

No. 622,707.

Patented Apr. 11, 1899.

E. OLSON.
WRENCH.

(Application filed May 21, 1898.)

(No Model.)

Fig. 1.

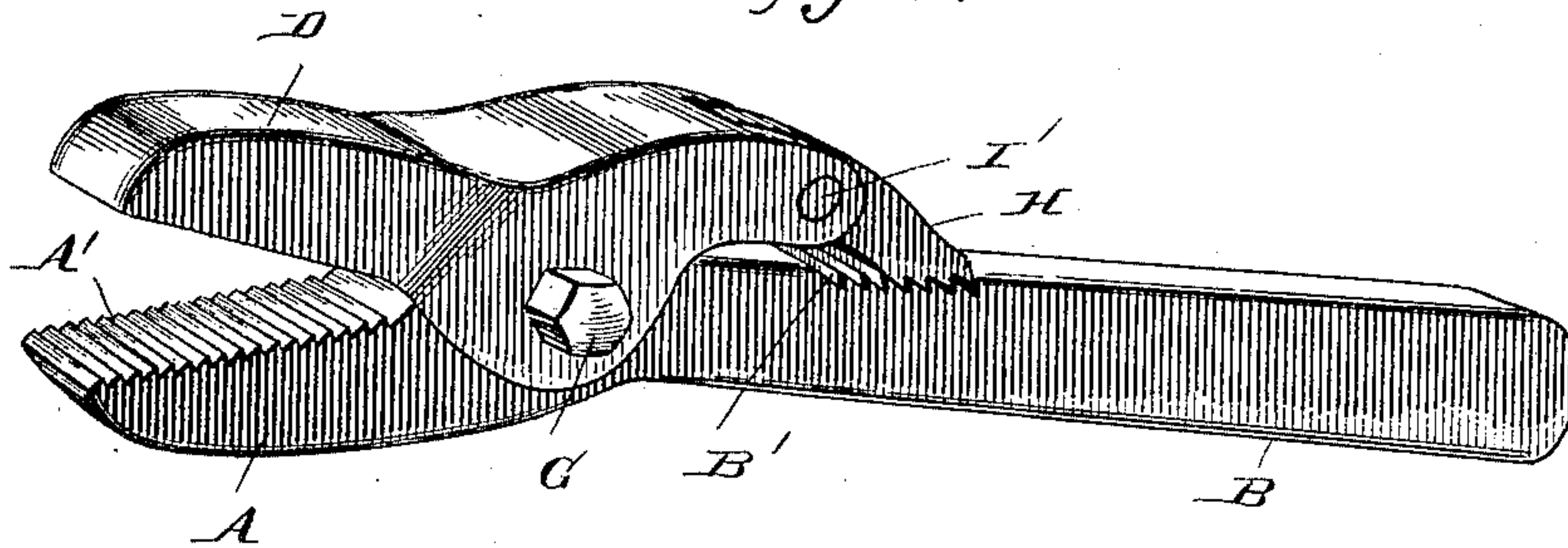


Fig. 2.

