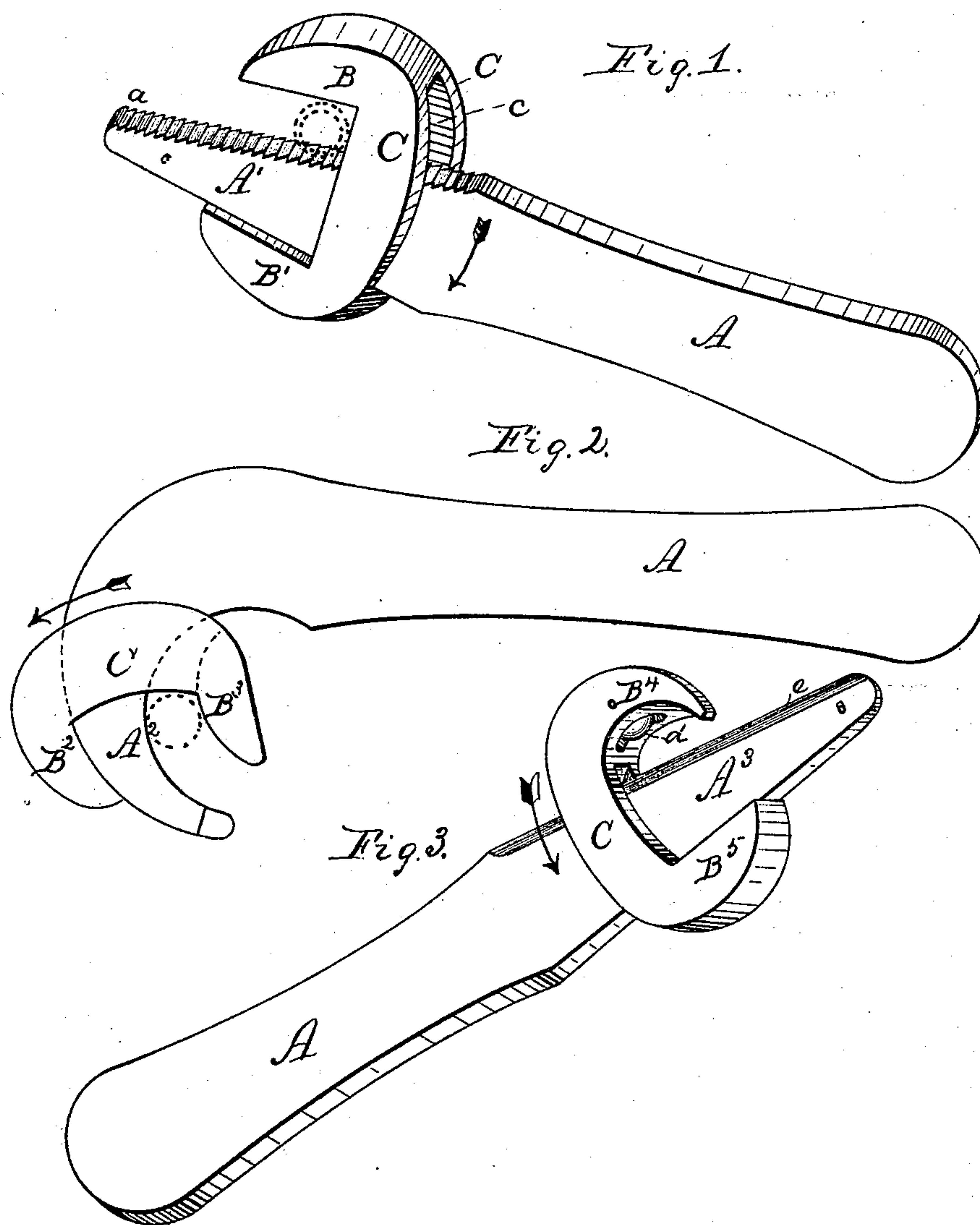


(Model.)

I. KINNEY.
WRENCH AND PIPE CUTTER.

No. 250,367.

Patented Dec. 6, 1881.



Witnesses,
Phil W. Hale.
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UNITED STATES PATENT OFFICE.

ISRAEL KINNEY, OF WINDSOR, ONTARIO, CANADA.

