United States Patent

Adams et al.

[15] **3,653,560**

[45] **Apr. 4, 1972**

[54] SEAM SEALER DISPENSING HEAD

[72] Inventors: **William H. Adams**, Lancaster; **Charles D. Painter**, Holtwood, both of Pa.

[73] Assignee: **Armstrong Cork Company**, Lancaster, Pa.

[22] Filed: **Mar. 2, 1970**

[21] Appl. No.: **15,557**

[52] **U.S. Cl.** **222/566**, 401/9, 401/48, 401/266

[51] **Int. Cl.** **B05c 5/02**

[58] **Field of Search** 222/566; 401/9, 48, 139, 265, 401/266; 156/391, 579

[56] **References Cited**

UNITED STATES PATENTS

3,279,971	10/1966	Gardener	401/266 X
179,341	6/1876	Perkins	401/266
548,572	10/1895	Miller	401/193 X
3,133,300	5/1964	Freeman	401/139

FOREIGN PATENTS OR APPLICATIONS

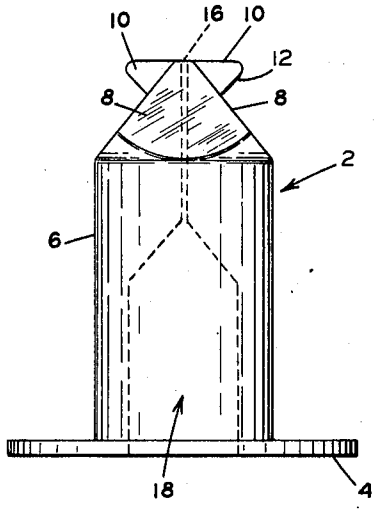
746,377	3/1933	France	401/193

Primary Examiner—Robert B. Reeves
Assistant Examiner—Frederick R. Handren
Attorney—Clifford B. Price

[57] **ABSTRACT**

A dispensing head or nozzle structure is mounted on a container of adhesive. The adhesive is especially adapted to adhere together edges of a flooring material. The nozzle structure is provided with an appropriate configuration and a guide structure so that a bead of adhesive is properly positioned between the edges of two pieces of sheet flooring and the adhesive will be distributed in a manner to properly adhere the edges together.

1 Claims, 3 Drawing Figures



Patented April 4, 1972

3,653,560

Fig. I

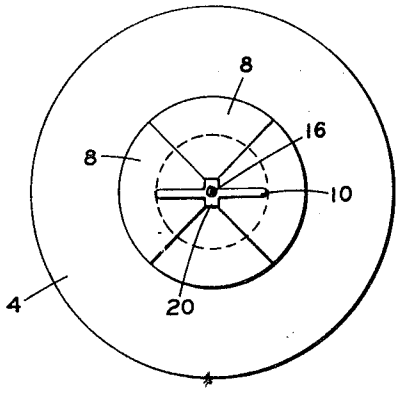


Fig. II

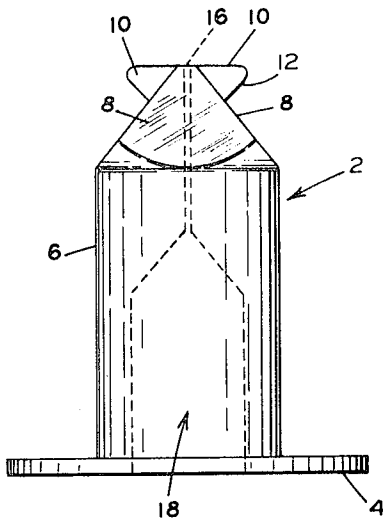
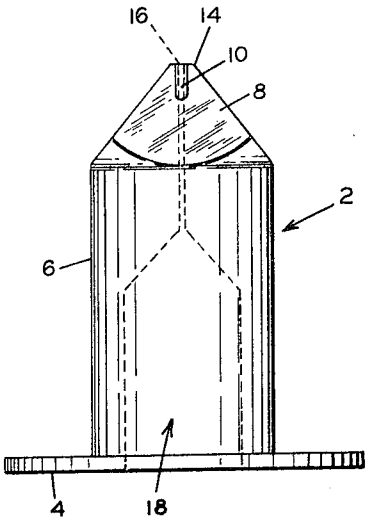


Fig. III



INVENTOR
WILLIAM H. ADAMS
CHARLES D. PAINTER

BY

ATTORNEY

SEAM SEALER DISPENSING HEAD

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to a seam sealer and, more particularly, to a seam sealer adapted to seal butt joints.

2. Description of the Prior Art

U.S. Pat. No. 3,472,725 discloses one type of seam sealer which is formed as a block-like structure. Appropriate means **3** open up the seam so that an adhesive may be applied. Also appropriate structure **4** is utilized for getting the adhesive into the seam area.

U.S. Pat. No. 3,279,971 discloses another type of seam sealer in which a nozzle structure is mounted on a canister of adhesive. The nozzle structure is utilized to both open up the seam and apply the adhesive into the open seam.

The principal object of the seam sealer herein is to provide a structure which is simpler in design than the prior art structure. Also the structure herein has certain features which will enable this structure to be more readily and easily used by the normal floor covering mechanic as he is laying a floor covering which has seams which must be sealed.

