Jan. 26, 1943 H. I. NICHOLAS 2,309,527

PRINT DRIER

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Fig. 1

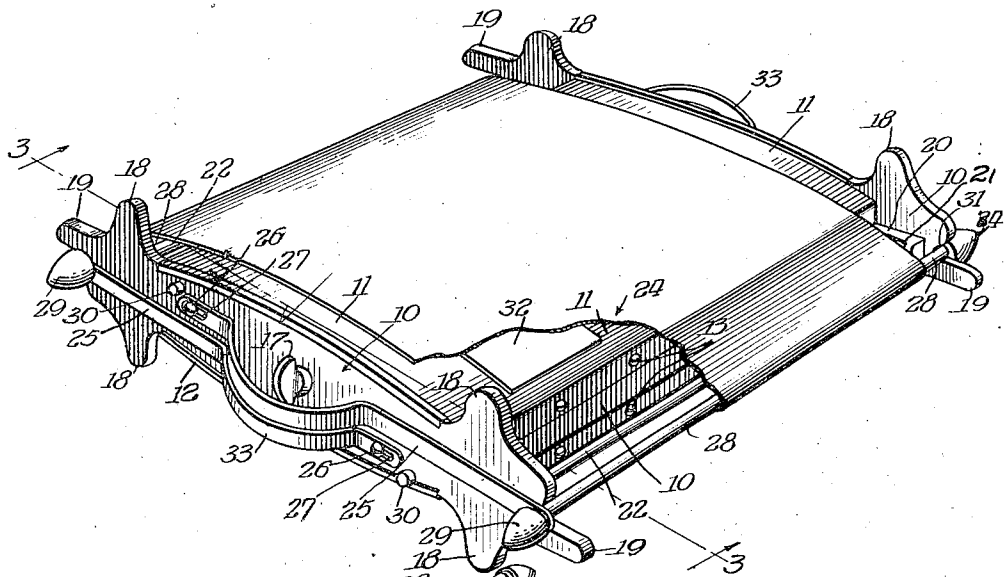
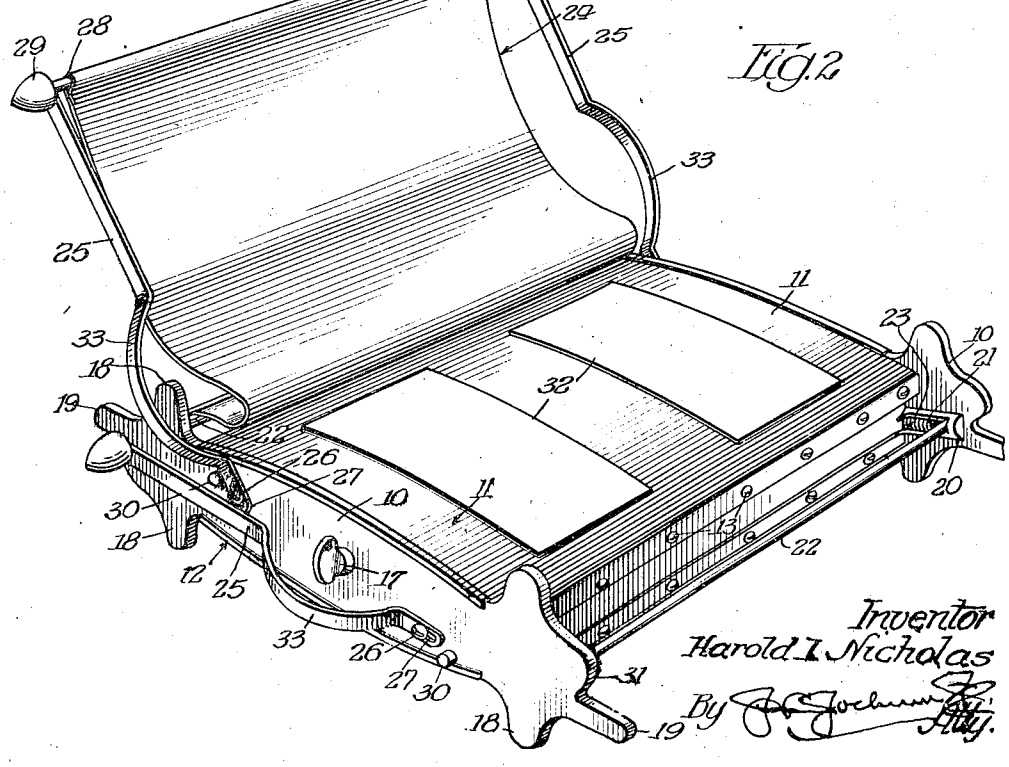


