

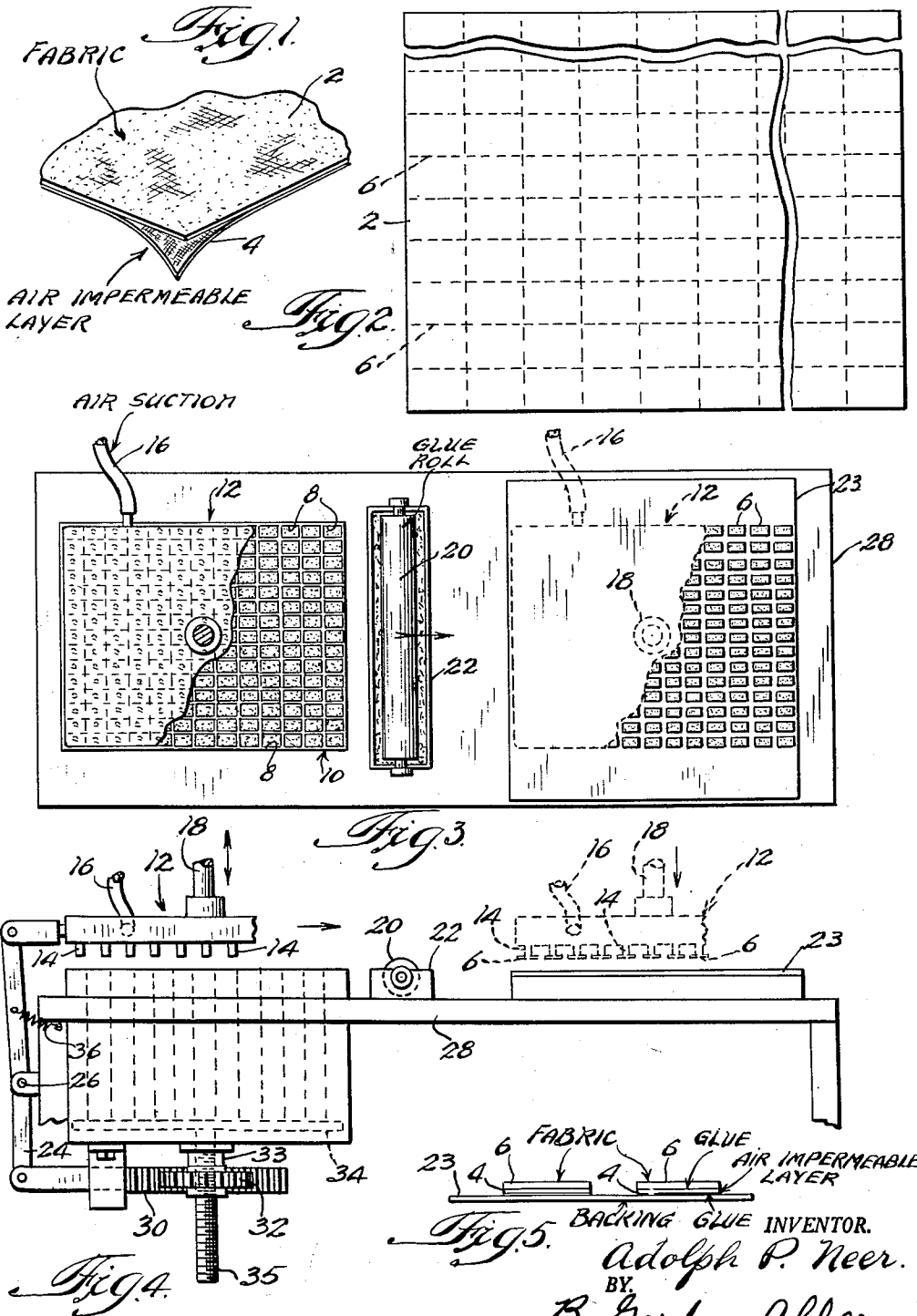
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SAMPLE CHART AND METHOD OF FABRICATING THE SAME

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SAMPLE CHART AND METHOD OF FABRICATING THE SAME

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1 Claim. (Cl. 216—62)

This invention relates to the fabrication of charts and more particularly of a chart in which samples of fabric or other air permeable material having different visual characteristics, such as color or weave, are attached in a predetermined arrangement to a backing at spaces provided thereon for the purpose of displaying such samples in connection with explanatory and advertising information on said backing adjoining said spaces.

