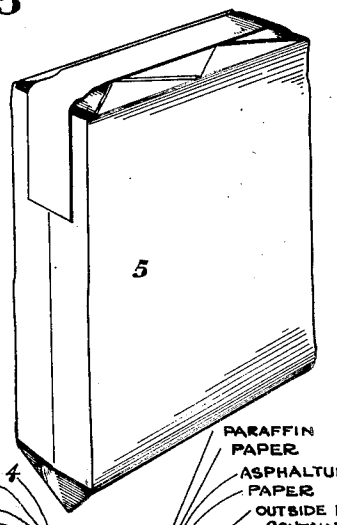
Jan. 20, 1931. W. L. TAYLOR 1,789,887

COVERING AND PROCESS OF MAKING IT

Filed Oct. 9, 1925

Fig. 1.



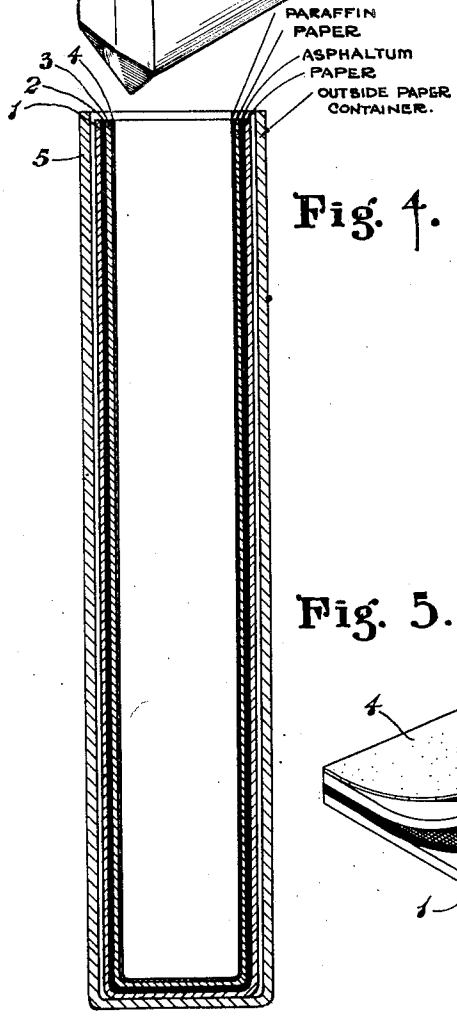


Fig. 4.

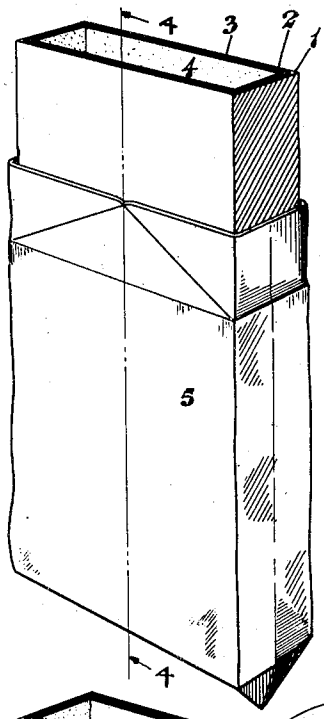


Fig. 2.

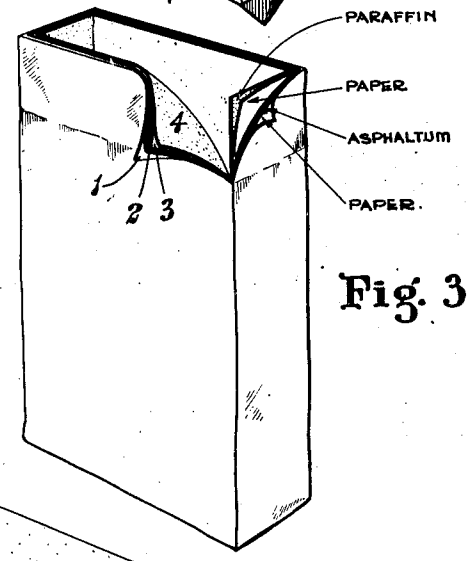
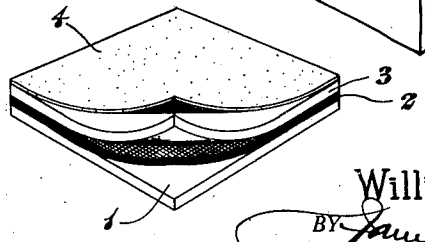


Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE

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COVERING AND PROCESS OF MAKING IT

Application filed October 9, 1925. Serial No. 61,603.

The present invention relates to improvements in coverings, such as are used for wrapping purposes and also for the making of bags and more particularly for use in the packaging of tobacco, and in making bags for other products such as confectionery.

