Aug. 5, 1947. C. WEST 2,425,215

LINOLEUM PASTE SPREADER

Filed Feb. 12, 1945

Fig. 1.

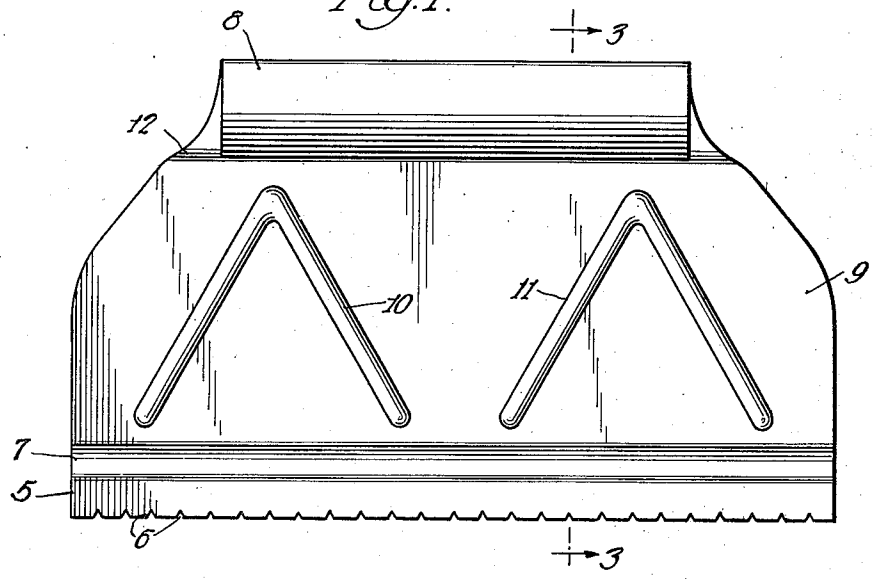


Fig. 2

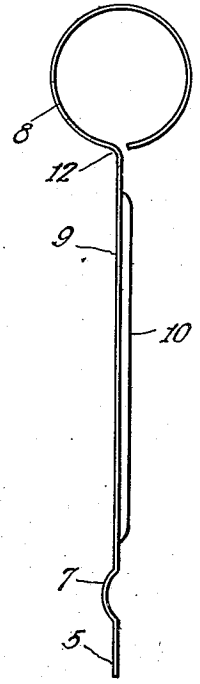


Fig. 3

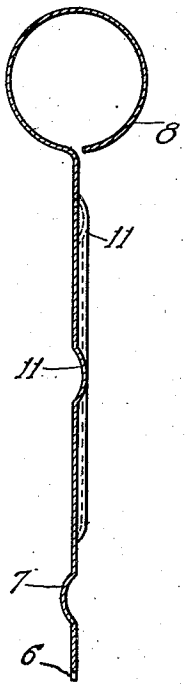
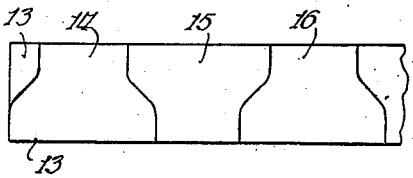


Fig. 4



Inventor
Clarence West
By: Fidel Carlson Kirkpatrick & Wells.
Attys.

Patented Aug. 5, 1947

2,425,215

UNITED STATES PATENT OFFICE

2,425,215

LINOLEUM PASTE SPREADER

Clarence West, Oak Park, Ill., assignor of one-half to Grant Gillam, Chicago, Ill.

Application February 12, 1945, Serial No. 577,491

7 Claims. (Cl. 91—62.5)

1

The present invention relates to paste spreaders particularly of the type used for spreading linoleum paste in laying linoleum. It is the principal purpose of this invention to provide a paste spreader which is (*a*) cheaper to manufacture; (*b*) more efficient in performance, and (*c*) neater and more attractive in appearance. The advantages of the present device lie in the savings of material, the convenience and ease in handling, and the low cost of manufacture, all of which are important in a device which in many instances is to be used only for one job and then generally discarded or laid aside and allowed to rust. Paste spreaders, such as those used by the commercial layers of linoleum and those who lay the linoleum in their own homes, are quite messy and difficult to clean at the end of the day's work. It is an advantage if the paste spreader can be made for such a low cost that the user can afford to throw the spreader away upon the completion of the job or at the end of the day's work. The present spreader embodies features which make it feasible to use lighter gauge and hence cheaper sheet metal so that the cost of the device to the ultimate buyer is so low that it is cheaper to throw the device away than it is to spend the time necessary to clean it.

