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(54) **Kit for dispensing substances**

(57) The invention relate to a frame (1) wherein multiple aerosol cans (4) can be attached for a delivering operation. The can (4) is connected with a flexible tube (8) to a one or a two component gun (10). The aerosol can be attached with a clip system (12) or with a screw adapter. The system is fitted for one or for 2 component

systems. The system is constructed in such a way that it is easy to clean and maintain. Therefore a cleaner and a steel brush is also provided. It is possible to put the system in a backpack wherein space is left for spare aerosol cans.

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Description

[0001] The present invention relates to a device and an arrangement for applying substances, more particularly foams as used in the construction industry such as polyurethane-based foams.

[0002] Aerosol-type cans are used for dispensing substances such as polyurethane, epoxy resin, polyester resin, sealants, lacquers, adhesives and any other liquid.

[0003] It is known to use applicators in the form of "guns" with an associated cylinder containing a substance, usually a sealant or a foam, to be dispensed.

[0004] These are hand-held guns and the aerosol can is directly fixedly attached to the gun. These systems have several disadvantages. For example the autonomy is low, the weight of the cylinder renders the device uncomfortable to handle. It is also difficult, due to the bulkiness of the can or cylinder, and possibly the required orientation of the can to access tight places such as corners, recesses or to apply the substances to ceilings etc..

[0005] The large pressure vessels which are not directly fixed to the applicator give a longer autonomy but there are problems to recycle them and these vessels must be submitted to special regulations for pressure testing and transport safety. The pressure vessels are also more expensive than the aerosol cans.

[0006] This invention relates to a system that offers the possibility to overcome the above inconvenient features.

[0007] According to one object of the invention, there is proposed a system using several cans at the same time.

[0008] It is also an object of the invention to provide an applicator system that combines the advantages of one component foam in large pressure vessels and normal aerosol-type cans.

[0009] According to still another object of the invention, there is provided a system with an autonomy of up to 4 kg of product without the need of changing the aerosol cans.

[0010] The arrangement of the invention provides a system which does not need a can on the gun itself so that the gun can be used in any desired position.

[0011] According to the invention there is provided an arrangement comprising an applicator, several cans, a holder to support and fasten the cans, and one or several flexible pipes or hoses connecting said cans to the applicator.

[0012] Preferably the holder is integrated in a rucksack in order to facilitate the handling of the arrangement during the work to perform (see fig. 10). The rucksack will preferably be provided with room for spare cans. The latter can be taken away before operating, in order to lighten the system and to render it easier to handle.

[0013] It is also possible to use the multicann-holder for applications requiring two or plural component systems. In this case the device preferably contains a ratio-control arrangement to control the output of the different components.

[0014] For certain applications, additional substances, e.g. a hardener, a catalyst, or the like, must indeed be admixed. The admixing of the substance is done at the applicator, if the substances are already mixed at the time when the aerosol dispenser is filled, the useful life of the contents is limited.

[0015] To this end, the multicann-holder makes it possible to use typically up to four 750 ml cans at one time, or even more.

[0016] The invention will be better understood in the light of the following further description, with reference to the annexed drawings provided in an exemplary way only :

Figure 1 is a front plan view of the system, The whole system is attached to a frame (1). The valve (figure 6) of the aerosol cans (4) need to be placed in the insert (5) and pressed down by using the standard clips (2).

[0017] The clip height can be adapted at any aerosol m size by sliding the clip frame (12) along the frame (1). The clip frame (12) can be secured with the fixing screws (3). After opening the ball valves (6) and (7) the gun is ready for use.

[0018] For attaching the aerosol cans to the holder one may use the clips system (12) with the valve (figure 6), a screw adapter (figure 7), and the can with a short valve and a ring (figure 8).

[0019] When the cans are empty they can easily be replaced in a known way.

[0020] Cleaning goes easily because the solvent container may also be in the form of a can, that is fixed on the multi-can holder with a screw adapter (11) and placed in the rucksack.

[0021] For cleaning extensively the inside of the multicann-holder there is provided a suitable steel brush (figure 2) which may be a part of the multicann-holder to form a kit. By closing the ball valve (7) the flexible (8) can be detached from the check valve (9) for cleaning or for replacement.

[0022] The applicator gun (10) can be used in all directions because the aerosol cans in the back are already standing upside down.

Figure 2 shows the steel brush for cleaning the inside of the multicann-holder.

