

T. P. FARMER.
Cutting-Pliers.

No. 158,205.

Patented Dec. 29, 1874.

Fig. 1.

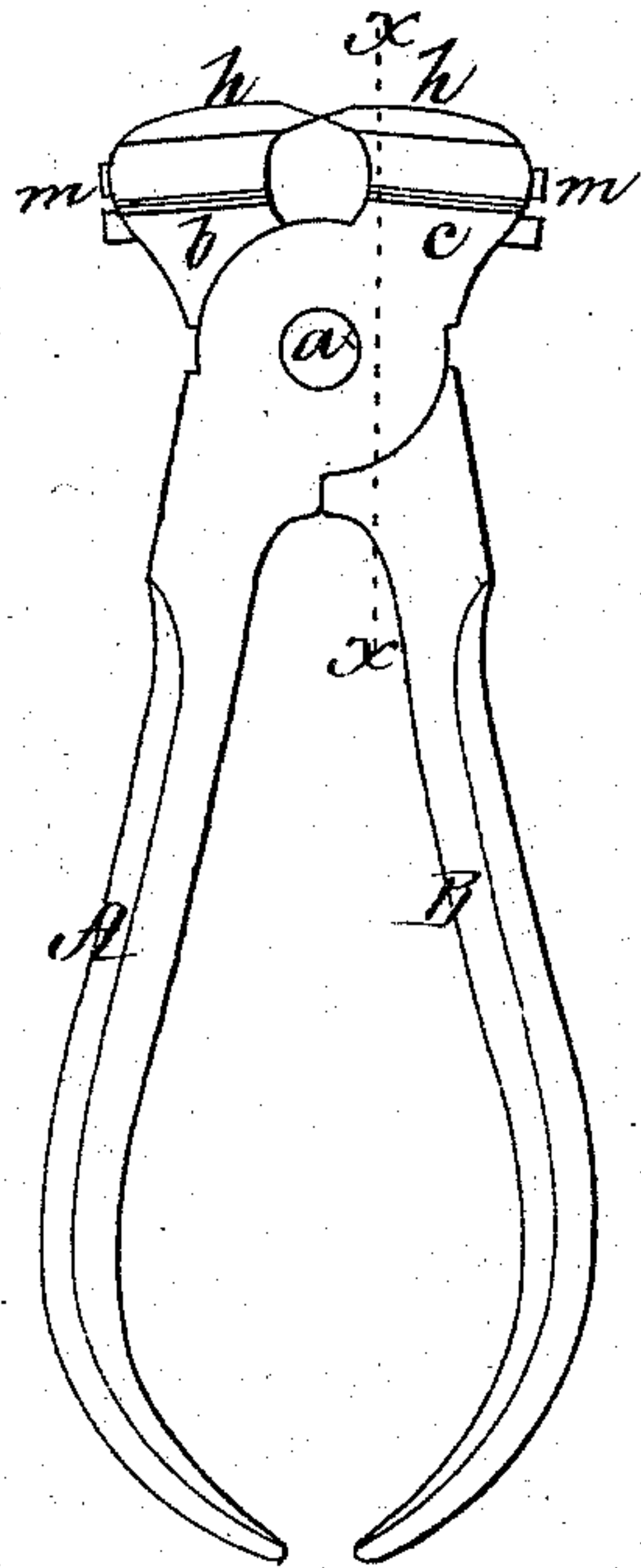


Fig. 2.

