

No. 762,716.

PATENTED JUNE 14, 1904.

W. E. HEATH.

SEALING CAP.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.

Fig. 1.

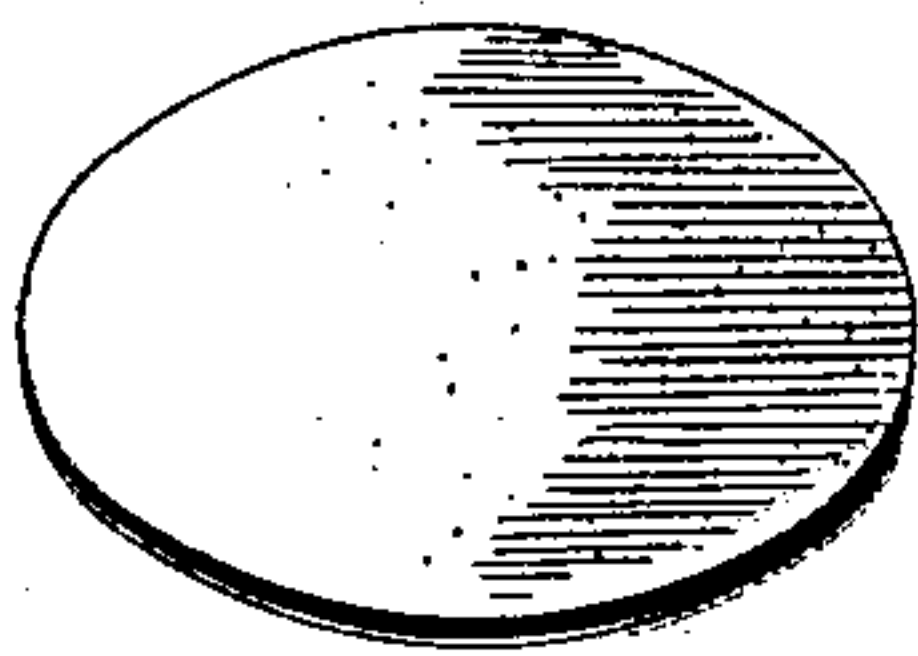


Fig. 2.

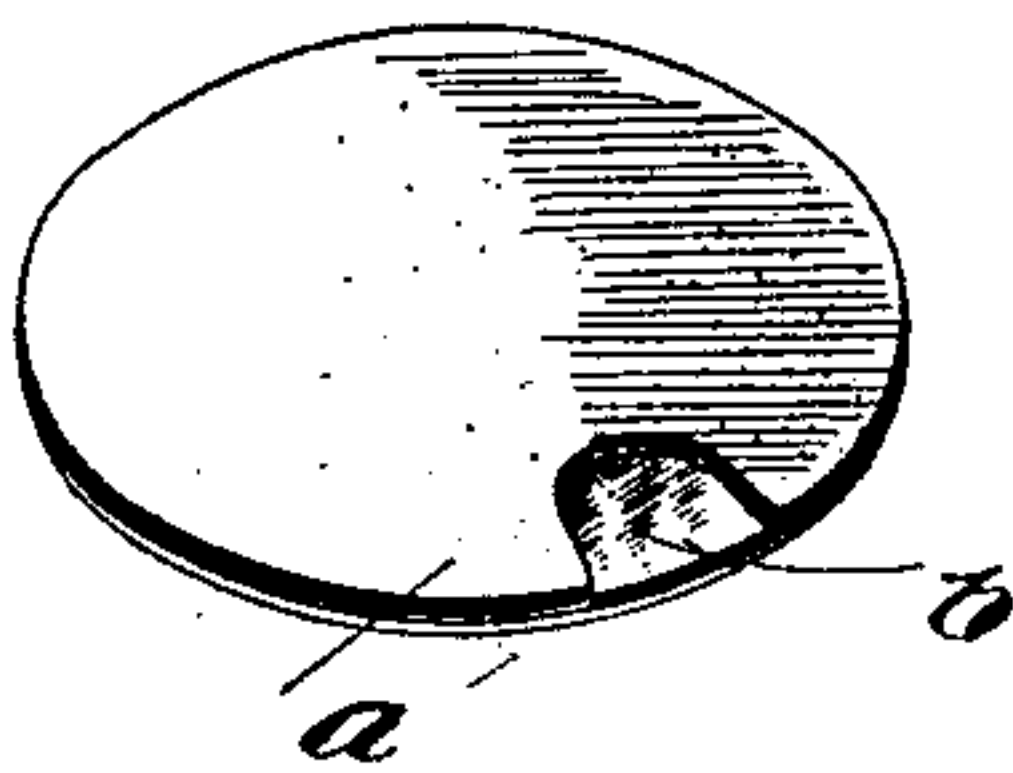


Fig. 3.

