March 28, 1950 D. E. SUTTON 2,501,922

MACHINE FOR SCORCHING OR DRYING PRINTING MATS AND THE LIKE

Filed Nov. 3, 1947 2 Sheets-Sheet 1

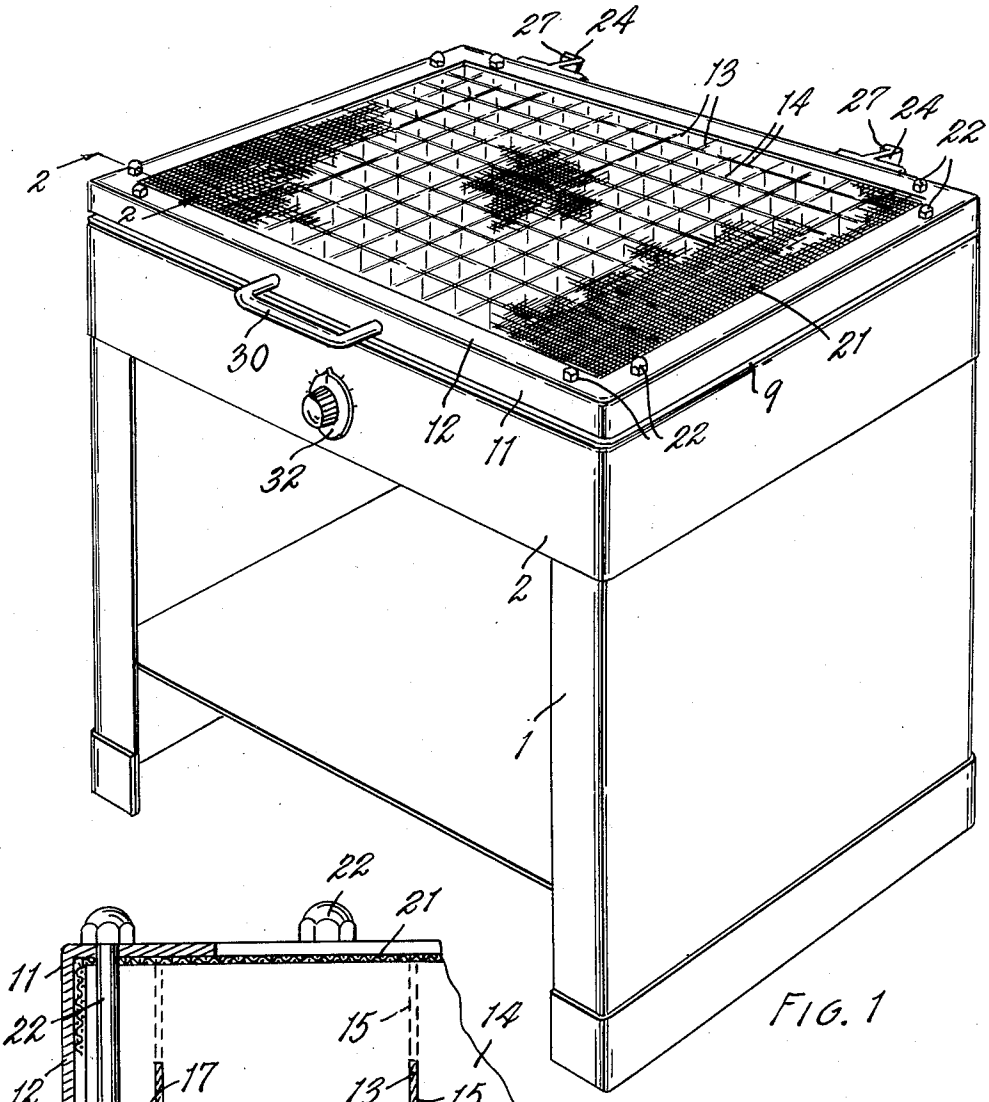


FIG. 1

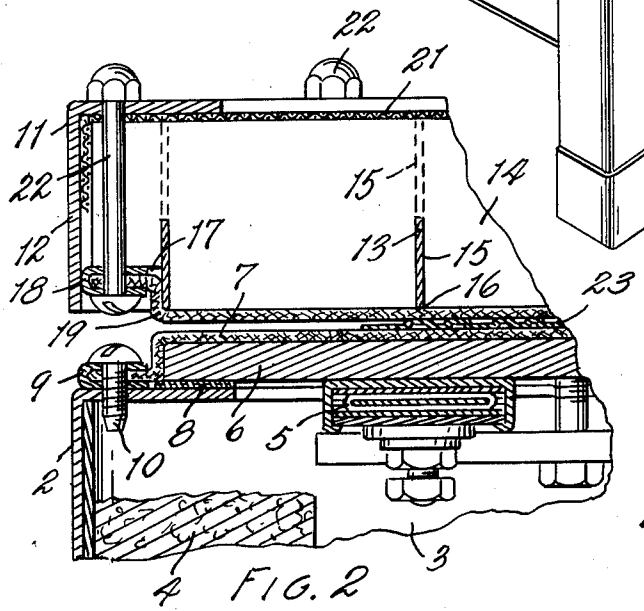


FIG. 2

INVENTOR.
