April 5, 1938. H. OUWERKERK 2,113,238

COLLAPSIBLE DISPLAY DEVICE

Filed May 12, 1937 2 Sheets-Sheet 1

Fig.1

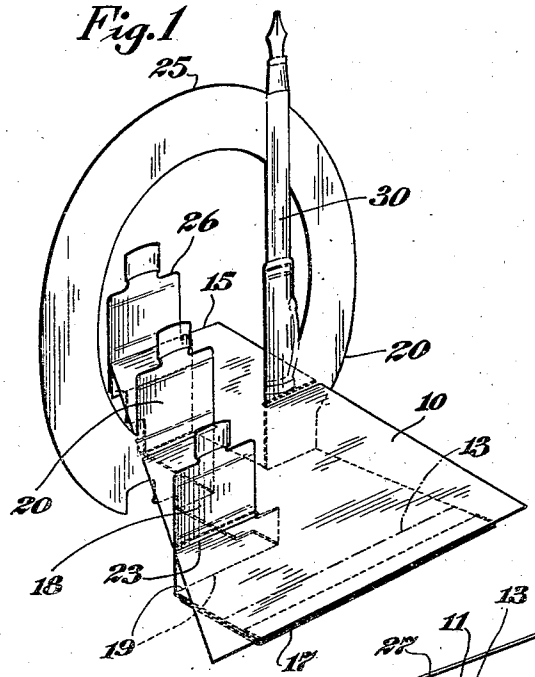



Fig.2

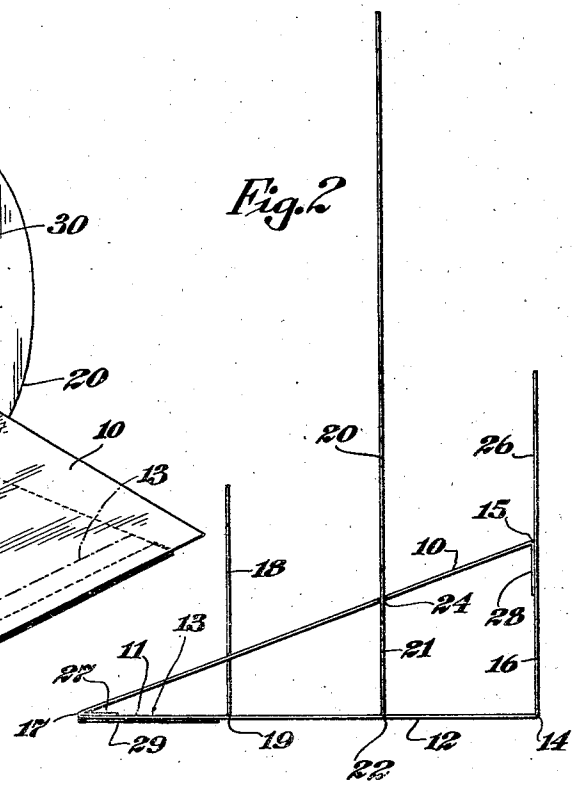



Fig.3

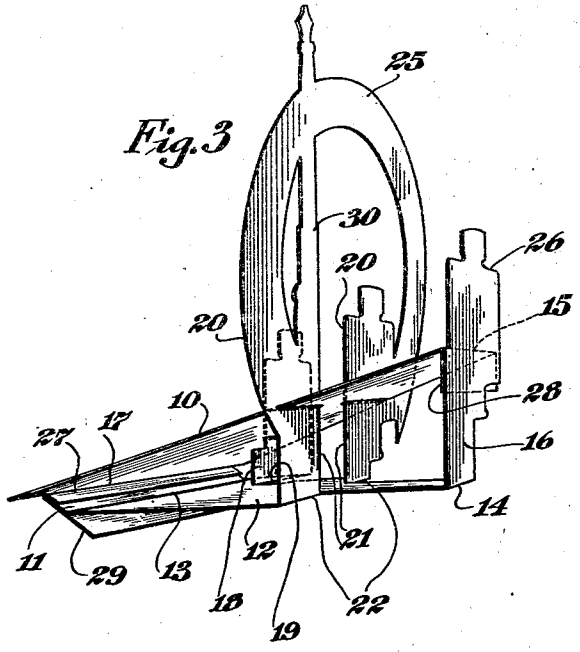
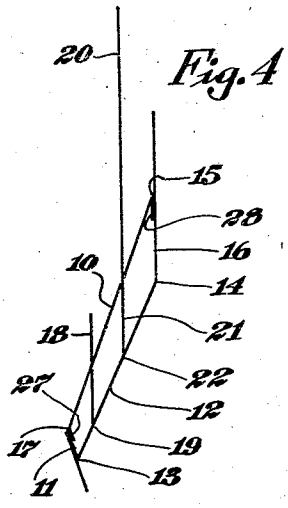



