June 11, 1968 D. GAUBATZ 3,387,386

PHOTOGRAPHIC PRINT AND FILM DRIER

Filed Jan. 24, 1966 2 Sheets-Sheet 1

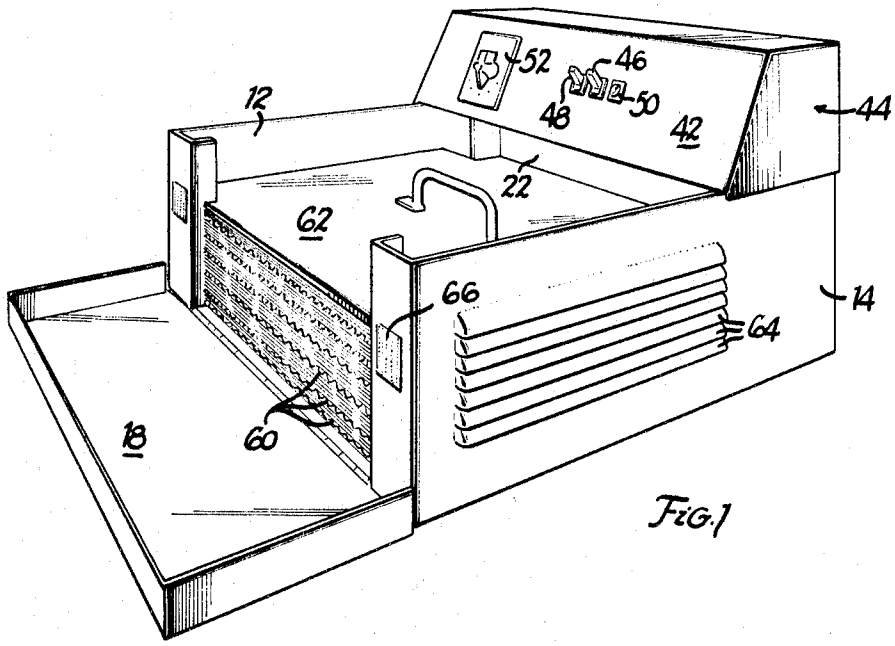


FIG. 1

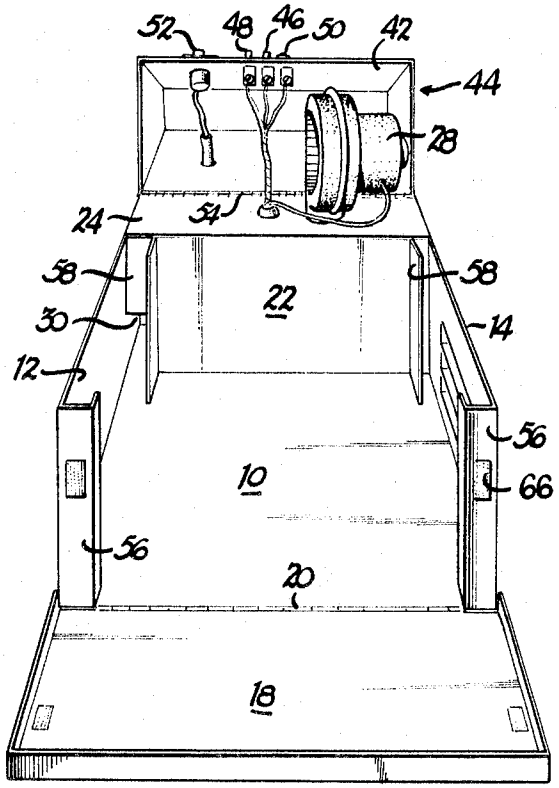


FIG. 2

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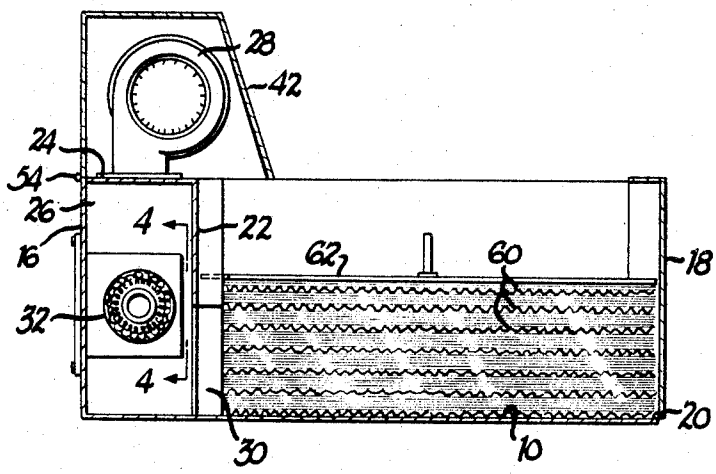


