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(71) Applicant: **De Soet, Bernardus Anthonius**
8212 XL Lelystad (NL)

(72) Inventor: **De Soet, Bernardus Anthonius**
8212 XL Lelystad (NL)

(74) Representative: **Klavers, Cornelis**
Octrooibureau Klavers B.V.
Markerkant 1201.20
1314 AJ Almere (NL)

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(54) **Merchandise dispensing device and associated display device**

(57) A dispensing device (1) for objects comprising an elongate supporting body (2) for objects, which supporting body is provided at an end thereof with securing means (4) for securing the supporting body to a bearer, and a pushing element (7) which can be moved along the elongate supporting body, wherein an end portion of an elongate pull member (5) extending along the elongate supporting body and comprising a handle (8) is attached to the pushing element (7), wherein the handle is provided at the other end of the pull member, and the dispensing device is provided with a guide mechanism enabling the pull member, near the pushing element thereof, to be held in position close to the supporting body in a slidable manner.

gate supporting body and comprising a handle (8) is attached to the pushing element (7), wherein the handle is provided at the other end of the pull member, and the dispensing device is provided with a guide mechanism enabling the pull member, near the pushing element thereof, to be held in position close to the supporting body in a slidable manner.

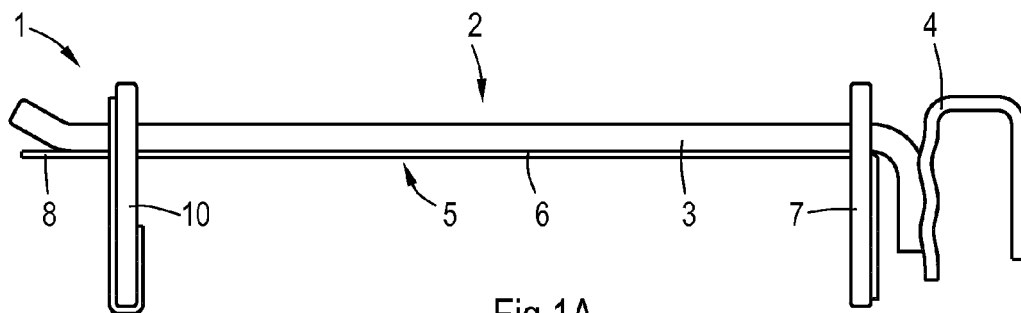


Fig.1A

Description

[0001] The present invention relates to a merchandise dispensing device comprising (1) an elongate supporting body for objects, which supporting body is provided at an end thereof with securing means for securing the supporting body to a bearer and (2) a pressure element which can be moved along the elongate supporting body.

[0002] Such a dispensing device is known from British Patent Application GB-2304102 A, which also discloses a display device housing a number of such dispensing devices disposed at a bearing wall in juxtaposed relationship with one another in a matrix-like arrangement. This device comprises a rolled leaf spring which urges the slidable pressure element forwards and hence also the products suspended in the device.

[0003] Besides, Belgian Patent BE- 1009863 A3 discloses a dispensing device comprising an elongate supporting body for objects, which supporting body is provided at one end with securing means for securing said supporting body to a bearer such as a wall, and a pressure element which is slidable along a guide path extending underneath the products, which pressure element is kept under pretension.

[0004] By virtue of the presence of the pressure element in said two dispensing devices according to the prior art, the products are always urged forward, also when one or more items are removed by customers. As a result, the remaining items are always within easy reach and visible, and can be readily taken out of the dispensing device. This advantage applies to a greater degree when the dispensing device is one of a row or matrix of juxtaposed dispensing devices, since, in the case that the products suspended from the dispensing device are not urged forward, they are out of reach or can only be reached with great difficulty from the sides of the products, and require a customer to reach deep into the device in a direction along the supporting body, as a result of which he can no longer see the items he wants to take from the dispensing device.

[0005] Although the devices according to the prior art have advantages as described above, they have the drawback that their construction is rather intricate and hence the cost price is high.

