namely, that of pivoting together the two members of the tool and securing in position the removable cutting-blade of the shears. Formed in the cut-out portion 29 of the jaw 24 is a longitudinally-extending groove 39, and also formed in the inner face of the jaw 6 is a longitudinally-extending groove 40, said grooves being for the purpose of forming staples, the rod from which the staple is to be formed being bent and placed between the jaws, it engaging the longitudinally-extending grooves, when by compressing the jaws the staple is formed.

The nipper-jaws 41 are formed at the ends of the jaws 6 and 24, said jaws being serrated, as illustrated at 42, said serrations terminating short of one of the edges of the jaws to leave a smooth portion 43, in which is formed a depression 44, said depression being used when the tool is used as a hog-ringer, the jaws being positioned on opposite sides of the ring, which rests in the depression, when by compressing the jaws the ring may be closed.

Formed in the upper surface of the jaw 24, on the forward side of the cut-out portion, is an inclined recess 45, and adjustable in the jaw 6 is a set-screw 45^a, having its inner end formed triangular to correspond with the teeth of a saw, the construction above set forth constituting a saw-set. For limiting the inward movement of the jaws when the tool is used as a hog-ringer or saw-set I provide the set-screw 46, which passes through the jaw 24 and is engaged by the jaw 6.

Removably secured on the inner side of the handle portion 2 is a tool-casing 47, which is

held in position by a screw 48, said casing having its outer end open and its inner wall cut out at said open end, as illustrated in Fig. 3. An angular lid 49 is provided to close said open end, said lid being hinged in the cut-out portion of the inner wall of the casing and its lower end adapted to engage behind the transversely-extending lug 51 on the inner side of the handle portion 2 and adjacent the open end of the casing. As the lid is closed the lower portion thereof engages the lug, and by pressing said lid inwardly its lower end may be sprung behind the lug, thus forming a spring-lid. A transversely-extending lug 52 extends inwardly from the inner side of the handle portion 1 and is adapted to abut against the lug 51 and limit the inward movement of the handle portions, so that the casing will not be mashed or broken, as would be the case were no stop provided. A plate 53, carried by the handle portion 2, constitutes a stop at the opposite end of the casing.

A number of small tools may be contained in the casing—as, for example, the chisel 54 (illustrated in Fig. 7)—all of said tools having a head 55 formed on the end of their shanks, which head is serrated, as illustrated at 56. When it is desired to use these tools, they are placed in the cavity 26 formed in the forward end of the jaw 24, the serrated surfaces of the cavity and the head being placed in engagement and the tools secured therein by the set-screw 57, which passes through the wall of the cavity.

Upon the outer surface of the handle portion 1 a ring 58 is formed to receive the finger of the operator, while at the end of said handle portion a screw-driver 59 is provided. The outer end of the handle portion 2 is notched to form a nail-drawer 60. One of the nipper-jaws 41 is perforated at 50 to constitute a rivet clamp or holder.

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

1. In a tool of the kind described, the combination with a rigid jaw and a shank, of a longitudinally-arranged bar extending from said rigid jaw, above and parallel with the shank, a longitudinal rib between the bar and shank, a slidable jaw on said bar, and a clamping-block carried by said slidable jaw for engagement with the bar, substantially as described.

2. In a tool of the kind described, the combination with a rigid jaw and the shank, of a longitudinally-arranged bar projecting from the rigid jaw parallel with and above the shank, a rib or raised portion between the bar and shank, a slidable jaw mounted thereon, a rearwardly-extending projection or lug on the movable jaw, a screw mounted in said lug, and a clamping-block swiveled to the screw and designed to engage the above-mentioned bar to lock the movable jaw in any predetermined position, substantially as described.

3. In a tool of the kind described, the combination with a rigid jaw and its shank, a rearwardly-projecting bar connected at one end to the rigid jaw and having teeth on its top edge and projecting on each side of the rib and extending through the opening in the slidable jaw, a lug projecting from the rear face of the slidable jaw and a screw-pressed locking-block carried by said jaw for engaging the extended end of the bar, substantially as described.

4. In a tool of the kind described, the combination with the rigid jaw and the shank, of a rearwardly-projecting bar projecting from

the said jaw and longitudinally of the shank, a slidable jaw having an opening through which the bar projects, a lug or projection on the movable jaw, a screw carried by the projection, and provided with a head at its lower end, a clamping-block for engagement with the projecting end of the bar and provided with a longitudinally-slotted groove whereby the screw is adapted to engage the block, substantially as described.

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