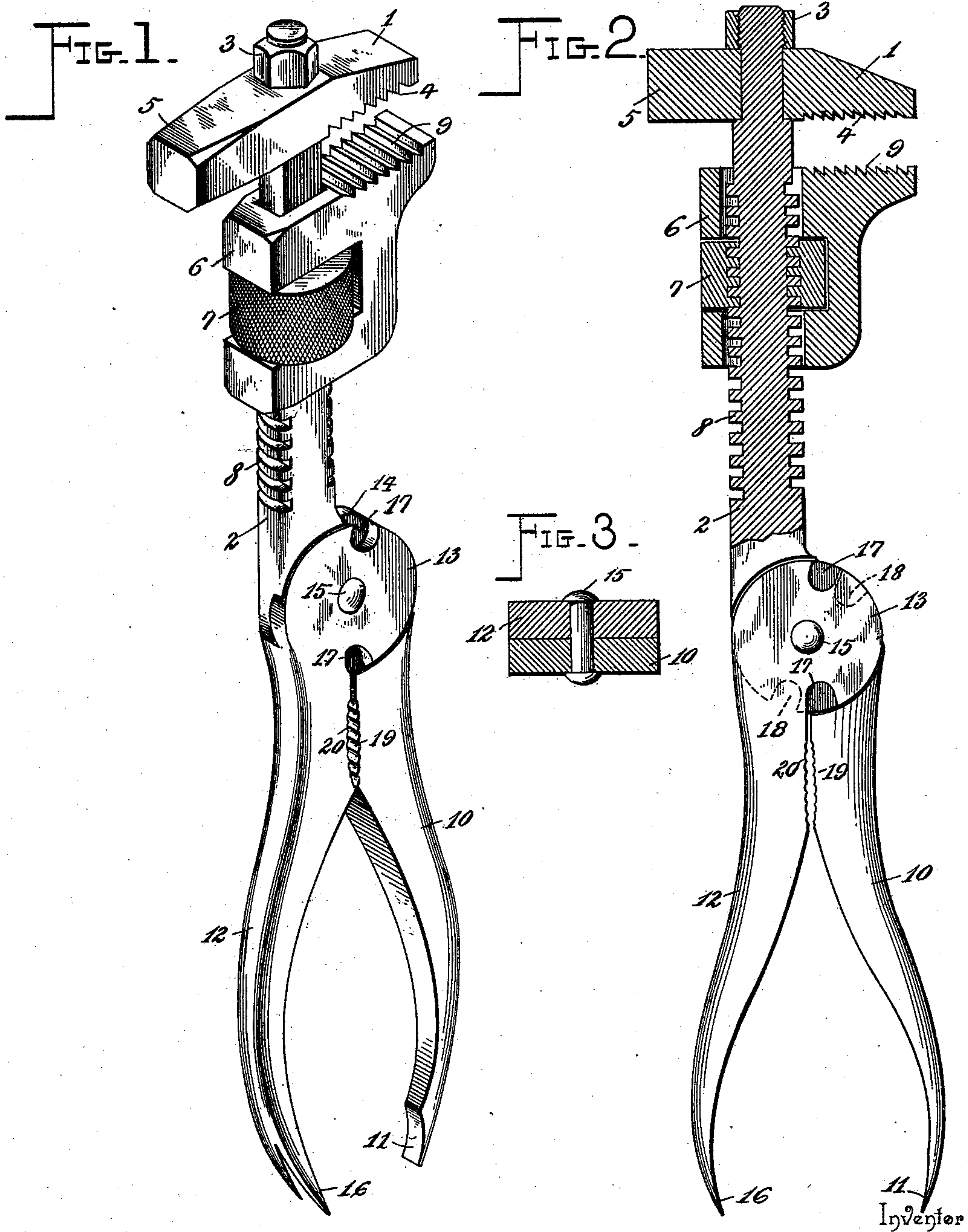


(No Model.)

M. WEISS.  
WRENCH.

No. 603,305.

Patented May 3, 1898.



Witnesses

John R. Deffenhard.  
J. F. Riley

By his Attorneys,

Calhoun & Co.

