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Description

This invention relates to weather stripping that is particularly suited for sealing the spaces or joints that exist between doors, windows and other closures or the like and the frames or structural supports therefor.

Pile weather strip is well known and has been commercially available for many years. It consists of a backing to which is secured a pile strip of resilient fibers. Typical of a pile weather strip is that shown in U.S. Patent No. 3,175,256, issued March 30, 1965, R.C. Horton. The pile weather strip shown in that patent is sold under the trade mark Fin-Seal and is characterized by a barrier strip of impervious, flexible, sheet material fixed to the backing and located within the pile strip. In its more elementary form conventional pile weather strip omits the aforementioned barrier strip.

Pile weather strip commonly is supported in what is known as a T-slot. The T-slot may be in the closure element, e.g., door or window, or in the frame or support therefore. In any event, as the name implies, it is a T-shaped slot having a longitudinally extending groove (the crossbar of the T) and a longitudinally extending opening (the upright of the T) communicating with the groove and of lesser width than the width of the groove. Commonly the pile weather strip is inserted into the T-slot from an open end thereof and is slid longitudinally into location in the T-slot. Generally this is not a problem when the weather strip is being installed in the closure or frame at the factory, although this mode of installation does become more difficult as the length of the T-slot increases.

Pile weather strip does wear out, of course, and it may be necessary to replace it from time-to-time in the field. In the field it may not be possible to gain access to an open end of the T-slot, at least without substantial disassembly of the closure, frame or other support, which is time-consuming and costly. Therefore, what is required is some technique that will permit pile weather stripping to be readily retrofitted in the field when access to the open end of the T-slot is not possible or difficult.

A solution to this problem is disclosed in U.S. Patent No. 3690038 issued September 12, 1972, Melven L. Dieterich. However, the Dieterich weatherstrip utilises an extruded profile and a considerable amount of plastic material and, thus, would be comparatively expensive to make. Additionally, in the Dieterich weatherstrip a part of the plastic profile projects beyond the T-slot requiring a relatively large mounting distance between the closure element and the frame or support therefor, whereas the industry trend is towards smaller mounting distances. In other words, in the the Dieterich weatherstrip the distance "g" necessarily is large in order to accommodate a notch of appropriate depth "e".

According to the present invention, we provide a weatherstrip comprising a backing having a front surface, a bottom surface opposite to said front surface and first and second side edges, a resilient sealing body upstanding from said front surface, secured to said backing and extending longitudinally of said backing at a location spaced inwardly from said first and second side edges, whereby said backing on either side of said sealing body and between said first and second side edges constitutes flanges, said weatherstrip being adapted to be inserted into a T-slot comprising a longitudinally extending groove having a longitudinally extending opening of lesser width than the width of said groove which opening communicates with said groove when said weatherstrip is so inserted into said T-slot said backing being located in said groove and said sealing body protruding through said opening, the width of said backing between said side edges thereof being greater than the width of said opening, characterised by the provision in said backing of a line of weakness extending longitudinally of said backing at a location between said sealing body and one of said edges of said backing and thus in one of said flanges, said line of weakness extending inwardly from said bottom surface toward said front surface but only part way through said backing, the portion of said backing between said line of weakness and said one edge thus being bendable in one direction about said line of weakness to allow said backing to be inserted into said groove through said opening and then springing into said groove after passage of said portion of said backing through of said opening, said line of weakness having abuttable edges and resisting bending of said portion said backing in a direction opposite to said one direction by abutment of said abbutable edges when any attempt is made to remove said weatherstrip through said opening, so that said weatherstrip cannot be readily removed from said T-slot by being pulled through said opening.

