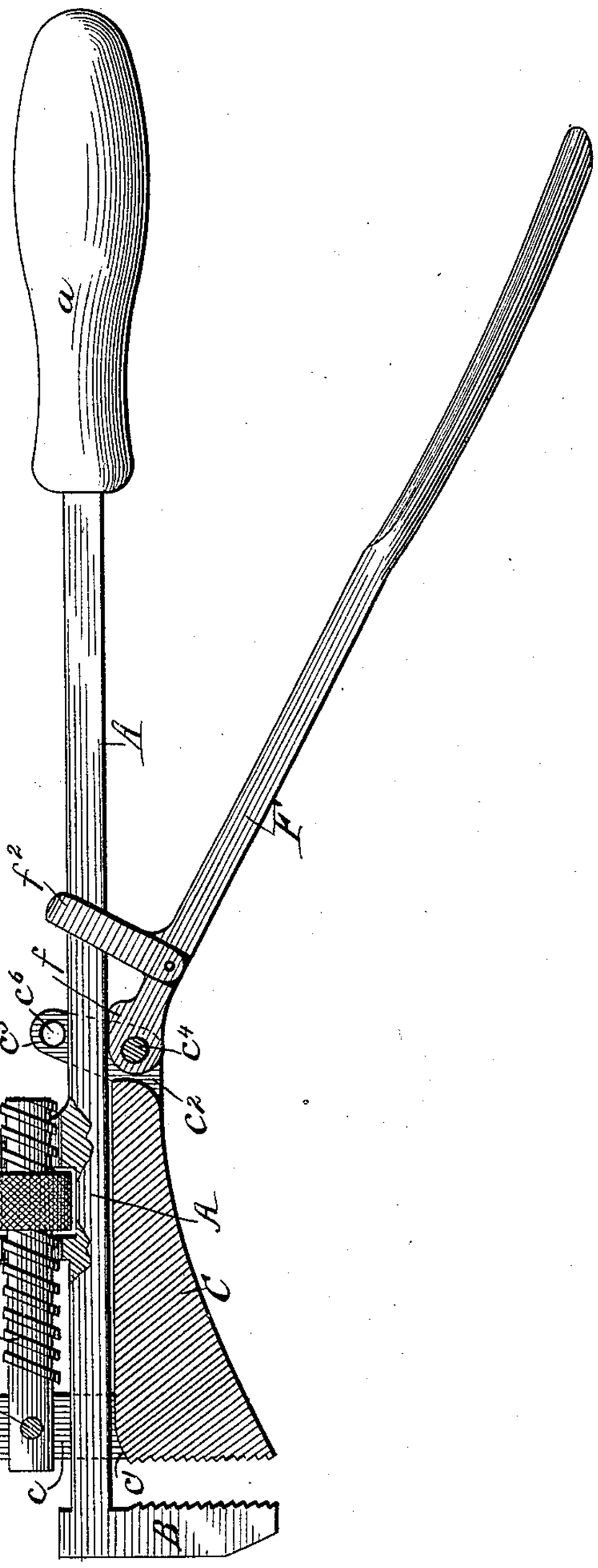
(No Model.)

G. W. HOOKS.

WRENCH.

No. 433,786. Patented Aug. 5, 1890.



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WRENCH.

SPECIFICATION forming part of Letters Patent No. 433,786, dated August 5, 1890.

Application filed April 9, 1890. Serial No. 347,259. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HOOKS, of Hooks' Switch, in the county of Hardin and State of Texas, have invented a new and useful Improvement in Wrenches, of which the following is a specification.

My invention relates particularly to a combined pipe and nut wrench, and has for its object to provide a wrench of the class described which can be quickly changed to an ordinary wrench, and vice versa, and one that is simple and durable in construction, and convenient and efficient in operation.

With these objects in view my invention consists of a shank having a rigid jaw attached thereto, a movable jaw adjustable on the shank and an eccentrically-headed lever pivoted to the rear end of the movable jaw and bearing on the shank adapted to separate the rear end of the movable jaw and said shank to throw the forward end of the movable jaw closer to the rigid jaw.

My invention consists, further, in certain details of parts and combination of the same, such as shown in the accompanying drawing, and more fully explained hereinafter.

In the drawing hereto annexed is shown a a longitudinal section, partly in elevation, of my improved wrench.

