A. C. LANG.

COLLAPSIBLE DISPLAY STAND.

APPLICATION FILED JUNE 14, 1916.

1,254,639.

Patented Jan. 22, 1918.

3 SHEETS—SHEET 1.

Fig. 1.

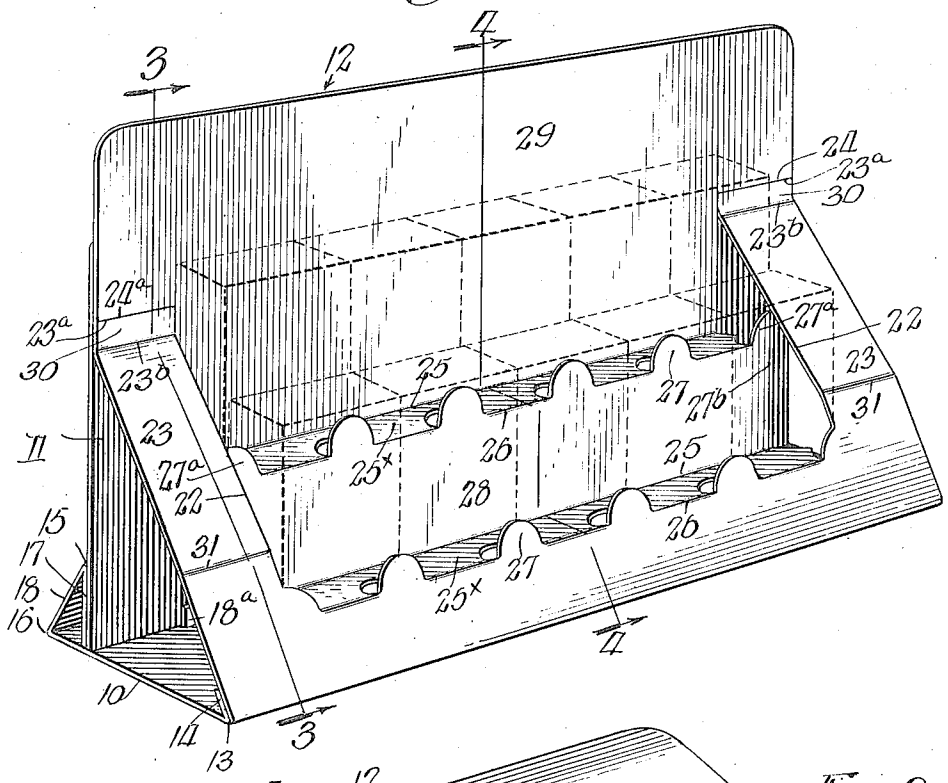
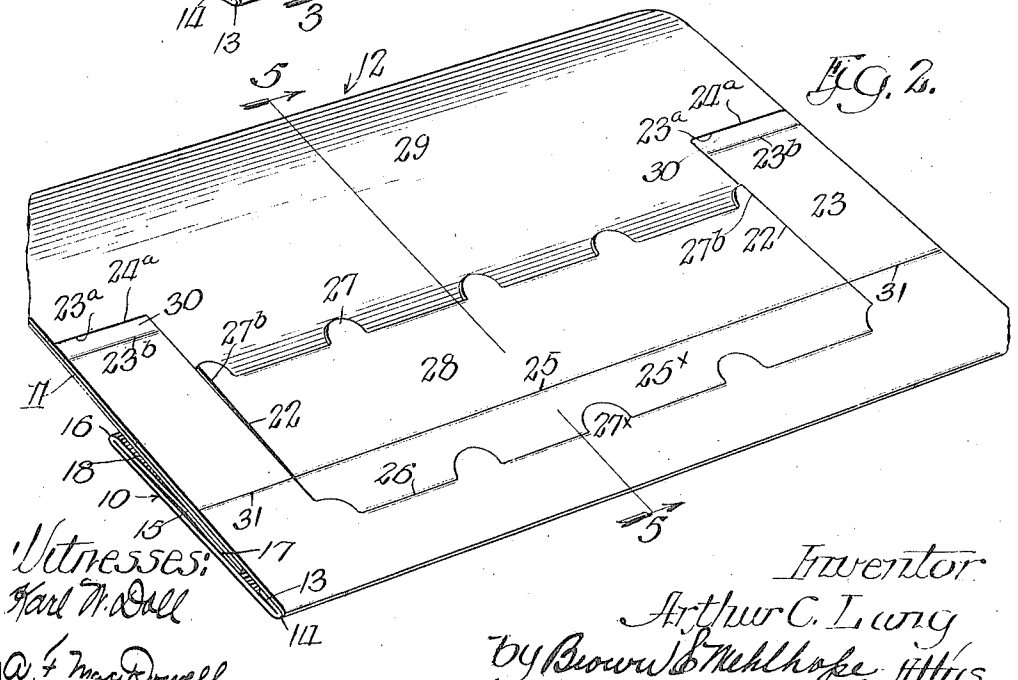


Fig. 2.



