

No. 881,561.

PATENTED MAR. 10, 1908.

H. G. ECKSTEIN.
MOISTURE PROOF PACKAGE.
APPLICATION FILED DEC. 8, 1904.

Fig. 1.

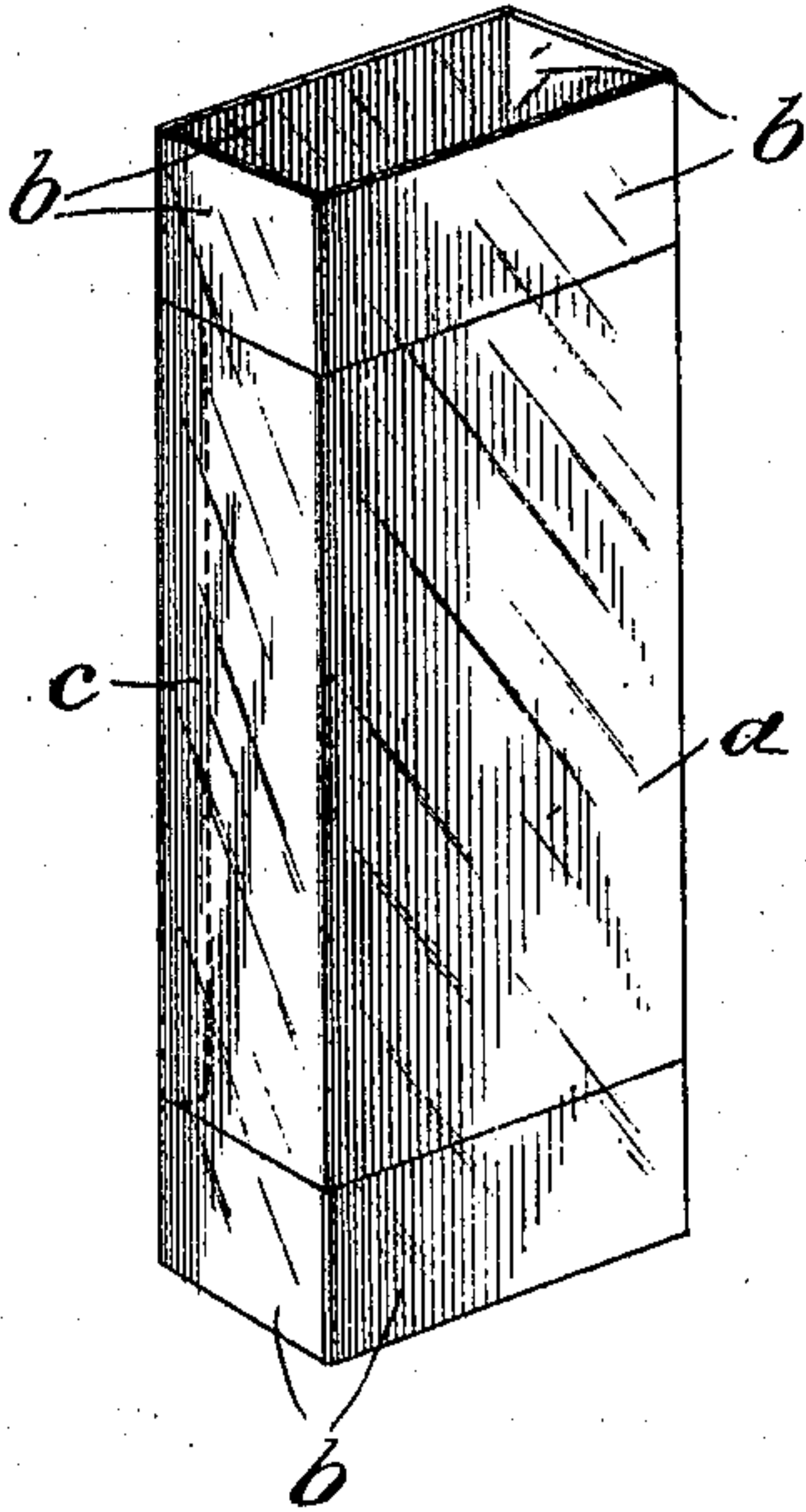


Fig. 2.

