

(No Model.)

S. GASSER.
WRENCH.

No. 489,605.

Patented Jan. 10, 1893.

Fig. 1.

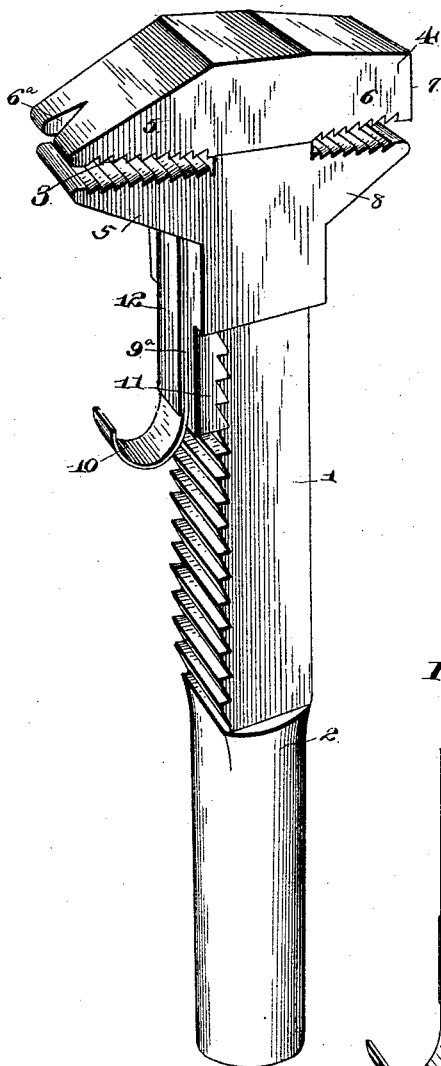


Fig. 2.

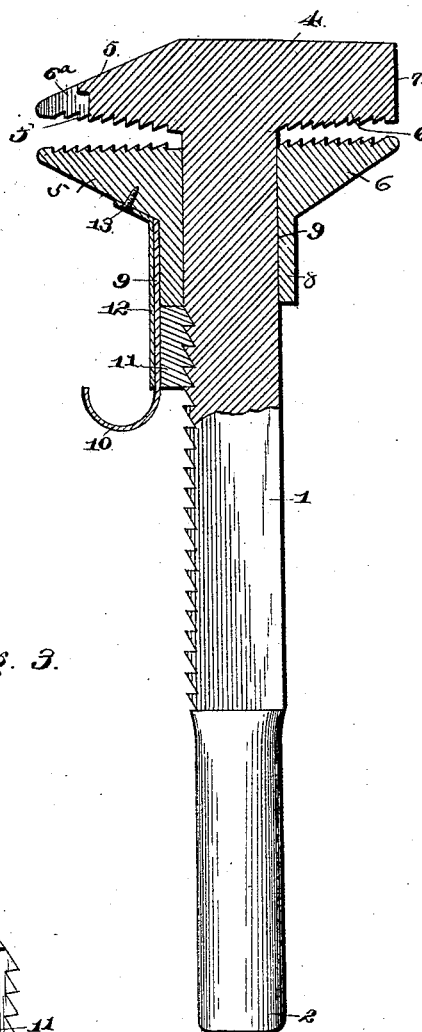
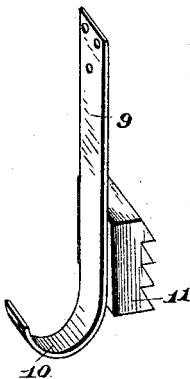


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

SANFORD GASSER, OF TROUT CREEK, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 489,605, dated January 10, 1893.

Application filed April 23, 1892. Serial No. 430,398. (No model.)

To all whom it may concern:

Be it known that I, SANFORD GASSER, a citizen of the United States, residing at Trout Creek, in the county of Ontonagon and State of Michigan, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to wrenches of that class employing and known as "sliding-jaw."

10 The objects of my invention are to provide a wrench of great simplicity in construction and effectiveness in operation, whose capacity for operating upon nuts, rods and pipes of various sizes is increased; that may be employed
15 as a hammer in applying nails or rivets or withdrawing the former; and to provide a simple and conveniently operated means for adjusting said sliding jaw with relation to the stationary jaw, and securely locking the same.

20 Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 represents a perspective view of a wrench constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detail of the locking-block.

