

F. R. MILLER.
STRETCHING FRAME.

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1,021,619.

Patented Mar. 26, 1912.

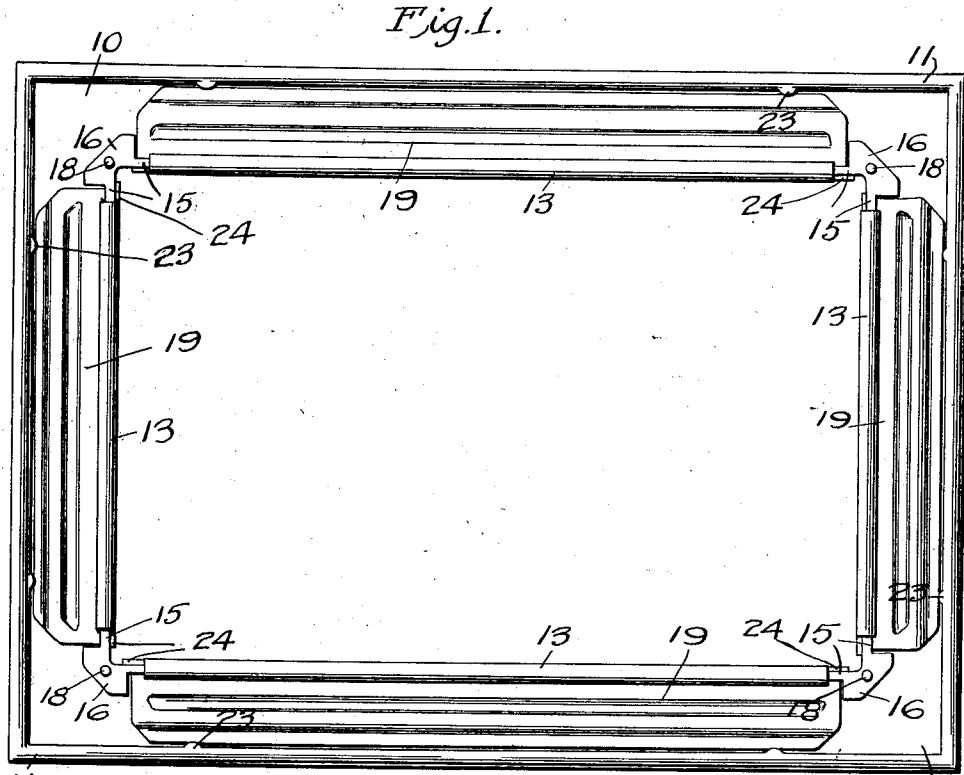
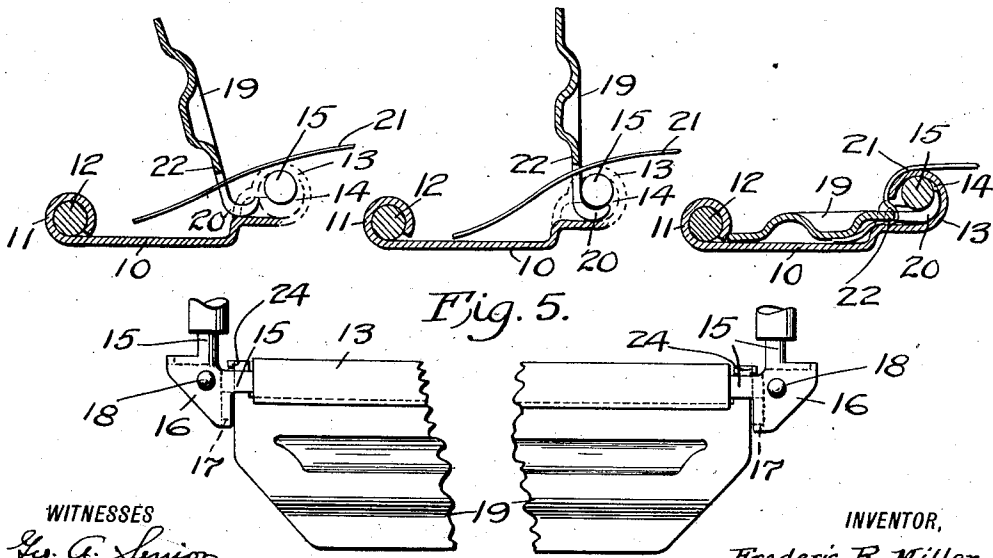


Fig. 2.

