March 25, 1941. M. HYNDMAN 2,236,060

DRINKING CUP

Filed Nov. 3, 1938 2 Sheets-Sheet 1

Fig. 1.

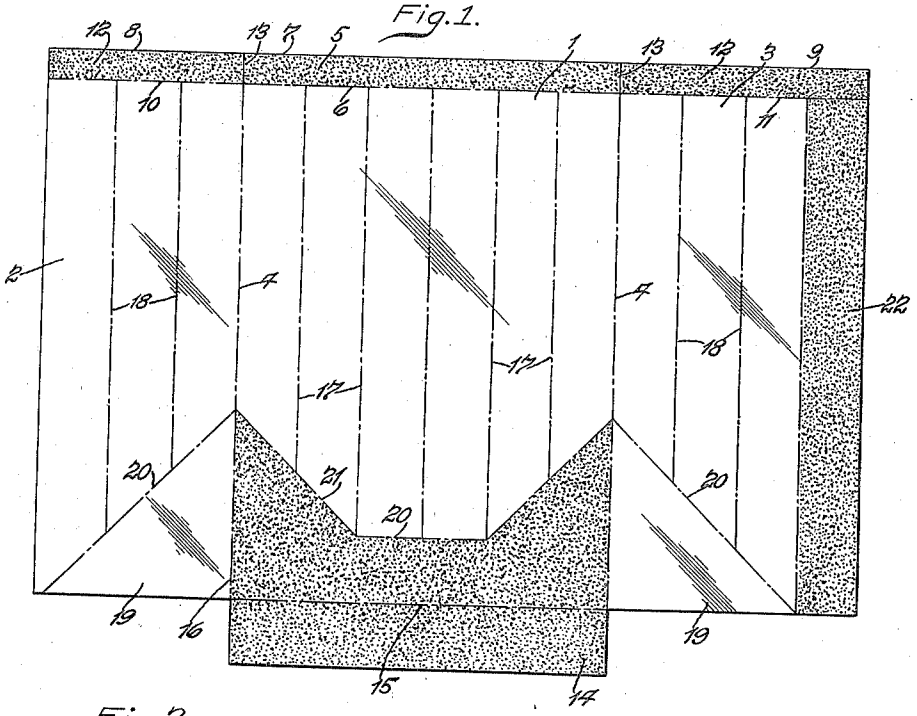


Fig. 2.

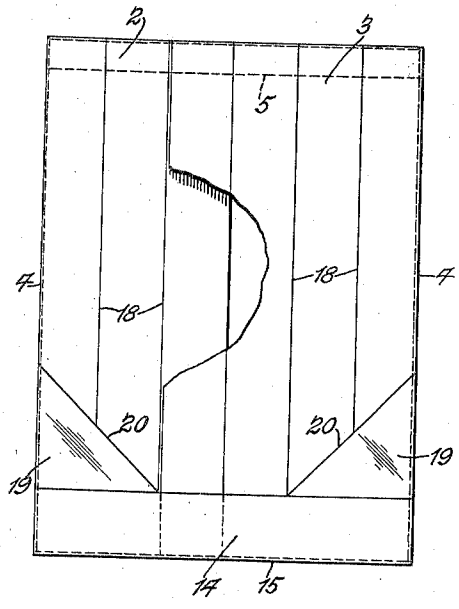


Fig. 3.

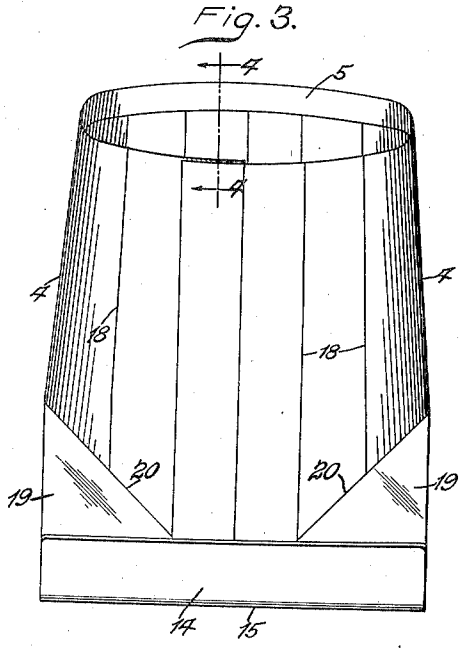
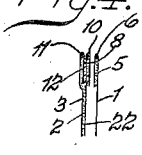


Fig. 4.



Inventor
Meade Hyndman
by Rippey & Cassidy
His Attorneys.

