



US 20040211794A1

(19) **United States**

(12) **Patent Application Publication**  
**O'Jack**

(10) **Pub. No.: US 2004/0211794 A1**

(43) **Pub. Date: Oct. 28, 2004**

(54) **VARIABLES**

(57)

**ABSTRACT**

(76) Inventor: **Stanislav Gergre O'Jack**, Rock Springs, WY (US)

Correspondence Address:  
**STANISLAV GERGRE O'JACK, Ph.D.**  
**2725 CHERRYWOOD LANE**  
**ROCK SPRINGS, WY 82901 (US)**

The nozzle on present manufactured prefilled caulking tubes of non metaic materials is plastic even though the container may be plastic or any other material like wood-pulp products such as treated paper or cardboard. The existing caulking-tube nozzle has limitations to adequately accommodate openings or areas requiring caulking beyond sizes above one quarter of an inch without making several passes and then tooling the joint. The present cutting-to-size (shape and angle) nozzle-end has the handicapped condition of reducing application-visibility, because the cut-end gets shorter when the end of the nozzle is trimmed to create a wider nozzle-end with which to accommodate the larger crack (opening) to be caulked. With prefilled caulking tubes, when the existing nozzle is trimmed shorter to create the required wider-range caulking-application ability, the end of the nozzle disappears behind the caulking container and the visibility is diminished.