Figure 3 is a perspective view of the insert (5).

Figure 4 shows the system using the screw adapter.

Figure 5 is a view of the system put in the backpack.

Figure 9 is a front plan view of the system with a ratio-control arrangement (13) adapted for two components 1 and B to be mixed in a two component gun.

Claims

1. A portable arrangement for delivering substances such as sealants, adhesives or foams comprising :
 - a rigid multi-holder frame able to fixedly hold at least two identical pressurized aerosol cans containing said substnacen the cans being connected via their delivering heads and valves to a common conduit,
 - hand-held applicator,
 - a flexible pipe connecting the common conduit to the applicator.
2. An arrangement according to claim 1 wherein several cans can be attached with a clip system sliding along bars.
3. An arrangement according to claim 1 wherein several aerosol cans with rings can be attached to the holder with a screw adaptor.
4. An arrangement according to any preceding claims wherein the rigid holder frame is contained in a rucksack able to be carried on the back of the user.
5. An arrangement according to any preceding claims wherein the rucksasck is provided with a means for receiving additional spare cans and/or a cleaning can.
6. An arrangement according to any preceding claims wherein the multi-holder frame is also provided with a can containing a cleaning susbtances for cleaning the consuits and the hose, said can being attached to the holdr by means similar to the ones retaining the main substance cans and being possibly also connected to said conduit via a valve.
7. An arrangement according to any preceding claims wherein the rucksack contains a means for cleaning the conduit, preferavly a suitable metal brush.
8. An arrangement according to any preceding claims wherein there are at least two different substances in said several cans and said substances are conveyed to the applicator through a ratio-control system via separate conduits or flexible pipes, and mixed to the desired ratio.

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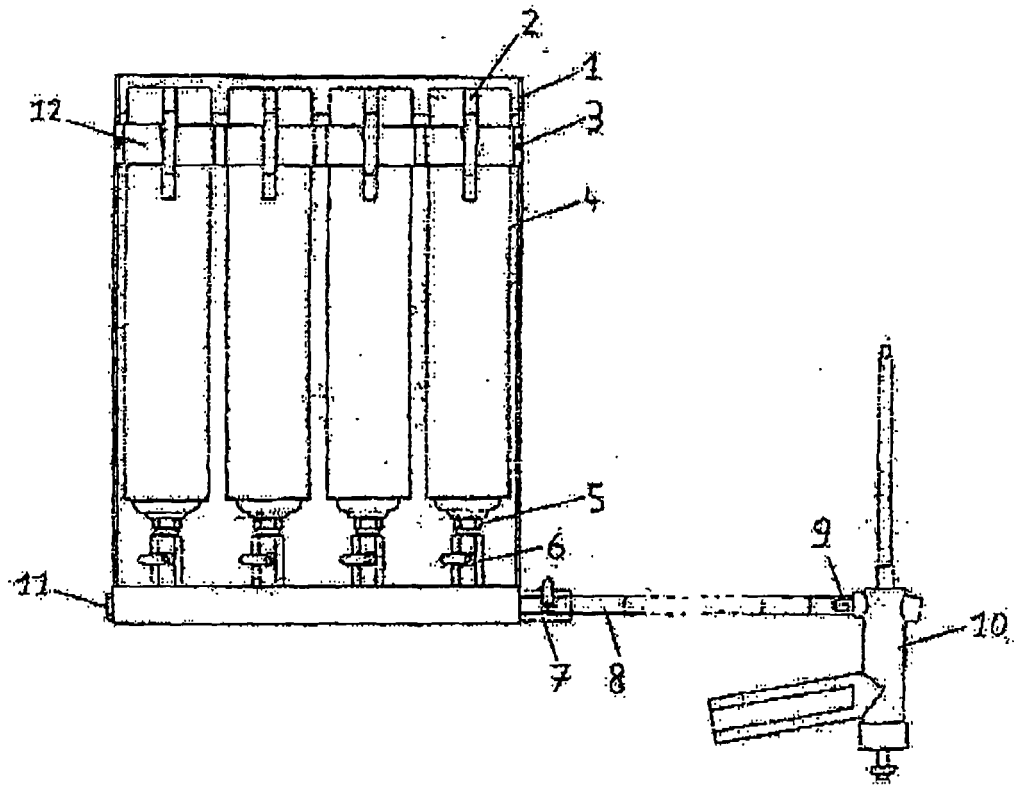