FIG. 3

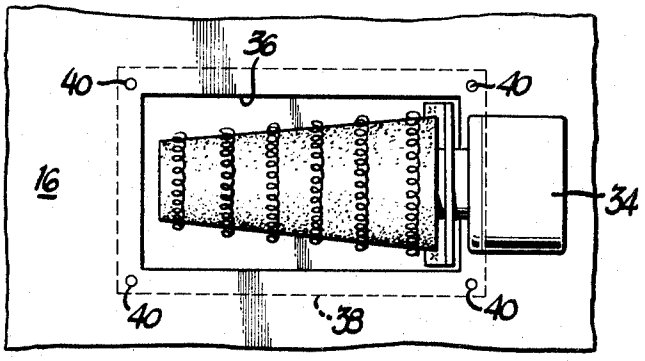


FIG. 4

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PHOTOGRAPHIC PRINT AND FILM DRIER

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ABSTRACT OF THE DISCLOSURE

A photographic print drier includes a box-like structure with spaced outer walls and a partition wall dividing the structure into two compartments one for heating and the other for drying by delivering a flow of warm air through a stack of photographic prints separated from each other by blotters to enable the simultaneous drying of a relatively large number of prints.

This invention relates to improvements in photographic print driers of the type employed by commercial photographic studios.

It is an object of the invention to provide a photographic print drier of the foregoing type of compact, easy to use construction.

It is another object of the present invention to provide a photographic print drier having a minimum number of operating elements readily accessible for maintenance and repair.

The foregoing, and other objects, will become apparent from the following specification taken in conjunction with the accompanying drawings.

In the drawings:

FIGURE 1 is a perspective view of a photographic print drier embodying the present invention with the front end wall of the drier open and a stack of prints loaded into the drier;

FIGURE 2 is a front view in perspective of the drier of FIGURE 1, with the print stack and stack cover removed and the hook of the drier in its open position;

FIGURE 3 is a side elevational view of the drier with the near side wall of the structure removed; and

FIGURE 4 is a detail cross sectional view of the plenum chamber taken approximately on line 4—4 of FIGURE 3.

The print drier disclosed in the drawings is constructed preferably from sheet metal material and includes a bottom **10**, upstanding parallel side walls **12** and **14** and a fixed rear wall **16**. A front wall **18** is hinged along its lower edge to the front edge of bottom **10** as by a piano hinge **20**. At a location spaced forwardly from rear wall **16**, an intermediate wall **22** extends transversely between side walls **12** and **14**. A top wall **24** covers the space between rear wall **16** and intermediate wall **22** and extends transversely between the two side walls to provide an enclosed plenum chamber **26** at the rearward portion of the drier. A blower **28** of conventional construction is mounted on top of top wall **24** with the blower outlet projecting downwardly through the wall to blow air into plenum chamber **26**.

As best seen in FIGURE 2, an opening **30** is cut in intermediate wall **22** immediately adjacent side wall **12** to extend upwardly a relatively short distance from bottom **10**. Air forced into plenum chamber **26** by operation of blower **28** is discharged from the plenum chamber through opening **30** into the print drying chamber represented by the space between side walls **12** and **14** forwardly of intermediate wall **22**.

As best seen in FIGURES 3 and 4, an electrical heating element **32** of conventional construction is mounted within plenum chamber **26** as by means of a bracket **34** mounted on the inner side of rear wall **16**. Access to heating element **32** is provided by an opening **36** in rear wall **16** normally closed as by a cover plate **38** removably secured to rear wall **16** as by screws **40**.

The control switches for the motor of blower **28** and heater **32** are mounted upon the front panel **42** of a hood designated generally **44**, the heater control switch being indicated at **46** and the motor control switch at **48**. An indicator light **50** is also mounted on front panel **42** to indicate when the heating element is on. Preferably, the control system of the device also includes an automatic timer switch **52**, such timer switches being of well known commercially available construction. The electrical wiring connections between the various switches, lights and blower motor are completely conventional and well known to those skilled in the art. A suitable power cord, not shown, is employed to connect the various elements of the electrical circuit to a conventional electric power source, such as a wall outlet.

Hood **44** is hinged along its rear edge to the upper edge of rear wall **16** as by a piano hinge **54**. As best seen in FIGURE 2, when the hood is in its open position access is provided to the electrical switch connections and to blower **28** for purposes of maintenance or repair.

As best seen in FIGURE 2, the forward ends of side walls **12** and **14** are reversely bent to form inwardly projecting channel sections or posts **56**. Angle members **58** are fixedly secured to the front side of intermediate wall **22**, the projecting webs of angle members **58** and the innermost side surfaces of posts **56** being in coplanar alignment with each other. The purpose of members **56** and **58** is to provide an alignment guide for the rectangular blotters **60** (FIGURES 1 and 3) which are employed to separate layers of prints from each other within the print stack when the drier is in operation. The width of the rectangular blotters **60** is selected so that they fit between the projecting webs of angle members **58** and the inner side surfaces of channel sections **56** so that the side edges of the blotters are spaced inwardly from the inner sides of the side walls **12**. The length of the blotter element **60** is such that a reasonably snug fit is obtained between intermediate wall **22** and the inner side of front wall **18** when wall **18** is in its elevated position.

