Feb. 9, 1937. V. FORTUNATO ET AL 2,070,478

COLLAPSIBLE SIGN CHARACTER

Filed Nov. 29, 1935 3 Sheets-Sheet 1

FIG. 1.

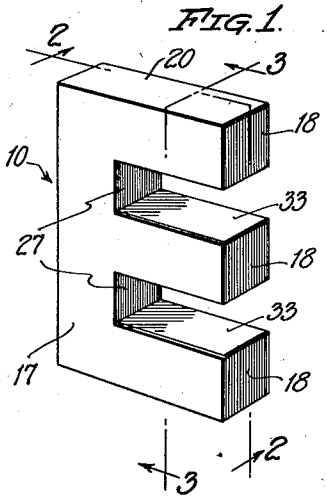


FIG. 2.

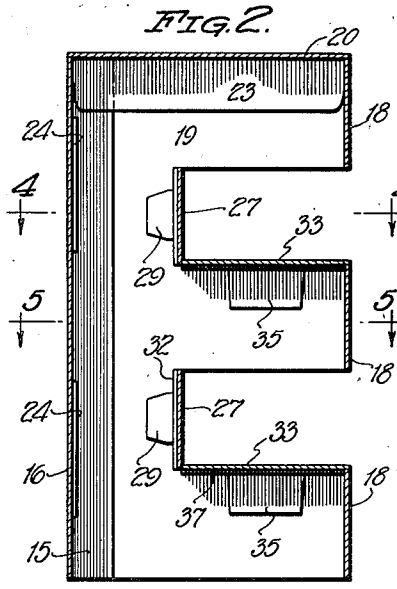


FIG. 3.

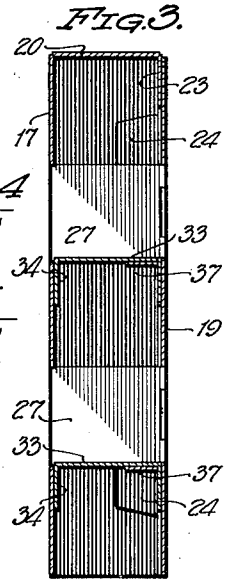


FIG. 4.

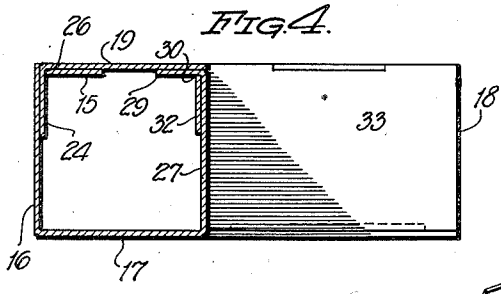


FIG. 5.

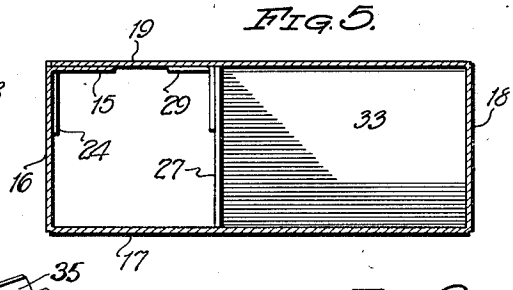


FIG. 7a.

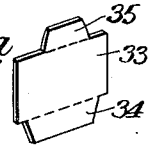
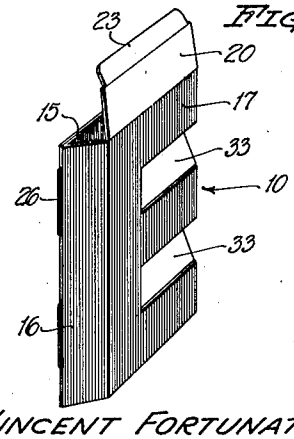


FIG. 7.

FIG. 6.



VINCENT FORTUNATO
ROMEO A. CATOZELLA.
INVENTORS.

BY Ely & Pattison.
ATTORNEYS.

WITNESS:

Feb. 9, 1937. V. FORTUNATO ET AL 2,070,478

COLLAPSIBLE SIGN CHARACTER

Filed Nov. 29, 1935 3 Sheets-Sheet 2

FIG. 8.

