(No Model.)

W. L. WARNER.

SHEARS FOR METAL WORKERS.

No. 325,291. Patented Sept. 1, 1885.

Fig. 1.

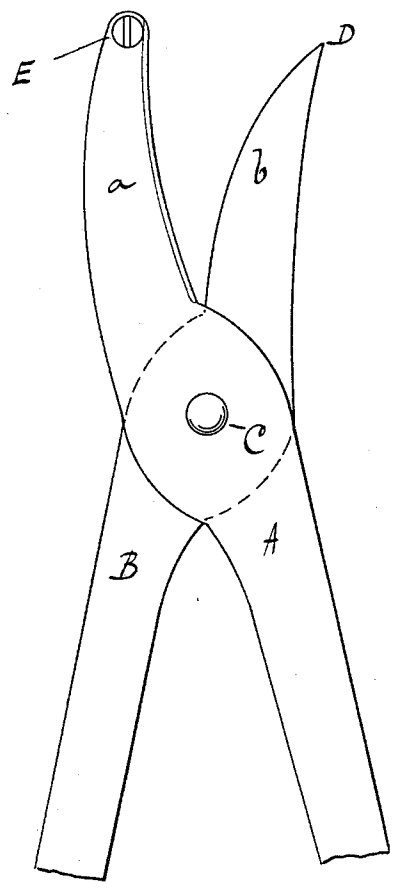


Fig. 2.

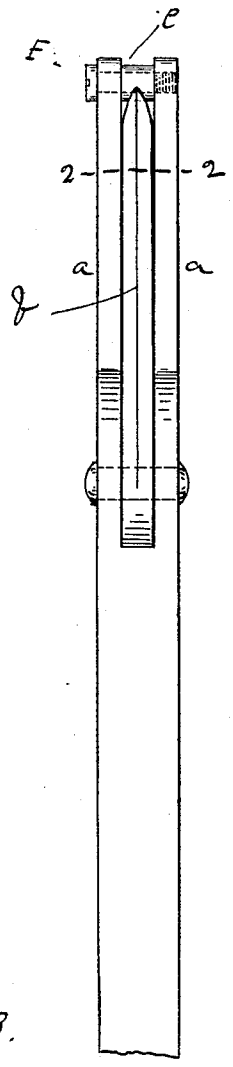
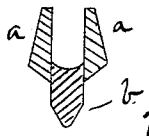


Fig. 3.



Witnesses
Andrew. O'Neill
Charles Shelton

William L. Warner
by his Attorney
Andrew. O'Neill

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UNITED STATES PATENT OFFICE.

WILLIAM L. WARNER, OF NEW HAVEN, CONNECTICUT.

SHEARS FOR METAL-WORKERS.

SPECIFICATION forming part of Letters Patent No. 325,291, dated September 1, 1885.

Application filed May 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. WARNER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Hand-Shears for Metal-Workers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 represents a side view of my improved shears; Fig. 2, an edge view, and Fig. 3 a section on line 2 2, Fig. 2.

This invention relates to an improvement in that class of shears commonly called "metal-workers' hand-shears."

Shears of this class are usually constructed with straight cutting-jaws to cut straight lines in sheets of metal; also there are what is known as "circular-jawed hand-shears," for trimming or evening up the ends of sheet-metal pipes, or for cutting holes in sheet metal. The curvature or circle in this class of shears is not on line with the handle, and is objectionable and impracticable for their purpose.

The object of my invention is to overcome this objection; and it consists in the construction of the shears as I shall hereinafter describe.

A represents the one part, and B the other part, pivoted at C. The part A is provided with two cutting-jaws, *a a*, which are in a line with the handle. The jaws *a a* are curved opposite from ordinary shears. The part B is provided with a single cutting-jaw, *b*, with more curvature than the double jaws *a a* and terminates in a point, D, which is extremely sharp or pointed. The jaw *b* has a gutter or concavity running the length of its inner surface, so it can be readily and easily sharpened, making its cutting qualities more efficient. Between the two jaws *a a* at their ends is a set-screw, E, which has a collar, *c*. The object of the screw is to keep the two ends from spreading apart when the shears are in use. Should there be occasion to sharpen the shears, the screw E can be readily tightened to draw more closely the double jaws. The collar or shoulder formed on the screw E is filed or pared down, so as to permit the two jaws to be drawn more closely together after the shears are sharpened to admit of their being closed so their sharp cutting-edges will come closely in contact and not spread. The jaw *b* is beveled on both sides for lightness, and may be employed as an edging-tool.

Any desired curvature may be given to the jaws without departing from the spirit of the invention.

The mode of operating or using the shears is as follows: The pointed part D of the single jaw *b* is inserted in the metal to be cut, by a single blow. Then the operator cuts the metal in two pieces (a pipe for instance) without using a chisel or hammer.

This improved cutter avoids a great waste of metal, and avoids the occasion of smoothing or rounding up either end of the two cut pieces, which has to be done when the chisel is employed. These shears will be found very convenient in cutting pipes and like articles.

I do not wish to be understood as broadly claiming a pair of shears with pointed ends and having concave cutting-edges, as such, I am aware, is not new.

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

In combination with the jaws *a a*, a set-screw and collar, for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM L. WARNER.

Witnesses:

LUCIUS P. DENNIS,

WM. H. ELY.