June 24, 1941. H. F. GRAU 2,246,936

BRICK PACKAGE

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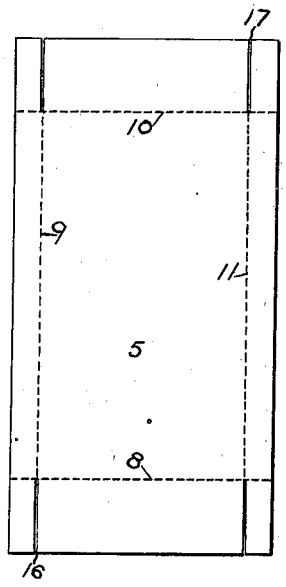


Fig 1

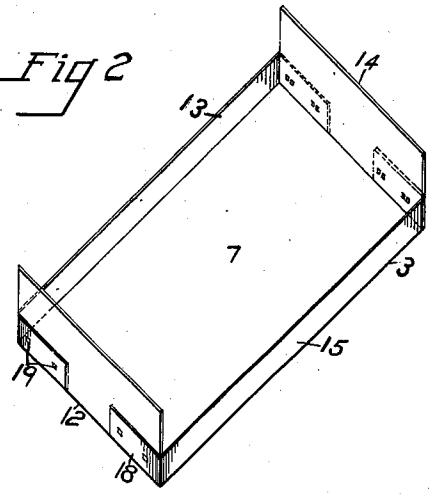


Fig 2

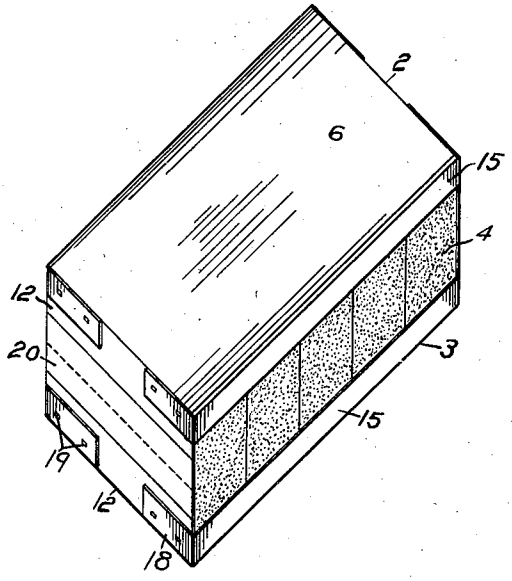


Fig 3

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BRICK PACKAGE

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6 Claims. (Cl. 206—46)

This invention relates to brick packages and, more particularly to packages for the transportation from the mill to the place of use of preformed bricks of predetermined size and and shape, such as insulating fire bricks.

One of the chief difficulties, in connection with the manufacture and sale of these types of bricks, has been the problem of safe and economical transportation. Such bricks, being comparatively heavy and fragile and hence liable to breaking, chipping or cracking, require careful protection in shipment, particularly for export trade; while, at the same time, the marketable value of such bricks imposes a low limit of permissible packing and transportation costs for absorption in the sales price at destination.

A customary method of shipping bricks has been to package them in wooden cartons but such practice has proved costly, due to the cost of packaging materials and the added transportation charges, since it has been found necessary to employ strong, heavy lumber for packages of practicable size in order to carry the contents safely to their destination. Wooden cartons, unless excessively heavy, have proved unsatisfactory and inefficient as carriers and have resulted in considerable losses from damaged contents. Moreover they are undesirable in that they are difficult to open with the ordinary implements employed by bricklayers.

The present invention has for its chief object to dispense with the objectionable practice of using heavy wooden cartons for handling and transportation and to provide a light weight package which will reduce packing and transportation costs while assuring safe carriage of the contents. An object of the invention is to provide a reliable package, of light and economical type, for the safe handling and transportation of fragile, preformed brick, such as insulating fire brick. A further object is to provide a brick package which will reduce packing and transportation costs while assuring safe package of the fragile bricks, and will, nevertheless be easy to open with the implements ordinarily available where the bricks are used, thereby permitting the packaged bricks to be taken to the work, as a unit, and opened at the job, even though it may be on a scaffold or other place of restricted space. A still further object is to provide a brick package manufactured of material employed in such a manner as to attain the maximum effect of its property of strength in tension while its weaknesses in shear and compression are overcome by the particular arrangement of the parts of the package so that stresses of such nature are assumed by the contained bricks or are distributed over large areas. A still further object is to provide a package so designed that the contents thereof may be observed or inspected without opening the package.