The present invention also provides a method for inserting a weatherstrip of the type set out in the preceding paragraph into a T-slot of the type set out in the preceding paragraph which comprises inserting a first portion of said backing between said line of weakness and one side edge of said backing through said opening into said groove, pushing said weatherstrip towards said T-slot while bending a second portion of said backing between said line of weakness and the other edge of the backing to a sufficient extent to permit the remainder of said backing to pass through said opening into said groove, and permitting said second portion of said backing between said line of weakness and said other edge of said backing to spring into said groove after said second portion has passed through said opening.

The invention also resides in the combination of the aforesaid weatherstrip and T-slot, the weatherstrip being located in said T-slot with said backing in said groove and said sealing body extending through said opening.

A preferred embodiment of the present inven-

tion is now described by way of example with reference to the accompanying drawings in which:-

Figure 1 is a perspective view of a piece of weatherstrip embodying the present invention;

Figure 2 shows the weatherstrip of Figure 1 being inserted into a T-slot, and

Figure 3 shows the weather strip of Fig. 2 in position in the T-slot of Fig. 2.

Referring to the drawings, one embodiment of a pile weather strip of the instant invention is shown. It includes a backing 10 having a front surface 11, a bottom surface 12 opposite to the front surface and side edges 13 and 14. Also included is a pile strip 15 of resilient fibers upstanding from front surface 11. The pile strip is secured to backing 10 in known manner, e.g., by being woven into the backing and/or adhered thereto and extends longitudinally of the backing at a location spaced inwardly from side edges 13 and 14. Included within or immediately adjacent to pile strip 15 may be a barrier strip of the type disclosed in aforementioned U.S. Patent No. 3,175,256, but this is entirely optional.

The portions of backing 10 on either side of pile strip 15 and between side edges 13 and 14 constitute flanges 16 and 17 that are devoid of pile material.

The weather strip is adapted to be inserted into a T-slot 18 formed in a window, door or other closure or in the frame or support therefor, this component being designated 19 and having an edge 20. T-slot 18 includes a longitudinally extending groove 21 having a groove width A and a longitudinally extending opening 22 having a width B that is less than width A of groove 21. Opening 22 communicates with groove 21 and, in fact, extends between groove 21 and edge 20.

The weather strip and T-slot are so constructed and proportioned relative to each other that when the weather strip is inserted into the T-slot, backing 10 is located in groove 21, and pile strip 15 protrudes through opening 22 and beyond edge 20. Since the width of backing 10 is greater than that of opening 22, the weather strip necessarily is retained in the T-slot as a result of flanges 16 and 17 being located beneath flanges 23 and 24 of component 19.

Component 19 usually is fabricated of metal particularly aluminum, but it may be of plastics or any other suitable material depending on the nature of the application.

The weather strip itself may be made of known materials. The pile strip 15 usually is made of filament polypropylene yarns that have been siliconed and ultraviolet stabilized, but other materials may be employed. The fibers of the pile should be resilient and durable, however. Backing 10 may be and preferably is of two part construction, the upper part 25 being a woven layer of, for example, polypropylene yarns, and the lower part 27 being a continuous layer of compatible plastics material, e.g., polypropylene extruded onto and laminated to the underside of woven layer 25.

Pile strip 15 may be woven into backing 10, and the extruded layer 27 of plastics material serves to assist in holding pile strip 15 in place.

Reference may be made to U.S. Patent Nos. 4,288,482 and 4,288,483, both issued September 8, 1981 and granted to Schlegel Corporation for other forms that the weather strip may take and for other materials from which it may be constructed. Broadly speaking, the materials of which the weather strip may be constructed are not critical. However, backing 10 should be relatively rigid so that it cannot be readily removed from the T-slot once inserted into groove 21 thereof.