Fig.4




INVENTOR.
HAN OUWERKERK

BY

Frederick Breitenfeld
ATTORNEY.

April 5, 1938. H. OUWERKERK 2,113,238

COLLAPSIBLE DISPLAY DEVICE

Filed May 12, 1937 2 Sheets-Sheet 2

Fig. 5

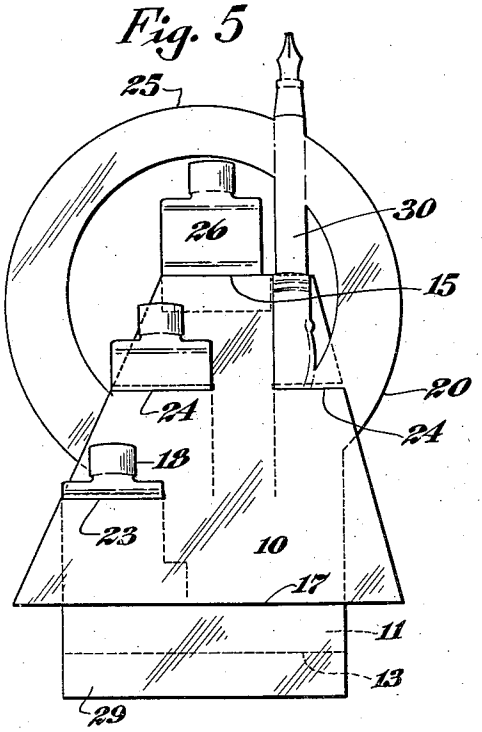



Fig. 6

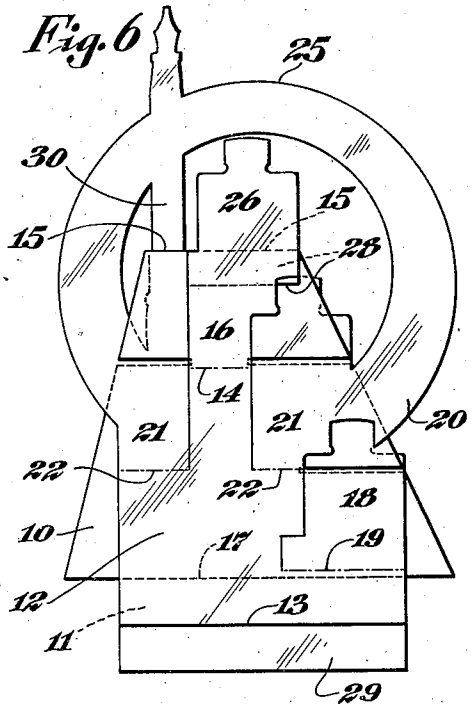



Fig. 7

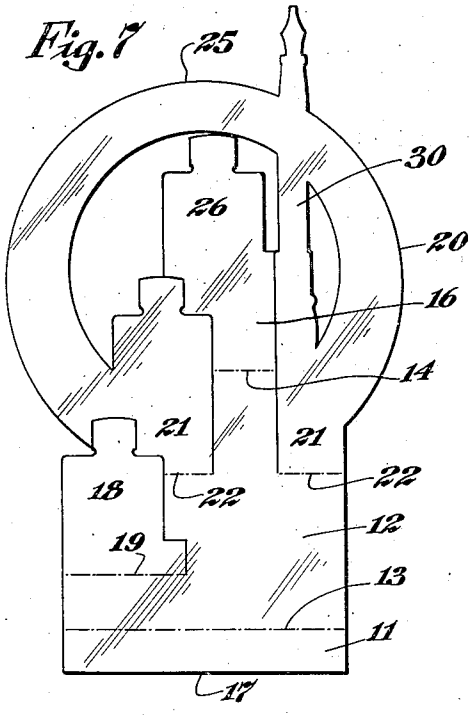
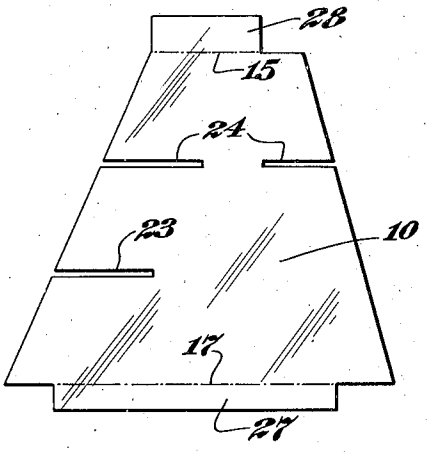



Fig. 8




INVENTOR.
HAN OUWERKERK

BY

ATTORNEY.

Patented Apr. 5, 1938 2,113,238

# UNITED STATES PATENT OFFICE

2,113,238

## COLLAPSIBLE DISPLAY DEVICE

Han Ouwerkerk, Amsterdam, Netherlands, assignor to Einson-Freeman Co., Inc., Long Island City, N. Y., a corporation of Delaware

Application May 12, 1937, Serial No. 142,176

9 Claims. (Cl. 40—126)

My present invention relates generally to display devices, and has particular reference to an improved device of the collapsible variety.

A device of the present character is primarily designed for use on a counter or in a store window, and is usually composed of flexible sheet material such as cardboard. However, it will be obvious that the broader phases of the invention are not restricted to any particular mode of use nor to the use of cardboard per se. Accordingly, wherever the term "cardboard" is used herein, it is intended to include within its significance other equivalent sheet materials.

The general object of the invention is to provide a device of enhanced simplicity, composed of a minimum number of parts, and requiring a minimum amount of manipulation to transfer the device from the collapsed or knock-down condition to the set-up condition, or vice versa.

The present improved device is of a character which, when set up, presents to view a series of suitably configured and embellished display panels arranged in parallel, offset planes. In the embodiment herein chosen for illustration the device, when set up, displays three panels in vertical planes, each of which depicts a commodity