H. DE L. TROVER.

STRETCHING FRAME.

APPLICATION FILED SEPT. 27, 1915.

1,200,052. Patented Oct. 3, 1916.

FIG. 1.

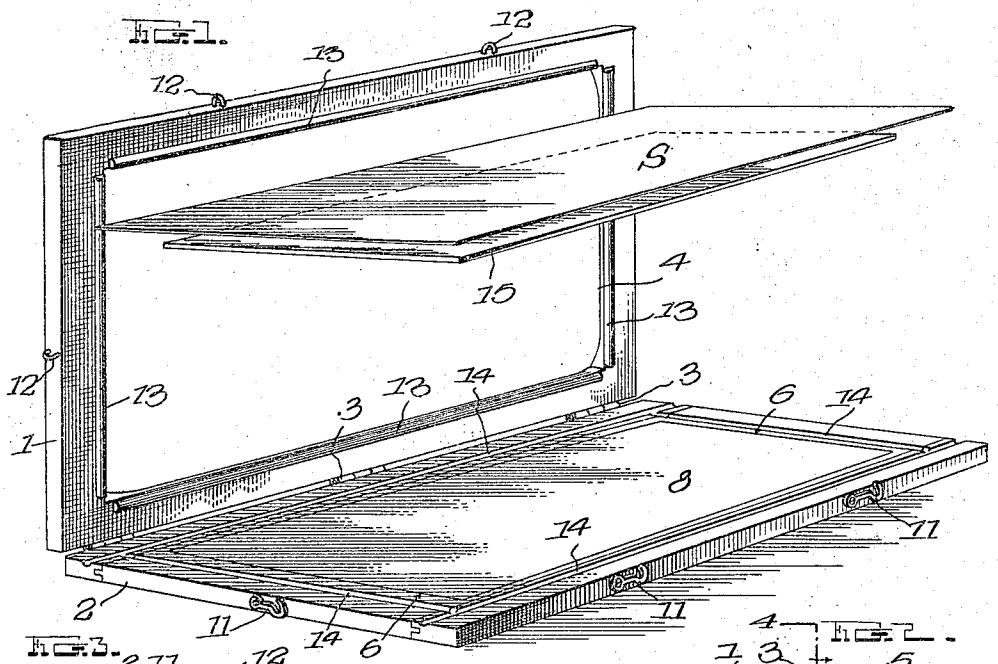


FIG. 3.

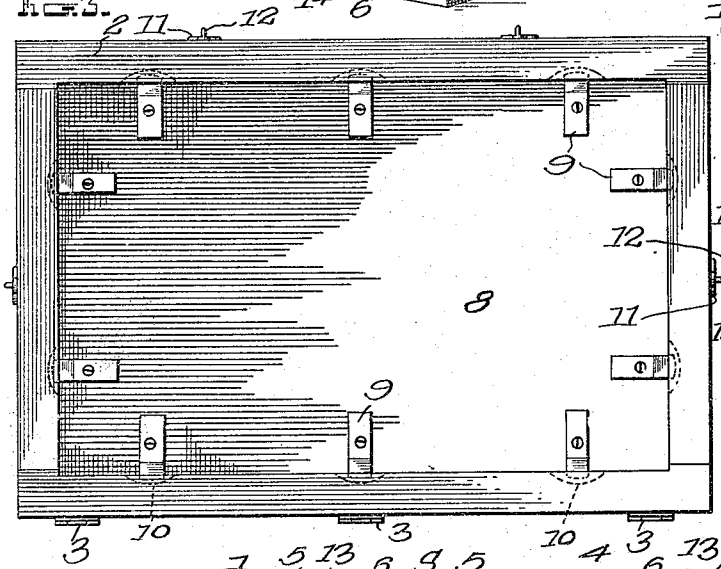


FIG. 2.

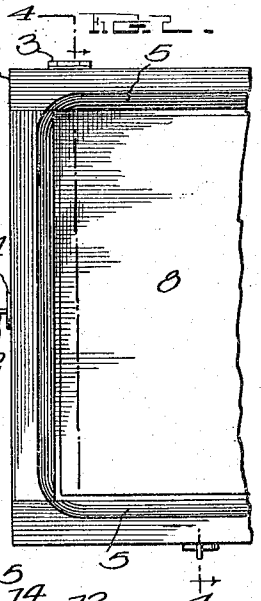
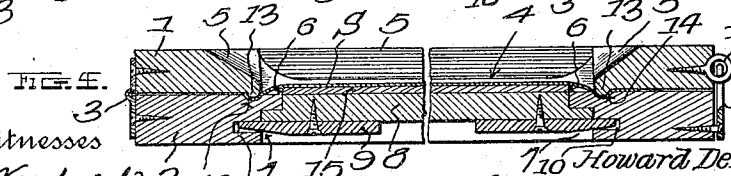


FIG. 4.



Witnesses

H. Woodard

Inventor

Howard DeLorum Trover

By H. B. Williamson & Co.

Attorneys

THE NORRIS PETERS CO., PHOTO-LI O., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HOWARD DE LORUM TROVER, OF SALEM, OREGON.

STRETCHING-FRAME.

1,200,052. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed September 27, 1915. Serial No. 52,938.

