(No Model.)

E. CONORD.

FRAME FOR STRETCHING FABRICS.

No. 260,086. Patented June 27, 1882.

Fig. 1.

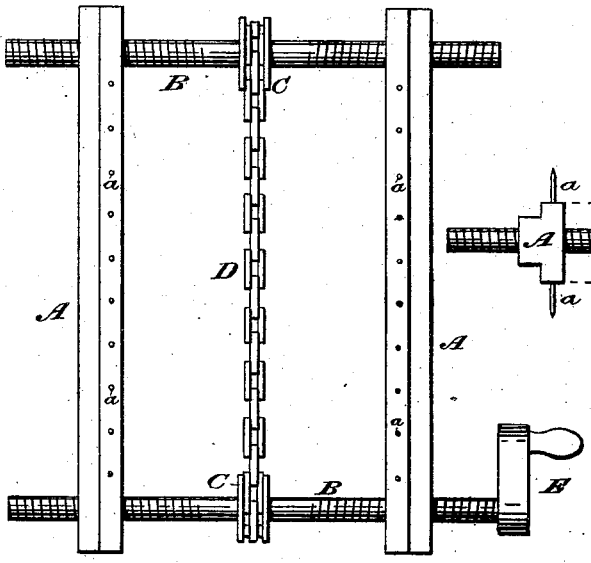


Fig. 2.

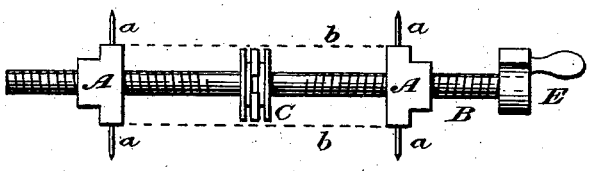


Fig. 3.

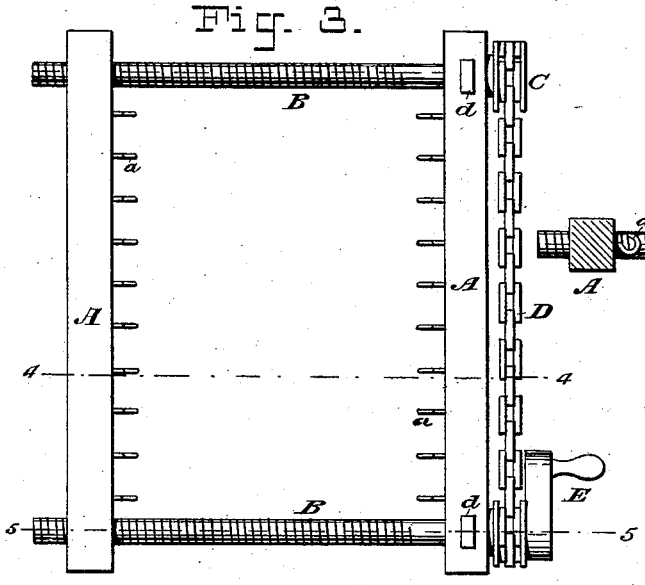


Fig. 4.

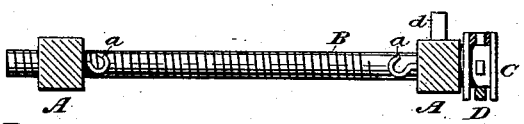
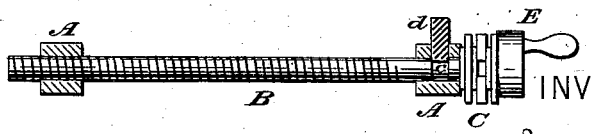


Fig. 5



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UNITED STATES PATENT OFFICE.

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FRAME FOR STRETCHING FABRICS.

SPECIFICATION forming part of Letters Patent No. 260,086, dated June 27, 1882.

Application filed April 1, 1882. (No model.)

To all whom it may concern:

Be it known that I, EUGENE CONORD, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain Improvements in Frames for Stretching Fabrics, of which the following is a specification.