The drier is loaded by first laying a blotter element upon bottom **10** with the element positioned between the projecting webs of angle members **58** and channel sectoins **56**. It is more convenient to load the drier with front wall **18** in the lowered position shown in FIGURES 1 and 2. After the first blotter is in position, a print or prints to be dried is laid upon the top of the blotter and a second blotter element is placed over the prints after they are in position. This process is repeated until a stack consisting of alternate layers of prints and blotters, such as that shown in FIGURE 1, has been loaded into the drier.

After the stack has been completed, a removable cover in the form of a fairly heavy flat plate **62** is placed in position on top of the stack. Cover **62** is dimensioned to completely fill the space between side walls **12** and **14** and intermediate wall **22** and front cover **18** when the front wall is in its elevated position. Effectively, cover member **62** defines a top of the drying chamber.

Blotter elements **60** preferably take the form of a pair of outer layers separated by a corrugated intermediate layer, the corrugation permitting the flow of air transversely through the blotter element. Moisture from the prints is absorbed by the absorbant outer layers of the blotter element, and as the moisture soaks through the outer layers, the flow of air through the corrugations evaporates the moisture.

Heated air is passed through the loaded stack of prints by operation of blower **28** and heater **32**. Blower **28** blows air inot plenum chamber **26** where the air is heated by

operation of heater **32**. The heated air passes from plenum chamber **26** through opening **30** into the space between side wall **12** and the adjacent edge of the stack of prints. When cover plate **62** is in position, the top of this space is closed, and with front wall **18** in its elevated position, air passes from the space between side wall **12** and the stack into the stack to flow through the corrugations of the blotting elements to the space between the opposite side of the stack and side wall **14**. Louvers **64** formed in side wall **14** permit the moisture-laden air to flow from the drier. A magnetic catch **66** is employed to hold front wall **18** in its upper position as best seen in FIGURE 3, front panel **42** of hood **44** projects forwardly beyond intermediate wall **22** so that air is available to the blower intake through the opening in the hood forward of intermediate wall **22**.

While one embodiment of the invention has been described in detail, it will be apparent to those skilled in the art that this specific embodiment may be modified. Therefore, the foregoing description is to be considered exemplary rather than limiting and the true scope of the invention is that defined in the following claims.

I claim:

1. A photographic print drier or the like comprising a box-like structure having a pair of spaced side walls, a fixed rear end wall and a hinged front end wall, extending between said side walls, an intermediate wall extending between said side walls in spaced adjacent relationship to said rear wall, a top wall extending between said rear wall and said intermediate wall from side wall to side wall to define a plenum chamber, at the rear of said box-like structure, the portion of said structure in front of said intermediate wall defining a drying chamber adapted to receive a stack of prints to be dried with the stack spaced inwardly from the side walls, means defining an opening in said intermediate wall placing said plenum chamber in communication with said drying chamber at a location adjacent the bottom portion of one of said side walls, heating means in said plenum chamber, blower means mounted on said top wall for blowing air into said plenum chamber to force heated air from said plenum chamber through said opening, removable cover means adapted to rest upon the top of a stack of prints in said drying chamber to close the top of said chamber, outlet means at the other of said side walls permitting the egress of air from said drying chamber and a hood hingedly mounted upon the upper edge of said rear wall and adapted to cover said blower means when said hood is in its closed position, said hood having a front panel projecting forwardly of said intermediate wall when said hood is closed to define an air inlet for said blower means.

2. A photographic print drier or the like comprising a box-like structure having a pair of spaced side walls, a fixed rear end wall and a hinged from end wall, extending between said side walls, an intermediate wall extending between said side walls in spaced adjacent relationship to said rear wall, a top wall extending between said rear wall and said intermediate wall from side wall to side wall to define a plenum chamber, at the rear of said box-like structure, the portion of said structure in front of said intermediate wall defining a drying chamber adapted to receive a stack of prints to be dried with the stack spaced inwardly from the side walls, means defining an opening in said intermediate wall placing said plenum chamber in communication with said drying chamber at a location adjacent the bottom portion of one of said side walls, heating means in said plenum chamber, blower means mounted on said top wall for blowing air into said plenum chamber to force heated air from said plenum chamber through said opening, removable cover means adapted to rest upon the top of a stack of prints in said drying chamber to close the top of said chamber, outlet means at the other of said side walls permitting the egress of air from said drying chamber wherein said stack of prints includes a plurality of rectangular blotter elements of uniform dimensions, the spacing between said side walls being greater than the width of said blotter elements and the distance between said front end wall being substantially equal to the length of said blotter elements, guide means spaced inwardly from each of said side walls for locating said blotter elements in said drying chamber to define a side chamber extending along each side of the stack, said opening placing said plenum chamber in direct communication with one of said side chambers, and said removable cover means closing the top of each of said side chambers.

3. A print drier as defined in claim **2** wherein said outlet means comprises louver means in the other of said side walls.

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