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FLAT PAD APPLICATOR

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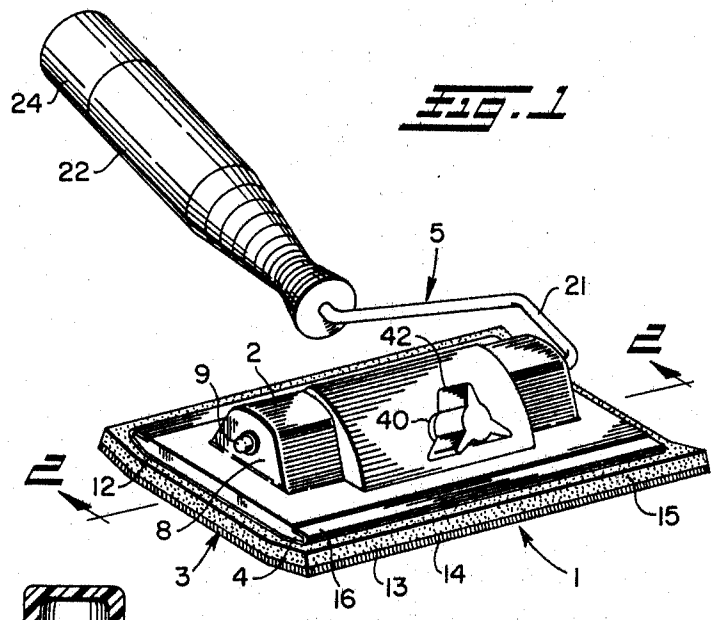


Fig. 1

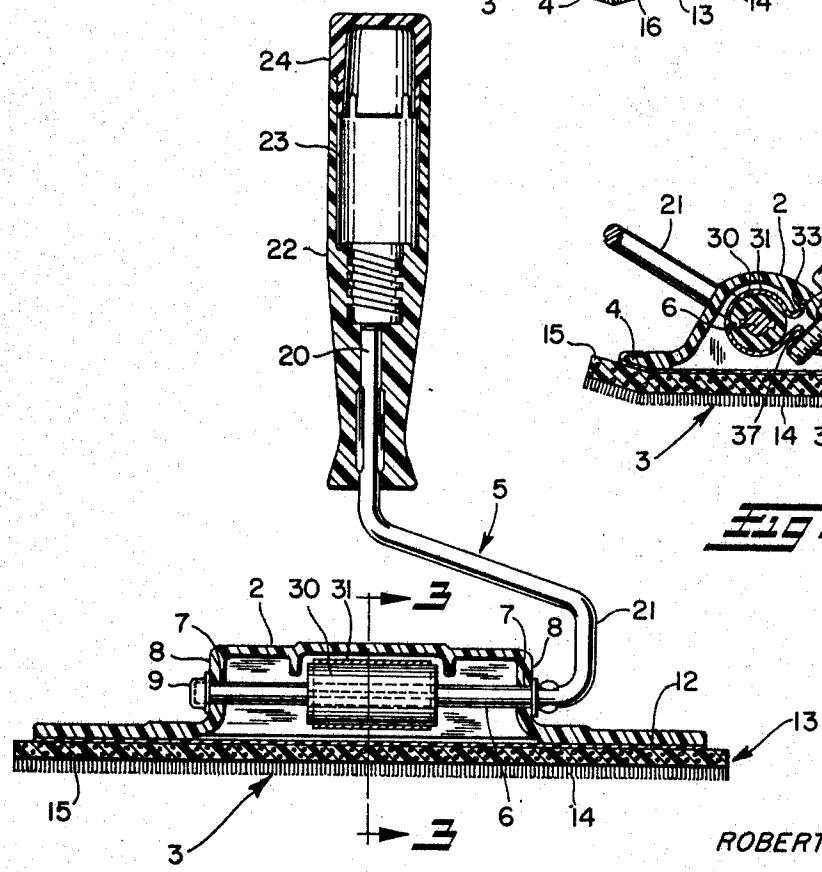


Fig. 2

Fig. 3

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FLAT PAD APPLICATOR

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ABSTRACT OF THE DISCLOSURE

A flat pad applicator having a handle pivotally mounted to the frame by a shaft on which is mounted a brake drum engageable by a brake band, the tension of which may be varied to vary the freedom of movement of the handle.

