Nov. 27, 1951 C. F. McBRIDE ET AL 2,576,622

COMBINATION LATEX AND TAPE APPLICATOR FOR RUGS

Filed Oct. 26, 1949

FIG. 1

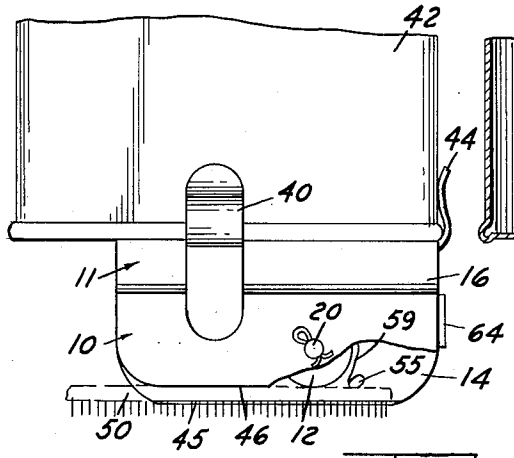


FIG. 2

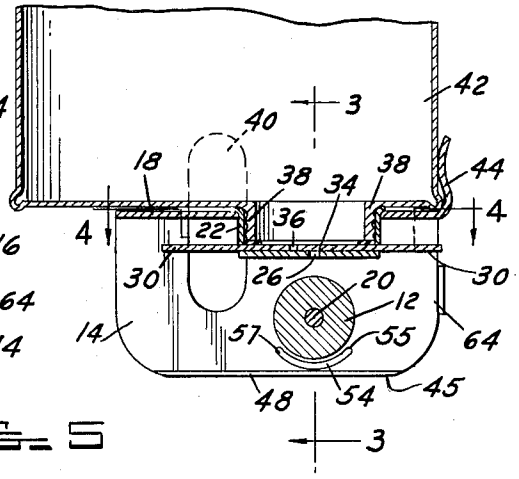


FIG. 5

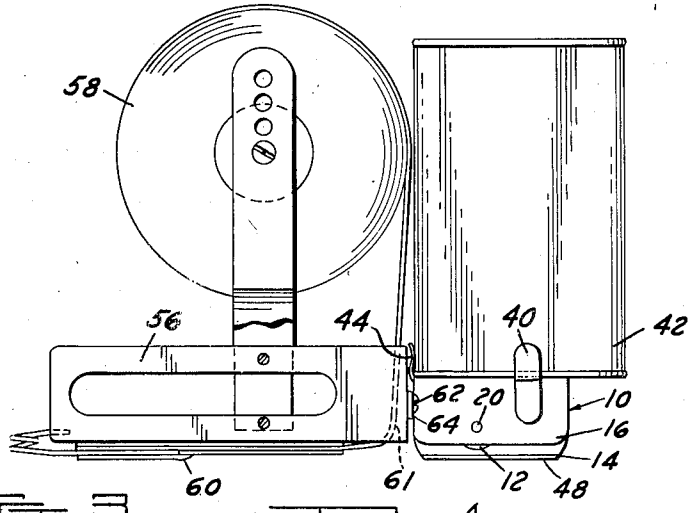


FIG. 3

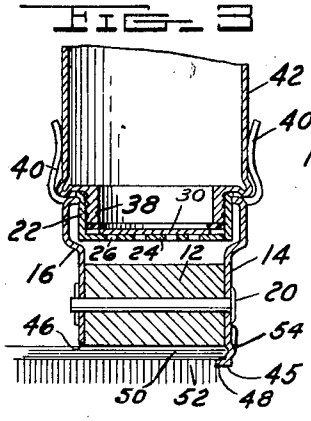
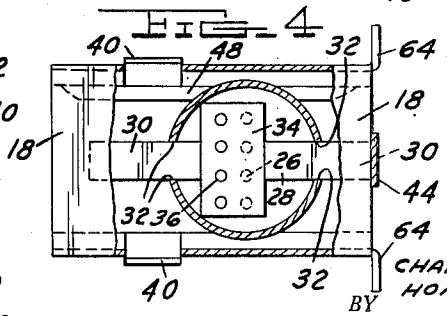


FIG. 4



INVENTOR.
CHARLES F. McBRIDE
HOMER G. KREPS

BY

Barnes, Kisselle, Laughlin & Rauch

ATTORNEYS

Patented Nov. 27, 1951 2,576,622

UNITED STATES PATENT OFFICE

2,576,622

COMBINATION LATEX AND TAPE APPLICATOR FOR RUGS

Charles F. McBride and Homer G. Kreps,
Sturgis, Mich.

