E. E. CLAUSSEN & E. A. CLAUS.

WATERPROOF PAPER CUP.

APPLICATION FILED JUNE 1, 1911.

1,006,722. Patented Oct. 24, 1911.

Fig. 1.

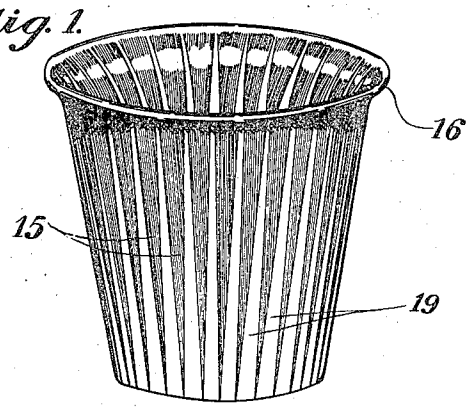


Fig. 2.

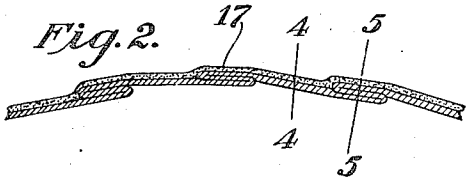


Fig. 3.

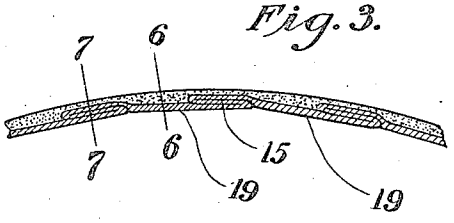


Fig. 4.

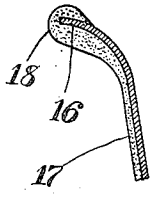


Fig. 5.

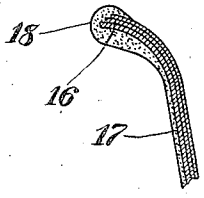


Fig. 6.

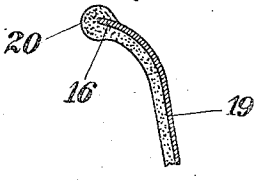


Fig. 7.

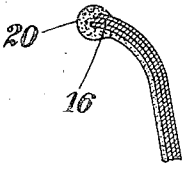


Fig. 8.

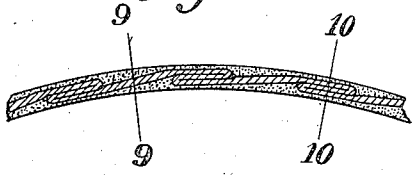


Fig. 9.

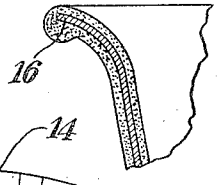


Fig. 10.

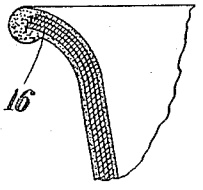
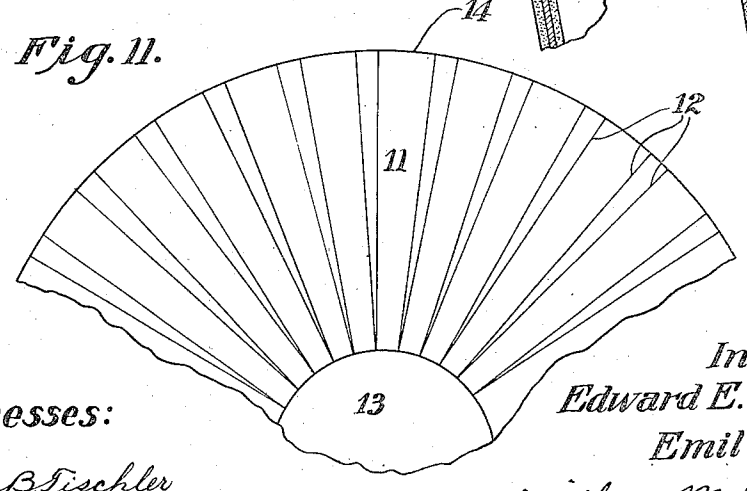


Fig. 11.



Witnesses:

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Emil A. Claus

by Wilbur M. Stone

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UNITED STATES PATENT OFFICE.

EDWARD E. CLAUSSEN AND EMIL A. CLAUS, OF HARTFORD, CONNECTICUT.

WATERPROOF PAPER CUP.

1,006,722. Specification of Letters Patent. Patented Oct. 24, 1911.