A pile weather strip embodying the instant invention is capable of being installed in a T-slot in the normal way, i.e., by being slid longitudinally into the slot via an open end thereof. However, in accordance with the instant invention, the weather strip also is capable of being inserted into the T-slot by passage of backing 10 through opening 22 into groove 21. Normally the width of backing 10 relative to the width of opening 22 and the relatively rigid nature of backing 10 would not permit this to be achieved. However, in accordance with the instant invention, a line of weakness 26 is provided in backing 10 extending longitudinally of the backing and at a location between pile strip 15 and one of the side edges, namely, in the embodiment shown, side edge 14. Thus, in this particular embodiment, the line of weakness 26 is provided in flange 17. Line of weakness 26 extends inwardly from bottom surface 12 toward front surface 11 but only part way through backing 10.

In the preferred embodiment of the invention line of weakness 26 is a score line or a so-called "kiss cut". Also in a preferred embodiment its depth is only 15% to 30% of the depth of backing 10 and, in the case where the backing is composed of an upper woven layer 25 and a continuous lower layer 27 of plastics material, in which case both layers normally are of about equal depth, the depth of line of weakness 26 is only about 30% to 60% of the depth of layer 27. In a preferred embodiment of the invention line of weakness 26 is located inwardly from edge 14 at a point 60% to 80% of the width of flange 17.

It also should be noted that it is preferable for a line of weakness 26 to be provided in each flange 16 and 17 so that the weather strip is not handed but can be installed by inserting either flange into the T-slot.

To insert the pile weather strip into the T-slot, flange 16 first is inserted through opening 22 into the part of groove 21 below flange 23. The remaining part of the weather strip then may be inserted into the T-slot by pushing the weather strip towards the T-slot and running one's finger or a tool along the upper surface of flange 17 opposite line of weakness 26 causing a hinging action of flange 17 about the line of weakness 26. This effectively reduces the width of backing 10 so that it can pass through opening 22. Once this has been accomplished, flange 17 will, as a result of what has been termed a "living hinge action", spring into the part of groove 21 beneath flange

24. Since line of weakness 26 resists any tendency for flange 17 to bend downwardly, the pile weather strip cannot be readily removed from the T-slot, although it can be removed forcefully when it is worn out or damaged.

While pile weather strip embodying in the instant invention is particularly useful for retrofit, it also is useful in O.E.M. procedures where long lengths of weather strip have to be inserted in T-slots and frictional resistance may be met.

While reference has been made repeatedly herein to T-slots, it will be appreciated that the instant invention may be capable of being utilized with other types of grooves.

While preferred embodiments of the invention have been disclosed herein, those skilled in the art will appreciate that changes and modifications can be made therein without departing from the scope of the invention as defined in the appended claims.

Claims

1. A weatherstrip comprising a backing (10) having a front surface (11), a bottom surface (12) opposite to said front surface (11) and first and second side edges (13,14) a resilient sealing body (15) upstanding from said front surface (11), secured to said backing (10) and extending longitudinally of said backing (10) at a location spaced inwardly from said first and second side edges (13,14), whereby said backing (10) on either side of said sealing body (15) and between said first and second side edges (13,14) constitute flanges (16,17), said weatherstrip being adapted to be inserted into a T-slot (18) comprising a longitudinally extending groove (21) having a longitudinally extending opening (22) of lesser width than the width (A) of said groove (21), which opening communicates with said groove (21) when said weatherstrip is so inserted into said T-slot (18) said backing (10) being located in said groove (21) and said sealing (15) protruding through said opening (22), the width of said backing (10) between said side edges (13,14) thereof being greater than the width (B) of said opening (22), whereby said weatherstrip is retained in said groove (21), characterised in that said weatherstrip has in said backing (10) a line of weakness (26) extending longitudinally of said backing (10) at a location between said sealing body (15) and one of said edges (13,14) of said backing (10) and thus in one of said flanges (16,17), line of weakness (26) extending inwardly from said bottom surface (12) towards said front surface (11) but only part way through said backing (10), the portion of said backing (10) between said line of weakness (26) and said one edge (14) thus being bendable in one direction about said line of weakness (26) to allow said backing (10) to be inserted into said groove (21) through said opening (22) and then springing into said groove (21) after passage of said portion of said backing (10) through said opening (22), said line of weakness (26) having abuttable edges and resisting bending of said portion of said backing (10) in a direction opposite to said one direction by abutment of said abuttable edges when any attempt is made to remove said weatherstrip through said opening (22), so that said weatherstrip cannot be readily removed from said T-slot (18) by being pulled through said opening (22).