Application October 26, 1949, Serial No. 123,691

12 Claims. (Cl. 154—1.6)

1

This invention relates to a latex applicator and more particularly to a device which may be attached directly to a latex container and manipulated to apply a coating of latex along the edge of a rug on the back face thereof.

It has been customary in the past to secure a binding tape to the edge of the rug by means of sewing. This method is time consuming and necessarily expensive. More recently it has been discovered that a binding tape can be applied to a rug very effectively and in much less time than required by the sewing by securing the tape to the rug with an adhesive, such as latex. The latex is usually applied to the rug as a narrow band by means of a brush or the like and the tape is subsequently applied either manually or by means of a device such as disclosed in our co-pending application, Serial No. 92,854, filed May 12, 1949.

When latex is employed for the purpose of securing a binding tape along the edge of the rug, it is essential to apply latex as a uniform coating on the back face of the rug as well as along the cut edge of the rug. The application of latex to the cut edge of the rug is necessary for firmly securing the binding tape around the raw edge of the rug and thereby prevent unraveling. Although this latter method of securing a binding tape to the edge of a rug has proved to be less time consuming and more economical than sewing, the application of latex to the rug by means of a brush is still a relatively slow operation which must be performed rather cautiously in order to insure a satisfactory binding.

It is an object of this invention to provide a device which enables the application of latex to a rug in much less time and with much less effort than required by the conventional brushing method.

More specifically, the invention contemplates a device which is adapted to be attached directly to a latex container and pushed along the edge of the rug to apply a uniform coating of latex on the back face of the rug, as well as along the cut edge of the rug.

A further object of the invention is to provide a device for applying latex to a rug which can be attached to a binding tape applicator, such as is shown in the aforementioned co-pending application, so that the latex and the binding tape can be applied to the rug as a single operation.

In the drawings:

Figure 1 is a side elevation, partly in section, of the latex applicator shown attached to a latex container and positioned on a rug.

2

Figure 2 is a vertical sectional view through the latex applicator and container shown in Figure 1.

Figure 3 is a sectional view along lines 3—3 in Figure 2.

Figure 4 is a horizontal sectional view along lines 4—4 in Figure 2.

Figure 5 is a side elevation of the latex applicator mounted on a binding tape applying device.

Referring to the drawings, the latex applicator, generally designated 10, comprises a bracket 11 on which is mounted a roller 12. Bracket 11 is of inverted U-shape and comprises a pair of vertically depending legs or side walls 14 and 16 connected at their upper ends by a central web portion 18. Roller 12 is mounted between legs 14 and 16 on an axis perpendicular to the plane of legs 14 and 16 and so that the end faces of the roller are adjacent the inner faces of legs 14 and 16.

At a point directly above roller 12 web portion 18 is provided with a depending cup member 22. Cup 22 may be formed integrally with web 18 or as a separate member which is secured to web 18 as by brazing or the like. The bottom wall 24 of cup 22 is perforated as at 26, preferably along a line extending transversely across legs 14 and 16 and directly above pin 20. A slide member 28 is provided for opening and closing perforations 26. Slide 28 is fitted on the inner face of bottom wall 24 and has projections 30 at each end thereof which are arranged to protrude through diametrically opposed slots 32 formed in cup 22. At its center portion, slide 28 is formed with a rectangular flag member 34 having apertures 36 which are adapted to register with apertures 26 in the bottom wall of cup 22. When slide member 28 is pushed to the left, as viewed in Figure 4, apertures 36 and 26 are out of registration and when the slide is pushed to the right to a position where the corners of flag 34 abut against the side wall of cup 22, apertures 26 and 36 are in registration.