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3 SHEETS—SHEET 2.

FIG. 3.

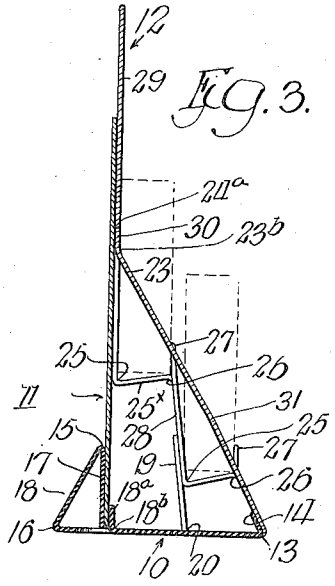


FIG. 4.

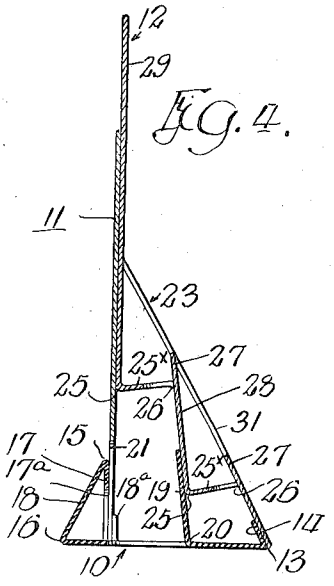


FIG. 5.

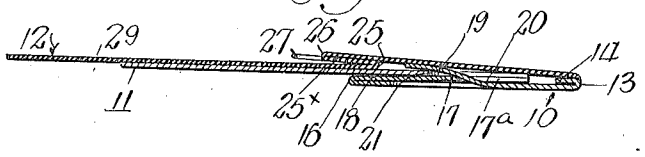
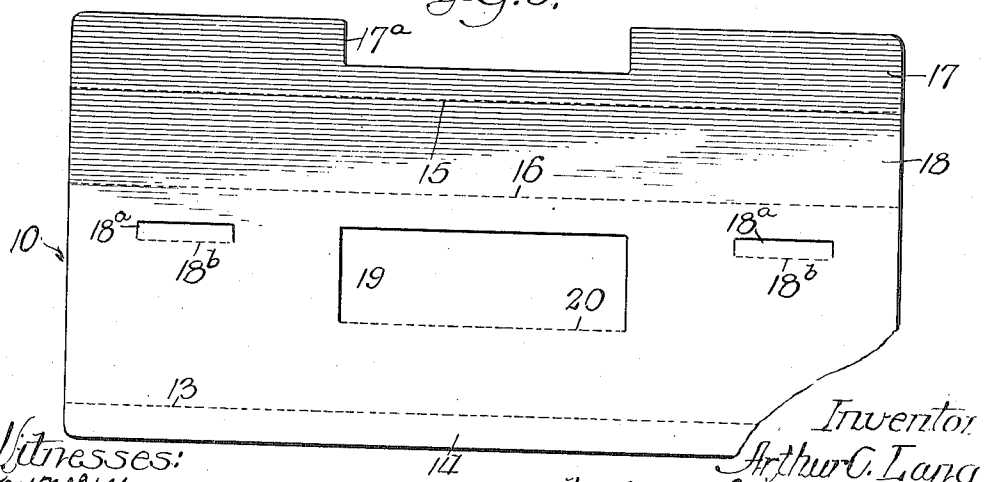


FIG. 6.



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3 SHEETS—SHEET 3.

