

PATENT SPECIFICATION

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(54) PACKAGES FOR INJECTIBLE MEDICATION

(71) We, IMS LIMITED, a Company organized according to the Laws of the State of Delaware, of 408 South Spring Street, Los Angeles, California 90013, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to packages for injectible medication.

It is important that syringes and other containers for injectible medication be maintained in a sterile condition during shipment and storage. It is also important that the syringe be made ready for injection at the time of use without the destruction of sterility.

The present invention provides a flexible, non-form-retaining, generally rectangular, transparent, closed bag having a lengthwise dimension substantially greater than its lateral dimension, said bag containing a vial and a vial injector extending lengthwise in the bag, said bag be imperforate and non-permeable to maintain said contents in aseptic condition prior to opening, said bag having heat seals coextensive with both of its lengthwise edges, said bag having a slit in a lengthwise edge in proximity to one end thereof so that upon lateral ripping, one end of the bag is completely removed to permit removal of the vial and vial injector by a simple dumping force, said slit being substantially perpendicular to the lengthwise edge of said bag, the interior of said bag being separated from said slit by a seal, said slit and its seal extending inwardly of said heat seal at the adjacent lengthwise edge.

With such a bag, the vial and vial injector can be maintained in isolated and sterile condition during storage but may readily be removed therefrom when needed without the need to touch or otherwise grasp them. Further, the entire end of the bag can be torn cleanly away in a single

[Price 25p]

motion to afford ready ingress and egress.

Preferably, the bag is made of a transparent plastics material; the seal associated with the slit may then be formed by heating to fuse together superposed plastics layers.

The bag may contain a pre-filled hypodermic syringe.

The invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a bag constructed in accordance with the present invention;

Figure 2 is an enlarged view of a part of the bag;

Figure 3 is an enlarged view of a part of another bag constructed in accordance with the invention;

Figure 4 shows the bag of Figure 1 after one end of the bag has been ripped away; and

Figure 5 shows the removal of the contents of the bag without touching the contents thereof.

The bag 10 has a generally rectangular configuration. The size and shape of the bag are not critical, but the bag has a lengthwise dimension substantially greater than its lateral dimension to accommodate conveniently a vial 14 and a vial injector 12 which are arranged lengthwise in the bag.

A slit 16 is surrounded by a discrete semi-circular heat seal 18, which separates the interior of the bag from the slit. The bag 10 is completely closed to maintain the sterility of the contents of the bag.

The heat seal can also completely encompass the slit such as is shown in Figure 3 where rectangular heat seal 20 completely surrounds slit 22.

The slits 16 and 22 and their associated heat seals 18 and 20 extend inwardly of the heat seals at the adjacent lengthwise edges of the bag to facilitate opening of the bag.

In operation, the ends of the bags adjacent the slits are simply grasped and the slits start to tear laterally across the bag, resulting

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in a clean and complete removal of an end of the bag, as shown in Figure 4. No corners or flaps are present to interfere with the removal of the contents of the bag onto a surgical tray 24 or other convenient receptacle. While not shown, the contents of most bags can be removed by the use of one hand applying a dumping action. Thus, with the bag of the invention, it is possible to unwrap injectible medication without its being touched by human hands.

In a preferred embodiment, the bag is charged with a sterilizing gas such as ethylene oxide prior to sealing. An indicator strip which undergoes a colour change in the presence of sterilizing gas can be sealed into the bag to reveal any subsequent break or opening in the bag.

The bag itself may be made of a thin film material which is substantially non-permeable. Preferably, the bag is made of transparent plastics material such as polypropylene, cellulosic esters, and the like. Various printed instructions can be applied to the exterior of the bag. The bag is non-form-retaining, that is to say, if it is deformed, it does not remain in that deformed configuration when it is released, as, for example, does the package of United States Specification No. 3,164,695 where the package includes a wire to maintain the shape of the package after deformation and release.

The bag may contain one or more syringes, injectors, vials and/or ampoules.

WHAT WE CLAIM IS:—

1. A flexible non-form-retaining, gener-

ally rectangular, transparent, closed bag having a lengthwise dimension substantially greater than its lateral dimension, said bag containing a vial and a vial injector extending lengthwise in the bag, said bag being imperforate and non-permeable to maintain said contents in aseptic condition prior to opening, said bag having heat seals coextensive with both of its lengthwise edges, said bag having a slit in a lengthwise edge in proximity to one end thereof so that upon lateral ripping, one end of the bag is completely removed to permit removal of the vial and vial injector by a simple dumping force, said slit being substantially perpendicular to the lengthwise edge of said bag, the interior of said bag being separated from said slit by a seal, said slit and its seal extending inwardly of said heat seal at the adjacent lengthwise edge.

2. A bag as claimed in claim 1, wherein the bag contains a sterilizing gas and an indicator strip which is colour responsive to said gas.

3. A bag substantially as hereinbefore described with reference to, and as shown in, Figures 1, 2, 4 and 5 of the accompanying drawings or Figures 1, 4 and 5 of the accompanying drawings when modified as shown in Figure 3.

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