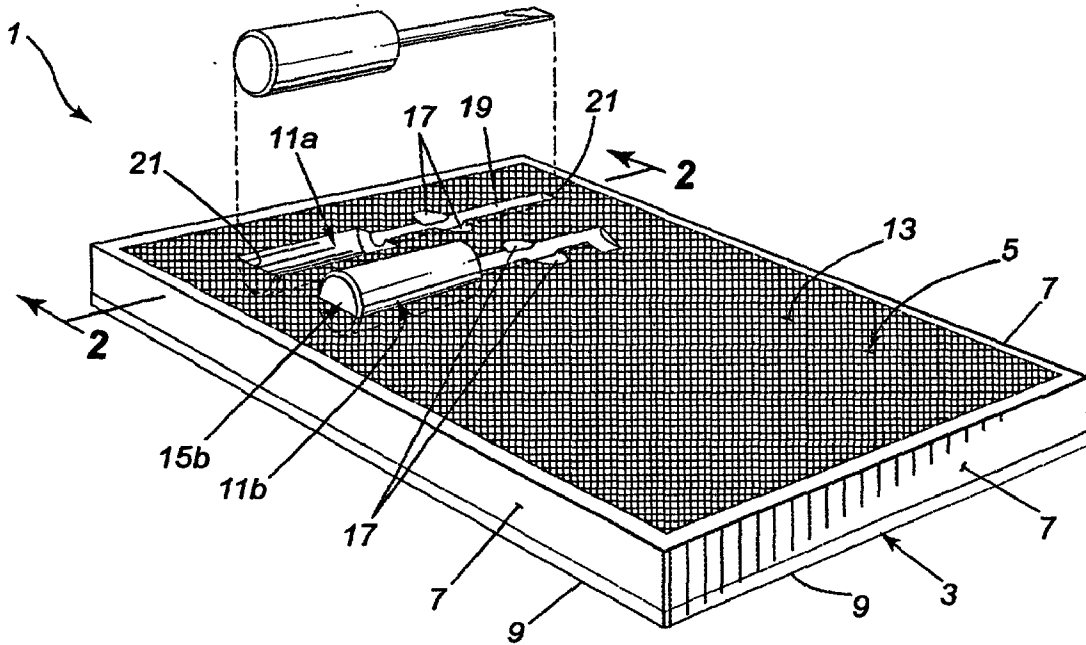


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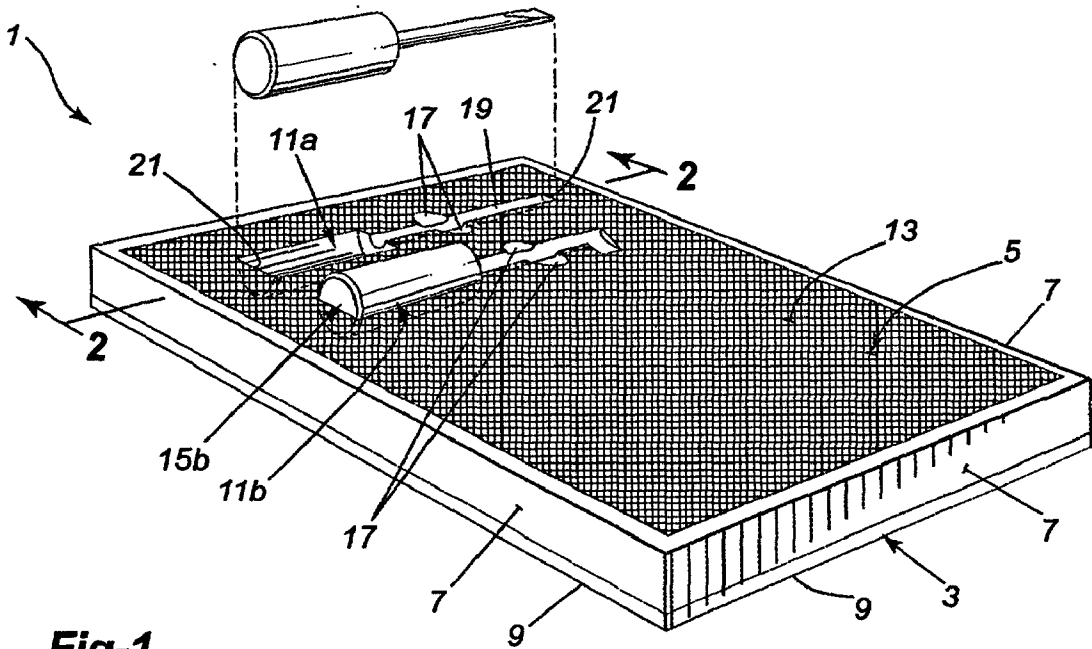