It is also a purpose of this invention to provide a novel construction of a paste spreader of thin sheet metal construction whereby the blade is made rigid against bending on an axis perpendicular to its working edge and against bending on an axis parallel to its working edge despite the thinness and inherent flexibility of the sheet metal used.

It is a further purpose of the invention to provide a paste spreader of the character described wherein a reinforcing rib in the body of the tool is so formed and located that a paste well is provided adjacent the spreading or working edge of the implement so as to enable the device to spread out the paste more uniformly over a large surface.

The nature and advantages of my invention will appear more fully from the following description and accompanying drawing wherein a preferred form of the invention is shown. It should be understood however that the drawing and description are illustrative only and should not be taken as limiting the invention except insofar as it is limited by the claims.

In the drawings:

Figure 1 is a view in side elevation of a paste spreader embodying my invention;

Figure 2 is an end view of the paste spreader;

2

Figure 3 is a sectional view taken on the line 3—3 of Figure 1; and

Figure 4 is a diagrammatic view illustrating the manner in which the material for paste spreader units is cut from a strip so as to have a minimum amount of waste.

Referring now to Figures 1 to 3 of the drawings, these figures show the paste spreader which embodies my invention as being constructed of a single piece of sheet metal. Preferably I make the piece of metal quite thin in order to save weight and lower the cost of production. In fact, it is of such thin material that without making certain provisions the device would be incapable of standing up under the usage to which it is subjected in spreading linoleum paste. The spreader comprises a flat spreader edge portion which is notched as shown at 6 to provide spaced teeth in the edge portion. The sheet of material is formed between dies to provide a wide and relatively shallow reinforcing and stiffening rib 7 of arcuate cross-section extending lengthwise of the blade in spaced substantially parallel relation to the working edge 5, the primary function of which is to resist bending of the working edge portion under rough usage, but which, incidentally, also serves to provide a well or trough in which paste may accumulate. The paste flows out of this trough during a part of the spreading action so as to facilitate uniform flow of the paste to the surface being covered. The working edge 5 with its adjacent well portion 7 is necessarily spaced appreciably from the handle portion 8 of the spreader, to enable the operator to grasp the handle portion 8 without getting his fingers in contact with the paste covered part of the spreader. The intermediate portion of the spreader is indicated by the numeral 9. This intermediate portion is reinforced transversely by the simple expedient of forming the tool between dies to provide spaced V-shaped ribs 10 and 11 therein. In order to produce the handle 8, the narrow upper portion of the spreader is curled into a circular form onto itself, there being a rather sharp bend 12 where the handle portion joins the main body portion 9. This bend together with the curl of the handle has a similar reinforcing and stiffening effect as the rib 7, whereby to resist distortion of the spreader blade under rough usage. Yet there is a limited amount of resilience imparted to the spreader blade by having the rib 7 and the bend 12 for the handle 8 spaced from the opposite ends of the ribs 10 and 11 to the extent shown, whereby to give the tool a good "feel" in working with it.

The manner of making the spreader is as follows: the blanks from which the spreaders are to be made are punched from a strip of sheet metal using a punch and die to cut along the lines shown in Figure 4 of the drawings. Thus initially I have a loss of a small piece 13 of material from each strip and after that alternate sections of the strip are punched through the die while the other sections are pushed off the end of the die. I have numbered the sections of the strip shown in Figure 4 to indicate at least three spreader pieces. The first or left hand piece 14 is punched through the die leaving the small piece 13 of waste material to be shoved off the end of the die when the strip is advanced. The strip is advanced until the section 16 is positioned beneath the punch so that the next operation of the punch press will punch the section 16 through the die leaving the section 15 on the die to be pushed off when the strip is advanced again.

After the spreader pieces are punched as indicated above the next operation is to press each piece between dies to form the reinforcing ribs 10 and 11 and to cut the notches 6. This is done in one operation of a press, and at the same time the handle portion 8 has the bend portion 12 formed therein and is bent half around. Then on the next press operation the handle is rolled around a mandrel and the paste well 7 is formed. This completes the spreader to its final form ready for use. Because of the fact that the paste well 7 also acts to stiffen the spreader and the bend at 12 acts to stiffen the spreader, it is possible to use a much lighter gage of material than would be otherwise considered essential, bearing in mind the rough usage to which such tools are subjected. The ribs 10 and 11 are of course highly advantageous in preventing the large flat body of the spreader from being distorted. These ribs strengthen the spreader against bending about any particular axis. The only appreciable flexibility in the spreader construction is between the line of the bend 12 and the tips of the ribs 10 and 11. This is an advantage rather than disadvantage because it tends to give the spreader a flexible feel to the hand of the operator thus reducing fatigue in using the tool.