Fig. 3.

Fig. 4.



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STRETCHING-FRAME.

1,021,619.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, FREDERIC R. MILLER, a citizen of the United States, residing at Cypress Hills, in the county of Queens and State of New York, have invented new and useful Improvements in Stretching-Frames, of which the following is a specification.

This invention relates to stretching frames and is especially adapted for use in stretching paper for painting, fabric for embroidery work and similar uses, and it consists of certain new and simple wings folding down against the frame itself and mounted eccentrically so as to clamp the edges of the material to be stretched over the opening in the frame as will be more fully described in the following specification, set forth in the claims, and illustrated in the drawings, wherein,

Figure 1 is a plan view of the frame. Figs. 2, 3 and 4 are sectional views showing the operation of the clamping wings. Fig. 5 is an enlarged plan view showing the hinged ends of one of the wings.

The frame consists of a structure 10, preferably of metal and having around its outer edge the bead 11 inclosing the wire frame 12. The inner edges of the frame also have beads 13, made from the material of the frame and partly inclosing metal rods 14, shown in dotted lines in the sectional views. The ends of these rods are provided with eccentric trunnions 15, which are united by corner blocks 16 which are undercut as at 17, and are riveted to the frame by means of the pin 18. The construction of the frame and the arrangement of these trunnions is clearly shown in the enlarged sectional views and the clamping of the material to be stretched in the frame is effected by means of wings 19 having at each end hooks 20 which are adapted to engage the trunnions 15 and work upon same to produce the clamping effect. As will be seen in Fig. 2 the wing is substantially upright and disengaged from the trunnion in order to permit of the entrance of one edge 21 of the paper or fabric to be stretched. After the insertion of the edge of the paper, the lower end of the wing is moved forward, bringing the hook 20 immediately below the

trunnion. The wing is then thrown down into the position shown in Figs. 1 and 4 and is then drawn inward by the eccentric action of the trunnion so as to bring the edge of the paper over the bead 13, and it is then drawn inward by means of the edge 22 of the wing beneath the inner edge of the bead, gripping the material, crimping and clamping same to the metallic frame.

The wings 19 are grooved in order to strengthen them and the inner edges of the beads 11 are provided with lugs 23 which hold the wings against accidental removal.

At the outer side of the hooks 20 are small lugs 24, which enter the recesses 17 at each side of the corner piece and prevent the removal of the wings and their consequent loss. The outer ends of the recesses are closed to prevent the removal of the wings and they fit within the corner pieces so as to prevent lateral movement.

When the edges of the paper or other material are clamped under one of the wings, the other edge is then drawn taut and clamped down thus stretching the material so as to draw it tight over the opening where the necessary work may be done on it.

It is obvious that the parts may be otherwise arranged and modified without departing from the essential features above described.

As shown in the sectional views, the inner edges of the beads 13 are cut away to allow just enough room between it and the edge of the wing to admit of the entrance of the material to be stretched while not bearing upon it sufficiently to break or cut it.

The formation of the grooves in the wings raises their ends above the frame so that the finger nail may be inserted to raise them when the material is to be removed.

What I claim as new and desire to secure by Letters Patent is,—

1. In a stretching frame, the combination with an open frame having an interior bead, of corner pieces connecting the bead and forming eccentric trunnions, wings with hinges to fit on the trunnions and edges on the wings to cooperate with the beads and clamp the material to be stretched.

2. In a stretching frame, the combination with an open frame having outer and inner beads, hinged wings with raised ends cooperating with the beads for gripping
5 and clamping the material to be stretched, and locking means on the beads for holding the wings in their clamping position.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERIC R. MILLER.

Witnesses:

GEO. A. SENIOR,
CHARLES LA RUE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
