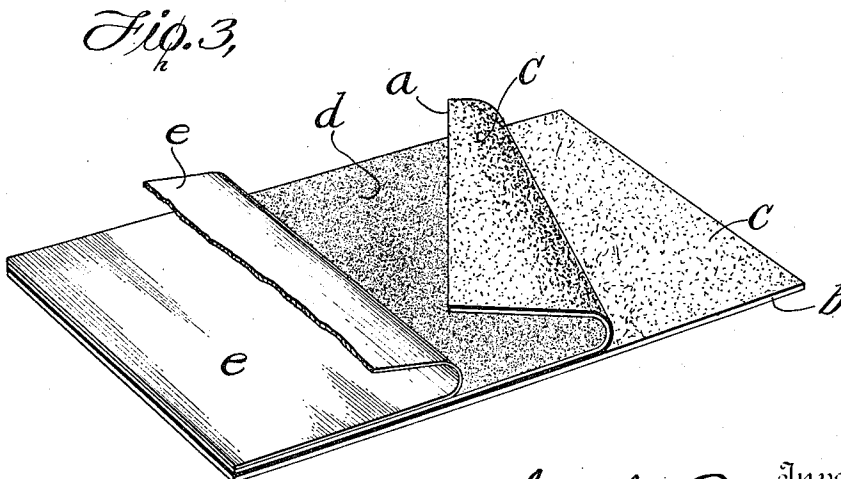
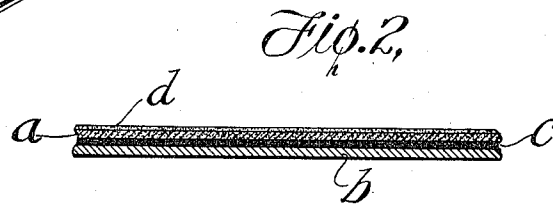
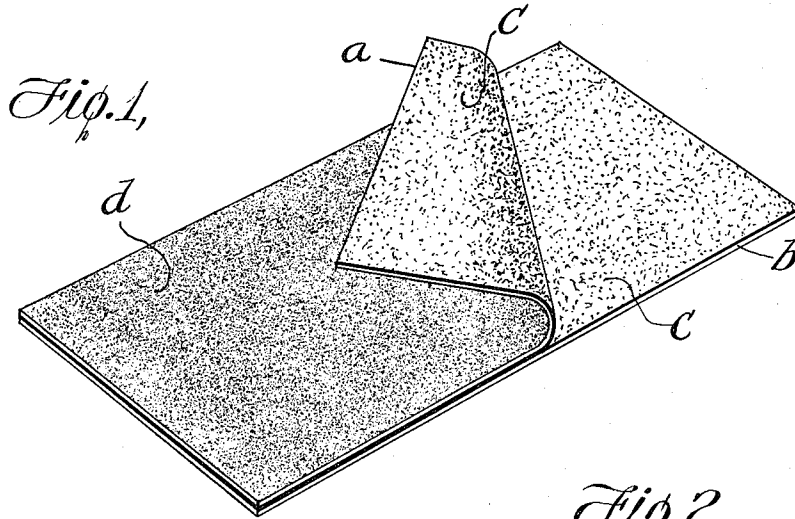


J. PETERSON.
WAXED OR PARAFFINED SHEET OR WEB.
APPLICATION FILED JULY 7, 1916.

1,217,819.

Patented Feb. 27, 1917.



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By *his* Attorneys
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UNITED STATES PATENT OFFICE.

JONATHAN PETERSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO COMBINATION MACHINE COMPANY, A CORPORATION OF DELAWARE.

WAXED OR PARAFFINED SHEET OR WEB.

1,217,819.

Specification of Letters Patent.

Patented Feb. 27, 1917.

Application filed July 7, 1916. Serial No. 107,906.

To all whom it may concern:

Be it known that I, JONATHAN PETERSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Waxed or Paraffined Sheets or Webs, of which the following is a specification.

