J. ZIMMERMAN.

CLAMPS FOR MAKING FRAMES.

No. 189,831. Patented April 17, 1877.

Fig. 1.

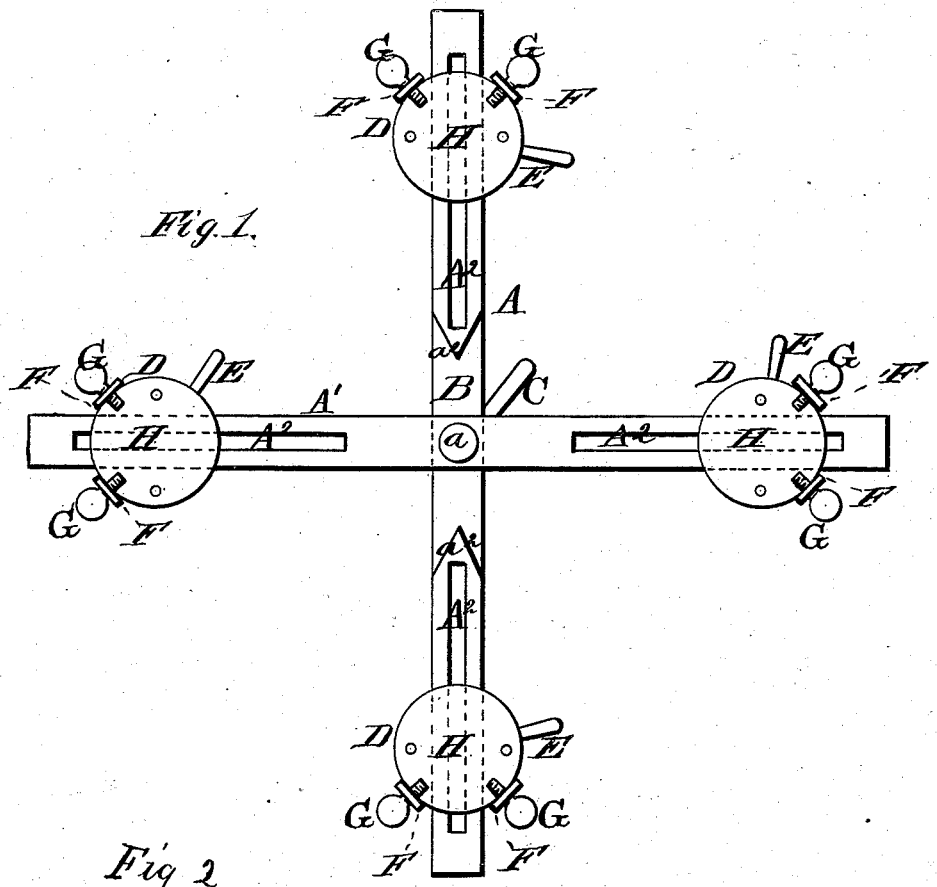
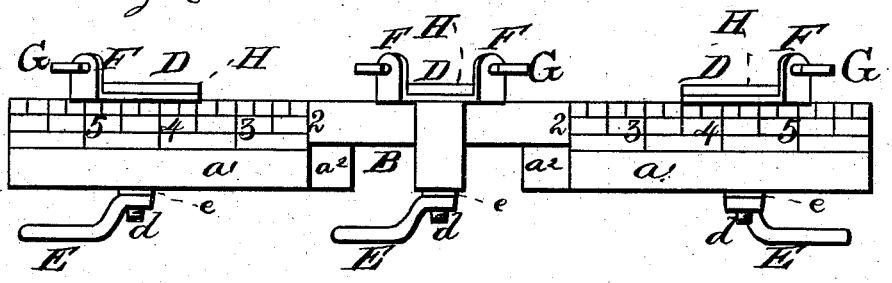


Fig 2



WITNESSES

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IMPROVEMENT IN CLAMPS FOR MAKING FRAMES.

Specification forming part of Letters Patent No. **189,831**, dated April 17, 1877; application filed November 4, 1876.

To all whom it may concern:

Be it known that I, JASPER ZIMMERMAN, of Brunswick, in the county of Chariton and State of Missouri, have invented a new and valuable Improvement in Clamps for Making Frames; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my frame-clamp, and Fig. 2 is a side elevation of the same.

This invention relates to clamps used for holding picture-frames and similar frames while in process of construction.

In the annexed drawings, A A^1 designate two corresponding arms, which are pivoted together at their middle parts by a bolt, *a*, and recessed at and on each side of said pivotal point so that their surfaces will be flush. To allow the pivotal adjustment of said arms without cutting away an unnecessary amount of the material, said recesses (marked B B in the drawings) are made fishtail-shaped at each end, so that the thick parts a^1 a^1 of said arms terminate inwardly in points a^2. Arms A A^1 are locked at any desired angle by means of a screw-tapped clamping-lever, C, which engages with screw-threads on the end of bolt *a*.

The thick parts a^1 of arms A A^1 are longitudinally slotted at A^2, so as to allow the adjustment toward and from the pivot of four plates or disks, D, each of which is provided with a screw-threaded attaching-bolt, *d*, that passes down through one of said slots A^2. Each one of said plates is locked in any such adjustment by means of a screw-tapped clamping-lever, E, (similar to C,) which operates on the screw-threads of its attaching-bolt *d*. Said bolts *a* and *d* are provided with washers *e e*, against which the screw-tapped nut ends of saids clamping-levers bind. Said bolts *d*, when said clamping-levers are loosened, are capable of being turned within their slots. Said plates or disks D are provided with raised flanges or lugs F F, (two to each plate,) which flanges or lugs are screw-tapped and receive radial thumb-screws G G, which press against the picture-frame or other frame held in said clamp, binding upon the same at each side of every corner thereof. Each one of said metal disks or plates D is provided with a circular wooden shield, H, (shown in Fig. 2,) for the purpose of preventing injury to the small saw used in fitting the joints, as hereinafter described.

It is obvious that this device is adjustable in several different ways. It may be adapted to any shape of frame by suitably changing the angle of pivoted arms A A^1. It may be adjusted to suit any size of frame by moving plates D toward or from the central pivot, and clamping them at the desired points. The said disks can be adjusted pivotally and separately, so that radial thumb-screws G will be presented properly to the sides of the frame, which they hold on each side of the corners thereof.

The moldings for the frame are first sawed off in any miter-box, and then placed in the clamp, which will bring all the joints into position at the same time. If any do not fit, the ends of the moldings may be suitably sawed away by inserting and operating a fine saw without removing them from the clamp. When the joints all fit, the plates D are loosened so as to allow the removal of said moldings, the ends of which are then glued. The said moldings are next replaced in the clamp, as before, and the clamp is tightened again to hold them for drying. When the drying is ended the frame is finished.

If the moldings are too thin for the thumb-screws G G to bear against them, thin strips of wood are placed on shields H, so as to hold up said moldings sufficiently to be clamped. Arms A A^1 are graduated, as shown in Fig. 2, so as to facilitate the hereinbefore-described adjustment for size. The diagonal of the frame being known, it is only necessary to adjust each of the disks or plates D one-half of that distance by said graduations or scale.

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

1. In a clamp for frames, the centrally-pivoted slotted arms A A^1, in combination with the disks D, having flanges F F, and set-

screws G G, said disks being adapted to slide in their slots, and also to be rotated on their axes, and held in any desired position, substantially as described.

2. In a clamp for frames, plate D, provided with screw-tapped flanges F F, and clamping thumb-screws G G, arranged and operating substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JASPER ZIMMERMAN.

Witnesses:
R. C. GREGORY,
LOU. A. FISHER.