

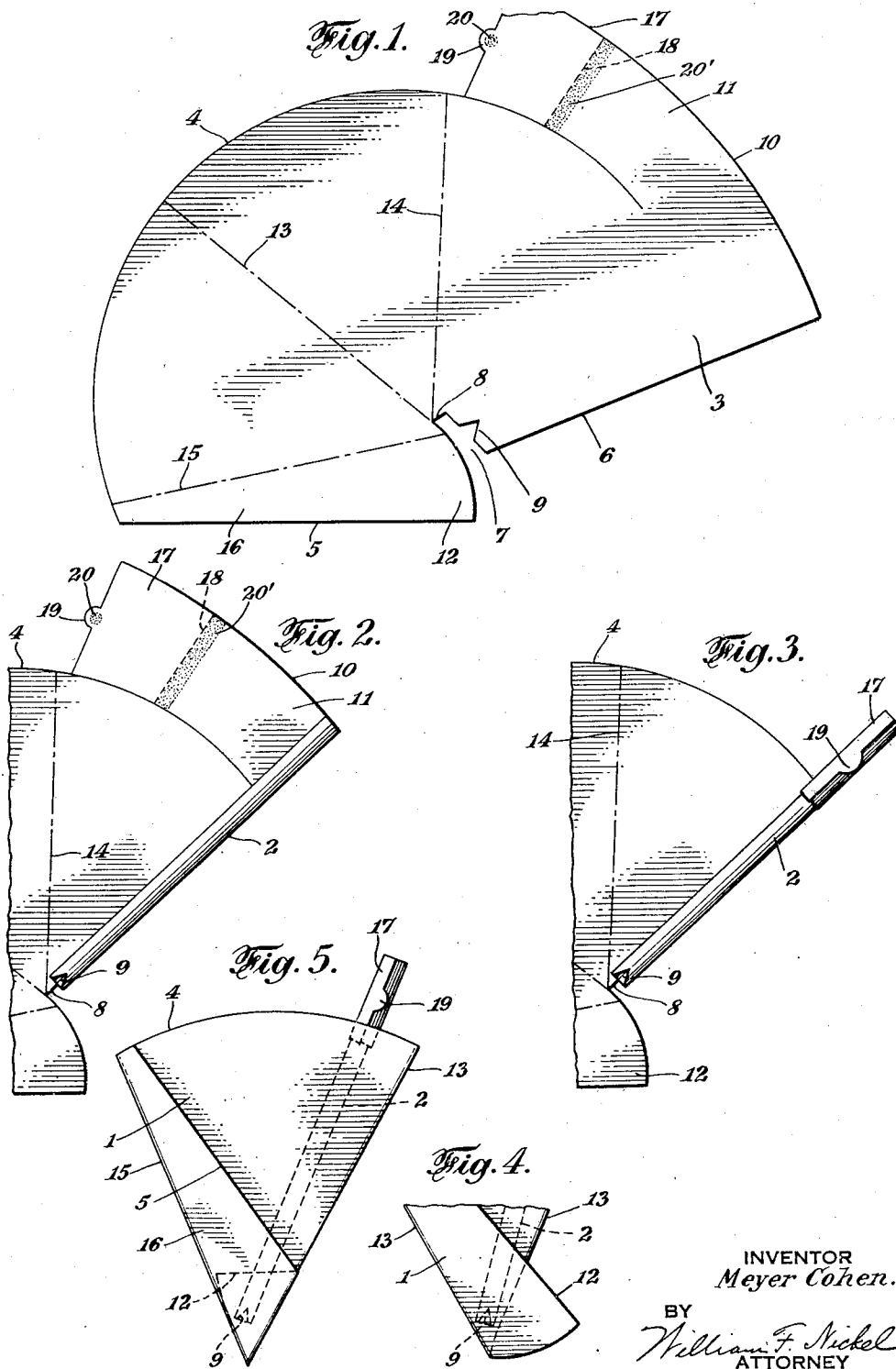
Nov. 8, 1949

M. COHEN

2,487,100

DRINKING CUP OF SHEET MATERIAL

Filed Aug. 19, 1947



## UNITED STATES PATENT OFFICE

2,487,100

## DRINKING CUP OF SHEET MATERIAL

Meyer Cohen, Flushing, N. Y.