My present invention relates to a new and improved waxed or paraffined sheet or web especially adapted for use in the manufacture of wrappers, bags, envelopes, or other forms of packages or containers for various kinds of merchandise and more particularly for manufactured products, such for instance, as chewing and smoking tobacco, snuff and other products which may be affected more or less by atmospheric changes or conditions when exposed thereto.

A prime object of the invention is to provide a flexible sheet or web having a wax or paraffin coating on one face only thereof, the opposite face being free from such coating, so that when the sheet or web is folded into bag, pouch, envelop or container form, either the inner or the outer surface of such article so formed will be waxed or paraffined and therefore rendered substantially air and moisture-proof.

A sheet or web waxed or paraffined on one surface only thereof, has many obvious advantages over a sheet or web wherein the wax or paraffin permeates entirely there-through and this is especially true when such sheets are used in the manufacture of envelopes, bags or pouches for manufactured products such as are usually adapted to be carried in the pocket of the user and which containers commonly bear certain printed matter to designate the contents, the name of the manufacturer, etc.

Briefly and generally stated, the invention comprises a wax or paraffin coated sheet comprising a layer of flexible sheet material having a second superimposed layer united thereto by a film of cementitious material, one of said layers being impregnated with wax or paraffin, the said film of cementitious material serving as a barrier to prevent the wax or paraffin from penetrating the non-impregnated layer.

In order to enable others to fully comprehend and practice my said invention, I will

now proceed to describe the same in detail, reference being had for this purpose to the accompanying drawing wherein:

Figure 1, is a perspective view on a somewhat enlarged or exaggerated scale, in so far as the thickness of the layers is concerned, of a waxed or paraffined sheet made according to the present invention, the separated layers or sheets of the completed web or sheet being separated one from another at one end of the view to more clearly illustrate the construction.

Fig. 2 is a cross section of the sheet shown in Fig. 1.

Fig. 3 is a perspective view similar to Fig. 1 showing the wax or paraffin coated surface of the web provided with an attached protective tissue-sheet.

In the said drawing the reference letter *a* designates one of the sheets or layers of the composite sheet; *b* the other or backing sheet or layer; *c* an interposed film of cementitious material, such for instance, as a rubber compound which facially unites the contacting faces of the two sheets or layers throughout substantially the entire area thereof, and *d* the wax or paraffin applied to or incorporated in one of the aforesaid sheets or layers, such for instance, as a sheet or layer *a*.

In providing a waxed or paraffined sheet or web for use in the manufacture of envelopes, bags, pouches or like containers, it is of course desirable that they be relatively soft and flexible so as to conform more or less to the pocket of the user, and I prefer therefore, to utilize in the manufacture of my improved waxed or paraffined sheet, relatively soft and flexible paper for the sheets or layers *a* and *b* and I also prefer to employ as the uniting medium or agent between the two sheets or layers, a thin film of rubber compound, although I do not wish to be understood as limiting myself to the use of such compound as a uniting medium as other adhesive or cohesive substances or materials may be employed without departing from the spirit of the invention, provided such substances shall not affect the desired composite sheet. I prefer, however, to use a rubber compound for the stated purpose, because such material serves as an effective barrier to prevent the wax

or paraffin carried by one of the sheets or webs from penetrating or entering the other or superimposed web or sheet, and furthermore, such rubber compound being more or less permanently resilient does not in any way interfere with the softness or flexibility of the finished product, which when made in accordance with this invention can be readily folded or manipulated into envelop, bag, pouch or container form.

When I employ a rubber compound as the uniting medium for facially connecting the superimposed sheets, I prefer to first coat each of the sheets with the rubber compound in liquid form, then allow such coatings to become dry or partially dry or "tacky" after which the two sheets are superimposed with the coated faces in contact and the composite sheet subjected to suitable pressure with or without heat to bring about an intimate union between the sheets, such union in the instance mentioned being effected by reason of the cohesive property of the cementitious material employed.