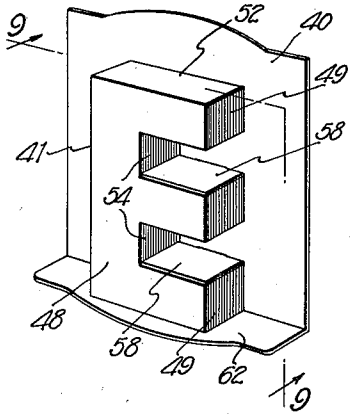


FIG. 9.

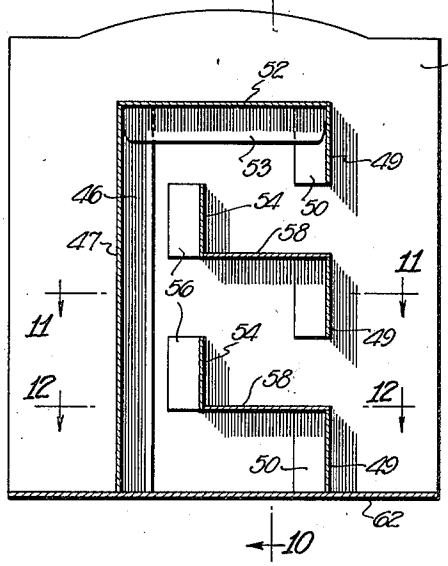


FIG. 10.

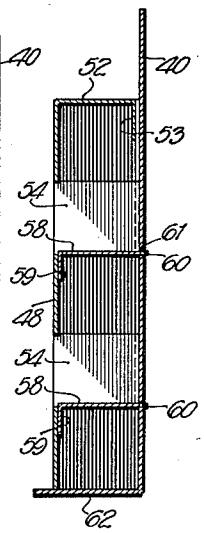


FIG. 11.

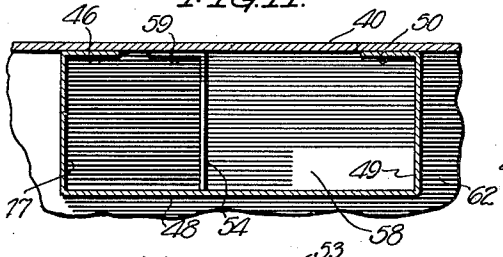


FIG. 12.

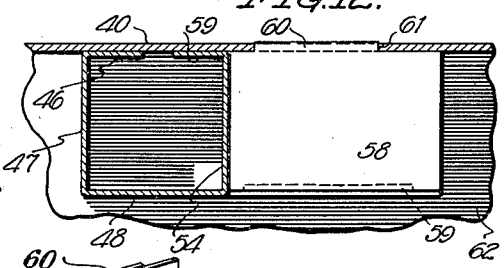


FIG. 14.

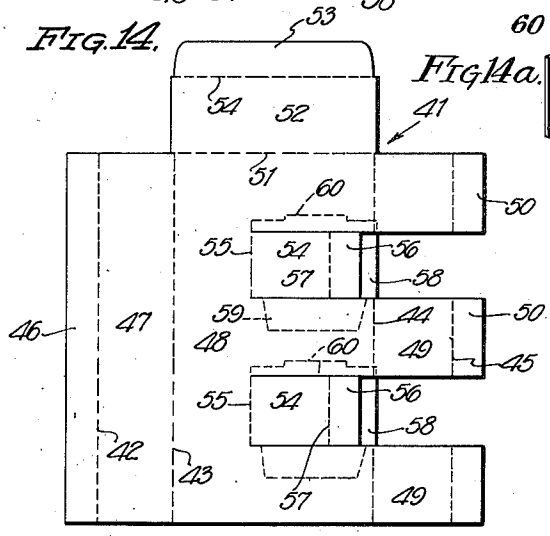


FIG. 14a.

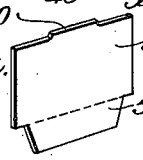
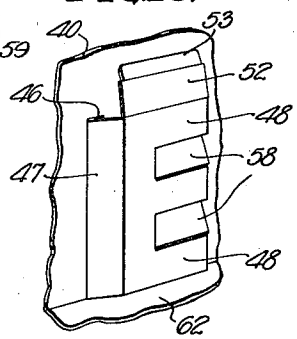


FIG. 13.