Cup 22 is dimensioned such as to receive the pouring spout 38 of a conventional metal pint or quart container 42 in which latex is usually sold. Accordingly spring fingers 40 are struck out from each of the legs 14 and 16 so as to engage the side walls of container 42. A similar spring finger 44 is provided at one end of web 18 for engaging an end wall of the container.

As is best shown in Figure 3, legs 14 and 16 are of unequal length and are provided with substantially straight lower edges 45 and 46, respectively. Lower edge 45 of leg 14 is formed with

an inwardly extending flange 48 which is spaced below the lower side of roller 12 a distance substantially equal to the thickness of the backing material 50 of the rug 52 on which the latex is to be applied. Edge 46 of leg 16 is spaced slightly above the lower end of roller 12 so that when the device is arranged on the back face of a rug and pushed along the edge of the rug with a slight downward pressure, edge 46 rides over the back face of the rug and cooperates with leg 14 to form a trough in which the latex is deposited, as will be hereinafter described. The lower edges of legs 14 and 16, it will be noted, provide runners for slidably guiding the device along the edge of the rug.

A rug binding, when properly applied, extends around the cut edge of the rug so as to prevent unraveling of the backing material and it is therefore essential that latex be applied to this cut edge so that the binding tape subsequently applied will adhere firmly to the cut edge. In the device illustrated, latex is permitted to flow along and into the cut edge of backing material 50 by means of a trough 54 formed on leg 14 adjacent roller 12. Trough 54 is preferably formed as a depression on the inner face of leg 14 and extends from a point above the lower side of roller 12 downwardly to flange 48. Trough 54 is preferably of crescent shape so as to follow the periphery of roller 12 with its opposite ends 55 and 57 terminating at points on opposite sides of pin 20 above the lower end of the roller.

When it is desired to apply latex to the back face of a rug, the cap is removed from the container 42 and the device is attached to the container with cup 22 inserted over the pouring spout 38 and with the spring fingers 40 and 44 engaging the walls of the container. The entire assembly is then inverted and positioned on the back face of the rug with flange 48 hooked beneath the edge of the rug as is illustrated in Figure 3. Slide 28 is then actuated to bring apertures 36 into registry with apertures 26 to permit the latex to flow from the container onto the upper surface of roller 12. When the latex begins to flow, a slight downward and forward pressure is exerted on the container so that as it is pushed along, roller 12 engages and rolls over the back surface of the rug. The surface of the roller is roughened, as by knurling, to insure a positive rolling movement. It will be noted that roller 12 is thus rotated and thereby applies latex to the rug just ahead of the roller. This is true whether the container is pushed either forwardly or rearwardly, that is, either to the right or to the left, respectively, as viewed in Figure 2. The latex dripping on the roller will therefore accumulate in the angle formed between the lower surface of the roller and the surface of the backing material just ahead of the roller, as at 59. This accumulation of latex, it will be noted, extends at one end to the end 55 of trough 54 and the latex therefore flows into trough 54 and downwardly around the trough into the cut edge of the rug. The device is pushed along the rug with the lower edge of wall 14 engaging the cut edge of the rug and thus serving as a guide and insuring penetration of the latex into the cut edge of the rug.

After the latex is applied as described, the binding tape is applied to the edge of the rug. The tape can be applied directly to the latexed portion of the rug or, if desired, the tape itself may also be given an application of latex prior to securing it to the rug.

In Figure 5, we have shown the latex applicator attached directly on a binding tape applicator, such as is described in the above-mentioned co-pending application. The binding tape applicator comprises a base 56 which supports a roll of binding tape 58, the tape extending downwardly through a guide 61 at the front end of base 56 and along a guide plate 60 on the lower face of base 56. The arrangement is such that when base 56 is positioned on a rug backing with guide plate 60 engaging the edge of the rug to which an adhesive has been applied, base 56 may be pushed forwardly to unreel the tape 58 from the roll and automatically secure it to the rug.

