Jan. 22, 1957 R. B. TAYLOR ET AL 2,778,491

BUILDING MATERIALS PACKAGE

Filed Oct. 11, 1954

Fig. 1

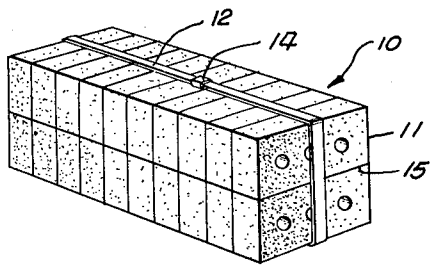


Fig. 2

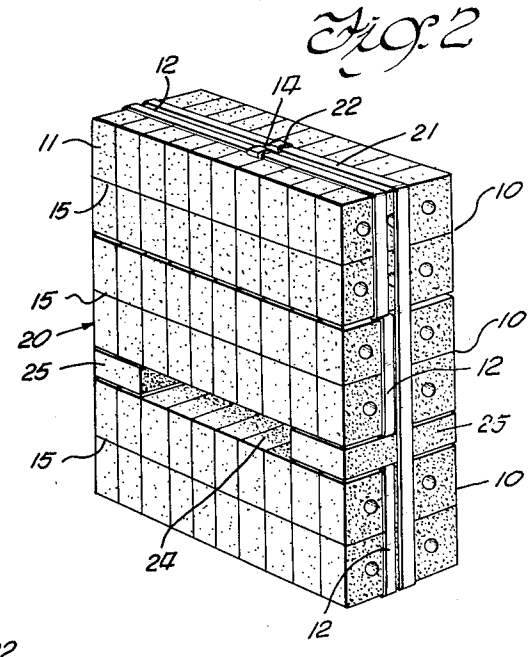


Fig. 4

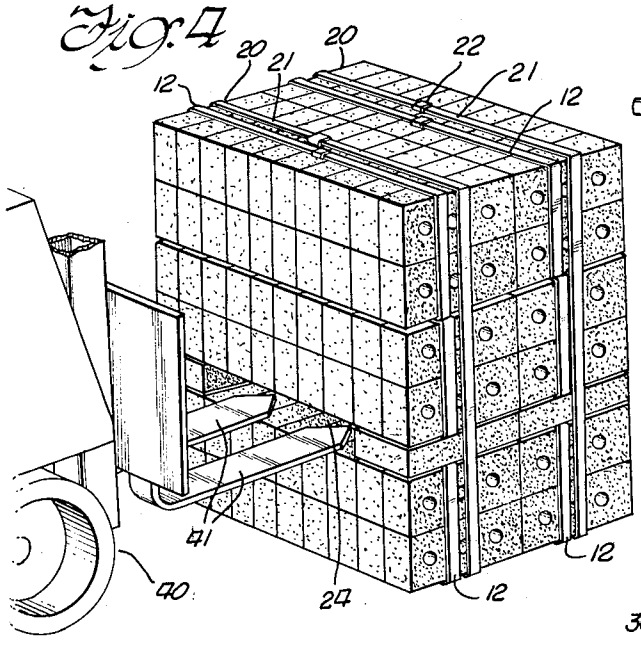
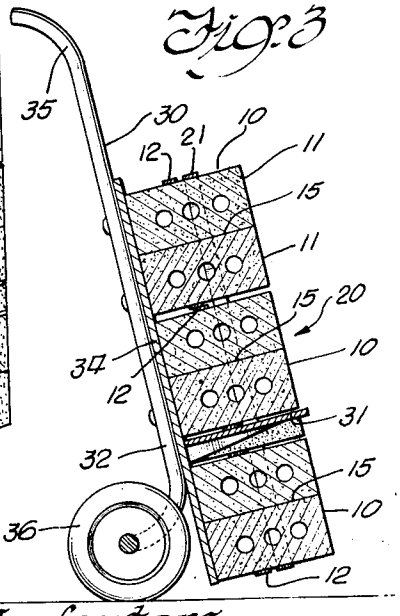


Fig. 3



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BUILDING MATERIALS PACKAGE

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4 Claims. (Cl. 206—65)

The present invention relates to the expeditious handling of building materials, and particularly to a packaging unit for storing and handling building bricks. The invention finds particular, although not exclusive, utility in packaging and handling building bricks, tile, and blocks.

It is the general object of the invention to provide a package of building bricks which may be readily handled by conventional materials handling equipment.

In the case of faced building materials, such as face brick and glazed tile, it is a further object of the invention to furnish a package which will protect such faces from abuse in handling.

Still another object of the invention is to provide a package of building bricks which may be broken into subunits on the construction site for movement by hand.

Yet another object of the present invention is to provide a convenient self-contained package for handling building bricks with conventional equipment which does not require the use of pallets or other auxiliary equipment.

Further objects and advantages of the invention will become apparent as the following description of an exemplary embodiment proceeds, taken together with the accompanying drawings, in which:

Figure 1 is a perspective view shown in perspective of a modular unit of bricks exemplifying an element of the invention.

Fig. 2 is a package of brick units shown in perspective.

Fig. 3 is a side elevational view in partial section of a package of bricks such as illustrated in Fig. 2 being carried by a hand truck.

Fig. 4 is a perspective view of two such packages as illustrated in Fig. 2 poised for engagement by the tines of a conventional fork lift truck.

In broad outline, the invention contemplates basic modular units of building bricks which are in turn packaged in such a fashion as to provide a handling opening sufficient to accommodate the engaging arms or tines of conventional material handling equipment. Referring now to Fig. 1, it will be seen that the basic modular unit **10**, there illustrated, consists of a package of twenty conventional building bricks **11** bound together by a steel strap **12** and secured by a fastener **14**. The interface **15** between the parallel rows of bricks in the basic unit **10** may be made up of "face" sides of the brick or building blocks employed. That is, that portion of the bricks or building materials which are ultimately intended to be exposed to view when the wall is erected is the "face" portion of the block at the interface **15**.

