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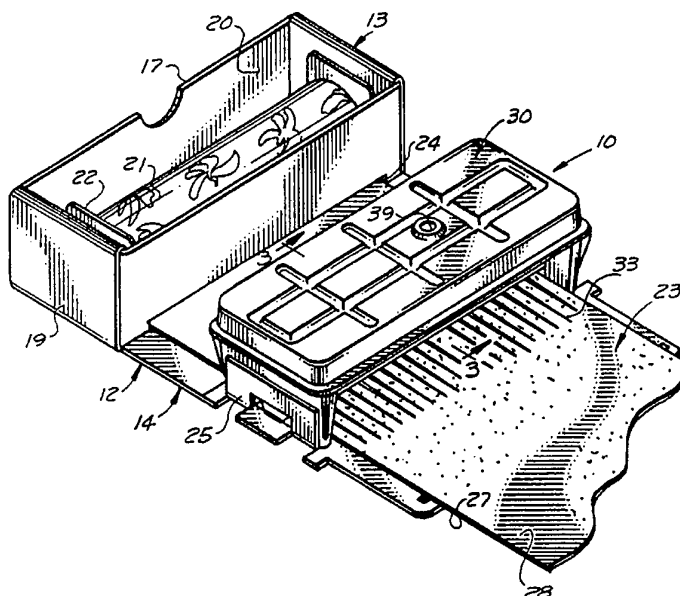
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(54) Title: WALLPAPER PASTE APPLYING APPARATUS AND METHOD OF USE



(57) Abstract

A paste dispenser (30, 414) having a paste reservoir (34, 417) and an applicator (42, 423) for containing and applying paste (32) to wallpaper (23). A package (12) having a container (13) and a base (14, 412) transformable between a package configuration wherein the paste dispenser (30, 414) is received within the container (13) and the container (13) is closed by the base (14, 412), and an applicator configuration wherein the base (14, 412) extends from the container (13) and carries the paste dispenser (30, 414). An arresting device in contact with the wallpaper (23) for limiting the flow of paste (32) from the paste dispenser (30, 414).

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WALLPAPER PASTE APPLYING APPARATUS
AND METHOD OF USE

Technical Field

5 This invention relates to devices for aiding in hanging wallpaper. More particularly, the present invention relates to devices for applying wallpaper paste to wallpaper. In a further and more specific aspect, the present invention concerns a comprehensive wallpaper paste applying apparatus.

10

Background Art

Hanging paper on walls has long been practiced, and traditionally includes measuring and cutting a length of wallpaper from a roll, applying paste to the back surface of the length of wallpaper, and applying the paste coated side of the paper to a surface such as a wall or ceiling. Devices for aiding in applying wallpaper paste have been known for as long as wallpaper. A wide variety of devices are available, from brushes used to apply paste by hand and troughs through which lengths of paper are pulled, to large, complex and costly devices employed by professionals which are adjustable to apply a desired thickness of paste.

Each of the devices has benefits and detriments. The brushes, and troughs are very inexpensive and simple to use. However, while simple to use, they are not easy to use. Applying paste smoothly and evenly, to a desired thickness, requires a great deal of practice. Even with a great deal of experience, application of paste in this manner is inefficient, taking a relatively long time, with less than optimal results. These devices also tend to be messy, with paste spilled or otherwise distributed over surfaces that are not intended to be pasted, such as table tops or floor coverings. After use, the devices employed must be thoroughly cleaned, removing all traces of paste. If this is not done, the devices will be of little use in the future.

The more complex devices available, greatly increase efficiency, apply paste smoothly and evenly, and at adjustable depths. These same devices, however, also tend to be large, cumbersome, difficult to transport and expensive. These factors tend to limit the use of these devices to professional paper hangers, who can pay the additional costs by increasing their speed and efficiency. The private home owner simply cannot justify the expense of the large complex machines, since they paper only occasionally, and generally a very limited amount. Furthermore, the more complex devices require an expenditure of time to set up, and require cleaning when papering is finished.

It would be highly advantageous, therefore, to remedy the foregoing and other deficiencies inherent in the prior art.

Accordingly, it is an object of the present invention to provide improvements in applying wallpaper paste to wallpaper.

Another object of the present invention is to provide an improved wallpaper paste applying apparatus.

And another object of the present invention is to provide a comprehensive wallpaper paste applying apparatus.

Still another object of the present invention is to provide a wall paper pasting apparatus which employs interchangeable paste cartridges.

Yet another object of the present invention is to provide an apparatus which is economical for use by the general public.

Yet still another object of the present invention is to provide a wallpaper paste applying apparatus which is light weight and portable.

A further object of the present invention is to provide a wallpaper paste applying apparatus which requires little setup and no clean-up.

And a further object of the present invention is to provide a wallpaper paste applying apparatus which is unencumbered, simple, and easy to use.

Yet a further object of the present invention is to provide an apparatus which applies a uniform coat of paste to wallpaper.

Disclosure of the Invention

Briefly, to achieve the desired objects of the present invention in accordance with a preferred embodiment thereof, provided is a wallpaper paste applying apparatus for applying paste to wallpaper, including a paste dispenser and a package having a container, and a base coupled to the container. The package is transformable between a package configuration and an applicator configuration. In the package configuration the paste dispenser is received within the container and the container is closed by the base. In the applicator configuration the base extends from the container and carries the paste dispenser. A roll of wallpaper is placed in the container with the paper extending between the paste dispenser and the base. Also provided is arresting means for limiting the flow of paste from the paste dispenser onto the paper.

In a further and more specific aspect, the paste dispenser includes a reservoir, an applicator, and a support. The reservoir supplies paste to the applicator, and is carried by the support.

In a specific embodiment, the applicator is coupled to the support which detachably receives the reservoir. In this manner, the reservoir functions as a replaceable cartridge.

The above problems and others are overcome and the above objects are further realized in methods of using the wallpaper paste applying apparatus.

