I. Lamplugh.

Shearing Metal.

No. 58,267. Patented Sept. 25, 1866.

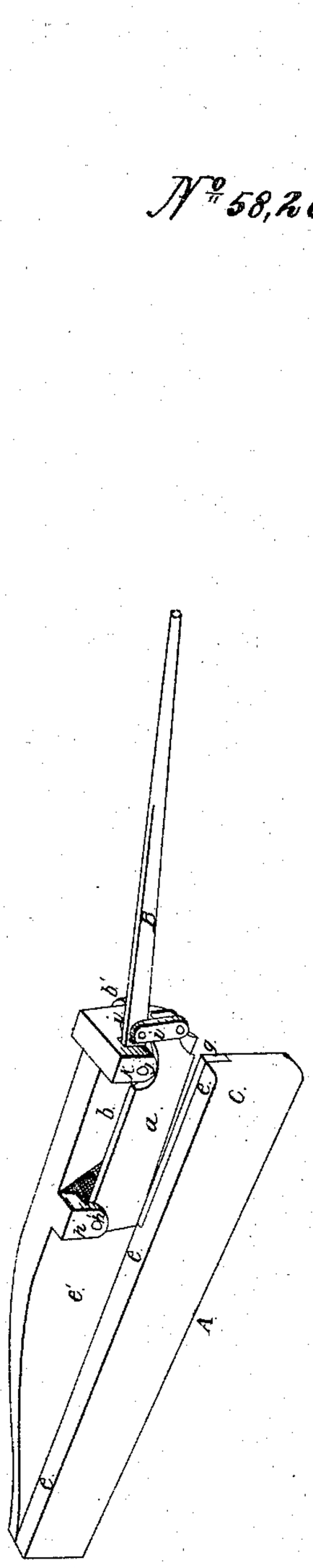

Fig. 1.

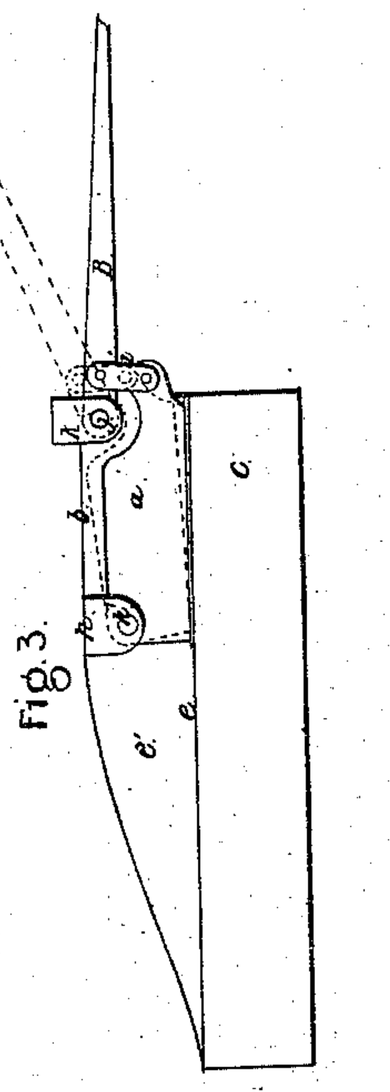

Fig. 3.

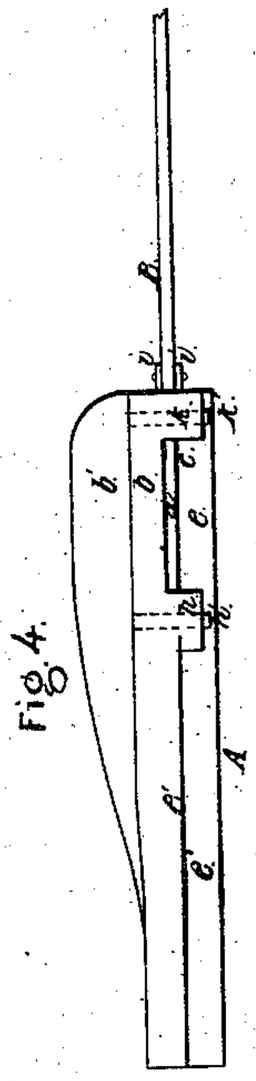

Fig. 4.