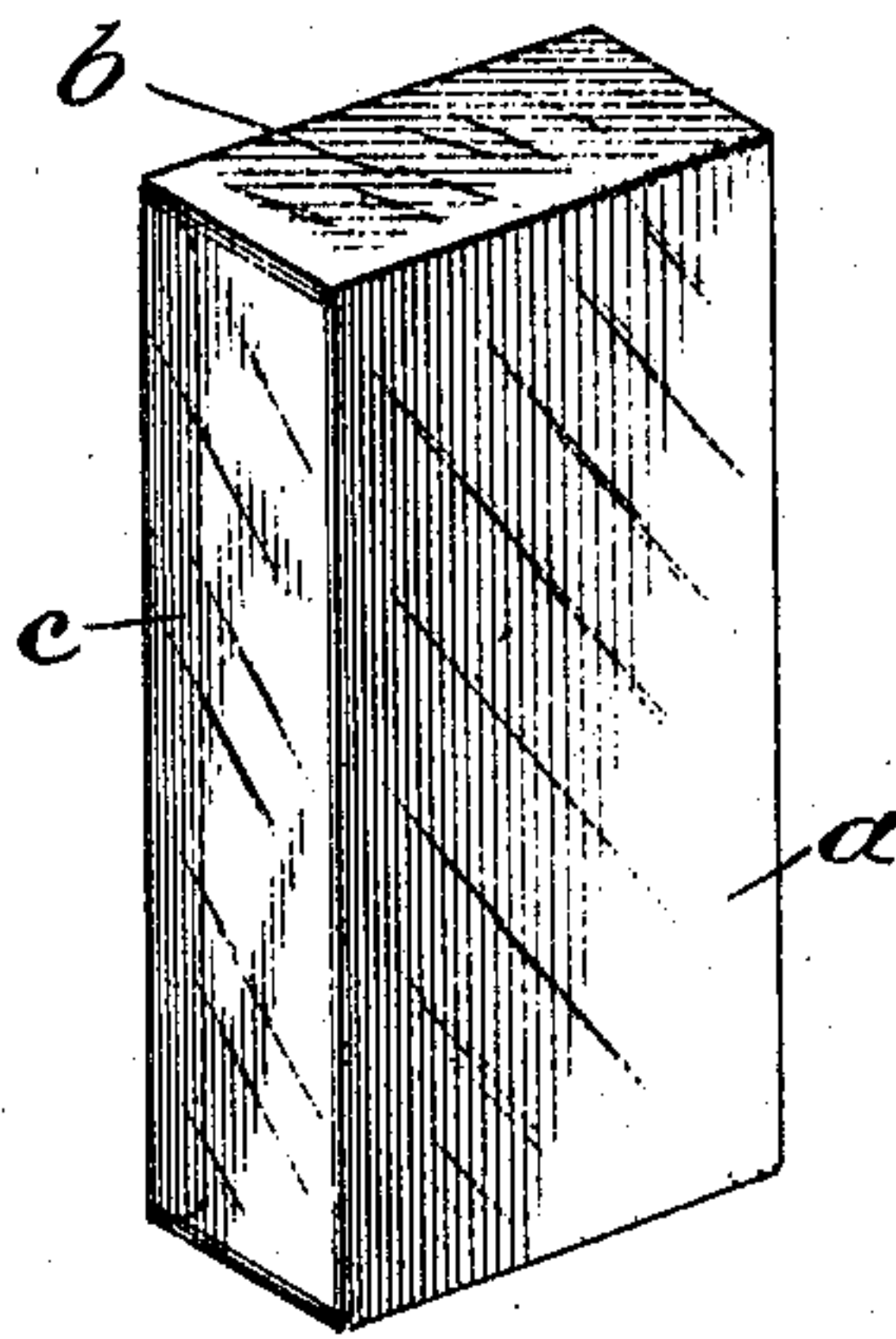


Fig. 3.