Brief Description of the Drawings

The foregoing and further and more specific objects and advantages of the instant invention will become readily apparent to those skilled in the art from the following detailed description of a preferred embodiment thereof, taken in conjunction with the drawings, in which:

Fig. 1 is a perspective view of a wallpaper paste applying apparatus, constructed in accordance with the teachings of the present invention, as it would appear being used in the applicator configuration;

Fig. 2 is a side view illustrating the apparatus of Fig. 1;

Fig. 3 is a sectional view taken along line 3-3 of Fig. 1;

Fig. 4 is an enlarged fragmentary view of an applicator;

Fig. 5 is a sectional side view of a portion of the applicator illustrated in Fig. 4;

Fig. 6 is a perspective view of a wallpaper guide;

Fig. 7 is a sectional side view of the wallpaper guide of Fig. 6;

Fig. 8 is an exploded view of a further embodiment of a wallpaper paste applying apparatus;

Fig. 9 is a sectional end view of the wallpaper paste applying apparatus of Fig. 8 as it would appear in operation;

Fig. 10 is a partial sectional front view of the wallpaper paste applying apparatus of Figs. 8 and 9;

Fig. 11 is a partial perspective view of the paste dispenser of Fig. 8, with the reservoir separated from the support; and

Fig. 12 is a sectional end view of the paste dispenser of Fig. 8, as is would appear prior to dispensing paste.

Best Mode for Carrying Out the Invention

Turning now to the drawings in which like reference characters indicate corresponding elements throughout the several views, attention is first directed to Fig. 1 which illustrates a wallpaper paste applying apparatus generally designated by the reference character 10. Apparatus 10 includes a package 12 consisting of an open topped container 13 and a base 14. Package 12 is constructed so as to be deformable between a package configuration and an application configuration. In Fig. 1, package 12 is illustrated in the application configuration.

Container 13 has a bottom 15, not visible, a back wall 17, a front wall 18 and sidewalls 19, defining a cavity 20. A roll 21 of wallpaper 23 is positioned within cavity 20. Front wall 18 has a slot 24 formed therein, along the bottom edge adjacent bottom 15, through which lengths of wallpaper 23 are removed.

Base 14 extends forwardly from bottom 15, and includes a dispenser attachment 25 which positions and secures a paste dispenser 30. In the package configuration, base 14 folds over container 30 forming a closed container carrying paste dispenser 30 within cavity 20. With additional reference to Fig. 2, wallpaper 23, having a front or patterned surface 27 and a back surface 28, is pulled from roll 21 positioned in cavity 20, through slot 24 with back surface 28 up, away

from base 14. Bottom 15 supports roll 21 of paper 23, while front wall 18 holds roll 21 in a spaced apart relationship with paste dispenser 30. Paper 23 is fed between base 14 and paste dispenser 30 which uniformly
5 deposits a coat of paste 32 in strips 33.

Turning now to Fig. 3, paste dispenser 30 includes a paste reservoir 34 carried by a support 35. Paste reservoir 34, in this embodiment, includes opposing walls 37, a top 38 with a vent opening 39 and a downward
10 sloping bottom 40 terminating in a longitudinally extending outlet centrally positioned between walls 37 and extending substantially between ends 43 and 44. An applicator 42 is coupled to paste reservoir 34 at the outlet of paste reservoir 34, and has a length which
15 corresponds to the width of paper 23. Support 35, in this embodiment, includes legs 45 which depend downward from sloping bottom 40 proximate ends 43 and 44, supporting reservoir 34 with applicator 42 spaced apart from base 14.

20 Arresting means for limiting the flow of paste 32, which in this embodiment includes a resilient member 48 and a anti-friction layer 49, is coupled to base 14 in a position which corresponds to applicator 42 when paste dispenser 30 is properly positioned by dispenser
25 attachment 25. Resilient member 48 is formed from a resilient material such as foam rubber. Anti-friction layer 49 is preferably a thin layer of slippery material such as plastic, which is coupled over resilient member 48. Paper 23 passes between the arresting means and
30 applicator 42, and is biased firmly against applicator 42 by resilient member 48 so as to prevent paste 32 from leaking out over back surface 28 of paper 23. Anti-friction layer 49 helps paper 23 slide freely under paste dispenser 30 for a smooth, uniform coat of paste.

35 In this embodiment, applicator 42 of paste dispenser 30 is a substantially horizontal panel 51 through which a plurality of apertures 52 extend, as can be seen in Figs. 4 and 5. Apertures 52 are evenly spaced, each being

separated from adjacent apertures 52 by parallel spacer ridges 53. Paste 32 flows freely through apertures 52 onto back surface 28 as paper 23 is moved between paste dispenser 30 and base 14. Spacer ridges 53 extend outward from panel 51, forming boundaries for paste flowing from each aperture 52. Paste strips 33 are formed by applying separate flows of paste from each aperture 52 to paper 23. Each of apertures 52 supplies a flow of paste kept separate from adjacent flows by spacer ridges 53.

It can be seen that the arresting means, consisting a resilient member 48 and anti-friction layer 49, firmly presses paper 23 against spacer ridges 53. Those skilled in the art will understand that resilient member 48 may be substantially any means for biasing wallpaper 23 against applicator 42. This biasing action prevents leakage of paste 32 between ridges 53 and prevents the application of an excess of paste 32. As the paste level goes down within reservoir 34, vent opening 39 allows entry of air into reservoir 34 preventing the formation of a vacuum which would disrupt the even flow of paste through apertures 52.

Figs. 6 and 7 illustrate a wallpaper guide generally designated 364. Wallpaper guide 364 is a stiff sheet of material such as cardboard or plastic, having a leading edge 365 and a trailing edge 366. Wallpaper guide 364 is preferably of a chevron shape, with the pointed side being leading edge 365. A wallpaper clip 367 is affixed to wallpaper guide 364 intermediated leading edge 365 and trailing edge 366. Wallpaper clip 367 receives and retains the edge of wallpaper 23, when wallpaper 23 is inserted in a direction indicated by arrowed line M. When wall paper paste applying apparatus 10 is positioned in the application configuration, wallpaper guide 364 is inserted between base 14 and paste dispenser 30. The leading edge of wall paper 23 is affixed to wallpaper guide 364 to easily pull the wall paper between base 14 and paste dispenser 30.

