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(54) **COIN BAG SPOUT ASSEMBLY**

ANORDNUNG EINER MÜNZTÜTE UND EINER MÜNZZUFUHRRLUTSCHE
ENSEMBLE GOULOTTE POUR SAC DE PIÈCES

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EP-A- 0 157 405 **GB-A- 2 128 795**
US-A- 5 297 598

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Description

BACKGROUND OF THE INVENTION

[0001] This invention relates to coin and token handling machines and particularly to a spout to which a coin bag can be attached for the delivery of coins through the spout into the bag.

[0002] Coin handling machines, such as coin sorters or counters, often discharge coins or tokens into a cloth bag. A filled coin bag can be quite heavy. Therefore, it is necessary to provide a positive attachment of the coin bag to the coin discharge point on the coin handling machine.

[0003] In the past, bags have been attached to spouts using a metal ring surrounding a cylindrical spout with the bag pinched between the ring and the periphery of the spout. An example of this form of bagging spout is shown in U.S. patent 5,443,419 issued August 22, 1995 to Adams, et al. for "Collector Assembly for Coin Handling Machine". Another form of bagging attachment that has been used incorporates a spring clamp into which a coin spout is moved linearly. A gathered portion of the coin bag is pinched between the spring clamp and the spout. Such an arrangement is shown in U.S. patent 5,297,598 issued March 29, 1994, to Rasmussen, et al. for "Coin Bag Holding Device for Coin Handling Machine". A similar arrangement is disclosed in GB-A-2128796.

[0004] The past mechanisms for attaching the coin bag to the spout have required the operator to use both hands. The bag spout assembly of the present invention is designed to be operated with one hand by an experienced operator.

SUMMARY OF THE INVENTION

[0005] In accordance with the present invention, a coin bag spout assembly comprises:

- a stationary clip member adapted for attachment adjacent to a coin discharge point, said clip member having spaced fingers that extend on each side of a central open area; and
- a tubular spout member having one end mounted to the clip member on a pivot axis that allows the spout member to be pivoted forwardly and upwardly out of a position between the fingers of the clip member.

[0006] Preferably, the stationary clip member is U-shaped, having a rear wall adapted for attachment adjacent to the coin discharge point and having two spaced apart sides extending forward from the rear wall, the tubular spout member having one end pivotally mounted about an axis oriented transversely to the spaced apart sides of the clip member and having an opposite end to be pivoted forwardly and outwardly from the open side of the clip member from a secured position between the sides of the clip member.

[0007] Preferably, the sides of the clip member are formed into yieldable fingers. Furthermore, the spout member preferably has bosses which enter into the spaces between fingers on each side of the clip member to enhance the gripping action.

[0008] Also in the preferred embodiment, the spout member has a forward extending lip portion adjacent its bottom opening which can be grasped by an operator to pivot the spout member out of engagement with the clip member for releasing a coin bag.

[0009] An operator can remove and replace a coin bag using only one hand by the simple act of pivoting the spout member out of engagement with the clip member and then re-engaging the spout member with the clip member after a filled bag has been removed and a new bag placed about the spout member.

[0010] The foregoing and other objects and advantages of the invention will appear in the detailed description which follows. In the description, reference is made to the accompanying drawings which illustrate a preferred embodiment of the coin spout assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011]

Fig. 1 is a view in perspective of a coin sorting machine using the coin bag spout assemblies of the present invention;

Fig. 2 is a view in side elevation of a bag spout assembly taken in the plane of the line 2-2 of Fig. 1;

Fig. 3 is a view similar to Fig. 2 but showing the spout member disengaged from the clip member;

Fig. 4 is a top view of several bag spout assemblies taken in the plane of the line 4-4 of Fig. 2;

Fig. 5 is a view in vertical section through the coin spout assembly taken in the plane of the line 5-5 of Fig. 2;

Fig. 6 is a view in horizontal section of the spout assembly taken in the plane of the line 6-6 of Fig. 2;

Fig. 7 is a view in horizontal section of the spout assembly taken in the plane of line 7-7 of Fig. 2;

Fig. 8 is an enlarged view in vertical section taken in the plane of the line 8-8 in Fig. 2; and