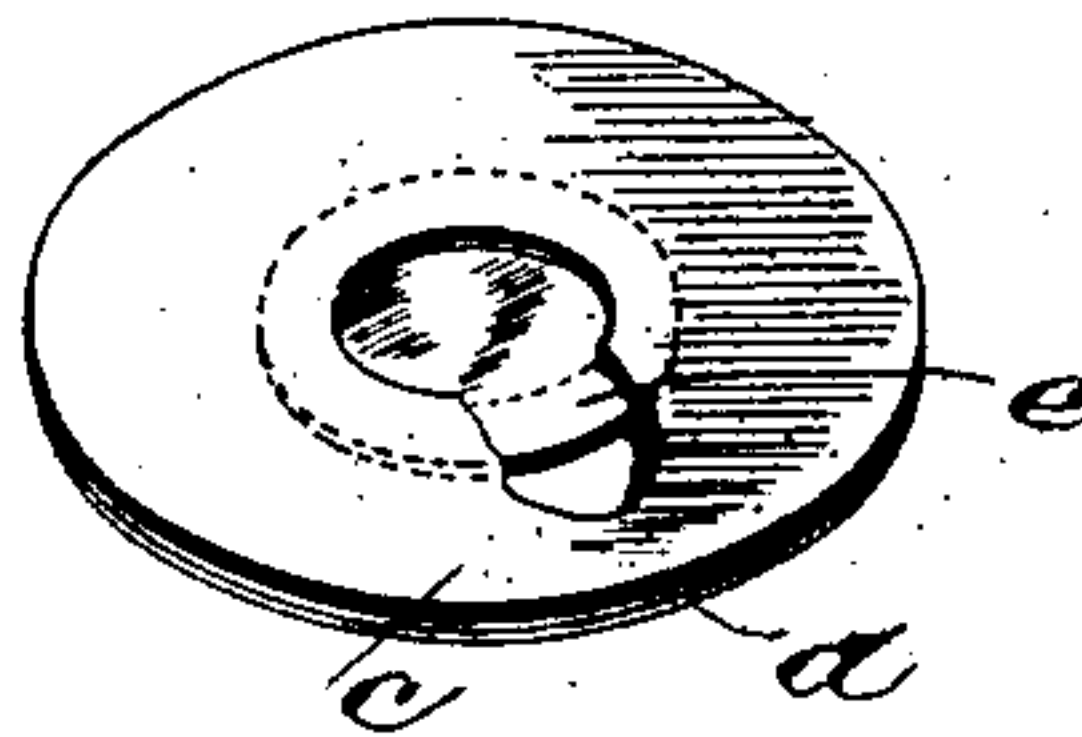


Fig. 4.