A further embodiment 410 of a paste applying apparatus is shown in Fig. 8. Apparatus 410 includes a package (not shown) which may be substantially identical to that of the previously described package, however, in this embodiment, front wall 18 of container 13 and dispenser attachment 25 are preferably omitted. The package includes a base 412 having openings 413 which position and secure a paste dispenser 414. Apparatus 410 includes a paper retainer 415 which is attachable to paste dispenser 414. Paper retainer 415 will be discussed in greater detail below.

With additional reference to Fig. 9, paste dispenser 414 includes a paste reservoir 417 carried by a support 418. Support 418 includes opposing walls 419, opposing end walls 420 and a downward sloping bottom 422 terminating in a longitudinally extending applicator 423 centrally positioned between walls 419. Applicator 423 extends between end walls 420 of support 418 as seen in Fig. 10, and has a length which generally corresponds to the width of the wallpaper being use. Applicator 423 is preferably identical to applicator 42 as described previously. Legs 424 depend downward from sloping bottom 422 proximate opposing end walls 420, supporting support 418 so that applicator 423 is spaced apart from base 412. Screws 425, extending upward through openings 413 in base 412, are received within openings 427 (visible in Fig. 11) formed in each of legs 424, positioning and retaining paste dispenser 414 on base 412. An outwardly directed lip 428 extends from the top edge of opposing walls 419 and end walls 420 for supporting paste reservoir 417.

Paper retainer 415, in this embodiment is an upright member 430 which is removably coupled to support 418. Upright member 430 is preferable coupled to support 418 with a snap fit arrangement consisting of complementary male and female elements. Upright member 430 has extensions 432 terminating in female elements 433 while male elements 434 are formed on bottom 422 of support 418 extending the length of opposing walls 419. It will be

understood that male elements 434 may extend along bottom 422 proximate either or both of opposing walls 419. As can be seen in Fig. 9, upright member 430 prevents the roll of wall paper from being pulled under paste dispenser 414 when paste is being applied.

Still referring to Figs. 8 and 9, paste reservoir 417, in this specific embodiment, includes opposing walls 440, end walls 442, a top 443, and a downward sloping bottom 444. Paste reservoir 417 is divided into an upper portion 445 and a lower portion 447 by an outward flaring of opposing walls 440 and end walls 442, forming a substantially horizontal overhang 448 encircling reservoir 417 generally intermediate bottom 444 and top 443. In this specific embodiment, paste reservoir 417 is configured to function as a replaceable cartridge removably inserted into support 418. Lower portion 447 is received by support 418, with overhang 448 engaging lip 428. Securement means is also provided for securing reservoir 417 to support 418. The preferred securement means consists of pairs of opposing hooks 449, one of each pair being visible in Fig. 8, depending downward from lip 428 at opposing walls 419 proximate end walls 420. An elastic member 450 extends between hooks 449 of each pair, extending over top 443 of reservoir 417, firmly pressing overhang 448 against lip 428.

When installed in support 418, bottom 444 of reservoir 417 is suspended above bottom 422 of support 418. Paste is discharged from reservoir 417 and is collected in support 418. The slope of bottom 422 directs paste to applicator 423. Bottom 444 of reservoir 417 slopes downward from opposing walls 440 to a point intermediate opposing walls 440 as can be seen with specific reference to Fig. 9. Bottom 444 also slopes downward from end walls 442 to an intermediate point therebetween, as can be seen with specific reference to Fig. 10. Fig. 11 clearly shows bottom 444, sloping downward from opposing walls 440, and end walls 442 to a centrally located outlet 452 intermediate opposing walls

440 and end walls 442. The sloping configuration of bottom 444 compels substantially all of the paste contained in paste reservoir 417 to discharge through outlet 452 into support 418. As can be seen with
5 reference back to Fig. 9, paste collecting in support 418 has been found to rise to a level which generally reaches outlet 452. At this point, discharge of paste from reservoir 417 is halted until the level is lowered. When
10 the supply of paste has been exhausted in one reservoir or a different type of paste is desired, the reservoir can be removed and replaced with a full reservoir, or a reservoir containing a different paste.

With reference to Fig. 12, paste reservoir 417 is sealed by a pull tab 453 having a seal end 454 which is
15 removably affixed to bottom 444 around the periphery of outlet 452, and an opposing tab end 455. Pull tab 453 seals outlet 452, allowing reservoir 417 to be moved and handled individually, without discharge of paste. This permits reservoir 417 to be used as a cartridge which may
20 be replaced as desired.

Installation of reservoir 417 is accomplished by placing a sealed reservoir 417 onto support 418 so that lower portion 447 is received within support 418 and overhang 448 engages lip 428. Pull tab 453 is doubled
25 back upon itself, with tab end 455 extending from between bottom 444 of reservoir 417 and lip 428 of support 418. A space between bottom 444 and lip 428 sufficient for the egress of tab end 455 is provided by a sloped channel 457 formed in reservoir 417. Channel 457 substantially
30 girdles reservoir 417, extending centrally down opposing walls 440 through overhang 448, and continuing through bottom 444 to a point adjacent outlet 452. This is most clearly visible in Fig. 11. Elastic members 450 are then placed over reservoir 417, coupled between opposing hooks
35 449 of each pair. Reservoir 417 is then unsealed by gripping tab end 455 of pull tab 453 and extracting in a direction indicated by arrowed line N. Paste is then free to discharge through outlet 452 into support 418.

Various changes and modifications to the embodiments herein chosen for purposes of illustration will readily occur to those skilled in the art. To the extent that such modifications and variations do not depart from the spirit of the invention, they are intended to be included within the scope thereof which is assessed only by a fair interpretation of the following claims.