Fig. 9 is an enlarged view in vertical section taken in the plane of the line 9-9 in Fig. 8.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0012] The bagging spout is usable with a variety of coin handling equipment, including coin sorters of the type shown in U.S. patent 5,295,899 issued March 22, 1994, for "Two Disc Coin Handling Apparatus". In such coin sorter, coins are deposited on the surface of a rotating disc which forms the coins into a single file in a single layer and feeds the aligned coins to a sorting plate in which the coins exit at spaced openings in the plate

depending upon their size. Each denomination of coin to be sorted can be discharged into a respected one of a plurality of collectors. The collectors can include spouts which lead to cloth coin bags. U.S. patent 5,443,419 issued August 22, 1995. for "Collector Assembly for Coin Handling Machine" illustrates various forms of collectors, including drawers and chutes which allow coins to pass through the collector to an opening beneath the collector.

[0013] Fig. 1 illustrates such a coin sorter 10 mounted on a stand 11 that includes an upright shaft 12 attached to the underside of the coin sorter 10 and a base 13 formed of a plurality of radially extending legs. A circular floor 15 forms a part of the stand 11 to support the weight of coin bags.

[0014] The sorter 10 has a bottom plate 18 on which collector chutes 19 rest. The bottom plate 18 contains coin discharge openings 20 aligned with openings in the bottom of the collectors 19. A coin bag spout assembly 25 in accordance with the present invention is mounted beneath each of the openings 20.

[0015] The spout assembly 25 includes a stationary clip member 26 and a spout member 27. The clip member 26 has bearings 28 extending from each side of its upper top. The bearings 28 terminate in lands 29 with openings 30 that receive screws 31 to mount the clip member to the underside of the bottom plate 18. A projection 32 extends from the lower rear of each clip member 26. The projection 32 mounts a triangular boss 33 that is received in a mating opening in the lower flange 34 of a channel shaped member 35 attached to the underside of the bottom plate 18 to thereby locate the clip member 26.

[0016] The spout member 27 is generally tubular in shape. Its upper front edge mounts a pair of pins 36 which are received in the bearings 28. As a result, the spout member 27 is capable of being pivoted into and out of engagement with the stationary clip member 26. When the spout member 27 is engaged with the clip member 26, as shown in Fig. 2, the spout member 27 is aligned with the opening 20 in the lower plate 18.

[0017] As shown in Figs. 6 and 7, the sides 37 and 38 of the clip member 26 extend partially around bulging sides 40 and 41 of the spout member 27. Thus, the sides 37 and 38 of the clip member 26 will be forced apart when the spout member 27 is pivoted into engagement with the clip member 26. To provide a degree of flexibility to the sides 37 and 38 of the clip member 26, the sides are formed into upper and lower fingers 42 and 43 separated by a space 44. The top and bottom edges of the space 44 are defined by radii of the axis of the pivot pins 36 in the bearings 28. The bulging sides 40 and 41 of the spout member 27 are provided with rectangular bosses 46 which are shaped to nearly fill the space 44 between the fingers 42 and 43 when the spout member 27 is engaged with the clip member 26. The bottom of the spout member 27 is provided with a forwardly projecting lip portion 48.

[0018] In operation, the spout member 27 is released from engagement with the clip member 26 by the operator grasping the lip portion 48 and pivoting the spout member

27 outwardly. The open mouth of a coin bag can then be slid over the outside of the spout member 27. The spout member 27 will not fill the open mouth of the coin bag. Instead, the operator grasps the loose portion of the coin bag and pivots the spout member 27 rearwardly to engage the clip member 26. The rear of the mouth of the coin bag is pinched between the outer surfaces of the spout member 27 and the inner surfaces of the clip member 26. As shown in Fig. 5, the coin bag is held against vertical loads by the interengagement of the bosses 46 with the fingers 42 and 43 on the sides of the clip member 26.

[0019] To remove a filled or partially filled bag from the spout assembly, the operator grasps the top of the bag or the lip portion 48 and pulls it outwardly thereby pivoting the spout assembly 27 free of the clip member 26.