Donald E. Sutton
BY
Otto A. Earl
Attorney.

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MACHINE FOR SCORCHING OR DRYING PRINTING MATS AND THE LIKE

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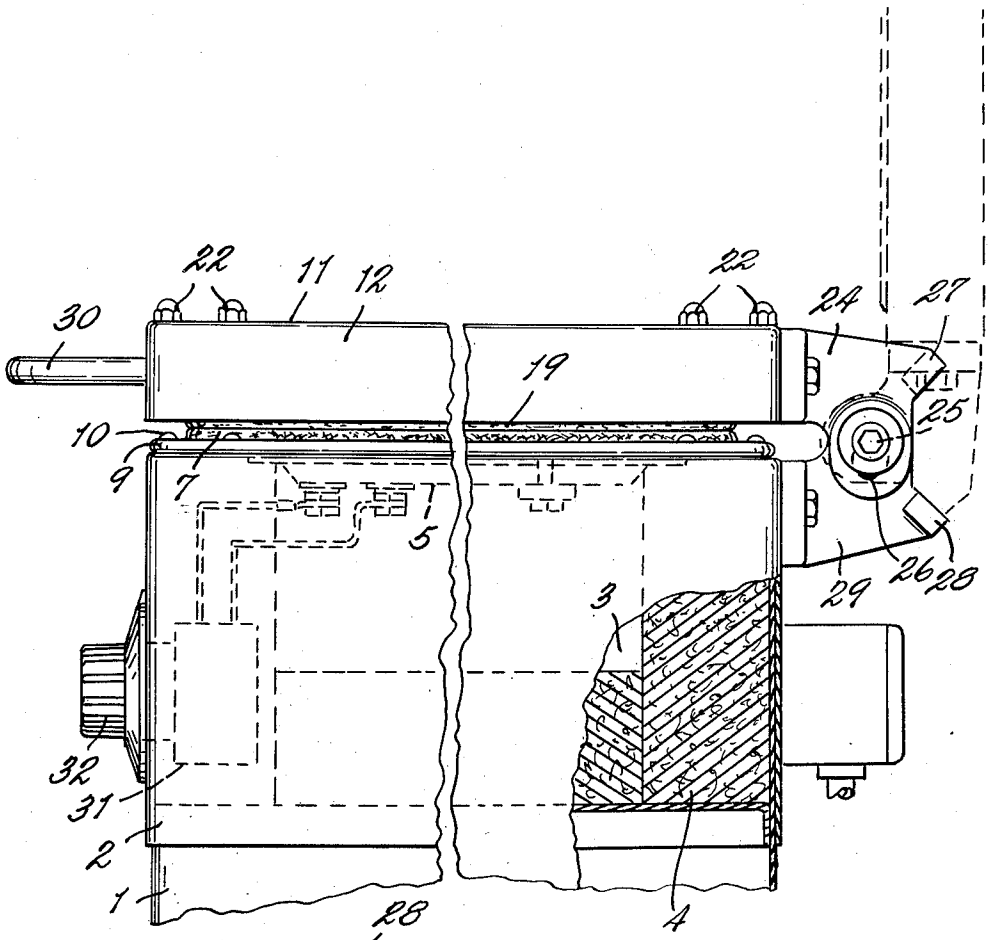