Industrial Applicability

The present invention is capable of being exploited in any situation where persons desire to apply paste to wallpaper. The present invention is particularly appropriate to individual consumers who do not want or require large complex and expensive pasting machines.

CLAIMS

1. A wallpaper paste applying apparatus for applying paste to wallpaper, said apparatus comprising:

a package transformable between a package configuration and an applicator configuration, said package including:

an open container, and

a base extending from said container adapted to fold over and close said container in the package configuration and extend from said container in the applicator configuration;

a paste dispenser having an applicator for applying paste to said wallpaper, said paste dispenser carried by said base and receivable within said container in the package configuration; and

arresting means for limiting a flow of paste from said paste dispenser.

2. A wallpaper paste applying apparatus as claimed in claim 1 wherein said paste dispenser further includes:

a paste reservoir having an outlet formed therein, for containing said paste; and

a support attachable to said base, for supporting said paste reservoir.

3. A wallpaper paste applying apparatus as claimed in claim 2 wherein said applicator includes a panel with a plurality of apertures extending therethrough, coupled to said reservoir at said outlet.

4. A wallpaper paste applying apparatus as claimed in claim 3 wherein said applicator further includes a plurality of spacer ridges extending from said panel, between said plurality of apertures.

5. A wallpaper paste applying apparatus as claimed in claim 2 wherein said paste reservoir is detachably received by said support.

5 6. A wallpaper paste applying apparatus as claimed in claim 5 wherein said support further includes:

a sloping bottom terminating in said applicator;
walls extending from said sloping bottom;
10 legs extending from said sloping bottom opposite said walls, supporting said applicator above said base; and
securement means for securing said reservoir to said support.

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7. A wallpaper paste applying apparatus as claimed in claim 6 wherein said securement means includes:

a plurality of hooks extending downwardly from an outer surface of said walls; and
20 an elastic member extendable between said hooks for engagement with said reservoir.

8. A wallpaper paste applying apparatus as claimed in claim 6 wherein said paste dispenser further includes
25 sealing means for sealing said paste reservoir.

9. A wallpaper paste applying apparatus as claimed in claim 2 wherein said arresting means includes a resilient member coupled to said base proximate said applicator, for biasing said wallpaper against said
30 applicator and an anti-friction layer overlaying said resilient member.

10. A wallpaper paste applying apparatus as claimed
35 in claim 6 wherein said applicator includes a panel with a plurality of apertures extending therethrough and plurality of spacer ridges extending from said panel, between said plurality of apertures.

11. A method of using a wallpaper paste applying apparatus comprising the steps of:

providing a wallpaper paste applying apparatus including:

5 a package having a container and a base coupled to and closing said container, a paste dispenser having a paste reservoir with an outlet formed therein, a support, and an applicator, carried within said
10 package, and

 seal means sealing said dispenser;

providing a roll of wallpaper, said wallpaper having a leading edge;

15 opening said package and extending said base outward from said container;

 positioning said paste dispenser on said base; placing said roll of wallpaper into said container;

20 inserting said leading edge of said wallpaper between said paste dispenser and said base; and unsealing said paste dispenser.

12. A method as claimed in claim 11 further including the steps of:

25 limiting the flow of paste from said paste dispenser; and

 pulling said wallpaper between said paste dispenser and said base thereby applying paste to said wallpaper.

