Sept. 15, 1964 E. F. BAUMER 3,148,773

BANDED BRICK PACKAGE

Filed Aug. 7, 1962 4 Sheets-Sheet 1

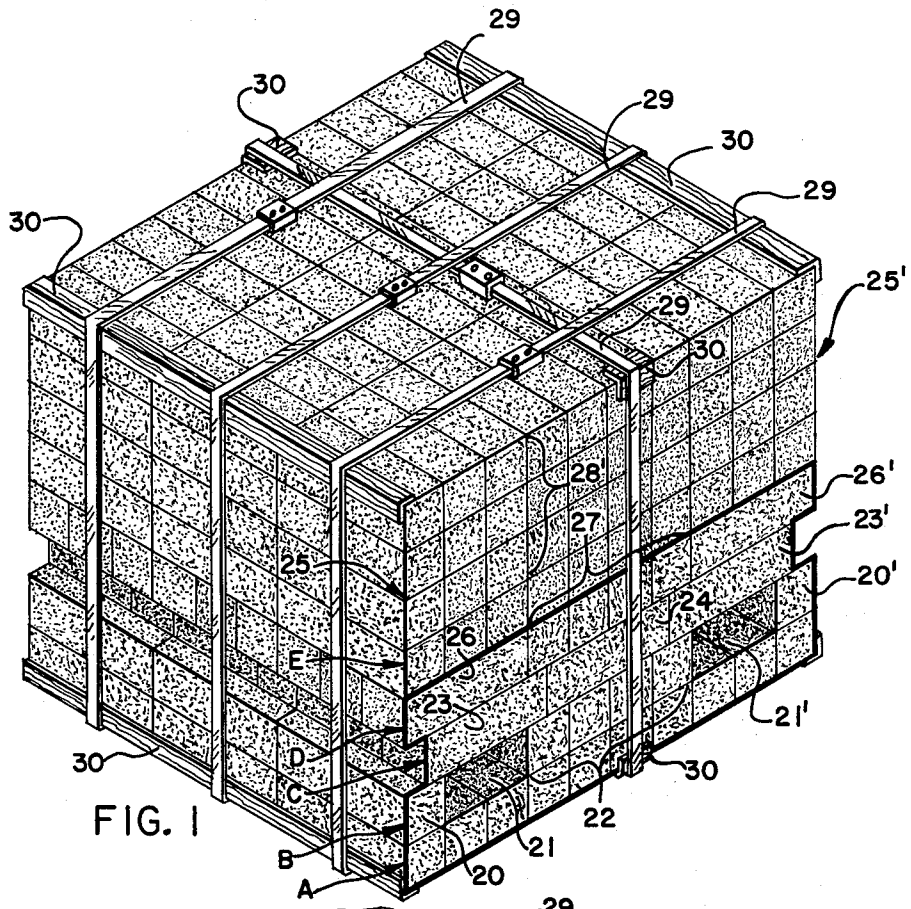


FIG. 1

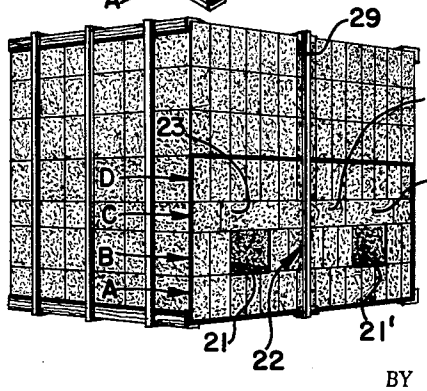


FIG. 6

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BANDED BRICK PACKAGE

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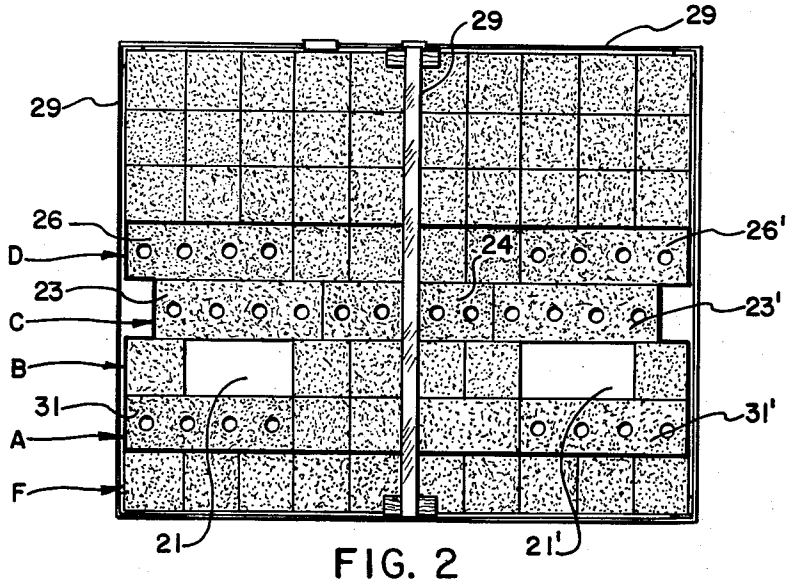