[0006] It is an object of the present invention to provide a dispensing device as set forth in the opening paragraph, which has a simplified construction and/or a lower cost price.

[0007] This object is achieved by means of a dispensing device as set forth in the opening paragraph, which dispensing device has the characteristics of claim 1.

[0008] The pull member, which may be comprised of a simple rod, enables the pressure element to be manually pulled forward and hence also the products to be pulled forward or "fronted". After it has been used, the pull member can be pressed back again, thereby putting it away so that it can no longer form an obstacle. As a result, the dispensing device according to the invention

can be of very simple construction and hence have a low cost price.

[0009] An additional advantage of the dispensing device according to the invention resides in that it is easy to clean as it comprises only a few components, which, in addition, are shaped such that they are readily accessible for cleaning brushes and the like.

[0010] In addition, unlike said devices disclosed in GB-2304102 A and BE-1009863 A3, the dispensing device according to the invention takes up hardly any space, and it requires no storage space for objects.

[0011] Moreover, the dispensing device according to the invention can be obtained by complementing an existing dispensing device with said pull member and guide mechanism, without the original device having to be adapted. The device thus achieved offers the advantages according to the invention and is still capable of accommodating as many items of merchandise as the original device.

[0012] In an embodiment, the pressure element may be a snap-on element with respect to the pull member, so that both components can be kept separate from one another during transport and storage, which takes up less space and reduces the risk of damage to the device.

[0013] In an advantageous embodiment, the device additionally comprises a guide plate which is provided with an aperture through which the supporting body and the pull member extend, wherein the guide plate is situated between the pressure element situated near one end of the pull member and the other end of the pull member. During operation, the guide plate should be situated behind the last item of merchandise suspended in the device.

[0014] Such a dispensing device can suitably be used to guide the pull member at or near the end of the supporting body when there are no objects suspended anymore from the supporting body to provide such guidance. For this purpose, it is alternatively possible to attach a small hook or the like to the supporting body, however, this requires adaptation of the original design, which would be unfavourable in the case of retrofit.

[0015] In another advantageous embodiment, the guide plate has a clamping mechanism around the aperture, which, when the guide plate is provided on the supporting plate, allows the former to move when a shearing force exerted on the guide plate exceeds a predetermined threshold value.

[0016] As a result, unintentional movement of the items suspended from the supporting body is prevented, as could occur, for example, when the frontmost product is removed in a clumsy way or when the supporting body is manufactured such that it extends slightly upwards, for example 20-30 degrees. In addition, a suitably designed clamping mechanism can take care of a variation of cross dimensions of the supporting body, so that it can be used in a plurality of already existing dispensing devices, as a so-termed retrofit addition.

[0017] If such a clamping mechanism comprises a thin,

flexible plate, in which the aperture is provided, then it becomes possible to obtain a very easily manufacturable clamping mechanism, which can thus have a low cost price. Such a flexible plate may additionally be provided in a recessed portion of a thicker, rigid plate, which may or may not be transparent.

[0018] In an advantageous embodiment, the guide plate is transparent and has a surface substantially perpendicular to the supporting body. A presentation surface is thus obtained on which product information for the customer and/or shop assistant(s) can be displayed.

[0019] In a particular embodiment, the supporting body comprises two juxtaposed rods which are level with one another, and the pull member is arranged between these rods. This enables a very stable configuration to be obtained, as the pull member can be guided by both rods.

[0020] Said two juxtaposed rods of the supporting body may first diverge, at the location of their ends remote from the securing means, so as to form a vertical passage for objects to be suspended between the rods and may then be interconnected. By virtue thereof, objects to be suspended from the rods, such as wine glasses, can be readily provided or removed, while at the same time a stable support is obtained for the suspended objects.

[0021] In addition, the two juxtaposed rods of the supporting body may be laterally bent, at the location of their ends remote from the securing means, with respect to the direction of running of said rods in order to form a horizontal slide guide for the pull member.

