G. R. REEVES.

MITER CLAMP.

APPLICATION FILED MAR. 7, 1917.

1,246,466

Patented Nov. 13, 1917.

2 SHEETS—SHEET 1.

Fig. 1

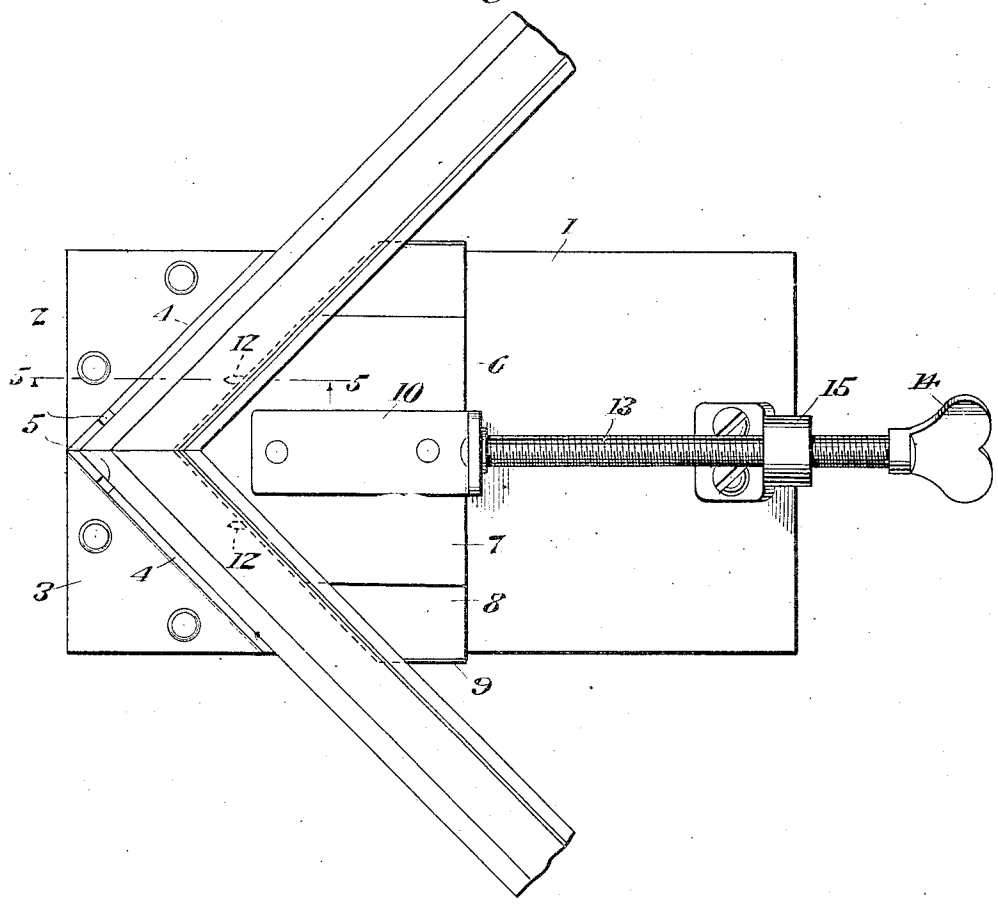
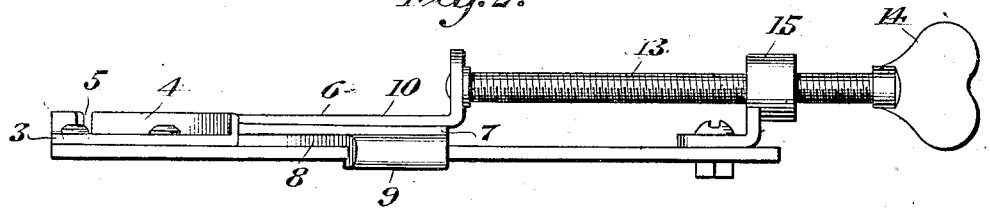


Fig. 2.



INVENTOR

G. R. Reeves

WITNESSES

M. D. Slifer

Rodney M. Lovette

BY Victor J. Evans

ATTORNEY

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2 SHEETS—SHEET 2.

Fig. 3.

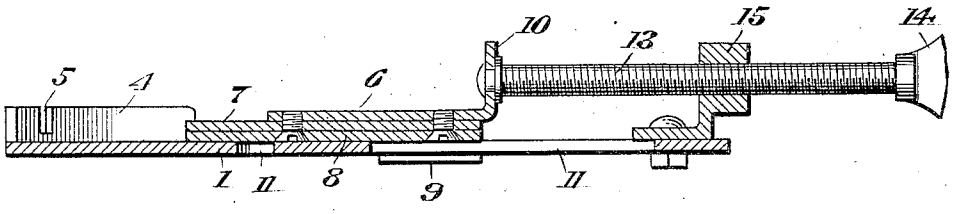


Fig. 4.

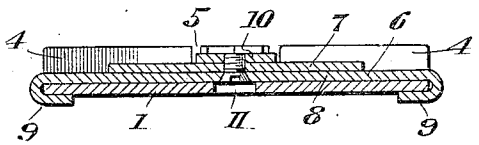
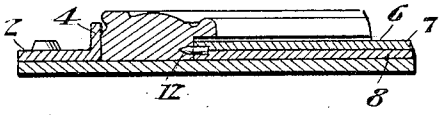


Fig. 5.



INVENTOR

G. R. Reeves

WITNESSES

M. D. Slifer

Rodney M. Smith

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE R. REEVES, OF OAK PARK, ILLINOIS.

MITER-CLAMP.

1,246,466. Specification of Letters Patent. Patented Nov. 13, 1917.

Application filed March 7, 1917. Serial No. 153,027.

