Oct. 3, 1967 R. J. SCHAEFER 3,344,770

IMMERSION DEVICE INCLUDING DOCTOR MEANS

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Fig. 1

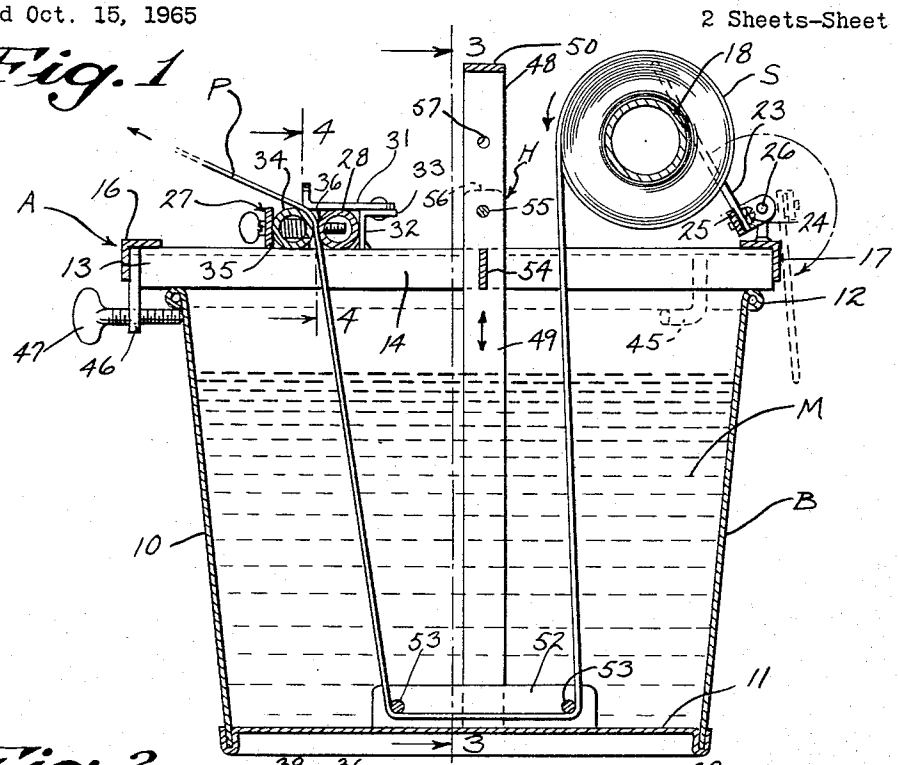
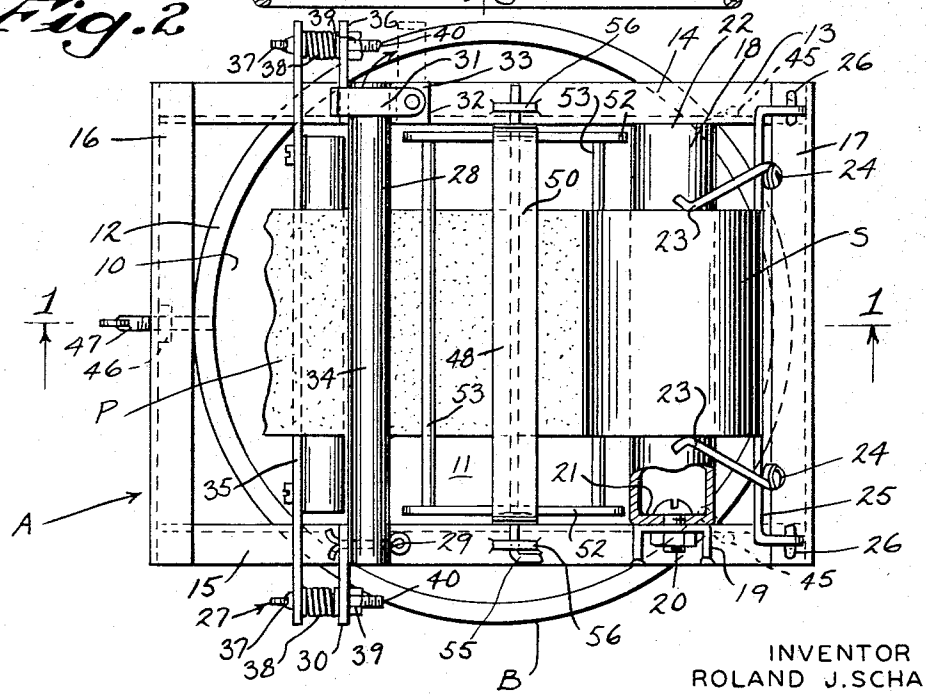