FIG. 3

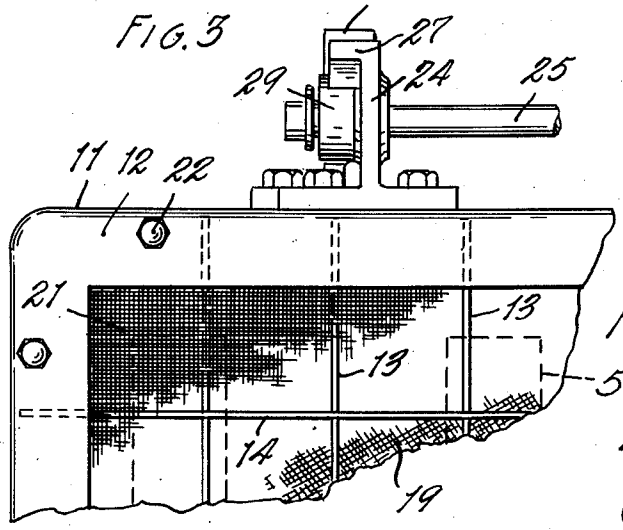


FIG. 4

INVENTOR.
Donald E. Sutton
BY
Otto A. Earl
Attorney.

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MACHINE FOR SCORCHING OR DRYING PRINTING MATS AND THE LIKE

Donald E. Sutton, Kalamazoo, Mich., assignor to Hammond Machinery Builders, Inc., Kalamazoo, Mich.

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8 Claims. (Cl. 34—143)

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This invention relates to improvements in machine for scorching or drying printing mats and the like.

The main objects of this invention are:

First, to provide a machine for scorching or drying printing mats which is highly efficient permitting the use of relatively high temperatures in the drying or scorching of the mats with a minimum of likelihood of burning or injuring the mats.

Second, to provide in a scorching or drying machine an improved cover or hold-down plate which holds the work against wrinkling or buckling while it is being heated and also permits free escape of the vapors and gases released from the work by the heating thereof.

Third, to provide a machine having these advantages which is simple and economical in structure and not likely to be distorted in use.

Other objects and advantages pertaining to the details and economies of my invention will be apparent from a consideration of the following description and claims.

Fig. 1 is a front perspective view of a machine embodying my invention with the hold-down cover in closed position, only fragments of the cover screen being illustrated.

Fig. 2 is an enlarged fragmentary view in vertical section on a line corresponding to line 2—2 of Fig. 1, a printing mat being shown in the machine.

Fig. 3 is an enlarged fragmentary end elevational view with the cover shown in closed position by full lines and in open position by dotted lines.

Fig. 4 is an enlarged fragmentary plan view.

The embodiment of my invention illustrated comprises a pedestal designated generally by the numeral 1 and comprising a top frame 2 constituting the side walls of the heating chamber 3 having insulation 4 therein. Electric heating elements 5 are mounted within this chamber in operative relation to the platen consisting of the bed plate 6 which is of metal and of uniform thickness throughout. A facing sheet 7 is arranged over this platen bed plate 6 this sheet being desirably of woven asbestos. The edges of the bed plate 6 are spaced from the edges of the frame and insulated therefrom indicated at 8. The edges of the facing 7 extend beyond the edges of the plate and are provided with U-shaped binding strips 9 embracing the edges, the binding strips being secured by the screws 10 to the supporting frame. These binding

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strips serve to laterally support or limit the movement of the bed plate 6.

The cover or hold-on plate, designated generally by the numeral 11, comprises the border frame 12 formed of angled stock and arranged with the angle facing inwardly and downwardly as shown at Fig. 2. Within this frame is an open work grid consisting of two sets of grid strips 13 and 14 arranged in angular crossing relation to each other, the grid strips being oppositely slotted at 15 so that the strips may be arranged in interlocking or interengaging relation with the lower edges 16 of the strips in the same plane. Their upper edges are also preferably in the same plane. The ends of the strips are arranged within the angles of the border frame as shown in Fig. 2.

The lower edges of strips of the embodiment illustrated are notched at 17 to receive the clamping strips 18 for the grid facing sheet 19. This sheet 19 is desirably formed of woven asbestos and is stretched across the lower edges of the grid strips in supported relation thereto. The edges of the facing sheet 19 are embraced by the binding strips 18 which also serve as clamping members for the grid strips as is best shown in Fig. 2. A screen 21 preferably of woven wire is arranged upon the grid with its edges within the border frame and draped over the ends of the grid strips. Clamping bolts 22 secure the grid facing 19, the grid strips and the screen.

The open work grid formed by the grid strips as described provides for the free escape or passage of steam or vapors or gases which may be discharged from the work being heated or scorched as is conveniently shown at 23.

The hold-down cover is provided with pivot ears 24 mounted on the pivot rod 25, which is in turn mounted for limited vertical movement in the vertically elongated bearing openings 26 of the ears 29. Stops 27 and 28 on the hinge members 24 and 29 coact to support the cover in open position. This mounting allows the cover to adjust itself to the thickness of the particular work being treated and it allows the full weight of the cover to rest upon the work. A handle 30 is provided at the front of the cover.