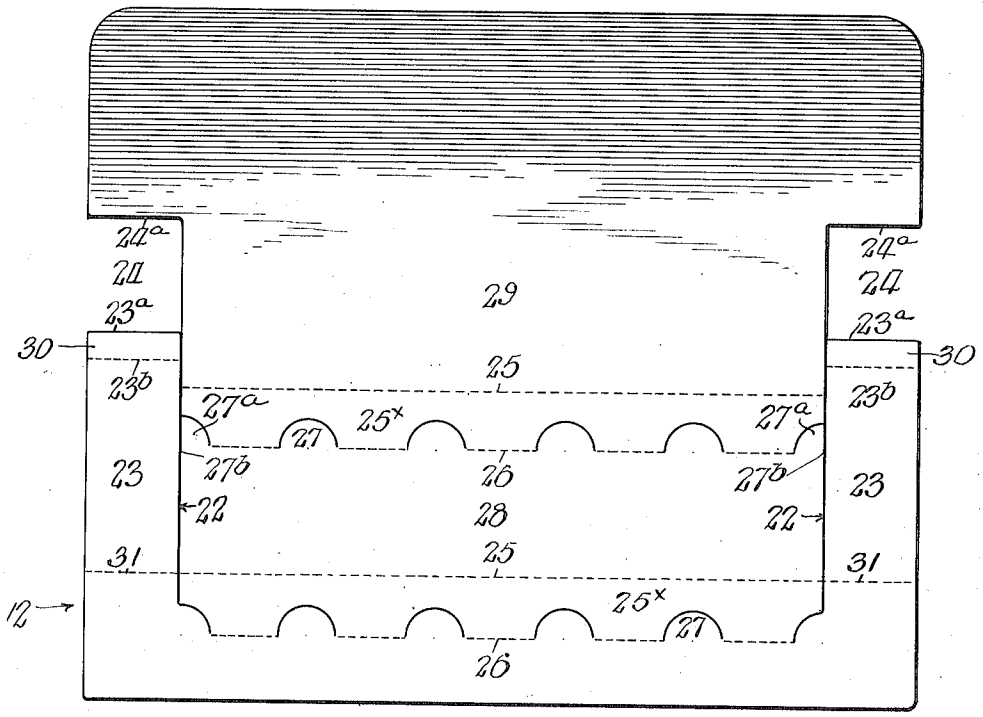


FIG. 7.

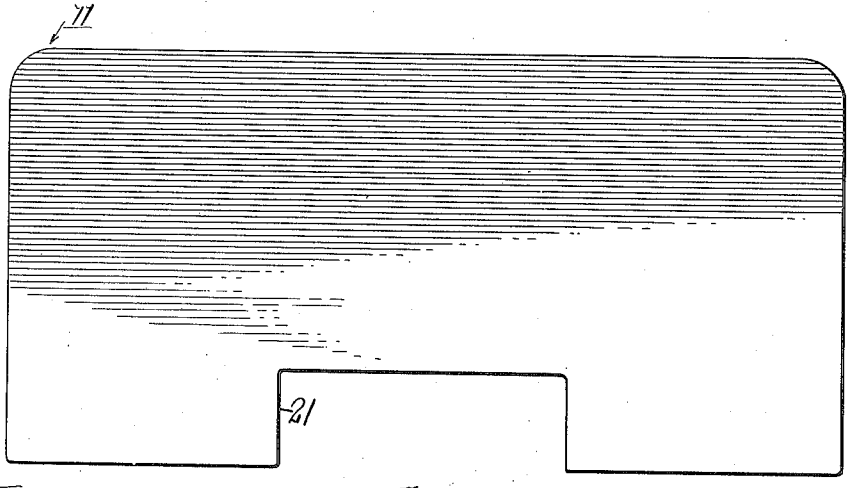


FIG. 8.

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UNITED STATES PATENT OFFICE.

ARTHUR C. LANG, OF CHICAGO, ILLINOIS, ASSIGNOR TO N. K. FAIRBANK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW JERSEY.

COLLAPSIBLE DISPLAY-STAND.

1,254,639. Specification of Letters Patent. Patented Jan. 22, 1918.

Application filed June 14, 1916. Serial No. 103,608.

To all whom it may concern:

Be it known that I, ARTHUR C. LANG, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Collapsible Display-Stands; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a collapsible display stand and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The many advantages of the invention will be more particularly pointed out and may be more readily seen after I have described the embodiment of the invention shown herein in detail.

In the drawings:

Figure 1 is a perspective view illustrating my collapsible display stand set up with the packages it is intended to display shown in dotted lines.

Fig. 2 is a perspective view showing the stand collapsed and ready for shipment.

Figs. 3 and 4 are views representing vertical sections through the stand when set up in planes indicated respectively by the lines 3—3 and 4—4 of Fig. 1.