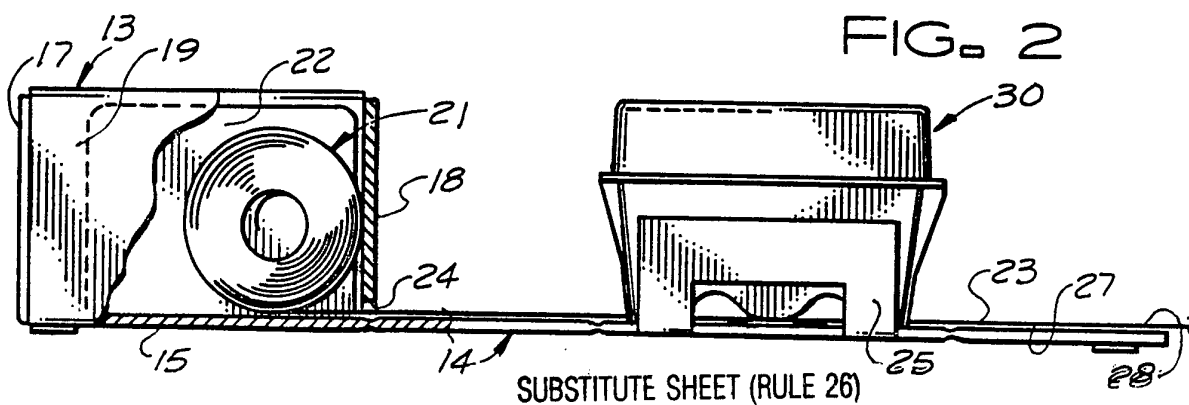
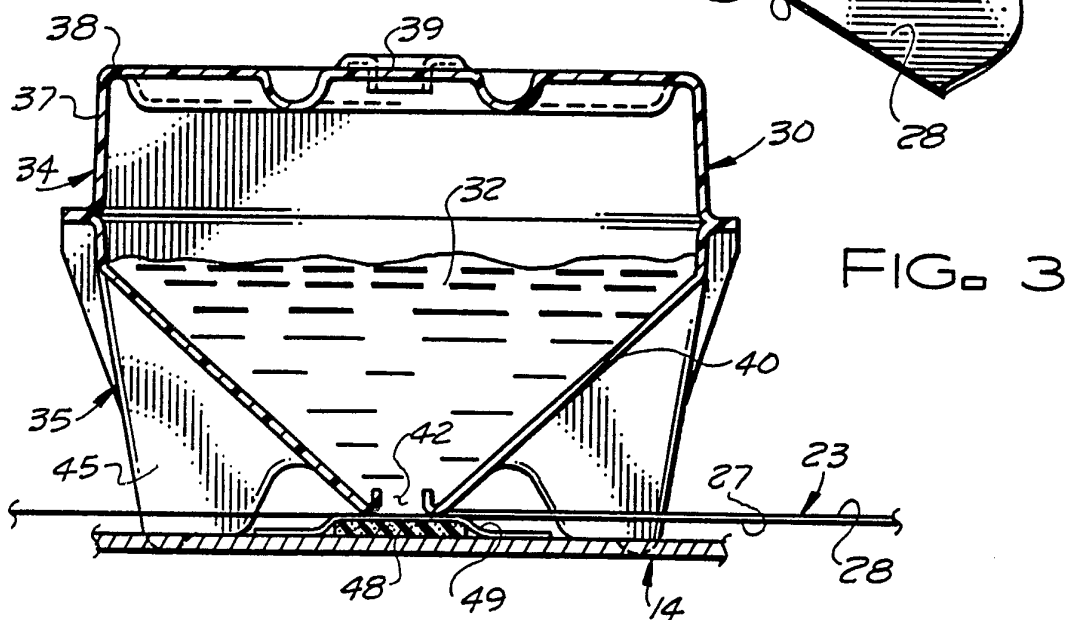
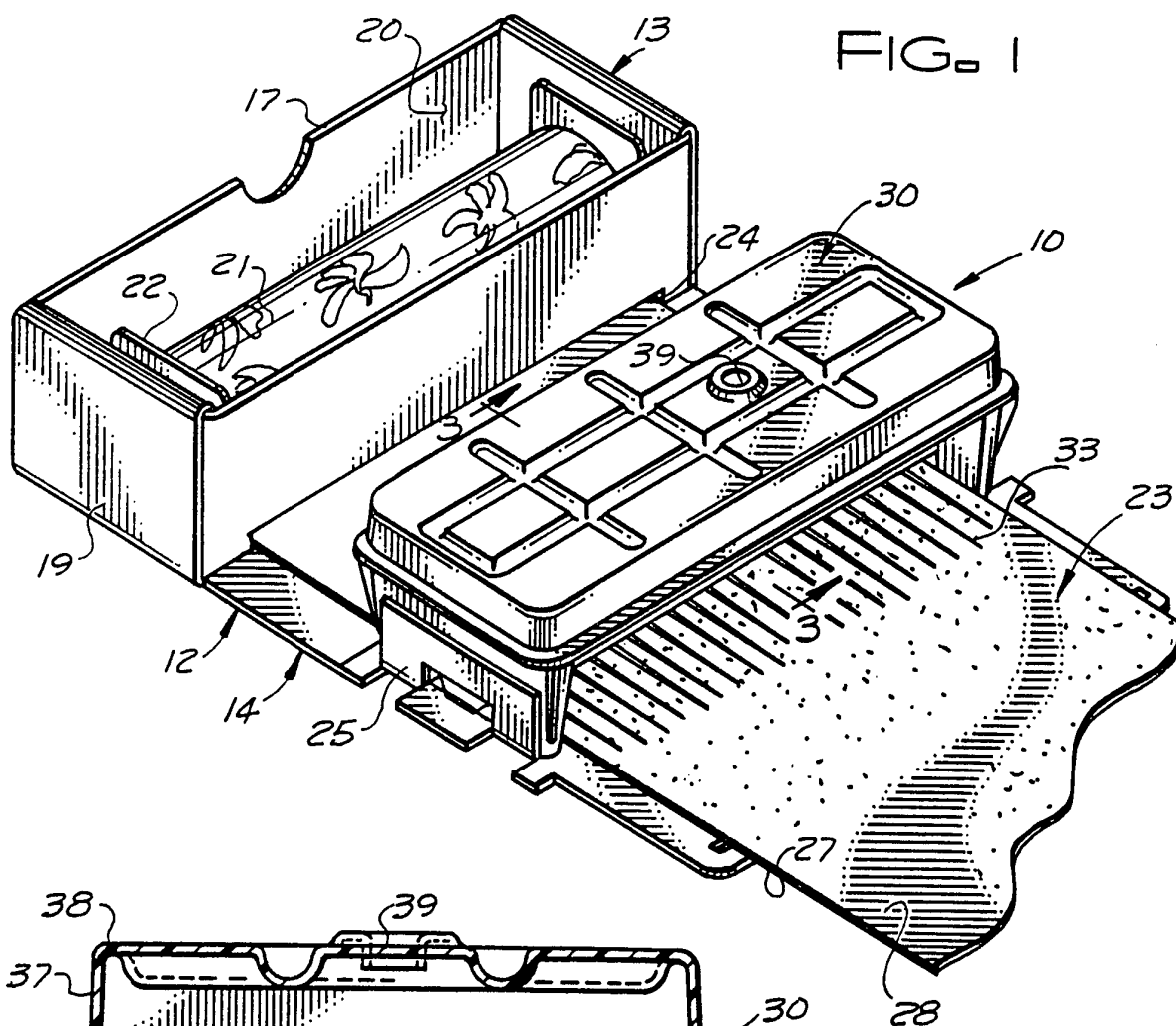
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13. A method as claimed in claim 12 wherein the step of inserting includes the steps of providing a wallpaper guide, attaching said leading edge of said wallpaper to said wallpaper guide, and inserting said
35 guide between said applicator and said base.

14. A method as claimed in claim 11 wherein the step of unsealing includes the step of removing an outlet tab sealing said outlet of said reservoir.

5 15. A method as claimed in claim 12 wherein the step of limiting includes biasing said wallpaper against said applicator.

10 16. A method as claimed in claim 11 further including the step of exchanging first said paste reservoir with a second paste reservoir.