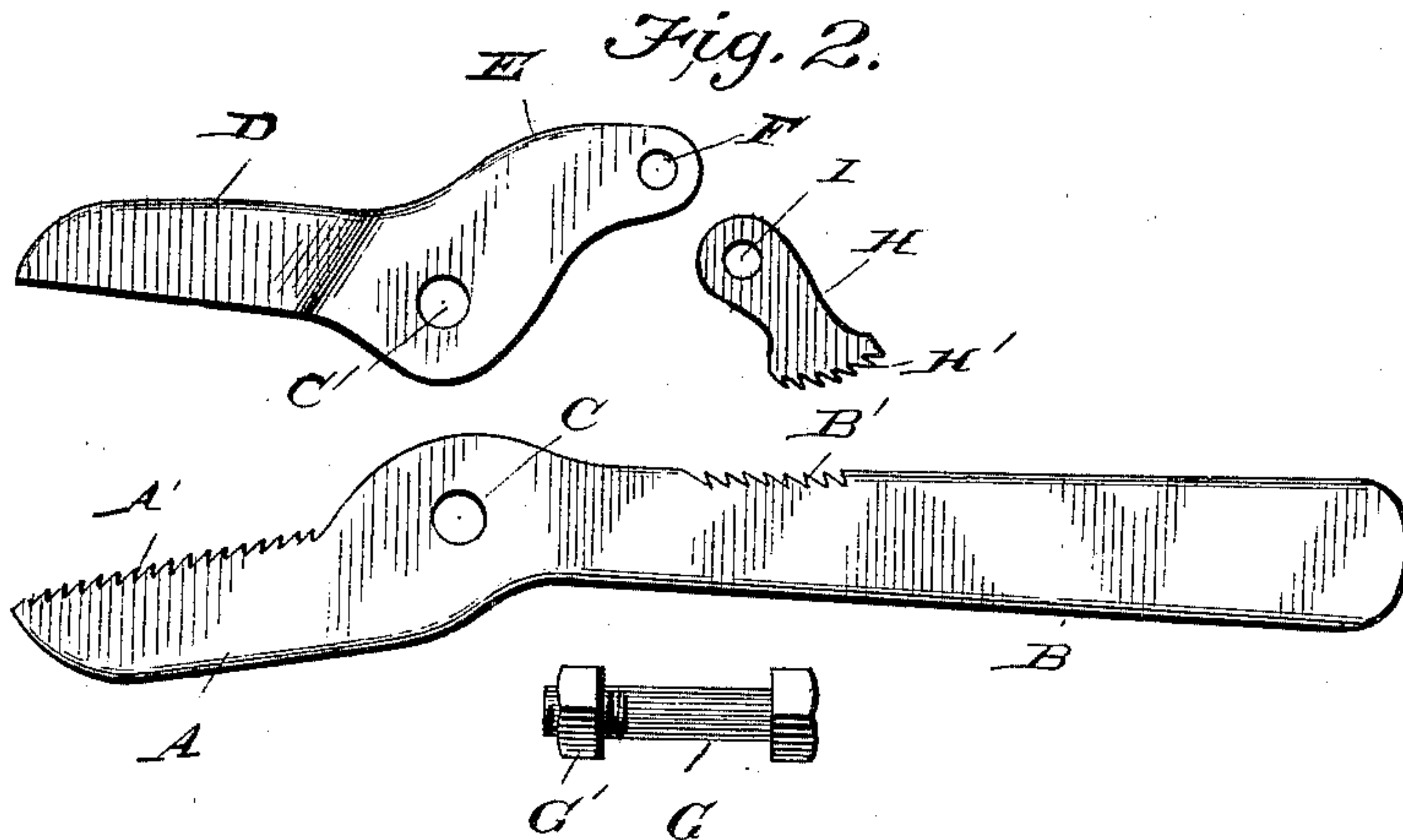
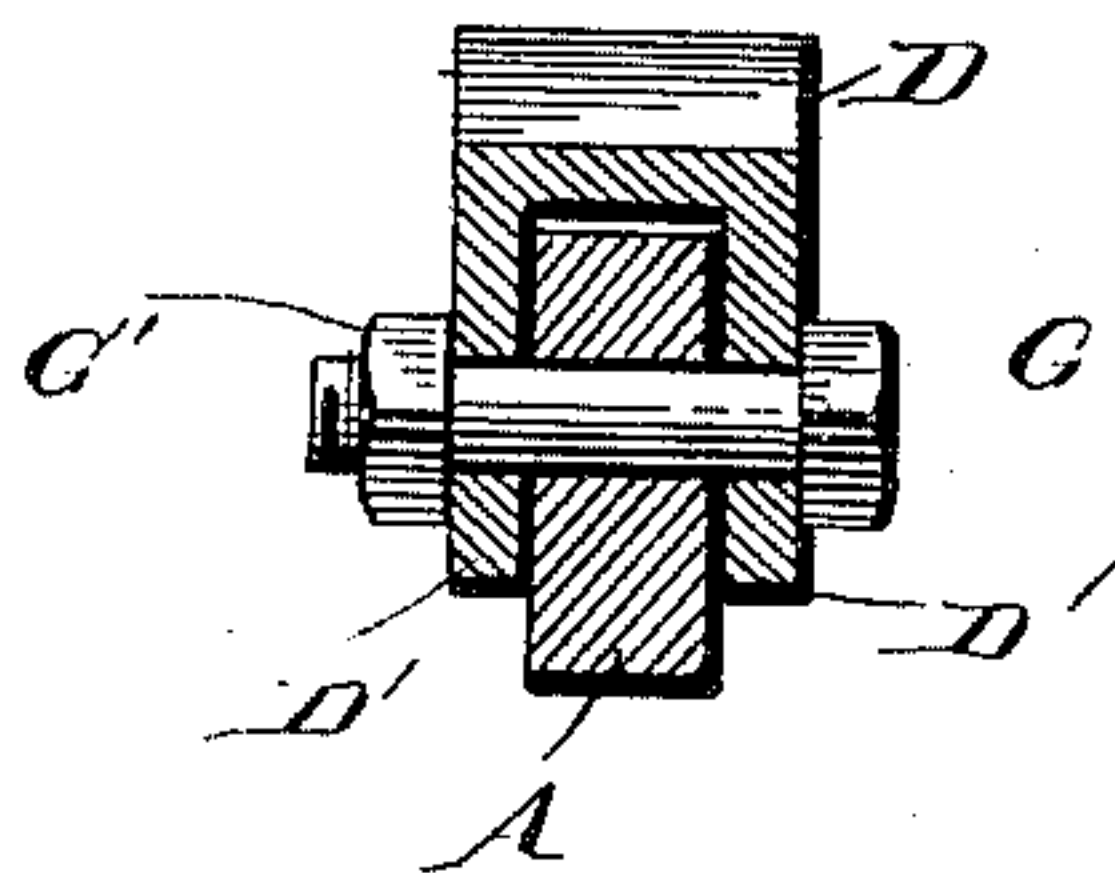


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD OLSON, OF SEATTLE, WASHINGTON.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 622,707, dated April 11, 1899.