Fig-1

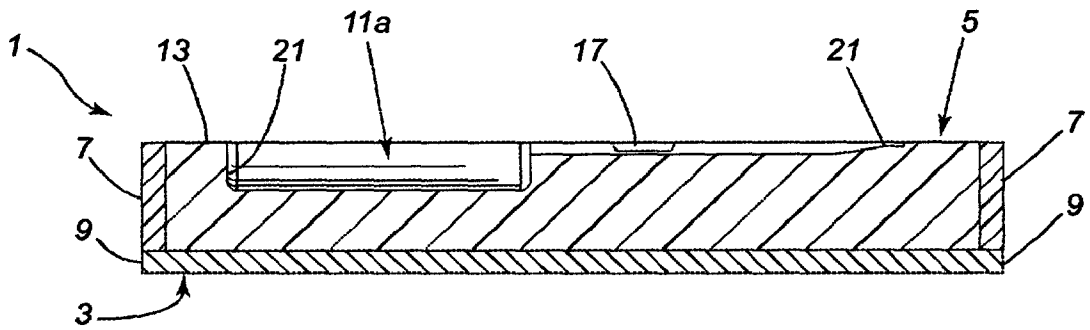


Fig-2

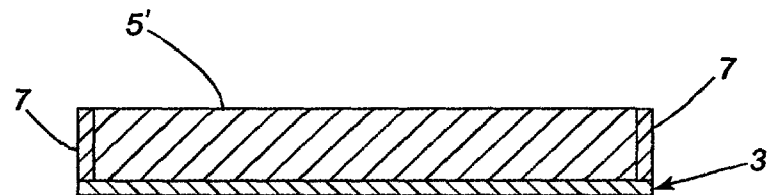


Fig-3a

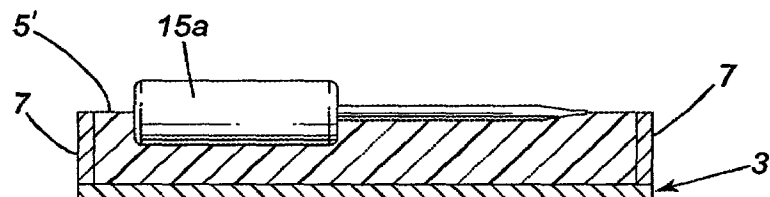


Fig-3b

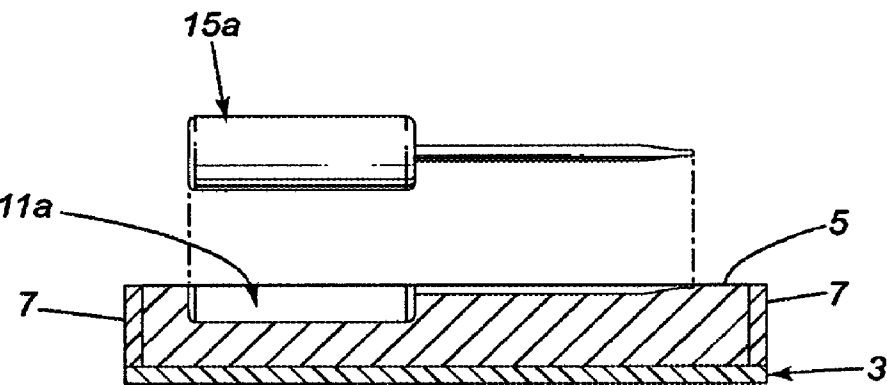


Fig-3c

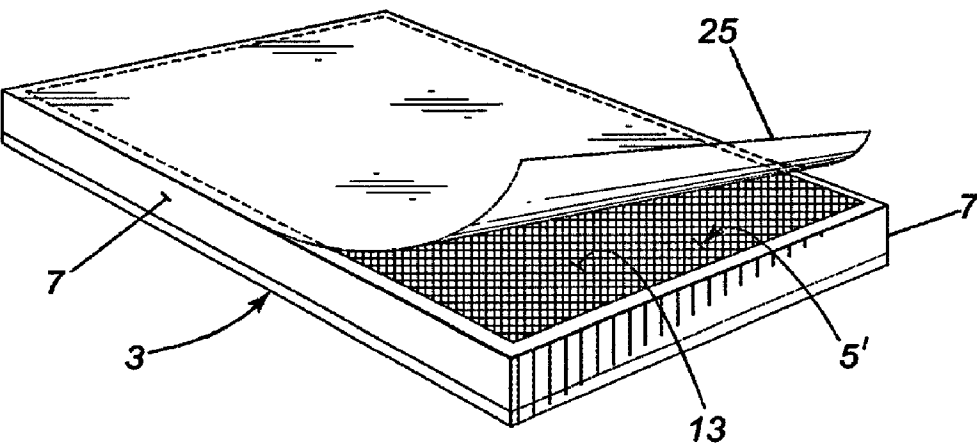


Fig-4

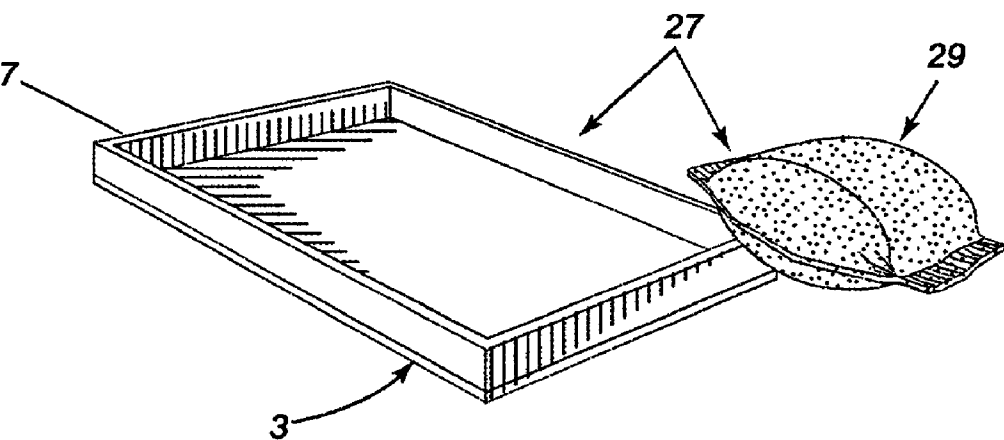


Fig-5

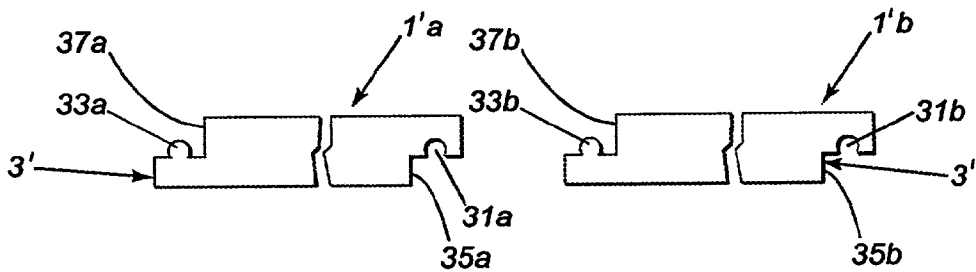


Fig-6

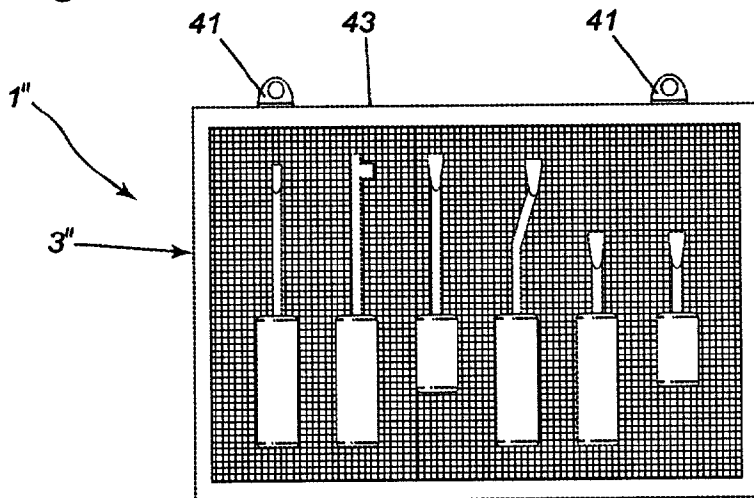


Fig-7

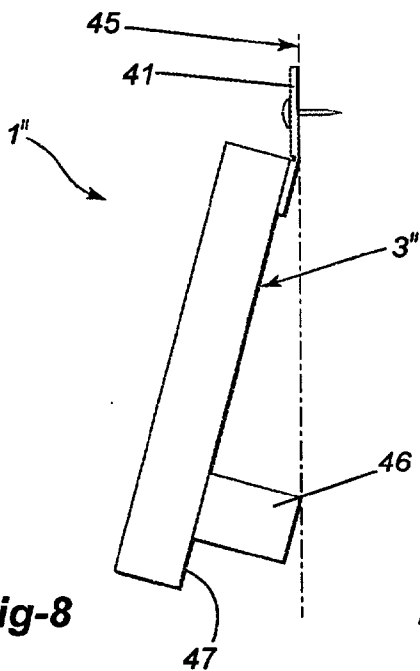


Fig-8

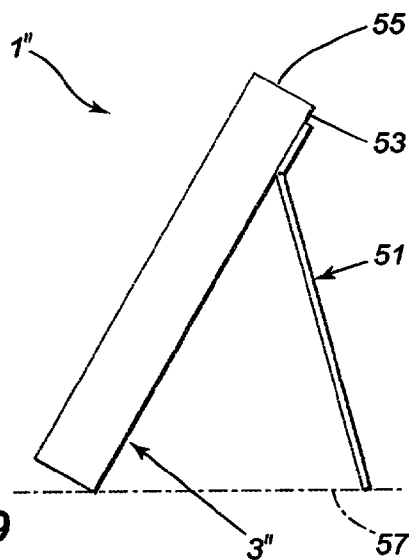


Fig-9

ARTICLE HOLDER

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] This invention is directed toward an article holder, and more particularly to an article holder of the type having impressions therein, the impressions in the shape of the articles to be held. The invention is also directed toward a kit for making the article holder and to a method of making the article holder.

[0003] 2. Description of the Related Art Including Information Disclosed Under CFR §§ 1.97-1.99

[0004] Holders in the form of trays or shelves having depressions therein, the depressions shaped similar to the shape of the articles they are to hold, are well known. These holders are particularly suited to holding tools. The holders are formed in various ways. They can be molded from plastic sheets with