(No Model.)

H. J. THAYER & C. H. CHANDLER.

ARTIST'S CANVAS STRETCHER.

No. 306,117. Patented Oct. 7, 1884.

Fig. 1.

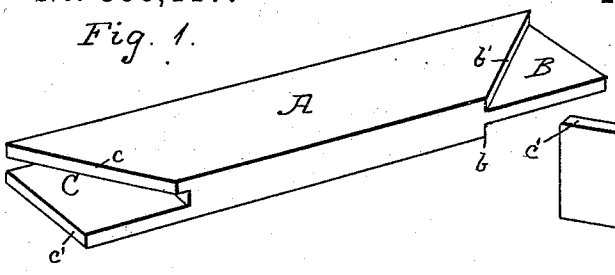


Fig. 2.

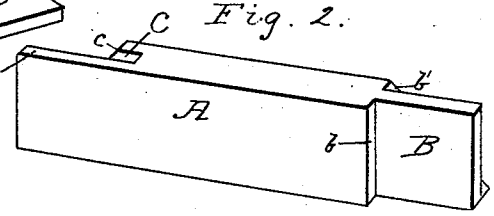


Fig. 3.

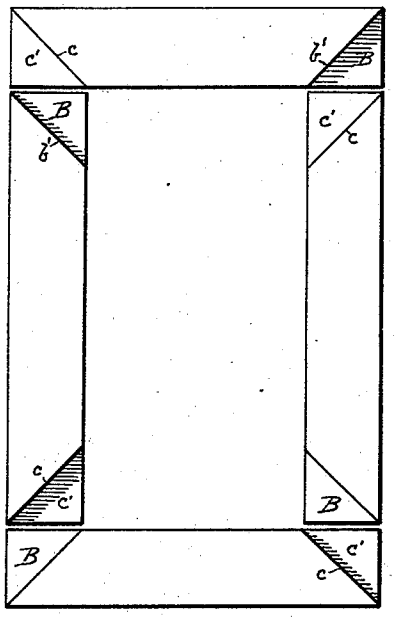


Fig. 4

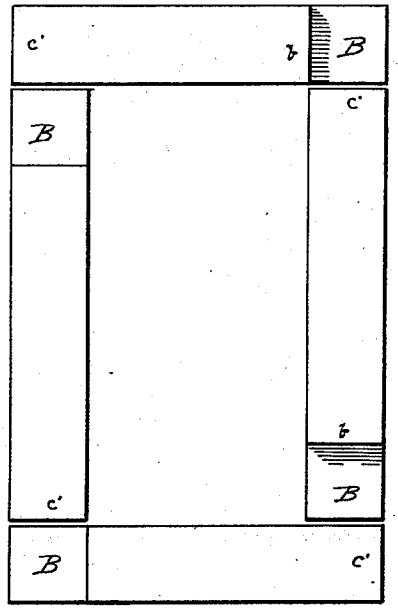
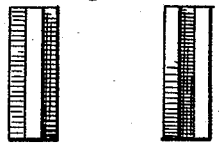


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY J. THAYER AND CHARLES H. CHANDLER, OF CHICAGO, ILLINOIS.

ARTIST'S CANVAS-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 306,117, dated October 7, 1884.

Application filed February 19, 1883. (No model.)

To all whom it may concern:

Be it known that we, HENRY J. THAYER and CHARLES H. CHANDLER, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Artists' Stretchers or Frames; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others to make and use the same, reference being had to the drawings and letters of reference marked thereon.

Figures 1 and 2 show perspective views of one of the pieces forming the stretcher; Fig. 3, a rear elevation of the stretcher; Fig. 4, a front elevation of the stretcher, and Fig. 5 end views of one of the pieces forming the stretcher.

The great difficulty with manufacturers and dealers in artists' canvas-stretchers arises from the fact that, as these stretchers are now constructed, it is necessary for parties making and dealing in such supplies to carry a very large stock of the material from which the frames for the stretchers are made, which necessity arises for the reason that, as now constructed, the side and end pieces composing the frame have to be made up and held in stock for different-sized frames, necessitating the keeping on hand of a large number of side pieces and end pieces of various lengths in order to fill orders for frames of different sizes.