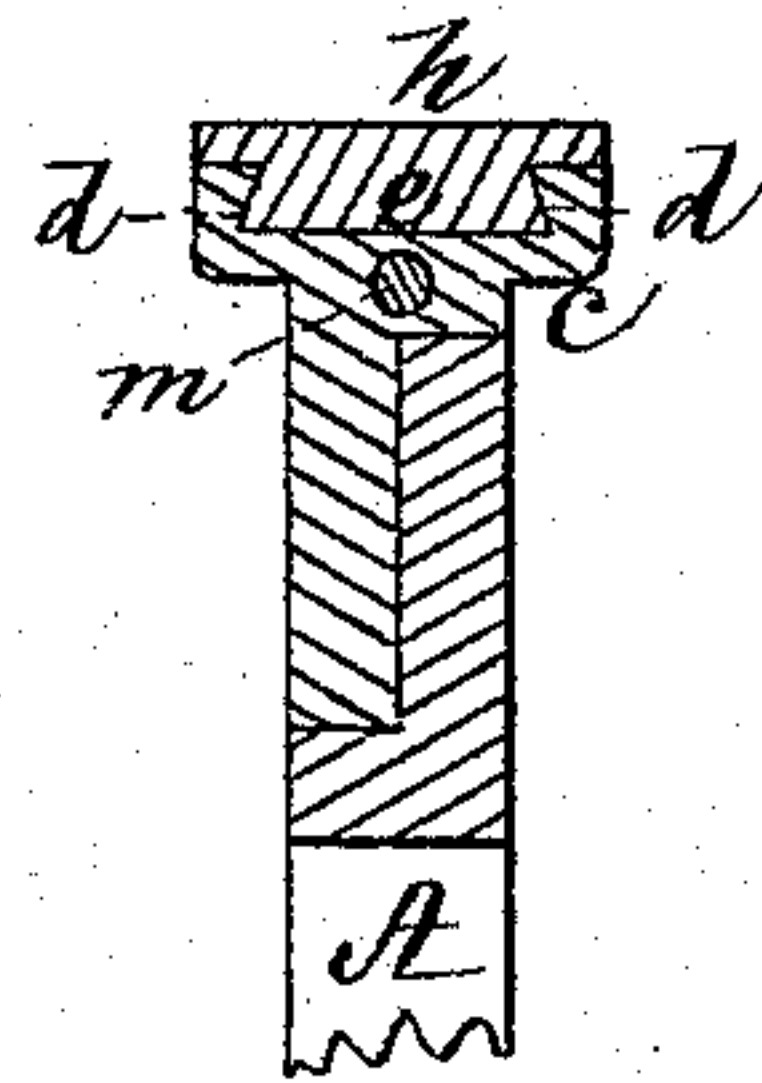
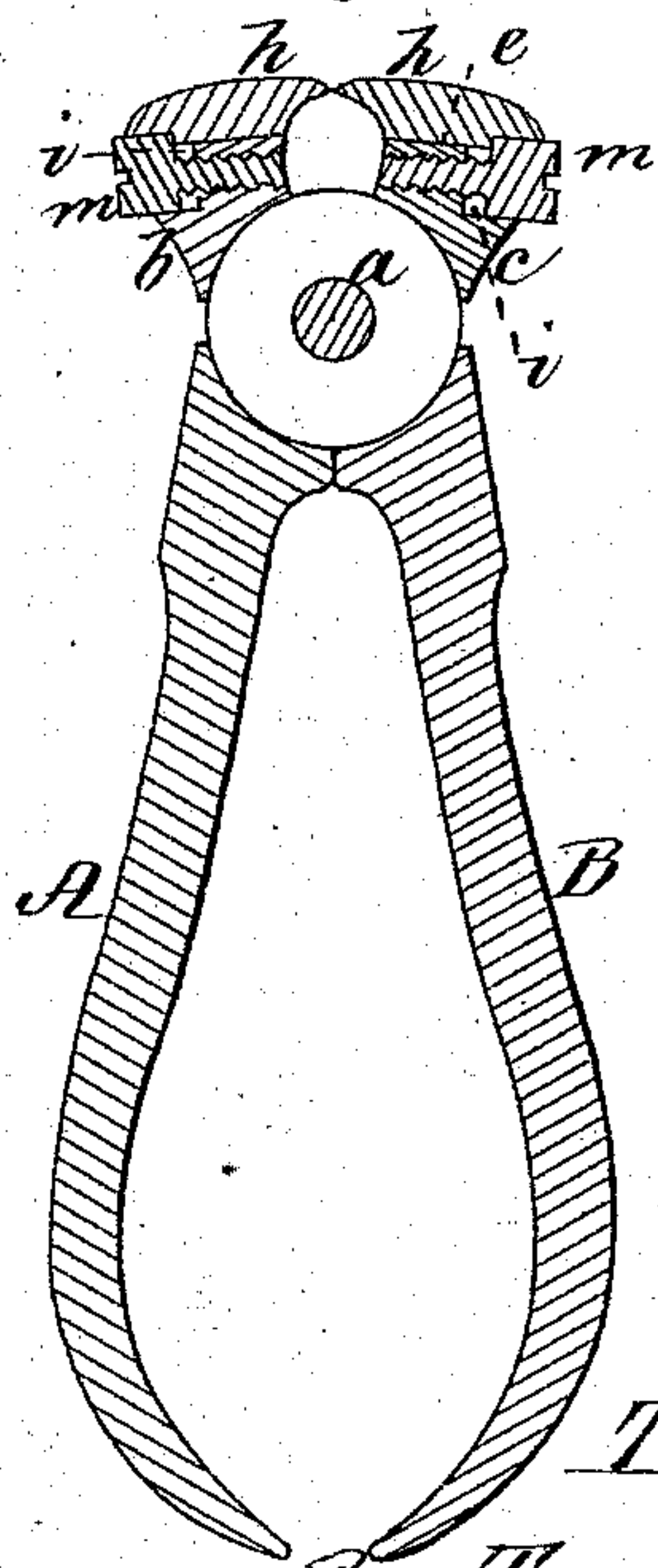


