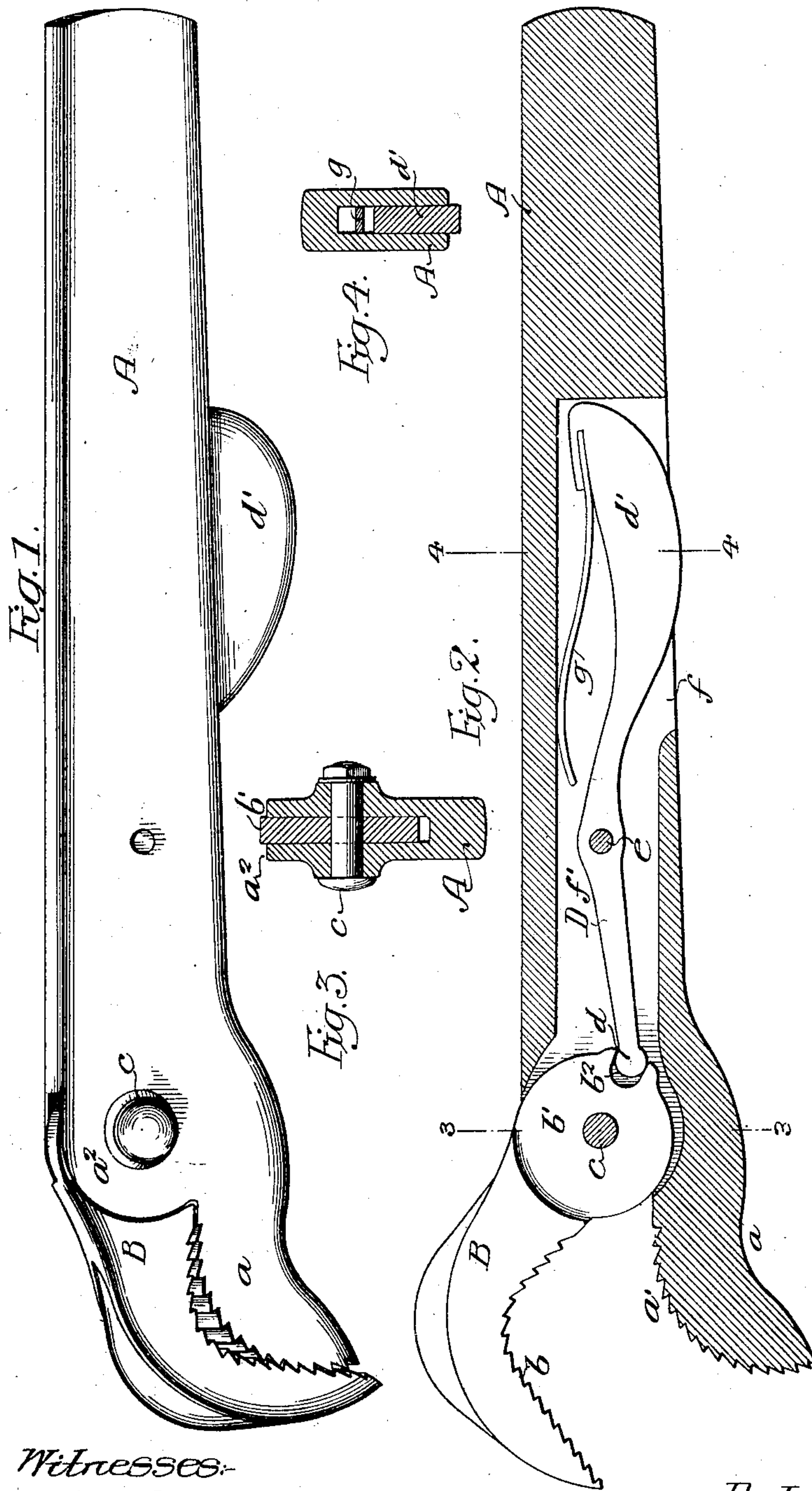


No. 897,665.

