

Sept. 5, 1967

M. LEIBOW

3,340,131

PRESSURE ROLLER

Filed Sept. 17, 1964

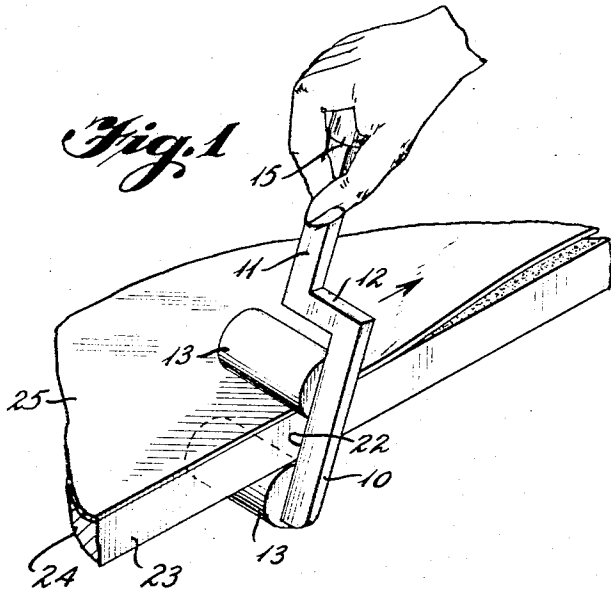


Fig. 3

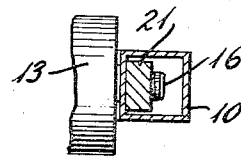
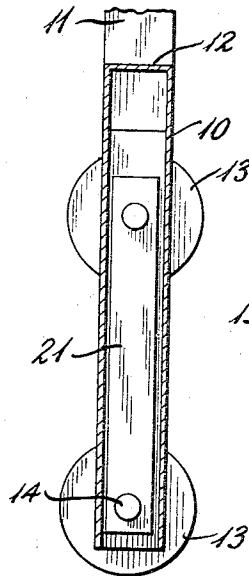
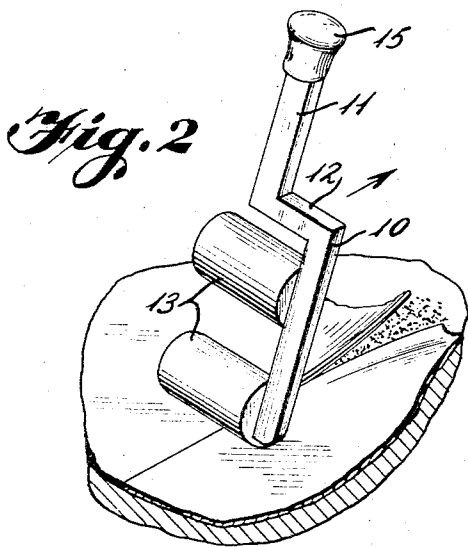
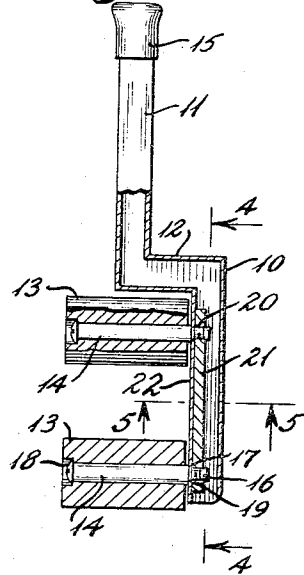


Fig. 5

Fig. 4

INVENTOR

Martin Leibow

BY

A. Yates Demelle, Jr.

ATTORNEYS

1

3,340,131

PRESSURE ROLLER

Martin Leibow, Dallas, Tex., assignor to Misceramic Tile, Inc., Cleveland, Miss.

Filed Sept. 17, 1964, Ser. No. 397,124

4 Claims. (Cl. 156-579)

ABSTRACT OF THE DISCLOSURE

A hand tool having hard spaced rollers for applying pressure to at least one surface.

This invention relates to tools of various kinds for performing work of many types by hand, including hand tools employed in the finishing and refinishing of furniture, including tables, counter tops, shelving, and the like, having relatively thin surface sheets adhesively attached thereto.

The invention relates particularly to a hand tool having a combination body and handle and spaced rollers by means of which the device can be operated somewhat like a clamp to apply pressure through rollers along the edge to the top or upper surface and portions of a base while the second roller engages the lower or opposite surface of the base and proper adhesion between the contiguous surfaces of the same is provided.

Surface layers not properly adhesively secured to a base or underlying surface tend to deteriorate and rise at the joints or edges, resulting in ragged edge portions with some of the surface layer removed or damaged, leaving unsightly areas and places for the accumulation of dirt. This has been known to result from improper bonding together of the surface layer with the underlying layer occasioned perhaps by the lack of proper equipment such as a hand tool by which intimate adhesion could be obtained.

It is an object of the invention to provide a hand tool including a body forming a manipulating handle with such body also mounting spaced parallel rollers, one of which can be applied to the under side of a base while pressure is exerted on the other roller on the upper side of a base to roll the surface and edge covering layers or laminae on a base in one simple operation.

Another object of the invention is to provide a hand tool of the character indicated in which a pair of rollers are mounted in spaced relation at right angles to a straight edge and with such straight edge having a portion disposed at right angles thereto and with a handle attached at the opposite end of such right angular portion in generally parallel relation to the first portion so that the handle will be in the proper position for exerting the force necessary in the use of the device.