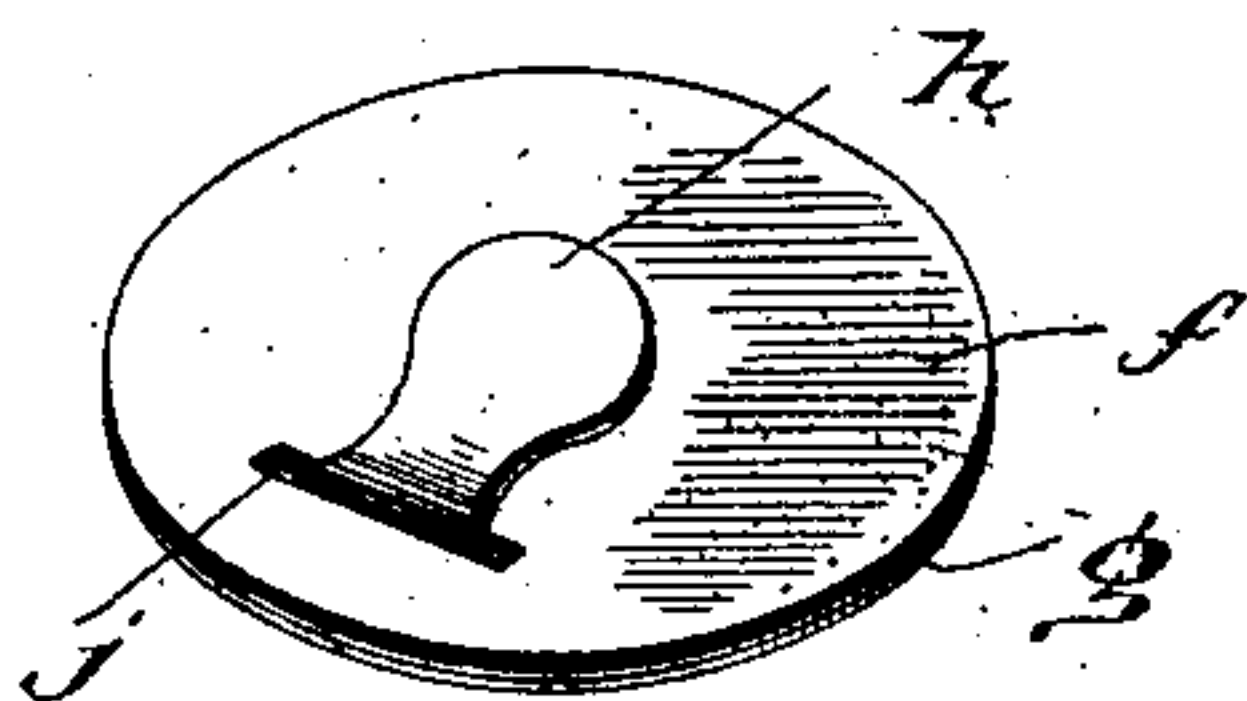
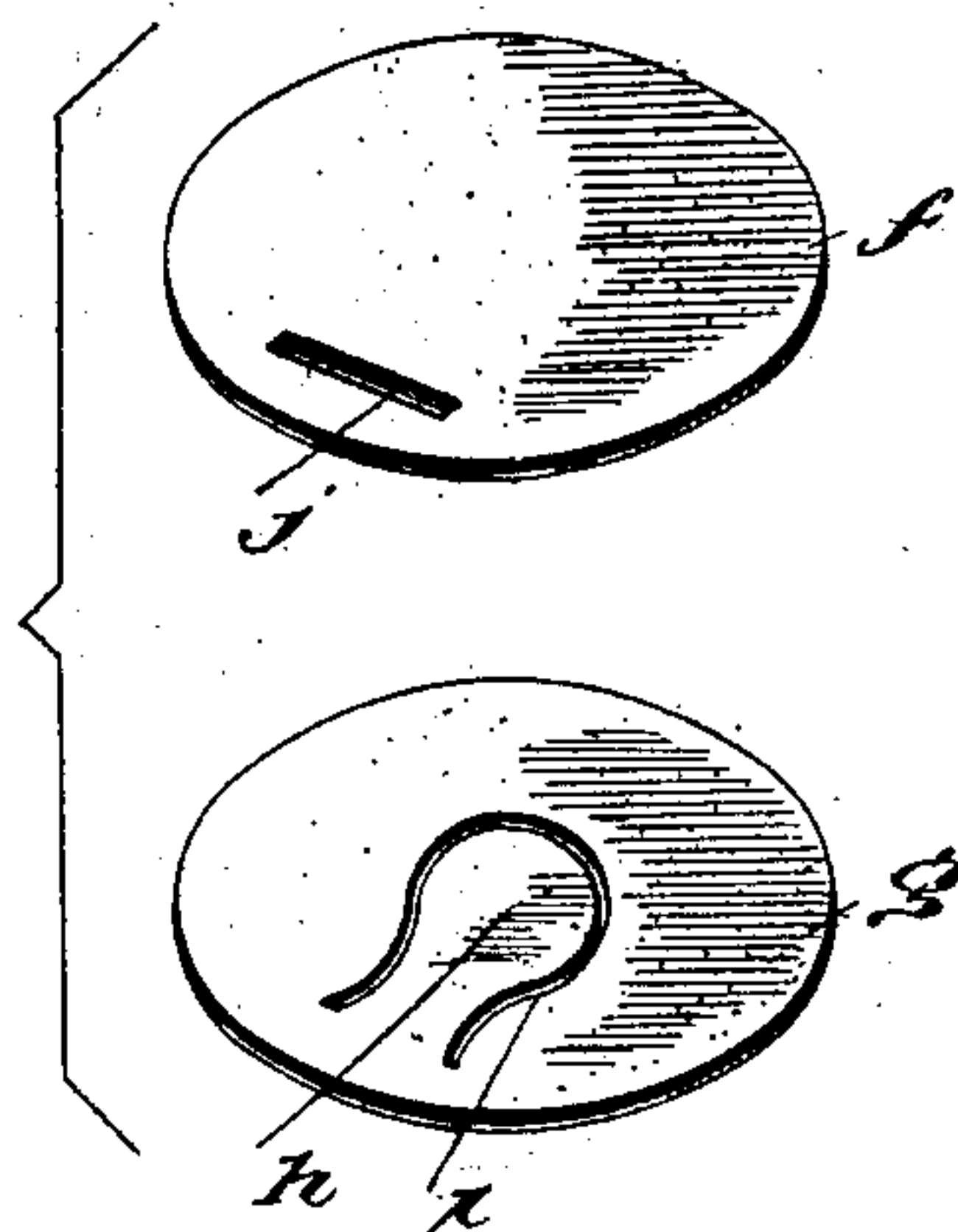


