(No Model.)

D. GARRISON & G. C. REUKAUFF.

CLAMP.

No. 386,631. Patented July 24, 1888.

Fig. 1.

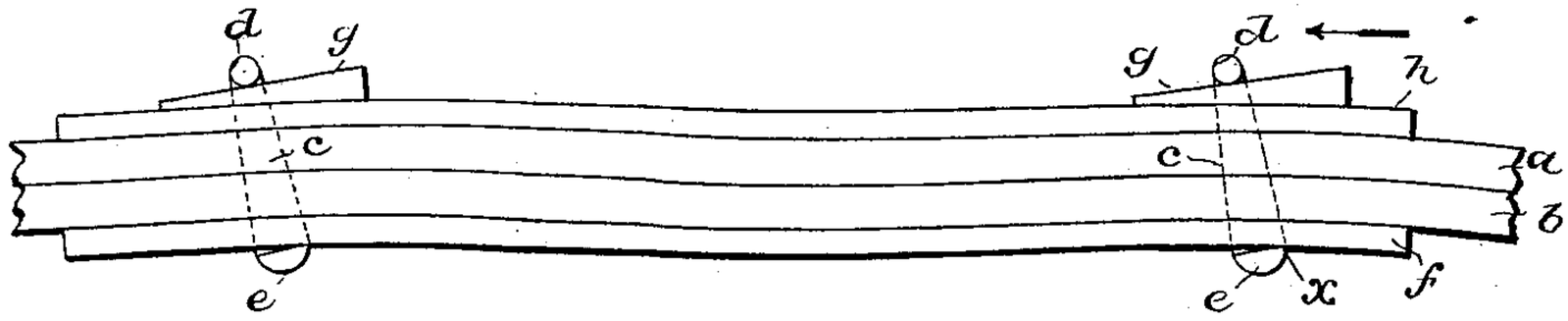


Fig. 2.

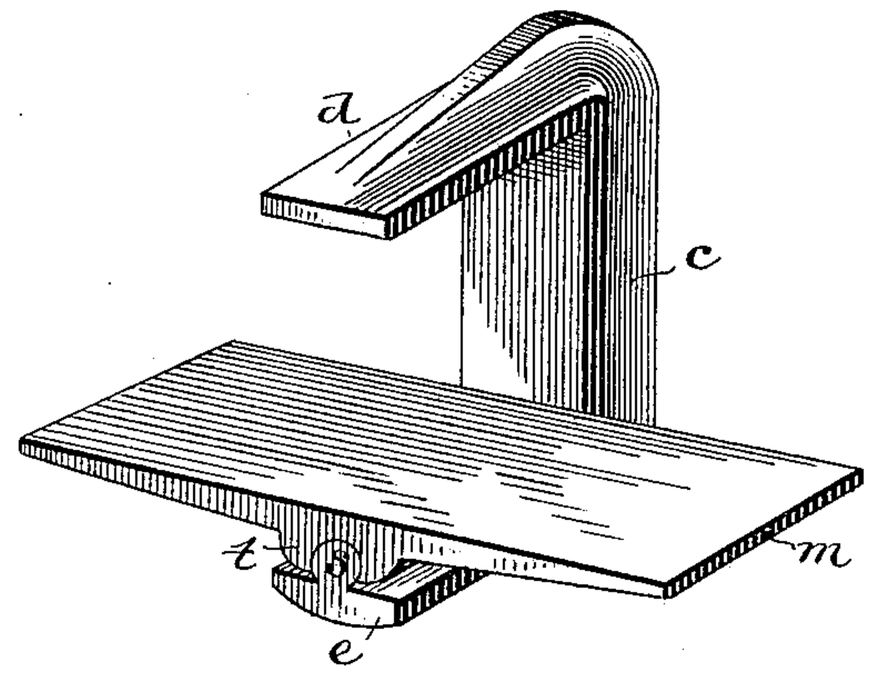
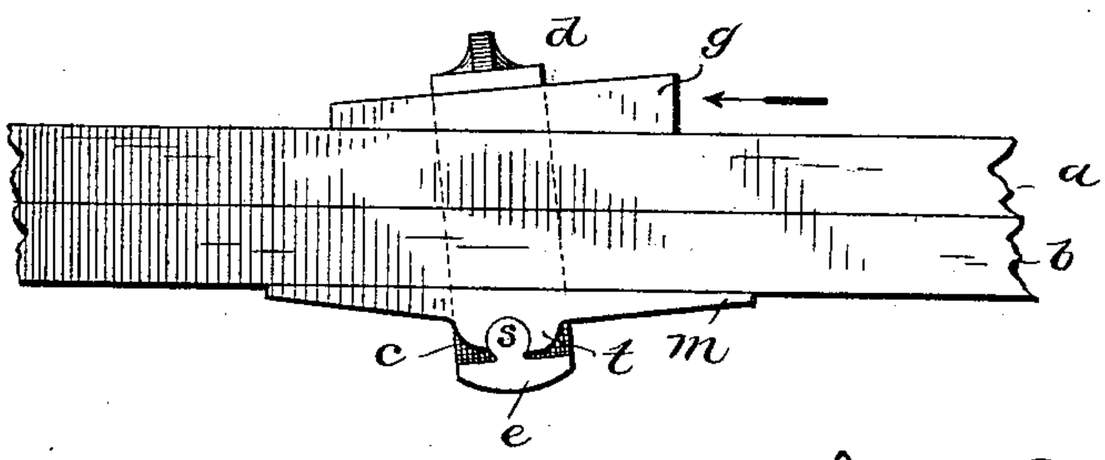