SUMMARY OF THE INVENTION

The nozzle structure is designed to be fastened to a plastic squeeze bottle or a metal can structure, which can be worked by hand to force the adhesive from the bottle or can through the nozzle to the area to be sealed. The nozzle has fins or guides which serve to properly open the seam and direct the entry of the adhesive from the nozzle into the area between the two pieces of sheet flooring. The guides are mounted relative to flat surfaces which are designed to guide the nozzle structure relative to the plane of the flooring and enable the nozzle structure to easily slide across the flooring. The opening in the nozzle is positioned relative to the fin and on a face structure which will permit the dispensing of the proper size bead of glue so that excess glue is not dispensed.

BRIEF DESCRIPTION OF THE DRAWING

FIG. I is a top view of the nozzle structure;

FIG. II is a front view of the nozzle structure; and

FIG. III is a side view of the nozzle structure of FIG. II.

DESCRIPTION OF PREFERRED EMBODIMENT

Referring to FIG. II, the nozzle assembly **2** has a base portion **4** which may be fastened by any appropriate manner to the body of a plastic squeeze bottle or a metal can which contains the adhesive or glue that is to be dispensed. Positioned on the base is a cylindrical body **6** which is formed at its upper end, as seen in FIG. II, with an end portion formed of four flat planes or faces **8** which form a tetrahedral-type nose for the nozzle structure. One or more fins or ribs **10** protrude from one or more of the faces **8**.

The fins **10** serve as a guide and a seam opening structure. Two pieces of sheet material are butted together and glue must be applied to the butt joint. Normally, the two butted edges of the seam would be very close together and any space there between, of which there is normally none, would be a very difficult area into which to force the glue. Therefore, the fin must be inserted into this space and, due to the resilient nature of the floor covering, force back the two edges of the floor covering to provide an opening roughly equal to the width of the fin so that an open seam is provided for entry of the glue. Referring to FIG. II, an angle is defined between the plane of the face **8** and the plane containing the edge **12** of the fin **10**. The angle between these two planes is approximately 100°. An angle less than 90° will cause increased resistance to the pulling action which is attempting to move the tool down the seam. The greater, over 90°, this angle is the greater is the force required to keep the tool's directional travel parallel with the plane of the floor surface and overcome the tendency

of the fin to rise up and out of the seam. An angle of from 90° to approximately 110° is tolerable. The distance that the fin extends out from the plane of the face **8** is governed by the thickness of the flooring and inner layers thereof.

The face **8**, from which the fin protrudes, allows for insertion of the fin to the desired depth and maintains a flush condition across both surfaces of the flooring material forming the butt joint. Consequently, the face **8** will be flat against the flooring and supported by the flooring on either side of the seam during the operation of the dispensing structure. The width of the face **8** narrows to the desired size at the edge **14** which is in the region of the dispensing hole **16**. The dispensing nozzle has a passageway structure **18** which passes from the base region through the length of the body portion **6** to the dispensing hole **16**. The size of the edges **14** of the faces **8** in the vicinity of the dispensing hole **16** determine the size of a flat surface **20**. In this flat surface **20**, the dispensing hole **16** is located. It is desired that the dimensions of the flat surface **20** correspond closely to the size of the bead to be dispensed since the size of the dispensing hole and the surface area at the face to a large degree contribute to the size of the bead of adhesive which is dispensed. It is desirable that only the necessary amount of adhesive be dispensed for the proper securing of the butt joint and, particularly, that excessive adhesive not be dispensed since it may leave an aesthetically undesirable appearance. Naturally, as shown in FIG. II, two fins could be used and the tool could be utilized by placing either fin within the seam. The other fin could serve the function of visually assisting the user in keeping the tool in alignment with the seam. It will be seen that the structure is such that, when the fin is inserted into the seam, the dispensing opening **16** is positioned just above the surface of the floor and directly over the seam and that the glue or adhesive will be dispensed directly into the open seam structure, which exists due to the fact that the fin has been inserted into the butting structure of the two flooring materials.

The flat faces **8** at the end of the nozzle structure stabilize the end of the nozzle so that it will ride on the top of the flat surface of the floor covering above the seam to be secured together. A rounded surface at this point will not give a stable positioning of the nozzle above the seam to be sealed, and will not maintain a flush condition across both surfaces. Also, the controlling of the size of the face **20** eliminates a broad opening at the tip of the nozzle and thus permits the dispensing of the required size bead of adhesive into the seam structure. Finally, the above structure provides the two fin structures which permit one to have flexibility to use the tool with either one of the fins and in effect doubles the life of the tool since one fin could be worn out and the second one still utilized. Furthermore, the fin, not inserted into the seam, can actually serve a guide function to help guide the tool during the movement of the dispensing nozzle down the seam.

What is claimed is:

1. A nozzle comprising a means for fastening the nozzle to an appropriate structure, an elongated body portion, a passageway extending completely through said body portion, the end of the body portion opposite from the fastening means being formed with four flat faces forming a tetrahedral-type nose structure, two fin structures protruding from and perpendicular to two opposite flat faces, the fin structure is substantially triangular in shape with one side of the triangle being in the plane of a flat face, the second side of the triangle being in a plane through the end of the nozzle, and the third side of the triangle being approximately 100° inclined from the plane of the flat face from which the fin perpendicularly protrudes, said two fins being in the same plane which extends perpendicularly from two opposite flat faces, an opening at the extreme end of the nozzle structure and interconnected with the passageway through the body of the nozzle structure, and said opening existing closely adjacent the juncture of one portion of the fins and their flat surface.

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