This invention relates to a brick package of pulpboard material comprising upper and lower body portions of identical size and shape, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the body portion, opposite side walls having flanges integral therewith overlapping to some extent adjacent side walls and being secured thereto, at least a number of similar side walls in said upper and lower body portions meeting in abutting relationship, and means overlying the abutting edges of said side walls serving to secure the body portions against separation or relative shifting.

The term "pulp board material" is used herein to denote a pulp board product such as fiber board or corrugated board, characterized by its strength of resistance to tensile stresses and its relatively great yield in shear and compression, as compared with wood. It will be appreciated the low resistance to shear makes it impossible to join the parts of such a package by ordinary nailing.

The accompanying drawing illustrates a preferred embodiment of my invention, in which

Figure 1 is a plan view of a blank from which an enclosing cap is formed;

Figure 2 is an isometric view of a formed cap; and

Figure 3 is an isometric view of an assembled brick package.

Referring to the drawing, there is shown a rectangular package of pulpboard material comprising upper and lower body portions or caps 2 and 3 of identical size and shape, enclosing the upper and lower ends of an assembly of preformed rectangular bricks 4, such as insulating fire brick. Each of the caps 2 and 3, preferably, are formed from a rectangular blank 5 providing respectively the top and bottom members 6 and 7 of the completed package.

The blank 5 is provided with scoring or folding lines 8, 9, 10 and 11 to permit the peripheral portions of the blank to be folded inwardly to form side walls 12, 13, 14 and 15 of the completed cap. The folding lines 9 and 11 ter-

minate in gashes 16 and 17 in order to separate individual peripheral portions forming the side walls. It will be noted opposite side walls 13 and 15 are greater in length and smaller in height than the adjacent side walls 12 and 14. The side walls 13 and 15 terminate in flanges 18 integral therewith, such flanges 18 being adapted to be folded inwardly to overlap the adjacent side walls 12 and 14.

Staples 19 are used to fixedly secure the flanges 18 to the overlapped walls 12 and 14 integrally uniting the side walls and forming a strong, light weight, economical holder for the assembly. Such staples 19 penetrate the flanges 18 and the side walls 12 and 14 and are properly clinched at the inside of the cap 2. Such stapling may be accomplished by any standard stapling machine. While I prefer to use staples due to their strength and the ease with which they may be applied, it will be understood other means may be used to accomplish the same result, for example, the flanges 18 may be stitched or adhesively secured to the walls 12 and 14. The cap 3 is formed in the same manner.

In constructing the assembled package, a predetermined number of bricks are assembled in cap 3, the cap covering the lower portion of such bricks. Cap 2 is placed over and covers the upper portion of the assembly. It will be noted that similar side walls 12 and 14 of the caps 2 and 3 meet in abutting relationship while similar side walls 13 and 15 of the caps 2 and 3 do not engage one another and hence permit the assembly to be inspected without opening or breaking the package. Such method of assembly also aids in reducing the cost of the package since it permits a material reduction in the amount of material required to form the package without lowering the efficiency or sacrificing the safety thereof. To prevent separation or relative shifting of the caps 2 and 3 during handling or transportation, adhesive securing strips 20 are placed on each end of the package over the abutting edges of the similar side walls 12 and 14. Such strips, after the adhesive is dry, resist forces tending to separate the upper and lower body portions and maintain the opposing side walls in definite alignment.

It will be noted the upper and lower surfaces of the package are entirely smooth and are adapted to receive any desired printing or other identifying matter thereon. Such smooth unbroken surfaces likewise permit readily moving the container on the floor or inserting the lifting arms of a truck therebeneath, and also facilitate the movement of the containers on conveyers.