Fig. 2



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Fig. 3

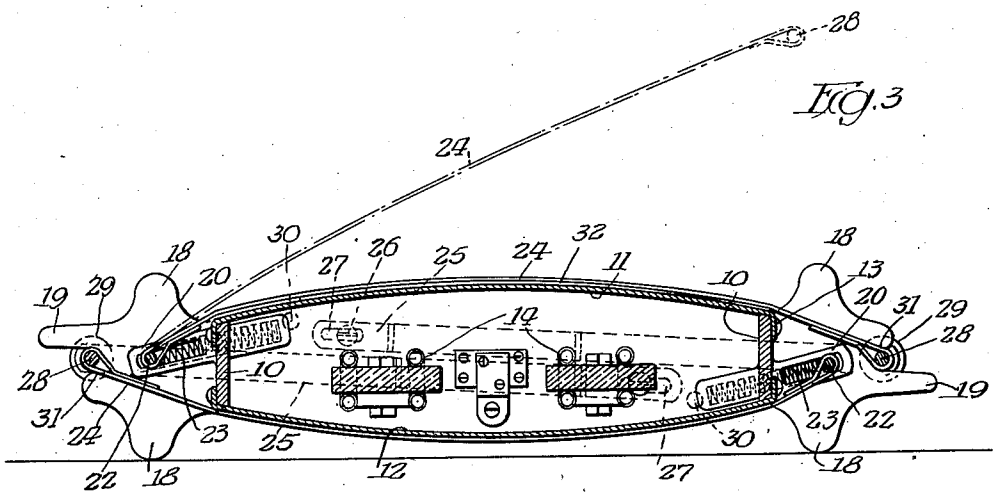
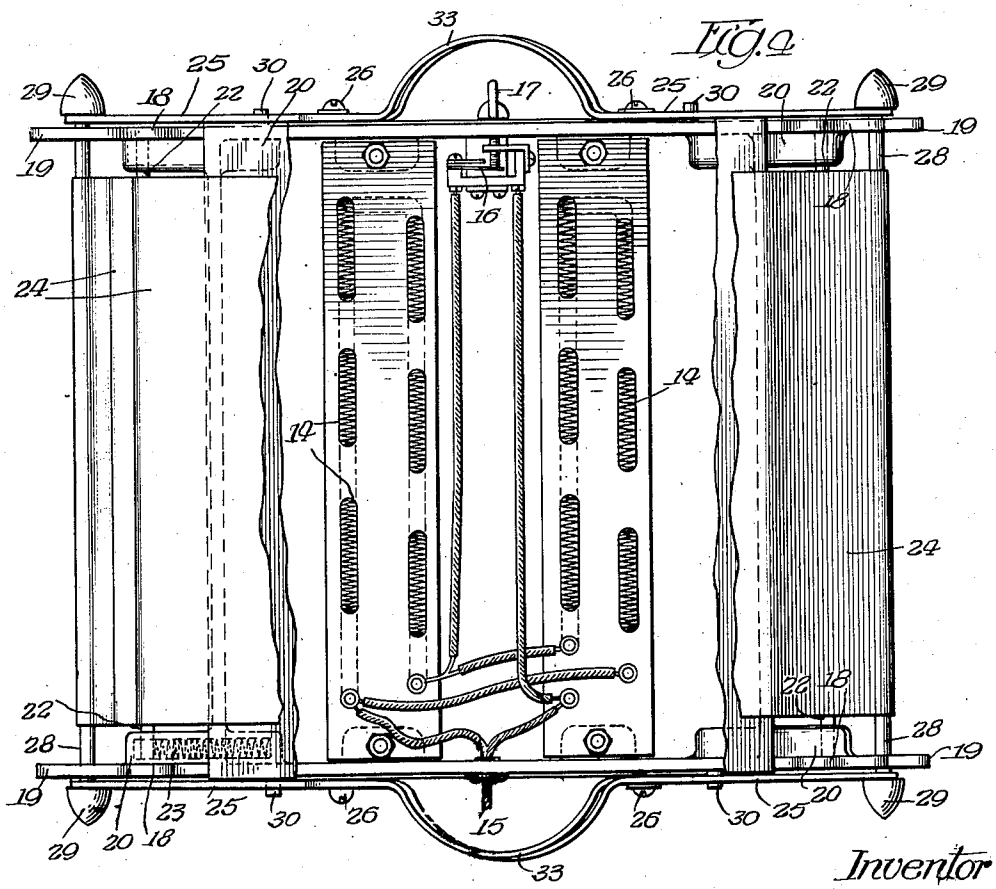