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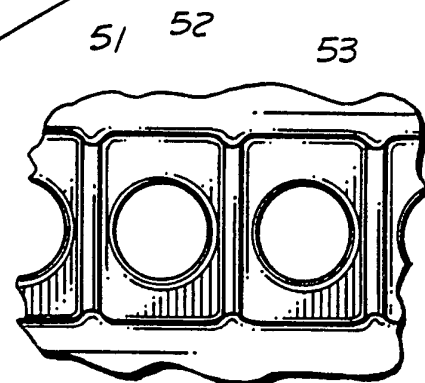
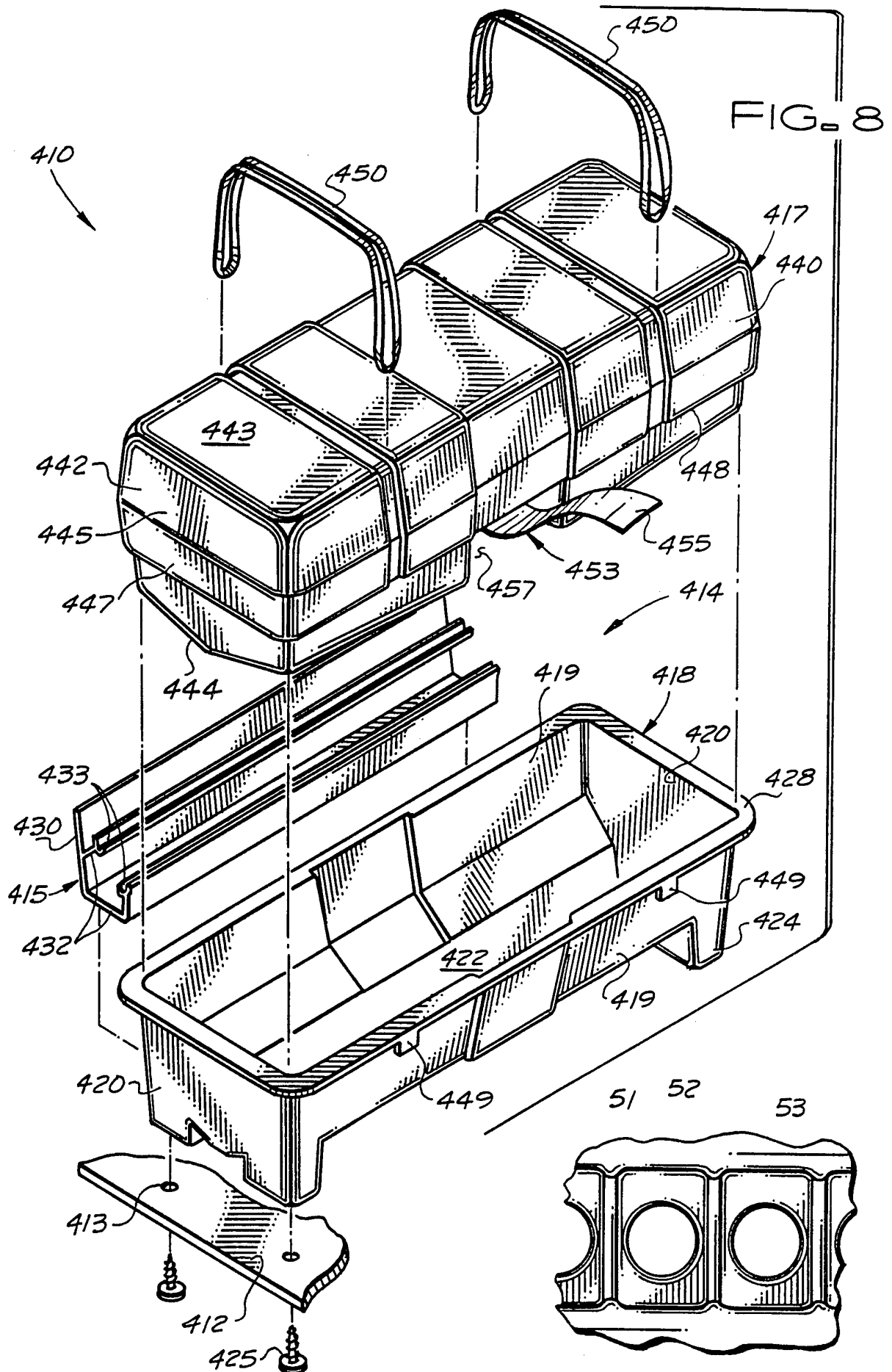