[0020] The bag spout assembly can be used in connection with any form of coin handling machine in which the coins fall through an opening.

Claims

1. A coin bag spout assembly (25), **characterized by:**

a stationary clip member (26) adapted for attachment adjacent to a coin discharge point, said clip member having spaced fingers that extend on each side of a central open area; and a tubular spout member (27) having one end mounted to the clip member (26) on a pivot axis that allows the spout member to be pivoted forwardly and upwardly out of a position between the fingers of the clip member.

2. A spout assembly according to claim 1, further **characterized in that** the spaces between the fingers on each side of the clip member (26) are defined by radii extending from the pivot axis of the spout member (27).

3. A spout assembly according to claim 2, **characterized in that** the spout member (27) has bosses on its outer surface that mate with the spaces between the fingers of the clip member.

4. A spout assembly according to claim 1, **characterized in that** the spout member (27) has an outwardly extending lip portion at its front bottom end for grasping by an operator.

5. A coin bag spout assembly according to claim 1, wherein the stationary clip member (26) is U-shaped, having a rear wall adapted for attachment adjacent to the coin discharge point and having two spaced apart sides extending forward from the rear wall, the tubular spout member (27) having one end pivotally mounted about an axis oriented transversely to the

spaced apart sides of the clip member (26) and having an opposite end to be pivoted forwardly and outwardly from the open side of the clip member from a secured position between the sides of the clip member.

Patentansprüche

1. Anordnung (25) einer Münztüte und einer Münzzufuhrutsche, **gekennzeichnet durch:**

ein stationäres Klemmglied (26), das zur Anbringung neben einer Münzausgabestelle ausgebildet ist und auseinanderliegende Finger aufweist, die sich beiderseits eines mittleren offenen Bereichs erstrecken; und
ein rohrförmiges Rutschenglied (27), das mit seinem einen Ende an dem Klemmglied (26) auf einer Schwenkachse angeordnet ist, die eine Verschwenkung des Rutschenglieds nach vorn und oben aus einer Lage zwischen den Fingern des Klemmglieds ermöglicht.
2. Anordnung nach Anspruch 1, ferner **dadurch gekennzeichnet, daß** die Zwischenräume zwischen den Fingern auf jeder Seite des Klemmglieds (26) durch Radien begrenzt sind, die sich von der Schwenkachse des Rutschenglieds (27) weg erstrecken.
3. Anordnung nach Anspruch 2, **dadurch gekennzeichnet, daß** das Rutschenglied (27) auf seiner Außenseite Angüsse aufweist, die in die Zwischenräume zwischen den Fingern des Klemmglieds eingreifen.
4. Anordnung nach Anspruch 1, **dadurch gekennzeichnet, daß** das Rutschenglied (27) an seinem vorderen Bodenende einen sich nach außen erstreckenden Lippenteil zum Erfassen durch eine Bedienungsperson aufweist.
5. Anordnung nach Anspruch 1, bei der das stationäre Klemmglied (26) U-förmig ist und eine Rückwand aufweist, die zur Anbringung neben der Münzausgabestelle ausgebildet ist und zwei auseinanderliegende Seiten aufweist, die sich von der Rückwand aus nach vorn erstrecken, wobei das rohrförmige Rutschenglied (27) mit seinem einen Ende um eine Achse drehbar gelagert ist, die quer zu den auseinanderliegenden Seiten des Klemmglieds (26) gerichtet ist und ein gegenüberliegendes Ende aufweist, das nach vorn und außen von der offenen Seite des Klemmglieds aus einer gesicherten Lage zwischen den Seiten des Klemmglieds geschwenkt werden soll.