[0022] If, in addition, at least part of the mutual connection between the two juxtaposed rods of the supporting body is closer to the securing means than the part of said rods which is most remote therefrom, there is also enough space to construct the handle of the supporting body so as to be accessible for an operator.

[0023] In another embodiment, the supporting body and the pull member comprise at least one pair of concentric rods, the innermost rod of which always forms part of the pull member. Such an embodiment may be constructed so as to be sturdy, stable, aesthetically attractive and hygienic.

[0024] In an embodiment, at least the pull member is made of a transparent material, as a result of which it is invisible, so to speak, to the user and does not noticeably hinder the visibility of the product, which is favourable from an aesthetic point of view.

[0025] In an embodiment, the dispensing device is provided with an auxiliary supporting body which extends parallel to the supporting body at some distance therefrom. In this manner, it is for example, yet not exclusively, possible that one supporting body is used to support the pull member, possibly by constructing both of them so as to be concentric, while the auxiliary supporting body is used to support the items of merchandise. This is advantageous, for example, when the suspension opening in the items is too small to allow passage of both the pull member and the supporting body, or when a more reliable and/or more beautiful slide guide of the pull member is

required, or when the device is provided as a retrofit to an existing supporting body.

[0026] In a final embodiment, a recoil element is provided between, on the one hand, the pull member or the pressure plate and, on the other hand, the supporting body or the securing means, which recoil element pulls or pushes the pull member or the pressure plate in the direction of the securing means when the pull member is not in the closest position with respect to the support. Said recoil element may be, for example, a tension spring which may possibly be arranged between the pull member and the securing means. Said recoil element may alternatively be a compression spring or any other spring body.

[0027] The invention additionally relates to a display device comprising a number of dispensing devices according to any one of the preceding claims. Such a display device offers advantages similar to those of the dispensing devices described hereinabove.

[0028] The dispensing device according to the invention will now be explained in greater detail with reference to the drawings shown below, in which corresponding parts bear the same reference numerals, whether or not provided with an accent symbol. In said drawings:

Figure 1A shows a side view of a first embodiment of a dispensing device according to the invention, Figure 1B shows the pull member of the dispensing device of Figure 1A,

Figure 1C shows a guide plate of the dispensing device of Figure 1A,

Figure 2A is a perspective view of a second embodiment of a dispensing device according to the invention,

Figure 2B shows the pull member of the dispensing device of Figure 2A,

Figure 3 is a perspective view of a third embodiment of a dispensing device according to the invention, and

Figure 4 is a similar perspective view of a fourth embodiment of a dispensing device according to the invention.

[0029] In Figure 1A, the dispensing device 1 comprises a supporting body 2 which is comprised of a supporting rod 3 and a bracket 4, which bracket can suitably be secured to a supporting wall of a dispenser housing (not shown) by means of screws. Underneath the rod 3, there is provided a pull member 5 which is comprised of an elongate pull rod 6 which is provided at one end with a pressure element 7 and at the other end with a handle 8. As is shown in Figure 1B, said pressure element 7 is provided with an aperture 9 which, in combination with the supporting rod 3, constitutes a guide mechanism allowing the pull member 5 to slide or glide along the supporting body 2. In this embodiment, the aperture 9 is chosen such that it fits around a number of different types of commercially available supporting bodies, so that the pull

member can be readily provided as a retrofit in existing dispensing and display devices.

[0030] Figure 1A also shows a guide plate 10 which (see Figure 1C) has an aperture 11 which is similar to aperture 9 of pressure element 7. Said guide plate 10 is composed, in this example, of synthetic resin and has a transparent window, so that if a sticker with product information is provided behind said window, this product information is visible to the user. In normal operation, the guide plate 10 is located between the pressure element 7 and the handle 8. As long as objects in the dispensing device are suspended from the supporting body 2, the guide plate 10 will be directly adjacent the pressure element 7, behind the objects. The pull member 5 is then held in position near the supporting body by the pressure element 7 with aperture 9, i.e., by the guide mechanism and by the objects, typically packagings of products, wherein the packaging is always provided with a hole through which pass both the supporting rod 3 and the pull rod 6.