FIG. 2

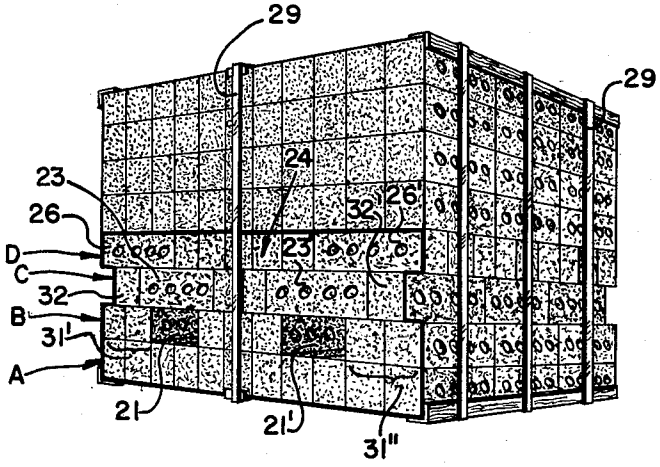


FIG. 3

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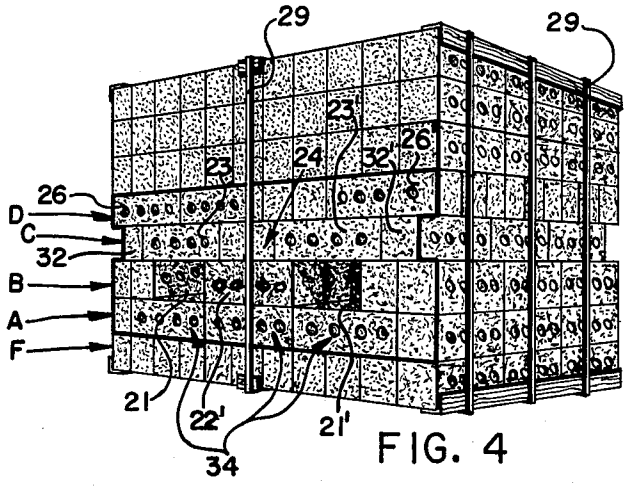


FIG. 4

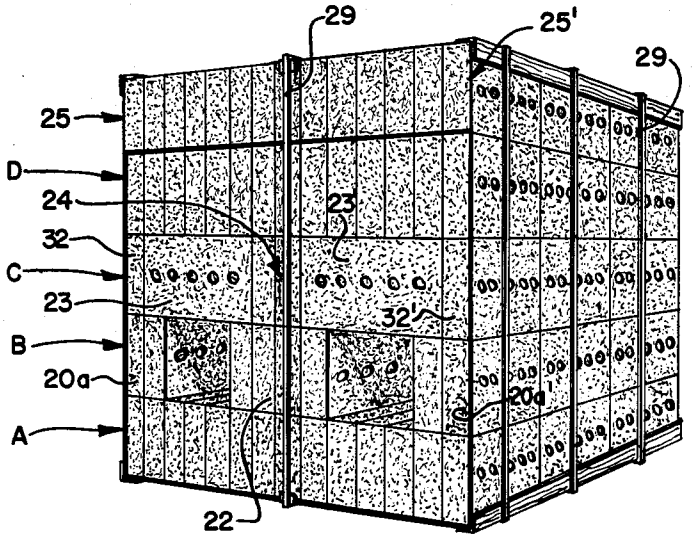


FIG. 5

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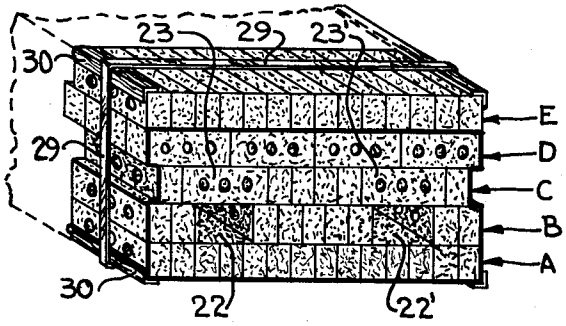