A primary object of the invention is to facilitate handling of the samples which are ordinarily in the form of fabric tabs having the same or different physical dimensions, depending upon the type of chart desired.

In the prior art practice such fabric samples or tabs having been attached to the back manually by the hand process. Not only is this process laborious and extremely expensive but also it results in a final end product which is unsightly and unclean, it being practically impossible to attach the tabs to the backing in the required symmetrical order without marring the backing with the adhesive.

In some prior art experiences, involving the use of paint sample tabs in the fabrication of paint color charts or in the application of labels, a vacuum or suction head has been used to handle the tabs or labels. In such operation the tabs or labels are picked up from a stack by a vacuum or suction head and delivered to the point of application. This has proven to be entirely ineffective with respect to samples of fabric or air permeable material due to the fact that the head when applied to a stack of fabric tabs frequently fails to pick up the tab or will pick up two or more of such tabs from the top of the stack due to the fact that such tabs are air permeable.

Many expediciencies have been tried to avoid the use of the expensive manual process of applying fabric samples to a backing without success.

Accordingly, a primary object of the present invention has been to afford a simple and economical method in which fabric or other air permeable tabs may be handled by the use of vacuum in lifting such tabs from stacks thereof.

A more specific object of the invention is to apply air impervious layers to one side of the fabric sections in fixed relation thereto prior to dividing the sections into tabs which are then stacked and moved by a suction head from a hopper to a backing for attaching the tabs thereto as by adhesive.

Still another object of the invention is to apply such air impervious layers to the fabric sections by adhesive or by spraying or otherwise coating one side of such sections.

A further object of the invention is to eliminate any possibility of adhesive penetrating the fabric so as to be visible to a user of the chart.

The invention comprehends a novel chart wherein the air permeable tabs are secured to the backing by adhesive between the backing and the air impermeable layers of the tabs.

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The foregoing and other objects and advantages of the invention will become apparent from a consideration of the following specification and the accompanying drawings wherein:

Figure 1 is a fragmentary sectional view of fabric having an air impervious layer applied thereto, said layer being partly peeled away from the fabric;

Fig. 2 is a plan view of the fabric showing in phantom lines a plurality of tabs to be cut therefrom;

Figure 3 is a schematic plan view of apparatus which may be utilized in securing the tabs to their backings, the suction head being partly broken away and being shown at tab lifting position in solid lines and at tab gluing position in phantom lines;

Figure 4 is a side elevational view of the apparatus shown in Figure 3; and

Figure 5 is a fragmentary edge elevational view of a novel sample chart fabricated in accordance with the invention.

Describing the invention in detail and referring first to Figures 1 and 2, it will be seen that a section of air permeable fabric 2, such as is commonly used for decorative purposes, as, for example, draperies, curtains, upholstery and ornamental items, is secured to a substantially air impermeable layer 4, which may be formed of paper, plastic or any other desired material.

It will be understood that the fabric 2 may be of woven or of any other air permeable construction, and the layer 4 may be secured thereto as by an adhesive on either or both of the fabric 2 and layer 4. Or, if desired, the layer 4 may be applied in liquid form, as for example by spraying on one side of the fabric 2.

After the layer 4 has been applied to the fabric, the latter is cut or otherwise divided into a plurality of segments or tabs 6 (Figures 2 and 3). It will be understood that the tabs 6 may be of the same or different sizes and shapes as may be desired.

It will be understood that the foregoing procedure is ordinarily followed with respect to a number of different fabric sections 2, each differing from the other in some manner, as for example, color, texture or weave. Then the tabs 6 formed by cutting each section 2 as above described are loaded or stacked in a pile within a section 8 of a hopper 10, with the layer 4 of each tab facing downwardly.