In our co-pending application, we have shown means at the front end of base 56 for applying latex to the tape. We have discovered that a more satisfactory binding is produced if the latex is applied to the rug, rather than the tape. Accordingly, the latex applicator 10 is arranged to be secured to the front end of base 56 by one or more screws 62 which pass through a pair of ears 64 at one end of bracket 11. With an arrangement such as is shown in Figure 5, the latex and the binding tape can be applied to the rug simultaneously, that is by a single operation. As base 56 is pushed forwardly along the edge of the rug, a narrow band of latex is applied to the rug by roller 12 and the tape 58 is subsequently applied to the latexed portion of the rug. We have found that by using a quick setting latex and by pushing the device along the edge of the rug at a speed which renders the manual operation convenient, the spacing of roller 12 and guide plate 60 is such that the latex applied by the roller has set to the desired degree before the tape is applied from the roll to produce a firm bond between the rug backing and the tape.

It will thus be seen that we have provided a simply constructed latex applicator which enables the application of latex to a rug in a rapid manner and with very little difficulty. The applicator is further designed so as to insure a thorough saturation of the cut edge of the rug with latex so that the binding tape subsequently applied will adhere firmly and prevent unraveling. A further feature of the invention resides in the provision of an applicator which is capable of being attached directly to a latex container which thereby avoids the necessity of pouring the latex from the container in which it is sold into a special container from which it is dispensed.

It will also be noted that the combined latex and tape applicator enables both the latex and the tape to be applied to the rug in a single operation.

We claim:

1. A device for applying a liquid adhesive to the back and edge surfaces of a rug comprising a bracket having a pair of spaced apart depending legs, a roller mounted between said legs on an axis extending transversely across said legs, one of said legs being longer than the other, said longer leg projecting downwardly below the peripheral surface of said roller at the lower side of the roller and having an outwardly extending depression on the inner face thereof which forms a trough adjacent one end of the roller which extends from a point above to a point below the peripheral surface of said roller at the lower side of the roller, and means on said bracket for directing liquid adhesive to the peripheral surface of said roller, whereby when said

bracket is pushed over the back face of a rug with the lower edge of said longer leg pressed against the vertical side edge of the rug, a portion of the adhesive applied to the back face of said rug by said roller will flow through said trough and into said vertical side edge of the rug.

2. A device for applying a liquid adhesive to the back and edge surfaces of a rug comprising a bracket having a pair of spaced apart depending legs, a roller mounted between said legs on an axis extending transversely across said legs, one of said legs being longer than the other, said longer leg projecting downwardly below the peripheral surface of said roller at the lower side of the roller and having an outwardly extending depression on the inner face thereof which forms a trough adjacent one end of the roller which extends from a point above to a point below the peripheral surface of said roller at the lower side of the roller, means on said bracket for directing liquid adhesive to the peripheral surface of said roller, whereby when said bracket is pushed over the back face of a rug with the lower edge of said longer leg pushed against the vertical side edge of the rug, a portion of the adhesive applied to the back face of said rug by said roller will flow through said trough and into the vertical side edge of the rug, and means on said bracket for attaching said bracket to the upper end of a liquid adhesive container of the type having a pouring spout at its upper end, said adhesive applying means on said bracket cooperating with the pouring spout of said container to direct a stream of adhesive to the peripheral surface of said roller when the container is inverted.

3. A device for applying latex to the back and edge surfaces of a rug comprising a bracket having a pair of spaced apart depending legs, the bottom edges of said legs extending longitudinally of said bracket and forming a pair of runners for slidably guiding said bracket on the back face of a rug adjacent an edge thereof, one of said legs being shorter than the other, a roller supported between said legs for rolling movement on a horizontal axis extending transversely of said legs, said longer leg extending downwardly beyond said roller and adjacent one end of the roller whereby said bracket can be positioned on the back face of a rug with the roller resting on said back and with the lower end of said longer leg extending downwardly and overlapping the vertical side edge of the rug, means for applying latex to said roller, and means on said longer leg adjacent said roller forming a trough for directing latex applied to the back face of the rug by said roller in a path downwardly toward the lower edge of said longer leg on the inner side thereof whereby a portion of the latex applied to the rug is permitted to flow through said trough means and into the vertical side edge of the rug.

