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(54) Abstract Title: **A brick carrying tool**

(57) The tool 10 comprises a handle portion 15 for holding the tool, a pair of forks 11, 12 substantially parallel to one another and spaced apart along the fork length, the forks being adapted to be inserted through holes formed in a brick (as shown in Fig 4). The tool is characterised further by a support portion 18 linking the handle portion to the forks. The handle portion is spaced apart from and located above a mid-portion of the forks.

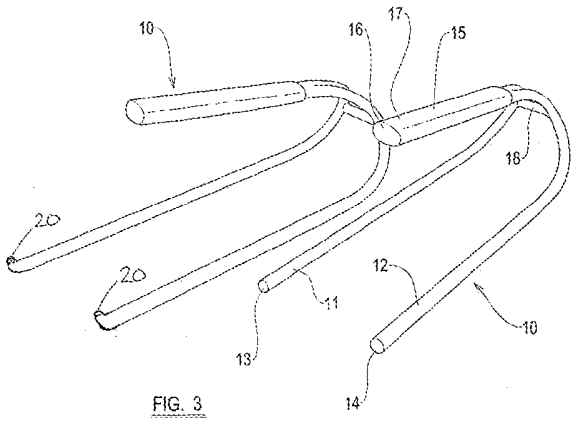

FIG. 3

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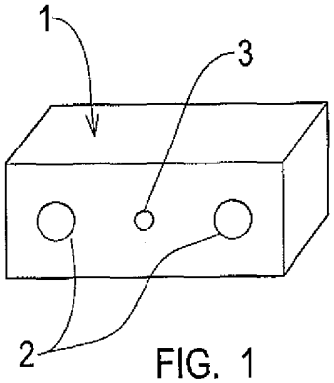