Fig. 4



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UNITED STATES PATENT OFFICE

2,309,527

PRINT DRIER

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Application June 10, 1940, Serial No. 339,804

7 Claims. (Cl. 34—146)

This invention relates to improvements in driers particularly adapted though not necessarily limited in use for drying photograph prints, and one of the objects of the invention is to provide an improved device of this character which will be of a simple and compact structure, effective and efficient in operation, and easy to handle.

A further object is to provide an improved device of this character in which there is employed a plurality of separate drying surfaces upon which the prints are placed, with a heating element or unit between such surfaces, and which device is shiftable to interchange the positions of the drying surfaces so that the prints in contact with one of the surfaces will be drying while the prints are being placed in drying position in contact against another drying surface.

A further object is to provide in a device of this character improved means for holding the prints in contact with such drying surfaces.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts, hereinafter more fully described and claimed and shown in the accompanying drawings illustrating this invention, and in which

Figure 1 is a perspective view, partly broken away, of a device of this character constructed in accordance with the principles of this invention and showing the position the parts will assume when prints are held against one of the drying surfaces.

Figure 2 is a view similar to Figure 1 showing one side of the device in an open position.

Figure 3 is a detail sectional view taken on line 3—3 Figure 1.

Figure 4 is a top plan view, partially broken away and with parts omited, and on an enlarged scale.

Referring more particularly to the drawings, the numeral 10 designates generally a body portion which may be of any desired size and configuration but is preferably substantially elliptical in cross-section and is hollow so as to provide drying surfaces 11—12 which are opposed to each other and are preferably slightly convex. These surfaces may be formed in any suitable manner, such as by means of elements which may be secured to the body portion in any desired or suitable manner, such as by screws 13 passing through flanges on the surfaces and into the body.

Within the hollow body thus formed is arranged a heating unit 14 of any desired or suitable construction having any desired number of heating elements, current being supplied to the heating elements from any suitable source through a conductor 15 and which latter may be connected to the source of supply by means of a suitable plug (not shown) adapted to be plugged into a wall socket.

A thermostatic element 16 of any suitable construction may be provided within the body for controlling the elements and a switch device 17 may also be employed, the latter being accessible from the outside of the body portion.

Portions of the frame of the body are shaped to form projections 18 which extend above and below the top and bottom convex walls and which serve as supports or feet for holding the heating surface out of contact with the support upon which the device rests and they also serve as fulcrums upon which the body may be turned.

Other portions of the body are preferably shaped to form horizontal projections 19 which may serve not only as handles by means of which the drier may be turned on its edge and about the fulcrum 18 so as to bring either of the drying surfaces uppermost, but such portions 19 also serve as additional fulcrums upon which the drier may be further turned.