[0031] When the dispensing device accommodating merchandise is in use, the user, typically a customer or a shop-assistant, pulls the handle 8 to pull the pull rod 6 in his direction, every time one or more objects have been removed from the dispensing device, thereby causing the pressure member 7 to urge the suspended objects in the forward direction. By virtue of this operation, the objects to be dispensed can always be at the front of the supporting rod 3, where they are clearly visible and readily accessible.

[0032] Once the last object has been removed from the dispensing device 1, the pull rod, on the side of the handle 8 thereof, is retained close to the supporting rod 3 by the guide plate 10 with aperture 11 thereof.

[0033] In this exemplary embodiment, the pull rod 6 is made of transparent synthetic resin material, which, in addition, is so soft that it allows the pull rod 6 to be cut to the desired length compatible with the supporting rod 3, which is favourable again in the case of retrofit.

[0034] In Figure 2A, a dispensing device is shown which is similar to that shown in Figure 1A, with this difference that the supporting body 2' comprises two supporting rods 3' (instead of one supporting rod 3), which extend parallel to one another and at some distance from one another, and, towards the front side, i.e., the side of the supporting body 3' remote from the bracket 4', they first diverge and are then bent upwards and subsequently backwards, and after that they extend towards each other and converge. In this manner, the stems of wine glasses G suspended from the supporting body 2' can pass between the supporting rods 3' in the vertical direction, at least on the front side of the supporting body 2', and there is also sufficient space to grasp the eye 8' of the pull rod 6', also through the opening 8a thereof.

[0035] The pull rod 6' is guided, at one end thereof, by two slits extending between the three teeth 7a of the pressure element 7', and also by the two vertical portions 3a of the supporting rods 3'.

[0036] In Figure 3, the dispensing device 1" comprises two concentric rods, of which the outermost rod forms the supporting rod 3", which are secured to the bracket 4", and the innermost rod forms the pull rod 6" with handle 8" and is slidably arranged within the supporting rod 3".

[0037] The operation of the second and third embodiment shown in, respectively, Figures 2A, 2B and Figure 3, is similar to that of the embodiment shown in Figures 1A and 1B, at least with respect to the pulling forward of objects.

[0038] Figure 4 shows a further embodiment of the device according to the invention, which is similar to that of Figure 3, and which differs therefrom in particular by the presence of an auxiliary supporting body 12 underneath the supporting rod 3". In this embodiment, the items of merchandise must be suspended from the auxiliary supporting body Figure 4 does not show that a tension spring is provided, behind the pull rod 6", within the hollow supporting rod 3", secured to the bracket 4". This tension spring, which is not shown in the drawing, makes sure that the pull rod 6" is automatically retracted again after an operator has pulled it forwards (i.e. to the left in Figure 4); this increases the ease of use of the device.

[0039] Variants of the embodiments shown are possible. For example, the pull rod 6 may be provided with rings which embrace the supporting rod 3 instead of the guide plate 10.

Dispensing device	1
Supporting body	2
Supporting rod	3
Bracket	4
Pull member	5
Pull rod	6
Pressure element	7
Handle	8
Aperture	9
Guide plate	10
Aperture	11
Auxiliary supporting body	12

Claims

1. A dispensing device for objects comprising:

- 1 an elongate supporting body for objects, which supporting body is provided at an end thereof with securing means for securing the supporting body to a bearer, and
 - 2 a pressure element which can be moved along the elongate supporting body,
- characterized in that**

