July 17, 1923. 1,462,443

L. C. BROOKS

PAPER CAN OR CARTON

Filed Aug. 21, 1916

Fig. 1.

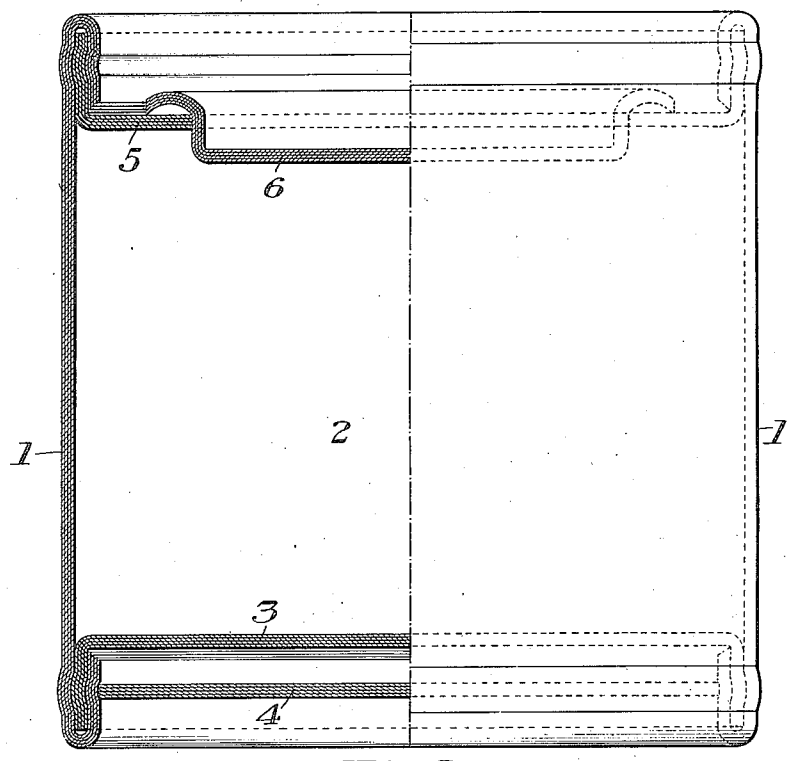
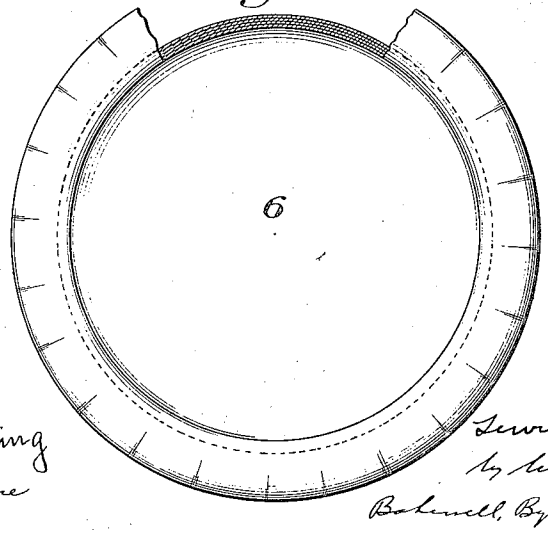


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

LEWIS C. BROOKS, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NATIONAL PAPER CAN COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

PAPER CAN OR CARTON.

Application filed August 21, 1916. Serial No. 115,962.

To all whom it may concern:

Be it known that I, LEWIS C. BROOKS, a citizen of the United States, residing at Milwaukee, Milwaukee County, Wisconsin, have invented a new and useful Improvement in Paper Cans or Cartons, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 illustrates a paper can or carton, partly in vertical section, embodying the invention, and

Figure 2 is a plan view, taken partly in section, of the plug cap or closure of the can.