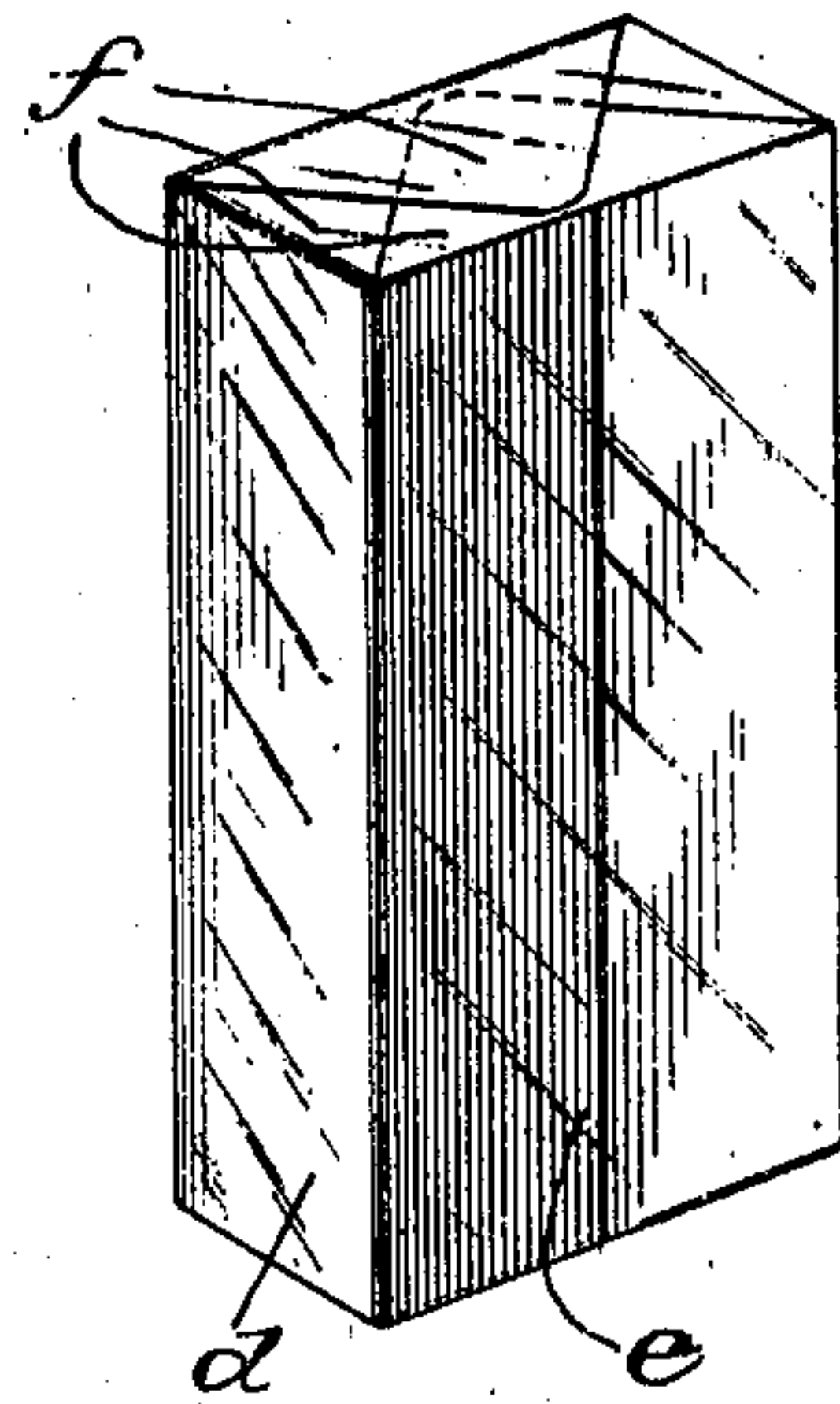