On each end of the body 10 spaced bearings are provided and are preferable in the form of housings 20 which have open sides 21. A bar or member 22 extends across each end of the body and spaced therefrom, and the extremities of these rods project through the open sides 21 into the respective housings 20. A spring 23 is arranged in each of the housings 20 and these springs tend normally to move the rod or member 22 away from the proximate edge of the body 10, for a purpose to be described.

Secured by one end to each of these rods or members 22 is a flexible member 24 which is of substantial area and is adapted to be extended across one of the drying surfaces 11 of the body portion.

Spaced arms or members 25 are secured by one extremity to each side of the body for pivotal movement and also for lengthwise sliding movement. This may be accomplished preferably by means of a screw or fastening device 26 which passes through a slot 27 in the respective members 25 and into the body member.

Supported by these members 25 and extending across the space therebetween is another rod or member 28 to which the free end of the member 24 is secured. The members 25 together with

the respective rods 28, constitute frames, and one of these frames is provided to cooperate with each of the drying surfaces 11—12. Each of said frames is connected by one end to the body portion 10 for sliding and pivotal movements with respect thereto.

The ends of the rod or member 28 may be shaped to form buttons 29 by means of which the members 25 may be swung about the pivots formed by the fastening devices 26.

Stops 30 may also be provided to be engaged by the members 25 for holding them in the position shown in Figure 2.

The body member is provided with catches or shoulders 31 so shaped as to provide notches or recesses adjacent the side of the drying surfaces opposite the side adjacent which the respective rods or members 22 are located, and these shoulders or catches 31 are so positioned that when the arms or members 25 are swung into a position to cause the flexible member 24 to extend across the drying surface and into contact with the prints 32 which are being dried, portions of the rod 28 will pass thereunder so as to releasably anchor the free end of the flexible member 24 against the tension or stress of the spring 23, so as to hold the flexible member taut. This is accomplished by reason of the fact that the springs 22 will yield to permit the rod or member 28 to pass under the shoulders 31 while the free end of the flexible member is being anchored and will also yield so as to permit the free end of the flexible member to be released. This anchoring and releasing operation of the flexible member is also accomplished by reason of the fact that the arms or members 25 are slidable by reason of the pin and slot connection 26—27 with the body 10 and will slide longitudinally.

The permanently anchored portions of the respective flexible members 24 are disposed at opposite edges of the body portion of the drier as are also the anchoring means for the free ends of the respective flexible members.

With this construction and arrangement it will be manifest that when the device is placed in the position shown in Figures 1, 2 or 3 and after the prints 32 have been placed upon the drying surface, the flexible member 24 may be anchored or secured in position to hold the prints in contact with the drying surface. The drier may then be turned over so as to bring the other drying surface uppermost and this is accomplished by turning the device upon the respective projections or extensions 19 which serve as fulcrums for that purpose.

If desired, portions of the member 25 may be deflected or bent, as at 33, to serve as handles by means of which the device may be transported.

With this improved construction it will be manifest that there will be provided a very light, simple and comparatively cheap device which may be easily manipulated and is so constructed and arranged that while the prints are being placed against one of the drying surfaces and secured in position by the flexible member 24, the prints against the other surface will be drying, and furthermore that the device may be readily turned so as to bring either of the drying surfaces uppermost.

The springs 23 which serve to hold the flexible members 24 taut will be housed and protected and will not be in any position where they will become injured during the operation or use of the device.

While the preferred form of the invention has been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts, within the scope of the claims, without departing from the spirit of this invention.

What is claimed as new is:

1. A print drier embodying a drying surface, means for heating said surface, spaced bearings adjacent one edge of said surface and each embodying a housing having an open side, a rod extending across the space between said bearings and entering the respective housings, a spring in each housing tending normally to move said rod in one direction, a flexible member secured by one end to said rod and adapted to be extended across said surface, a catch adjacent another edge of said surface, and means at the free end of said flexible member adapted to cooperate with said catch for releasably anchoring the free end of the said flexible member against the tension of said springs.

