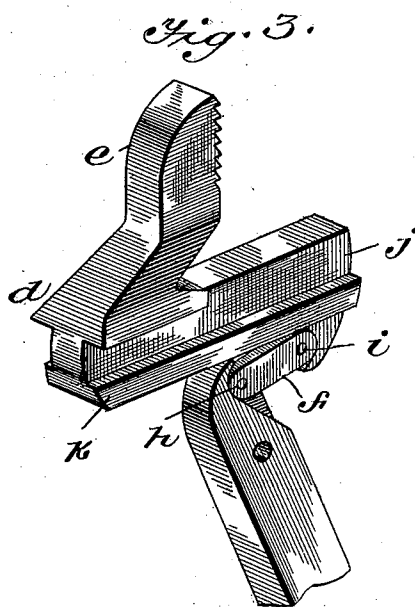
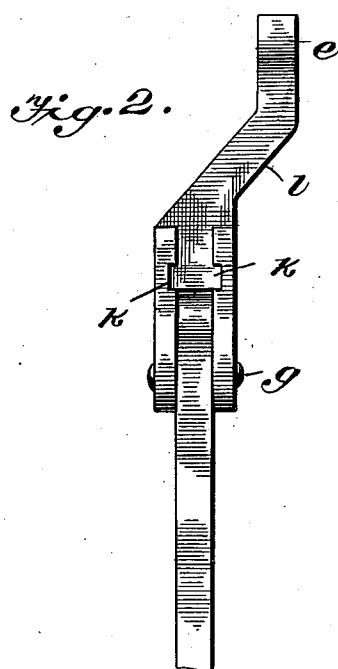
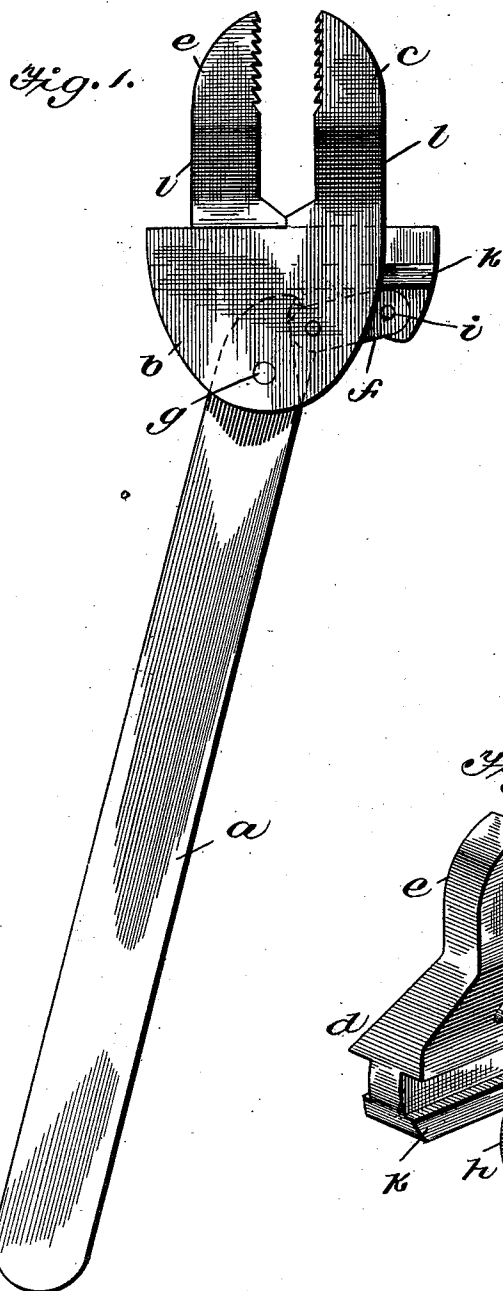


(No Model.)

T. GEISEL.
WRENCH.

No. 554,596.

Patented Feb. 11, 1896.



Witnesses

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THEODOR GEISEL, OF SPRINGFIELD, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 554,596, dated February 11, 1896.

Application filed December 10, 1894. Serial No. 531,341. (No model.)