To all whom it may concern:

Be it known that I, HOWARD D. TROVER, a citizen of the United States, residing at Salem, in the county of Marion and State of Oregon, have invented certain new and useful Improvements in Stretching-Frames; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stretching frames particularly used for drying and stretching sheets of flexible materials, and has for one object to provide a light and portable device which, because of its extreme simplicity, can be very inexpensively manufactured.

Another object is to provide a frame of this character in which a pad for dampening the sheets to be stretched is disposed.

A further object is to provide a frame from which the dampening pad may be quickly and easily removed without removing the sheet to be stretched when said sheet has been sufficiently moistened.

With the above and other objects in view, my invention resides in certain novel features of construction, combination and arrangement of parts which will hereinafter be more particularly described and claimed and shown in the drawings wherein:

Figure 1 represents a perspective view of my frame in open position, the wet pad being removed; Fig. 2 is a top plan view of a portion of my improved device; Fig. 3 is a similar view of the back thereof, and Fig. 4 is a vertical transverse section taken on the line 4—4 of Fig. 2.

While I have illustrated this improved frame as being used particularly for stretching and drying sheets of flexible materials, yet it is evident that it may be put to a great many other uses, such as making letter copies, blue prints, or for crocheting, embroidering, or painting on cloth or paper, and for various other purposes.

This device comprises a pair of open frames 1 and 2 substantially rectangular in form and hinged on their long side by the hinges 3. The uppermost frame has its edges surrounding the opening 4 beveled as shown at 5 to more readily allow the hand of the user to move over the flexible material without tiring the wrists. The lower face of the bottom frame adjacent the opening 6 therein is grooved as shown at 7 to provide flanges upon which a removable back 8 is adapted to rest. As shown in the various figures, the back 8 is somewhat smaller in size than the opening 4 in the upper frame 1. This back is held in operative position by any preferred means, but I preferably employ the turn buckles 9 pivoted on said back and adapted to have one end thereof extended into notches 10 formed in the inner edges of the frame 2 when the back is in position. This arrangement of the turn buckles on the back is best disclosed in Fig. 4.

In order to clamp the two frames together, suitable clamping means are provided around their edges, and in the frames illustrated I use the hooks 11 secured to one of the frames which are adapted to coact with the eyes 12 on the other frame. The inner face of the frame 1 is provided around the opening 4 therein with the tongues 13 which are adapted to coact with similarly shaped grooves 14 formed on the lower frame 2.

The back 8 is adapted to have placed thereon a normally wet pad 15 which is substantially of the same size as or slightly smaller than said back in order that said pad may be removed when the device is in operation, by removal of the back 8.

In using this invention, the pad 15 is thoroughly moistened before placing it upon the back 8, and the sheet of material to be stretched is also preferably, although not necessarily, moistened before placing it on the pad. This sheet S of flexible material must be of a size sufficiently large to extend beyond the grooves formed on the lower frame 2 in order that the tongues on the upper frame may force the edges of said sheet S into the grooves to hold the sheet in position. After the sheet S has been placed on the pad and the frame 1 moved from the position shown in Fig. 1 to its closed position and clamped by means of the hooks and eyes on the edges of the frame, the back 8 may be removed by loosening the turn buckles 9, and the wet pad will come out with the back. It is obvious that this pad is allowed to stay between the frames until the sheet S has become thoroughly moistened in order that said sheet when drying, will shrink to a sufficient extent to present a perfectly plane surface. After removing the pad, the back 8 may be again

placed in position or may be left out of the frame 2 until the sheet S is thoroughly dry. When, however, the sheet is desired to be drawn upon or have paint applied thereto, the back is first placed in position.

When it is desired to remove the sheet S it is simply necessary that the hooks be loosened and the frame 1 swung to an open position as shown in Fig. 1, when the sheet may be readily removed.

From this description of the construction and operation of this improved device, it will be seen that I have provided a very useful device which will serve a great variety of purposes, but which is particularly well adapted for stretching and drying sheets of material which could not be otherwise flattened sufficiently.

I claim:

1. In a device of the class described, a pair of open frames, a removable back for one of said frames, a pad adapted to be placed on said back between the frames, and means for clamping said frames together, said frames being designed to clamp a sheet of flexible material therebetween over said pad, the latter being adapted to be withdrawn when the back is removed from the frame.

2. In a device of the class described, a pair of open hinged frames, a removable back for one of said frames, a pad adapted to be placed on said back between the frames, means for clamping said frames together, said frames being designed to clamp a sheet of flexible material therebetween over said pad, and means for securing the back in operative position, said back being removable to permit the pad to be withdrawn.

3. In a device of the class described, a pair of open hinged frames, one of said frames having grooves on its inner face adjacent the opening therein, tongues on the other frame for coaction with said grooves, the outer face of the upper frame being beveled adjacent the opening therein, a normally stationary removable back for said lower frame, means for securing the back in operative position, a pad adapted to be placed on said back between the frames, and means for clamping said frames together, said frames being designed to clamp a sheet of flexible material therebetween over said pad, the latter being adapted to be withdrawn when the back is removed from the frame.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HOWARD DE LORUM TROVER.

Witnesses:
ANNA L. TROVER,
DAVID C. BLOOM.

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