FIG. 6

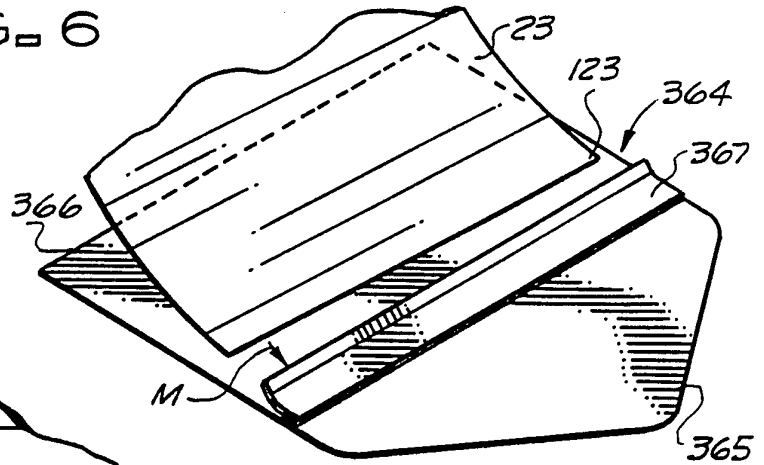


FIG. 5

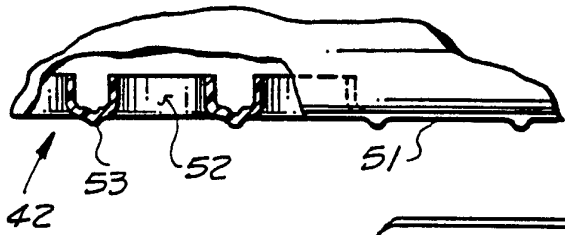


FIG. 7

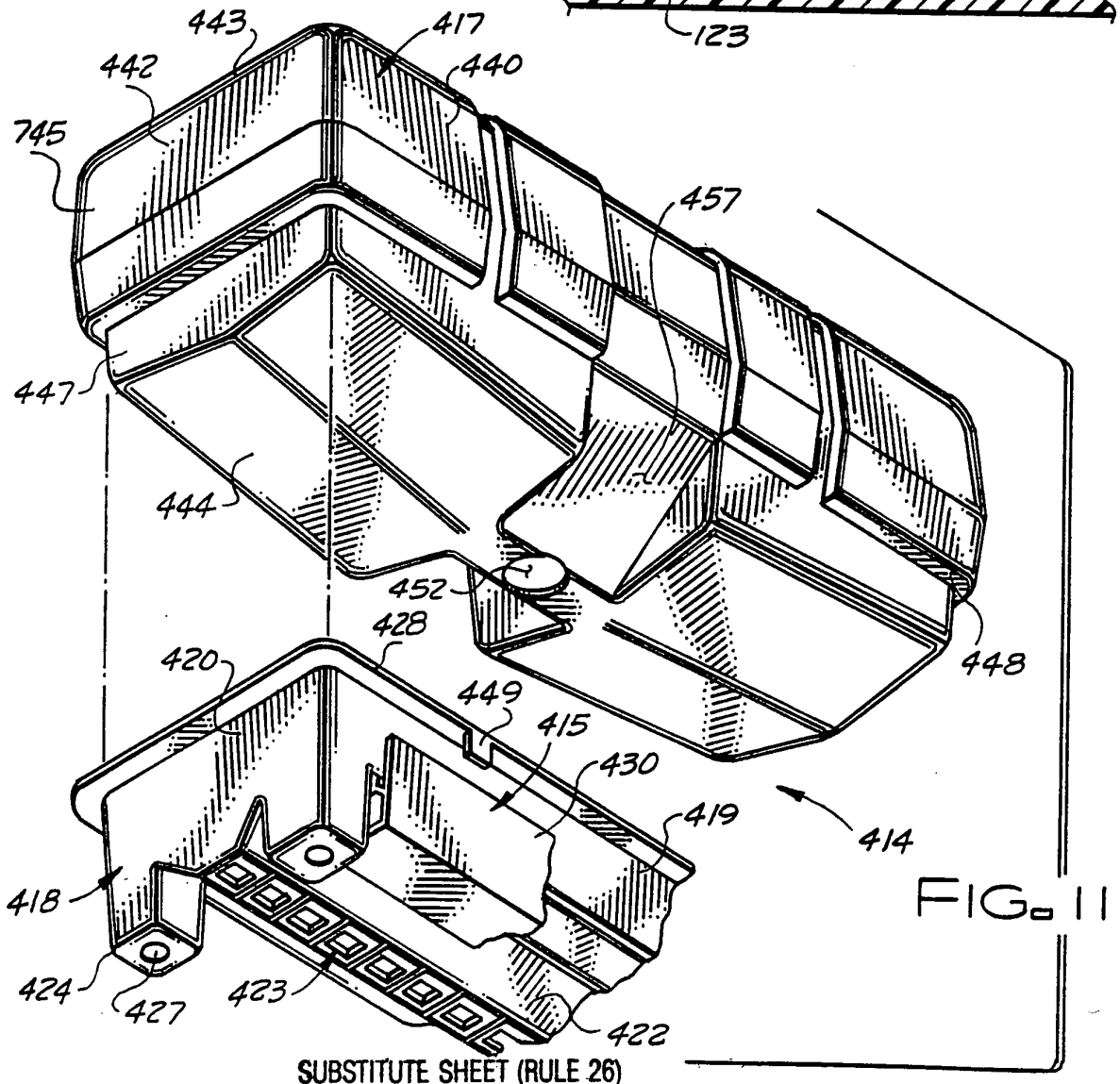
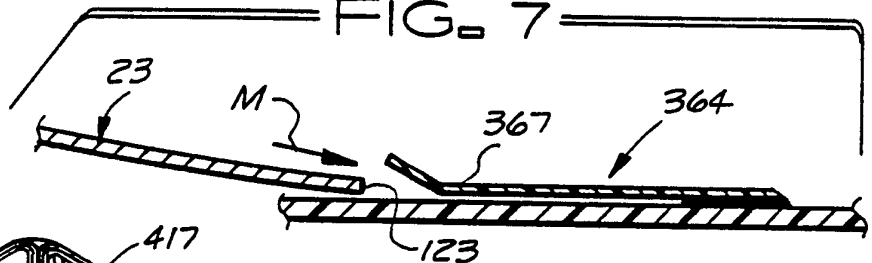