Other objects and advantages of the invention will be apparent from the following description considered in conjunction with the accompanying drawing wherein:

FIG. 1 is a perspective illustrating one application of the invention and one use of the same;

FIG. 2, a similar view of another use;

FIG. 3, a central longitudinal section;

FIG. 4, a longitudinal section on the line 4-4 of FIG. 3; and

FIG. 5, a transverse section on the line 5-5 of FIG. 3.

Briefly stated the invention is a relatively simple hand tool composed of a pair of spaced rollers mounted on parallel shafts each attached at one end to a connecting bar having a right angular portion generally parallel to the rollers and with a portion normal to the rollers forming a handle with a gripping knob at the end of the same. Location of the rollers in spaced relation allows them to be disposed on opposite sides of a relatively flat body to which a thin lamina or one or more surface and edge layers may

2

be applied. During use by disposing the rollers angularly relative to the body additional leverage may be provided for applying pressure to such surface layer or layers. Also pressure can be applied, not only to opposite sides of a relatively flat body, but also to the edge which joins the sides.

With continued reference to the drawing, the hand tool of the present invention includes a tubular body having a pair of straight offset bar portions 10 and 11 extending in opposite directions and connected by an offset 12. The straight bar portion 10 carries spaced freely rotatable generally cylindrical rollers 13 having hard outer surfaces, and the straight bar portion 11 serves as a manipulating portion and may have a knob 15 for facilitating the gripping action. As will be observed from FIG. 3, the axis of the bar portion 11 is located substantially midway the ends of the rollers 13 in order that leverage pressure applied can be exerted along the length of the rollers substantially uniformly.

Rollers 13 may be mounted in any desired manner as, for example, by means of shaft forming bolts 14 having threaded ends 16, shoulders 17, and screw driver slots 18. These shaft forming bolts may be inserted through openings 19 in the body portion 10 of the bar and the threaded portions of the bolt engaged in internally threaded openings 20 of a nut or lock bar 21, which forms in effect a pair of integrally connected nuts.

The bar which forms the body portions 10, 11 and 12 is rectangular in cross-section, for simplicity, for ease of manufacture, and to provide a flat surface 22 which can be pressed against an edge 23 of a flat member 24 to apply leverage or pressure against a surface layer (not shown) and the edge 23 of the flat member 24 when the handle portion 11 is gripped and the tool tilted so that the roller more remote from the handle will engage the under surface of the flat member 24 while the spaced roller will bear upon the sheet or lamina 25. Thus leverage can be applied to provide intimate contact between the surface layer and the main body to insure proper adhesion including extremely tight butt and edge joints where they are desired. Also the flat surface 22 facilitates the positioning and maintenance of the tool in the desired position during use.

It will be apparent from the foregoing that a simple inexpensive practical and durable hand tool is provided by which pressure can be applied through a roller to exert downward and edgewise pressure while a second roller functions as a clamp but allows the first roller to be moved along the surface of veneer to be adhered and by means of which the proper amount of pressure may be employed to insure proper adhesion of the surface of one layer to the other and thus an extremely tight butt or edge joint is provided.

It will be obvious to one skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A hand tool for applying pressure to at least one surface of a body, said tool comprising a handle forming member having upper and lower offset portions, upper and lower roller mounting elements rigidly fixed to said lower offset portion in spaced relation to each other, a roller having a hard outer surface rotatably mounted on each of said mounting elements, at least a portion of the outer surfaces of said rollers being in spaced parallel relation to each other, the outer surface of said lower roller extending downwardly below said lower offset portion, and the upper offset portion of said handle forming member

3

overlying said rollers, whereby at least one of said rollers can be placed in contact with the surface of the body so that when pressure is applied to said handle forming member such pressure will be transmitted through said roller to said surface.

2. The structure of claim 1 in which said rollers are generally cylindrical and the axes of said roller mounting elements are substantially parallel with each other.

3. The structure of claim 1 in which said upper and lower portions of said handle forming member are generally parallel with each other and normal to the axis of said rollers.

4. A hand tool for applying pressure to multiple surfaces of a relatively flat body of predetermined thickness and having a generally flat edge, said tool comprising a handle forming member having upper and lower offset portions, a pair of roller mounting elements rigidly mounted on said lower offset portion, said elements being spaced along the axis of said lower offset portion, a roller having a hard outer surface freely rotatably mounted on each of said elements, the outer surfaces of said rollers

4

being spaced apart a distance greater than the predetermined thickness of said body, the outer surface of the lowermost roller extending below said lower offset portion, and said upper offset portion of said handle forming member overlying said rollers, whereby said rollers can be located on opposite surfaces of said body so that when pressure is applied to said handle forming member such pressure will be transmitted through said rollers to said surfaces.

References Cited

UNITED STATES PATENTS

| | | | |
|-----------|--------|---------|-----------|
| 126,833 | 5/1872 | Rippon | 107—50 |
| 430,781 | 6/1890 | Lingner | 29—110.5 |
| 2,035,127 | 3/1936 | Hinton | 29—116 |
| 2,231,132 | 2/1941 | Lovett | 156—579 |
| 3,130,435 | 4/1964 | Smith | 15—230.11 |

EARL M. BERGERT, *Primary Examiner.*

20 DOUGLAS J. DRUMMOND, *Examiner.*