BACKGROUND OF THE INVENTION

The present invention relates generally as indicated to a flat pad applicator and more particularly to certain improvements in the pivotal mounting of a handle to the applicator housing.

Flat pad applicators are presently being used for applying different types of coatings to various surfaces, including paint, stains, and wax, to name a few. For one use it may be desirable that the handle be free to pivot to allow the pad to remain in direct contact with the surface at all times, as when the applicator is being used as a floor spreader. However, other uses may require that there be some resistance to pivoting of the handle, as when painting surfaces which require considerable reaching to reduce the amount of wrist action and muscle strain, or when maximum control is advantageous as when painting shelves and enclosed spaces. Still other uses require increased resistance to pivoting of the handle or complete locking of the handle to keep the pad flat against the surface during painting and prevent the pad from flipping over. Complete locking of the handle also permits the painter to apply pressure to the bottom edges or laps of lap siding and the like with either the front edge of the pad or the bottom of the pad after inverting the applicator.

SUMMARY OF THE INVENTION

With the foregoing in mind, it is a principal object of this invention to provide a flat pad applicator in which the resistance to turning of the handle may readily be varied in a controlled manner as required for a particular use.

Another object is to provide a flat pad applicator of the type described which is of a relatively simple and inexpensive construction.

These and other objects of the present invention may be achieved by providing an applicator with a handle which is pivotally mounted to the frame by a shaft having a brake drum mounted thereon and a brake band wrapped thereabout, the tension of which may be varied by loosening and tightening a knob screw to vary the freedom of movement of the handle.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawing setting forth in detail a certain illustrative embodiment of the invention, this being indicative, however, of but one of the various ways in which the principles of the invention may be employed.

BRIEF DESCRIPTION OF THE DRAWING

In the annexed drawing:

FIG. 1 is an isometric view of a preferred form of flat pad applicator constructed in accordance with this invention;

FIG. 2 is a transverse section through the applicator of FIG. 1, taken on the plane of the line 2—2 thereof; and

FIG. 3 is a vertical section through the applicator of FIG. 2, taken on the plane of the line 3—3 thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now in detail to the drawing, there is illustrated by way of example a preferred form of flat pad applicator **1** which generally consists of a housing **2** desirably of molded plastic having a pad assembly **3** removably attached to the bottom flanges **4** and having a handle frame **5** pivotally mounted to the housing **2** by passing the axle portion **6** of the handle frame **5** through aligned openings **7** in the laterally spaced housing end walls **8**. A cup push nut **9** or the like may be forced over the outer end of the axle portion **6** to retain the same against accidental removal.

In the form shown, the pad assembly **3** includes a base plate **12** to which is cemented a pad **13**. The pad **13** may be of any suitable type, but desirably consists of an outer layer **14** of suitable fabric such as mohair having a polyurethane or like sponge backing **15** which allows the outer fabric layer **14** to give and flex when pressure is applied, thus greatly enhancing the action of the pad by eliminating undesirable shock and friction and allowing the pad to follow irregular surfaces so that the fabric filaments are better able to force the coating material carried thereby into cracks and depressions. To permit replacement of the pad assembly **3** so that it may be readily discarded and replaced when required, the sides **16** of the base plate **12** are channel-shaped for receipt of the tapered bottom flanges **4** of the housing **2** by sliding the channel-shaped sides **16** lengthwise over such bottom flanges. The pad assembly **3** is retained in place by surface friction which may be enhanced by making the base plate **12** of a flexible material such as polyvinyl chloride which may also be extruded.

