

A TUBE HOLDER

Field of the Invention

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The present invention relates to a tube holder and, in particular, to a tube holder for holding ampoules and test tubes.

10 Background of the Invention

It is known to provide ampoule and test tube racks which include a web portion provided with several apertures and a base portion spaced from the web portion and arranged so
15 that a tube received during use in an aperture rests on the base portion.

However, such a tube holder is not configured to accommodate tubes of significantly varying lengths.

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Summary of the Invention

In accordance with an aspect of the present invention, there is provided a tube holder comprising:

25 a web portion having a plurality of apertures; and
 a base portion disposed relative to the web portion such that the apertures are aligned relative to the base portion;

 the base portion being of stepped configuration
30 defining at least a first step and a second step such that a distance between the base portion and the web portion at one of the apertures disposed above the first step is different to a distance between the base portion and the web portion at another one of the apertures disposed above
35 the second step so that tubes of differing lengths can be accommodated in the tube holder.

In one embodiment, three discrete distances are defined between the web portion and the base portion.

5 The base portion may comprise a substantially flat base plate and a support portion of stepped configuration fixed to the base plate, for example by adhesive bonding.

10 In one arrangement, the support portion comprises two parallel side plates of stepped configuration and first and second support plates fixed to the side plates so as to define first and second steps.

15 In one embodiment, apertures of differing sizes are provided. The apertures may comprise at least one first aperture disposed above the base plate, at least one second aperture of reduced size relative to the at least one first aperture disposed above the first step, and at least one third aperture of reduced size relative to the at least one second aperture disposed above the second
20 step.

In one arrangement, the tube holder is configured such that a space is defined between the web portion and the base portion which is accessible by a user. The web
25 portion may be connected to the base portion by a side wall.

The tube holder may be at least partially transparent.

30 Brief Description of the Drawings

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

35 Figure 1 is a diagrammatic perspective view of a tube holder in accordance with an embodiment of the present invention; and

Figure 2 is a diagrammatic plan view of the tool holder shown in Figure 1.

Description of an Embodiment of the Invention

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Referring to the drawings, there is shown a tube holder 10 for holding tubes of the type including ampoules and test tubes.

10 The tube holder includes a web portion 12, in this example of generally flat configuration, a base portion 14 disposed adjacent the web portion 12, and a side wall 15 connecting the web portion 12 to the base portion 14. Since the web portion 12 is connected to the base portion
15 14 by only the side wall 15, a space between the web portion 12 and the base portion 14 is easily accessible so as to facilitate easy cleaning.

The base portion 14 in this example includes a generally
20 flat base plate 16 extending generally parallel to the web portion 12, and a support portion 18 of generally stepped configuration. The arrangement is such that the base plate 16 and the support portion 18 define multiple, in this example three, distances between the web portion 12
25 and the base portion 14.

In this example, the web portion 12, the side wall 15 and the base plate 16 are integrally formed and define a generally U-shaped member, and the support portion 18 is
30 fixed to the base plate 16 in any suitable way, for example by adhesive bonding.

In this example, the support portion 18 includes two parallel side plates 20 and first and second support
35 plates 22, 24 respectively defining first and second steps.

In order that the web portion 12 may accommodate tubes, a plurality of apertures are formed in the web portion 12. In this example, two first apertures 26, four second apertures 28 of reduced size relative to the first
5 apertures 26, and six third apertures 30 of reduced size relative to the second apertures 28 are provided. By providing apertures of differing size, the tube holder 10 is able to receive tubes of differing diameter.

10 The apertures are formed on the web portion 12 such that the first apertures 26 are disposed above the base plate 16, the second apertures 28 are disposed above the first support plate 22, and the third apertures 30 are disposed above the second support plate 24. In this way, a first
15 distance is defined between each of the first apertures 26 and the base plate 16, a second distance of reduced size relative to the first distance is defined between each of the second apertures 28 and the first support plate 22, and a third distance of reduced size relative to the
20 second distance is defined between each of the third apertures 30 and the second support plate 24.

It will be appreciated that by providing the first, second and third distances between respective apertures and the
25 base portion 14, the tube holder 10 is able to hold tubes of differing lengths.

In the present example, the tube holder is formed of transparent plastics material such as Perspex so as to
30 facilitate easy identification of tubes disposed during use in the tube holder 10.

In the claims of this application and in the description of the invention, except where the context requires
35 otherwise due to express language or necessary implication, the words "comprise" or variations such as "comprises" or "comprising" are used in an inclusive

sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

5 Modifications and variations as would be apparent to a skilled addressee are deemed to be within the scope of the present invention.

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CLAIMS:

1. A tube holder comprising:
a web portion having a plurality of apertures; and
5 a base portion disposed relative to the web portion
such that the apertures are aligned relative to the base
portion;
the base portion being of stepped configuration
defining at least a first step and a second step such that
10 a distance between the base portion and the web portion at
one of the apertures disposed above the first step is
different to a distance between the base portion and the
web portion at another one of the apertures disposed above
the second step so that tubes of differing lengths can be
15 accommodated in the tube holder.
2. A tube holder as claimed in claim 1, wherein three
discrete distances are defined between the web portion and
the base portion.
- 20 3. A tube holder as claimed in claim 1 or claim 2,
wherein the base portion comprises a substantially flat
base plate and a support portion of stepped configuration
fixed to the base plate.
- 25 4. A tube holder as claimed in any one of claims 1 to 3,
wherein the support portion defines two steps.
5. A tube holder as claimed in any one of the preceding
30 claims, wherein apertures of differing sizes are provided.
6. A tube holder as claimed in claim 5 when dependent
on claim 4, wherein the apertures comprise at least one
first aperture disposed above the base plate, at least one
35 second aperture of reduced size relative to the at least
one first aperture disposed above a first step, and at

least one third aperture of reduced size relative to the
at least one second aperture disposed above a second step.

7. A tube holder as claimed in any one of the preceding
5 claims, wherein the tube holder is configured such that a
space is defined between the web portion and the base
portion which is accessible by a user.

8. A tube holder as claimed in claim 7 when dependent
10 on claim 3, further comprising a side wall between the web
portion and the base plate, wherein the web portion, the
side wall and the base plate define a substantially U-
shaped member.

15 9. A tube holder as claimed in any one of the preceding
claims, wherein the tube holder is at least partially
transparent.