FIG. 1

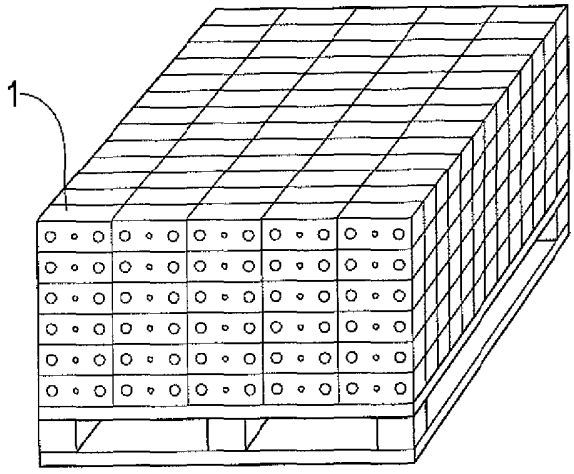

FIG. 2

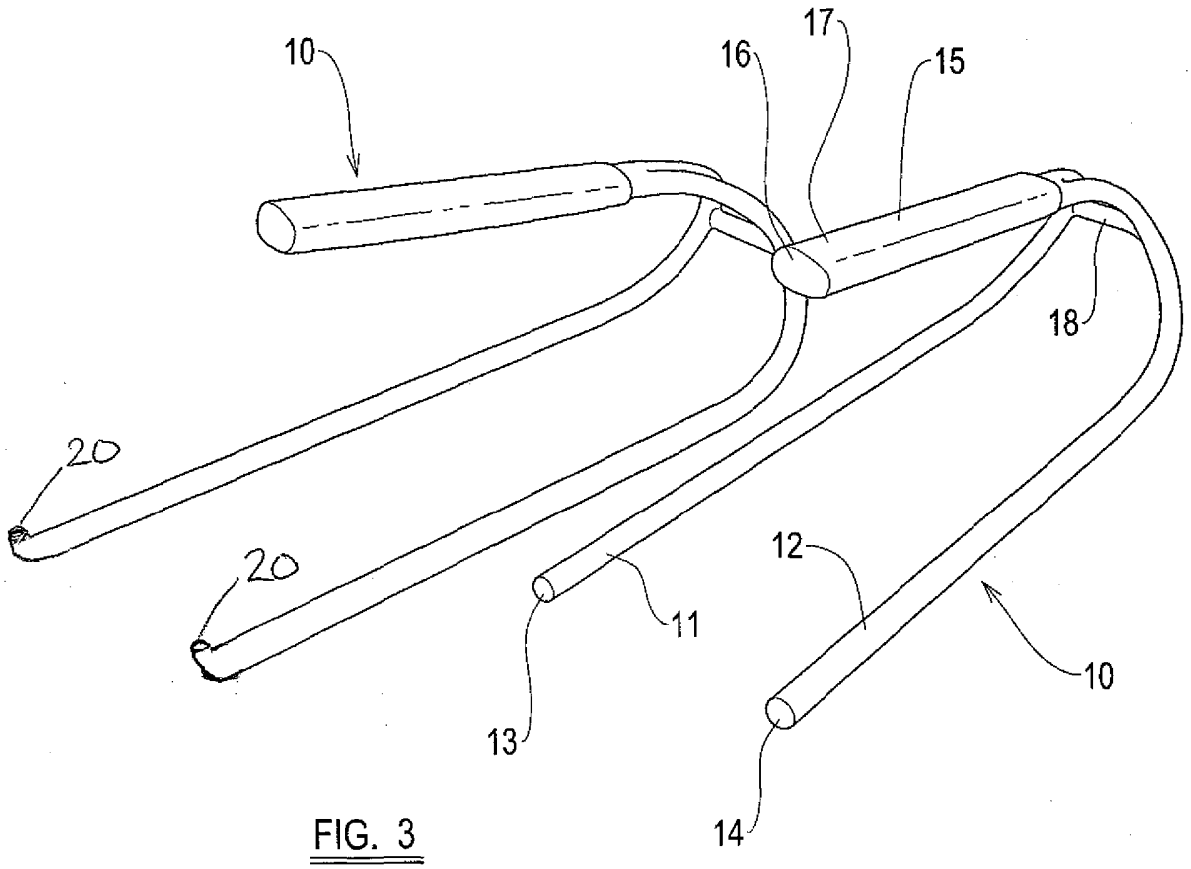

FIG. 3

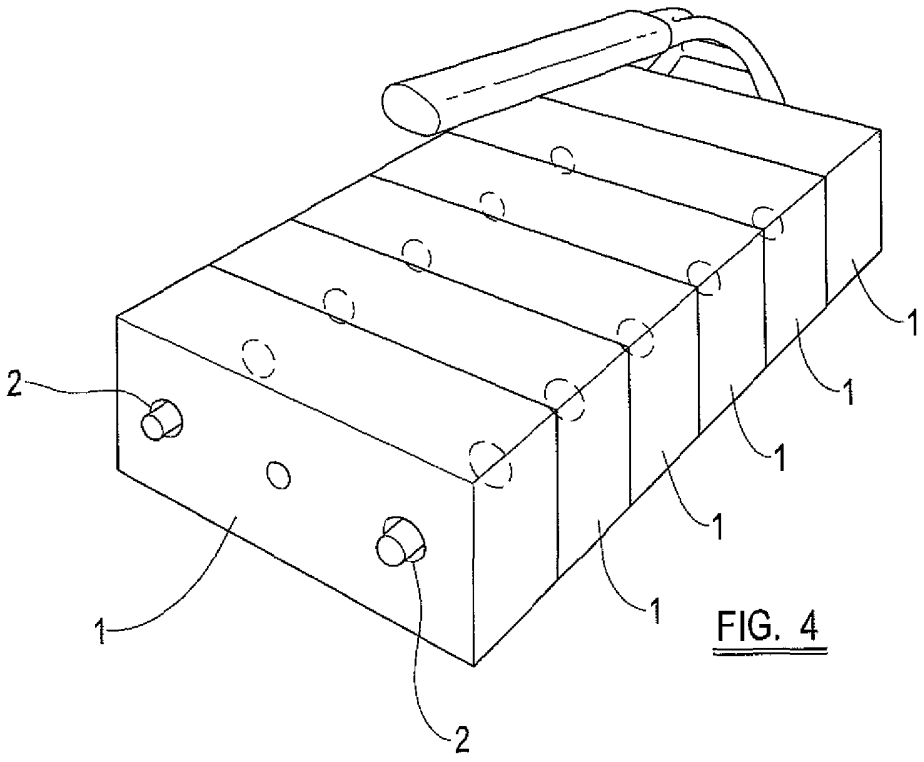

FIG. 4

Title: A Tool

Description of Invention

This invention relates to a tool and more particularly to a tool for assisting with the carriage of a number of separate bricks.

When bricks are delivered to a building site, they are commonly provided on a pallet with 400 bricks on each pallet.

Extruded or wire cut bricks have through holes as shown in figures 1 and 2 of the accompanying drawings.

When builders receive a new pallet of bricks at a site the bricks need to be distributed around the site where the bricks are to be laid. It is inefficient to carry the bricks individually and dangerous to carry many bricks with hands and arms. On some sites, a gripping tool is used. These tools are known as brick carrying tongs. The tongs clamp against the outer surfaces of a line of bricks to sandwich the line of bricks together. This is an expensive tool with moving parts that can fail.

It is an object of the present invention to provide a tool to facilitate the moving of a number of bricks from a stacked brick pallet and allow those bricks to be freely distributed around a building site.

The invention provides a tool for carrying bricks having at least a pair of through holes formed therein, the tool comprising: a handle portion for holding the tool; a pair of forks substantially parallel to one another and spaced apart by a predetermined distance along the fork length, the forks being insertable in a pair of through holes formed in a brick; and a support portion linking the handle portion to the forks, the handle portion being, in use, spaced apart from

and located over a mid-portion of the forks which hang below the handle portion.

Preferably, the forks are a pair of bars which are bent back through approximately 180° at the support portion and which terminate at their other end in the handle portion.

Conveniently, the support portion incorporates a spacer to dictate the spacing between the forks.

Preferably, a pair of bars are used to manufacture the handle portion, the support portion and the forks.

Conveniently, the bars are joined together in the handle and dictate the spacing of the forks.