VINCENT FORTUNATO
ROMEO A. CATOZELLA.
INVENTORS.

BY Fly & Pattisson
ATTORNEYS.

WITNESS:

Feb. 9, 1937. V. FORTUNATO ET AL 2,070,478

COLLAPSIBLE SIGN CHARACTER

Filed Nov. 29, 1935 3 Sheets-Sheet 3

FIG. 15.

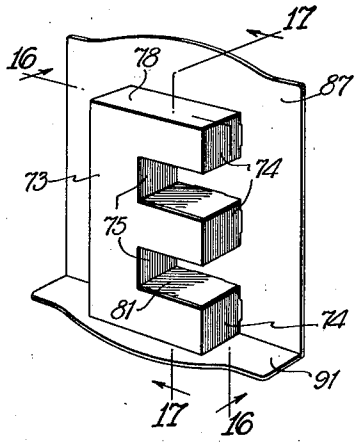


FIG. 16.

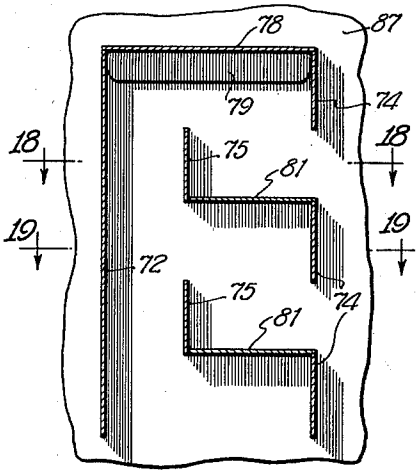


FIG. 17.

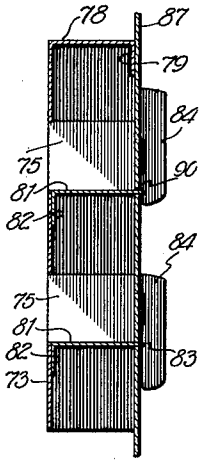


FIG. 18.

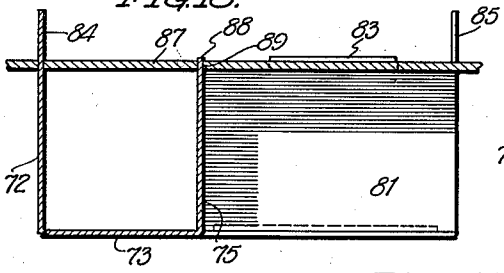


FIG. 19.

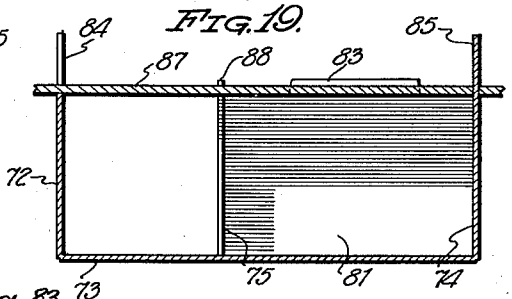


FIG. 21a.

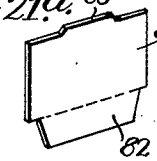


FIG. 20.

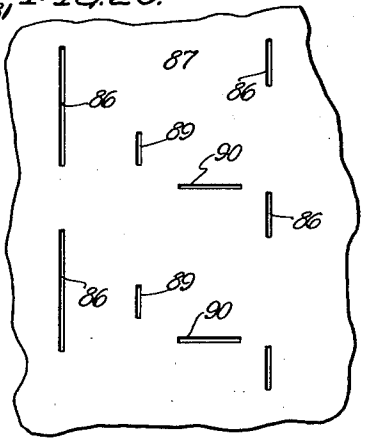


FIG. 21.

VINCENT FORTUNATO
ROMEO A. CATOZELLA.
INVENTORS.

BY Fly & Pattison
ATTORNEYS.