The object of this invention is to enable the end pieces of one sized frame to be used with the side pieces of another sized frame, and so on, using the side pieces for the end pieces as the frames increase in size, to the limit of the largest size manufactured, and to have the ends of the pieces mitered or cut to form mortises and tenons, with a straight shoulder on one side and a diagonal shoulder on the opposite side, and of a uniformity in respect to the form and cut, by which the side pieces of the smaller frame are adapted to form the end pieces of the next larger frame without any change, thus enabling a large reduction in the stock carried, as well as producing a much stronger and better frame for the purpose for which it is intended.

In the drawings, A represents four pieces of the proper length to form one size of stretcher-frame. The end piece for one end of the complete stretcher is formed on one of its ends with a tenon, one end wall of which is straight and the other diagonal running from the upper corner to the lower corner of of the space occupied by the tenon B, so that a tenon, B, is formed which is entirely cut away on one side with a vertical end wall, while the opposite side is only half cut away with a diagonal end wall. The opposite end of this end piece is formed with a mortise, C, one wall of which is of the full size of the space occupied by the mortise, while the other wall is formed by cutting away the portion of the outer end extending from the upper corner in a diagonal direction to the lower corner of the space occupied by the mortise. This manner of cutting the ends of the end piece forms a tenon on one side with a straight wall, *b*, and a diagonal wall, *b'*, and a mortise, C, on the opposite end, with one wall, *c*, on a diagonal line at the end, and the other wall, *c'*, full to the limit of the space occupied by the mortise, which space corresponds in depth to the width of the tenon. The angle at which the oblique walls *b'* and *c* are cut is one of forty-five degrees. The other end piece has its end cut and formed in precisely this same manner. The side pieces have their ends cut in the same manner to form on one end a tenon with a cut-away portion having a straight end wall on one side and a diagonal cut-away portion to form a diagonal wall on the other side, and with the opposite end having a mortise with a full wall on one side and a diagonal cut-away wall on the other side. The cut-away wall for the tenon having a straight end is on the same side of the piece as the full wall of the mortise, and the diagonal cut-away portions of the tenon and mortise are on the opposite side. The end pieces in use are simply reversed for opposite ends of the stretcher, and the side pieces are also reversed when the frames are to be put together, so that the full walls of the mortises of the end pieces and also the side pieces will be on diagonal corners in relation to each other. The side pieces for the smallest sized frame are of the length for the end pieces of the next sized frame, and so on up to the largest sized frame used.

The pieces for a small-sized frame are put

together by selecting two end pieces and two side pieces of the proper length, and one end piece is at its tenoned end slipped into the mortised end of one of the side pieces, while the tenoned end of the other side piece is slipped into the mortised end of the end piece, and the other end piece is applied by slipping its mortised end onto the tenoned end of the first side piece and its tenoned end into the mortised end of the other side piece. This brings the diagonal walls of the respective end pieces and side pieces to match one with the other and the full walls of the mortise to fill the cut-away wall of the tenon having the straight side. The next sized frame is formed by taking the side pieces of the small-sized frame for the end pieces with side pieces of the required length, and interlocking the pieces at the corners in the manner described for the small frame, and this manner of constructing the frames is applied to the frames of different sizes up to the largest. The stretcher-frames thus formed are very strong, as the union at the corners has a diagonal brace on one side and a straight brace on the other, so that after the frame is once put together the corners will brace themselves against end, side, and diagonal strain, and by having the respective pieces formed with a mortise on one end with a straight wall and a diagonal wall, with a tenon on the opposite end having a straight end wall and a diagonal end wall, it will be seen that the tenon of one piece will fit the mortise of any other piece, so that the amount of stock to be carried will be greatly reduced.

What we claim as new, and desire to secure by Letters Patent, is as follows:

The pieces A, each having on one end a tenon with a straight end wall and an oblique end wall, and having on the opposite end a mortise having a full wall on one side and a diagonal cut-away wall on the opposite side, substantially as and for the purposes specified.

In testimony that we claim the foregoing as our own we hereunto affix our signatures in the presence of two witnesses.

HENRY J. THAYER.
CHARLES H. CHANDLER.

Witnesses:
WEBSTER T. WHITING,
FRANK. E. NOVAK.