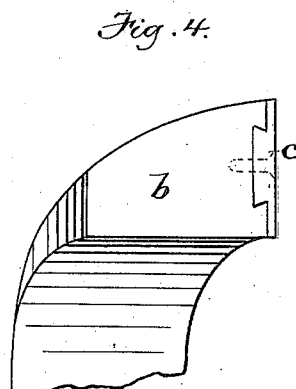
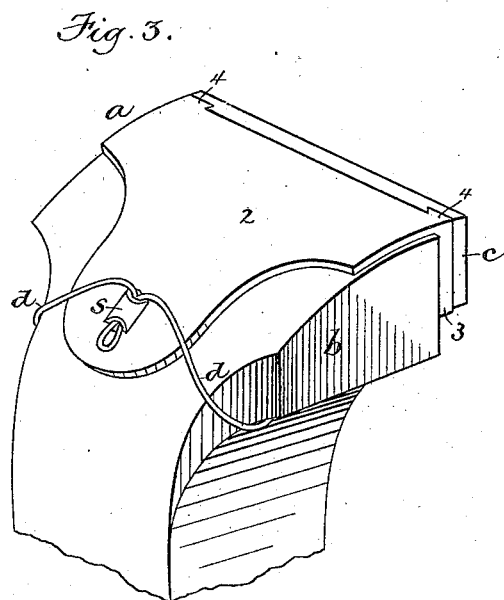
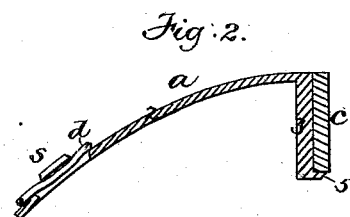
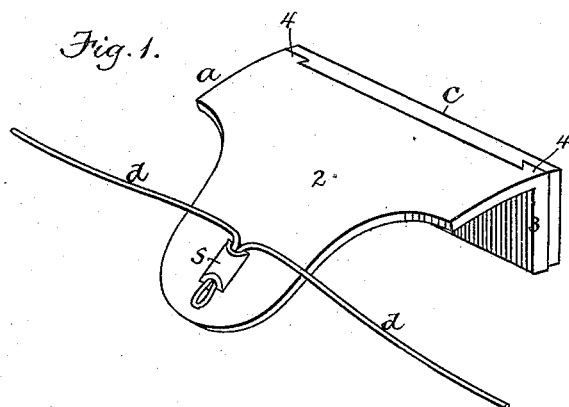


(Model.)

E. A. GALBRAITH.
VISE JAW ATTACHMENT.

No. 307,453.

Patented Nov. 4, 1884.



Witnesses.

A. L. White
H. Brown

Inventor.

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Atty.

UNITED STATES PATENT OFFICE.

EDWARD A. GALBRAITH, OF BOSTON, ASSIGNOR TO HIMSELF AND OZRO
M. WHITTIER, OF QUINCY, MASSACHUSETTS.

WISE-JAW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 307,453, dated November 4, 1884.

Application filed February 25, 1884. (Model.)

To all whom it may concern:

Beit known that I, EDWARD A. GALBRAITH, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Vise-Jaw Attachments, of which the following is a specification.

This invention has for its object to provide improved means for securing protecting-plates of soft metal or equivalent material to vise-jaws, to prevent injury to articles grasped by said jaws, particularly such articles as have finished surfaces or are of a soft nature. Vise-jaws, being generally made of hardened steel, and often roughened or corrugated on their clamping-faces, are liable to mar any kind of finished work when pressed firmly against it.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my improved attachment. Fig. 2 represents a sectional view of the same. Fig. 3 represents a perspective view of a vise-jaw with my attachment applied thereto. Fig. 4 represents a side elevation of a vise-jaw.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents the holder, which is composed of any suitable rigid metal which will not become distorted by the usage to which it is liable to be subjected in a vise.

The holder is composed of the curved portion 2, adapted to rest on the upper end of a vise-jaw, *b*, and the flange 3, adapted to bear against the clamping-face of the jaw. The flange 3 is provided on the outer face with dovetail ribs 4 4.

c represents the protecting plate or filling, which is fitted to the ribs 4, and is held thereby in contact with the outer face of the flange 3. Lugs or projections 5 may be provided at the bottom of the flange 3, to support the lower edge of the protecting-plate.

The plate or filling *c* may be of brass, copper, Babbitt metal, rawhide, or any other suitable material.

The portion 2 of the holder is provided with springs *d d*, which project at opposite sides, and are adapted to bear at their outer ends with a yielding pressure against the neck of the vise, as shown in Fig. 3, thus securing the holder and its filling or protecting plate to the vise, so that it will not be liable to accidental displacement, but can be removed without difficulty when required.

The springs are sufficiently flexible to conform to vise jaws or necks of different sizes, so that the attachment is not limited to use in connection with any particular pattern of vise.

It will be seen that the rigid holder enables the protecting-plate or filling to be conveniently applied and removed, and by its rigidity prevents said plate from being distorted by the pressure to which it is subjected.

The springs *d d* are preferably composed of a single piece of wire inserted in a socket, *s*, on the holder.

Fig. 4 shows a vise-jaw having a dovetail groove in its face and a filling or protecting plate inserted in said groove, said plate being preferably of rawhide.

I claim—

The improved vise-jaw attachment consisting of plate *a*, having curved portion 2, adapted to rest on the upper end of a vise-jaw, the flange 3, adapted to bear against the face of the jaw, and having dovetail ribs 4 4, the filling-plate *c*, held in place by the dovetail ribs, and the springs *d d*, attached to plate *a*, all combined and arranged for attachment to a vise-jaw substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 21st day of February, 1884.

EDWARD A. GALBRAITH.

Witnesses:

C. F. BROWN,
A. L. WHITE.