- an end portion of an elongate pull member

- extending along the elongate supporting body and comprising a handle is attached to the pressure element,
 - wherein the handle is provided at the other end of the pull member, and
 - the dispensing device is provided with a guide mechanism enabling the pull member, near the pressure element thereof, to be held in position close to the supporting body in a slidable manner.
2. The dispensing device according to claim 1, **characterized in that** the device additionally comprises a guide plate which is provided with an aperture through which the supporting body and the pull member extend, wherein the guide plate is situated between the pressure element situated near one end of the pull member and the other end of the pull member.
 3. The dispensing device according to claim 2, **characterized in that** the guide plate has a clamping mechanism around the aperture, which, when the guide plate is provided on the supporting plate, allows the former to move when a shearing force exerted on the guide plate exceeds a predetermined threshold value.
 4. The dispensing device according to claim 3, **characterized in that** said clamping mechanism comprises a thin, flexible plate, in which the aperture is provided.
 5. The dispensing device according to any one of claims 2 to 4, **characterized in that** the guide plate is transparent and has a surface substantially perpendicular to the supporting body.
 6. The dispensing device according to any one of the preceding claims, **characterized in that** the supporting body comprises two juxtaposed rods which are level with one another, and the pull member is arranged between these rods.
 7. The dispensing device according to claim 6, **characterized in that** the two juxtaposed rods of the supporting body first diverge, at the location of their ends remote from the securing means, so as to form a vertical passage for objects to be suspended between the rods, and are then interconnected.
 8. The dispensing device according to claim 7, **characterized in that** the two juxtaposed rods of the supporting body are laterally bent, at the location of their ends remote from the securing means, with respect to the direction of running of said rods in order to form a horizontal slide guide for the pull member.
 9. The dispensing device according to claim 7 or claim 8, **characterized in that** at least part of the mutual connection between the two juxtaposed rods of the supporting body is closer to the securing means than the part of said rods which is most remote therefrom.
 10. The dispensing device according to any one of the preceding claims, **characterized in that** the supporting body and the pull member comprise at least one pair of concentric rods, the innermost rod of which always forms part of the pull member.
 11. The dispensing device according to any one of the preceding claims, **characterized in that** at least the pull member is made of transparent material.
 12. The dispensing device according to any one of the preceding claims, **characterized in that** the dispensing device is provided with an auxiliary supporting body which extends parallel to the supporting body at some distance therefrom.
 13. The dispensing device according to any one of the preceding claims, **characterized in that** a recoil spring is provided between, on the one hand, the pull member or the pressure plate and, on the other hand, the supporting body or the securing means, which recoil spring pulls or pushes the pull member or the pressure plate in the direction of the securing means when the pull member is not in the closest position with respect to the support.
 14. A display device comprising a number of dispensing devices according to any one of the preceding claims.