FIG. 7

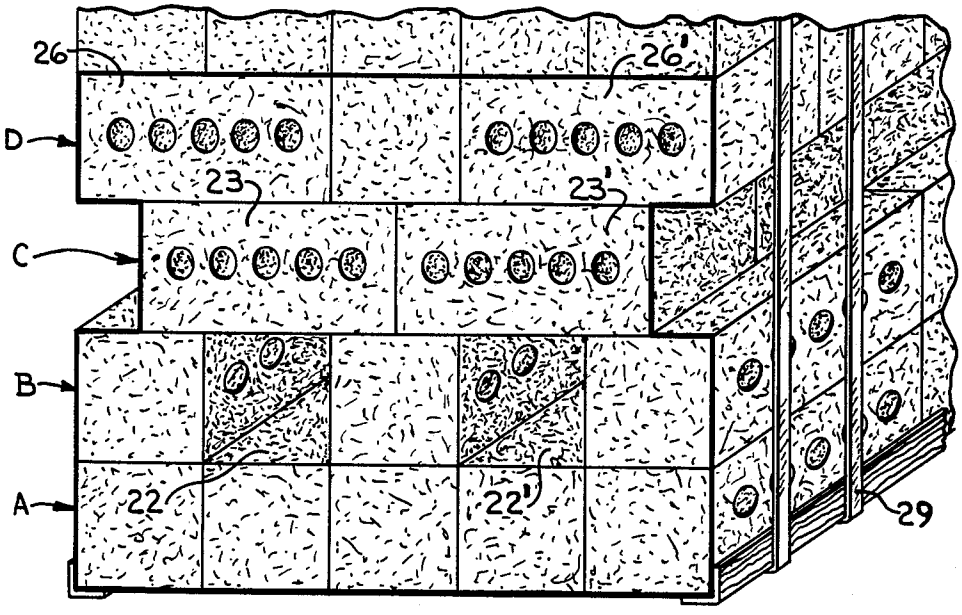


FIG. 8

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United States Patent Office 3,148,773 Patented Sept. 15, 1964

3,148,773
BANDED BRICK PACKAGE

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Filed Aug. 7, 1962, Ser. No. 215,394
2 Claims. (Cl. 206—65)

This invention relates to a banded transportable brick package having two voids and suitable for on-site moving by ordinary fork lift trucks and dollies. More specifically, it deals with a pallet-less brick package having large voids capable of being handled by most lift trucks, said voids being maintained in stable condition during assembly and transportation without the aid of lintels or similar supporting elements.

One of the important features for a brick package, to be transportable by a fork lift truck or dolly, is its low center of gravity. Such a package has been developed and has been described in the Baumer Patent 2,967,612, and this type of package has been in extensive use during the past few years, particularly for high rise buildings having reinforced concrete floors which facilitate the movement of jack dollies.

However, with the recent rise in construction of garden type apartments with limited-load elevators and wooden floors, and with the advent of wider use of longer size brick, there has developed a need for another type of package which can be adapted for such brick, and which can be assembled in units which could be transportable over the weaker types of wooden floors.

In this connection, it must be noted that truck transporting elements, such as the tines of fork lift trucks, dollies, etc., vary in size, and since most present brick packages (other than those of U.S. Patent 2,967,612) provide only narrow void openings (up to about 4½ inches), their limitations in building applications are obvious. Accordingly, one object of the present invention is to provide two equally-spaced voids having a width of at least 5½ inches, and preferably, 6 inches.

According to the present invention, a compact, readily assembled and banded package of brick can be produced without a lintel and with a low center of gravity by the use of a four-row encompassed basic unit of brick. Since banding of the sides by steel strapping or wire necessitates that the terminal (top and bottom) rows of the brick package be laid on their sides in running relation, we are concerned herein only with the encompassed rows of brick, i.e., the rows including and adjacent the void row of the package which, in this case, are new and novel, and form the basis of the present invention. The term "running relation," employed herein, designates brick laid on their sides and abutting each other at their sides and in a row, with their ends directed forwardly.