WRENCH AND PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 250,367, dated December 6, 1881.

Application filed March 18, 1881. (Model.)

To all whom it may concern:

Be it known that I, ISRAEL KINNEY, of Windsor, county of Essex, Province of Ontario, Canada, have invented a new and useful Improvement in Pipe and Nut Wrenches and Pipe-Cutters; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to produce a wrench which shall automatically adjust itself to grasp pipes or other articles of different sizes when turned in one direction, and become released when turned in the opposite direction, for the purpose of taking a fresh hold and to render such a wrench simple and strong in construction. It has the further object to provide such a wrench with a cutter or cutters, by which it may be converted into a cutting as well as a wrenching tool.

In the accompanying drawings, Figure 1 is a wrench constructed according to my invention. Fig. 2 shows a modification thereof; and Fig. 3 is a perspective view of a wrench provided with cutters, by which it is enabled to be used as a pipe-cutting tool.

Referring to Fig. 1, the letter A designates the wrench-handle, which terminates at one end in a flat tapering tongue, A', having one of its edges serrated, as shown at *a*.

The letters B and B' indicate two strong jaws, which are connected by two stout parallel cross-bars, C C, between which is an oblong space or slot, *c*, through which the tongue A' is passed in order to bring it between the said jaws. The jaws B B' preferably converge somewhat toward each other from the cross-bars, and the jaw B' serves as an abutment or brace for the tongue A' when a pipe or other article is clasped between the serrated edge of the tongue and the inner edge of the jaw B, and said jaw B' opposes its entire inner edge equally to the tongue, so that there is simply a dead strain and no leverage exerted against said jaw. When a pipe is placed between the jaw B and the serrated edge of the tongue A' the handle is moved in the direction indicated by the arrow marked upon it. The teeth of the tongue bite upon

the object clasped, which object bears against the bar C, thus forcing the jaws toward the wide end of the tongue and drawing said tongue between the jaws to continually tighten its grasp by a wedge-like action as it slides along the jaw B'. When the pipe or other object has been turned as far as practicable, moving the handle in the opposite direction bears it away from the jaw B and allows both jaws to slip sufficiently far toward the small end of the tongue to so loosen the object as to permit the turning of the handle.

In the modification shown in Fig. 2 the tongue A² is curved edgewise, and the inner edge of the jaw B² is correspondingly curved, so as to lie snugly against the outer edge of said tongue. The jaw B³ is curved outwardly, and may or may not be parallel with the inner edge of the jaw B².

In the modification shown in Fig. 3 the jaw B⁴ is concave, and is provided with a rotary cutting-disk, *d*, which is pivoted in a longitudinal slot in said jaw, so that its cutting-edge will project toward the tongue A³, which is provided with the cutting-edge *e* opposite said rotary cutter. The opposite edge of the tongue is straight and plain, to bear against the full length of the inner edge of the jaw B⁵, which is also straight. When this modification is placed upon a pipe so that said pipe lies between the cutting-edge *e* of the tongue and the rotary cutter D, the handle is to be moved in the direction indicated by the arrow, and at the same time pressed inwardly, so that it will be wedged against the object to be cut and firmly braced by the jaw B.

I am aware that wrench-bars have been provided with double sliding jaws, and I lay no claim to such invention, broadly; but,

Having described my invention and explained the operation thereof, I claim—

1. In a wrench, the combination, with the connected jaws having their inner edges opposite each other, of the handle provided with a tapering tongue, arranged to slide between said jaws and against the inner edge of one of them, substantially as described.

2. In a wrench, the combination, with the jaws arranged opposite each other and connected by the bars or portion C, of the handle provided with the tapering tongue passing

through said opening and having one of its edges arranged to slide along the inner face of one of said jaws, substantially as described.

3. The combination of the jaws arranged
5 opposite each other and connected by the bars or portions C, of the rotary cutter *d*, pivoted in one of said jaws, and the handle A, provided with the tapering tongue passing between said connecting bars or portions and arranged to

slide against the jaw opposite the rotary cutter, substantially as described. 10

In testimony whereof I sign this specification in the presence of two witnesses.

ISRAEL KINNEY.

Witnesses:

WM. M. PORTER,
HENRY F. QUELCK.