Application August 19, 1947, Serial No. 769,359

5 Claims. (Cl. 229—1.5)

1

This invention relates to drinking cups and the like; and especially to drinking cups fashioned out of paper and other sheet material.

An important object of the invention is to provide a drinking cup or other container having a suction tube incorporated with the body thereof in a novel manner; the part constituting the tube being so related to the container that the tube is formed and disposed in its operative position when the material used for the container is bent or otherwise worked to give the article its final shape.

Another object is to provide a container for a beverage having a suction tube incorporated therewith and of such design that the tube is disposed within the body of the container, to permit the nesting of a number of such containers and the insertion thereof into vending machines for sale or in tubular magazines or hoppers of glass or other material for free use; and adapted to be made up in various shapes to serve the intended purpose.

A further object is to provide a container of sheet material with a portion to be rolled to form the tube when the container is given its shape; and which is combined with the body of the cup in a manner that is virtually independent of the configuration thereof.

These and other objects and advantages are made clear in the following description, taken with the drawings; which illustrate several embodiments of a drinking vessel or container according to my invention. But this disclosure is explanatory only; and various changes in details of construction may be made without omitting any of the essential parts or deviating from the distinguishing characteristics in which the invention resides.

On the drawings:

Figure 1 is a plan view of a blank to be formed into a drinking cup according to the invention.

Figures 2 and 3 show successive steps in bending said blank of sheet material into the shape of a cup.

Figure 4 shows a detail.

Figure 5 is a side view of a finished cup.

In Figures 1, 2, 3, 4 and 5 the cup is shown as made of paper, bent into conical shape. The body is indicated at 1; and on the interior is a suction tube 2, lying against one side, open at its lower end, and extending from the bottom to a point slightly higher than the upper edge or rim of the cup.

This cup is fashioned out of a blank having the outline illustrated in Figure 2, which is approx-

2

imately semi-circular and includes a sector-shaped section 3 of longer radial extent than the remainder of the blank; which has a curved edge 4 and a radially disposed edge 5. The section 3, integral with the blank, has an edge 6 that is inclined with respect to the edge 5, and makes an obtuse angle therewith. The edges 5 and 6 are so disposed that if the latter were produced far enough inward it would intersect the edge 5 near the middle thereof.

The two edges 5 and 6 are separated at their inner ends by a curved recess 7. This recess has substantially parallel sides of unequal length, the longer being adjacent the edge 5, and a straight transverse inner end 8. The shorter side of the recess or slot has a triangular notch 9 that forms an inlet opening for the tube 2.

The outer part 10 of the section 3 is curved like the edge 4. It has a lateral projection 11 extending laterally therefrom along the adjacent part of the edge 3. The inner edge of this projection runs along the edge 3, and is formed by cutting through this part of the blank. The longer side 7 of the central recess or slot intersects with the adjacent radial edge 5 to form a pointed or triangular projection 12.

To form the cup, the section 3 is first rolled up, starting with the edge 6, to make the tube 2. The projection 11 is wrapped around the outer end of the tube and made fast with glue or otherwise to hold the tube and prevent unrolling. See Figures 2 and 3. Then the blank is bent around the tube and glued in place. The notch 9 then forms an inlet opening at the inner end of the tube near the bottom of the cup and the projection 12 is wrapped around the lower end or pointed apex of the body 1 and glued fast. The cup is then finished.

The method of forming the cup is fully illustrated on Figures 1 to 4 inclusive. After the tube 2 is rolled, the blank is bent about a radial line indicated at 13; then it is bent about another radial line 14 to dispose the tube adjacent the line 13; the part between the tube and the line 14 lying opposite the inner face of the section of the blank between the lines 13 and 14, said section forming one side of the cup; said part also lying against another section between the line 13 and a third radial line 15 forming the other side of the cup.

Then the section between lines 13 and 15, the latter being adjacent the edge 5, bent around the line 13, overlies the part between the tube 2 and the line 14; and the section 16 between the line 15 and edge 5 is then bent around the line 15 to

carry the section 16 and the edge 5 around the line 14 against the exterior surface of the cup between the lines 13 and 14. The projection 12 is turned around the pointed end or apex of the cup and glued fast.