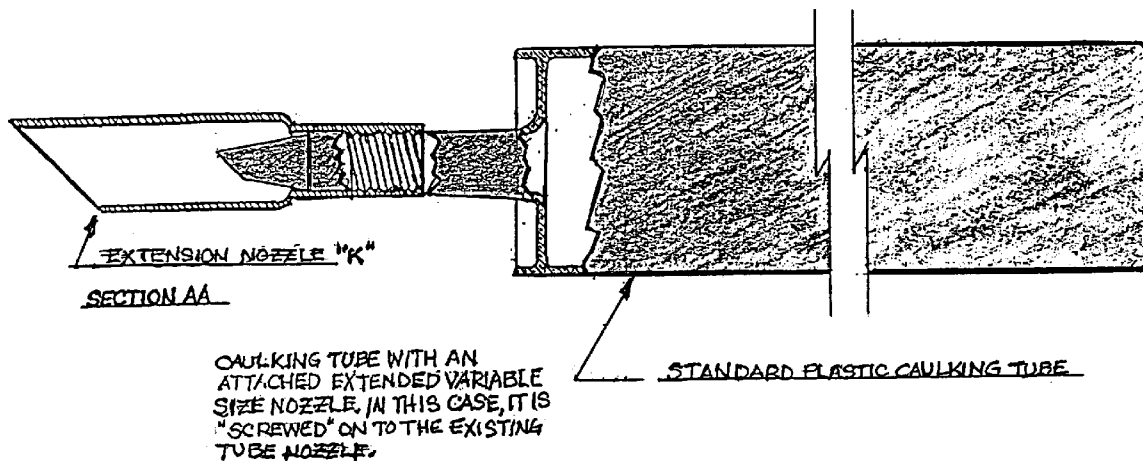
(21) Appl. No.: **10/368,317**

(22) Filed: **Apr. 22, 2003**

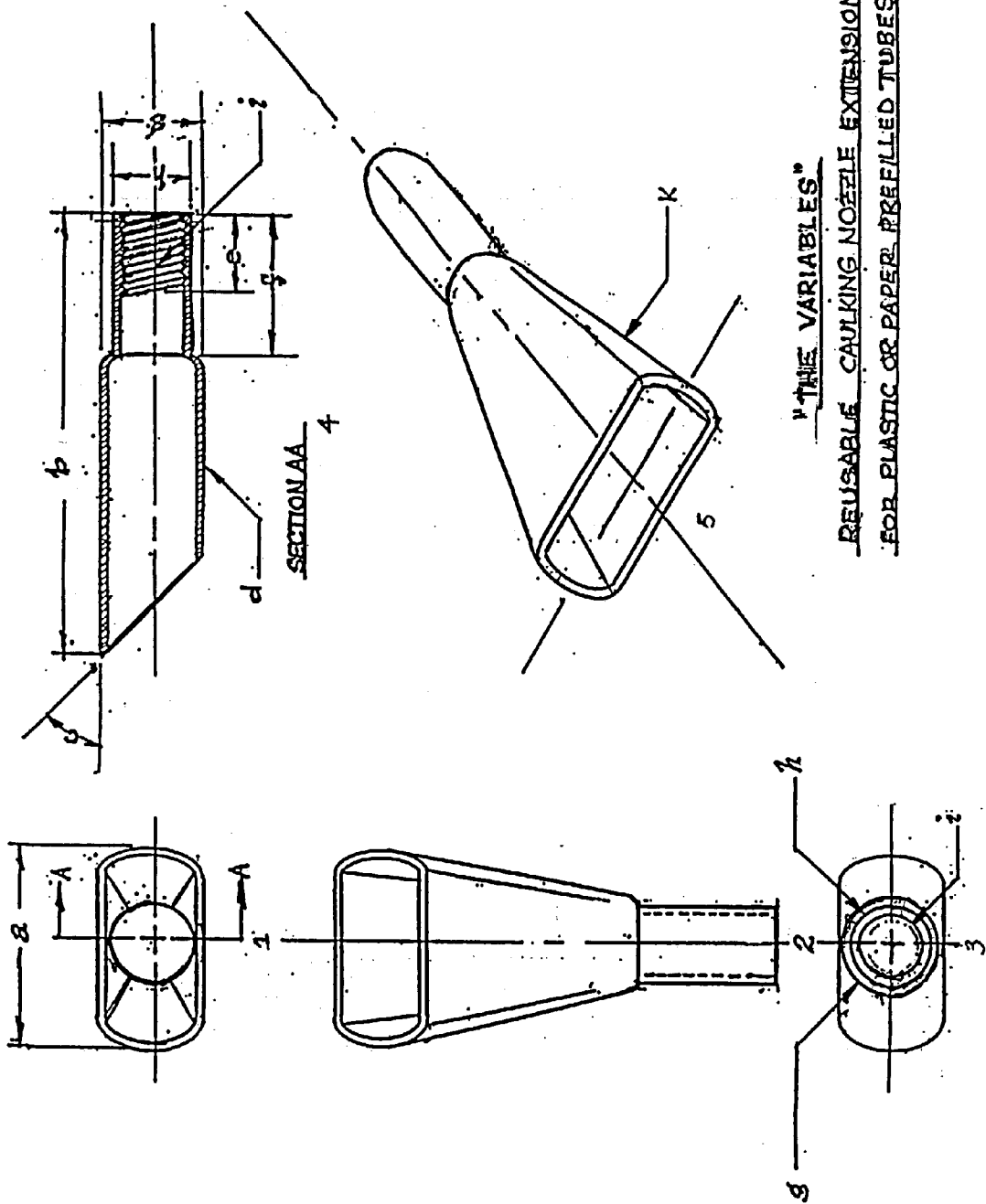
**Publication Classification**

(51) Int. Cl.<sup>7</sup> ..... **B65D 5/72**

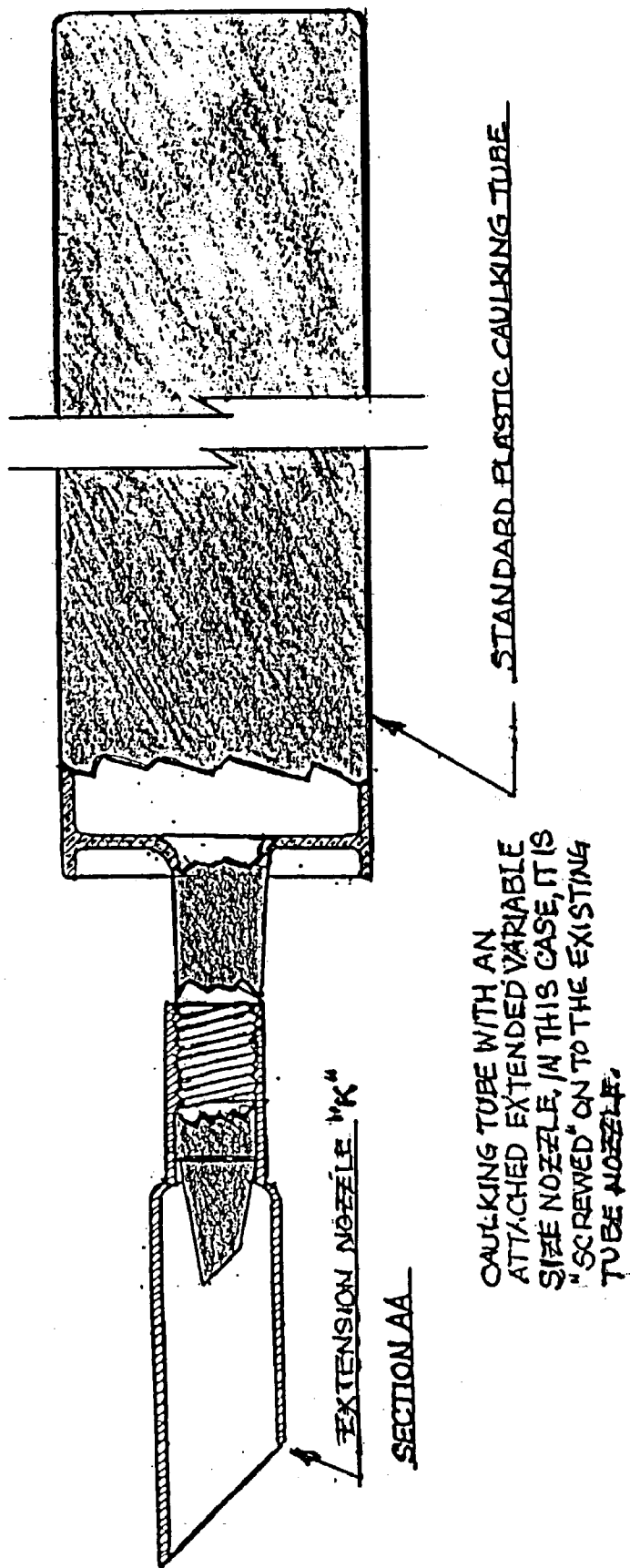
(52) U.S. Cl. .... **222/568**







"THE VARIABLES"  
REUSABLE CAULKING NOZZLE EXTENSION  
FOR PLASTIC OR PAPER PREFILLED TUBES.



### VARIABLES

[0001] Summary: To have nozzles such as “k” as shown on sheets #1 and #2) of different sizes available that can be attached to an existing nozzle on the end of a caulking tube. The material used on the existing caulking tube nozzle will dictate both the material to be used on extension nozzles and also the manner by which an extension nozzle will be or could be attached to the existing caulking tube nozzle. By attaching to the existing caulking tube nozzle (temporarily or permanently) an extension nozzle of a different size and or shape, areas that require wider range of application of caulking can be facilitated above the normal range of the existing caulking tube nozzle’s abilities. The nozzles are reusable.

[0002] Support: On present manufactured caulking tubes, the nozzle on the tube is plastic even though the container may be plastic or any other material like wood pulp products such as treated paper/cardboard, etc. The existing caulking tube nozzle has limitations to adequately accommodate openings or areas requiring caulking beyond certain sizes above one quarter of an inch without making several passes and then tooling the joint. Also, the present cutting-to-size (shape and angle) nozzle-end has the handicapped condition of reducing application visibility because the cut end gets shorter and shorter when the end of the nozzle is trimmed to create a wider nozzle-end with which to accommodate the larger crack (opening) to be caulked. Presently, with pre-filled caulking tubes, when the existing nozzle is trimmed shorter and shorter to create a required wider range caulking application ability, the end of the nozzle disappears behind the caulking container and the visibility is diminished. With an added nozzle such as shown on drawing #1, additional length is added to the existing caulking tube nozzle thus increasing visibility of the nozzle’s end which then permits easier application. The size of the nozzle used can be determined by the size of the area or opening that needs to be filled or covered.

