E. N. PORTER.

Picture-Frame Clamp.

No. 207,441. Patented Aug. 27, 1878.

Fig. 1.

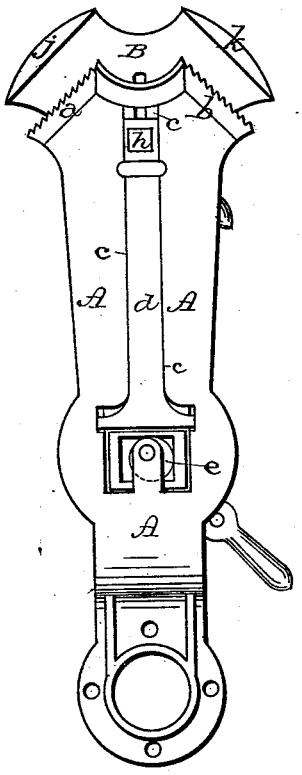
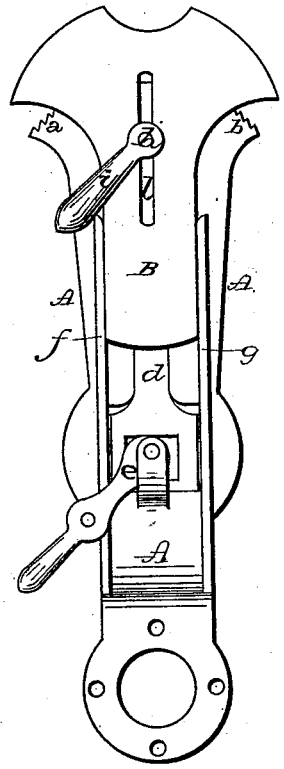


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD N. PORTER, OF HARDWICK, VERMONT.

IMPROVEMENT IN PICTURE-FRAME CLAMPS.

Specification forming part of Letters Patent No. **207,441**, dated August 27, 1878; application filed June 12, 1878.

To all whom it may concern:

Be it known that I, EDWARD N. PORTER, of Hardwick, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Picture-Frame Vises; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a vise for holding picture-frames while their mortise-and-tenon, miter, or other joints are being pinned, bradded, or otherwise fastened together.

My improved device is made of metal, and is so arranged that its jaws can be instantly and perfectly adjusted to moldings of any width or length, and then by means of a cam-lever the corners of the frame are so firmly held that there is no possibility of any movement in the operation of fastening the moldings, nor is there any necessity to readjust the vise until the fastening of each side of the joint is completed, thereby securing perfect work in the simplest, easiest, and cheapest manner.

I do not claim that all the parts are new, except in combination with others.

In the drawings, Figure 1 is a front view of my invention. Fig. 2 is a rear view of the same.

Similar letters indicate corresponding parts.

A represents a plate, which is intended to be attached to the operator's table or bench. The two sides *a* and *b* of its upper extremity approach each other at right angles, and constitute fixed jaws, whose surfaces are slightly intended to gripe more securely the inner side of the moldings when placed in position to be fastened together, as hereinafter described. A slot, *c*, of a width sufficient for a sliding bar, *d*, of suitable dimensions extends longitudinally in the center of the plate A from a point near its upper end to a short distance below the middle of the plate, at which point its dimensions are enlarged to admit the expansion of the lower end of the bar *d*. Within this enlargement of the sliding bar *d* is placed a cam-lever, *e*, which is intended to raise or lower the bar *d*, together with the adjustable plate B, to which it is attached. This lever may be worked by the foot by means of a rod and treadle, or by the hand alone.

On either side of the rear of the plate A are projections *f* and *g*, which serve to strengthen and brace the plate lengthwise, and also for bearings or guides to control the longitudinal movement of the upper and adjustable plate B. In the center of this upper plate B is the longitudinal slot *l* to receive the tongue or screw *h*, attached to the sliding bar *d*, which guides the movement of the plate B, and at the same time holds it at any point desired by means of a set-nut, *i*. Each of the two sides of the upper extremity of the adjustable plate B terminate at an angle corresponding with that of the fixed jaws *a* and *b*. From these sides flanges project forward, which are indented on the under side to form adjustable jaws *j* and *k*, which antagonize perfectly with the fixed jaws *a* and *b*. An opening is left between the jaws *j* and *k* in the apex of the angle at the top of the plate B, to allow the ends of the moldings which are intended to be joined together to project above the jaws *j* and *k*, in order that they may be conveniently nailed or otherwise fastened together at the joint without interfering with the jaws of the vise.

I prefer to have my device stand perpendicular to the bench. To accommodate frames of greater dimensions than can stand between the floor and the jaws, my apparatus can be made to be attached to the table or bench horizontally, in which event the cam-lever *e* is located on the under side.

In operation, the moldings to be joined together are laid upon the face of the fixed jaws *a* and *b* of the plate A, with their mitered extremities meeting directly over the center of the plate. They are held in this position by sliding down upon their upper sides the adjustable jaws *j* and *k*. The plate B is then secured to the sliding bar *d* by turning the set-nut *i*. This leaves both hands of the operator free to perfect the joint, if necessary.

The process of clamping the moldings more closely is accomplished by tightening the gripe of the jaws *j* and *k* of the adjustable plate B by means of the cam-lever *e*, to which the plate

B is attached. Thus easily and securely held, it is impossible for the frame to move while being nailed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The adjustable plate B, controlled by screw *h*, which moves in slot *l*, in combination with cam *e* and sliding bar *d*, substantially as set forth.

2. The combination of the cam *e*, sliding bar *d*, and nut *i* with stationary plate A and adjustable plate B, the several parts being constructed and arranged to operate substantially as and for the purposes specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD N. PORTER.

Witnesses:

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