I claim:

1. A paste spreader of the character described comprising a sheet of material having a substantially straight edge adapted to be applied against the surface on which the paste is spread and having a paste well adjacent to said edge comprising a groove running parallel to the spreading edge, said sheet of material having a handle portion formed thereon at the edge opposite the spreading edge, the sheet having spaced diagonally running reinforcing ribs pressed therein and projecting from the plane of the sheet on the side opposite said groove, certain of said ribs being angularly disposed with respect to others, and all of said ribs lying between said groove and the handle portion of the spreader.

2. A paste spreader of the character described comprising a sheet of metal having two opposite parallel side edges one of which is substantially longer than the other, said metal sheet having a groove therein adjacent to but spaced from the longer edge and extending from end to end thereof to provide a paste well, said sheet being curved to tubular shape at its shorter edge to provide a handle portion.

3. A paste spreader of the character described

comprising a sheet of metal having two opposite parallel side edges one of which is substantially longer than the other, said metal sheet having a groove therein adjacent to but spaced from the longer edge and extending from end to end thereof to provide a paste well, said sheet being curved to tubular shape at its shorter edge to provide a handle portion, the main portion of the sheet between the handle portion and the groove lying in a plane substantially bisecting the handle.

4. A linoleum paste spreader comprising a sheet metal blade of thin gauge for lightness and economy having a longitudinal edge portion which provides a straight working edge and another longitudinal edge portion opposite the working edge formed to provide an elongated tubular handle substantially parallel to the working edge lending stiffness and strength to that portion of said blade, and said blade being depressed to provide a relatively wide but shallow rib extending substantially the full length of the blade in closely spaced substantially parallel relation to the working edge to reinforce the working edge portion to resist bending without interfering with transverse flexibility of the blade which is an inherent characteristic of the light gauge sheet metal of which the blade is formed, said blade being further depressed to provide shallow stiffening and strengthening ribs in the intermediate portion thereof between the handle and the longitudinally extending rib which ribs extend in transverse relation to but are spaced at their opposite ends from the handle and the longitudinally extending rib.

5. A linoleum paste spreader comprising a sheet metal blade of thin gauge for lightness and economy having a longitudinal edge portion which provides a straight working edge and another longitudinal edge portion opposite the working edge formed to provide an elongated tubular handle substantially parallel to the working edge lending stiffness and strength to that portion of said blade, and said blade being depressed to provide a relatively wide but shallow rib extending substantially the full length of the blade in closely spaced substantially parallel relation to the working edge to reinforce the working edge portion to resist bending without interfering with transverse flexibility of the blade which is an inherent characteristic of the light gauge sheet metal of which the blade is formed, said blade being further depressed to provide shallow stiffening and strengthening ribs spaced longitudinally of the blade in the intermediate portion thereof between the handle and the longitudinally extending rib, which ribs extend in transverse relation to and are spaced at one end from the longitudinally extending rib.

6. A linoleum paste spreader comprising a sheet metal blade of thin gauge for lightness and economy having a longitudinal edge portion which provides a straight working edge and another longitudinal edge portion opposite the working edge formed to provide an elongated tubular handle substantially parallel to the working edge lending stiffness and strength to that portion of said blade, and said blade being depressed to provide a relatively wide but shallow rib extending substantially the full length of the blade in closely spaced substantially parallel relation to the working edge to reinforce the working edge portion to resist bending without interfering with transverse flexibility of the blade which is an inherent characteristic of the light gauge sheet metal of which the blade is formed, said blade

being further depressed to provide shallow stiffening and strengthening rib spaced longitudinally of the blade in the intermediate portion thereof between the handle and the longitudinally extending rib, which ribs extend in transverse relation to and are spaced at one end from the handle.

7. A paste spreader of the character described comprising, a sheet of material having a paste spreading edge adapted to be applied against the surface on which the paste is to be spread, said sheet being bent to provide a groove extending longitudinally throughout the length of the sheet closely adjacent and in parallel relationship to the paste spreading edge, said groove being throughout its length arc shaped in transverse section to provide a paste well on one side of the sheet and a correspondingly outwardly extending rib on the opposite side of the sheet, said well permitting paste therein to flow freely over the lower edge of the groove toward and to the paste

spreading edge, and said sheet having an edge portion opposite the spreading edge provided with a handle.

CLARENCE WEST.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,158,348	Welty	Oct. 26, 1915
421,995	Reibnitz	Feb. 25, 1890
1,001,532	Kenyon et al.	Aug. 22, 1911
1,434,903	Manning	Nov. 7, 1922
2,287,231	Cathcard et al.	June 23, 1942
64,792	Prentiss	May 14, 1867
155,463	Richardson	Sept. 29, 1874
392,135	Reed	Oct. 30, 1888
1,898,590	Milligan	Feb. 21, 1933