

G. W. CORNELL.  
Screw-Fastening for Joints.

No. 197,721.

Patented Dec. 4, 1877.

Fig. 1.

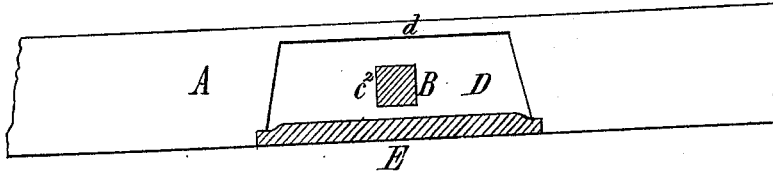


Fig. 2.

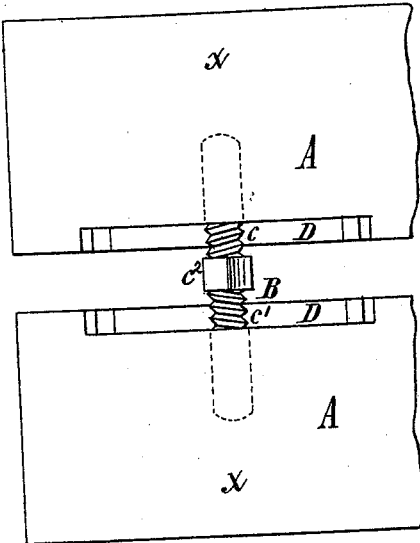


Fig. 3.

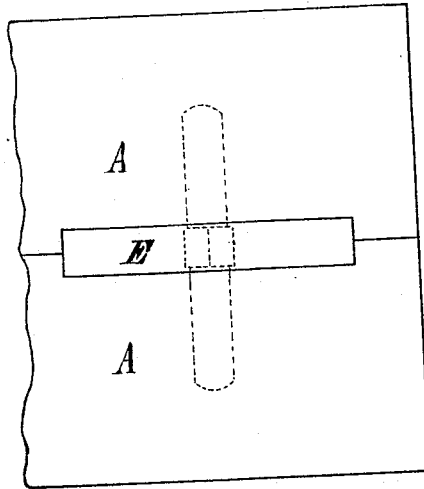
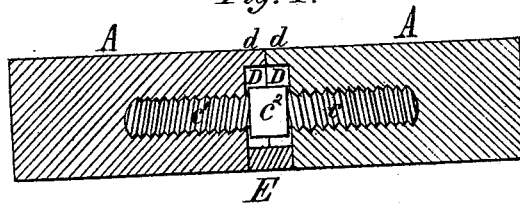


Fig. 4.



George H. Sykes  
Chas. J. Buchheit } Witnesses

George W. Cornell, Inventor  
by Edward Wilhelm,  
Attorney.

# UNITED STATES PATENT OFFICE.

GEORGE W. CORNELL, OF CLARENCE CENTRE, NEW YORK, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO DAVID F. RIEGLE AND DAVID SHARRER, OF SAME PLACE.

## IMPROVEMENT IN SCREW-FASTENINGS FOR JOINTS.

Specification forming part of Letters Patent No. 197,721, dated December 4, 1877; application filed April 19, 1877.

*To all whom it may concern:*

Be it known that I, GEORGE W. CORNELL, of Clarence Centre, in the county of Erie and State of New York, have invented certain new and useful Improvements in Screw-Fastenings for Glue-Joints, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

My invention relates to a fastening-bolt for the glue-joints of joinery and other wood-work, composed of a right and left handed screw, and an intermediate shank adapted to be seized by a wrench, the bolt being screwed into the two pieces of wood to be secured together endwise, as will be hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a side elevation of one of two pieces of wood secured together by my improved fastening, with the screw-bolt and space-block in section. Fig. 2 is a top-plan view of the two pieces of wood with the screw-bolt partially screwed home. Fig. 3 is a top-plan view of the two pieces clamped together by the screw-fastening. Fig. 4 is a cross-section in line *x* *x*, Fig. 3.

Like letters of reference designate like parts in each of the figures.

A A represent two pieces of wood designed to be secured together endwise. B represents the screw-fastening, composed of a right and a left handed screw, *c c'*, adapted to be screwed directly into the wood, and an intermediate shank, *c<sup>2</sup>*, made of any suitable form, so that a wrench can be applied thereto. D D represent two mortises or recesses formed in the contiguous sides of the pieces A A at the points where the screw-fastenings are to be applied. The recesses D extend from the under or rear side of the portions A A to within a short distance of the top or face sides thereof, leaving a strip, *d*, of greater or less width, on each of the contiguous sides of the portions A A, between the recess D and the face of the portion A, so that when the portions A A are drawn together by the screw-bolts B the joint at the face side will be a straight line. The recesses D are made of such depth that when the two portions A A are drawn tightly to-

gether the recesses will accommodate the shank *c<sup>2</sup>* and the end of the wrench for which it is designed.

E is a space-block inserted in the opening formed in the under or rear side of the pieces A A by the recesses D D, for the purpose of closing the same after the pieces A A are firmly secured together.

Any suitable number of these screw-fastenings may be employed to secure two pieces of wood together, as the size of the pieces and the use for which they are designed may render necessary.

In securing two pieces of wood together by my improved screw-fastening, their contiguous ends are planed off in the ordinary manner, when the recesses D are formed, and holes for the reception of the screws bored in the same. The bolts B are then inserted and screwed partially home by applying a suitable wrench to the shank *c<sup>2</sup>*. This being accomplished, the glue is applied and the parts tightly clamped together. The space-block D is then inserted and secured in place by gluing, or in any other suitable manner.

The screw-fastening B forms a very strong and reliable means for securing the parts together, permitting the same to be operated upon in any desired manner, as soon as they are clamped together, without waiting for the glue to set; and they also prevent the joint from separating or warping when exposed to the weather.

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

The combination, with the two pieces of wood A A, provided in their contiguous ends with recesses D, constructed as described, of the screw-fastening B, composed of right and left handed screws *c c'*, adapted to screw directly into the wood, and an intermediate shank, *c<sup>2</sup>*, to which a suitable wrench may be applied, substantially as and for the purpose hereinbefore set forth.

GEO. W. CORNELL.

Witnesses:

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B. D. CORNELL.