FIG. 1

Fig. 2

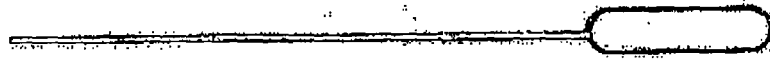


Fig. 3

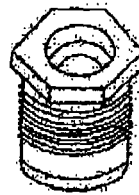


Fig. 6

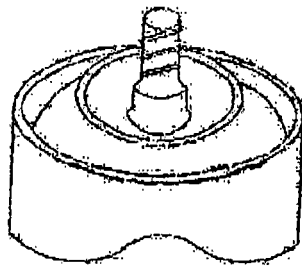


Fig. 7

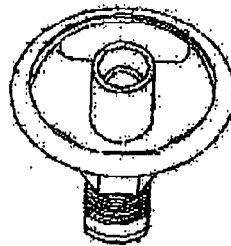
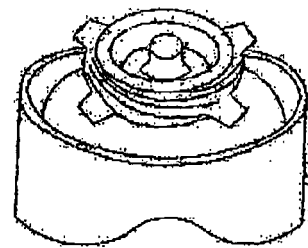


Fig. 8



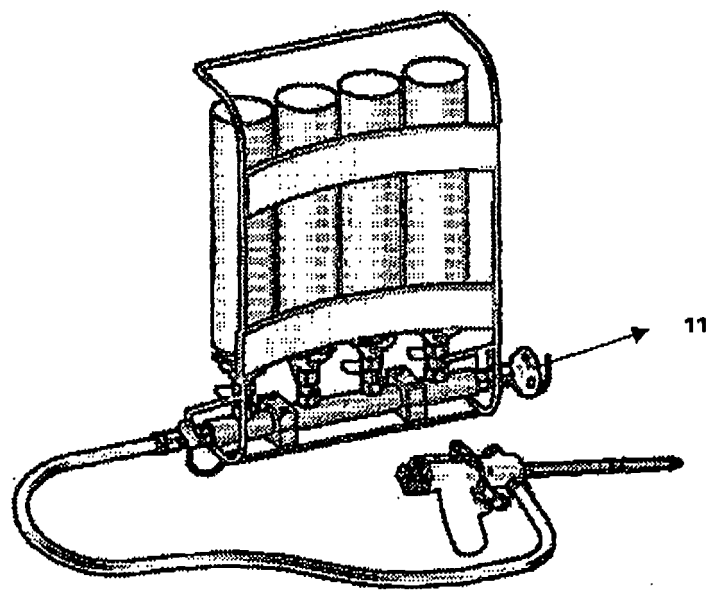


Figure 4

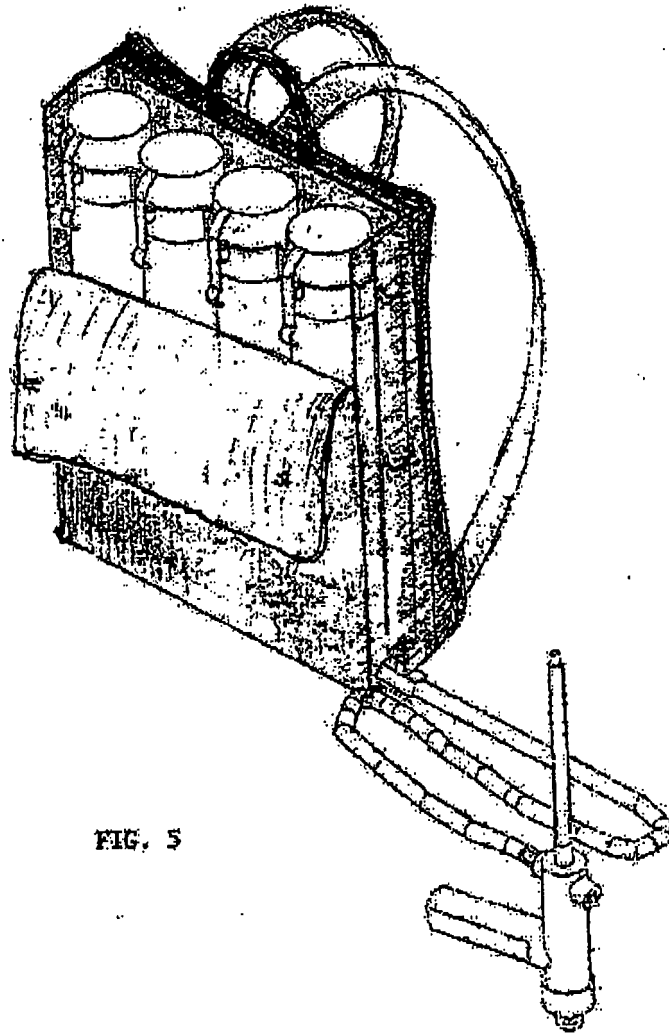


FIG. 5