Fig. 3.



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UNITED STATES PATENT OFFICE.

DAVID GARRISON AND GEORGE C. REUKAUFF, OF PHILADELPHIA, PENNSYLVANIA.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 386,631, dated July 24, 1888.

Application filed February 2, 1888. Serial No. 262,774. (No model.)

To all whom it may concern:

Be it known that we, DAVID GARRISON and GEORGE C. REUKAUFF, citizens of the United States, residing in Philadelphia, Philadelphia county, Pennsylvania, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

Our invention relates to that class of clamps which are used for holding together strips of wood, which are glued face to face in the manufacture of moldings and other articles; and our invention consists in constructing the clamp as fully set forth hereinafter, so as to avoid the objections incident to the use of clamps of the ordinary construction.

In the drawings, Figure 1 is a view illustrating the construction of ordinary clamps and the difficulties incident to their use. Fig. 2 is a perspective view of our improved clamp; Fig. 3, a view illustrating the manner in which the clamp is used.

In the manufacture of moldings for picture-frames, &c., it is common to make composite strips by gluing together two or more long strips of wood, with the view of saving the expense of using single pieces of heavy material. In securing the smaller pieces together it is common to employ clamps of the construction shown in Fig. 1, each clamp consisting of a U-shaped piece of metal having a stem, *c*, and two arms, *d e*, and in using these clamps the two strips *a b* are coated with glue upon their adjoining faces and placed between two guard-pieces of wood, *h f*, and each clamp is brought with its arms *d e* to embrace the assembled pieces and extend transversely across them, and a wedge, *g*, is driven between the upper guard-piece, *h*, and the upper arm, *d*, of the clamp, thereby forcing together the intervening pieces and holding the coated faces of the strips in close contact until the glue hardens. The objections to the use of clamps thus constructed are the necessity of employing the guard-strips *h f*, which must be used to prevent the wounding of the strips *a b*, the placing of the guard-strips in position and the moving them therefrom resulting in a loss of time and their use in a waste of material. The chief objection, however, is that in driving the wedges in the direction of the arrow, Fig. 1, the clamps are canted to one side, so that the pressure exerted by the elevated corner *x* of the lower arm, *e*, in connection with the downward pressure of the arm *d*, carried farther to the left than a point directly over the pressing-point of the arm *e*, tend to bend the strips to a bow or curved form, the result being that after the strips are glued together and the clamps are removed the composite strip instead of being absolutely straight is waved and irregular. To obviate these objections, we construct the clamp in the manner illustrated in Fig. 2, and use it as shown in Fig. 3.

The said clamp is constructed of a U-shaped piece having a stem, *c*, and two laterally-projecting parallel arms, *d e*, with a bearing-plate, *m*, hung or pivoted to the arm *e* in any suitable manner, so that the plate *m* will lie flat against the under strip, *b*, whatever may be the angle assumed by the stem *c* and arm *b*, resulting from driving in the wedge *g*. As a result of this construction, the line of pressure from the lower arm, *e*, while always at right angles to the lower face of the strip *b*, has no tendency whatever to tilt or bend the said strip, as the plate *m* will swing upon the arm *e* and lie flat against the strip in a uniform pressure throughout its entire length of pressing-surface. The tilting of the upper arm, *d*, has no effect to twist or bend the strip below, as the wedge *g* receives the pressure near the center, so that it bears with about equal force throughout its entire face. The plate then may be pivoted or hinged to the arm *e* to swing thereon in different ways; but we prefer to provide the arm *e* with a longitudinal cylindrical rib, *s*, which fits a corresponding section in a hub, *t*, of the plate.

Without limiting ourselves to the precise construction and arrangement of parts shown, we claim—

The combination, in a clamp, of a U-shaped piece having two parallel arms, and a plate, *m*, pivoted to the inner side of one of said arms, to swing thereon upon a longitudinal axis parallel to the overhanging arm, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

DAVID GARRISON.
GEO. C. REUKAUFF.

Witnesses:
EDWARD B. STAGGERS,
CHAS. E. HARMAN.