WITNESS:
E. Newton Lusby

Patented Feb. 9, 1937 2,070,478

UNITED STATES PATENT OFFICE

2,070,478

COLLAPSIBLE SIGN CHARACTER

Vincent Fortunato and Romeo A. Catozella, Brooklyn, N. Y., assignors to The Mounting & Finishing Co. Inc., Brooklyn, N. Y., a corporation of New York

Application November 29, 1935, Serial No. 52,160

12 Claims. (Cl. 40—140)

This invention relates to improvements in display sign characters.

One of the main objects of the invention resides in a foldable display sign character constructed of cardboard which may be collapsed to a flat position when not in use to facilitate compact packing and shipping of the same, and which may be easily set up for use by one unskilled in the art to produce a display character having three dimensions, namely, height, width, and depth.

Another feature of the invention is to provide a box-like cardboard display character which may either be in the form of letters of the alphabet, or in the form of numerals, or both, and from which display signs for store windows and interior displays may be constructed for advertising purposes.

A further feature of the invention is the provision of a foldable display character which is cut and scored from blanks of cardboard by automatic machinery with a minimum amount of waste of material, and at a minimum cost.

With these and other objects in view, the invention resides in the certain novel construction, combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of one form of the invention, the same being set up for use.

Figure 2 is an enlarged vertical sectional view on the line 2—2 of Figure 1.

Figure 3 is a vertical transverse sectional view on the line 3—3 of Figure 1.

Figure 4 is a horizontal sectional view on the line 4—4 of Figure 2.

Figure 5 is a horizontal sectional view on the line 5—5 of Figure 2.

Figure 6 is a perspective view showing the sign character in partially collapsed position.

Figure 7 is a plan view of the blank from which the sign character is constructed.

Figure 7a is a detail perspective view of one of the auxiliary walls.

Figure 8 is a perspective view of a modified form of sign character.

Figure 9 is an enlarged vertical sectional view on the line 9—9 of Figure 8.

Figure 10 is a vertical transverse sectional view on the line 10—10 of Figure 9.

Figure 11 is a horizontal sectional view on the line 11—11 of Figure 9.

Figure 12 is a horizontal sectional view on the line 12—12 of Figure 9.

Figure 13 is a perspective view of the sign character in partially collapsed position.

Figure 14 is a plan view of the sign character in a flat spread out position.

Figure 14a is a detail perspective view of one of the auxiliary walls.

Figure 15 is a perspective view of a further modified form.

Figure 16 is an enlarged vertical sectional view on the line 16—16 of Figure 15.

Figure 17 is an enlarged vertical sectional view on the line 17—17 of Figure 15.

Figure 18 is a horizontal sectional view on the line 18—18 of Figure 16.

Figure 19 is a horizontal sectional view on the line 19—19 of Figure 16.

Figure 20 is a front elevational view of the supporting panel with the sign character removed.

Figure 21 is a plan view of the sign character in flat position.

Figure 21a is a detail perspective view of one of the auxiliary walls.

Referring to the drawings by reference characters, and more particularly to the form of the invention shown in Figures 1 to 7 inclusive, the numeral 10 designates a hollow sign character in its entirety constructed substantially of a single blank of cardboard or like stiff bendable material. Referring to Figure 7, the blank from which the character is formed is scored on the vertical score or fold lines 11, 12, 13, and 14 to provide respectively an end flap 15, side wall 16, front wall 17, side wall 18 and rear wall 19. In the drawings, the letter "E" is shown, but it will be understood that the character may be any letter of the alphabet or any numeral. Extending from the top of the front wall 17 is a top wall 20, separated from the front wall by a score line 21. The flap 20 is scored parallel to the score line 21 as at 22 to provide a locking flap 23.

Extending from the free side edge of the rear wall 19 are tongues 24 which are bendable on the score line 25, and which tongues are adapted to enter the respective slots 26 provided along the score lines 11.

As above mentioned the letter "E" is shown in the drawings and the front wall 17 is cut to the particular shape of the character to be formed, whereas the rear wall 19 is cut in a reverse manner so that when the rear wall is folded on the front wall, the two walls will be disposed in alinement.

