

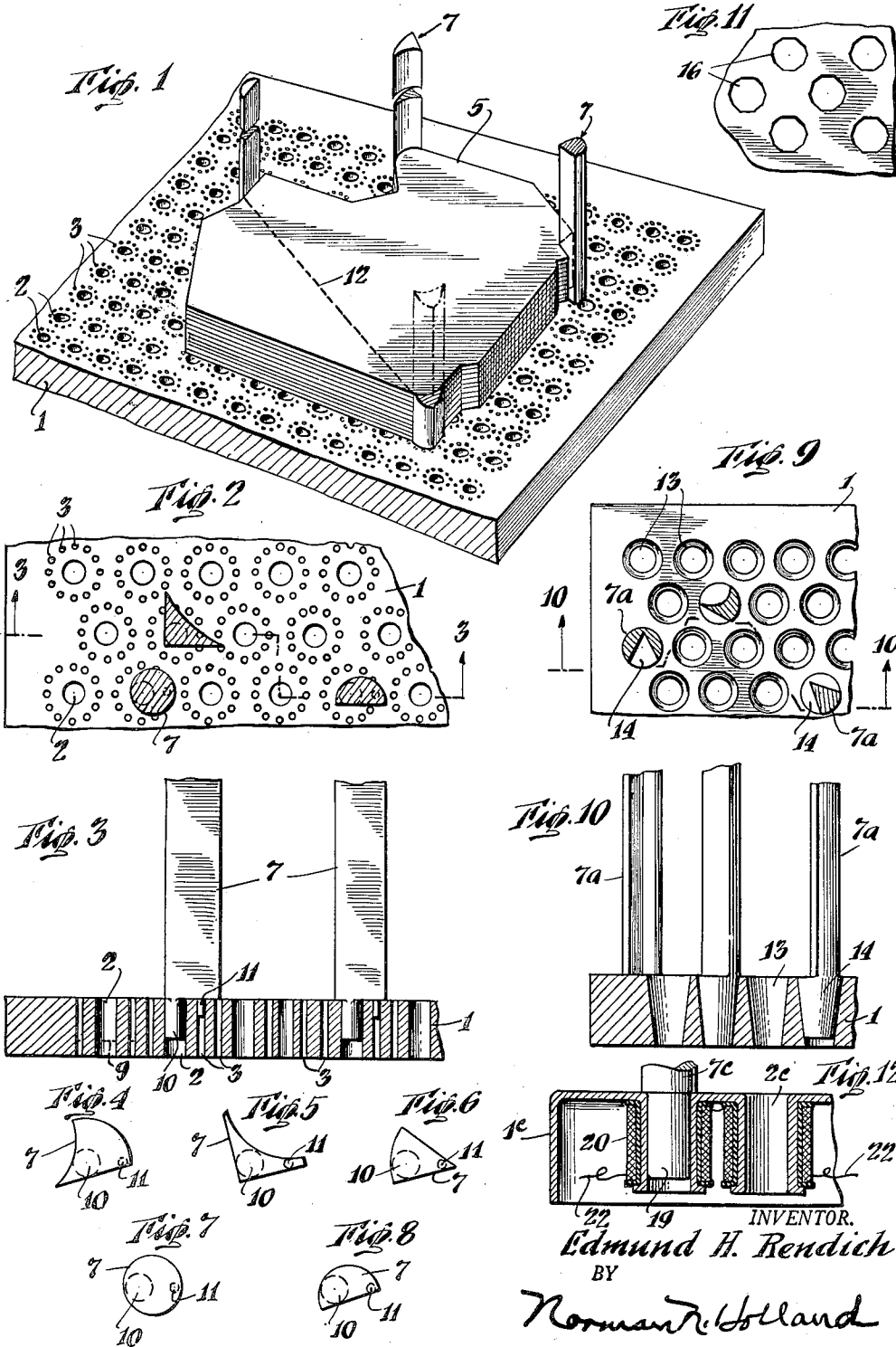
Dec. 16, 1952

E. H. RENDICH

2,621,807

DISPLAY POSITIONING DEVICE

Filed Jan. 29, 1948



INVENTOR.
Edmund H. Rendich

BY
Norman C. Holland
ATTORNEY

UNITED STATES PATENT OFFICE

2,621,807

DISPLAY POSITIONING DEVICE

Edmund H. Rendich, Stewart Manor, N. Y.

Application January 29, 1948, Serial No. 5,116

4 Claims. (Cl. 214—10.5)

1

The present invention relates to a device or means adapted to be used for accurately positioning and retaining display devices, or portions thereof, during manufacturing operations.