In the present invention, the said encompassed rows of the basic unit consist of a lower row of abutting brick of equal height and disposed on their sides (stretcher or flat), extending over the entire width of the package. The second row consists of brick of equal height laid on their sides (stretcher or flat), with at least one brick, and not more than three, placed in running relation at each end, flush with the sides of the package. This row encloses two equally-spaced voids, separated by brick, each of the voids being at least 5½ inches wide, and, preferably 6 inches wide, but having a width not exceeding the length of the brick. The third row of brick, disposed over the second row, comprises one brick laid crosswise the running direction and over the spanning each void, the space between these two brick (if any adequate space is available) being filled with brick of the same height. With this structure, there often is room at the ends of the row for one brick laid in running relation. In such case, such brick are included, provided they do not cause the width of the row to exceed the predetermined width of the

package. The fourth row consists of abutting brick of equal height laid on their sides (stretcher or flat) and extending over the entire width of the package. It is understood that when the lower row or fourth row of brick are laid in running relation, then they will constitute the bottom and top row of the unit. However, if either or both of these rows contain brick laid in the crosswise (binding) direction, then another row in running relation must be used for the bottom and/or the top row, as the case may be. Since the aforesaid four rows encompass the essential basic unit of the invention, it is, of course, possible, and often desirable, to add brick to each side, in equal numbers and configurations, and layers of brick may be added below and above the top and bottom layers, as is demanded by the job. For example, in high stacks, it is often desirable to insert one or more binder courses (rows) of brick running across a part of or across the entire width of the package at right angles to the running direction (i.e., in the cross-wise direction) in order to prevent falling of the brick, upon unbanding, due to the height of the stack. Also, one or more vertical sections may be added in depth, if desired.

The invention will be more readily understood by reference to the accompanying drawings in which a preferred embodiment is described, and in which FIGURE 1 presents a perspective view of a package of cube jumbo size bricks wherein the basic unit of the present invention is indicated in heavy lines in the front of the package. FIGURE 2 illustrates a front view of another package of similar brick wherein a bottom row of brick, below the basic unit, is included, and brick in some of the rows of the basic unit are in different arrangement. Perspective views of other cube jumbo brick packages are depicted in FIGURES 3 and 4, while FIGURE 5 illustrates a perspective view of a package of Norman bonding brick made in accordance with the present invention. A similar view of another package of standard size brick, made in accordance with the present invention, is shown in FIGURE 6. A similar view of a package of standard brick is depicted in FIGURE 7, while FIGURE 8 shows a similar view of a package containing large blocks. Similar numerals refer to similar parts in the various figures.

A preferred type of package for cube jumbo brick (9" x 3" x 3") is shown in FIGURE 1, wherein the basic unit claimed is indicated by the darker boundary lines in the front of the package. Since the lower row (A) of 10 brick is laid on the stretcher side completely in running relation, this row can be considered also as the bottom row. The second row (B) consists of two end bricks **20** and **20'** serving as the outer side boundary of voids **21** and **21'** into which the two tines of the fork truck, or other delivery or raising and transporting means, are inserted. These two voids are equally spaced by the four brick **22** laid on their sides in running relation therebetween, thus making the void 6" wide.

The third row (C) consists of brick **23** disposed over and spanning, in crosswise relation, void **21**. Brick **23'** likewise spans the other void **21'**, while brick **24** is laid on its side crosswise between bricks **23** and **23'**, thus filling the space therebetween. It will be noted that, in this row, bricks **23** and **23'** do not extend flush with side edges **25** and **25'** of the package, but this does not interfere with the stability or transportability of the package.

The fourth row (D) of the basic unit of the present invention consists of end bricks **26** and **26'** laid on their sides crosswise and extending to the ends **25** and **25'**, respectively, of the package. The space between them is filled with four brick **27** of the same height and laid in running relation. The top row E consists of 10 bricks laid on their sides in running relation, so that the package could be banded over this row, if desired. However, in the case of FIGURE 1, the order called for packages of

225 brick to be laid on pallets measuring 32" x 24" x 6½", and hence, the additional upper three rows 28 were added, before metal bands 29 were fastened thereover to make a compact, solid, transportable package. Strips of cardboard 30 may be inserted at the corners to avoid any possible damage by the bands. The package shown in FIGURE 1 is an elevator brick package developed to set on a contractor's pallet to be moved to hoists and around wooden floors by jack dollies inserted under the 6½" height of the pallets. A package of 255 brick for use with jack dollies on concrete floors may be made by adding another row of 30 brick on top of the package of FIGURE 1, prior to strapping. Additional rows or layers of brick may be added, prior to banding, if desired, to meet the capacity of lifting equipment used, or the load capacity of the flooring over which it is to be transported. For example, a package of 380 brick can be made by adding another section in series behind the 3-section stack of FIGURE 1, and adding two additional layers of 40 brick each, prior to banding. Such a package would be suitable for delivery to all jobs other than buildings with elevators.