In carrying out my invention I employ a shank A, to one end of which is secured the handle *a*, and upon the opposite end is secured the rigid jaw or head B, the inner face of said jaw being serrated or smooth, as desired. A movable jaw C slides upon one side of the shank A, and upon the side of the shank opposite the jaw C are formed the parallel lugs a' a', said lugs having horizontally-aligning apertures a^2 a^2, and between the lugs a' is arranged the milled adjusting-nut D, said nut being secured between said lugs by the screw-rod E, passing through said nut and apertured lugs. The forward end of the sliding jaw C is formed with the arms or lugs *c* straddling the shank A, the outer ends of said arms being pivotally connected with the forward end of the screw-rod E by means of the bolt c^3. The forward end of the sliding jaw is preferably serrated, and at said forward end the side of said jaw contiguous to the shank A is cut away or curved, as shown at c', and at its rear end the sliding jaw is slotted, as at c^2, and between the members of said slotted end is pivoted upon the bolt c^4 the eccentric head or end *f* of the lever F, said head being so constructed and arranged that by pressing the lever F toward this shank the eccentric head bears upon the same, and the rear end of the sliding jaw C is forced away from the shank and moved slightly forward, turning upon the pivotal bolt c^3, which connects the sliding jaw and adjusting-screw.

The cut-out portion c' at the forward end of the sliding jaw permits the rear end to be forced away from the shank and the outer portion of the forward end of said jaw to be thrown nearer to the rigid jaw B, thus tightly clamping any article that may be between the jaws, said jaws having been previously approximately adjusted to the article by means of the milled nut and adjusting-screw.

f^2 indicates a loop attached to the lever F and encircling the shank A, said loop being for the purpose of limiting the outward or downward movement of the said lever. The rear end of the sliding jaw is also provided with arms or lugs c^5, which straddle the shank A, said arms serving to prevent lateral displacement and to hold the sliding jaw rigid when the wrench is used as a monkey-wrench. The arms c^5 are apertured, as at c^6, the purpose of which will appear farther on.

In operating my improved wrench either as a nut or pipe wrench the sliding jaw is first approximately adjusted to the article, and after the article has been placed between the jaws the lever F is pressed toward the shank A. The eccentric head or end *f* throws the rear end of the jaw away from the shank and also moves the same slightly forward, the said jaw turning on the pivotal bolt c^3, and in doing so the outer forward end is thrown closer to the rigid jaw and impinges tightly upon the article between the said jaws.

When it is desired to use the wrench as a monkey-wrench, the bolt c^4 is removed, the lever F withdrawn, and the bolt c^4 placed in the aperture c^6 of the arms c^5. The wrench is then adapted for use as an ordinary monkey-wrench.

The loop f^2 is detachably secured to the lever F.

Having thus described the construction and

operation of my improved wrench, what I claim is—

1. In a wrench, the combination, with a shank carrying a rigid jaw, of a movable jaw sliding upon one side of the shank and pivoted upon the opposite side, and an eccentrically-headed lever pivoted to the movable jaw and bearing upon the shank to force the movable jaw closer to the rigid jaw, substantially as shown and described.

2. In a wrench, the combination, with a shank carrying a rigid jaw, of a movable jaw sliding upon one side of the shank, and having a longitudinally-adjustable pivot upon the opposite side of the same, and an eccentrically-headed lever pivoted to the rear end of the movable jaw, and bearing upon the shank, substantially as and for the purpose described.

3. In a wrench, the combination, with a shank having a rigid jaw, of a movable jaw sliding upon one side of the shank, a nut and screw upon the opposite side of the shank, the said adjusting-screw and movable jaw being pivotally connected at their forward ends, and a lever having an eccentric head pivoted to the rear end of the movable jaw, substantially as and for the purpose described.

4. In a wrench, the combination, with a shank having a rigid jaw, of a movable jaw sliding upon the shank, the rear end of said jaw having arms straddling the shank and apertured at their outer ends, the lever having an eccentric head pivoted to the rear end of the movable jaw, and the bolt upon which said lever is pivoted, said bolt being adapted to be removed and release the lever and be placed in the said apertured arms, substantially as and for the purpose described.

5. In a wrench, the combination, with a shank having a fixed jaw, of a movable jaw sliding upon one side of the shank, the side contiguous to the shank being cut away at its forward end, the adjusting nut and screw arranged upon the opposite side of the shank to that upon which the movable jaw slides, the forward ends of the adjusting-screw and movable jaw being pivotally connected to each other, and the lever having an eccentric head pivoted to the rear end of the movable jaw adapted to bear upon the shank and throw the rear end of said jaw away from the shank, substantially as and for the purpose set forth.

6. An improved wrench consisting of the shank having the rigid jaw and apertured lugs extending in opposite directions, the nut arranged between the lugs, and the adjusting screw-rod passing through said lugs, and with the movable jaw sliding upon the shank and having the straddling-arms at the forward and rear ends, the forward straddling-arms being pivotally connected to the forward end of the adjusting-screw, the rear arms being apertured, the lever having an eccentric head pivoted to the rear end of the movable jaw and adapted to bear upon the shank with said head, the bolt upon which said lever is pivoted, said bolt being adapted for use as described, and the detachable loop secured to the lever and encircling the shank to limit the outward movement of said lever, substantially as shown and described.

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Witnesses:
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