Artificial-flower makers, embroiderers, and others who work upon stretched fabrics have heretofore employed a frame consisting of two opposite tentering-bars and two cross-bars connecting them, forming a rectangle, and having pins inserted in holes in the cross-bars to hold the tentering-bars apart when the fabric has been stretched. The fabric is first attached by its opposite edges to the tentering-bars. The latter are then separated by pulling apart with the hands, first at one end and then at the other, and are held apart by inserting the pins in the cross-bars. This is a clumsy and troublesome operation, and by it the fabric is unequally stretched and often deteriorated.

The object of my invention is to produce a frame which shall stretch the fabric uniformly and evenly without possibility of biasing or stretching cornerwise, and which shall require no skill and but little strength to operate it.

Two forms of my invention are shown in the accompanying drawings, Figure 1 being a plan, and Fig. 2 an end view, of one form; and Fig. 3 is a plan, Fig. 4 a cross-section cut on the line 4 4, and Fig. 5 a partial cross-section cut on the line 5 5, of the other form.

In all the figures, A A are the tentering-bars; *a a*, the tentering-pins thereon; B B, transverse screws engaging the bars and crossing at opposite ends thereof; C C, sprocket-wheels, one fixed on each screw, and D a chain or equivalent non-slipping flexible connector—such as a belt pierced with holes—connecting the two sprocket-wheels and communicating motion from one screw to the other.

To one screw, which becomes the driving-screw, a crank, E, is fixed.

The opposite edges of the fabric are caught onto the tentering-pins, and the crank E is turned in such direction as to cause the bars A A to move away from each other by the action of the screws, thereby stretching the fabric. When the latter is stretched to the requisite tension the frame may be laid away until such time as it is desired to release the fabric, when the crank is turned backward, and the fabric is taken off the pins.

In Figs 1 and 2 the screws B B are cut with right and left threads, and the sprocket-wheels C C are fixed to their centers, so that the chain D is always midway of the bars A A.

The tentering-pins *a a* project from opposite sides of the bars A A, as shown in Fig. 2, so that two fabrics may be stretched simultaneously, as indicated by the dotted lines *b b*. As these fabrics are equally distant from the screws on opposite sides thereof, the strain in stretching is equalized.

By using right and left screws I am enabled to attain double speed without increasing the pitch of the thread, and also to retain the sprocket-wheels and chain always in the middle of the space between the bars, which for many uses is an advantage. This form of my invention is especially designed for the use of wax-flower makers.

The modification shown in Figs. 3 to 5 has screws threaded only one way—as right hand—and screwing into only one bar A, being journaled in the other. To prevent their moving longitudinally in the hole in the other bar, each is grooved at *c* within said hole, and a key, *d*, is driven through a mortise in the bar, and its end enters this groove, as best seen in Fig. 5. Other means for preventing longitudinal play may, however, be used.

The chain and wheels are arranged just outside of the bar A last referred to, and the chain extends alongside this bar.

The tentering-pins *a a* are in the form of hooks, as shown in Fig. 4, arranged along the inner faces of the bars.

But one fabric can be stretched at a time, and this stands in a plane with the axes of the screws.

This form of frame is best for embroiderers, who wish to have access to both sides of the fabric, as the chain is outside the frame, out of the way.

I claim as my invention—

1. The combination of tentering-bars A A, tentering-pins *a a* thereon, transverse screws B B, sprocket-wheels C C, fixed thereto, non-slipping flexible connection D, and crank E, substantially as and for the purposes set forth.

2. The combination of bars A A, each with

two rows of tentering-pins, *a a*, on its opposite sides, with right and left screws B B, sprocket-wheels C C, each fixed on the center of one of said screws, non-slipping flexible connection D, arranged midway of said bars, and crank F, substantially as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EUGENE CONORD.

Witnesses:
ARTHUR C. FRASER,
HENRY CONNETT.