If it is desired to raise the lifting row B (because of equipment limitations), a bottom row F (FIG. 2) may be added. It will be noted that, in the package depicted in FIGURE 2, the lower row A is not the bottom row, since the outside brick 31–31' are not laid in running relation and thus cannot be banded. Also, the spanning brick 23–23' in this case are laid in crosswise relation on their stretcher sides (rather than the flat sides) as is intervening brick 24.

In FIGURE 3, the same cube jumbo brick are used to make up an elevator package to set on the contractor's pallets and be moved to hoists and around floors by jack dollies. This 3-section package contains 249 brick and the basic unit therein has 11 brick in the lower (and, in this case, bottom) row (A). The second row (B) has two end bricks 31' and 31" bounding the outer edge of voids 21 and 21'. Row (C) has an additional end brick 32 and 32', since there is adequate room at the ends therefor. If this package is to be rolled over wooden floors, the top row of brick may be removed, leaving 216 brick to be banded.

FIGURE 4 depicts a 3-section package of 249 cube jumbo brick wherein a brick 22' is laid crosswise between voids 21–21', and the brick 34, other than the end ones in the lower row (A), are laid crosswise in binder relation. An additional end brick 32–32' is inserted adjacent spanning brick 23–23' to fill in the adequate outside space in this row.

Norman bonding brick, which measures 12" x 2¼" x 8", also can be easily packaged into compact, transportable packages, according to the present invention. For example, FIGURE 5 presents a 3-section elevator package of 192 such brick. In this case, an extra brick (32 and 32' in row (C), and 20*a* and 20*a*' in row (B)) inserted on each side, enable making all rows flush with side edges 25–25' of the package. The voids in this package are 6¾" wide.

Even standard size (regular) brick (8" x 2¼" x 3½") can be formed into an elevator brick package of the present invention, as is apparent from FIGURE 6. In this case, the 3-section package contains 261 brick, and is suitable to ride on contractor's pallets measuring 32" x 24" x 6½". All of the brick except those in the spanning row (C), are laid in running relation, and the void width is 5⅝".

A common package used in the construction of elevator or high rise buildings, employing regular size (8" x 2¼" x 3½") brick, is illustrated in FIGURE 7. When packaged in 3-sections to set on contractor's pallets, for use with jack dollies, it is employed for such uses, whereas for other types of buildings wherein the packages are laid on the ground, they may contain four or more sections.

In FIGURE 8, there is shown a package of blocks (8" x 8" x 16") normally employed for back-up of brick construction, or for commercial building walls. In this case, due to the large size of the blocks, there is no space available in the third row (*c*) between spanning blocks 23 and 23' (disposed over voids 22 and 22'), in which case no filling blocks between blocks 23 and 23' are required.

Although the present invention has been adapted to brick of various sizes, it is to be understood that this is done for purposes of illustration only, and that the invention is applicable to rectangular pieces of blocks, stone, tile, self-supporting boxes, and the like. Each layer of the package may be protected by conventional materials such as hay, felt, paper, and the like.

I claim:

1. In a banded transportable elevator brick package containing a bottom and a top row of brick which are laid in running relation and extending to the sides of the package, the improvement comprising a vertical stack unit of superimposed rows of brick included in said package, said unit comprising,

a lower row of brick of equal height disposed on their sides and extending across the entire width of the package,

a second row of brick of equal height disposed on their sides over said lower row and enclosing two equally-spaced voids separated by brick and having a width of at least 5½ inches but less than the length of a brick, said second row having at least one and not more than three brick laid in running relation and bounding the outer side of each void and extending to the side of the package,

a third row of brick comprising one brick laid crosswise and completely spanning each void, brick of the same height filling any available space therebetween, and not over one brick laid in running relation at each end provided the width of the package is not exceeded, and

a fourth row of brick of equal height and disposed on their sides and extending across the entire width of the package.

2. In a banded transportable package of long brick containing a bottom and a top row of brick which are laid in running relation and extending to the sides of the package, the improvement comprising a vertical stack unit of superimposed rows of brick included in said package, said unit comprising,

a lower row of brick of equal height disposed on their sides and extending across the entire width of the package,

a second row of brick of equal height disposed on their sides over said lower row and enclosing two equally-spaced voids separated by brick and having a width of at least 6 inches but less than a length of a brick, said second row having at least one and not more than three brick laid in running relation and bounding the outer side of each void and extending to the side of the package,

a third row of brick comprising one brick laid crosswise and completely spanning each void, brick of the same height filling any available space between, and not over one brick laid in running relation at each end, and

a fourth row of brick of equal height disposed on their sides and extending across the entire width of the package and having each end brick laid crosswise the running direction.

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