Application filed June 1, 1911. Serial No. 630,592.

To all whom it may concern:

Be it known that we, EDWARD E. CLAUSSEN and EMIL A. CLAUS, citizens of the United States, and residents of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Waterproof Paper Cups, of which the following is a specification.

This invention relates to paper cups and particularly to such cups as are formed of an integral disk of paper having plaited side walls and coated with waterproofing material.

The object of our improvements is to provide a cup of the class specified, of substantial construction, pleasing appearance and cleanly and comfortable in use.

To these ends our improvements comprise features illustrated in the accompanying drawings wherein—

Figure 1 is a perspective view of a paper cup embodying our improvements. Fig. 2 is a horizontal cross section on an enlarged scale of a portion of the side wall of our improved cup; Fig. 3 is a modified form of what is shown in Fig. 2; Fig. 4 is a vertical section on line 4, 4, of Fig. 2 and showing the upper edge of the cup. Fig. 5 is a view similar to that of Fig. 4 but on line 5, 5, of Fig. 2. Fig. 6 is a vertical section on line 6, 6, of Fig. 3 and showing the top edge of the cup. Fig. 7 is a view similar to that of Fig. 6 but on line 7, 7, of Fig. 3. Fig. 8 is a horizontal cross section similar to that of Fig. 3 but showing a modification thereof. Fig. 9 is a vertical section on line 9, 9, of Fig. 8 and showing the top edge of the cup. Fig. 10 is a view similar to that of Fig. 9 but on line 10, 10, of Fig. 8. Fig. 11 shows a portion of a disk of paper suitably creased for folding, to form our improved cup.

Our improved cup is formed from a flat and preferably circular disk of paper 11 suitably creased as at 12 approximately radially, from a center and preferably circular portion 13 commensurate with the proposed bottom of said cup, outwardly to the edge 14 of said disk. This disk is folded along said creased lines 12, 12 into tapering plaits 15, and outer edge 14 thereof is preferably rounded outwardly to form a convenient lip 16. Said folding may be done by some convenient means, not shown, and the folded blank then squeezed into final shape by such well known means as a pair of dies, not shown. We preferably dampen the disks of paper previous to folding and squeezing, thereby softening the inherent sizing and causing the paper to fold more easily. We also preferably heat the dies so that when the several thicknesses of the plaits of the side walls of the cup are squeezed between said dies that inherent sizing cements those thicknesses securely together thereby forming a continuous side wall comprising sections alternately of one thickness and a plurality of thicknesses of paper. The cup thus formed is then coated, preferably on the outside only as at 17, Figs. 2, 4 and 5 with waterproofing material, such as paraffin, and an extra portion of said paraffin 18 is deposited under and around the top rim 16, Figs. 4 and 5, thereby forming a beaded rim of waterproofing material of smooth contour, of pleasing appearance and agreeable to the lips. In some instances, while the paraffin is still soft we press the cup in cold dies to cause the larger part of the coating of paraffin on the side walls, Fig. 2, to flow to the single thickness portions 19, 19 of said side walls Figs. 1, 3 and 6, whereby said side walls are rendered of uniform thickness throughout, thereby presenting a superior appearance. Also said dies may have a contour which will form the beaded top edge of the cup into the symmetrical form 20 of the cross sections of Figs. 6 and 7. Or by coating our improved cup with paraffin both inside and out and then pressing in dies, we obtain side walls of uniform thickness, Fig. 8, and the uniform beaded rim of Figs. 9 and 10.

We claim:—

1. A cup, including in combination, an integral sheet of paper, a coating of waterproofing material and a beaded rim of waterproofing material.

2. An integral paper cup having side walls comprising vertical sections alternately of one thickness and a plurality of thicknesses of paper, an outer coating of waterproofing material and a beaded rim of waterproofing material.

3. An integral paper cup having side walls composed of vertical sections alternately of one thickness and three thicknesses of paper, a coating of waterproofing material rendering said side walls of uniform thickness throughout and a beaded rim of waterproofing material.

4. An integral paper cup having side

walls of vertical sections alternately of one thickness and a plurality of thicknesses of paper, said plurality of thicknesses being cemented together by the inherent sizing of the paper and said cup having an outer coating and a beaded rim of waterproofing material.

Signed this 24th day of May, 1911, at Hartford, Connecticut, before two subscribing witnesses.

EDWARD E. CLAUSSEN.
EMIL A. CLAUS.

Witnesses:
HEATH SUTHERLAND,
F. E. ANDERSON.