2. A weatherstrip according to claim 1 characterised in that the sealing body (15) is a pile strip of resilient fibres.

3. A weatherstrip according to claim 1 or 2 characterised in that there are two of said lines of weakness (26), one in each side edge portion or flange of said backing (10).

4. A weatherstrip according to claim 1, 2 or 3 characterised in that the or each line of weakness (26) is a score line.

5. A weatherstrip according to claim 4 characterised in that the depth of the or each score line (26) is from 15% to 30% of the depth of said backing (10).

6. A weatherstrip according to claim 4 or 5 characterised in that said backing (10) comprises an upper layer (25) of woven material and a lower continuous layer (27) of plastics material laminated to said upper layer (25), said upper layer (25) having said front surface (11) and said lower layer (27) having said bottom surface (12), the or each each score line (26) extending from said bottom surface (12) only part way through said layer (27) of plastics material.

7. A weatherstrip according to any one of the preceding claims, characterised in that the or each line of weakness (26) is located inwardly of a side edge (13,14) of the backing (10) at a point 60% to 80% of the width of that portion of the backing (10) between said side edge and the sealing body or pile strip (15) in which the line of weakness is located.

8. A method for inserting a weatherstrip of the type claimed in any preceding claim into a T-slot (18) of the type set forth in claim 1 which comprises inserting a first portion (16) of said backing (10) between said line of weakness (26) and one side edge (13) of said backing (10) through said opening (22) into said groove (21), pushing said weatherstrip towards said T-slot (18) while bending a second portion (17) of said backing (10) between said line of weakness (26) and the other edge (14) of the backing (10) to a sufficient extent to permit the remainder of said backing (10) to pass through said opening (22) into said groove (21), and permitting said second portion (17) of said backing (10) between said line of weakness (26) and said other edge (14) of said backing (10) to spring into said groove (21) after said second portion (17) has passed through said opening (22).

9. In combination a weatherstrip of the type claimed in any of claims 1 to 6 and a T-slot (18) of the type set out in claim 1, said weatherstrip being located in said T-slot (18) with said backing (10) in said groove (21) and the sealing body (15) extending through said opening (22).