In order to obtain the best results in the packaging of tobacco, there are a number of requisites, to-wit: water-proof and moisture-proof bag material which is at the same time odorless and of good physical properties; cheapness of manufacture; a material which is comparatively inexpensive and permits of the rapid, safe and automatic manipulation necessary for cheap manufacture.

Highly specialized processes and machinery have been developed for making tobacco bags. Heretofore it has been attempted to provide a tobacco bag having a plurality of plies of paper pasted together with a continuous film of asphaltic material having at least one of the plies of paper impregnated or saturated with paraffin or the like. I have found by experience that, while the paraffin in solution impregnated the sheet and allowed the production of the bag on the bag manufacturer's equipment, it acted as a solvent for the asphalt to such an extent that it bled or drew the asphalt through the paper and discolored it to the point where it was objectionable to use in the package or container, since the user is given the impression that the discoloration is caused by nicotine in the tobacco, thereby making the bags unfit for use.

Attempts heretofore made to pack tobacco into bags on the tobacco manufacturer's packing equipment by using superposed layers of paper with a layer of asphalt therebetween but not paraffined on the surface, the dry unparaffined paper thereby making contact with the forming mechanism, have not been successful owing to the friction of the dry surface of the unwaxed paper on the forming mechanism.

The object of the present invention is to overcome these objections, which I accomplish by the use of a thin film of cold or solid unmelted paraffin applied by friction to the surface only of the paper and not by saturation or impregnation.

The application of the paraffin to the surface of the paper away from the asphalt prevents drawing or bleeding the asphalt lining through the sheet of paper when made into bags on the bag machine and thereby avoids spots or discoloration.

The thin film surface coating of the paper with paraffin has friction reducing qualities or benefits and permits the forming and packaging of the bags on automatic machinery since it allows the bag to freely pass over the automatic brass formers and other parts of the machinery without injury to the paper or to the finished bag and allows the contents to be filled in and proper closure made of the filled package in a thoroughly efficient and satisfactory manner.

The invention consists in the application of cold unmelted paraffin on the surface of one ply of the paper before the process of applying the asphalt between the sheets or after the asphalt has been placed between the plies of paper or after it has been slit into individual rolls ready to be made into bags on the bag making machine.

My invention also consists in an article of manufacture comprising a layer of paper coated upon one side with asphalt and a layer of paper superimposed upon said asphalt and having its opposite side coated or surfaced with cold unmelted paraffin.

My invention also consists in the process and in the several features herein set forth and claimed.

In the drawings, which serve to illustrate my invention:

Fig. 1 is a perspective view of a bag made in accordance with my invention shown in closed and sealed position;

Fig. 2 is a similar view of the bag showing the cover and lining in open position and the latter partly withdrawn;

Fig. 3 is a perspective view of the bag lining showing plies of paper, asphaltum, paper and paraffin, as indicated;

Fig. 4 is a longitudinal section, enlarged, on the line 4—4 of Fig. 2;

Fig. 5 is a perspective view showing the

plies of paper, asphalt, paper and paraffin partly separated in order to more clearly illustrate their relation to each other.

In the construction of covers made in accordance with my invention, I am enabled to produce a very efficient, economical, neat, simple and light covering which is adapted to be readily formed into bags of any desired size and shape by automatic bag making machinery in an extremely economical and satisfactory manner.

I provide a layer of paper 1 having upon one side a coating 2 of asphalt or any equivalent material and superposed upon the asphalt a layer 3 of paper either previously or afterwards coated upon its other side with a film of cold unmelted paraffin 4. The coating of asphalt and the coating of paraffin, as well as the combining of the two coated layers or plies, may all be performed by machinery, which is not the subject-matter of the present invention.

In the application of cold unmelted paraffin to the paper, while I prefer to apply a thin film thereof to the surface of the paper, I do not limit myself to any particular quantity or thickness thereof upon the surface of the ply of paper but desire to use such quantities as are necessary to reduce the friction on the tobacco manufacturer's packaging machinery.

The surface coating of paraffin acts as a solvent to the accumulated asphalt which adheres to the bag manufacturing machine.

My invention applies to paper in sheets or in rolls and made into bags or any other type of receptacles for use in packaging all kinds of tobacco, confections, and the like, where asphalt lined paper is used.

I do not limit myself to any particular method of application of the cold unmelted paraffin to the paper but prefer to apply it on suitable automatic machinery or on bag making machines on account of the reduced cost in such methods of application. The paraffin or equivalent material can be applied, however, at any time previous to the actual dyeing out of the bag or receptacle and the folding thereof.

As a material for such coverings, containers or bags I preferably employ a paper sheet formed of two or more plies, between which is placed a thin layer of asphaltic material. Such asphalt should preferably be so highly refined as to possess no odor and must have sufficient plasticity that it will not crack when the paper is folded or manipulated. The asphalt or equivalent material must also be viscous or gummy so as to act as a cementing agent in holding the plies of paper securely together. The paper also should be of a character which permits of automatic manipulation.