FIG. 9

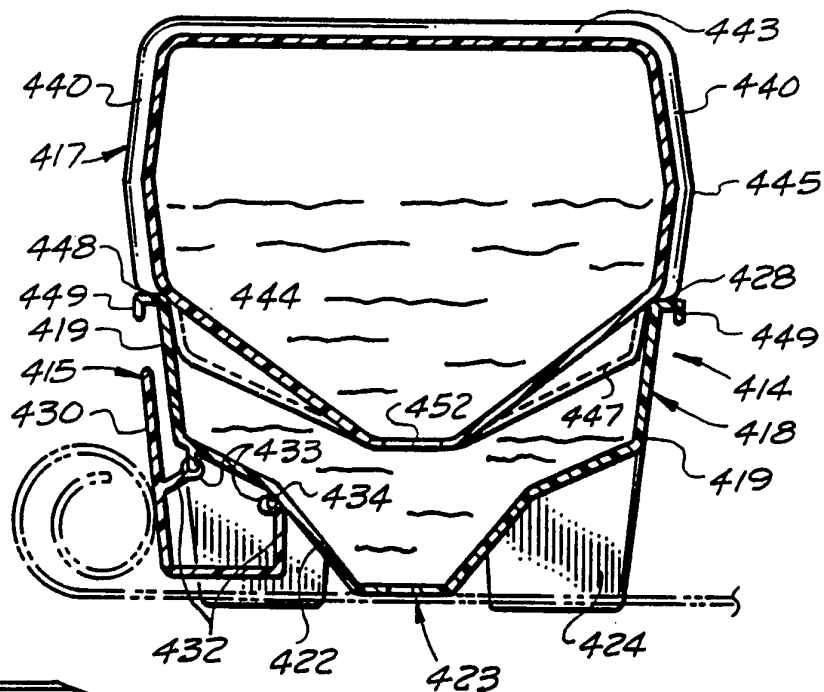


FIG. 10

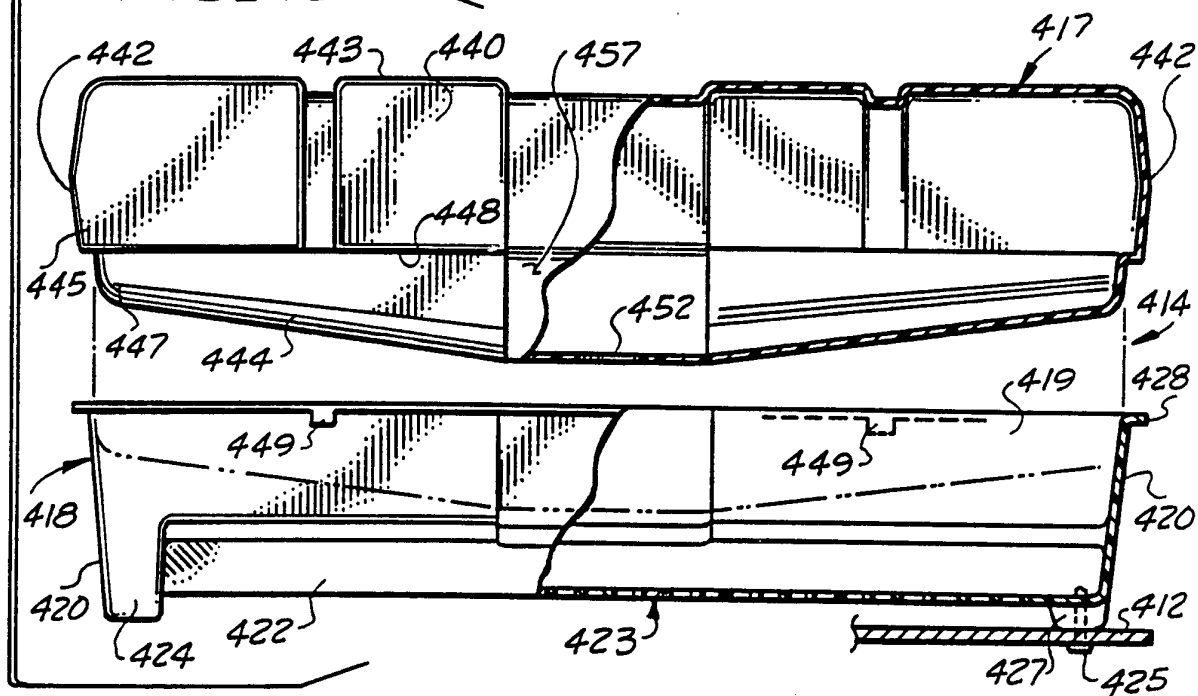
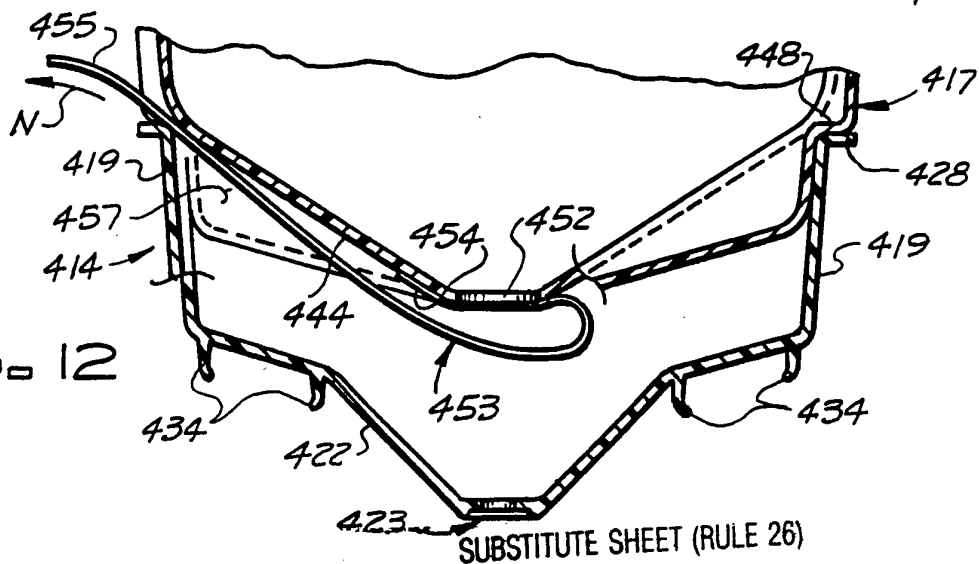


FIG. 12



INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(5) :B05D 1/18; B05C 3/02

US CL :427/434.3, 439; 118/415, 419, Dig. 17; 156/524, 577, 575

According to International Patent Classification (IPC) or to both national classification and IPC

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 4,660,502 (SCOTT) 28 April 1987, See figures 4-6.	1-16
A,P	US, A, 5,249,547 (TAKADA ET AL.) 05 October 1993, See Figures 1 and 6-7 and see column 3 line 49 to column 4 line 8.	1, 11-12 and 15-16

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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