impressions, shaped to the articles they are to hold, integrally formed therein. An example of such a holder is shown in U.S. Pat. No. 5,071,004. Such holders are however relatively expensive because of the molds required and they do not hold the articles all that well because the walls forming the depressions are rigid. More importantly, the impressions may not fit all the articles to be held and/or the articles to be held may not fill all the impressions formed so space on the holder is wasted.

[0005] It is also known to provide trays or shelves formed from, or carrying, thick, rigid sheets which can be cut on site to provide impressions or cutouts in the shape of the tools to be held. This assures that the number and shape of the cutouts match the number and shape of the articles to be stored thereby minimizing waste space. An example of such a holder is shown in U.S. Pat. No. 5,409,560. However, making the cutouts is laborious and many people are just not able to cut neat, accurate, cutouts for the articles to be stored.

SUMMARY OF THE INVENTION

[0006] It is the purpose of the present invention to provide simple article holders that securely and closely hold articles. It is a further purpose of the present invention to provide holders that can be easily custom made by the user, on site, to hold the particular articles he wants stored. It is another purpose of the present invention to provide a method of making the holders. It is yet another purpose of the present invention to provide a kit for making the holders in accordance with the inventive method.

[0007] In accordance with the present invention, the holder comprises a rigid base with a thick layer of slightly resilient holding material thereon. The thick layer of holding material has exact impressions of the articles to be stored on the holder.

[0008] The holder is made by providing a thick layer of the holding material on the base when the holding material is still impressionable and settable. The impressions are formed by pressing the articles individually into the layer of impressionable material and then removing the articles to allow the material to set.

[0009] The material used may be a putty or a similar type of material.

[0010] The invention is particularly directed toward an article holder comprising a rigid base and a thick layer of slightly resilient, set material on the base. The layer has impressions extending inwardly from the top surface of the layer toward the base, each impression formed, before the material sets, by at least the bottom portion of the article to be stored in the impression.