The present invention provides an economical, light-weight package which reduces packing and transportation costs while assuring safe carriage of the contents. The blanks forming the caps are identical as to dimension and construction and hence can be cut or shaped at the same time and stapled in the same machine. Such construction greatly reduces the cost of labor and material and produces a package wherein a maximum capacity is obtained by the use of a minimum amount of material. The package is especially adapted for the safe handling and transportation of fragile preformed bricks, such as insulating fire brick. The package is so designed as to attain the maximum effect of the strength of the pulpboard material in tension while its otherwise objectionable weaknesses in shear and compression are overcome by the particular arrangement of the parts of the package so that such stresses are assumed by the contained assembly or are distributed over large areas. The open structure of the package permits the contents to be observed without breaking the package which is highly desirable since various grades of bricks are packaged in like manner.

While I have described and illustrated a preferred embodiment of my invention, it will be understood my invention is not so limited but may be otherwise embodied within the scope of the following claims.

I claim:

1. A brick package of pulpboard material comprising upper and lower body portions of similar size and shape, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the body portion, opposite side walls having flanges integral therewith overlapping to some extent adjacent side walls and being secured thereto, side walls of said upper body portion meeting similar side walls of said lower body portion in abutting relationship while the remaining side walls of said upper body portion are spaced from similar side walls of said lower body portion, and means overlying the abutting edges of said side walls serving to secure the body portions against separation or relative shifting.

2. A brick package of pulpboard material comprising upper and lower body portions of identical size and shape, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the body portion, opposite side walls in the formed body portions being smaller in height than adjacent side walls, flanges integral with said smaller side walls overlapping adjacent higher side walls, means securing said overlapping flanges to adjacent side walls thereby uniting the side walls, higher side walls in said upper and lower body portions meeting in abutting relationship, and means overlying the abutting edges of said walls serving to secure the body portions against separation or relative shifting.

3. A rectangular brick package of pulpboard material comprising upper and lower body portions of identical size and shape, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the body portion, opposite side walls in the formed body portions being smaller in height than adjacent side walls, flanges integral with said smaller side walls overlapping adjacent higher side walls, staples penetrating said flanges and the overlapped side walls serving to unite said side walls, higher side walls in said upper and lower body portions meeting in abutting relationship, and securing strips overlying the abutting edges of said walls serving to prevent separation or relative shifting of said body portions.

4. A mercantile package of bricks suited for transportation to the place of use, comprising an assembly of preformed bricks of predetermined size and shape, upper and lower body portions enclosing at least the upper and lower portions of said assembly, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being

folded inwardly to form side walls of the body portion, opposite side walls having flanges integral therewith overlapping adjacent side walls and being secured thereto thereby uniting said side walls, side walls of said upper body portion meeting similar side walls of said lower body portion in abutting relationship while the remaining side walls of said upper body portion are spaced from similar side walls of said lower body portion, and means overlying the abutting edges of said side walls serving to secure the body portions against separation or relative shifting.

5. A mercantile package of bricks suited for transportation to the place of use, comprising an assembly of preformed bricks of predetermined size and shape, upper and lower caps enclosing at least the upper and lower portions of said assembly, each cap being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the formed cap, opposite side walls in the formed caps being smaller in height than adjacent side walls, flanges integral with said smaller side walls overlapping adjacent higher side walls, staples penetrating said flanges and the overlapped side walls serving to unite said side walls, higher side walls in said caps meeting in abutting relationship while lower side walls do not engage similar side walls in the other cap, and securing strips overlying the abutting edges of said walls serving to prevent separation or relative shifting of said caps.

6. A brick package of pulpboard material comprising upper and lower body portions of similar size and shape, each body portion being formed from a rectangular blank providing respectively the top and bottom members of the completed package, peripheral portions of said blank being folded inwardly to form side walls of the body portion, means securing side walls of the body portion to one another, side walls of said upper body portion meeting similar side walls of said lower body portion in abutting relationship while at least one side wall of said upper body portion is spaced from a similar side wall of said lower body portion, and means overlying the abutting edges of said side walls serving to secure the body portions against separation or relative shifting.

HARRY FREDERICK GRAU.