March 25, 1941. M. HYNDMAN 2,236,060

DRINKING CUP

Filed Nov. 3, 1938 2 Sheets-Sheet 2

Fig. 5.

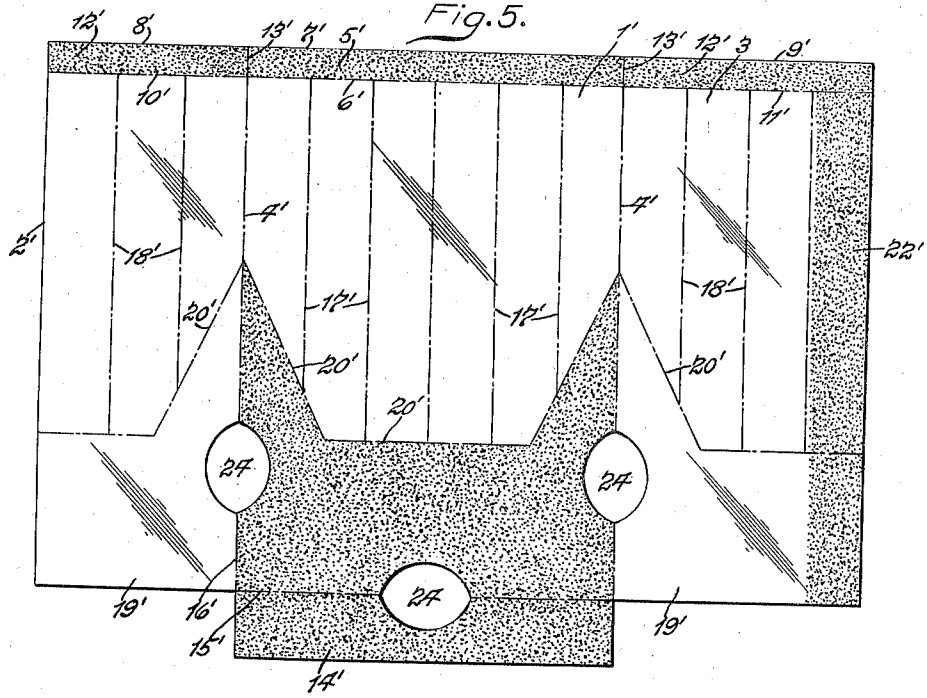


Fig. 6.

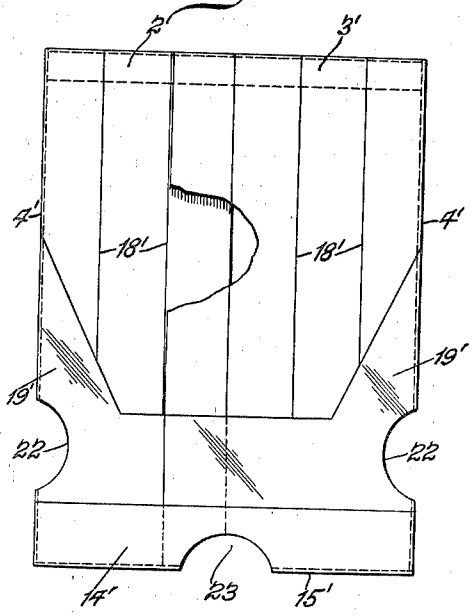


Fig. 7.

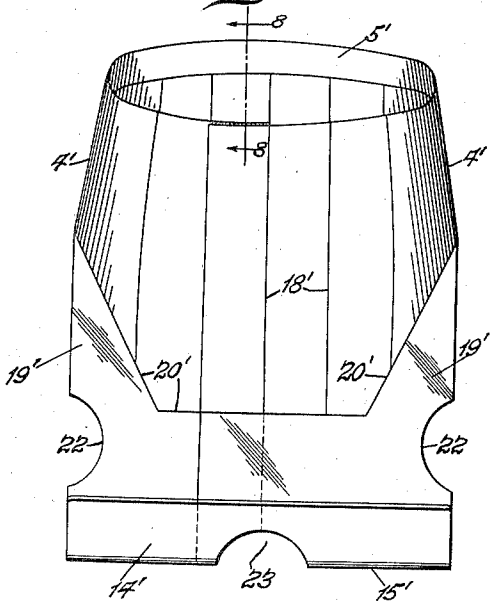
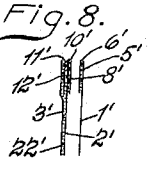


Fig. 8.



Inventor
Meade Hyndman
by Rippey & Cassidy
His Attorneys.

Patented Mar. 25, 1941 2,236,060

UNITED STATES PATENT OFFICE

2,236,060

DRINKING CUP

Meade Hyndman, St. Louis, Mo.