To all whom it may concern:

Be it known that I, GEORGE R. REEVES, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented new and useful Improvements in Miter-Clamps, of which the following is a specification.

This invention comprehends improvements in clamps and relates more particularly to a miter clamp for use in securing picture frame sections and analogous sections while gluing or nailing the same.

One of the objects of the invention is to provide a very simple and practical miter clamp which will engage the mitered ends of two members and hold them in such fashion that they will not split when nailed together.

Another object of the invention is to provide a miter clamp having a frame or base plate upon which is slidably mounted a clamping plate, the base plate being provided with flanges having notches therein to permit nailing and the clamping plate being formed in sections between which are secured holding spurs.

The invention also aims to generally improve clamps of this nature to render them more practical, useful and commercially desirable.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter fully described, illustrated and claimed.

In the drawings,

Figure 1 is a plan view of the miter clamp showing a pair of frame members secured therein.

Fig. 2 is a side elevation of the clamp.

Fig. 3 is a longitudinal sectional view through the clamp.

Fig. 4 is a transverse sectional view showing the means of securing the clamping plate to the frame plate, and

Fig. 5 is a transverse sectional view on the plane of line 5—5 of Fig. 1.

Referring in detail to the drawings by numerals, 1 designates the frame or base plate which is preferably rectangular in shape and which has secured to its upper side adjacent one end, the triangular stop plates 2 and 3. Each of the plates is formed on its longest side with an upstanding flange 4 and the two flanges converge toward the longitudinal center of the frame plate and are disposed at right angles to each other. The inner ends of the flanges meet at the center line of the frame plate forming a closed angle and each flange is provided with a transverse upwardly opening notch 5 for a purpose to be hereinafter mentioned.

Slidably mounted upon the frame plate is a clamping member generally designated 6 formed of the superposed plates 7, 8. The forward edges of these plates are convergent toward the longitudinal center of the frame plate and are disposed at right angles to each other. Attaching flanges 9 are formed on the lateral edges of the plate 8 and engage the under face of the frame plate to slidably connect the clamping plate thereto.

Lug screws connect the plates 7 and 8 and the angular plate 10. These screws are threaded into the plates from the rear side of the frame plate and in order to provide easy access to said screws, the frame plate is formed with the openings 11 which may be registered with the heads of the screws. Removably clamped between the plates 7 and 8 to project beyond the forward edges thereof are a pair of spurs 12 and the opposed faces of the plates are longitudinally recessed to provide sockets for the accommodation of the spurs. The spurs being received partly in each of the plates 7 and 8 will coöperate with the screws to hold the plates against relative rotational movement.

The clamping member is actuated by a screw 13 swiveled at one end to the angular plate 10 and provided upon its other end with a wing member 14. This screw works through a threaded sleeve 15 on the bracket 16 bolted or otherwise secured to the frame plate 1.

In operation, a pair of frame sections are positioned in the clamp as shown in Fig. 1 and then the clamp tightened to force the miter ends of the frame sections into close engagement with each other. The spurs 12 will engage the frame sections and prevent any possibility of slipping when nails or other suitable fasteners are driven into the sections through the notches 5. Heretofore, much expense and trouble has been caused by the ends of the frame members splitting when secured by nails, and I prevent this splitting action by having the flanges 4 form a closed angle. Should the spurs become worn or bent, they may be easily removed

by unscrewing the plates of the clamping member as will be readily understood.

From the foregoing description taken in connection with the accompanying drawings, it will be seen that I have provided a very simple and efficient miter clamp consisting of a minimum amount of parts, which may be cheaply manufactured and quickly assembled.

While I have shown and described the preferred embodiments of my invention, it will be clearly understood that I do not wish to be limited to this construction, but may make such changes as will fall within the scope and spirit of the invention as claimed.

What I claim is:—

1. A miter clamp comprising a frame plate, flanges on said frame plate forming a closed angle, a clamping member slidable on the frame plate, said clamping member being formed of two superposed plates, spurs removably secured between said plates and projecting beyond the forward edges thereof, each of the plates being formed with grooves, and the grooves of one plate coöperating with the grooves of the other plate to form sockets for the spurs, and means for forcing the clamping member toward the flanges.

2. A miter clamp comprising a frame plate, flanges mounted on said plate and converging toward the medial line thereof, said flanges being disposed at right angles to each other and meeting at their opposed ends to form a closed angle, the flanges being formed with upwardly opening nail slots, a clamping member slidable on said frame plate toward and away from said flanges, said clamping member being formed of two superposed plates, spurs removably secured between said plates and projecting beyond the forward edges thereof, each of the plates being formed with grooves, and the grooves of one plate coöperating with the grooves of the other plate to form sockets for the spurs, and actuating means for said clamping member.

3. A miter clamp comprising a frame plate, flanges mounted on said plate at right angles to each other, a clamping member slidable on said frame plate, said clamping member being formed of two superposed plates, spurs removably secured between said plates and projecting beyond the forward edges thereof, each of the plates being formed with grooves, and the grooves of one plate coöperating with the grooves of the other plate to form sockets for the spurs, screws removably securing said plates together and means for moving the clamping member longitudinally.

4. A miter clamp comprising a frame plate, flanges mounted on said plate at right angles therefrom, said flanges converging toward the medial line of the plate and forming a closed angle, the flanges being provided with nail slots, a clamping member slidable on said frame plate and comprising a pair of superposed plates, spurs removably fitted between said plates, each of the plates being formed with grooves and the grooves of one plate coöperating with the grooves of the other plate to form sockets for the spurs, screws removably securing said last mentioned plates to each other, the frame plate being formed with openings with which said screws are adapted to register and means for moving the clamping member longitudinally.

In testimony whereof I affix my signature.

GEORGE R. REEVES.