One form of paper which I have successfully used is thin white newsprint which can be pasted to another similar layer of newsprint by an intervening coating of asphalt, or for unlined bags, pasted to a piece of manila paper or special kraft paper; or two layers of manila paper can be pasted together with an intervening layer of asphalt to make a good bag, after the outer surface of one of said layers has been coated with unmelted paraffin or its equivalent.

So far as preserving qualities are concerned, bags of such paper having a film of paraffin retain the tobacco moisture and flavor longer than the usual period between production and consumption, taking the place of tinfoil containers in this respect, at only a fraction of the cost of the latter and thereby effecting a great saving in expense of producing the bags.

In cost, this material compares quite favorably with any pasted stock, and is far cheaper than tinfoil or sheet metal. It can be handled by packing machinery at high speed and low labor cost.

One difficulty which I find in this special asphalt cemented paper and which I overcome by my invention resides in the fact that in forming bags it is necessary for economy to cut, fold and paste the paper by automatic machinery and the gummy or viscous nature of the asphalt rapidly clogs up the knives and in time other parts of the machine to such an extent that without the surface application of paraffin the material thus employed is not practical.

I have found, however, that by applying to the surface of one of the asphalt pasted layers a coating of unmelted paraffin or equivalent material which does not draw or bleed the asphalt through the paper this difficulty is overcome.

Paraffin or relatively similar products are known as insulators of paper and as such will add to the moisture resistant qualities thereof. I have not experimented with other materials than paraffin but under the term of paraffin or the like I wish to include such materials as possess those functions of cold unmelted paraffin which are decribed herein as the reasons for its use.

According to my invention comprising a covering, bag, or the like, one of the paper layers of an asphalt cemented plural ply sheet is either coated with cold unmelted paraffin prior, during or after the cementing of asphalt or the like or it will be coated with paraffin just prior to the machine operations in cutting and forming the asphalt cemented sheet into a bag, liner or envelope, this last method being preferred.

I find that a coating of paraffin on the inner surface of the lining of a bag will so lubricate the cutting knives and other machine parts coming into contact with exposed edges of the metal as to do away with all accumula-

tion of the viscous asphalt on the knives and other contacting parts.

The coating of paraffin is also used on the inside of the bag or liner so that it will come next to the tobacco or other product in order that the moisture from the tobacco or other product will not be absorbed by the inner ply of paper.

Furthermore, the presence of the coating of paraffin on the inner surface of the inner ply of a bag having an asphalt cementing agent between its plies imparts further moisture-proof qualities than such as are afforded by the asphalt cemented paper.

The reason for this is that the paraffin on the surface of the paper closes the pores thereof and the intermediate asphalt binder retains the elasticity and structure, thus acting as a reinforcing medium to the elastic pliable interior paraffin surface coating.

While I have set forth the preferred materials and method of use it will be understood that the same is capable of modification without departing from the scope or spirit of the invention as defined in the claims, as for instance, while I prefer to use cold unmelted paraffin I may use any other suitable equivalent material such as beeswax or a compound of crystal-like formation with particular reference to its use and adaptability, as well as desirability, for tobacco bags and containers. This is merely by way of illustration, since the invention is also adaptable and useful in the formation of covers or containers for any purpose for which they may be used, such as confectionery and the like.

The application of cold unmelted paraffin applied to the surface of the paper not only prevents the bleeding or drawing through of the asphalt to the inner or paraffined coated surface but also requires a less quantity of paraffin, thereby effecting a still further saving in the cost of manufacture.

The importance of this invention is shown by the fact that the tobacco manufacturer, failing to find practical the asphalt paraffin saturated sheet, and the asphalt unparaffined sheet, has turned to the manufacture of bags with the asphalt applied to that part of the ply of the paper which is exposed to the outside and on which the printing appears, which is impractical because of the exposure of the asphalt through slime spots, imperfections in the paper, etc. The asphalt should be confined to the liner and not be placed next to the outside material of the bag as all paper in the roll, when the asphalt is being applied, shows exposures and stains, and, in some instances, the oils of the ink on the printed bag bleeds the asphalt on the outside and makes it unfit to the view of the customer as the paraffin did in its bleeding the asphalt on the inside.

I have illustrated my invention, as clearly shown by Figs. 3 and 4, as comprising a double bag formed of an inner container or liner, as heretofore described, and of an outer bag or container 5 formed of a single ply of varying base weights of manila paper, the outer side of which bears the usual printed matter found upon bags of this kind.

It has also been determined that the application of hot paraffin to saturate or impregnate the sheet of paper next to the asphalt interlining neutralizes the viscosity of the asphalt and allows the plies of paper to separate, causing the bag to open up and make it unfit for use.

What I claim as new and desire to secure by Letters Patent is:

An article of manufacture comprising a covering formed of a layer of paper coated with adhesive material consisting of asphalt and having superimposed on said adhesive asphalt a layer of paper surface-coated with cold unmelted paraffin.

WILLIAM L. TAYLOR.