such as a bottle of ink. The panels project upwardly from a sloping element on which suitable advertising indicia or descriptive matter, or mere ornamentation, may be arranged. It will be understood, however, that my invention is not restricted to any such particular depiction or commodity.

The present construction is characterized by the employment of three hinged sections, one serving as a base, another as a top, and the third one as a front wall. The top may be swung from a rear inoperative position to a forward operative position by swinging the front end from a rear position overlying the base to a forward position in alignment with the base. Extending between the rear edges of the base and top is a rear section which serves to hold the top in a sloping relationship to the base when the device is set up.

In the preferred embodiment, the rear section is permanently hinged to the base and the top so that the device is, in cross-section, a trapezium having a relatively long base and relatively short ends. By the term "trapezium" I intend to refer to a quadrilateral whose sides are all of unequal lengths, and hence unparallel.

It is a feature of my invention to construct the trapezium in such a manner that the combined length of the top and front end is equal to the combined length of the base and rear section, whereby the device may be collapsed into substantially flat condition by superposing the top and front end over the base and rear section.

Furthermore, the parts are so proportioned that when the device is set up the rear section assumes a substantially upright relationship to the base, thereby retaining the top in the proper sloping position.

The device is completed by providing hinged display sections or panels on the base, and slots in the top, so that these sections automatically assume upright positions when the device is set up, and automatically fold flat when the device is collapsed.