Revendications

1. Ensemble de goulotte (25) pour sac à pièces de monnaie, **caractérisé par**
un élément fixe de pince (26) adapté pour être fixé en position adjacente à un point de décharge de pièces de monnaie, ledit élément de pince présentant des doigts écartés les uns des autres et qui s'étendent de chaque côté d'une zone centrale ouverte et un élément tubulaire de goulotte (27) dont une extrémité est montée sur l'élément de pince (28) par un axe de pivotement qui permet à l'élément de goulotte de pivoter vers l'avant et vers le haut hors d'une position située entre les doigts de l'élément de pince.
2. Ensemble de goulotte selon la revendication 1, **caractérisé en outre en ce que** les espaces entre les doigts situés de chaque côté de l'élément de pince (26) sont définis par des rayons qui partent de l'axe de pivotement de l'élément de goulotte (27).
3. Ensemble de goulotte selon la revendication 2, **caractérisé en ce que** l'élément de goulotte (27) présente sur sa surface extérieure des reliefs complémentaires aux espaces situés entre les doigts de l'élément de pince.
4. Ensemble de goulotte selon la revendication 1, **caractérisé en ce que** l'extrémité inférieure avant de l'élément de goulotte (27) présente une partie en levre qui s'étend vers l'extérieur et destinée à être saisie par un opérateur.
5. Ensemble de goulotte pour sac à pièces de monnaie selon la revendication 1, dans lequel l'élément de pince fixe (26) présente la forme d'un U dont une paroi arrière est adaptée pour être fixée en position adjacente au point de décharge des pièces de monnaie et dont deux côtés situés à distance l'un de l'autre s'étendent vers l'avant en partant de la paroi arrière, une extrémité de l'élément tubulaire de goulotte (27) étant montée à pivotement autour d'un axe orienté transversalement par rapport aux côtés écartés l'un de l'autre de l'élément de pince (26) et une extrémité opposée étant destinée à être tournée vers l'avant et l'extérieur du côté ouvert de l'élément de pince depuis une position fixée située entre les côtés de l'élément de pince.

FIG. 1

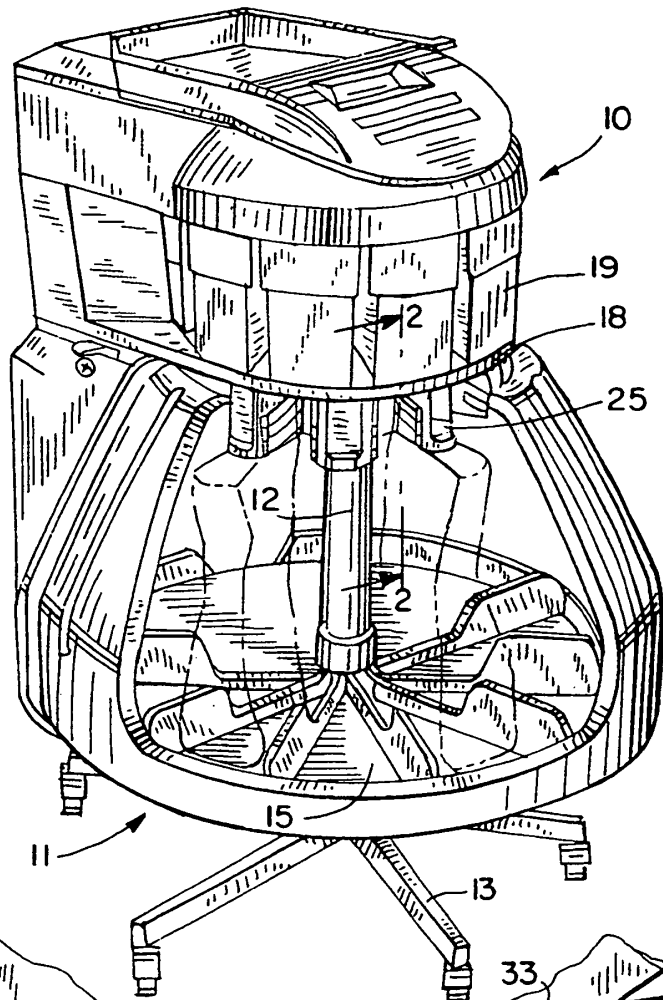
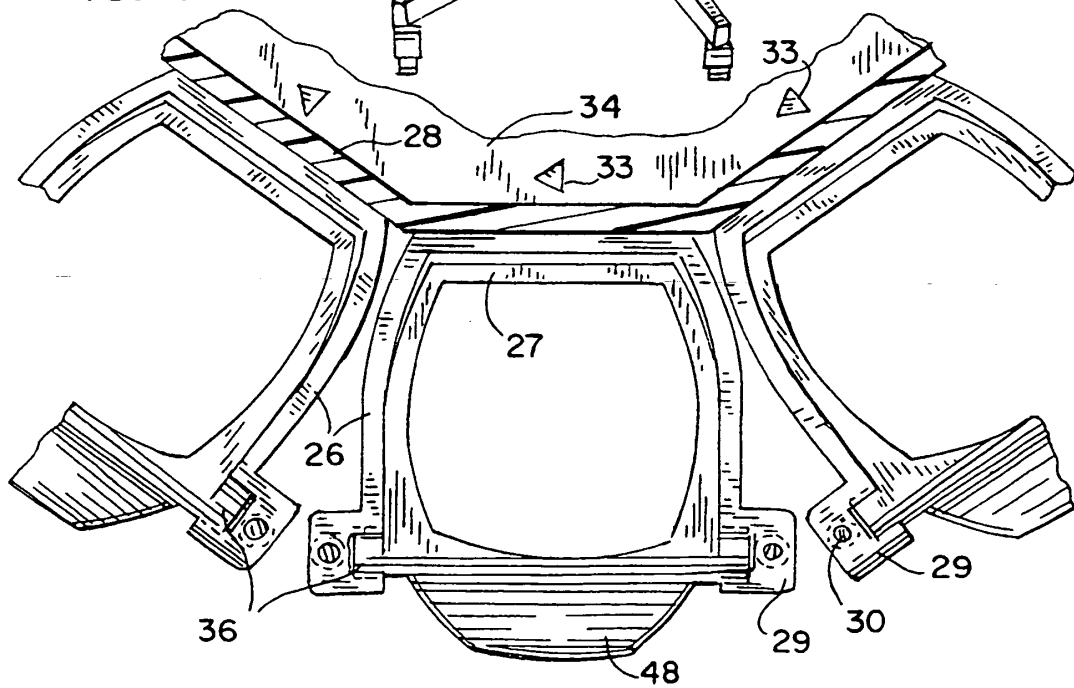