30 Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the shank or stock of the wrench, and the same is rectangular in cross-section, being provided at its lower end with a suitable handle, 2. Above the handle one
35 edge of the stock is provided with a series of teeth 3, which are inclined or upwardly disposed, as shown. The upper end of the stock is provided with a transverse head 4, forming at the front and rear sides of the shank jaws
40 5 and 6 respectively. The outer face of the jaw 5 is inclined, and is bifurcated or provided with a claw 6^a for withdrawing nails. The inner face of the jaw 5 is flared with relation to the stock 1, or in other words is inclined as shown, and has formed thereon a series of transverse teeth, which are inclined and disposed toward the extremity of the jaw. The jaw 6 is also provided with teeth, inclined or inwardly disposed, as shown, and
45 but very little flared as compared with the jaw 5. The end of the head 4, at which the jaw 6 is located, terminates in a hammer-face

7, which may be used to drive nails, rivets, or for other general purposes.

8 designates the sliding-head, the same having a central rectangular bore 9, for the loose reception of the stock 1. The head 9 extends to opposite sides of the stock, to form a second front jaw 5, and a second rear jaw 6. The lower front jaw 5, or the one just mentioned,
60 is provided with a series of transverse teeth, oppositely disposed with relation to those of the upper jaw 5, or in other words are inwardly-disposed, and the jaw 6 of the sliding-head is provided with teeth disposed oppositely to those of the upper jaw 6, or in other words outwardly disposed.

A spring-metal strip 9, is secured to the front face of the sliding-head, and depends from the same, terminating in an outwardly-turned
70 finger-hold or hook 10, and riveted to the inner side of this strip is a ratchet-faced block 11, the teeth of which are downwardly-disposed or in other words are contrarily disposed to the teeth 3 of the stock 1. A flat spring 12 is secured at 13 to the under side of the jaw 5, is bent to conform to the angular-portion of the jaw, and at its lower free end rests flatly against the outer side of the strip, and serves to press the ratchet-
80 faced block inwardly, so that its teeth engage with those of the stock.

By reason of the divergence of the jaws 5 and 6, it will be seen that the former are adapted to operate upon pipes or rods of
85 greater diameter than they otherwise would be; and may be more readily applied thereto. The same is true as to the jaws 6, with relation to nuts. By grasping the finger-hold of the spring-metal strip of the ratchet-faced
90 block, it will be seen that the latter may be drawn outwardly or out of engagement with the teeth 3 of the stock of the wrench, against the tension of the flat spring, and then the head 8 slid down to any point along the stock,
95 or moved up upon the stock, as may be desired; or in the upward movement of the head the ratchet-faced block need not be withdrawn from engagement with the teeth of the stock, but said block will simply glide over
100 the said teeth, engaging at any point thereof when the head is at rest. By such an arrangement, accurate and rapid adjustments are attained with little or no effort upon the part

of the handler. It will be seen that the flat spring will combine with the inner spring strip to maintain the block in proper engagement, and that when said block is drawn away from the stock the spring will ride over the face of the strip.

Having described my invention, what I claim is:—

1. In a wrench of the class described, the combination with the rectangular stock, terminating at its lower end in a handle, and at its upper end in a head forming a jaw, of a sliding head mounted on the stock, and provided with a jaw adapted to co-act with that of the head of the stock, a spring metal strip secured to the sliding head at the front side thereof and extending below the same, a block secured to the under side of the strip and having a ratchet-face, the teeth of which are downwardly disposed in a direction contrary to a series of teeth formed on the face of the stock and a flat metal spring secured to the sliding head and resting flatly against the metal strip, substantially as specified.
2. In a wrench, the combination with the rectangular stock provided with a series of teeth on its outer face, at its lower end pro-

vided with a handle and at its upper end with a transverse head forming front and rear jaws, slightly diverged from the stock, the front jaw being provided with outwardly-disposed transverse cleats, the rear jaw with inwardly-disposed transverse cleats, the sliding head having a bore fitting the stock and provided at opposite sides of the same with jaws, the front one having inwardly disposed teeth and the rear one having outwardly-disposed teeth, the spring-metal strip secured to the front face of the sliding head, extending below the head and bent to form a finger-hold, the block secured to the inner side of the same and having a ratchet face, and the flat spring secured to the front face of the head and having its lower free end resting on the outer face of the metal strip, substantially as specified.

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

SANFORD GASSER.

Witnesses:

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W. H. OAKLEY.