Patentansprüche

1. Dichtungsleiste, die einen Rückenstreifen (10) mit einer vorderen Oberfläche (11), einer unteren Oberfläche (12) auf der zur vorderen Oberfläche (11) entgegengesetzten Seite und ersten und zweiten Seitenkanten (13, 14) aufwest, wobei ein elastischer Dichtkörper (15) sich von der vorderen Oberfläche (11) erstreckt, der an dem Rückenstreifen (10) befestigt ist und sich in Längsrichtung des Rückenstreifens (10) an einer Stelle erstreckt, die von den ersten und zweiten Seitenkanten (13, 14) nach innen einen Abstand aufweist, wobei der Rückenstreifen (10) auf jeder Seite des Dichtkörpers (15) und zwischen den ersten und zweiten Seitenkanten (13, 14) Flansche (16, 17) bildet, wobei die Dichtungsleiste so ausgebildet ist, daß sie in einen T-förmigen Schlitz (18) eingesetzt werden kann, der eine sich in Längsrichtung erstreckende Nut (21) aufweist, die eine sich in Längsrichtung erstreckende öffnung (22) von geringerer Breite als die Breite (A) der Nut (21) besitzt, welche öffnung mit der Nut (21) in Verbindung steht, wenn die Dichtungsleiste so in den T-förmigen Schlitz (18) eingeführt wird, daß der Rückenstreifen (10) in der Nut (21) angeordnet ist und der Dichtkörper (15) durch die öffnung (22) herausragt, wobei die Breite des Rückenstreifens (10) zwischen seinen Seitenkanten (13, 14) größer ist als die Breite (B) der öffnung (22), wodurch die Dichtungsleiste in der Nut (21) festgehalten wird, dadurch gekennzeichnet, daß die Dichtungsleiste in ihrem Rückenstreifen (10) eine Schwächungslinie (26) aufweist, die sich in Längsrichtung des Rückenstreifens (10) an einem Ort zwischen dem Dichtkörper (15) und einer der Seitenkanten (13, 14) des Rückenstreifens (10) und daher in einem der Flansche (16, 17) erstreckt, wobei sich die Schwächungslinie (26) von der unteren Oberfläche (12) nach innen zur vorderen Oberfläche (11), aber nur durch einen Teil des Rückenstreifens (10) hindurch erstreckt, wobei der Bereich des Rückenstreifens (10) zwischen der Schwächungslinie (26) und der einen Kante (14) dadurch in einer Richtung um die Schwächungslinie (26) biegbar wird, so daß der Rückenstreifen (10) in die Nut (21) durch die öffnung (22) eingeführt werden kann und dann in die Nut (21) einschnappen kann, nachdem dieser Bereich des Rückenstreifens (10) durch die öffnung (22) hindurchgeführt ist, wobei die Schwächungslinie (26) Ränder aufweist, die aneinander anliegen können und einer Biegung dieses Bereichs des Rückenstreifens (10) in einen Richtung Widerstand entgegensetzt, die der einen Richtung entgegengesetzt ist, und zwar durch Aneinanderliegen der Kanten, die aneinander liegen können, wenn ein Versuch unternommen wird, die Dichtungsleiste durch die öffnung (22) zu entfernen, so daß Dichtungsleiste night einfach aus dem T-förmigen Schlitz (18) entfernt werden kann, indem sie durch die öffnung (22) gezogen wird.

2. Dichtungsleiste nach Anspruch 1, dadurch gekennzeichnet, daß der Dichtkörper (15) eine Bürstenstreifen von nachigiebigen Fasern ist.

3. Dichtungsleiste nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß zwie der Schwächungslinien (26) vorgesehen sind, und zwar eine in jedem Seitenkantenbereich oder Flansch des Rückenstreifens (10).

4. Dichtungsleiste nach Anspruch 1, 2 oder 3, dadurch gekennzeichnet, daß die oder jede Schwächungslinie (26) eine eingeritzte Linie oder Kerblinie ist.

5. Dichtungsleiste nach Anspruch 4, dadurch gekennzeichnet, daß die Tiefe der oder jeder eingeritzten Linie (26) zwischen 10 bis 30% der Tiefe des Rückenstreifens (10) beträgt.

6. Dichtungsleiste nach Anspruch 4 oder 5, dadurch gekennzeichnet, daß der Rückenstreifen (10) eine obere Schicht (25) aus gewobenem Material und eine untere kontinuierlich Schicht (27) aus Kunststoff aufweist, die auf die obere Schicht (25) laminiert ist, wobei die obere Schicht (25) die Vorderfläche (11) und die untere Schicht (27) die Bodenfläche (12) aufweist, wobei die oder jede eingeritzte Linie (26) von der Bodenfläche (12) sich nur über einen Teil durch die Schicht (27) aus Kunststoffmaterial erstreckt.

7. Dichtungsleiste nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die oder jede Schwächungslinie (26) innerhalb einer Seitenkante (13, 14) des Rückenstreifens (10) an einer Stelle angeordnet ist, die 60 bis 80% der Breite des Bereiches des Rückenstreifens (10) zwischen der Seitenkante und dem Dichtkörper oder Bürstenstreifen (15), in dem die Schwächungslinie angeordnet ist, entspricht.