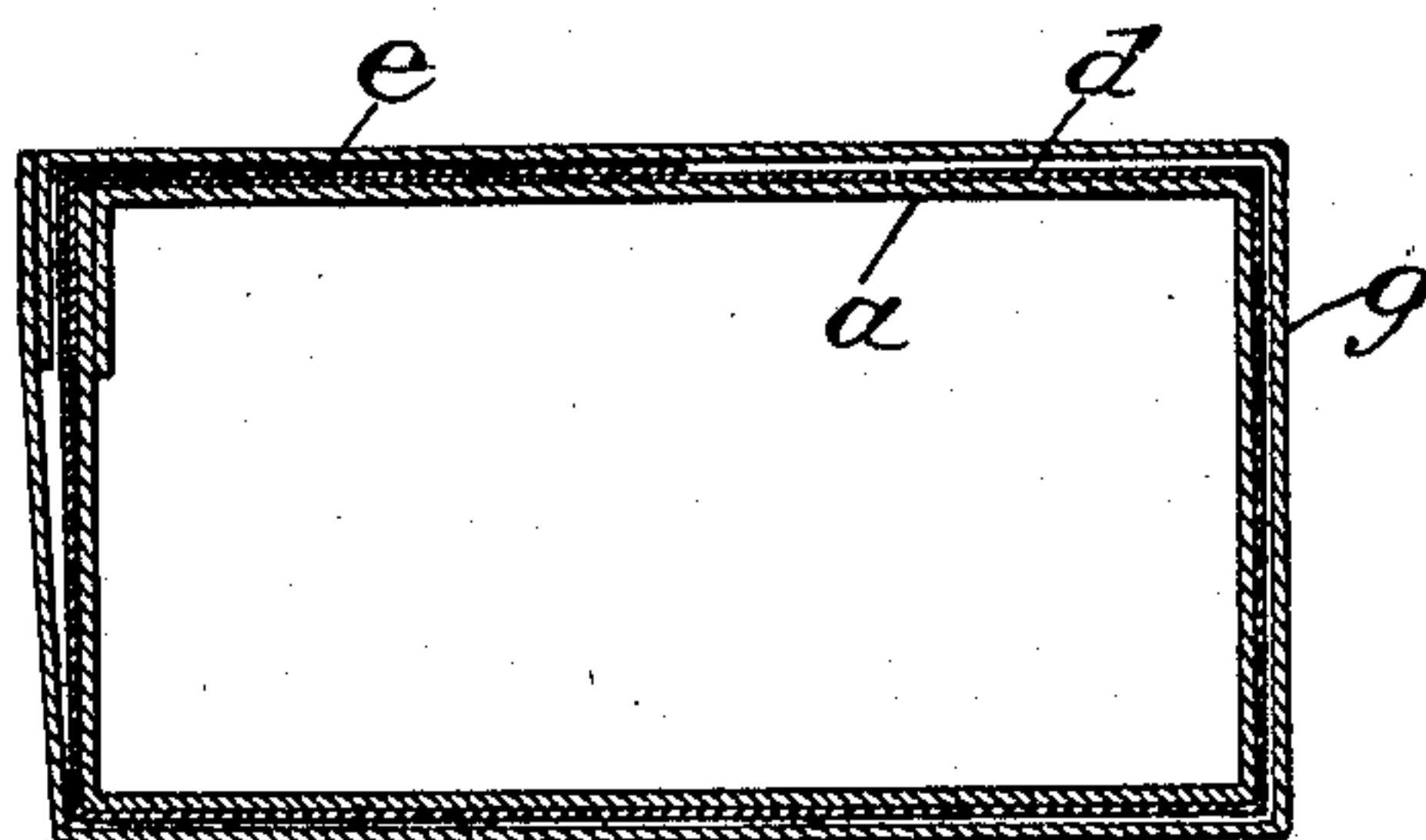