New forms of advertising displays adapted for use in store windows or on counters and the like are being constantly evolved and each new type of advertising display is generally made in relatively large quantity. It is desirable that each individual display of a particular "run" be almost exactly the same as every other display of the particular order or run. This is sometimes difficult to achieve since in the manufacture of such advertising displays certain hand operations are utilized, one such instance being the securing together of different parts by adhesive. Operations of this type require that the parts of a given display be secured together in definite relationship.

Where displays are manufactured in large quantities some form of "jig" is generally used for assisting the assemblers in manufacturing the displays. Such jigs, in general, provide means for insuring that certain co-operating parts are accurately positioned prior to being joined together in the formation of a composite portion of a display.

It has heretofore been the practice to employ the services of a skilled carpenter, working in conjunction with production men, to design, lay out and make a number of individual forms to precise measurements for each different type and size of display device. The time and expense involved in making such forms is considerable and results in substantially increasing the manufacturing costs of the displays. It is frequently necessary that as many as twenty identical forms be constructed for use by assemblers who must perform certain operations on the display devices. Extensive tests and refittings and reconstruction are frequently required in the manufacture of the wooden forms; in some instances two days are required in order to complete a single satisfactory guide form.

In addition to the difficulties and disadvantages arising out of the above manner of producing the guide forms, the particular forms are generally useless after the completion of a particular job and they are therefore destroyed or discarded.

The present invention aims to overcome the above and other disadvantages or difficulties by providing a new and improved device or means adapted to serve as a positioning or guide form during the manufacture of articles such as dis-

2

play devices. The invention further contemplates the provision of a new and improved display positioning device which is adapted to be used in the formation of an infinite number of different types of display devices; the device need not be discarded after the completion of a particular order but may be reassembled for use in fabricating different display devices of subsequent orders.

An object of the present invention is to provide a new and improved display positioning device.

Another object of the invention is to provide a display positioning device which is inexpensive to manufacture and use.

Another object of the invention is to provide a display positioning device which may be used and re-used for manufacturing a wide variety of different display devices.

Another object of the invention is to provide a new and improved display positioning device which is readily adapted to the manufacture of different display devices.

Still another object of the invention is to provide a display positioning device which may be readily and accurately set up by relatively unskilled labor.

Other and further objects of the invention will be obvious upon an understanding of the illustrative embodiment about to be described, or will be indicated in the appended claims, and various advantages not referred to herein will occur to one skilled in the art upon employment of the invention in practice.

A preferred embodiment of the invention has been chosen for purposes of illustration and description and is shown in the accompanying drawing, forming a part of the specification, wherein:

Fig. 1 is a perspective view, partially broken away, illustrating in a general way one form of the present invention;

Fig. 2 is a fragmentary top plan view showing a portion of the display positioning device illustrated in Fig. 1;

Fig. 3 is a sectional view taken along the line 3—3 of Fig. 2;

Figs. 4 through 8 are end views showing forms of portions of the display positioning means illustrated in Figs. 1 and 2;

Fig. 9 is a fragmentary top plan view illustrating another form of the display positioning device;

Fig. 10 is a sectional view taken along the line 10—10 of Fig. 9;

Fig. 11 is a fragmentary top plan view illustrating a slightly different form of display position-

3

ing device similar to that illustrated in Figs. 9 and 10; and

Fig. 12 is a fragmentary sectional view illustrating a modified form of the invention.

For purposes of clarity and convenience of the description the invention will be described chiefly with reference to use in connection with the manufacture of display devices.

Referring again to the drawings, and more particularly to Fig. 1 thereof, there is illustrated a display positioning means comprising a base or support member 1 provided with a plurality of spaced openings or apertures 2 therein. The apertures 2 are preferably regularly spaced with respect to each other and each is shown with a plurality of secondary recesses or apertures 3 adjacent to it. The apertures 2 and recesses 3 may extend entirely through the base or support member 1 or, if desired, they may extend only partially through the table. The base 1 is adapted to support displays 5 laid thereon and the displays 5 are adapted to be suitably or accurately positioned by means of members 7, the members 7 having suitable projections or portions which extend into the apertures 2 and recesses 3 to retain the members in position.

The apertures 2 and recesses 3 may extend entirely through the base member 1 or only partially therethrough, to some such depths as is indicated by the dotted line 9 in Fig. 3. The former construction is preferred, however, since it minimizes the possibility of apertures or recesses becoming gradually filled with particles of dust, cardboard, etc.

The members 7 are preferably elongated so that they extend a substantial distance above the surface of the base member 1 and are shown of mostly irregular or of varying cross sections at those portions which project above the upper surface of the base or support 1. The varying cross section contours facilitate co-operation with and more accurate positioning of display devices 5 which may be placed upon the surface of the support member 1. Preferably a plurality of elongated members is utilized and certain of these members have differing cross sections. Different suitable cross sectional forms are indicated in Figs. 4 through 8 of the drawings.