[0003] The extension nozzle can be made of any kind of material such as metal, non metal such as plastic, etc, and either be temporarily attached or permanently attached.

[0004] An extension nozzle of metal or other hard surface material such as found in existing caulking tube nozzle ends can be temporarily attached if the inner end of the extension nozzle is threaded with one or more threads in it with which to some degree cut its own thread onto the existing tube nozzle or if the existing tube nozzle were manufactured with a mating outer surface thread to accommodate the extension nozzle’s inner thread, the conjoining of the two nozzles in either this or in like manner would create a secure and non flexing like attachment so as to sustain caulking control in caulking application. The extension nozzle would thus literally be “screwed on, or rotated on” the existing caulking tube nozzle. If screwed on, then whether cutting its own thread or the existing nozzle if it were to have been manufactured with the same or similar threading on it, the extension nozzle could be attached and reused time after time. The action of the threaded extension nozzle actually will be cutting thread—like grooves as it is screwed or rotated onto the existing caulking tube nozzle, If the extension nozzle were to be made of a non metal material, such as high density plastic, then that nozzle could also be used in the same manner as the metal nozzle: installed and removed.

[0005] If the plastic or non metal nozzle could be manufactured inexpensively, then the nozzle could be discarded after use or cleaned and reused as with the metal or other hard surfaced nozzles. A package of different size nozzles ranging from ¼" to, for example, 1½" could easily facilitate a variety of uses and or conditions.

[0006] As denoted on both pages #1 and #2 of the submitted drawings, categorically, each item “A” plus “a” through “k” will be addressed here.