[0011] The invention is also directed toward a method for making an article holder comprising: providing a rigid base; providing a thick, substantially uniform, layer of impressionable, settable, material on the base; pressing each article to be stored on the holder into the layer toward the base to form an impression of at least a portion of the article in the layer; and allowing the material to set to provide a slightly resilient layer of material on the base with permanent impressions for receiving the articles.

[0012] The invention is further directed toward a kit for making an article holder comprising: a rigid base having a raised border about its sides; and a separate, sealed container carrying sufficient impressionable, settable material to cover the surface of the base within the borders to a sufficient thickness to allow impressions of articles to be formed in the layer by pressing the articles into the layer before it sets.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view of one form of the holder;

[0014] FIG. 2 is a cross-section taken along line 2-2 in FIG. 1;

[0015] FIGS. 3a, 3b and 3c are cross-section views showing the holder being made;

[0016] FIG. 4 is a perspective view of one form of the holder just prior to set up;

[0017] FIG. 5 is a view of a kit sold to provide the holder;

[0018] FIG. 6 is a detail side view of two holders with interconnecting means;

[0019] FIG. 7 is a front view of a holder adapted for mounting on a vertical surface;

[0020] FIG. 8 is a side view of a modified embodiment of the holder of FIG. 7; and

[0021] FIG. 9 is a side view of another embodiment of the holder.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0022] The article holder 1, as shown in FIGS. 1 and 2, is in the form of a tool holder and comprises a shelf-like or tray-like member having a quadratic-shaped, rigid, base 3. The base 3 is relatively thin and preferably rectangular in shape. A thick, uniform, layer 5 of slightly resilient, set, holding material is mounted on the top surface of the base 3. The base 3 preferably has an edging or border 7 about its sides 9 to retain the layer 5 of holding material on the base 3. The border 7 is preferably as high as the layer 5 is thick.

[0023] The layer 5 has a plurality of impressions 11a, 11b, 11c, etc. formed therein, the impressions extending down from the top surface 13 of the layer 5 well into the layer. Each impression 11a, 11b, etc. is unique to the article 15a,

15b, etc. to be stored therein and corresponds to at least the bottom portion of that article. When the article, **15a** for example, is removed from its impression **11a** on the holder **1**, the impression **11a** remains empty until the same article **15a** is returned to the impression. Each article only fits one impression on the holder so the user knows instantly where an article, on being returned, is to be stored.

[0024] The holder **1** is made by providing a thick, uniform, layer **5'** of impressionable, settable, material on the base **3** as shown in **FIG. 3a**. Each article **15a**, etc. to be stored on the holder is then pressed into the layer **5'**, one at a time, to form an impression **11a**, etc. of at least the bottom portion of the article as shown in **FIG. 3b**. The articles **15a**, etc. can be arranged on the top surface **13** of the layer **5'** in a manner to store the most articles possible on the holder without the impressions running into each other or affecting the integrity of the walls defining the impressions. The articles **15a**, etc. are then removed leaving empty impressions **11a**, etc. as shown in **FIG. 3c**, and the layer **5'** of impressionable, settable material is allowed to set or harden to provide the slightly resilient layer **5** filled with impressions of the specific articles to be stored on the holder. Once the layer **5** is set, the articles can be returned to their impressions to be stored by the holder as shown in **FIG. 3D**.

[0025] Preferably, finger holes **17** are formed in the layer **5'** at the same time each impression **11** is formed. A pair of opposed finger holes **17** can be provided for each impression, one finger hole **17** on each side **19** of the impression, the finger holes **17** intermediate the ends **21** of the impression. Once the layer **5'** sets, the finger holes **17** allow the user to easily grip the article within the impression to remove the article when it is needed.

[0026] The holder **1** could be sold with the layer **5'** of impressionable, settable, material already on the base **3** within the border **7** as shown in **FIG. 4**. An air-impermeable cover **25** can be provided on the border **7** overlying the top surface **13** of the layer **5**, the cover **25** sealed to the border **7** so that the layer **5'** remains impressionable and settable until use. Once the buyer is ready to set up his holder, he removes the cover **25** and presses the specific articles he wishes to store into the top surface **13** of the layer to form the impressions for the articles.