Fig. 2



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Fig. 3

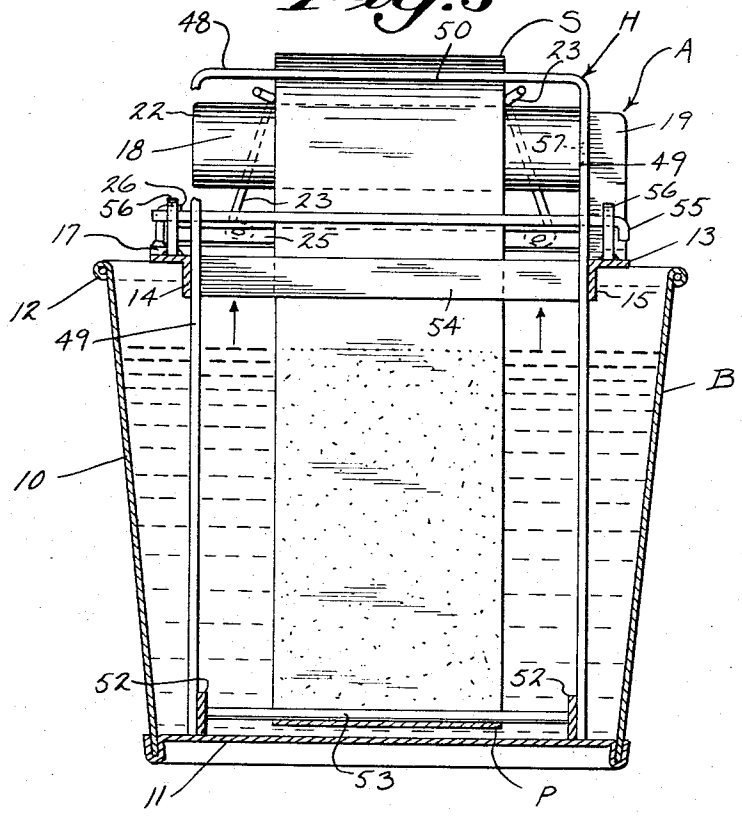
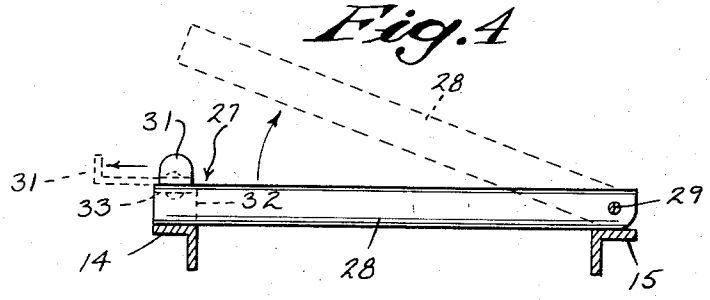


Fig. 4



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3,344,770 IMMERSION DEVICE INCLUDING DOCTOR MEANS

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This invention appertains to dispensing and applying materials, and more particularly to new and useful improvements in a dispensing attachment for pails and the like for applying adhesive or mastic to strip material.

In construction work, particularly for sealing abutting insulation members and the like, strip material is often applied to the joint and in order to effectively seal and utilize this strip material it is necessary that adhesive or mastic be placed on the materials so that the same will adhere firmly and bond satisfactorily. This is true in roofing construction and the like.

This invention relates primarily to applying a mastic or adhesive to glass fabric from a roll. Glass fabric is customarily used to seal off the porous ends of insulation material used in air conditioning and heating ducts. In the past, it has been the practice to apply the mastic by simply painting it on with a brush and of course, this is messy and does not do a satisfactory job. It is also difficult to regulate the amount of adhesive applied to the glass fabric strip in this manner. Further, the mastic or paste is usually placed in a conventional bucket or pail and thus there has long been a need for some sort of attachment that will effectively hold a roll of glass fabric in such a manner that the adhesive may be quickly and easily applied to the strip in the desired quantity and the strip then applied where needed.