Fig. 5 is a view representing the transverse section through the stand when collapsed in a plane indicated by the line 5—5 of Fig. 2.

Figs. 6, 7 and 8 are views representing respectively the base piece, back piece and front piece of which the stand is composed laid flat as cut and scored in preparation to make the stand, the full lines indicating cuts and the dotted lines indicating score lines in the usual manner.

The display stand is designed to provide a plurality of shelves which are arranged in the manner of a flight of stairs. In the example of the invention illustrated herein, but two shelves are provided, but as will be apparent as I proceed with my specification, the device is not limited to any particular number of shelves.

Referring now to that embodiment of my invention illustrated in the drawings:—10 indicates a base piece, 11 indicates an upright back piece and 12 indicates what may be called the front piece of the display stand. The latter piece provides not only braces to hold the stand and more particularly the back piece in proper upright position upon the base but also provides the steps or shelves upon which the articles to be displayed are supported. All three pieces are made of cardboard or of like material and are cut and scored in the manner now to be described.

The base piece 10 consists of an elongated, substantially rectangular sheet of the length of the stand that is to be made. Said base has a longitudinal score line 13 spaced back from its front edge to leave a flap 14 which is turned up along the score line and is attached to the bottom margin of the front piece 12. Longitudinal score lines 15 and 16 are placed near the rear edge of the sheet, the score line 15 defining a flap 17 and the space between the score lines 15 and 16, defining a web 18. In the manufacture of the stand, the web 18 is turned upwardly and forwardly into an inclined position, as indicated in Fig. 3, while the flap 17 is turned downwardly into a vertical position and has secured to it the bottom marginal part of the back piece.

The flap 17 is provided with an elongated notch 17^a, the purpose of which will appear presently. Near the score line 16, the sheet is cut to provide tongues 18^a, 18^a which are bent upwardly about score lines 18^b, 18^b. Said tongues abut against the front face of the bottom marginal part of the back piece 11, as appears in Fig. 3. A longer and wider tongue 19 is cut out of the part of the card intermediate the two shorter tongues 18^a, 18^a and is bent upwardly about a score line 20. This tongue, as will presently appear, is attached to support the shelves.

The back piece 11 consists of an elongated substantially rectangular sheet of the same length as the base piece. Said back piece is provided at its bottom with an elongated notch 21 of substantially the same length as the notch 17^a in the base piece.

The front piece 12 consists of a substantially rectangular sheet of the same length as the other sheets. Said sheet is cut near its end margins by lines 22—22, which extend transversely of the sheet and parallel to the end edges thereof. Said cuts define

brace flaps 23—23. The sheet is cut to leave rectangular notches or spaces 24—24 at the ends 23^a—23^a of the brace flaps 23. The sheet is provided with spaced pairs of longitudinal score marks 25—26 which define respectively the rear and front edges of the shelves and which are separated by a distance equal to the intended vertical spacing of the shelves. The lines 26 defining the front edges of the shelves are broken and are interrupted by a plurality of curved cuts which define tongues 27—27 cut out of the sheet.

The proximate score marks 25 and 26, when the stand is set up, define an upright web 28 (see Fig. 4) which forms the back of the lower set of shelves and the front support for the next higher set of shelves. The parts 29 of the sheet beyond the score mark 25 of the last shelf, in the case where but two shelves are intended as in the present case, form an upright web which is attached to and which preferably extends above the back piece 11.

The end brace flaps 23 are provided with score marks 23^b near their ends to leave end flaps 30 which are bent at an angle to the length of the brace flaps and are secured to the back piece 11. In cutting the card, the spaces 24 are so proportioned that when the front piece is set up as shown in Fig. 1, the end 23^a of the flap 30 will meet the shoulders 24^a left in cutting out the said spaces. The flaps 23 are also provided with score marks 31 in line with the score mark defining the rear edge of the lowest shelf. The purpose of these score marks will appear presently.

In attaching the front piece in the manner described, the parts 25^x—25^x between the several pairs of score lines 25—26 are made to assume a substantially horizontal position, while the web 28 and the rear part 29 of the sheet are made to assume a substantially vertical position, as is readily apparent from an examination of Fig. 4. The lower marginal part of the sheet and the two brace flaps 23 are made to assume an inclined position as more easily seen in Fig. 1. The tongues 27 being cut from the parts of the sheet which form the shelves or steps, are, in setting up the device, made to assume a substantially upright position as shown. Thus, when the packages are placed upon the shelves 25^x as indicated in dotted lines in Fig. 1, said tongues will present a plurality of longitudinally spaced flanges to retain the packages from dislodgment from the several shelves. The tongue 19 of the base piece is attached to the intermediate web 28 which forms the back of the lower shelf and the front support of the next upper shelf as clearly to be seen in Figs. 3 and 4.