It will be noted that the majority of the cross sections shown in Figs. 4 through 8 are of non-circular form. This is preferred since it facilitates extension of guide portions of the elongated members into cut away portions of display devices laid upon the base 1 (see Fig. 1). In addition to having substantially narrow positioning or guide portions, each of the elongated members 7 is shown having a substantially flat or curved cross section adapted to cooperate with straight edge portions of the display device 5. Thus any elongated member is adapted to cooperate with cut away, recessed or straighter portions of any particular display device.

As shown in Figs. 1 through 8 the elongated members are adapted to be retained in given position with respect to the base member 1 by projections on protuberances 10 and 11 adjacent the ends thereof. The projections 10 complement the apertures 2 of the base member 1 in such manner as to retain the elongated members 7 in position within the apertures 2. The smaller protuberances or projections 11 may project into and be complementary to the adjacent recesses 3 of the base member 1. The projections 11 of the elongated members are adapted to fit into any of the recesses 3 shown extending about the

4

apertures 2 of the table member; thus a projecting portion 10 of a positioning member 7 may be fitted into a desired aperture 2 and the elongated member rotated about the projection 10 to move a suitable cross section of the elongated member into contact with a desired portion of a display device 5. Thereafter the elongated member may be pressed downwardly with respect to the base member 1 to insert the projection 11 into an adjacent positioning recess 3. In this relationship the main projection 10 serves to retain the article positioning member 7 to the base member 1 and the auxiliary projection 11 serves to retain a desired adjusted angular position of the article positioning member.

Any suitable number of article positioning members 7 may be utilized to facilitate accurate positioning of display devices on the base member 1. While four of the elongated members 7 are illustrated in Fig. 1 this showing is merely illustrative. The particular number of elongated members to be utilized will be affected by the size of the base member 1 and the size of the display device to be worked upon, the elongated members 7 being assembled with the base 1 at strategic locations with respect to the shape and size of the particular display device being "run through."

In using a display positioning device such as is illustrated in Figs. 1 through 8, a particular display device may be laid upon the base member 1 and display positioning members 7 placed into assembled relationship with respect to the apertures 2 and thereafter rotated to move a surface of the member 7 into contact with an adjacent edge of the display device. The "offsetting" of the projections 10 and 11 with respect to article positioning portions of the members 7 facilitates movement of a guide edge of an elongated member into contact with an edge of a display device. The number of elongated members assembled about the edges of the particular display device is preferably such as to accurately locate display cards or devices subsequently placed into contact with the elongated members.

In using the device an operator may first move a display device into contact with the elongated members to thus accurately position it with respect to the base member 1, and then allow it to move downwardly into contact with the surface of the base member 1; thereafter a flap, tab or other supplementary portion of the display device may be accurately located by placing it also into contact with appropriate of the elongated members as indicated by the dotted line 12 shown in Fig. 1, these latter two members serving as guide stops for the supplementary piece of the display device. A stack of the completed, or partially completed, display devices may be formed by similarly locating additional portions of display devices. The elongated members and base 1 provide for formation of a substantially uniform stack of display devices. When a sufficient number of display devices have been completed, or partially completed, the stack may be removed and a subsequent stack formed on the base member.

Upon the completion of a particular order the elongated members 7 may be withdrawn from the base member 1 and thereafter inserted into different recesses 2 and apertures 3 for the locating of different shapes or forms of display devices. Relatively unskilled labor is capable of readily setting up the positioning device and it is not necessary to utilize the surfaces of a highly skilled

carpenter or other specialist to make up special forms for each particular display device order.

The base or support 1 and elongated members 7 may be constructed from any suitable materials and may be of any appropriate dimensions or size. For example, the materials utilized may comprise wood, plastic, metal, glass, hard rubber or the like.

In Figs. 9 and 10 there is illustrated another form of the invention wherein apertures 13 are of substantially tapered form and adapted to co-operate with correspondingly shaped complementary foot portions 14 of elongated members 7a having upwardly extending portions similar to those described in connection with Figs. 1 through 8. By pressing the elongated members 7a firmly into a complementary recess 13 it is adapted to be securely retained in set position during use as a locating device, similarly to the form previously described.

In Fig. 11 there is shown a slightly different form of the present device having apertures 16 provided with a plurality of flat side walls; as shown, the apertures 16 are of substantially decagonal shape. This shape of aperture is adapted to co-operate with a similarly shaped foot portion of an elongated member to more firmly retain the elongated member against rotation with respect to the surface of the base member 1.

While the apertures 16 illustrated in Fig. 11 are of decagonal shape, they may have a greater or lesser number of sides. The decagonal form offers the advantage of providing ten different positions of angularity for an elongated member. The use of a lesser number of flat sides provides a lesser number of positions of angularity and the use of a greater number of flat sides presents manufacturing difficulties which, from a commercial point of view, do not warrant the additional work and expense involved.