Other features of construction leading to maximum economy of manufacture, extreme simplicity in structural nature and mode of operation, and unusual effectiveness and attractiveness from a display standpoint, will be set forth hereinafter.

I achieve the foregoing objects, and such other objects as may hereinafter appear or be pointed out, in the manner illustratively exemplified in the accompanying drawings, in which—

Figure 1 is a perspective view of a display device in set-up condition, constructed in accordance with the present invention;

Figure 2 is a side view of the same;

Figure 3 is a perspective view of the same taken from a rear point of view, with the device partially collapsed;

Figure 4 is a view similar to Figure 2, showing the manner of collapsing the structure, this figure being diagrammatic in so far as each blank is represented only by a single line;

Figure 5 is a top view of the device in fully collapsed condition;

Figure 6 is a rear view of Figure 5;

Figure 7 is a plan view of one blank entering into the construction; and

Figure 8 is a plan view of another blank entering into the construction.

The present device consists essentially of three hinged sections 10, 11 and 12, the section 10 constituting a top, the section 12 a base, and the section 11 a front end. When the device is set up, the end 11 is swung around the hinge axis 13 until it is in alignment with the base 12. When the device is to be collapsed, the end 11 is swung rearwardly around the hinge axis 13 until it assumes a position overlying the base 12.

Extending between the rear edge 14 of the base 12 and the rear edge 15 of the top 10 is a rear

section 16 which is preferably hinged to the element 10 and 12 along the lines 15 and 14, respectively.

Hereinafter, when the length of the rear section 16 is referred to, it is intended to signify the distance between the hinge axes 14 and 15. Similarly, the length of the top is intended to refer to the distance between the hinge axis 15 and the hinge axis 17; the front end 11 is deemed to have a length extending between the axes 17 and 13; and the base 12 is deemed to have a length extending between the axes 13 and 14.

In accordance with my invention, the combined length of the top 10 and the front end 11 is made equal to the combined length of the base 12 and the rear section 16, so that the device may be collapsed into substantially flat condition by superposing the sections 10 and 11 over the sections 12 and 16. When the device is set up, the alignment of the sections 11 and 12 causes the device to assume a position in which the cross-section is triangular; and it is a feature of my invention to make the sections 11 and 16 of such relative lengths that when the device is set up the section 16 assumes a substantially vertical position relative to the base 12, as shown most clearly in Figures 1, 2, and 3.

In the preferred embodiment herein illustrated, the sections 11, 12, and 16 are integral portions of a single blank illustrated in full in Figure 7; and the top 10 constitutes a separate blank, illustrated by itself in Figure 8. The device may be said to define, in cross-section, a trapezium having a relatively long base and relatively short ends, the lengths of the sides being so proportioned that when the front end 11 is aligned with the base 12 the longer end 16 assumes the upright position, thereby retaining the top 10 in the sloping relationship to the base 12, as shown in Figures 1, 2, and 3.

My invention provides for at least one display panel hinged to the base 12, and at least one corresponding slot in the top 10 through which the display panel projects, the slot being so positioned that it is disposed directly above the hinge axis of the panel when the device is set up.

In the preferred embodiment illustrated, I have shown a display panel 18 formed integrally with the base 12 and hinged to the latter along the line 19. I have shown a second display panel 20 having the two lower portions 21 hinged to the base 12 along the hinge axis 22.

The top 10 is provided with a slot 23 through which the panel 18 projects, and with the aligned slots 24 through which the panel portions 21 project. Preferably, the panel 20 is shaped, in its upper portion, in the form of an ornamental arch 25 serving as a sort of frame for the rear portion of the device.

Preferably, also, the rear section 16 is provided with the integral extension 26 extending upwardly beyond the top 10 and serving as an additional display panel.

In assembling the present device, it is preferable to form attachment flaps 27 and 28 on the ends of the top 10, the same being adhesively or otherwise secured to the sections 11 and 16. It is also preferable to secure an additional reinforcement blank 29 to the front end 11 so as to brace the device across the hinge axis 13 when it is set up.