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM E. HEATH, OF BALTIMORE, MARYLAND, ASSIGNOR TO STANDARD BOTTLE-CAP CORPORATION, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

SEALING-CAP.

SPECIFICATION forming part of Letters Patent No. 762,716, dated June 14, 1904.

Application filed February 3, 1904. Serial No. 191,890. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ELISHA HEATH, a citizen of the United States, residing at Baltimore city, Maryland, have invented certain
5 new and useful Improvements in Sealing-Caps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use
10 the same.

This invention relates to certain improvements in sealing caps or disks for bottles, jars, and the like, and more particularly relates to sealing-disks made from sheet material of a
15 somewhat stiff yet flexible nature.

Heretofore milk-jar caps or disks have been usually made from cardboard or other like finished paper, and these caps have generally been waxed or treated with paraffin to render
20 them impervious, or approximately so. The materials of these caps heretofore employed are objectionably discolored by the treatment to which they are subjected to render them impervious. In order to produce the caps at
25 the necessary low price, it has heretofore been necessary to use cardboard or paper of the manila type, or what is known to commerce as "wood-board," which when paraffined produces caps of an objectionable yellowish color.
30 White cardboards or paper, such as bristol-board, are too expensive for use in making milk-jar caps or disks and even if employed would turn a dirty objectionable shade when paraffined. In fact, it is impossible by the
35 methods now in use to paraffin cardboard (regardless of its color) without objectionably discoloring it, and in the case of white cardboard the result is prohibitive, as the stock changes from white to a dirty gray.

It is exceedingly desirable for sanitary and other reasons that milk-jar caps be produced of a clean white color and yet at the necessary low price and of the necessary stiffness and elasticity. Until my invention, so far as
45 I am aware, no material has been found that would produce a white paraffined milk-jar cap.

It is an object of my invention to produce

a sealing disk or cap meeting these requirements and free from the objections found in those now in use and at the same time a cap
50 which can be treated to render the same approximately impervious without changing the color of the cap to an objectionable shade—in other words, to produce what had heretofore been impossible—viz., a white waxed or par-
55 affined cap.

A further object of the invention is to produce certain improvements in sealing disks or caps providing for the ready and easy removal of such caps from the jar without requiring
60 the use of tools or other implements.

My invention consists in the employment of a peculiar material or materials in the manufacture of sealing-disks; and my invention also consists in certain novel features in construction and arrangements of parts, as more
65 fully and particularly set forth hereinafter.

Referring to the accompanying drawings merely for the purposes of explanation and without desiring to limit the various features
70 of my invention to the constructions disclosed, Figure 1 shows in perspective a milk-jar sealing disk or cap in the most simple form and composed of a single thickness of raw pulp in sheet form. Fig. 2 shows in perspective,
75 partially broken away, a sealing disk or cap of the same material as the disk of Fig. 1, but composed of two plies or sheets cemented or otherwise united. Fig. 3 is a perspective
80 view, partially broken away, of a sealing-disk composed of two sheets, plies, or disks of said raw-pulp material cemented together and having the centers thereof cut out to form the disk with a finger-opening, a sheet of thin
85 easily torn or fractured paper being secured between said plies to span the central openings, whereby the completed disk can be removed from the jar-mouth by forcing the finger through said finger-opening, puncturing
90 said thin sheet of paper or the like. Fig. 4 is a perspective view of an improved construction of sealing-disk comprising two sheets or plies of said raw-pulp material, although this feature of my invention is not so limited. Fig.

5 is a perspective view showing the two disks composing the cap of Fig. 4 separated from each other.