8. Verfahren zum Einfügen einer Dichtungsleiste des Typs eines der vorangehenden Ansprüche in einen T-förmigen Schlitz (18) des in Anspruch 1 beschriebenen Typs, das die Schritte aufweist, einen ersten Bereich (16) des Rückenstreifens (10) zwischen der Schwächungslinie (26) und der einen Seitenkante (13) des Rückenstreifens (10) durch die öffnung (22) in die Nut (21) einzufügen, die Dichtungsleiste in Richtung auf den T-förmigen Schlitz (16) zu drücken, wobei ein zweiter Bereich (17) des Rückenstreifens (10) zwischen der Schwächungslinie (26) und der anderen Kante (14) des Rückenstreifens (10) in ausreichendem Maße gebogen wird, daß der Rest des Rückenstreifens (10) durch die öffnung (22) in die Nut (21) hindurchgelangen kann, und den zweite Bereich (17) des Rückenstreifens (10) zwischen der Schwächungslinie (26) und der anderen Kante (14) des Rückenstreifens (10) in die Nut (21) einschnappen zu lassen, nachdem sich der zweite Bereich (17) durch die öffnung (22) hindurchbewegt hat.

9. Kombination einer Dichtungsleiste vom Typ eines der Ansprüche 1 bis 6 und eines T-förmigen Schlitzes (18) des Typs gemäß Anspruch 1, wobei die Dichtungsleiste in dem T-förmigen Schlitz (18) so angeordnet ist, daß sich der Rückenstreifen (10) in der Nut (21) befindet und sich der Dichtkörper (15) durch die öffnung (22) erstreckt.

Revendications

1. Une bande d'étanchéité comprenant un support (10) ayant une surface avant (11), un surface de fond (12) opposée à ladite surface avant (11) et un premier et second bords latéraux (13, 14), un corps d'étanchéité élastique (15) se dressant verticalement à partir de ladite surface avant (11), fixée audit support (10) et s'étendant longidutinalement par rapport audit support (10) à une distance espacée vers l'intérieur, a partir desdits premier et second bords latéraux (13, 14), de telle sorte que ledit support (10) sur l'un ou l'autre côté du bord d'étanchéité (15) et entre lesdits premier et second bords latéraux (13, 14) forme des rebords (16, 17), ladite bande étant destinée à être insérée à l'intérieur d'une fente en T (18) comprenant une rainure s'étendant longitudinalement (21) ayant une ouverture s'étendant longitudinalement (22) de largeur inférieur à la largeur (A) de ladite rainure (21), ladite ouverture communique avec ladite rainure (21) lorsque ladite bande d'étanchéité est ainsi insérée à l'intérieur de la fente en T (18), ledit support (10) étant logé dans ladite rainure (21) et ledit corps d'étanchéité (15) faisant saillie à travers ladite ouverture (22), la largeur dudit support (10) entre lesdits bords latéraux (13, 14) de celui-ci étant supérieure à la largeur (B) de ladite ouverture (22), de telle sorte que ladite bande d'étanchéité est retenue dans rainure (21), caractérisée en ce que ladite bande d'étanchéité présente dans ledit support (10) une ligne de faiblesse (26) s'étendant longitudinalement par rapport audit support (10) en un point situé entre ledit corps d'étanchéité (15) et l'un desdits bords (13, 14) dudit support (10), et ainsi dans l'un desdits rebords (16, 17), ladite ligne de faiblesse (26) s'étendant vers l'intérieur à partir de ladite surface de fond (12) vers ladite surface avant (11) mais seulement sur une partie dudit support 10, la partie dudit suport (10) entre ladite ligne de faiblesse (26) et l'un desdits bords (14) pouvant être ainsi pliée dans une direction autour de ladite ligne de faiblesse (26) pour permettre audit support (10) d'être inséré à l'intérieur de ladite rainure (21) à travers ladite ouverture (22) puis d'être poussé à l'intérieur de ladite rainure (21) après passage de ladite partie dudit support (10) à travers ladite ouverture (22), ladite ligne de faiblesse (26) présentant des bords susceptibles de venir bout à bout et résistant au pliage de ladite partie dudit support (10), dans une direction opposée à ladite première direction par aboutement desdits bords susceptibles de venir bout à bout lorsq'une tentative quelconque est faite pour enlever ladite bande d'étanchéité à travers ladite ouverture (22) de telle sorte que ladite bande d'étanchéité ne puisse pas être facilement enlevée de ladite fente en T (18) en étant tirée à travers ladite ouverture (22).