The score lines 31 in the brace flaps 23, permit the bottom part of the front piece to assume a less inclined position than the main length of the brace flaps, when the stand is set up and more particularly when the packages are placed on the lower shelf and caused to engage the associated tongues 27. This adds to the general appearance of the stand.

In cutting the tongues 27, they are preferably disposed so that they will be placed at the middle of the packages that are to be displayed. Half tongues 27^a are formed adjacent the cuts 22 by which the inner edges of the brace flaps 23 are defined. When the stand is set up, the edges 27^b of said half tongues engage the inner edges of the brace flaps and provide intermediate end braces to prevent longitudinal distortion of the stand.

The stand is shipped in collapsed condition as illustrated in Figs. 2 and 5. When in this state, the tongues 18^a of the base piece 10, lie flat and the web 18 and the flap 17, together with the attached back, lie flat on the main body of the base piece,—the former being bent forwardly and the latter backwardly (see Fig. 5). The front piece will lie flat on the base piece with the top step or shelf 25^x folded in reversed position as illustrated. The notch 17^a in the flap 17 of the base piece and the notch 21 in the back piece permit the collapsing of the front piece as described with the tongue 19 attached to the web 28 between the two steps or shelves. To set up the stand, the back is swung upwardly and its bottom edge moved rearwardly over the base piece until it is brought to an upright position, when the tongues 18^a are bent upwardly and caused to engage and lock it in position. This automatically brings the other parts into proper, expanded position.

I claim as my invention:

1. A collapsible stand comprising a base piece, a back piece and a front piece, the base being attached to the back piece and the front piece being attached respectively to the base piece and to the back piece, the front piece being cut and scored to provide a plurality of shelves arranged in the manner of steps and the base piece being provided with tongues adapted to support said steps intermediate the front and rear of the base, and said base, back and front piece being attached together and being constructed so as to be capable of being folded into superposed relations.

2. A collapsible stand comprising a base piece, a back piece and a front piece, the base being attached to the back piece and the front piece being attached respectively to the base and to the back piece, the front piece being cut and scored to provide end braces connecting the base piece directly with the back piece and to provide a part adapted to fold to form a plurality of shelves arranged in the manner of steps, and said

base, back and front piece being constructed so as to be capable of being folded into superposed relations.

3. A collapsible stand comprising a base piece, a back piece and a front piece, the base piece being scored to provide a flap at the front to which the bottom of the front piece is secured and being scored at the back to provide a flap to which the back piece is secured, and an intermediate web adapted to brace the back piece in its upright position, said base piece also being cut to provide tongues to engage the front face of the bottom of the back piece and a tongue to provide an intermediate support for the front piece, the back piece consisting of an upright sheet secured to the rear flap of the base piece, and the front piece consisting of a sheet cut to provide end braces for the stand which are inclined to the back piece and secured at their upper ends thereto, and which is cut and scored intermediate said brace pieces to provide parts adapted to fold into the form of substantially horizontal stepped supports or shelves and the top part of said front piece being bent into a vertical plane and secured to the front of said back piece.

4. A collapsible stand comprising a base piece, a back piece and a front piece, the base piece being scored to provide a flap at the front, to which the bottom of the front piece is secured and being scored at the back to provide a flap to which the back piece is secured, and an intermediate web adapted to brace the back piece in its upright position, said base piece also being cut to provide tongues to engage the front face of the bottom of the back piece and a tongue to provide an intermediate support for the front piece, the back piece consisting of an upright sheet secured to the rear flap of the base piece, and the front piece consisting of a sheet cut to provide end braces for the stand, which are inclined to the back piece and secured at their upper ends thereto, and which is cut and scored intermediate said brace pieces to provide parts adapted to fold into the form of substantially horizontal stepped supports or shelves, with a plurality of tongues projecting above the plane of said stepped supports along the front edges thereof, and the top part of said front piece being bent into a vertical plane and secured to the front of said back piece.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 27th day of May, A. D. 1916.

ARTHUR C. LANG.

Witnesses:
T. N. ALFREDS,
KARL W. DOLL.