Thus, the various compartments 8 of the hopper 10 are each loaded with a plurality of substantially identical tabs 6, and the tabs in each compartment differ in some pre-selected manner from the tabs in other compartments 8, all of which are illustrated as being of substantially the same size but which may be of varying sizes, shapes and arrangement, depending upon the desired sizes, shapes and arrangement of the tabs 6.

A suction head 12 having depending lugs 14 adapted to register with respective compartments 8 is provided with a flexible suction line 16 connected to any suitable source of vacuum, such as a pump. Each lug 14 is provided on its bottom face with one or more air inlets connected to the suction line 16. The head is operated, either manually or by suitable apparatus connected to an actuator rod or bar 18.

The head 12 is lowered so that the lugs 14 enter the respective compartments 8, whereupon one tab in each compartment is attached by suction to the bottom face of the related lug 14, as best seen in phantom lines at the right of Figure 4. The head 12 is then moved to the right, as seen in said figure, to wipe the layers 4 of the tabs against a roller 20, which may be rotatably journaled in a glue container 22, or may otherwise be supplied with glue or similar adhesive for applying the latter to the layers 4 of the tabs as they are moved by the head

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12 to the position shown at phantom lines in Figures 3 and 4.

The head is then lowered to press the tabs against a suitable backing 23 or other member to which the tabs are secured by the adhesive; whereupon the vacuum in the head 12 is preferably released and the head is returned to the position shown at solid lines in Figures 3 and 4, in which position the head actuates a lever 24 for a purpose hereinafter described.

The lever 24 is fulcrummed at 26 on a frame 28 which supports the hopper 10 and container 22, and said lever is connected to a rack 30 which actuates a pinion 32 connected to a nut 33 threaded on a screw 35 for elevating a platen 34 upon which the stacks of tabs 6 are supported at their lower ends. Each time the head returns to the position shown at solid lines in Figures 3 and 4, the platen is elevated an increment to move the tabs to the top of their compartments preparatory to initiation of another cycle of operations such as that above described.

It may be noted that the lever 24 is provided with a spring 36 or other means to return the lever to proper position as the head 12 moves to the left, as shown in Figure 4. Thus the lever 24 is returned by the spring to a position for actuation by the head upon its return to the position shown by solid lines in the drawings. The connection of the pinion 32 to the nut 33 is ratchetlike and accommodates slidable rotation of the pinion relative to the nut without actuating the latter as the spring returns the lever for the purpose above described.

It will be understood, however, that any conventional means such as may be utilized to adjust the stacks of tabs upwardly for the purpose of periodically restoring the upper ends of the stacks to a predetermined level, such adjusting means forming no part of this invention.

Referring now to Figure 5, it will be seen that the novel sample chart, which is fragmentarily shown in edge elevational view, comprises a backing 23 secured, as by adhesive, to the air impermeable layers 4 of the tabs 6. The backing is provided in the usual manner with printed explanatory or advertising material (not shown) to be read in connection with the various tabs 6 on the backing.

Thus it will be understood that the invention comprehends a novel sample chart and method of fabricating

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wherein air permeable tabs of fabric or similar material may be effectively removed from stacks or piles of such tabs by a suction head for securement thereby to a backing in a predetermined arrangement thereon.

While the present invention has been explained and described with reference to specific embodiments of structure, it will be understood, nevertheless, that numerous modifications and variations are susceptible of being incorporated without departure from the essential spirit or scope thereof. Accordingly, it is not intended for an understanding of this invention to be limited by the foregoing description nor by the illustrations in the annexed drawings, except as indicated in the hereinafter appended claim.

What is claimed as new and desired to be secured by Letters Patent of the United States is as follows:

A method of fabricating a sample chart having a backing to which are adhesively secured a plurality of air permeable tabs of various physical characteristics, said method comprising applying air impermeable layers to the back sides of a plurality of segments of air permeable material having respectively, different physical characteristics, then cutting said segments into tabs and loading the tabs of respective segments into separate hoppers with the back sides of said tabs facing inwardly of the hoppers, contacting the outer sides of the tabs in said hoppers with ports of a suction head to lift one tab from each hopper, applying adhesive to the back sides of the tabs carried by the head and then clamping the back sides of the tabs carried by said head against the backing sheet to adhesively secure the last-mentioned tabs thereto.

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