Fig. 3.



Witnesses,
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UNITED STATES PATENT OFFICE.

THEODORE P. FARMER, OF BOSTON, ASSIGNOR TO EDWARD M. FARNSWORTH, OF REVERE, MASSACHUSETTS.

IMPROVEMENT IN CUTTING-PLIERS.

Specification forming part of Letters Patent No. 158,205, dated December 29, 1874; application filed September 15, 1874.

To all whom it may concern:

Be it known that I, THEODORE P. FARMER, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Pliers for Cutting Wire, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of my improved pliers. Fig. 2 is a section on the line $x x$ of Fig. 1. Fig. 3 is a longitudinal central section.

The ordinary pliers for cutting wire, &c., are so formed that each cutter and its jaw are formed in one and the same piece, which is objectionable for the reason that when the cutter becomes worn away, so as to be of no further use, the entire tool must be discarded and a new pair of pliers purchased to supply its place. To avoid this objection is the purpose of my invention, which consists in a pair of pliers, each jaw of which is provided with a sliding cutter made adjustable in or on ways by means of a screw placed beneath it, which construction admits of the cutters being readily removed to be sharpened, and advanced from time to time as they become worn to bring them to their proper cutting position.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A B represent two levers pivoted together at a , the lower portions of the levers forming handles, and the portions above the pivot a forming jaws $b c$, each of which is provided at its top with a horizontal dovetailed groove, d , passing centrally through it, into which snugly fits a corresponding dovetailed projection, e , formed on the under side of a cutter, h , which construction admits of its being slid back and forth therein, and removed therefrom when desired. The rear of each jaw and its cutter are cut away, so that when in position a circular recess, i , will be formed for the reception of the head of a screw, m , the threaded portion of which

turns within the front portion of the jaw. The inner portion of the head of the screw m bears against the shoulder formed by the inner end of that part of the recess i cut within the projection e on the under side of the cutter, which, when worn away, can thus be advanced by turning the screw m so as to bring the cutting-edge to its proper central position, the screw also serving to hold the cutter and prevent its being forced back out of place in the operation of cutting.

By removing the screw m , the cutter may be readily slid out of its place in the jaw, for the purpose of sharpening, and when worn out may be replaced by a new one at a trifling expense.

The cutting-edge of each cutter is beveled on both sides, as seen in Figs. 1 and 3, whereby the liability of its being broken is greatly diminished.

Instead of each cutter being provided with a projection sliding in a groove in the jaw, the latter may be constructed with a projection, over which may slide the cutter having a correspondingly-shaped groove. By thus causing the cutters to slide in or on guides, their edges are kept parallel, and contact throughout their entire length insured.

The above-described pliers are exceedingly economical, as they can be used for an unlimited period of time by simply renewing the cutters as they are worn out, and a considerable saving is thereby effected.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the jaws $b c$ and the removable sliding cutters h , the adjusting-screws m , having heads arranged to slide in horizontal recesses i , formed in the jaws and countersunk in the cutters, substantially as set forth.

Witness my hand this 12th day of September, A. D. 1874.

THEODORE P. FARMER.

In presence of—

P. E. TESCHEMACHER,
W. J. CAMBRIDGE.