(No Model.)

H. F. GRAY.

STRETCHER FRAME.

No. 371,934. Patented Oct. 25, 1887.

FIG. 1

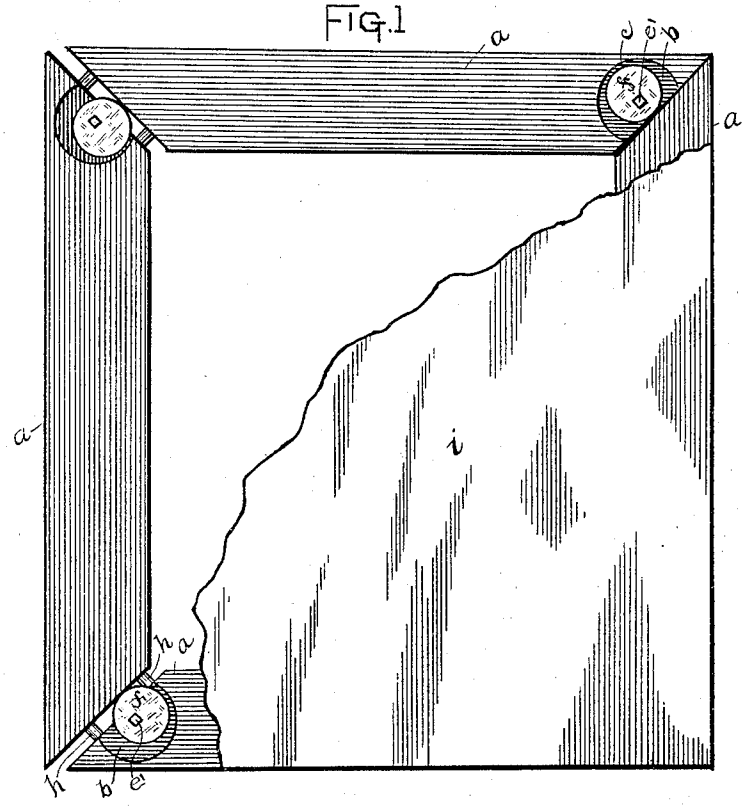


FIG. 2

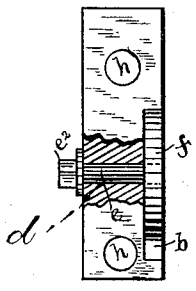


FIG. 3

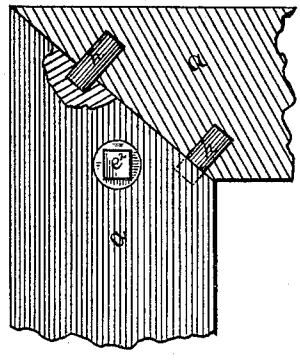
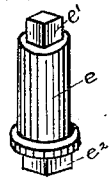


FIG. 4.



WITNESSES

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STRETCHER-FRAME.

SPECIFICATION forming part of Letters Patent No. 371,934, dated October 25, 1887.

Application filed June 16, 1887. Serial No. 241,556. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. GRAY, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Stretcher-Frames, of which the following is a specification.

My invention relates to the improvement of frames over which artists' canvas or other similar material is stretched, and particularly relates to the improvement of my former invention, filed April 18, 1887, and allowed; and the objects of my invention are to produce a simple, neat, and effective device of this class, by means of which the sides and ends of the frame may readily and easily be separated to stretch the canvas thereon and held in the desired position. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the frame, showing the canvas thereon broken away. Fig. 2 is a view of one end of one of the pieces forming the frame. Fig. 3 is a sectional view, partially in section, of one corner of the frame; and Fig. 4 is a perspective view of the operating pin or bolt.

Similar letters refer to similar parts throughout the several views.

a represents the four pieces forming the frame, said pieces being mitered at their ends in the usual manner to form a miter-joint at each corner of the frame, as shown. The front surface of each of the frame-pieces *a* adjoining one of its ends, is cut away to form a depression, *b*, therein in the form of an arc of a circle and a curved shoulder *c*.

The formation and arrangement of each of the pieces *a* being alike, I will, for convenience, describe the upper end piece of the frame and its connection with one of the side pieces.

Formed in the depressed end of the piece *a* at the true center of said partially-circular depression *b* is a vertical rounded hole, *d*, through which is made to pass from the rear side a closely-fitting cylindrical metallic operating pin or bolt, *e*, provided with a square head, *e'*, said head being adapted to project forwardly until its front end is about flush with the front surface of the frame-piece *a*, its front extension being limited by a circular flange formed about the base of the pin, and adapted to bear against the rear side of the frame-piece about the hole *d*. The rear end, e^2, of the pin projects slightly outward from the rear side of the frame-piece, and is formed square or nut-shaped to facilitate its engagement with a wrench. Mounted eccentrically on the front end of the pin *e*, and seated within the depression *b*, is a metallic disk, *f*, said disk being of such thickness as to bring its front surface flush with the front surface of the frame-piece *a*. This disk *f* is of such circumference and is mounted on the head of the pin *e* at such distance from the center of the former as to admit of its being turned to a position admitting of the joining of the mitered parts of the frame. As described in my former application, above referred to, there is made to project from the end of the piece *a*, below the surface of the depression *b*, dowel-pins *h*, which are adapted to enter corresponding holes formed in the adjoining piece.

The operation of my device is as follows: The parts of the frame being joined and connected by means of the dowel-pins, the canvas *i* is then secured to the front sides of the frame-pieces in the usual manner. Two adjoining parts of the frame may then be easily and gradually separated to stretch the canvas the desired distance by fitting a wrench over the rear square end of the pin *e*, and turning the same, thus causing the disk *f* to revolve and press against the end of the adjoining frame-piece to separate the parts, as shown in the upper and lower left-hand corners of the frame in Fig. 1 of the drawings.

While the parts are being separated, as above described, it will be seen that the dowel-pins will form guides on which the moving frame-pieces may slide. It will also be seen that by the means above-described an equal movement of a side and end piece of the frame is attained at the same time that the tendency of the jointed parts of stretcher-frames to pinch toward each other at their front edges and leave a gap at the rear is obviated by having the separating-disks bearing against the ends of the frame-pieces near their front surfaces.

While the objects of the invention herein mentioned are similar to those mentioned in my former application, it will be observed that they are attained by a more simple and inexpensive device.

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

In a stretcher-frame, the combination of the frame-pieces *a*, each having a depression, *b*, pin-hole *d*, and dowel-pins *h*, adapted to enter dowel-holes in the adjoining frame-piece, with the operating-pin *e*, carrying the eccentrically-mounted disk *f*, substantially as and for the purpose specified.

HENRY F. GRAY.

Witnesses:
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