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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MOISTURE-PROOF PACKAGE.

No. 881,561.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed December 6, 1904. Serial No. 235,706.

To all whom it may concern:

Be it known that I, HENRY G. ECKSTEIN, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Moisture-Proof Packages, of which the following is declared to be a full, clear, and exact description.

The invention relates to paper packages or cartons for marketing candies, pop-corn, coffee, tea, shelled peanuts or other similar goods or merchandise which deteriorate and become stale on exposure to the air.

In the endeavor to properly protect candies and other loose merchandise, paper partially saturated or having a wax coating on one or both sides has been employed, usually as an inner wrapper loosely folded about the goods and arranged within an outer protecting wrapper or carton of heavy stiff paper which holds the folds of the waxed paper in place. But such waxed wrappers are loose, that is, the overlapped portions or folds cannot be glued tight because the wax coating acts to prevent adhesion of glue or other sealing medium and the package is not air-tight or impervious to atmospheric moisture and will not prevent the deterioration of goods for more than a few days, particularly if the merchandise for which the package is employed, is like candied pop-corn, for example, very susceptible to the deleterious effects of moisture.

The present invention seeks to provide a moisture-proof paper package which is effectively sealed so as to be air and moisture tight at all points. The exact nature of the improvement is set forth in the following description and more particularly pointed out in the appended claims.

As above stated, paper waterproofed with wax cannot be satisfactorily sealed with glue or other cement and I have been unable to find any satisfactory method of sealing the ordinary waxed paper now on the market, which usually has 10 to 25 percent. wax. I have found however, that a wrapper of flexible paper supersaturated with wax, say from 45 to 55 percent. of the total weight and having a heavy surface coat, when folded about and held in shape by an inner wrapper, box or carton of stiff paper or other suitable material, may be satisfactorily sealed at all points to render the paper package air and moisture tight through aid of the contained

wax, by first heating the folded flexible wrapper to melt or partially melt the wax along the folded portions, and pressing the folds into close contact at all points and permitting the wax to cool and set.

The accompanying drawing illustrates the style of paper package to which the invention is more particularly directed.

Figure 1 is a perspective view of the inner supporting wrapper or carton of stiff paper or paper box-board, with its terminal end flaps extended or in unfolded condition to receive the charge of candy, candied pop-corn or other small merchandise. Fig. 2 is a perspective view of the same with its end flaps folded or closed. Fig. 3 is a perspective view showing the flexible waxed wrapper folded and sealed about the inner carton. Fig. 4 is a sectional view of the completed package.

The inner wrapper may be of any form suitable to contain the goods for which the package is designed, but should be of regular form and made of stiff material such as paper box-board and have foldable portions or the like which may be opened to receive the charge and then folded or shut up to entirely close the same and present comparatively rigid sides and ends to properly support the outer sealing wrapper of flexible waxed paper and hold it in shape.

In the form illustrated, the inner wrapper or carton *a* is preferably of stiff paper box-board formed by cutting the paper sheet into suitable blanks which are scored to form the corner folds and cut to form the foldable end flaps *b*. Preferably also, as in the form shown, the side edges of the blank are overlapped and glued together at *c*, to form a tight seam lengthwise of the carton, while the terminal flaps at each end beyond the seam are free to be folded down upon each other after the charge of merchandise has been placed within the carton, as shown in Fig. 2. Preferably also, the inner wrapper may be coated or impregnated throughout with wax and, since the inner carton is of heavy stock, it may hold a large amount of the wax and thus aid in rendering the package moisture-proof. Without the outer sealing wrapper, such a waterproofed carton I have found, constitutes a very satisfactory package, and forms the subject-matter of Letters Patent of the United States No. 797,504, issued to me August 15, 1905, but

the end flaps cannot be conveniently sealed tight by aid of the contained wax, since the flaps are stiff and unyielding and cannot be pressed into close contact at all points.