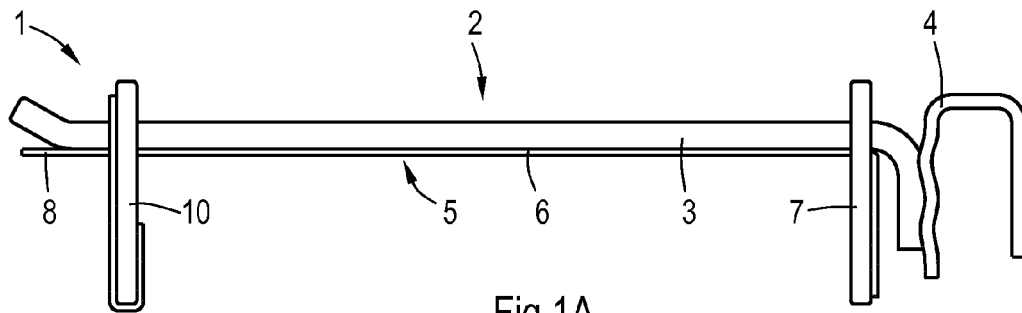


Fig.1A

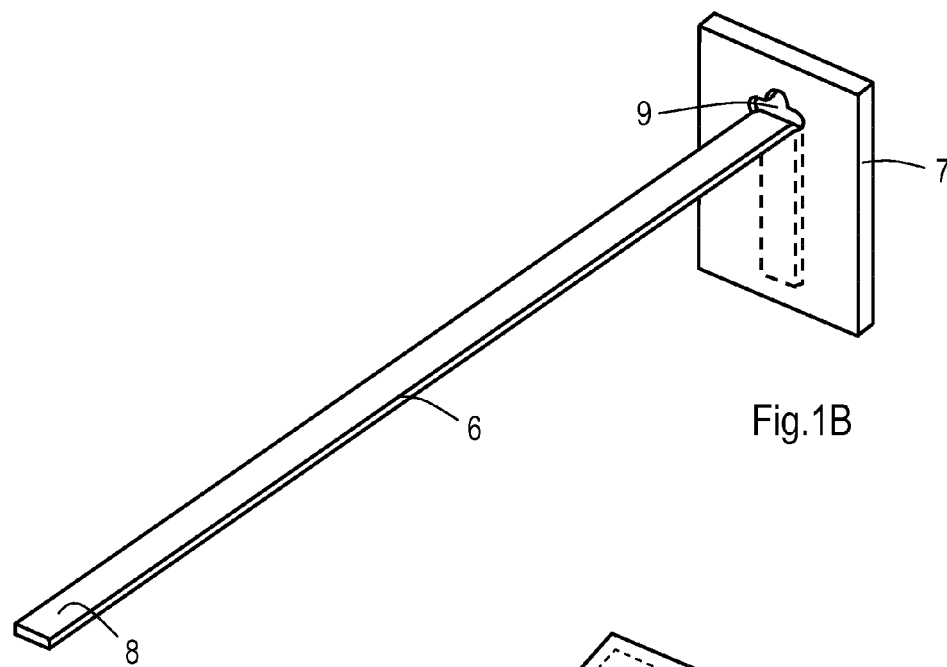


Fig.1B

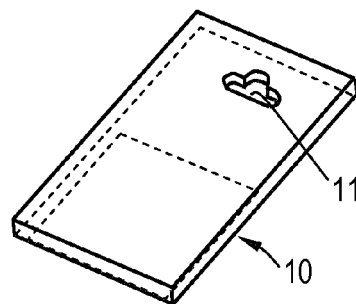
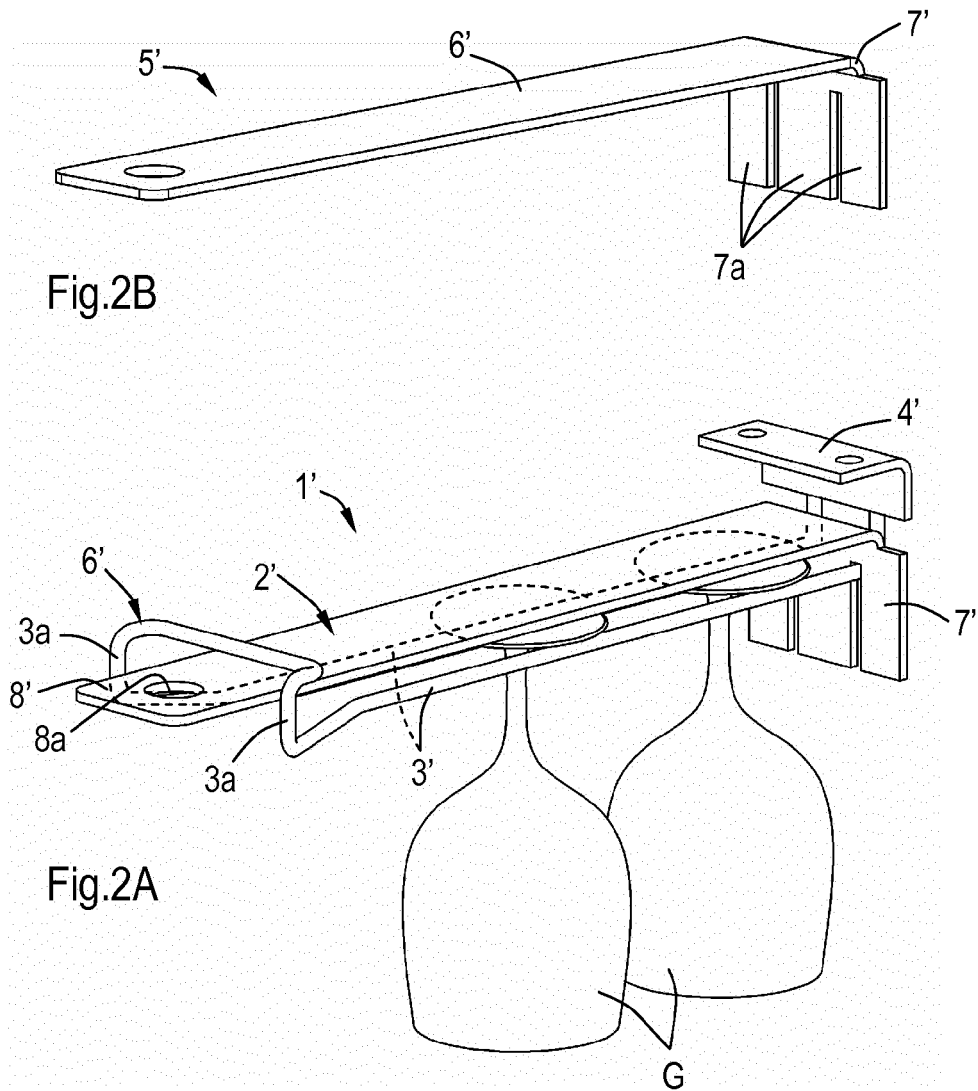