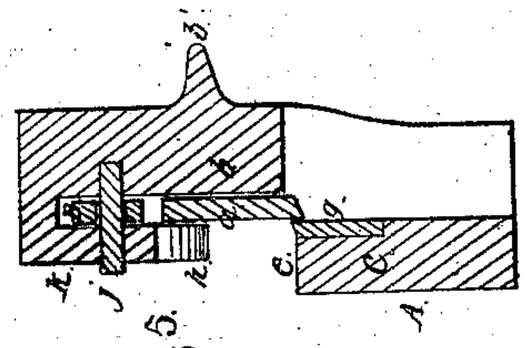

Fig. 5.

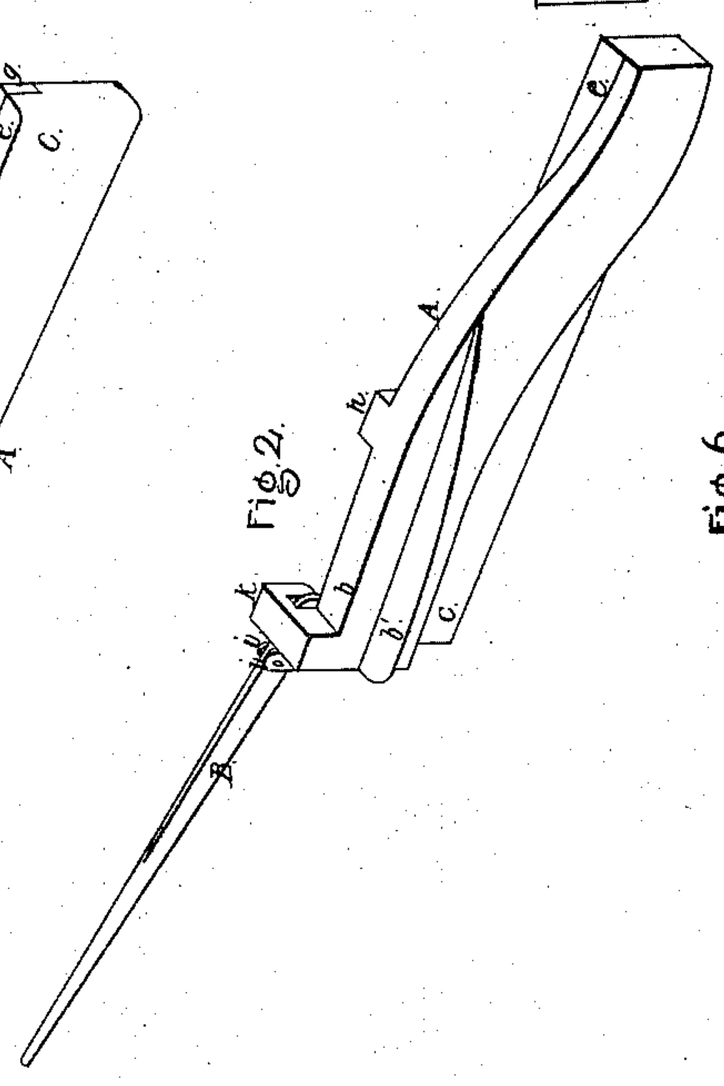

Fig. 2.

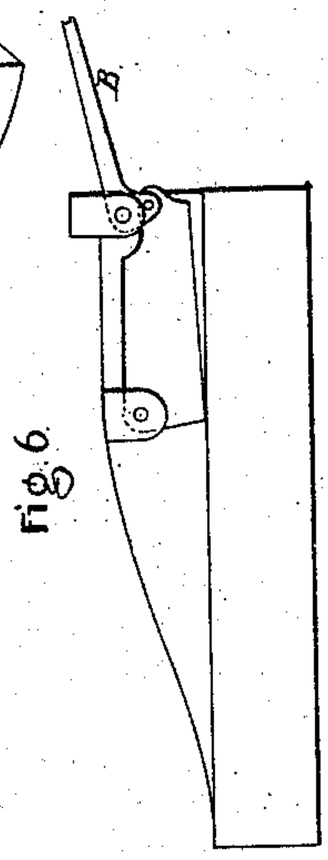

Fig. 6.

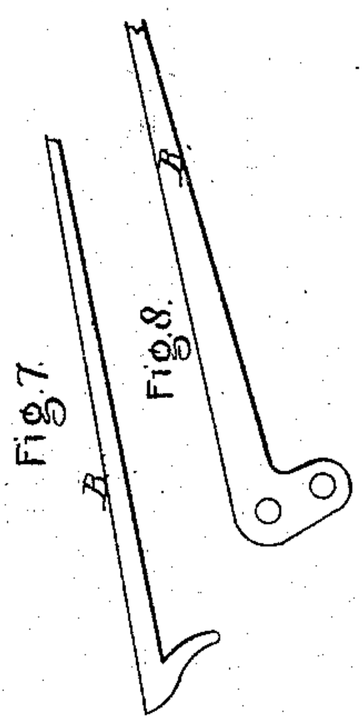

Fig. 7.