The form of the invention illustrated in Fig. 12 is along the lines of that above described but embodies means for effecting a magnetic effect in order to retain elongated members in position with respect to the base member 1c.

As shown in Fig. 12 each of the apertures 2c has a downwardly extending substantially cylindrical portion 19 around which extends a coil 20, each of the coils being suitably connected by leads or wires 22 with a source of electric current (not shown). The lower foot portion of the elongated members 7c may be entirely or partially metallic, so that upon energization of the coils which surround the apertures 2c a magnetic effect is created which retains the elongated members in position in the apertures. When the source of current is cut off or disconnected the feet of the elongated members may be withdrawn from the apertures or openings 2c. While permanent magnets may be utilized in lieu of the electromagnetic structure illustrated in Fig. 12, the latter is preferred since it provides an enhanced holding effect.

The upwardly extending guide portions of the elongated members 7c may be similar to those previously described in connection with Figs. 1 through 11.

It is believed that the operation of the display positioning device will be clear from the foregoing detailed description and that a further explanation thereof at this point would be repetitious.

It will be seen that the present invention provides a new and improved display positioning device or means which may be readily set up or

erected by relatively unskilled labor. The device may be repeatedly used and reused as it is not necessary to discard it upon the completion of a particular order; its usefulness is continuing.

While the device has been described and illustrated chiefly in connection with its adaptability to the manufacture of display devices it will be clear that the device is readily adaptable to the manufacture of and use with analogous manufacturing and other similar operations. The positioning device is rugged in construction and readily adapted to withstand any rough usage to which it may be subjected.

As various changes may be made in the form, construction and arrangement of the parts herein without departing from the spirit and scope of the invention and without sacrificing any of its advantages, it is to be understood that all matter herein is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A device of the class described for accurately positioning a plurality of stacked workpieces during manufacturing operations comprising a base having at spaced intervals substantially throughout the area thereof a plurality of apertures with downwardly and inwardly tapering walls, a plurality of rod members each having a foot portion with downwardly and inwardly tapering walls complementary to the walls of said apertures extending into an aperture and fitting closely against the aperture walls and at least one of said rod members having an upper stack-engaging portion integral with its foot portion, and said stack-engaging portion of said rod member having a longitudinally extending stack-engaging surface within the plan projection of the upper periphery of its foot portion and eccentric thereto, whereby said rod member may be rotated in the aperture to move said surface laterally to different adjusted positions for varying the location at which said upper portion will position said workpieces.

2. A device as claimed in claim 1, in which there are provided a plurality of said rod members having a longitudinally extending stack-engaging surface within the plan projection of the upper periphery of its foot portion and eccentric thereto.

3. A device of the class described for accurately positioning a plurality of stacked workpieces during manufacturing operations comprising a base having at spaced intervals substantially throughout the area thereof a plurality of apertures with downwardly and inwardly tapering walls, a plurality of rod members each having a foot portion with downwardly and inwardly tapering walls complementary to the walls of said apertures extending into an aperture and fitting closely against the aperture walls and at least one of said rod members having an upper stack-engaging portion integral with its foot portion, and said stack-engaging portion of said rod member having a plurality of longitudinally extending stack-engaging surfaces angularly spaced from each other and disposed within the plan projection of the upper periphery of its foot portion and eccentric thereto, whereby said rod member may be rotated in the aperture to move said surfaces laterally to different adjusted positions for varying the location at which said upper portion will position said workpieces.

4. A device of the class described for accurately positioning a plurality of stacked workpieces during manufacturing operations compris-

7

ing a base having at spaced intervals substantially throughout the area thereof a plurality of apertures with substantially smooth downwardly and inwardly tapering walls, a plurality of rod members each having a foot portion with substantially smooth downwardly and inwardly tapering walls complementary to the walls of said apertures extending into an aperture and fitting closely against the aperture walls and at least one of said rod members having an upper stack-engaging portion integral with its foot portion, and said stack-engaging portion of said rod member having a longitudinally extending substantially planar stack-engaging surface within the plan projection of the upper periphery of its foot portion and eccentric thereto, whereby said rod member may be rotated in the aperture to move said surface laterally to different adjusted positions for varying the location at which said upper portion will position said workpieces.

EDMUND H. RENDICH.

20

8

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

	Number	Name	Date
5	382,402	Baltes -----	May 8, 1888
	1,404,793	Priess -----	Jan. 31, 1922
	1,437,744	Berenson -----	Dec. 5, 1922
	1,665,439	Brown -----	Apr. 10, 1928
10	1,987,480	Kelley -----	Jan. 8, 1935
	2,539,809	Buckley -----	Jan. 30, 1951

FOREIGN PATENTS

	Number	Country	Date
15	69,372	Germany -----	July 3, 1893