Preferably the flap 11 has an extension 17, and the junction of this extension with the flap 11 is marked by a line of perforations 18. At the outer end of the extension 17 is a tab 19 having a spot 20 of adhesive thereon. A short strip of the surface on the flap 11 along the strip of perforations 18 is covered with adhesive 20'; so that when the tube 2 with the flap 10 and extension 11 is rolled, this adhesive, moistened if necessary, will engage the outside of it at the upper end to prevent unrolling. The extension 17, when wound around the end of the tube, is secured by the adhesive 20. This extension is provided for sanitary reasons. Before the cup is used the tab 19 is loosened by pulling it away from the tube to which it is held only lightly by the adhesive 20, and then this extension is torn off along the perforations 18. The outer end of the tube is thus kept covered and protected against soiling, and when the extension is pulled away, the tube will be perfectly clean, safe and ready for use.

The invention involves primarily the idea of constructing a drinking cup of sheet material which forms the body or the greater part of the body thereof, and has a portion to form the tube by rolling said portion when the sheet of material is worked into the shape of the cup. This idea can be embodied as illustrated and described herein, or in other designs of cups; for example, round or square cups with flat bottoms, which are shaped and attached separately, but with the material which makes the sides of the cup having a drinking tube provided by rolling up one edge.

Whenever cups with a tube 2 as above described are nested, they are so disposed that the tubes 2 of the successive cups in such assembly will be alternately at one side and the other.

In the construction shown on Figures 1 and 4, the blanks of sheet material may be formed without the line of perforations 18 at the junction of the extensions 17 and 11' with the flaps 11 and 10' respectively. The primary purpose of the extensions is to stiffen and strengthen the tube to prevent bending or crushing the outer tip when the cup is handled to be stored or shipped or loaded into a dispensing device, from which it can be withdrawn by the user. If the extension is detachable it protects the outer tip of the tube and keeps it clean as above described.

The construction above described can of course be utilized on containers of any kind requiring a discharge tube to deliver the contents, and the term "drinking cup" employed herein is to be understood in this sense.

Having described my invention, what I believe to be new is:

1. A drinking cup of sheet material, an integral portion of which along one edge is rolled to make a tube inside the cup, one end of the tube projecting beyond the rim and the other having a notch in the side to make an inlet opening adjacent the bottom of the cup.

2. A drinking cup of sheet material having an integral portion along one edge rolled into a suction tube within the cup, one end of said tube projecting from the rim of the cup, said portion having a flap extending from one side and wound about the projecting end of said tube and secured thereto to cover it and maintain the shape thereof.

3. A drinking cup according to claim 2, wherein the other end of the tube is disposed adjacent the bottom of the cup with the lower edge forming an inlet opening thereat.

4. A vessel of sheet material having an integral portion along one edge which is rolled to make a tube inside said vessel, one end of the tube projecting beyond the rim to said vessel and the other being adjacent the bottom and formed to present an inlet opening adjacent said bottom.

5. A container formed of flexible sheet material that has approximately the outline of a semicircle with two substantially straight edges, one of less length than the other, and a curved edge extending between the outer ends of the straight edges beginning at the shorter edge terminating short of the longer, the section along the latter of said edges being designed to be rolled up into a tube, the last-named section having a projecting terminal flap adjacent the curved edge, the straight edges making an obtuse angle with each other and being separated by a recess at the adjacent ends, the opposite sides of the recess extending towards the aforesaid curved edge, the distance between the inner end of said recess and the end of one straight edge adjacent the recess being unequal to the distance between the end of the other straight edge adjacent the recess and the inner end of the latter.

MEYER COHEN.

#### REFERENCES CITED

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

#### UNITED STATES PATENTS

| Number    | Name     | Date          |
|-----------|----------|---------------|
| 1,245,313 | Bohlman  | Nov. 6, 1917  |
| 1,569,568 | Pederson | Jan. 12, 1926 |
| 1,632,868 | Barbieri | June 21, 1927 |
| 1,870,223 | Barbieri | Aug. 9, 1932  |
| 2,052,307 | Kennedy  | Aug. 25, 1936 |
| 2,194,011 | Davidson | Mar. 19, 1940 |
| 2,392,479 | Humbert  | Jan. 8, 1946  |
| 2,426,159 | Barbieri | Aug. 26, 1947 |