In the formation of the "E", use is made of cut out material, such as far instance side flaps 27—27

which are foldable inwardly on the score lines 28 to close the right side of the character not closed by the side wall 18. The flaps 27 are provided with tongues 29 which are adapted to enter slots 30 provided at the line of score 31 between the rear wall 19 and inwardly foldable flaps 32. The parts so far described are all cut and foldable from a single blank of material and in instances where it is necessary to close certain side walls which cannot be accomplished from the single blank, auxiliary walls constructed of separate cardboard are provided. In the formation of the letter E, these auxiliary walls are shown at 33 and each is provided with an attaching tab 34 which is adhesively secured in the present instance to the rear side of the front wall 17. In this instance they constitute the walls for closing the tops of the lower horizontal and intermediate horizontal portions of the letter "E". Each flap 33 is provided with a locking tongue 35 which is receivable in the slot 36 formed along the line of score separating the rear wall 19 from inwardly foldable flaps 37.

Considering the box in its blank form as shown in Figure 7, all of the parts are foldable inwardly on the score lines in order that the tongues 24 may be inserted into the slots 26, the flap 15 being disposed against the inside of the rear wall 19. The side wall flaps 27—27 are secured in position by inserting the tongues 29 into the slots 30 while the tongues 35 of the auxiliary flaps or walls 33 are received in the respective slots 36. The top wall 20 is folded down and the flap 23 which is integral therewith is disposed on the inside of the rear wall. With the parts folded in this manner, a collapsible sign character may be provided and as shown in detail in Figures 1 to 6. When set up for use, a rigid character of three dimensions is provided, the said character having height, width, and depth. By employing sign characters constructed in this manner, an attractive display sign may be produced, for the letters may be set on end, or as shown in the following modifications, they may be mounted upon a supporting panel.

Whereas we have shown in the drawings, the tops of the horizontally disposed branches of the letter "E" as being closed, it is possible to reverse this construction for in the construction shown it is presumed that the character is to be viewed in perspective from the top. In instances where the character is to be viewed in perspective from below, the underside of a character may be similarly closed.

In order to collapse the character, it is not necessary that the initial interlocking of the tongues 24 and slots 26 be disturbed, for it is only necessary to open up the top 20, disengage the side wall flaps 27 from the rear wall and disengage the auxiliary flaps or walls 33 from the rear wall, whereupon the character may be collapsed in the manner shown in Figure 6.

In Figures 8 to 14, inclusive, a modified form of our invention has been shown wherein a cardboard panel 40 acts as the rear wall of the sign character 41. The sign character 41 in this instance is also shown as that of the letter E and the blank consists of cardboard cut and scored to provide a foldable box-like structure. The blank is scored on the parallel lines 42, 43, 44, and 45 to provide respectively, an attaching glue flap 46, a side wall 47, front wall 48, side wall 49, and attaching flaps 50. Formed integral with the top of the front wall 48 and foldable rearwardly on the transverse fold line 51 is a top wall 52 having a locking flap 53 integral therewith and foldable rearwardly on the score line 54 which is disposed parallel with respect to the score line 51. In the formation of the letter E, auxiliary side walls or flaps 54 are provided and are foldable inwardly on the vertical score lines 55. Glue flaps 56 are formed integral with the side flaps 54 and are foldable inwardly on the vertical score line 57.

In the formation of sign characters in this modification, the same condition may arise as that hereinbefore described, wherein additional walls or flaps may be required and which cannot be cut from the same blank of material. In this form, wall flaps 58 have attaching tabs 59 glued to the rear of the front wall 48 and the free opposite edge is provided with a locking tongue 60.

In the assembly of a sign character constructed in accordance with this modification, all of the walls or flaps are folded inwardly on the respective score lines and the flap 46 and flap 50 are adhesively secured to the supporting panel 40, the flaps 56 provided on the side wall flap 54 are also adhesively secured to the panel 40 as best seen in Figures 11 and 12 of the drawings. After the sign character has thus been attached to the panel 40, the top 52 is folded over and the flap 53 inserted to lie in close proximity to the panel 40 while the wall flaps 58 are folded to a horizontal position so that the tongues 60 enter horizontal slots 61 provided in the panel 40 and as shown in Figure 12 of the drawings.