[0007] “A” is a cross section of one type of nozzle as it relates to this design. In this instance, the nozzle is 1½" wide. This wide nozzle eliminates making several passes over a joint such as is normally experienced with the use of a narrower nozzle. Thus, it offers a much cleaner and more professional appearance without the necessity of tooling the joint. Sheet #2 illustrates the nozzle as attached to an existing caulking tube nozzle.

[0008] “a” is a variable. The nozzle can range from the ¼" in size, as related to the existing caulking tube nozzle’s trimmed size, to a size in this case of 1½" in width. The nozzle can be attached by having a threaded end, and thus it can be screwed onto the existing caulking tube’s nozzle, or, i.e., if the existing caulking tube nozzle were to have a raised manufactured ridge-ring on it, then if the extension nozzle had a indented mating ring depression, the extension nozzle could be snapped on and off and still be removable and reusable.

[0009] “b”, the length of the extension nozzle, is a variable and could be of any length, but in this case it is 3½" long to accommodate more caulking visibility and not be so long as to be encumbering or to have it flop around.

[0010] “c” is an angle of 45 degrees which is an angle that most professional caulkers employ for ease of application.

[0011] “d” is the gauge or thickness of the metal which in the test model was in the area of ⅛" thick or less. This is a relative dimension in keeping with the need for the nozzle to be both rigid and not too flexible wherein the later might deter appropriate caulking application. If the nozzle were to be of plastic or some other non metallic material, then the same above consideration of thickness would be applicable.

[0012] “e” is ½" long and also is a relative dimension in that if one revolution of a thread on the extension nozzle can adequately thread its way onto the existing caulking tube nozzle and hold it securely, then more threads would not be required. A series of smaller threads have already proven themselves to be appropriate. If the existing caulking tube nozzle were to be threaded in manufacturing, then the two could be screwed together much as machine threads mate with one another. If the nozzle were to be of a discardable nature, then the extension nozzle could be adhered somehow. A removable nozzle is preferable since it could be used over and over. If a metal or metal-like material or hard plastic (as in present existing caulking nozzles) is used, then as the nozzle end wears, and depending on the material, it can be reshaped by cutting, trimming or filing. The extension nozzle could be splined on, screwed on, rotated on, adhered on, snapped on, compressed on a with a split side or any other means of attaching the extension nozzle to the existing caulking tube nozzle.

[0013] “f” is a variable dimension and in this instance 1" (one inch) long so as to allow sufficient length for i.e.,

threading and for its length to encompass a sufficient portion of the existing caulking tube nozzle's perimeter in a move to keep the extension nozzle both aligned and to prevent the nozzle from flopping or rotating, etc.

[0014] "g" is a variable dimension and in this case 3/4" OD (outside diameter) which allows wider nozzle ends to be created with the material required to achieve for example a 1 1/2" wide extension nozzle end. This is a manufacturing and production area decision dimension.

[0015] "h" is 5/8" in keeping with the dimension of the existing caulking tube nozzle dimension at the point where the extension nozzle is able to adequately and securely mate with the existing caulking tube nozzle. Please note this on drawing #2 that sketch's this attachment issue as related to the existing caulking tube nozzle.

[0016] "i" is both relative to and defined in all of the above. It also is a relative dimension, and in this example it is 17/32". This dimension is controlled by the material used and the elements clarified in "h" and elsewhere above. It is the dimension to be determined at the point where the existing caulking tube nozzle achieve's its secure attachment with the extension nozzle. See "e" and "f" above.

[0017] Sheet #2 is a depiction of the existing plastic caulking tube and its nozzle as related to the attached, in this instance, metal extension nozzle.

[0018] "k" is the extension nozzle which, for example, can be made in various sizes such as 3/8", 1/2", 3/4", 1", 1 1/4" and 1 1/2" as shown in the above drawings.

[0019] Both permanently attached, removable and detachable nozzles could be packaged, for example as shown in "k" above, in groups of varying sizes. This also is a marketing and production based decision.

1: The ability to change the size at will, to increase or to decrease, the non metallic caulking tubes' nozzles with either metallic or non metallic attachable and/or detachable nozzles of various sizes.

2: Enhanced visibility. Presently, with prefilled caulking tubes, when the existing nozzle is trimmed shorter and shorter to create a required wider-range caulking-application ability, the end of the nozzle disappears behind the caulking container and the visibility is diminished. With an added nozzle such as shown on drawing #1, additional length is added to the existing caulking-tube nozzle thus increasing visibility of the nozzle's end which then permits easier application.

3: The ease of caulking larger openings without requiring hand-tooling of the joint.

\* \* \* \* \*