H. F. SEYMOUR.

VISE.

APPLICATION FILED OCT. 11, 1917.

1,314,985. Patented Sept. 2, 1919.

Fig. 1.

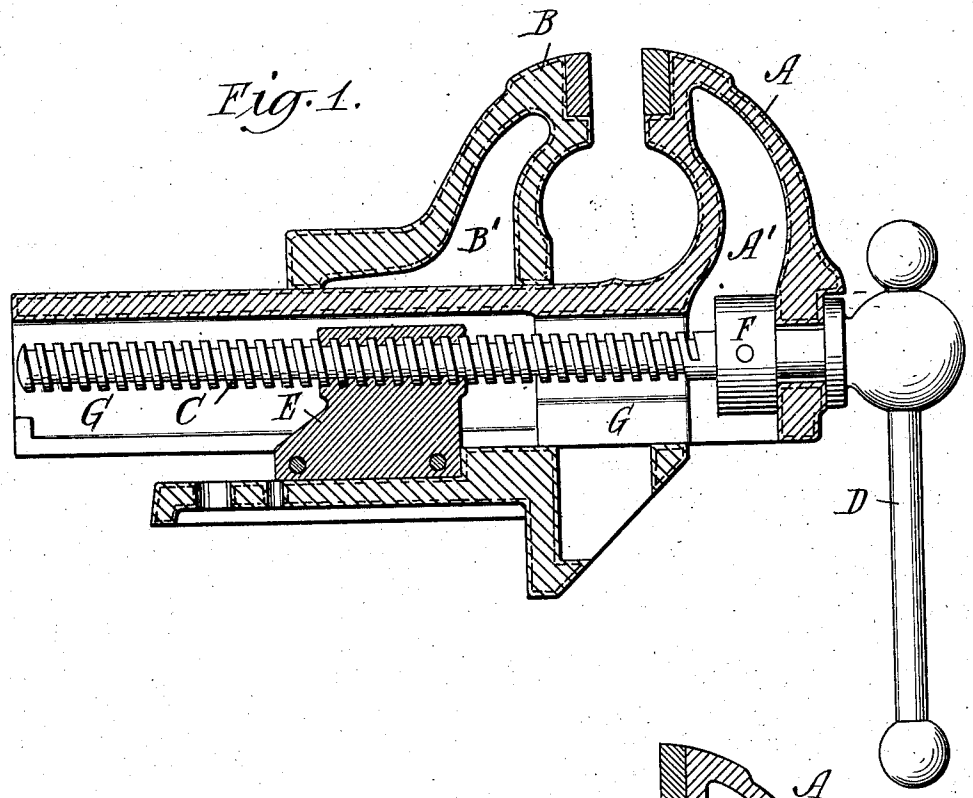
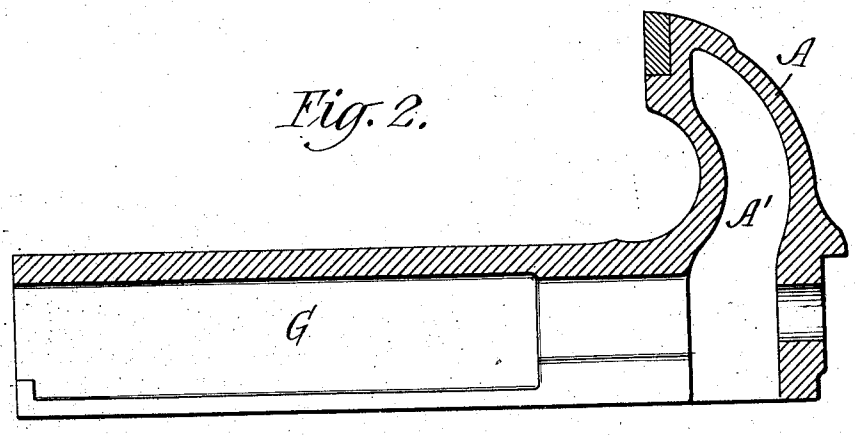


Fig. 2.



WITNESS:
John J. Ranagan
C. Curtis

Harold F. Seymour INVENTOR

BY Seymour & Seymour
ATTORNEYS

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HAROLD FREEMAN SEYMOUR, OF CLEVELAND, OHIO.

VISE.

1,314,985. Specification of Letters Patent. Patented Sept. 2, 1919.

Application filed October 11, 1917. Serial No. 195,899.

To all whom it may concern:

Be it known that I, HAROLD FREEMAN SEYMOUR, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Vise of which the following is a specification.

My invention relates to improvements in vises in which one and preferably both the jaws are first cast hollow and preferably of malleable iron and then annealed inside and out and toughened.

The objects of my improvements are:

First, to provide increased surface for the annealing effect and thus increase malleability and increase strength.

Second, to save material and cost and provide a stronger vise, of lighter weight at a low price to the consumer.

Other objects will appear from the hereinafter description.

I attain these objects by the mechanism illustrated in the accompanying drawing in which the same letters refer to similar parts.

Figure 1, is a vertical longitudinal section of a machinist's bench vise.

Fig. 2 is a detailed view of the hollow front jaw, and shank.

A is the front jaw, showing half the hollow,

B is the back jaw, showing half the hollow,

C is the main screw,

D is the handle,

E is the nut,

F is the collar,

G is the hollow shank integral with the front jaw A.

The inside and outside annealing is shown, exaggerated as to depth of annealing, by dotted lines wherever the contour is shown in the drawings, it being understood that the preferable annealing inside and outside is only skin deep and covers all surfaces inside and outside of the cast-iron parts; but deeper annealing may be made without departing from the spirit of my invention.

I make this improved vise in parts cast hollow preferably from iron that may best be made malleable by annealing or otherwise, except the main screw C and the handle D, which are ordinarily made solid of mild steel, and I then anneal all surfaces inside and out for seven to eight days.

The castings may be made of any desired mixture of iron that may be rendered malleable by annealing or otherwise, preferably hard white iron or from other iron that may be toughened and strengthened by annealing and even the parts described as castings may be hollow forgings of steel which are then treated for malleability in ways well known to those skilled in the art, and not necessary to describe.

When the jaws are cast as I prefer they should be of iron that may be best rendered malleable as aforesaid I obtain the hollow jaws by core-work in well known ways.

I have described and illustrated my improvement as embodied in a machinist's bench vise as a good illustration and not as a limitation, and I do not particularly describe or illustrate other vises to which my improvement is equally applicable and claimed. I have embodied it in blacksmith's vises also in large numbers on a commercial scale and have submitted them in both forms to severe service tests and to scores of heavy blows from a heavy sledge on the principal parts,—a destructive test for vises of the prior art,—but without harm to my improved vise.

Many variations may be made in the form and construction of the parts and of the whole mechanism, and in the material of which they are made, and in the method of treating the material without departing from the spirit of my invention which inheres in the hollow jaws, one or both annealed and toughened inside and out, in any degree, by any process.

What I claim and desire to secure by Letter Patent is:

1. In a vise, hollow metallic jaws and shank, annealed on the inside and outside surfaces.

2. In a vise, a hollow metallic jaw, annealed on the inside and outside surfaces.

3. In a vise, hollow metallic jaws and shank annealed skin deep on the inside and outside surfaces.

4. In a vise, a hollow metallic jaw annealed skin deep on the inside and outside surfaces thereof.

In witness whereof, I have hereunto set my hand at this city, county and State of New York, this 29th day of June 1917.

HAROLD FREEMAN SEYMOUR.

In presence of—
JOHN J. RANAGAN,
C. CURTIS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."