2. Une bande d'étanchéité selon la revendication 1, caractérisée en ce que le corps d'étanchéité (15) est une bande peluchée de fibres résilientes.

3. Une bande d'étanchéité selon l'une quelconque des revendications 1 et 2, caractérisée en ce deux lignes de faiblesse (26) sont prévues dans chacun des rebords ou parties latérales marginales dudit support (10)

4. Un support selon l'une quelconque des revendications 1 à 3, caractérisé en ce que la ou chaque ligne de faiblesse (26) est une ligne perforée.

5. Une bande d'étanchéité selon la revendication 4, caractérisée en ce que la profondeur de la ou de chaque ligne perforée (26) est de 15 à 20% de la hauteur dudit support (10).

6. Une bande d'étanchéité selon l'une quelconque des revendications 4 à 5, caractérisée en ce que ledit support (10) comprend une couche supérieure (25) de matériau tissé et une couche continue inférieure (27) en matière plastique laminée fixée à ladite couche supérieure (25), ladite couche supérieure (25) comportant ladite face avant (11) et ladite couche inférieure (27) comportant ladite surface de fond (12), le ou chacune des lignes perforées (26) s'étendant à partir de ladite surface de fond (12) seulement sur une partie de ladite couche (27) de matières plastiques.

7. Une bande d'étanchéité selon l'une quelconque des revendications précédentes, caractérisée en ce que la ou chaque ligne de faiblesse (26) est disposée à l'intérieur dudit bord latéral (13, 14) du support (10) en un point situé de 60 à 80% de la largeur de cette partie de support (10), entre ledit bord latéral et ledit corps d'étanchéité ou bande peluchée (15) dans lequel la ligne de faiblesse est disposée.

8. Un procédé pour introduire une bande d'étanchéité du type revendiqué dans l'une quelconque des revendications précédentes, à l'intérieur d'une fente en T (18) du type décrit dans la revendication 1, qui consiste essentiellement à insérer une première partie (16) dudit support (10) entre ladite ligne de faiblesse (26) et l'un desdits bords latéraux (13) dudit support (10) à travers ladite ouverture (22), à l'intérieur de ladite rainure (21), à pousser ladite bande d'étanchéité vers ladite fente en T (18) tout en pliant une seconde partie (17) dudit support (10) entre ladite ligne de faiblesse (26) et l'autre bord (14) du support (10), d'une distance suffisante pour permettre au reste dudit support (10) de passer à travers ladite ouverture (22), à l'intérieur de ladite rainure (21), et à permettre à ledite seconde partie (17) dudit support (10) entre ladite ligne de faiblesse (26) et ledit autre bord (14) dudit support (10) d'être comprimé à l'intérieur de ladite rainure (21) après que ladite seconde partie (17) soit passée à travers ladite ouverture (22).