PATENTED SEPT. 1, 1908.

DE LEONARD RUGG.
AUTOMATIC WRENCH.

APPLICATION FILED JAN. 2, 1907.



Witnesses:
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UNITED STATES PATENT OFFICE.

DE LEONARD RUGG, OF CATSKILL, NEW YORK.

AUTOMATIC WRENCH.

No. 897,665.

Specification of Letters Patent.

Patented Sept. 1, 1908.

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To all whom it may concern:

Be it known that I, DE LEONARD RUGG, a citizen of the United States, residing at Catskill, New York, have invented certain Improvements in Automatic Wrenches, of which the following is a specification.

The object of my invention is to make an automatic wrench, which shall be simple in construction and so designed that it can enter very narrow spaces and be operated some distance from the jaws. This object I attain in the following manner, reference being had to the accompanying drawings, in which:

Figure 1, is a perspective view of my improved wrench; Fig. 2, is a longitudinal sectional view, showing the movable jaw raised; Fig. 3, is a sectional view on the line 3—3, Fig. 2; Fig. 4, is a sectional view on the line 4—4, Fig. 2.

A is the handle of the wrench, having a fixed jaw *a*.

B is the movable jaw pivoted to the fixed jaw by a bolt *c*. The jaw *a* has a serrated gripping surface *a'* and the jaw B has a serrated gripping surface *b*; the teeth being preferably formed as indicated and the shape of the jaws is such that a pipe, nut or other device will be properly gripped.

In the present instance the handle portion, as well as the jaw *a* is made very narrow and at the pivot there are two cheek pieces *a²* between which fits the portion *b'* of the jaw B. The jaw end being very little wider than the handle portion and when the jaws are open as in Fig. 2, they open at the extreme end so that when the wrench is applied it can enter a very narrow space and engage the object without lateral movement. The portion *b'* of the jaw B is in the form of a disk in the present instance and is notched at *b²* for the reception of the end *d* of the operating lever D which rests in a cavity *f'* in the handle, as shown. The lever is pivoted at *e* and has an extension *d'* which projects through a slot *f* in the handle. The cavity may be formed in a single casting or the handle may be made in two parts, and either of wrought or cast metal.

g is a spring resting between the extended portion *d'* of the lever D, and the base of the cavity in the handle tending to force this portion out, as illustrated in Fig. 1, and consequently closing the jaw B, but when pressure is applied to the portion *d'*, as illustrated in

Fig. 2, the jaw B is raised against the pressure of the spring so that the wrench can be applied to a pipe or other device. The spring may be attached to the lever as shown or to the handle, as desired.

It will be seen by this arrangement that I can extend the lever D back from the pivot pin *c* any desired distance without in any way weakening the wrench, as it takes very little pressure to open and raise the jaw B, the formation of the two jaws is such that the wrench will grasp the article as soon as motion is imparted to the wrench handle, making what is commonly known as an automatic wrench.

Thus it will be seen that I am enabled to make a very narrow and compact automatic wrench, which can be operated by grasping the handle some distance from the jaws so that difficult points can be readily reached by the wrench and as it is automatic in its action a very slight movement will turn the pipe, bolt or other object.

The wrench is made in very few parts and can be cheaply manufactured and yet be substantial as the operating parts for opening the jaws can be made very light as there is practically no strain upon them; the strength being placed in the jaws where it is required.

I claim:—

The combination in a wrench, of a hollow handle having an integral curved jaw toothed on its convex surface and having two cheek pieces, an angular jaw having a reduced and notched portion fitting between the cheek pieces, a pivot pin on which the jaw is mounted, a lever mounted within the hollow handle and pivoted thereto, the end of one arm of said lever being shaped to engage the notch in the angular jaw, the other arm of the lever projecting rearwardly and through a slot in the handle, and a spring attached to the last mentioned arm of the lever and acting to force the movable jaw towards the fixed jaw.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

DE LEONARD RUGG.

Witnesses:

JOHN L. FROY,
AMBROSE JONES.