Martin Weiss.

Inventor



# UNITED STATES PATENT OFFICE.

MARTIN WEISS, OF SAN MARCOS, TEXAS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 603,305, dated May 3, 1898.

Application filed May 15, 1897. Serial No. 636,667. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN WEISS, a citizen of the United States, residing at San Marcos, in the county of Hays and State of Texas, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to improvements in wrenches.

The object of the present invention is to improve the construction of wrenches and to provide a simple, inexpensive, and efficient device adapted to be employed as a pipe or nut wrench, a hammer, a wire-cutter, and pliers and capable of extracting nails and of being used as a screw-driver without interchanging any of the parts or substituting one part for another.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a wrench constructed in accordance with this invention. Fig. 2 is a side elevation, partly in section. Fig. 3 is a transverse sectional view.

Like numerals of reference designate corresponding parts in the several figures of the drawings.

1 designates a fixed jaw detachably secured to one end of a shank 2 by a nut 3 and extended from both sides of the shank and provided at the inner face of its front portion with teeth 4 and having its rear portion 5 extended and shaped to form a hammer-head. The hammer-head 5 extends beyond the rear edge of a movable jaw 6 to prevent the latter from coming in contact with the surface struck when the device is used as a hammer.

The movable jaw 6, which is slidingly mounted on the shank 2, is bifurcated or slotted transversely of the wrench and receives a nut 7, which engages threads 8 at the opposite edges of the shank. The movable jaw is adjusted on the shank by rotating the nut 7, as will be readily understood. The teeth 4 of the fixed jaw and the teeth 9 of the movable jaw are oppositely shouldered to enable the device to grip a pipe or rod firmly, and the jaws are also adapted to clamp a nut or

other part. When the fixed jaw 1 is removed from the reduced end of the shank, the adjustable jaw 6 and the adjusting-nut 7 may also be detached.

The shank is provided at its inner end with a tapering curved handle portion 10, which terminates in a screw-driver point 11 and which forms one member of a pair of pliers. The other member 12 of the pliers is similarly shaped and has its inner end enlarged and recessed to receive an enlarged portion 14 of the shank. The inner end 13, which is circular and which forms an ear, is centrally perforated to receive a fastening device 15, which passes through a corresponding perforation of the portion 14 of the shank. The portion 14 is reduced in thickness, so that the outer face of the pivoted member 12 is flush with the adjacent faces of the shank and the handle portion 10 thereof, and the outer end of the pivoted member is provided with a claw 16 for extracting nails.

Notches 17 and 18 are provided at the peripheral edges of the ears 13 and the reduced portion 14 to form wire-cutters. The members of the pliers are spread sufficiently to cause the notches to register and enable them to receive a wire, which is cut by closing the plier members.

The contiguous abutting faces 19 and 20 of the members of the pliers, adjacent to the pivot 15, are provided with curved notches, as shown, to adapt the device for gripping bicycle-spokes or small rods, and bent spokes may be readily straightened by the device.

It will be seen that the device is exceedingly simple and inexpensive in construction, that it is strong and durable, and that it is adapted to be employed for a variety of purposes without removing or substituting one part for another.

What I claim is—

A device of the class described comprising a shank provided at one end with the laterally-offset integral handle portion 10 and having its other end reduced and threaded, said shank being provided between its reduced end and the handle portion 10 with screw-threads, the adjustable jaw slidingly mounted on the shank and provided with a transverse slot or bifurcation, an adjusting-nut

fitting in the slot or bifurcation of the adjustable jaw and engaging the threads of the shank, the jaw 1 provided with an opening to receive the reduced end of the shank and  
5 adapted to be removed therefrom, whereby the movable jaw and the adjusting-nut may be placed on and removed from the shank, a nut engaging the reduced end of the shank and securing the jaw 1 to the same, and the  
10 member 12 pivoted to the shank adjacent to

the inner end of the handle portion, substantially as described.

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

MARTIN WEISS.

Witnesses:

ALEX SZE FIR,

M. GOTTLIEB.