9. En combinaison, une bande d'étanchéité du type revendiqué dans l'une quelconque des revendications 1 à 6 et d'une fente en T (18) du type décrit à la revendication 1, ladite bande d'étanchéite étant montée à l'intérieur de la fente en T (18) avec ledit support (10) dans ladite rainure (21) et le corps d'étanchéité (15) s'étendant à travers ladite ouverture (22)

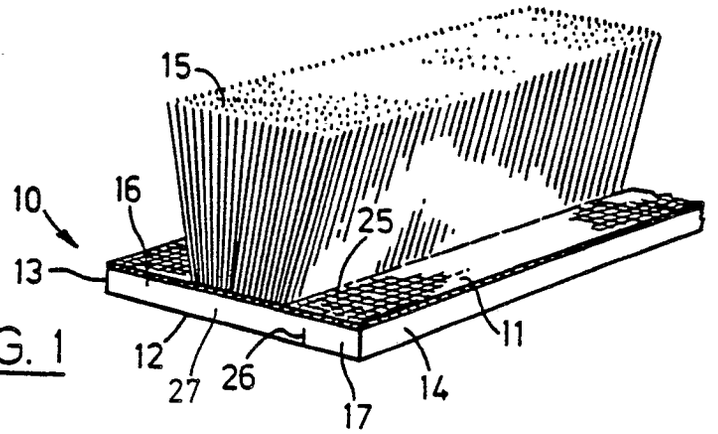

FIG. 1

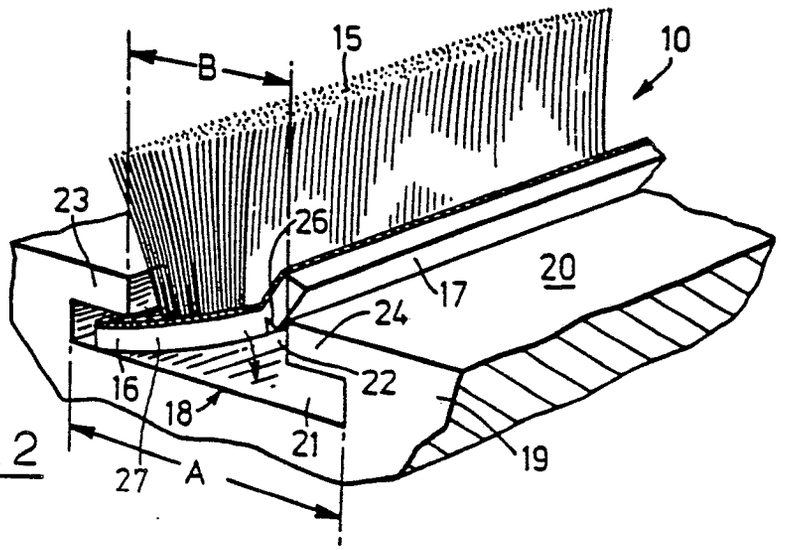

FIG. 2

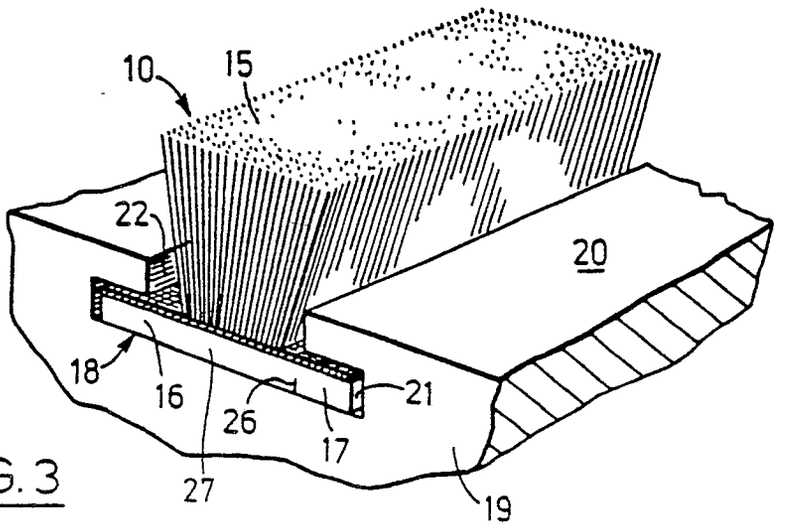

FIG. 3