In many instances raw wood-pulp is made by the pulp manufacturer from wood by well-known processes, such as the sulfite and soda processes, and is bleached and run through rolls and dried in sheet form for convenience in handling and shipping to paper-makers. These sheets of raw pulp constitute the raw material which is used as the basis for much of the wood-pulp paper manufactured, the pulp being known to commerce as "soda" and "sulfite" pulp. The paper-makers use this raw material as the basis for the paper product by again reducing the sheets of raw pulp to a soft pulpy condition and mixing therewith the other ingredients used in the manufacture of paper and carrying the compound through the various necessary processes for the production of finished paper sheets. The raw-pulp sheets are clean and white in color and appearance, and I have discovered that this raw material, from which paper is manufactured and which as an article of commerce has no commercial value aside from its use as a raw material in the manufacture of paper, possesses the necessary stiffness, stability, and elasticity for use as sealing disks or caps, and I have also discovered that this pulp can be treated to render it impervious or approximately impervious by paraffining or waxing or by an equivalent process without becoming objectionably discolored. Clean white paraffined milk-jar disks or caps can be produced by using this raw pulp, which heretofore, to the best of my knowledge and belief, has been used solely as a base or component part in the production of paper and paper articles after being worked over. This raw material can be purchased in the open market at a low price, and it is only necessary to paraffin the same after being cut into the desired form in order to produce what has heretofore been impossible—viz., a highly-desirable and long-sought white-colored cleanly-appearing sealing-disk, and hence I desire to broadly cover sealing disks or caps composed of this raw pulp before the same has been converted into paper or paper fabric. The sealing-caps can be cut from this raw material and produced in the simple form of a single ply or thickness, as shown in Fig. 1, with or without being treated to render the same approximately impervious, although as at present advised by experience I prefer to paraffin or otherwise treat the caps to render them approximately impervious, but do not wish to so limit the broad feature of my invention. The completed sealing-caps can be composed of one or more sheets or plies of the raw material. For instance, in Fig. 2 I show the milk-jar cap of the ordinary shape formed by two imperforate disks *a b* of the

raw material, said disks being suitably united by cement to form the completed cap. Milk-jar caps or sealing-disks of special design or peculiar construction can also be composed in whole or part of this raw material, and I show such adaptation in Figs. 3, 4, and 5.

The construction shown in Fig. 3 has been heretofore described and is disclosed and claimed in my United States patent application, filed September 15, 1903, Serial No. 173,307. In this construction I have shown the disks *c d* composed of the raw material, while the thin sheet *e* is composed of paper material.

In Figs. 4 and 5 I show a milk-jar or sealing-cap of novel construction and composed of the circular upper disk *f*, of thin sheet material, such as the raw material hereinbefore described, and the circular lower or bottom disk *g*, of preferably the same material and of the same size, or approximately so, as the upper or top disk *f*. The lower disk *g* has the tongue or finger-piece *h* formed therefrom by an approximately U-shaped cut *i* within the boundaries of said disk, so that the free end of the tongue is located at the central portion of the disk and the tongue is arranged about radially of the disk and is joined thereto near the edge of the disk. The top disk *f* has a straight slot *j* cut therethrough, preferably by cutting out a narrow oblong portion of the material of said top disk *f* to form a slot of the necessary dimensions to permit passage therethrough of the tongue *h*. In assembling the disks *g f* the tongue *h* is bent up and inserted in the slot *j*, and the top disk *f* is then pressed down on the lower disk *g* and usually cemented thereto to form the completed cap, as shown in Fig. 4. The tongue *h* forms a pull-piece or finger-tab by means of which the cap can be easily and readily pulled and removed from the jar. The tongue in its normal position in the completed cap is slightly elevated from the upper face of the top disk, whereby the tongue can be readily and easily grasped by the fingers. The disk *f* closes the opening formed by cutting out the tongue *h* from the bottom disk and also strengthens the cap and the tongue *h* to prevent the tongue *h* tearing free from the bottom disk.

What I claim is—

1. A closing-cap comprising a disk of sheet raw pulp.
2. A closing-cap comprising an approximately impervious disk of sheet raw pulp.
3. A closing-cap consisting of a white paraffined disk of sheet raw pulp, substantially as described.
4. A milk-jar cap composed of one or more disks of sheet raw pulp, said cap rendered approximately impervious by paraffin.
5. A sealing-disk comprising two plies of sheet material and a pull-tab cut from the

lower ply and extending upwardly through the upper ply.

6. A sealing-cap comprising two disks of sheet material, the lower disk having a tongue cut therefrom and passed up through the top disk, the top disk covering the lower disk and the aperture therein.

7. A closing-cap having a top pull tab or tongue and comprising two disks secured to-

gether, the lower disk having the tongue with- 10
in the circle thereof and extending upwardly
through a slot in the top disk.

In testimony whereof I affix my signature in
presence of two witnesses.

WILLIAM E. HEATH.

Witnesses:

ELISHA S. HEATH,
D. ARDIN CARRICK.