Application November 3, 1938, Serial No. 238,524

6 Claims. (Cl. 229—53)

This invention relates to drinking cups; and has special reference to foldable or collapsible drinking cups that are capable of being opened or expanded to receive their intended contents.

Objects of the invention are to provide an improved drinking cup made of a blank composed of paper or the like designed and arranged so that portions of the blank may be attached together to vary the capacity of the cup made therefrom; to provide blanks for the formation of cups having areas adapted to be attached together to form cups of different sizes or capacities even though the outside dimensions of the cups are approximately uniform; to provide cups made of blanks of paper or the like having marginal portions thereof attached together to form receptacles open only at one end and having score or hinge lines along which the walls of the cup fold or turn when the cup is opened or expanded to receive its intended contents; and to provide an idea of means for producing collapsed paper cups of varying dimensions or capacities made from blanks of uniform size.

Other objects of the invention will be apparent from the following description, reference being made to the annexed drawings, in which—

Fig. 1 is an inner side plan view of a blank used to form a collapsed paper cup of predetermined capacity.

Fig. 2 is a side elevation of a cup made from the blank shown in Fig. 1, a part of the overlapping end portion of one of the walls being broken away.

Fig. 3 is a perspective view of the completed cup opened to receive its intended contents.

Fig. 4 is a sectional view of the open end margins of the cup approximately along the line 4—4 of Fig. 3.

Fig. 5 is an inner side plan view of a blank of the same size as that shown in Fig. 1, arranged and designed to form a cup of less capacity than that made from the blank of Fig. 1 and having a longer handle portion provided by its closed end.

Fig. 6 is a side elevation of the cup made from the blank of Fig. 5.

Fig. 7 is a perspective view of the finished collapsible cup opened to receive its intended contents.

Fig. 8 is a sectional view of the open end margins of the cup approximately along the line 8—8 of Fig. 7.

The main portion of the blank shown in Fig. 1 is of elongated rectangular form including a central panel 1, a side panel 2 and a side panel 3, all of approximately equal length. The panels 2 and 3 are formed integral with the panel 1 and are defined therefrom by hinge or score lines 4 along which the panels 2 and 3 may turn to superimposed position upon the middle panel 1. A flap 5 is formed integral with the upper end of the panel 1 and is defined therefrom by a hinge or score line 6 along which the flap 5 may be turned and superimposed against the panel 1 and attached therto by glue or other adhesive substance 7. Flaps 8 and 9 are formed integral with the upper ends of the panels 2 and 3, respectively, and are defined therefrom by hinge or score lines 10 and 11 along which said flaps 8 and 9 may turn or fold against the panels 2 and 3 and may be attached thereto by glue or other adhesive 12. The flaps 8 and 9 are separated from the flap 5 by slits or cuts 13 extending the full width of said flaps from the edges thereof to the hinge or score lines 4, which terminate at the hinge or score line 6.

The lower end of the middle panel 1 is formed with an integral extended flap 14 defined by a hinge or score line 15 in continuation of the lower ends of the panels 2 and 3.

The lower end of the middle panel 1 is formed with an attaching area 16 which is designed and adapted to receive a coat of glue or other adhesive attaching substance. The attaching area 16 may be defined as the area below the lower ends of parallel vertical score or hinge lines 17 extending downwardly from the hinge or score line 6 parallel with each other and with the lines 4. Similar hinge or score lines 18 may be provided along the side panels 2 and 3 and terminate above the lower ends of said panels and form visible attaching areas 19 complementary to the portions of the attaching areas 16 covered by the side panels when said side panels are turned along the lines 4 and superimposed upon the middle panel 1.

Borders 20 may be formed at the lower ends of the lines 17 and 18 and constitute defined limits beyond which the adhesive 21 applied to the lower end of the panel 1 and to the flap 14 should not extend.

In assembling and finishing the cup by use of this blank, the flaps 5, 8 and 9 are turned upon their respective hinge or score lines 6, 10 and 11 and pressed against the panels 1, 2 and 3 until the glue or other adhesive previously applied to said flaps attach them securely to their respective panels. Then the panel 2 is folded along the hinge line 4 to superimposed position upon the panel 1, the panel 3 is folded along its hinge line 4 also to superimposed position upon the

panel 1 and with its adhesively coated marginal portion 22 overlapping the margin of the panel 2. When the panels 2 and 3 are thus superimposed upon the panel 1, the attaching areas 19 cover complementary portions of the attaching area 16 which had been previously coated with glue or other adhesive 21, and the adhesively coated margin 22 of the panel 3 covers a complementary marginal portion of the panel 2. The flap 14 is then folded upwardly to cover the lower margins of the panels 2 and 3, and sufficient pressure is applied to the folded cup to cause the parts to obtain strong and substantially inseparable attachment.