FIG. 4



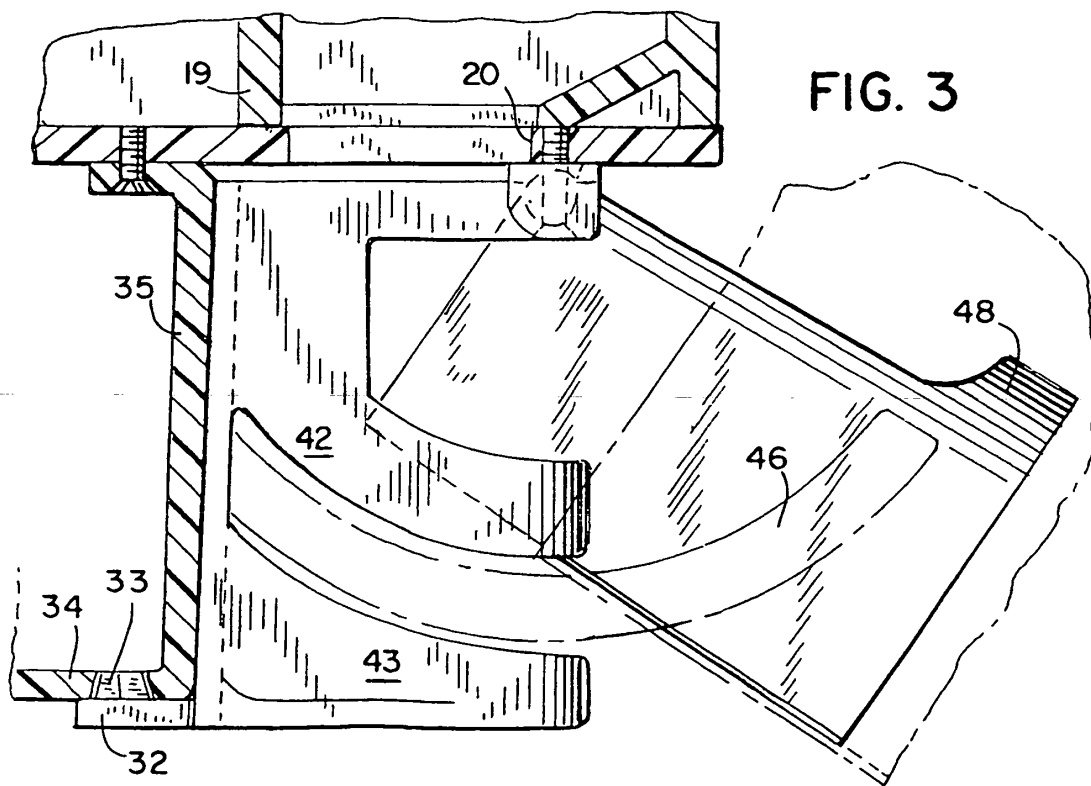
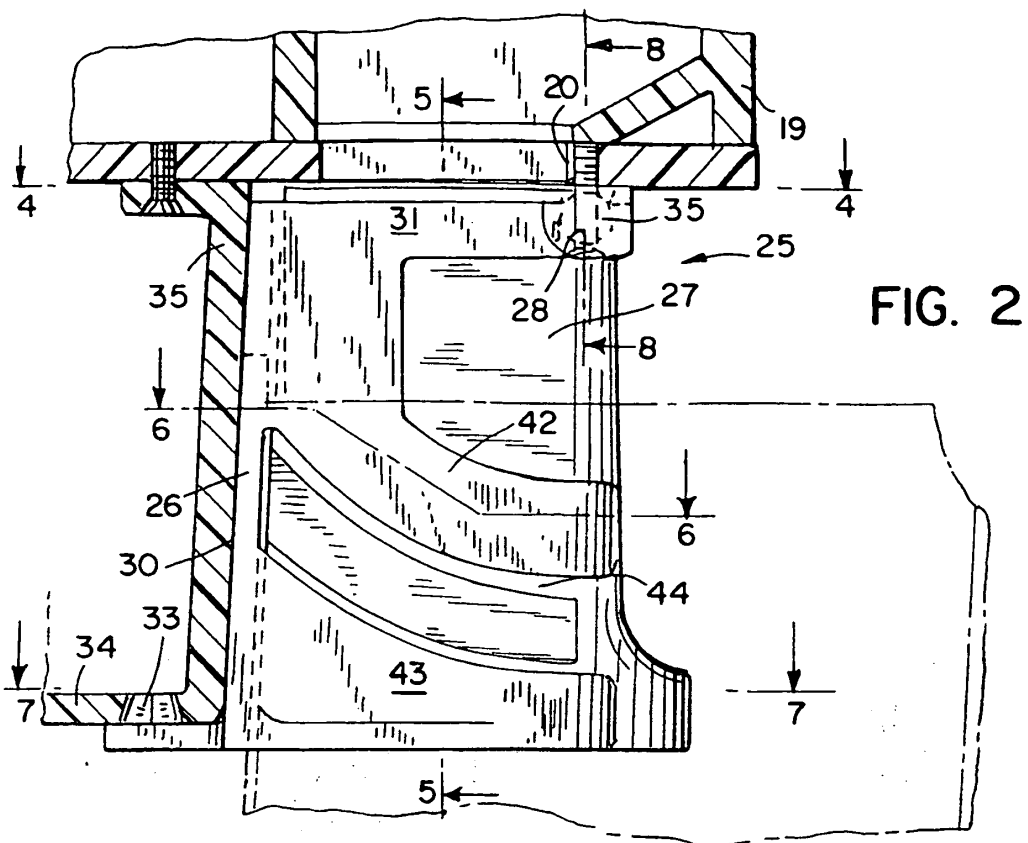