Although the basic modular unit **10** illustrated in Fig. 1 is made up of twenty bricks in two parallel rows of ten, if larger bricks are used the quantity of bricks may be correspondingly reduced. The weight of the unit **10** illustrated in Fig. 1, if made up of conventional brick, is approximately ninety (90) pounds; and consequently may be handled on the job by a laborer without requiring the aid of a hand truck or wheelbarrow. It will be appreciated that the single steel strap **12** is an item of minimum expense in the packaging and is an expendible item on the

building site when it is finally broken and the bricks are laid in place.

After the bricks have been bundled into the basic units **10**, a plurality of the basic units are then bundled together to form the handling package **20** as illustrated in Fig. 2. In Fig. 2 it will be seen that three of the basic units **10** have been assembled longitudinally and bound with a second girdling strap **21** secured by a second fastener **22**. If the manufacturer desires, the faces of the brick may be protected by placing them at the interface **15** of the basic brick packaging units **10**.

In order to provide for engagement by conventional materials handling equipment, an opening **24** has been provided above the lower unit **10** of bricks of sufficient width to accommodate the tines of a fork lift truck or other engaging prongs which may be found expedient to employ in handling the basic brick package **20**. The opening **24** is bounded by two spacer bricks **25** which are the same type of brick as used in the basic units **10**. In total, the package **20** contains sixty-two bricks, and will weigh approximately 275 pounds. The number of basic units **10** which are employed in the package **20** need not necessarily be fixed at three, but the unit illustrated is of a convenient size for handling and breaks down on a weight basis in the three individual packages to units which can also be moved on the site by manual labor.

The actual handling of the package is best illustrated in Figs. 3 and 4. In Fig. 3 it will be seen that the handling package **20** is positioned for movement by a hand truck **30**. The particular hand truck **30** illustrated has extending load-engaging arms **31** which are firmly secured to the frame **32** of the hand truck. A backing panel **34** engages the rear portion of the building block package **20**, and partially supports the load when the handles **35** of the hand truck **30** are lowered to roll it forward on its wheels **36**. Fig. 3 further illustrates how the faces of the brick **11** are protected from abuse in shipping by means of their location along the interfaces of the basic modular units **10**.

The packages **20** of building bricks may be paired together for handling by a forked lift truck **40** such as illustrated in Fig. 4. The broad handling opening **24** flanked by the spacer bricks **25** proves advantageous as it can be seen that sufficient clearance is allowed for both of the tines **41** of the fork lift truck to move within the opening **24**. In addition, the narrower arms **31** of the hand truck **30** can also be centrally employed in the same opening.

Although no horizontal banding of the two brick packages **20** has been shown in the two package unit as handled by the fork lift truck, such bands may be readily added if found desirable in accordance with the needs of the particular operator.

A distinct advantage is realized from the storing and handling of the package because no pallets or auxiliary equipment is required for either moving, handling or storage. Such items naturally bear an original cost as well as subsequent shipping and upkeep costs. The only item shipped with the package units as contemplated by the invention are the straps or banding which are of negligible cost, and consequently considered expendible at the construction site.

A further advantage of the package of building bricks contemplated by the invention is realized in shipment. Building materials are often subjected to rough handling. The spacer bricks **25** may shift somewhat and vary the location and width of the handling opening **24**. Because of the width of the opening, such shifting may take place to a considerable extent and still leave the opening **24** wide enough to accommodate the work engaging elements of conventional handling equipment.

When the packages of building bricks **20** are stored at the construction site they may be placed directly on the ground. Even though the ground may be wet or muddy

the contractor may be assured that the faces of the building materials will be protected from discoloration and contamination because of their location at the interfaces **15** in the modular units **10**.

Although one particular embodiment of the particular invention has been shown and described in some detail here, there is no intention to thereby limit the invention to the details of such embodiment. On the contrary, the intention is to cover all modifications, alternative embodiments, and usages or equivalents of the building materials package as fall within the spirit and scope of the invention as expressed and defined in the specification and the appended claims.

We claim as our invention:

1. A package of like bricks comprising, in combination, at least two modular units of twenty bricks, each of the units comprising two columns of ten bound with a tension strap forming an elongated rigid unit, a pair of spaced bricks between two of the units defining a single uninterrupted opening therebetween, said uninterrupted opening being of a length equal to the spacing of at least three bricks along the axis of the opening, and a package tension strap binding the units into a single package.

2. A package of bricks of the character defined in claim 1 above in which the brick faces are contiguous at the interface between the columns of brick in each modular unit.

3. A package of like bricks comprising, in combination,

three modular units of twenty bricks, each of the units comprising two columns of ten bricks bound with a flat tension strap forming an elongated rigid unit, a liner at the interface between the two columns of bricks protecting the contiguous faces, a pair of bricks between two of the units defining a single uninterrupted opening therebetween, said uninterrupted opening being of a length equal to the spacing of at least three bricks along the axis of the opening, and a package strap binding the units into a single package, the package strap being parallel to the unit strap.

4. A package of like bricks comprising, in combination, at least two modular units of a plurality of bricks, each of the units comprising at least one column of uniformly oriented brick bound with a tension strap forming an elongated rigid unit, a pair of spaced blocks between two of the units, the units being positioned in spaced relation with their longitudinal axes parallel and defining a single uninterrupted opening therebetween, said uninterrupted opening being of a length equal to the combined width of at least three bound bricks along the axis of the openings, and a package tension strap binding the units into a single package.

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