5 The outer sealing wrapper *d* in the form of a sheet of suitable size is supersaturated with wax, that is to say, is not only impregnated throughout with wax but has a heavy surface coat sufficient to seal the folded portions
10 when heated. The waxed sealing wrapper is tightly folded about the inner closed carton containing the merchandise, as indicated in Fig. 3. It is then heated to melt or partially melt the wax along the overlapped
15 portions *e* and at the end-folds *f*, and the overlapped and folded portions are then pressed into close contact at all points and the melted wax allowed to set. Since the
20 outer wrapper is of flexible paper, its folds may be readily pressed into close contact over the entire lapped portions thereof and effectively sealed by the melted wax.

The inner carton or wrapper, as stated, is of regular form and is stiff and comparatively
25 unyielding and serves as a firm support to hold the outer flexible wrapper in shape, and serves as foundation with flat smooth surfaces upon which the sealing wrapper may be smoothly and snugly folded and its over-
30 lapped portions smoothly and tightly pressed into contact when sealing the same by aid of the melted wax.

As stated, ordinary waxed paper containing only 10 to 25 percent. of weight of wax
55 cannot be readily and quickly sealed in this manner, and I preferably employ a Manila or parchment paper weighing, when unwaxed from 25 to 40 lbs. per standard ream and, after waxing about 50 to 80 lbs. so that
40 it is about half wax. The wax is preferably applied to the flexible paper sheet by dipping the latter in a bath of melted wax until it is supersaturated, that is to say, not only im-
45 pregnated throughout but has a heavy wax coating, then withdrawing the sheet and allowing the wax to cool or set without squeezing or draining off the surplus. Refined paraffin wax melting at *e. g.* 130° to 135° F. is preferably employed and the bath is
50 maintained at a temperature of from 180° to 200° F. These details of course are given only for guidance and may be widely varied in accordance with the different paper stocks employed. The desire is to obtain a paper
55 having a very high percentage of wax to thoroughly protect the contents of the package and so that sufficient wax is present as a heavy surface coat to properly seal the folds at all points.

60 While it is eminently preferable that the flexible sealing wrapper should be supersaturated with wax as above described, the wax

necessary for the sealing may be provided as a heavy coat applied to the surface of the paper. The heating and sealing of the
65 waxed wrapper may be performed in any suitable manner as by holding the package over a flame or before a hot blast and then pressing the folds snugly into contact with the fingers or by other suitable means. A
70 package thus formed is moisture-proof and practically air-tight at all points, and has been found to preserve intact for months in an atmosphere saturated with moisture, such
75 goods as candied pop-corn, which is very susceptible to the deleterious effects of moisture. Preferably, the package sealed as above described, is inclosed in an outer protecting
80 wrapper *g* of heavy paper of suitable shape and having, like the inner wrapper, terminal flaps which are folded and glued or otherwise cemented together. The outer protecting
85 wrapper prevents injury to the sealing wrapper and may bear advertising or other printing matter to indicate the nature of the contained goods.

Obviously, the package may be formed by aid of any suitable means, and ordinary stiff and flexible papers may be employed respectively for the inner supporting carton and
90 the flexible sealing wrapper. The details set forth of waxing the latter and the percentage of wax, is given for guidance only and may be varied to suit different circumstances and other details may be changed without de-
95 parture from the essentials of the invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A moisture-tight package for candies
100 and like merchandise, comprising an inner wrapper or carton of stiff paper board and of regular form having foldable flap portions, which may be opened to receive the charge and folded to completely inclose the same,
105 and an outer wrapper of flexible paper supersaturated with wax and sealed at its overlapping folded portions through aid of the contained wax, substantially as described.

2. A moisture-tight package for candies
100 and like merchandise comprising an inner box of regular form and of stiff, rigid material, having means which may be opened to receive the charge and closed to completely surround the same, and an outer wrapper of
115 flexible, heavily waxed paper, folded about the inner box and sealed around its overlapped portions through aid of the contained wax, substantially as described.

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Witnesses:

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