The object of the invention is to produce a paper can or carton, all of the parts of which are uniformly water-proofed, grease-proofed, or the like, and impervious to moisture, grease, or the like. Heretofore, while it has been the practice to build up the walls of a cylindrical paper can by winding a strip of paper saturated with a suitable proofing material, such as hot paraffine, around a mandrel to form a multi-ply wall, the end closures have been made of heavy paper or cardboard, which is dipped in paraffine or other proofing material. While the side walls, by virtue of the fact that they are formed of a plurality of plies of previously paraffined paper, resist moisture, the end closures have not resisted moisture as well as the side walls. This is due to the fact that when a single thickness of heavy paper or cardboard is impregnated, the melted paraffine, while impregnating the surface of the paper, does not as thoroughly penetrate and impregnate the intermediate body portion; whereas in building up a laminated sheet from a plurality of impregnated plies of paper the paraffine may be driven into the pores of the different plies so that the inner plies are as thoroughly waterproofed and as impervious to moisture as the outer plies.

Referring to the drawings, which illustrate one embodiment of the present invention, the side wall 1 of the cylindrical can 2 is made up by winding a strip of paper around a mandrel. The strip of paper is saturated with hot paraffine, as it is wound onto the mandrel and the plies are pressed together and consolidated, thus forming a compound sheet built up of a plurality of plies previously impregnated with paraffine.

The inner and outer bottom end closures 3 and 4 are made up of a plurality of plies of paper, thoroughly impregnated with some waterproofing material such as paraffine, which are consolidated under pressure into a solid sheet. This forms a uniformly impregnated, thoroughly water-proofed end closure. The upper closure of the can is formed by a closure-piece 5, which, as shown in the drawings, has a circular hole cut in it, in which is inserted a friction plug 6. Both the closure 5 and the plug 6 are built up similar to the bottom closure-pieces 3 and 4. The top and bottom end closures are as thoroughly impregnated with the proofing material as the side walls, and it is found that with a can so made, the end closures, as well as the side walls, will remain impervious to water almost indefinitely. It is possible to use such cans for holding wet materials for considerable periods of time, a thing which has been impracticable with an all-paper can having the closures heretofore used.

The drawings merely illustrate one of many kinds of paper cans or cartons to which the invention may be applied.

The present invention is also applicable to the manufacture of paper cans or cartons in which the material is proofed with some other proofing solution beside a waterproofing solution. For example, the various plies of paper may be impregnated with a grease-proofing solution.

The present invention is therefore not limited to its illustrated embodiment, but may be otherwise embodied within the scope of the following claims.

I claim:

1. An all-paper can or carton for the storage and preservation of food products having a body portion formed of a strip of paper previously impregnated with paraffine, wound on itself and consolidated into a seamless unbroken laminated shell, and closures attached to both ends of the body portion, each closure being built up of a plurality of layers of paper previously impregnated with paraffine and consolidated into an unbroken laminated sheet; substantially as described.

2. An all-paper can or carton for the storage and preservation of food products having a body portion formed of a strip of

paper previously impregnated with a proofing compound, wound on itself and consolidated into a seamless unbroken laminated shell, and closures attached to both ends of the body portion, each closure comprising a plurality of layers of paper previously impregnated with a proofing material and consolidated into an unbroken laminated sheet; substantially as described.

3. An all-paper can or carton for the storage and preservation of food products having a body portion formed of a strip of paper previously impregnated with a material which renders the paper impervious to grease or impervious to moisture, wound on itself and consolidated into a seamless unbroken laminated shell, and closures attached to both ends of the body portion, each closure comprising a plurality of layers of paper previously impregnated with a material which renders the paper impervious to grease or impervious to moisture and consolidated into an unbroken laminated sheet, substantially as described.

4. A can or carton for the storage and preservation of food products having a body portion formed of a strip of paper previously impregnated with a proofing compound, wound on itself and consolidated into a seamless unbroken laminated shell, and a closure attached to an end of the body portion, such closure comprising a plurality of layers of paper previously impregnated with a proofing material and consolidated into an unbroken laminated sheet, substantially as described.

5. A can or carton for the storage and preservation of food products having a body portion formed of a strip of paper previously impregnated with a material which is impervious to grease or impervious to moisture, wound on itself and consolidated into a seamless unbroken laminated shell, and a closure attached to an end of the body portion, such closure comprising a plurality of layers of paper previously impregnated with a material which renders the paper impervious to grease or impervious to moisture and consolidated into an unbroken laminated sheet, substantially as described.

In testimony whereof, I have hereunto set my hand.

LEWIS C. BROOKS.