From the above disclosures it will be clear that the uniting film is incomplete in advance of the layer-uniting action, the uniting operation acting to complete the film.

By providing a wax or paraffin coated sheet or web, as herein described, I find that I can incorporate the maximum amount of paraffin upon a face and into the body of one of the sheets or layers without danger of the same exuding or penetrating the other sheet or layer, since the cementitious material between the two layers serves as an effective barrier to prevent the waxy substance from passing through into the other or backing sheet or layer. I am thus able to provide an effective wax or paraffin coated sheet, one surface of which is absolutely free of the waxy substance and this surface may therefore be readily printed upon after the sheet has been formed. Furthermore, when the finished sheet or web is used in the manufacture of envelops, bags, pouches or containers, the interior thereof will have a permanently attached or integrally formed wax lining, which, together with the cementitious uniting agent between the two sheets or layers, serves to render the finished product substantially air and moisture-proof.

In some instances it may be desired not to have the wax or paraffin of the coated or impregnated sheet or layer exposed and to avoid such exposure without otherwise affecting the other qualities or properties of the finished product, I prefer to attach to the outer face of the coated or impregnated sheet or web a tissue-sheet *e*, as more clearly shown in Fig. 2 of the drawing. This tissue-sheet may be attached in any preferred way, but I have found that a satisfactory union between the two sheets may be effected by

applying the tissue-sheet to the coated or impregnated sheet or web before the waxy material has become thoroughly dried; it being understood that in actual practice when manufacturing the product the wax or paraffin will preferably be applied to the sheet or layer while in a melted condition so that it will thoroughly coat and penetrate the sheet or web.

I do not in this application lay claim to the method of making the wax or paraffin coated sheet, as such method will form the subject matter of a separate application.

The words "wax" and "paraffin" as herein employed, are used in their broader sense to include any substance or material of a waxy nature capable of rendering the sheet substantially air and moisture-proof and without affecting the flexibility of the finished product.

While I do not desire to be understood as limiting myself to the use of any particular kind of sheet material entering into the make-up of my improved product, I prefer to employ relatively thin sheets of soft flexible paper having great tensile strength so that the finished product will be as thin and flexible as possible to suit the purposes for which it is intended and I may, if desired, and in some instances prefer to employ a soft textured paper for the sheet that is to carry the wax or paraffin so that a maximum amount of the waxy substance may be carried.

What I claim is:

1. A flexible composite sheet having air and moisture-proof qualities and comprising superimposed layers of relatively thin and flexible paper, and means for facially uniting the layers substantially throughout the area of their opposed faces to render the sheet pliant and unaffected by sheet manipulation, such means consisting of a rubber-compound film completed by the layer-uniting operation, whereby intimate engagement of each layer with the film will be had throughout the layer faces, one of said layers being impregnated with paraffin, said film forming a barrier to prevent paraffin-impregnation of the other layer.

2. A flexible composite sheet having air and moisture-proof qualities and comprising a layer of relatively thin and flexible paper having one side treated with a normally dry permanently-resilient non-adhesive substance having cohesive qualities to produce a coating, and a second layer of thin and flexible paper similarly treated with such substance, said layers being superposed with the coatings in contact and united by pressure to produce a film facially uniting the layers throughout the area of their opposed faces, whereby the sheet is given increased strength and pliability and will be unaffected by sheet manipulation, one of said layers

being impregnated by paraffin, said film forming a barrier to prevent paraffin-impregnation of the other layer.

5 3. A paraffin coated sheet comprising a layer of flexible sheet material, a second superimposed layer of sheet material united thereto by a film of cementitious material with the flexibility of the sheets substantially maintained, one of said layers being impreg-
10 nated with paraffin, said film of cementitious material serving as a barrier to prevent the

paraffin from penetrating the non-impregnated layer, and a protecting tissue-sheet attached to and overlying the outer face of the paraffin impregnated layer.

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

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JONATHAN PETERSON.

Witnesses:

L. E. FISHER,
J. REIS, Jr.