By this means, a cup of any desired or predetermined capacity may be formed by varying the dimensions of the attaching areas 16 and 19, and these attaching areas may be defined otherwise than by the specific means shown, comprising the hinge or score lines 17 and 18. When the score lines 17 and 18 are present, they may be visible from the outside of the finished cup, as shown in Figs. 2 and 3, or not, as desired. When they are visible, the areas over which the panels 2 and 3 are attached to the panel 1 may also be visible, as shown. These attached areas constitute strengthened handle portions of the cup which may be conveniently engaged to hold the cup when it is used.

Fig. 5 shows a panel of the same size as that shown in Fig. 1 and of the same construction, with the exception that the attaching areas by which the respective panels are attached together are larger than the corresponding attaching areas on the panel 1. By varying the dimensions of the attaching areas which may be defined after the blanks are otherwise formed, cups of different selected capacities may be made.

The cups shown in Figs. 6 and 7 are made from blanks of the type shown in Fig. 5, and it is apparent that the attached portions of the respective panels constitute longer and larger handles, and consequently reduce the capacity of the cups in comparison with the cups illustrated in Figs. 2 and 3. The handle portion of the cups may be formed with notches 22 in the side edges and a notch 23 in the lower end for engagement by the thumb and certain fingers in holding the cup for use. These notches may result from holes 24 formed in the blank before the blank is folded, or the notches may be cut after the cup is formed as desired. The notches may be omitted, if preferred.

Like reference numerals, with exponents, are applied in Figs. 5, 6, 7, and 8 that are applied to analogous parts in Figs. 1, 2, 3 and 4.

The invention may be varied otherwise than in the specific particulars indicated, and the attaching areas may be defined in other ways. I do not restrict myself in unessential particulars, but what I claim and desire to secure by Letters Patent is:

1. A cup made from a blank of flexible material and comprising a middle panel and two side panels attached to the side edges of the middle panel and having their margins overlapping and attached together, and means attaching the lower margins and upwardly diverging portions of the side panels directly to the middle panel over a defined area of predetermined size extending upwardly from the lower ends of said panels and providing a substantially stiff handle at the lower end, and at diametrically opposite sides of the cup above said attached margins.

2. A cup made from a blank of flexible material and comprising a middle panel, two side panels hinged to the side edges of the middle panel and folded against the middle panel and having their margins overlapping and attached together, means attaching the lower margins and upwardly diverging portions of the side panels to the middle panel over defined areas extending upwardly from the lower ends of said panels, and a flap integral with the lower end of the middle panel covering and attached to the lower ends of said side panels and cooperating with said attached portions of said panels to provide a handle of substantial vertical width at the lower end, and at diametrically opposite sides of the cup above said attached margins.

3. A cup made from a blank of flexible material and comprising a middle panel, two side panels hinged to the edges of the middle panel and folded against the middle panel and having their margins overlapping and attached together, and means attaching the lower margins and upwardly diverging portions of the side panels directly to the middle panel over defined areas extending upwardly from the lower ends of said panels and forming an impervious closed end for the cup and providing a stiffened portion at the lower end and at diametrically opposite sides of the cup above said attached margins constituting a handle whereby the cup may be held when in use.

4. A cup made from a blank of flexible material and comprising a middle panel, two side panels hinged to the sides of the middle panel and folded against the middle panel and having their margins overlapping and attached together, means forming a defined attaching area of predetermined size on the surfaces of the lower margins and upwardly diverging portions of said panels, and means attaching said areas together and forming a stiffened portion at the lower end and at diametrically opposite sides of the cup above said attached margins and an impervious closed end therefor.

5. A cup made from a blank of flexible material and comprising panels having their ends attached together to provide a receptacle that is open at one end, means forming a defined attaching area of predetermined size on the surfaces of the lower margins and upwardly diverging portions of said panels, and means attaching said areas together and forming a stiffened portion at the lower end and at diametrically opposite sides of the cup above said attached margins and also forming an impervious closed end therefor, said stiffened portion constituting a handle for holding the cup and having finger receiving notches in the side edges thereof out of communication with the interior of the cup.

6. A cup made from a blank of flexible material comprising integrally connected superimposed panels and having its end margins overlapping and attached together, and means attaching the lower margins and also upwardly diverging portions of said superimposed panels over a defined area of predetermined size extending upwardly from the lower ends of said panels and providing a substantially stiff handle at the lower end and at diametrically opposite sides of the cup above said attached margins.

MEADE HYNDMAN.