Fig. 8.

Witnesses:
R. T. Campbell
Ed Schafer

Inventor:
Isaac Lamplugh
by his Atty
Marcus Bruce & Lawrence

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

ISAAC LAMPLUGH, OF SPRINGFIELD, ILLINOIS.

IMPROVED SHEARING APPARATUS.

Specification forming part of Letters Patent No. **58,267,** dated September 25, 1866.

To all whom it may concern:

Be it known that I, ISAAC LAMPLUGH, of Springfield, county of Sangamon, and State of Illinois, have invented a new and Improved Shearing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the front side of my machine. Fig. 2 is a similar view of the back side of the machine. Fig. 3 is a front elevation of the machine, showing the shear-blade and contrivances for moving it in two positions. Fig. 4 is a top view. Fig. 5 is a vertical cross-section through the front part of the machine.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine which is adapted for shearing metal and other hard substances, and which is so constructed that the shear-blade is supported between solid metal jaws in its vibrating movements, which jaws constitute a part of a frame that sustains the contrivances for operating the shears, and also sustains and guides the metal during the operation of shearing it, as will be hereinafter described.

By my invention I produce a portable shearing-machine which can be sustained in a common vise, or readily secured to a bench or trestle, and which can be taken apart and packed into a very compact compass for transportation, as will be seen from the following description.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a metal frame, which is adapted for receiving and sustaining the shear-blade *a* and the contrivances for operating this blade. The frame A is constructed with two jaws, *b c*. The front surface of the upper jaw, *b*, is in a plane perpendicular to the base of the frame, of which it forms a part, and this upper jaw is so arranged with reference to the lower jaw, *c*, and the back surface of this jaw that a space is formed to receive the shear-blade *a*, which latter is sustained between the two jaws and prevented from being thrust out laterally by them during the operation of shearing.

The lower edge of the jaw *b* is nearly in a horizontal plane with the upper edge of the lower jaw, *c*, and the width of the shear-blade is such that its sides always impinge upon the flat surfaces of both jaws whether the free end of this blade be elevated or depressed. The back or upper jaw, *b*, will therefore keep the cutting-edge of said blade in close contact with the stationary cutting-edge of a steel piece, *g*, that is inserted into and flush with the upper and vertical faces of the lower jaw, *c*. This fixed steel blade *g* may be welded or bolted or secured to the jaw *c* in any other suitable manner.

The upper edge of the jaw *c* forms, in conjunction with the ledge *e*, a bearing for the metal or other substance which is being sheared; and the vertical face *c'* of the frame A, which is in a plane with the front face of the shear-blade *a*, serves to guide the strips of metal during the operation of shearing.

The shear-blade *a* is pivoted at one end to an ear, *h*, by a pin, *h'*, and at the other end it is pivoted to short links *i i*, which are again pivoted to a hand-lever, B, as shown in Figs. 1 and 3. The lever B, which may be made very long, is pivoted by means of a pin, *j*, to an overhanging ear, *k*. By elevating and depressing lever B a vibrating movement will be imparted to the shear-blade, as indicated by the red and black lines, Fig. 3.

The two ears *h* and *k* are cast with the jaw *b*, and overhang the vertical face of this jaw to receive within them their respective parts; and the pins which enter these ear-bearings may have heads formed on their ends to admit of their ready removal when it is desired to take the machine apart and pack it up.

On the back surface of the jaw *b*, I form a rib, *b'*, which extends from the front end of this jaw back some distance, as shown in Figs. 2 and 4, and adds great strength to the jaw against lateral strain.

That portion of the machine or frame of the machine which extends back of the jaws constitutes a solid stock, for enabling me to secure the shears to a vise or bench; and, if de-

sirable, clamps may be applied to said stock to secure it to a bench or other fixed object.

I disclaim the construction shown in the rejected application of Saml. Jones; but while doing so I wish it to be understood that

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

The improved portable shearing-machine constructed as herein described and shown, as a new article of manufacture.

ISAAC LAMPLUGH.

Witnesses:

EDMUND PAGE,

GEO. W. GRAHAM.