2. A print drier embodying a body provided with a drying surface, means for heating said surface, a slidable member extending in a direction across said surface, resilient means tending normally to move said member in one direction with respect to said body, a flexible member secured by one end to said member, a pair of spaced members, means securing the said spaced members to said body for pivotal and sliding movements with respect thereto, a cross-member supported by said spaced members and to which cross-member the free end of the said flexible member is secured, and means carried by said body and with which last said means the said cross-member co-operates for releasably anchoring the latter to the said body against the tension of said resilient means.

3. A print drier embodying a body provided with a drying surface, means for heating said surface, a slidable member extending in a direction across said surface, resilient means tending normally to move said member in one direction with respect to said body, a flexible member secured by one end to said member, a pair of spaced members, means securing the said spaced members to said body for pivotal and sliding movements with respect thereto, a cross-member supported by said spaced members and to which cross-member the free end of the said flexible member is secured, and shoulders supported by said body and beneath which shoulders said cross-member is adapted to be positioned against the stress resilient means.

4. A portable and freely reversible print drier embodying a hollow body having opposite faces of substantial area which provide drying surfaces disposed in close proximity to each other, means disposed between such surfaces for heating them, flexible members of predetermined length, yielding means for securing one end of each of said members to the body, said flexible members adapted to overlie the respective drying surfaces, means individual to the free ends of the flexible members for releasably anchoring them to the body against the stress of their respective said yielding means, projections carried by said body adjacent opposite edges and extending beyond the respective surfaces to form supports for the body and fulcrums upon which the body may be turned, and additional ful-

crums for the body to turn on and projecting therefrom intermediate adjacent first recited fulcrums.

5. A print drier embodying a hollow body to provide opposed drying surfaces, means within the body for heating said surfaces, a plurality of frames, means connecting each of the frames to the body for pivotal and lengthwise sliding movements with respect thereto, one of said frames adapted to co-operate with each of the said surfaces, a flexible member for each frame, means individual to the flexible members for yieldingly anchoring one end thereof to the said body, the other end of each flexible means being secured to the respective frames and adapted to be extended by the movement of the frame across the respective drying surfaces, means for releasably securing the respective frames in position to hold the flexible members in proximity to the respective drying surfaces and against the tension of their respective yielding anchoring means, the said means which yieldingly anchors one end of the flexible members each embodying spaced housings, a member to which the flexible member is secured entering said housings, and springs encased in the housings and operating upon the last said member to normally move it in one direction with respect to said body.

6. A freely and bodily reversible print drier embodying a hollow body having substantially parallel opposite walls which provide drying surfaces disposed in close proximity to each other, a flexible member of predetermined length co-operating with and adapted to overlie each of said surfaces, means yieldingly anchoring each of said members by one end adjacent one edge of the respective surfaces, means releasably securing the free end of each of the flexible members adjacent the opposite edge of the respective surfaces and against the tension of said yielding means, the point at which each of the said flexible members is yieldingly anchored being disposed adjacent the point at which the free end of the other flexible member is releasably secured, projections extending beyond both of said surfaces, said projections serving as fulcrums upon which the body may be turned and also serving as supports for the body, and additional fulcrums for the body projecting therefrom and disposed intermediate the adjacent first said projections.

7. A print drier embodying a body having spaced opposite drying surfaces, projections on the body adjacent opposite edges and extending beyond and at substantially right angles to the respective drying surfaces and forming supports for the body, said projections also forming fulcrums upon which the said body may be turned, additional projections on the body extending beyond the edges of the body intermediate the first said projections, flexible members individual to said surfaces, each of said members being secured by one end to said body and adapted to be drawn over the respective drying surfaces, means for releasably anchoring the free end of the respective flexible members to the body adjacent that edge of the body which is opposite to the edge to which the respective members are secured, and means operating automatically to maintain a tension upon the respective flexible members when the free ends thereof are anchored to the said body.

HAROLD I. NICHOLAS.