It is, therefore, a primary object of my persent invention to provide a novel attachment for conventional pails or buckets which will hold a roll of glass fabric, apply the adhesive thereto, regulate the amount of adhesive so applied, and wherein the strip can then be cut from the attachment and quickly placed where needed.

Another important object of the present invention is to provide a novel attachment for holding a roll of glass fabric above and out of contact with the adhesive by providing an effective means for immersing a portion of the strip in the adhesive and then removing the excess mastic or adhesive when the strip is applied to the work.

A further object of this invention is to provide a novel attachment for pails and the like wherein different widths of glass fabric may be utilized and whereby the device can be readily attached and used with different sized buckets.

Still another object of this invention is to provide a novel attachment for buckets wherein almost all of the mastic or adhesive within the bucket can be effectively utilized to coat the strip prior to its application to the work.

A more specific object of the present invention is to provide an attachment for buckets having a rectangular shaped frame carrying on the upper part thereof adjacent one end a holder for a roll of the strip material, the holder having novel locator or positioning fingers which will steady the roll as the strip material is fed therefrom and which are adjustable to accommodate different thicknesses in the roll.

A salient feature of the invention resides in providing a novel squeegee device which may be adjusted so as to regulate the pressure put upon the strip as it emerges from the adhesive so that the amount of adhesive adhering to the strip can be effectively regulated, and wherein a novel removable means is provided for holding the strip adjacent the bottom of the bucket as the adhesive is being applied, said holding means being adjustable to different depths of buckets.

A further object of the invention is to provide a simple, practical and reliable construction that is economical to manufacture, positive in its operation and which can be placed upon the market easily.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts, hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which

FIGURE 1 is a longitudinal vertical section through the attachment and the container for the mastic or adhesive illustrating a roll of glass fabric in operative position for applying and regulating the amount of mastic, the section being represented by the line 1—1 of FIGURE 2, looking in the direction of the arrows;

FIGURE 2 is a top elevational view of the atachment shown in FIGURE 1 of the drawings, with certain parts being broken away and in section to further illustrate details in its construction;

FIGURE 3 is a vertical transverse section through the attachment and its container, the section being taken on the line 3—3 of FIGURE 1 of the drawings, looking in the direction of the arrows, and

FIGURE 4 is a fragmentary transverse section through the novel means for regulating the proper amount of adhesive to the strip.

Referring now to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates one type of the improved attachment and the same is shown associated with a conventional pail or bucket B with a roll of strip material S shown in its operative position for dispensing an adhesively coated portion P to be applied to the work.

It should be understood that the novel attachment A could be associated with many different types of containers and be made in various sizes to accommodate different container structures, and may of course be utilized with other strip material than the aforementioned glass fabric. Since it is common in air conditioning and heating duct construction to place the mastic M in a conventional bucket B, the attachment is so constructed as to be associated with a bucket of the conventional type having a round wall **10**, the usual bottom **11** and a top rolled bead **12**. Therefore, in the present form of the invention, attachment A includes broadly a rectangularly shaped frame **13** formed by joining angle members in such a manner as to provide spaced parallel longitudinally extending legs **14** and **15** and the cross arms **16** and **17** respectively. These members may be joined in any desired manner, such as by welding and the like. The rectangularly shaped frame should be of a size and configuration so that the arms **16** and **17** extend beyond the outer circumference of a standard bucket or pail and so that the longitudinally extending legs **14** and **15** rest on the upper periphery of the bead **12**, as shown. Adjacent one end of the frame and more particularly cross arm **17** thereof, I provide a transversely extending round holder **18**, the circumference of which is of a size and configuration to receive the standard core opening of a glass fabric strip S. This holder **18** is attached to an upstanding channel shaped bracket member **19** by means of a threaded bolt and nut **20** which is received in the closed wall **21** of the core member **18**. The opposite end **22** of the core member **18** is free and unobstructed so that the roll of glass fabric can be readily slipped over the end and held for free rotation on holder **18**. The holder **18** is also of sufficient length to receive different widths of the strip material S and in order to facilitate the ease of manipulation of the roll or strip

S, I provide inwardly extending locator and positioning fingers 23 which are pivotally secured by screws 24 to a transversely extending bar 25, the outer ends of which are bent inwardly and pivotally carried by the vertical fingers 26. Thus, the locator fingers may be moved from an operative position, full lines, FIGURE 1, to an inoperative indicated by the arrow and dotted lines in FIGURE 1, and further, by loosening the screws 24 the fingers may be pivoted to and from the roll when in operative position to adjust for the different thicknesses of the roll or strip material.