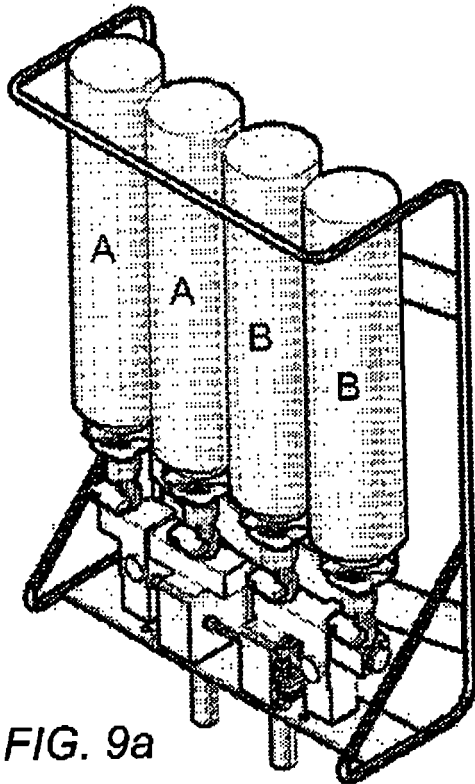
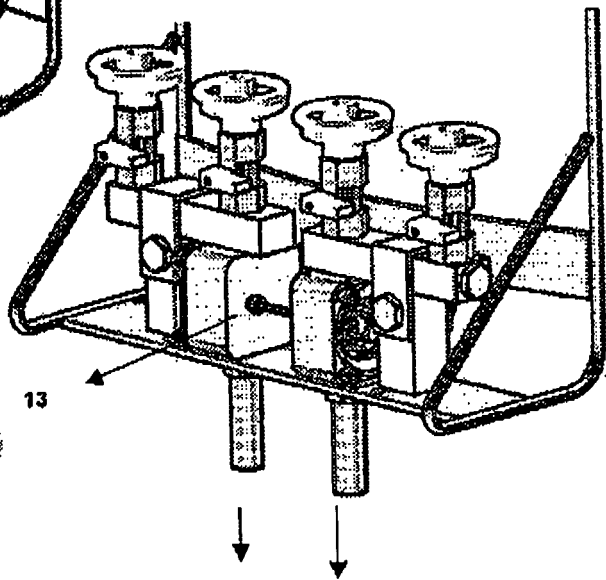


FIG. 9a



Towards two component gun

FIG. 9b

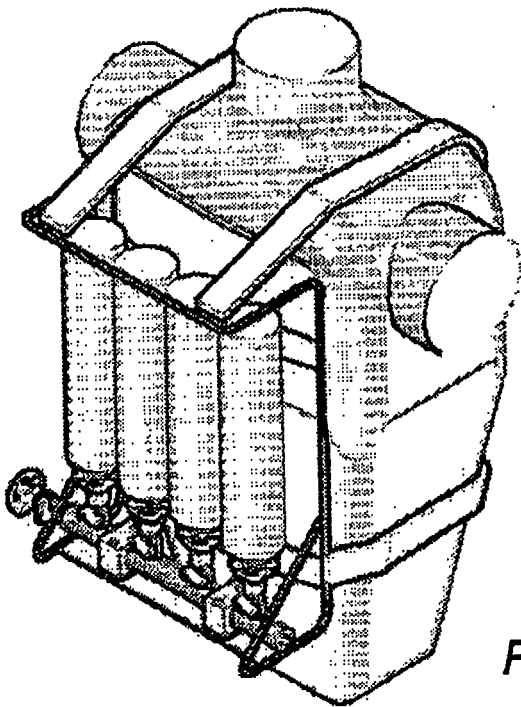


FIG. 10



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Place of search Munich		Date of completion of the search 22 August 2006	Examiner Pöll, A
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