I have illustratively shown the invention applied to a display device in which the depiction of a pen 30 is incorporated with the panel 20, and in which the panels 18, 20, and 26 depict separate bottles of ink. This illustration, it will be understood, is given merely by way of example and my invention is by no means restricted to any particular commodity.

The outstanding advantage of the present construction lies in the fact that its adjustment from collapsed condition into set-up condition requires no manipulations whatsoever, except to swing the parts around the hinge axis 13, as hereinbefore described. Another outstanding advantage of the invention lies in the fact that the main portion of it, as shown in Figure 7, is composed of a single integral blank, thereby reducing the expense of manufacture to a minimum.

Any desired advertising material may be placed upon the sloping top 10, or upon any of the upright display panel portions; and, in general, it will be understood that the invention is susceptible to innumerable modifications, depending upon the particular use to which the display device is to be put.

Furthermore, it is to be understood that changes in the details, herein described and illustrated for the purpose of explaining the nature of my invention, may be made by those skilled in the art without departing from the spirit and scope of the invention as expressed in the appended claims. It is, therefore, intended that these details be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, and illustrated its use, what I claim as new and desire to secure by Letters Patent is—

1. In a collapsible cardboard display device, three hinged sections defining a base, a front end, and a top, said top being movable from a rear collapsed position to a forward operative position by swinging said front end from a rearward position overlying the base to a forward position in alignment with the base, said top having a slot therein and said base having a hinged display panel extending through said slot, the hinge axis of said panel being in substantially vertical alignment with said slot when the top is in the forward operative position.

2. In a collapsible cardboard display device, the elements set forth in claim 1, in combination with a rear section engaging said base and top at the rear edges thereof, said rear section being substantially vertical when the device is set up, thereby maintaining the top in a sloping relation to the base.

3. In a collapsible cardboard display device, the elements set forth in claim 1, in combination with a rear section engaging said base and top at the rear edges thereof, said rear section being substantially vertical when the device is set up, thereby maintaining the top in a sloping relation to the base, and said rear section being hinged to and formed integrally with said base.

4. In a collapsible cardboard display device, the elements set forth in claim 1, in combination with a rear section engaging said base and top at the rear edges thereof, said rear section being substantially vertical when the device is set up, thereby maintaining the top in a sloping relation to the base, and said rear section having an integral extension defining a display panel projecting upwardly beyond said top.

5. In a collapsible cardboard display device, three hinged sections defining a base, a front end, and a top, said top being movable from a rear collapsed position to a forward operative

position by swinging said front end from a rearward position overlying the base to a forward position in alignment with the base, said top having a pair of aligned slots therein, said base having a hinged display panel with spaced portions extending through said slots, respectively, the hinge axis of said panel being in substantially vertical alignment with said slots when the top is in the forward operative position, and said display panel defining an ornamental arch framing the rear portion of the top.

6. In a collapsible cardboard display device, the elements set forth in claim 5, in combination with a rear section engaging said base and top at the rear edges thereof for maintaining the top in sloping relation to the base when the device is set up, said rear section having an extension projecting upwardly beyond said top and visible through said arch.

7. In a collapsible cardboard display device, the elements set forth in claim 1, in combination with a rear section hinged to the rear edges of said base and top, the combined length of said rear section and base being equal to the combined length of said front end and top, whereby the device may be collapsed into substantially flat condition by superposing said top and front end over said base and rear section.

8. In a collapsible cardboard display device, four hinged sections defining, in cross-section, a trapezium with a relatively long base and relatively short ends, said device being set up by aligning the shorter end with the base to form a triangular cross-section, the combined length of the base and the longer end being equal to the combined length of the top and said shorter end, whereby the device may be collapsed by folding said top and shorter end into superposed relation to said base and longer end.

9. In a collapsible cardboard display device, four hinged sections as set forth in claim 8, said ends being of such relative lengths that when the device is set up the longer end will stand at substantially right angles to said base.

HAN OUWERKERK.