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To all whom it may concern:

Be it known that I, EDWARD OLSON, a citizen of the United States, residing at Seattle, in the county of Kings and State of Washington, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to wrenches, and more especially to that class known as "alligator-wrenches."

The object of my invention is to simplify, cheapen, and otherwise generally improve the construction of this class of wrenches, while at the same time increasing their usefulness by rendering them strong, durable, reliable, and easy to operate.

With this object in view my invention consists of a wrench of the class mentioned, comprising a handle-bar and toothed jaw made of a single piece or bar of metal arranged at a slight angle to each other, a second jaw pivotally connected to the combined handle-bar and jaw at their connecting angle and provided with an outwardly and rearwardly projecting arm in the same plane as the handle-bar and on the same side thereof as the pivoted jaw, and a dog pivotally connected to the outer end of said projecting arm extending away from the jaws and provided with teeth to engage teeth on the adjacent face of the handle-bar.

My invention further consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the appended claims.

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

Figure 1 is a perspective view illustrating a wrench constructed in accordance with my invention. Fig. 2 is a view in side elevation of the various parts composing my improved wrench detached from each other. Fig. 3 is a detail sectional view on the vertical plane extending through the pivotal point of the two jaws transversely.

Like letters of reference mark the same parts wherever they occur in the different figures of the drawings.

Referring to the drawings by letters, A indicates one of the jaws of my improved wrench, which is formed as part of the same bar of metal which composes the handle-bar B, the jaw A lying at a slight angle outward from the line of the handle-bar and provided with teeth A' on its inner face, the handle-bar B being provided with teeth B' on its inner side inclined toward the point of junction of the handle-bar and jaw and a hole C being pierced through the metal at the joining angle of the handle-bar and jaw.

D indicates the outer jaw, which is provided with an extension or arm E, located at an angle with the jaw, two wings D' D' depending from the sides of the jaw D at its point of junction with the arm E at a sufficient distance apart to embrace the metal at the joining angle of the handle-bar B and jaw A, said wings being provided with openings C', which when the wings embrace the other jaw are in line with the opening C to receive the pivotal bolt G, which is passed therethrough and secured by means of the nut G'.

The free end of the extension-arm E is forked and provided with openings F. H indicates a pawl or dog located between the forked ends of the arm E and loosely pivoted thereto by means of the pin I' in the openings F of the arm E and the opening I of the pawl H. The pawl or dog H is provided with teeth H', inclined in the opposite direction to the teeth B' of the handle-bar B, with which they are adapted to engage.

In operating my improved wrench when the jaws A and B are moved toward each other the pawl H will slide along the side of the handle-bar B, and the teeth H' of the pawl H, engaging the teeth B' of the handle-bar B, will securely hold the jaws against being forced apart. To separate the jaws, it is only necessary to lift the pawl H to disengage its teeth H' from the teeth B' of the handle-bar, when the jaw D will be free to be oscillated on the pivot-bolt G.

The cheapness, simplicity, strength, durability, and reliability of a wrench constructed in accordance with my invention will be obvious from the foregoing description, and while I have illustrated and described what I consider to be the best forms for the several parts I wish it to be understood that I do not

restrict myself to these exact forms, but hold that any slight changes or variations therefrom such as might suggest themselves to the ordinary mechanic would properly fall
5 within the limit and scope of my invention.

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

1. The combination in a wrench, of a handle-bar and jaw made in one piece, a second jaw pivoted at the junction of the handle-bar and jaw first named and provided with an extension-arm beyond the pivot in the plane of the handle-bar and on the same side thereof
15 as the pivoted jaw, and a pawl loosely pivoted to the end of the extension-arm extending away from the jaws and provided at its free end with teeth to engage similar teeth on the adjacent face of the handle-bar, substantially as described.
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2. The combination with the jaw A and handle-bar B, made of a single piece of metal, the handle-bar having teeth B' on one edge between the handle and pivot, with the jaw D provided with an extension-arm E at an angle thereto on the same side of the handle-bar and with flanges D' and D' embracing the jaw A and handle-bar B at their point of junction, the pivotal bolt securing the handle-bar to the flanges D', D', and the dog or pawl H loosely pivoted in the forked outer end of the extension-arm E extending away from the jaws toward the handle and provided with teeth H' adapted to engage the teeth B' of the handle-bar, substantially as described. 25 30

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Witnesses:

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