FIG. 5

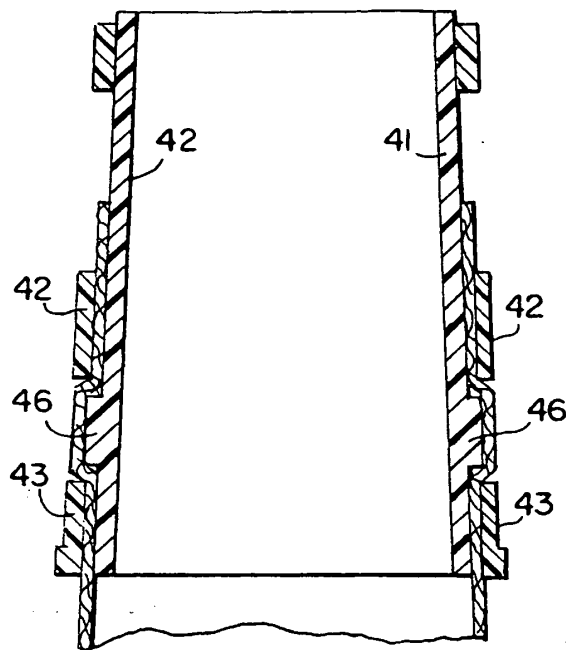


FIG. 8

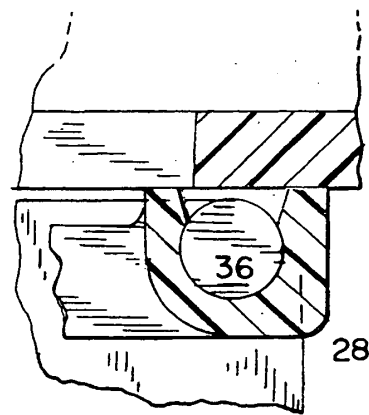
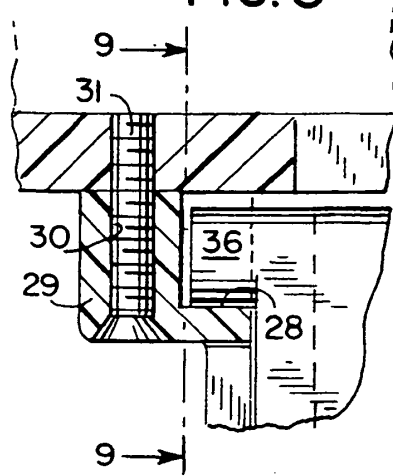


FIG. 9

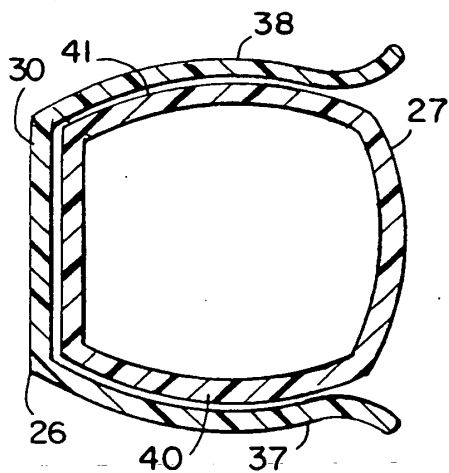


FIG. 6

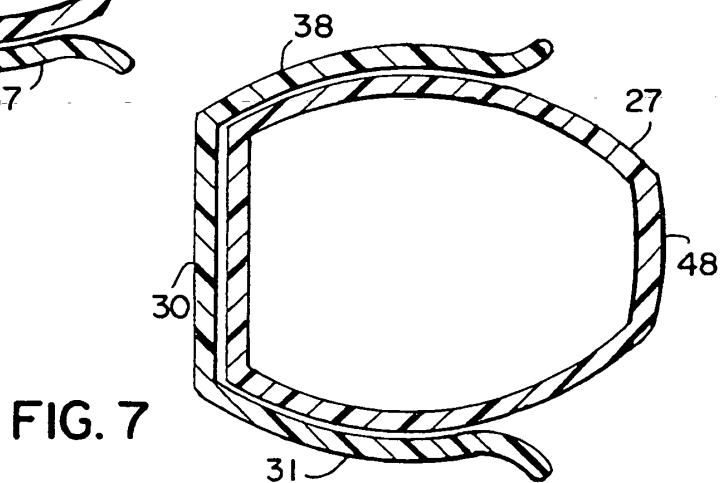


FIG. 7