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M. H. SIDEBOTHAM

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PAPER CONTAINER

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Fig. 1.

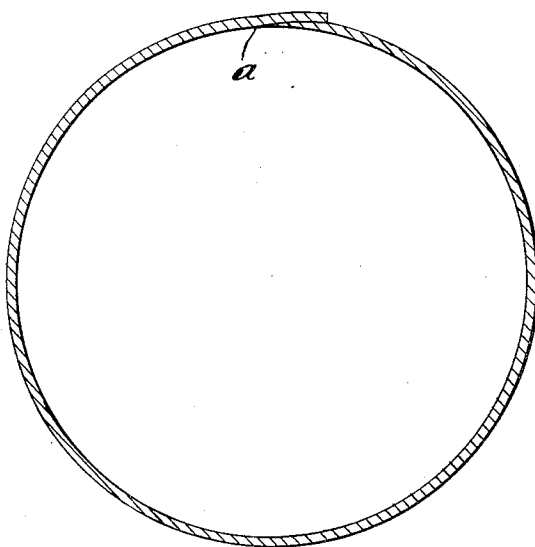
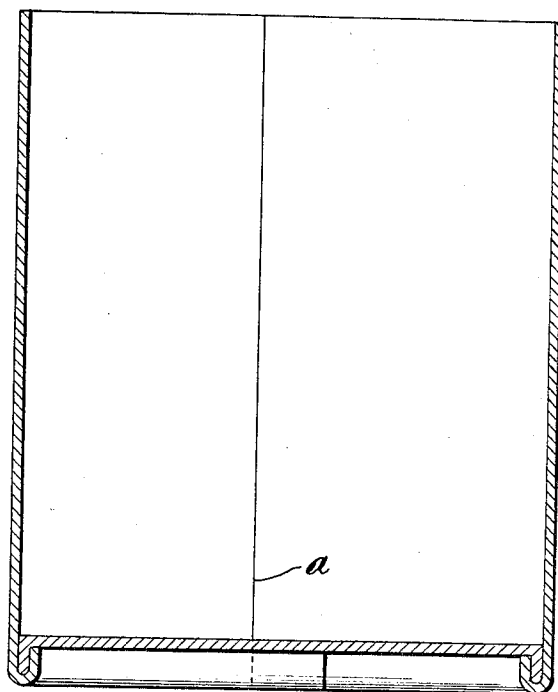


Fig. 2.

Inventor
Melvin H. Sidebotham
by *A. W. Harrison*
Attorney

UNITED STATES PATENT OFFICE

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PAPER CONTAINER

Melvin H. Sidebotham, West Newton, Mass., assignor to Specialty Automatic Machine Company, Chelsea, Mass., a Corporation of Massachusetts

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2 Claims. (Cl. 225—5.6)

This invention relates to paper containers, and has particular reference to such paper articles as are employed for holding material which, either wholly or partly, is of such liquid nature as to require closures that will not permit of any leakage.

A well known kind of receptacle for liquid comprises a body formed by rolling a sheet of stiff paper material to convolute form, the seam being formed by overlapping edges of the sheet, and the bottom closure consisting of a paper disk having a marginal flange enclosed by a rolled edge of the body. Unless some special treatment is effected, a slight crevice exists at one point of the margin of the said bottom disk because of the thickness of the edge of the body sheet which is inside at the overlapped seam. This is because no material which is suitable for making paper receptacles of substantial strength and stiffness can be converted to cylindrical form with the edges overlapping, and then present a perfectly cylindrical inner wall or surface. Therefore, unless something such as presently described is done, a circular disk will not completely fit the inside of the convoluted body, but will leave a crevice at that point of the disk where one edge of the wound body is inside the other edge.

Heretofore various methods have been employed to avoid the leaving of a crevice at the bottom of receptacles of the type referred to, such as skiving or grinding that edge of the body sheet of paper which is to be inside at the seam, so that the extreme edge thereof will be very thin. These methods are difficult to practice successfully, and are expensive due to the tools and time required to attain proper results.

The object of my present invention is to provide paper containers or receptacles of cylindrical form the bodies thereof including a seam comprising overlapping edges, and the closure including a circular disk, which can be produced with leak-tight joints economically as to both time and labor.

With said object in view, my invention consists in the article and the method of making it, substantially as hereinafter described and claimed.

Of the accompanying drawing:—

Figure 1 is a vertical section of a paper container constructed according to my invention.

Figure 2 represents a horizontal section of the same.

In carrying out my invention, one edge of the sheet or section of paper material which is to provide the body of the receptacle is reduced to an extremely thin condition by subjecting it to compression to an extremely thin degree, said condensed edge being indicated at *a* in the drawing. Such compression or condensation may be effected by rolling, hammering, or other equiv-

alent method, and it may be effected along the entire length of the edge which is to be the inner flap of the seam, or it may be only at that portion of such edge against which the margin of the closure disk is to bear.

The important feature is that the portion of the body seam which is to be adjacent to the usual disk that closes the bottom of the receptacle, shall, although an overlapped seam, present such a thin edge that no crevice will exist at any point of the margin of a circular disk.

Of course it is to be understood that in the completed articles, the contacting surfaces of the overlapping edges of the bodies are usually adhesively secured together. And the securing of the bottom disk to the body of each article may also be effected adhesively, or by rolling, or any preferred manner.

The result of producing the thin inner edge *a* of the seam of the container by compression in the manner described, is that the fibers of the paper material are condensed and the said edge is so hardened that a more reliable leak-tight seam or closure is effected than if such thin edge is produced by skiving or grinding. Such last-mentioned treatment necessarily removes some of the paper material and consequently reduces its strength.

Having now described my invention, I claim:—

1. A paper container comprising a cylindrical body member of single thickness having a vertical seam consisting of overlapped marginal portions of the body, and a circular disk having an outwardly turned flange enclosed by an inwardly turned end edge of the said body, that portion of the seam adjoining the said flange of the disk being preliminarily compressed to a hardened condensed tapered sharp-edged condition to fit and correspond completely with the outer surface of the outwardly turned flange of the disk and produce a leak-tight joint between the said body and disk.

2. A paper container comprising a cylindrical body member of single thickness having a vertical seam consisting of overlapped marginal portions of the body, and a circular disk having an outwardly turned flange enclosed by an inwardly turned end edge of the said body, the inner edge of the overlapped seam being preliminarily compressed to a hardened condensed tapered sharp-edged condition to fit and correspond completely with the outer surface of the outwardly turned flange of the disk and produce a leak-tight joint between the said body and disk.

MELVIN H. SIDEBOTHAM.