When the character is set up for use as shown in Figure 8, there is formed a character with three dimensions as hereinbefore explained and it will be understood that the panel 40 may be of any length to receive a number of characters, or each character may be individually mounted upon a separate panel. The panel 40 is provided with a forwardly bendable bottom or base flap 61 which closes the open bottom of the sign character. To collapse the character shown in this form, it is only necessary to lift up the top wall 52 and disengage tongues 60 of the wall flaps 58, whereupon the structure may be moved toward the right to a collapsed position as illustrated in Figure 13 of the drawings.

In Figures 15 to 21, a further modification is shown wherein the construction is quite similar to that shown in the preceding form with the exception that the character removably interlocks with the supporting panel instead of being permanently secured thereto. In this form the blank of cardboard is scored on the lines 70 and 71 to provide a side wall 72, a front wall 73, and side wall flaps 74. The letter "E" is shown as an example, and in addition to the side wall flaps 74, the same is provided with side wall flaps 75 foldable inwardly on the score line 76. Integral with the front wall 73 and foldable inwardly from the top thereof on the fold line 77 is a top wall 78 provided with an inwardly foldable flap 79 foldable on the score line 80. In this form, use is also made of separate auxiliary wall flaps 81 having glue flaps 82 secured to the rear of the front wall 73 whereas the opposite free edge of the flaps 80 are provided with locking tongues 83. Formed integral with the side wall 72, are hook tongues 84, while similar tongues 85 are provided on the side wall flaps 74. It will of course be understood that in the construction of certain characters, both sides of the character may be provided with continuous walls similar to the wall 72, and it is due to the shape of the letter "E" that the side wall flaps 74 are provided.

The blank is folded inwardly on the respective score lines, and the hook tongues 84 and 85 are

engaged in the vertical slots **86** provided in the supporting panel **87**. The cover **78** is folded down with the flaps **79** extending inwardly, after which the side wall flaps **75** are folded inwardly and the tongues **88** thereon enter vertical slots **89** in the panel. The wall flaps **81** fold inwardly and the tongues **83** thereof enter horizontal slots **90** in the panel. The character so formed produces the same effect as that shown in the preceding form. The panel **87** is provided with a base flap **91** which folds forwardly and closes the open bottom of the character, said flap also acting as a base.

When it is desired to collapse the character shown in this modified form, the entire character is disengaged from the supporting panel and may assume the position shown in Figure 21.

From the foregoing description, it will be seen that in all forms of the invention, we have provided a display sign character constructed of cardboard which when folded and secured in a set up position, produces an attractive and modernistic character for advertising display, and one wherein the character has three distinct dimensions, namely height, width and depth. Collapsing of the character as hereinbefore explained facilitates the compact packing and shipping of an advertising display and which may be set up for use by one unskilled in the art.

While we have shown and described several modifications of the invention, it will be understood that other constructions may be resorted to as come within the scope of the appended claims.

Having thus described the invention, what is claimed as new and is desired to be secured by Letters Patent of the United States, is:—

1. A sign character comprising a flat blank of cardboard cut and scored to provide a front wall of a shape corresponding to that of the character, rearwardly foldable side walls, a foldable rear wall joined to one of said side walls and being of a reverse shape to the front wall which when folded into a plane parallel with said front wall conforms to the shape thereof, and releasable interlocking means between certain of the walls for securing the folded blank in set up position to form a hollow sign character.

2. A collapsible sign character comprising identical spaced parallel front and rear walls, said front and rear walls conforming to the shape of a predetermined sign character, opposed side walls hingedly connected to opposite sides of said front and rear walls, and releasable interlocking means for securing the walls in set up character forming position against collapsing.

3. A sign character comprising a single blank of cardboard cut and scored to provide a front wall of a shape corresponding to the shape of that character, side walls hingedly connected to opposite sides of said front wall, a rear wall hingedly connected to one of said side walls and being of a shape reverse to said front wall, a rear flap hinged to the other side of said front wall and having slots along the hinge line thereof, locking tongues on the free side edge of said rear wall for reception in said slots when the blank is folded to set up position, and releasable interlocking means between said front and rear walls for bracing the same against collapsing when the blank is in folded set up position.