The handle frame **5** may be of the usual construction, including an outer end portion **20** extending generally at right angles to the axle portion **6** and connected thereto by a generally U-shaped intermediate portion **21**. Press fitted onto the outer end portion **20** is a handle **22** which preferably has a recess **23** internally threaded for connection of a handle extension thereto. Alternatively, an end cap **24** may be inserted into the recess **23** to close the same.

The handle frame **5** as thus described is free to pivot approximately 180 degrees from one side of the housing **2** to the other. Such free swinging movement is especially desirable when the pad applicator **1** is used as a floor spreader with an extension inserted in the handle **22** so as to allow the pad **13** to remain in contact with the floor surface at all times, even when the handle is depressed to a low angle. However, for other uses of the pad applicator it may be desirable to decrease the freedom of movement of the handle frame **5** with respect to the pad assembly **3** or even completely lock the handle frame **5** against movement relative to the pad assembly **3**, as when painting a vertical surface or ceiling to keep the pad flat against the surface being painted and prevent the pad from flipping over. An intermediate tension allowing the handle to pivot with some pressure is desirable when painting surfaces which require the painter to extend his reach to substantially reduce the amount of wrist action and muscle strain. When painting lap siding, it is desirable that the handle be completely locked against movement to permit the painter to apply pressure to the bottom edges or laps with the front edge of the pad or invert the applicator and apply paint with the bottom of the pad. Accordingly, it is desirable that the freedom of movement of the handle frame **5** with respect to the pad assembly **3** be fully adjustable

from a free swinging condition to a condition in which the handle frame **5** is completely locked against movement.

The present invention permits adjustment of the freedom of movement of the handle frame **5** by providing a brake drum **30** on the axle portion **6** within the housing **2**, with a brake band **31** of spring steel or other suitable metal engaging a substantial portion of the outer periphery of the brake drum. One end of the brake band **31** has an outturned flange **33** thereon (see FIG. 3) which is received in a groove **34** in the wall of the housing **2** for anchoring that end of the brake band **31** against movement. The other end of the brake band **31** also has an outturned flange **36** thereon, but with a screw thread **37** therein for threaded engagement by an adjusting screw **40** extending through an opening **41** in the housing. Tightening of the adjusting screw **40** by turning the knob portion **42** with the hand will cause the brake band **31** to frictionally grip the brake drum **30**, which frictional grip may be varied to apply complete locking tension to the brake drum **30** and handle frame **5** associated therewith or allow complete freedom of movement of the handle frame or anywhere in between as required for a particular job. Because the brake drum **30** and brake band **31** are located within the housing **2**, they are of course protected from paint and moisture which might otherwise affect their operation and shorten their useful life.

I, therefore, particularly point out and distinctly claim as my invention:

1. A pad applicator for applying coatings to surfaces comprising a housing, a pad attached to said housing, a handle frame having an axle portion, means pivotally securing said axle portion to said housing for free swinging movement of said handle frame with respect to said housing, a brake drum carried by said axle portion, a brake band encircling said brake drum, and means for varying the frictional grip by said brake band against said brake drum to vary the freedom of movement of said handle frame with respect to said housing.

2. The applicator of claim **1** wherein said last-mentioned means comprises a screw extending through an opening into said housing and having threaded engagement with one end of said brake band, and means for securing the other end of said brake band against movement with respect to said housing, whereby tightening of said screw draws said brake band into frictional engagement with said brake drum.

3. The applicator of claim **2** wherein said means for securing the other end of said brake band against movement comprises an outturned flange on said other end and a groove in the wall of said housing for receipt of said outturned flange.

4. The applicator of claim **1** wherein said housing has a pair of laterally spaced end walls with aligned openings therein for receipt of said axle portion.

5. The applicator of claim **4** wherein said brake drum and brake band are contained within said housing for protection.

6. The applicator of claim **5** wherein said handle frame includes an outer end portion extending generally at right angles to said axle portion, and a generally U-shaped intermediate portion connecting said outer end portion to one end of said axle portion, said handle frame being free to pivot approximately 180 degrees from one side of said frame to the other.

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