To all whom it may concern:

Be it known that I, THEODOR GEISEL, a citizen of the United States of America, residing in Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

The object of my invention is to produce a wrench which will be automatic in action, so that a movement of the arm in one direction will cause the jaws to engage the material, while a movement in the opposite direction will cause the jaws to separate and release the material, which shall be adapted for operation in positions where the common form of wrench cannot be employed, and which shall also be simple in operation and comparatively inexpensive in construction.

I accomplish the objects of my invention by the construction herein shown.

In the accompanying drawings, in which like letters of reference indicate like parts, Figure 1 is a side view of a wrench constructed according to my invention. Fig. 2 is an edge view of the same, a portion of the handle being broken away; and Fig. 3 is a perspective view of the sliding-jaw portion, link, and a portion of the handle.

In detail, *a* indicates the handle; *b*, the body of the stationary jaw; *c*, the jaw mounted thereon; *d*, the body portion of the movable jaw; *e*, the jaw mounted thereon; *f*, the link; *g*, the handle-pivot; *h* and *i*, the link-pivots; *j*, the portion of the movable-jaw body to which the link is pivoted, and *k* ribs upon the movable-jaw body.

The construction and operation will be readily understood on reference to the drawings in connection with the following description.

A body portion *b* is provided, having mounted thereon and preferably made integral therewith a jaw *c*. The central portion of the body *b* is cut out to allow the body portion *d* of the movable jaw to slide therein, and also to permit the handle and link to be mounted and operate therein, as herein set forth.

I prefer that the body portion be provided

with channels to receive the ribs *k* upon the movable-jaw body, these parts being so constructed as to give a good sliding fit.

The handle is pivotally mounted upon a pin *g*, which forms a fulcrum, and the body portion of the movable jaw is connected with the inner end of the handle by a link *f*, so that a movement of the handle in one direction will cause the movable jaw to approach the fixed jaw, while a movement of the handle in the opposite direction will cause the movable jaw *e* to be carried away from the fixed jaw *c*. When, therefore, it is desired to turn a nut or other object in one direction, it is unnecessary to adjust the jaws to the object to be operated upon; but if the jaws be placed in position at each side of the object and the handle carried in a direction to cause the movable jaw to approach the fixed jaw the material will be grasped between the jaw-faces, and may thus be turned or held until the handle be moved in the opposite direction, which will cause the jaws to separate and the object to be released.

For use in places where it is desired to reach under an overhanging portion—such, for instance, as engaging of bolts or nuts under the flange of a railroad-rail—my improved wrench is provided with offsets *l*. By means of these offsets the jaws are carried out of line with the handle, but they are disposed in a plane parallel with the plane of the handle. In the drawings the wrench is shown as having jaws adapted to engage under an overhanging portion when the lever is carried to the right. It is apparent that when the offsets are disposed on the opposite side of the plane of the lever the jaws will engage when the lever is carried to the left.

It will be seen that by the above construction the delay and annoyance incident to adjusting the jaws to an object will be avoided and that while the wrench is automatic in operation so far as the gripping and releasing of the jaws is concerned, all danger of slipping is avoided, as the greater the strain on the handle the tighter will the jaws grip the object, while at the same time the grip is released by a counter movement of the handle. As the means of engagement between the inner end of the handle (or short arm of the lever) and the sliding body of the movable

jaw may be varied, I do not limit myself to the exact construction illustrated.

Having, therefore, described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a body *b* having a jaw *c* and a movable body portion *d* arranged to slide within the body *b* and provided with a jaw *e*; a handle pivotally mounted in the body *b* and projecting toward the jaw end and arranged to engage the body portion of the movable jaw, the jaws being offset out of line with the handle, substantially as and for the purposes stated.

2. The combination of a body *b* having a jaw *c* and a movable body portion *d* arranged to slide within the body *b* and provided with a jaw *e*; a handle pivotally mounted in the body *b* and projecting toward the jaw end and arranged to engage the body portion of the movable jaw, the jaws being offset out of line with, and in a plane parallel with the plane of the handle, substantially as described.

THEODOR GEISEL.

Witnesses:

ALLEN WEBSTER,
E. C. STICKNEY.