4. The combination set forth in claim 3 including means on said bracket for attaching the bracket to a conventional container for latex of the type having a pouring spout at its upper end, said latex applying means comprising means on said bracket engageable with said pouring spout when the bracket is attached to said container for directing a stream of latex to said roller when the container is inverted.

5. The combination set forth in claim 4 wherein said last-mentioned means comprises a cup member on said bracket adapted to receive said pouring spout when the bracket is attached to the container, said cup member having passages therein for discharging latex from said container to said roller when the container is inverted.

6. The combination set forth in claim 3 wherein said trough forming means comprises an outwardly extending depression on the inner face of said longer leg adjacent the lower end of said roller, said depression extending from a point below to a point above the peripheral surface of the roller at the lower side of the roller.

7. The combination set forth in claim 6 wherein said depression extends longitudinally of said longer leg between points positioned on opposite sides of the axis of said roller and above the lower end of the roller.

8. A device for applying latex to the back and edge surfaces of a rug comprising a bracket of inverted U-shape having a pair of depending side walls, the lower edges of which form runners for slidably guiding the bracket over the back face of a rug along an edge thereof, a roller mounted between said side walls for rotation on an axis generally perpendicular to said side walls and with its opposite ends adjacent the inner faces of said side walls, one of said side walls extending downwardly to substantially the peripheral surface of the roller on the lower side thereof, the other side wall depending downwardly beyond the peripheral surface of the roller at the lower side thereof whereby the bracket can be positioned on the back face of a rug with the roller frictionally engaging said back face and with the lower edge of said last-mentioned side wall overlapping and contacting the vertical side edge of the rug, said last-mentioned wall having a trough formed on the inner face thereof adjacent the corresponding end of said roller and extending from below upwardly to at least the level of the peripheral surface on the bottom side of the roller and means on said bracket for directing a stream of latex to the peripheral surface of said roller on the upper side thereof.

9. The combination set forth in claim 8 wherein said trough extends longitudinally of said side wall between points positioned on opposite sides of the axis of rotation of the roller and beyond the periphery of the roller.

10. In combination, a base member having means for mounting a roll of binding tape thereon, guide means on said base member for directing the tape from said roll downwardly and along the bottom face of said base so that said tape is unreeled from said roll when said base is pushed over the back face of the rug with the tape disposed between the bottom face of said base and the back face of the rug, a support member secured to the front end of said base, a roller on said support member mounted for rolling movement on an axis extending transversely of said base and parallel to the bottom face thereof, said roller being positioned on said support to contact the back face of a rug when said base is pushed over said back face of the rug, a source of latex, and means on said support for directing said latex as a stream from said source to said roller, said latex being in such condition and said roller being positioned in advance of said base a distance such that the latex has set up sufficiently before being engaged by said tape as to bond said tape securely to the back face of said rug when said base member is pushed over said back face manually at a moderate rate of speed.

11. The combination set forth in claim 10 including a side wall on said support member ex-

tending downwardly below the peripheral surface of said roller at the lower side thereof, said side wall being disposed perpendicular to the axis of the roller and adjacent one end thereof, said side wall being adapted to engage a vertical side edge of the rug when the roller is positioned for rolling movement over the back face of the rug.

12. The combination set forth in claim 11 including a trough on said side wall extending from above to below the peripheral surface of the roller at the lower side thereof, said trough being disposed adjacent the periphery of the roller whereby the latex deposited on said rug by said roller

is permitted to flow through said trough and into the vertical side edge of the rug.

CHARLES F. McBRIDE.
HOMER G. KREPS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,901,908	Hoyos	Mar. 21, 1933