Adjacent the opposite end of the frame in relatively close proximity to cross arm 16, is an adjustable squeegee device 27, and this device is utilized to remove the excess mastic or adhesive clinging to the strip as the strip moves out of the bucket and mastic M. In order to accomplish this, I provide a transversely extending tubular member 28 which is pivotally attached at one end 29 to a bracket member 30 carried by leg 15. The tubular member 28 is of a size and configuration to extend entirely across the frame member, and in particular legs 14 and 15, and in its operative position (indicated by the full line in all of the figures), it is latched into place by a pivoted horizontally extending latch member 31 carried by an L-shaped bracket 32, the vertical leg of which also acts as a positioner for the bar in its closed position. The latch 31 in turn pivots on the horizontal leg 33 from its full lined position to dotted line position (FIGURES 2 and 4), so that the tubular member 28 may be pivoted from its full line operative position FIGURE 4 and so that the strip material and particularly, the portion P thereof, can be placed between member 28 and a stationary wiping member 34. Wiping member 34 is carried by a transversely extending bar 35 and this bar is positioned in alignment with bracket 30 on leg 15 and an identically formed bracket 36 secured to leg 14. The bar 35 may be adjusted longitudinally in relation to the brackets 30 and 34 and in order to provide this a pair of spaced threaded guide members 37 are affixed adjacent each end of the bar 35 and their free ends extend through apertures formed in the aforementioned brackets. Between the bar 35 and each respective bracket 30 and 34 springs 38 are positioned about the members 37 and are tensioned so as to continually urge bar 35 away from the brackets 30 and 34. In order to adjust the distance between these members, I provide nuts 39 which are threadedly received in the inner threaded ends 40 of the members 37. Thus, it can be seen that when nuts 39 are turned in one direction wiper bar 34 will move away and be spaced a greater distance from the member 28 and the wiping surface of these bars will then remove only a certain amount of mastic or adhesive. When the nuts are turned in an opposite direction bar 35 will be moved toward the member 28 and the space between the two members will be reduced and more pressure placed on the portion P of the strip S and therefore some adhesive will be squeezed from and removed from the strip. It should also be noted that each of the longitudinally extending legs 14 and 15 is provided with an inwardly extending hook 45 and these hooks 45 have a portion which engages under the bead 12, as shown in dotted lines FIGURES 1 and 2. Arm 16 intermediate its ends is provided with a depending piece 46 and this piece carries a wing bolt 47 which may be adjusted to engage under the bead 12 and cooperates with the depending hooks 45 to firmly lock the entire frame to the bucket or pail B. It can be seen that the different circumferences of buckets may be accommodated within the limits of the wing bolt 47. At this point it should be noted that the round elongated holder 18 can easily be taken off of the attachment by removing the nut 20 from its threaded bolt and then different sizes of holders can be substituted for the one shown. Thus, different sizes of glass fabric having different core dimensions can be readily accommodated.

Intermediate the holder 18 and squeegee I provide

novel means for depressing the strip S and holding the same adjacent the bottom 11 of the bucket B, to effectively take advantage of all of the mastic in the bucket. This means includes a U-shaped vertically positioned main frame 48 the parallel legs 49 of which are joined by the cross-handle portion 50 and these depending legs are of sufficient length to protrude well above the upper peripheral surface of the bucket. Further, legs 49 are spaced apart so that they can be slidably but snugly received between legs 14 and 15. The lower end termination of each leg 49 is provided with a short longitudinally extending base piece 52 and extending transversely between each base piece 52 is a pair of spaced rods 53. All these members are firmly secured together to give a rigid means for holding and guiding the strip adjacent the bottom of the bucket 11.

I may also provide intermediate the legs 49 a cross brace bar 54 to further strengthen the frame.