A thermostatic control unit 31, shown conventionally at Fig. 3, is preferably provided this being provided with an adjusting member 32, details of which are not illustrated as they form no part of my present invention.

My improved scorcher or drying machine is highly efficient and enables the treatment of printing mats and other work preparatory for

use with a minimum of likelihood of injury thereto. Steam and gases generated by heating the work have free escape and at the same time the work is held flat upon the platen.

I have illustrated and described by invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe certain modifications or adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a machine in the class described, the combination with a supporting frame, of a platen comprising a bed plate of uniform thickness disposed on said frame with heat transfer insulation between said plate and frame, an asbestos platen facing sheet arranged over said bed plate with its edges extending beyond the edges of the bed plate, a U-shaped binding for the edges of said sheet secured to said supporting frame and constituting retaining means for said bed plate, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angles of the frame, a screen arranged upon the upper edges of the grid with its edges within the frame, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, and means for heating said platen bed plate.

2. In a machine in the class described, the combination with a supporting frame, of a platen comprising a bed plate of uniform thickness disposed on said frame with heat transfer insulation between said plate and frame, an asbestos platen facing sheet arranged over said bed plate, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angle of the frame, a screen arranged upon the upper edges of the grid with its edges within the frame, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, and means for heating said platen bed plate.

3. In a machine in the class described, the combination with a supporting frame, of a platen comprising a bed plate of uniform thickness disposed on said frame with heat transfer insulation between said plate and frame, an asbestos platen facing sheet arranged over said bed plate, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angles of the frame and being notched on their under edges, a screen arranged upon the upper edges of the grid with its edges within the frame, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, U-shaped binding strips for the edges of said grid facing sheet engaging the notched portions of said grid strips, bolts on said border frame disposed through such binding strips, means for swingably supporting said cover permitting limited vertical movement thereof when in closed position, and means for heating said platen bed plate.

4. In a machine in the class described, the combination of a platen having heating means associated therewith, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angles of the frame and being notched on their under edges, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, binding strips for the edges of said grid facing engaging the notched portions of said grid strips, bolts on said border frame disposed through such binding strips, means for swingably supporting said cover permitting limited vertical movement thereof when in closed position, and means for heating said platen bed plate.

5. In a machine in the class described, the combination of a platen having heating means associated therewith, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angles of the frame and with their upper edges in supported relation to the inwardly projecting flange of the frame, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, means for swingably supporting said cover permitting limited vertical movement thereof when in closed position, and means for heating said platen bed plate.

6. In a machine in the class described, the combination of a platen having heating means associated therewith, a cover comprising a border frame of angle section disposed to face inwardly and downwardly, sets of spaced parallel metal grid strips disposed vertically edgewise with the strips of the sets in crossing relation and oppositely slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being disposed within the angles of the frame, a screen arranged upon the upper edges of the grid with its edges within the frame, a grid facing sheet of asbestos disposed on the under side of the grid strips in supported relation thereto, means for swingably supporting said cover permitting limited vertical movement thereof when in closed position, and means for heating said platen bed plate.

7. In a machine of the class described the combination of a platen adapted to be heated and provided with a sheet asbestos facing, a cover comprising a frame having a horizontally projecting portion, sets of spaced parallel grid strips disposed vertically edgewise with the strips of the sets in crossing relation and slotted at their crossing points for interlocking engagement with their lower edges in the same plane,

the ends of the strips being in thrust sustaining engagement with the horizontally projecting portion of said frame, an asbestos sheet facing for said grid disposed on the under side of the grid strips in supported relation thereto, the edges of the facing being secured to said frame, and means for swingably supporting said cover permitting limited vertical movement thereof when the cover is adjusted upon work disposed on said platen.

8. In a machine of the class described the combination of a platen adapted to be heated, a cover comprising a frame having a horizontally projecting portion, sets of spaced parallel grid strips disposed vertically edgewise with the strips of the sets in crossing relation and slotted at their crossing points for interlocking engagement with their lower edges in the same plane, the ends of the strips being in thrust sustaining engagement with the horizontally projecting portion of said frame, a facing for said grid disposed on the

under side of the grid strips in supported relation thereto, the edges of the facing being secured to said frame, and means for swingably supporting said cover permitting limited vertical movement thereof when the cover is adjusted upon work disposed on said platen.

DONALD E. SUTTON.

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