[0027] Alternatively, the holder **1** may be sold in a kit **27** with a base **3** and a separate, sealed, container **29** containing the impressionable, settable, material as shown in **FIG. 5**. Once the user is ready to set up his holder, he opens the container **29** and spreads the settable material in a thick uniform layer on the base **3** within the border **7**. Articles to be stored are then impressed into the material before it sets to form impressions for the articles. The material to provide the layer can be a mixture of two different materials, these two materials stored in separate containers (not shown). The two materials are mixed together when ready to form depressions. The two materials are not suitable individually as impressionable, settable material, only when mixed together.

[0028] A suitable material for the forming the impressionable layer is a putty-like material known by the trade name "IMPRINT QUICKSTEP" and manufactured and sold by 3M. This material is a composition of vinylpolysiloxane. Other suitable materials, which are initially impressionable and then set to be slightly resilient but which hold the shape of an article pressed into the material, can also be employed.

[0029] The holder **1'** can be modular so that a plurality of holders can be easily linked together to form a larger storage area. The base of each holder **1'** can, for example, having cooperating connecting means **31**, **33** on opposite sides **35**, **37** of the base **3'** as shown in **FIG. 6**. Thus a second holder **1'b** and be mounted and detachably connected to a first holder **1'a** by connecting the connecting means **33b** on one of its sides **37b** to the connecting means **31a** on the side **35a** of the holder **1'a**.

[0030] The holder **1"** can also be provided with suitable means for supporting the holder if required. The holder **1"** can be stored flat on existing shelves or supports. The holder **1"** can also be stored in an upright position such as by hanging it, using brackets **41** on the one side **43** of the base **3"**, from vertical supports **45** as shown in **FIG. 7**. If the impressions formed in the holder **1"** are deep enough and/or if the material is resilient enough, the holders can be stored vertically. Otherwise, the holders can be constructed to be stored tilted slightly rearwardly to retain the articles in the impressions through gravity. For example the holders can be provided with a spacer block **46** at the bottom rear **47** of the base **3"** to tilt the holder **1"** rearwardly, as shown in **FIG. 8**, when the holder **1"** is suspended by the brackets **41**. The brackets **41** can be hinged in this embodiment. The block **45** could be replaced by a hinged brace (not shown) mounted on the back of the base near the bottom of the base. Alternatively, the holder **1"** can be provided with a hinged back brace **51** on the rear surface **53** of the base **3"**, near the top **55** of the base **3"** as shown in **FIG. 9**. The brace **51** is swung out when the holder is placed on a horizontal surface **57** to support the holder **1"** in a tilted position as shown.

I claim:

1. An article holder comprising a rigid base and a thick layer of slightly resilient, set material on the base, the layer having impressions extending inwardly from the top surface of the layer toward the base, each impression formed, before the material sets, by at least the bottom portion of the article to be stored in the impression.

2. An article holder as claimed in claim 1 including at least one finger hole on the side of each impression, intermediate the ends of the impression, allowing a person to grasp the article in the impression to more easily remove it from the impression when needed.

3. An article holder as claimed in claim 1 wherein the base is quadratic in shape and cooperating connecting means are provided on opposed sides of the base allowing each holder to be detachably connected, along either side, to another holder having similar connecting means.

4. An article holder as claimed in claim 1 wherein the base is quadratic in shape and support means are provided on the back of the base for help in supporting the holder in an upright position.

5. A method for making an article holder comprising: providing a rigid base; providing a thick, substantially uniform, layer of impressionable, settable, material on the base; pressing each article to be stored on the holder into the layer toward the base to form an impression of at least a portion of the article in the layer; and allowing the material to set to provide a slightly resilient layer of material on the base with permanent impressions for receiving the articles.

6. A method as claimed in claim 5 wherein the articles are removed after the impressions are made and before the material sets.

7. A method as claimed in claim 5 including forming finger holes in the layer while the material is still settable, the finger holes intercepting the depressions to allow easy removal of articles from the permanent depressions.

8. A method as claimed in claim 5 wherein the layer of settable material is initially sealed on the base with a cover of air-impermeable material, the cover removed when the impressions are to be made.

9. A method as claimed in claim 5 wherein the impressionable, settable, material is provided in a separate con-

tainer from the base and is spread onto the base as a thick layer when the impressions are to be formed.

10. A kit for making an article holder comprising: a rigid base having a raised border about its sides; and a separate, sealed container carrying sufficient impressionable, settable material to cover the surface of the base within the borders to a sufficient thickness to allow impressions of articles to be formed in the layer by pressing the articles into the layer before it sets.

* * * * *