4. A sign character comprising a single blank of cardboard cut and scored to provide a front wall of a shape corresponding to the shape of that character, side walls hingedly connected to opposite sides of said front wall, a rear wall hingedly connected to one of said side walls and being of a shape reverse to said front wall, a rear flap hinged to the other side of said front wall and having slots along the hinge line thereof, locking tongues on the free side edge of said rear wall for reception in said slots when the blank is folded to set up position, an end wall hinged to one end of said front wall, and a hinge flap connected to said end wall adapted to fit against the inner side of said rear wall when the blank is in folded set up position to brace the front, rear, and side walls from collapsing.

5. A collapsible sign character comprising identical front and rear walls of a shape corresponding to that of the character, side walls hingedly connected to said front and rear walls, an end wall hinged to said front wall, and a flap carried by the free edge of said end wall fitting against the inner side of said rear wall for bracing said front, rear, and side walls against collapsing along their hinge connections.

6. A collapsible sign character comprising a supporting panel, a front wall of a shape corresponding to the shape of that character, side walls hinged to opposite sides of said front wall, attaching tabs hinged to said side walls and adhesively secured to said supporting panel, bracing walls hinged to said front wall and extending rearwardly to said panel, and releasable interlocking means between said bracing walls and said panel to lock the front and side walls against collapsing against said panel.

7. A collapsible sign character comprising a single blank of cardboard cut to provide a front wall of a shape corresponding to the shape of a predetermined character and opposed side walls, parallel score lines dividing opposite sides of said front wall from said side walls; a rear wall to which said side walls are connected, bracing walls hingedly connected to said front wall and extending rearwardly to said rear wall, the axes of the hinge connections of said bracing walls being disposed at right angle to the score lines, and releasable interfitting means between said bracing walls and rear wall to prevent the front and side walls from accidentally collapsing along the dividing score lines therebetween.

8. A collapsible sign character comprising a front wall corresponding to the shape of a predetermined character, side walls hinged to opposite sides of said front wall, a rear wall to which said side walls are connected, an end wall hinged to said front wall, a flap carried by the free edge of said end wall and fitting against said rear wall, bracing walls hinged to said front wall and extending rearwardly to said rear wall, and releasable interlocking means between said bracing walls and said rear wall to lock the front and side walls against collapsing relative to said rear wall.

9. A collapsible sign character comprising a front wall corresponding to the shape of that character, side walls hinged to opposite sides of said front wall, a rear wall to which said side walls are hingedly connected, bracing walls hinged to said front wall and disposed at right angles to said side walls and extending rearwardly to said rear wall, and releasable interlocking means between said bracing walls and said rear wall to lock the front and side walls against collapsing relative to said rear walls.

10. A collapsible sign character comprising a front wall of a shape corresponding to that of a predetermined character, side walls hingedly

connected to opposite sides of said front wall, an end wall hinged to said front wall, a rear wall to which said side walls are hingedly connected, and a flap carried by the free edge of said end wall and fitting against said rear wall for bracing the front and rear walls against collapsing along their hinged connection.

11. A collapsible sign character comprising a front wall of a shape corresponding to the shape of that character, side walls hingedly connected to the sides of said front wall, a rear wall hingedly connected to one of said side walls and being of a shape corresponding to the shape of said front wall and disposed in spaced parallel relation thereto, a rear flap hinged to the other side of said front wall and having slots therein, and locking tongues on the free side edge of said rear wall for reception in said slots for securing all the walls in set up position.

12. A collapsible sign character comprising a front wall of a shape corresponding to the shape of that character, side walls hingedly connected to the sides of said front wall, a rear wall hingedly connected to one of said side walls and being of a shape corresponding to the shape of said front wall and disposed in spaced parallel relation thereto, a rear flap hinged to the other side of said front wall and having slots therein, and locking tongues on the free side edge of said rear wall for reception in said slots for securing all the walls in set up position, and releasable interlocking means connecting said front and rear walls for bracing the same against collapse.

VINCENT FORTUNATO.
ROMEO A. CATOZELLA.