Fig.1C



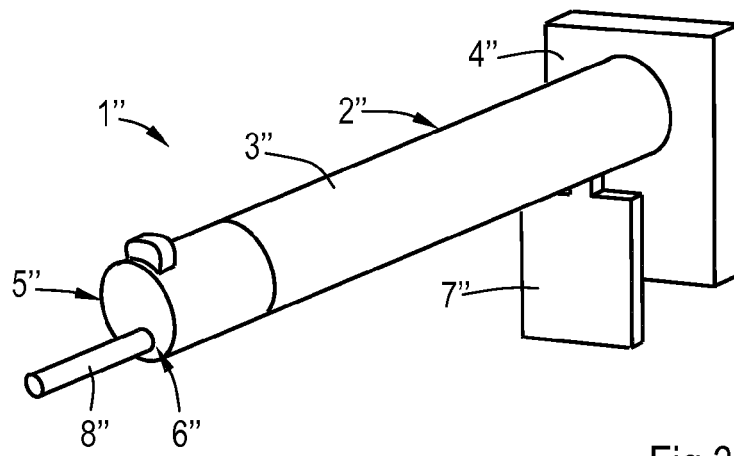


Fig.3

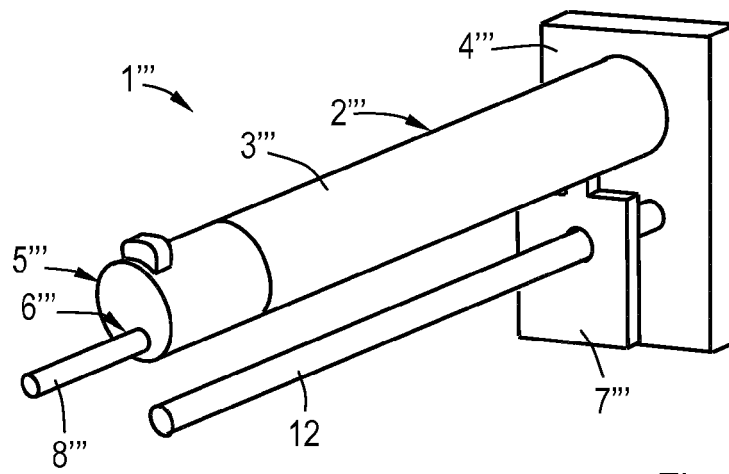


Fig.4



EUROPEAN SEARCH REPORT

Application Number
EP 13 15 8546

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Place of search The Hague		Date of completion of the search 27 June 2013	Examiner van Hoogstraten, S
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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