The guiding and holding means H may be secured to the frame and held in its proper position by the provision of a transversely extending removable rod 55 and this rod extends through suitable apertures provided in a pair of spaced upstanding ears 56. Thus when rod 55 is engaged through the apertures in legs 49 the entire device when properly secured to the bucket may be lifted and carried from place to place, and further when wing bolt 47 is turned so as to be disengaged from the bead 12, the entire attachment can be readily removed from the bucket.

Also in order to accommodate different depths found in different sized buckets, I provide a pair of upper aligned apertures 57 so that the base 52 can always be positioned in close proximity to and adjacent the bottom of the bucket 11. In order to utilize my device, therefore, it is only necessary to position the hooks 26 under the bead 12 of the bucket, adjust the wing bolt 47 so that it engages under the bead 12, and with the guiding and holding member H completely removed from the frame a roll of glass fabric or strip material S is positioned over holder 18 and locator fingers 29 are adjusted to engage the outer edges of the roll. A portion of the strip material is then unrolled and rods 53 are placed on the upper surface thereof. The entire guide and holding device is then inserted between legs 14 and 15 and pushed downwardly to the bottom of the bucket 11 carrying the strip S therewith. The upper portion P of the strip is then threaded between member 28 and wiping bar 34 and as previously mentioned, this can easily be accomplished by pivoted member 28 pivoting from its full line position FIGURE 4, and merely laying the portion P across the wiping bar 34 as shown. Member 28 is then returned to its operative position and latch member 31 is closed to firmly lock the same in place. The tension between the two members 34 and 28 is then adjusted by means of nuts 39 and the attachment is in its operative position ready for use. All that is then necessary is to grasp the portion P of strip S and pull the same through the mastic and through the squeegee apparatus 27, cut off the desired length to which the adhesive has been applied and secure the same to the needed portions of the air conditioning and/or heating ducts.

Thus, it can be seen that I have provided a very simple but effective attachment for applying mastic or adhesive primarily to glass fabric rolls as the same are being applied and used on the job.

While I have shown and described certain specific embodiments of the invention, it will be understood that these embodiments are merely for the purpose of illustration and description, that various other forms may be devised, and that changes may be made in the proportions and details of construction without departing from the spirit of the invention, or scope of the appended claims.

I claim:

1. A strip material dispensing attachment for fluid con-

tainers, pails, buckets and the like of the type having a continuous side wall, a bottom wall and an upper open end comprising, an open rectangularly shaped frame adapted to rest on the upper peripheral edge of said container having spaced longitudinally extending legs and end cross arms with said cross arms being positioned beyond the end terminations of the container wall, means for releasably and adjustably securing said frame to said container, the continuous strip material being in roll form, a holder for said roll extending above and transversely across said frame adjacent one end thereof, locator fingers pivotally carried by said frame, each finger being adapted to engage a side of said roll, means for adjusting each finger toward and away from said roll to accommodate different sized rolls, a squeegee unit carried by said frame adjacent the opposite end including, a pair of spaced wiper members between which said strip is threaded, one end of one wiper member of said squeegee unit being pivotally connected to a leg of said frame whereby to be adapted for pivotal movement upwardly and away from said other leg, means for holding said member in a locked operable position, means for adjusting the tension between the members, and a strip guiding and holding means positioned intermediate said roll holder and said squeegee unit for guiding and holding respective portions of said strip material adjacent the bottom of said container.

2. A strip material dispensing attachment as set forth in claim 1, wherein said strip guiding and holding means includes a vertically extending U-shaped frame of a size and configuration to be slidably and snugly received between said legs, the lower end termination of said U-shaped frame member carrying spaced base pieces, a pair of spaced rods joining said base pieces under which said strip material is held.

3. A strip material dispensing attachment as set forth in claim 2, wherein said guiding and holding means may be releasably secured to said frame.

References Cited

UNITED STATES PATENTS

310,544	1/1885	Sagendorph	118—619
345,002	7/1886	Spaulding	118—419 X
400,426	4/1889	Armstrong	118—114
758,132	4/1904	Gest	118—419 X
767,422	8/1904	Nicholls	118—420 X
808,578	12/1905	Ruttinger	142—68
826,087	7/1906	Christensen	15—262
2,440,179	4/1948	Mabli	118—420
2,960,963	11/1960	Shelton	118—419

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