Preferably, the handle portion is shrouded with a rubber or plastics material to act as a grip.

Conveniently, the handle portion has a designated grip area which is closer to the tips of the forks than to the support portion.

Preferably, the handle portion is angled with respect to the forks through between 160° and 175°.

Conveniently, an end of a fork has an upturned lip to prevent bricks loaded on the forks from sliding off the end of the forks.

Preferably, both ends of the forks have upturned lips.

In order that the present invention may be more readily understood, embodiments thereof will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is an extruded or wire-cut brick;

Figure 2 is a schematic view of a block of bricks stacked on a pallet;

Figure 3 is a perspective view of a pair of tools embodying the present invention; and

Figure 4 is a perspective view of a tool carrying a load of six bricks.

Referring to figures 1 and 2, bricks are delivered to a building site on a pallet in a stacked array. Each brick 1 is in this example an extruded brick or wire-cut brick. Each brick has a plurality of through holes which align with one another when the bricks are arranged side-by-side. In the example shown in figure 1, there are 3 holes: a pair of outer holes 2 of slightly larger diameter to the middle through hole 3. The holes 2,3 are formed during the manufacture of the brick and are consistently located with respect to the outer walls of the brick. In this example, the outer holes 2 are spaced apart by a distance of approximately 150mm (6"). The outer holes 2 have a diameter in the order of 3-5cm (0.75" to 1.25").

These dimensions and the location of the through holes 2 obviously change to a certain extent between different types of brick, sizes of brick and according to manufacturers' tolerances.

Figure 3 is a perspective view of a pair of tools 10 embodying the present invention. Each tool 10 has a pair of forks 11, 12 which are elongate elements preferably formed of steel bar. The two forks extend parallel to one another and are of the same length. The end of the bars comprise tips 13, 14 which

are rounded. Each tool 10 has a handle portion 15 in which the other ends 16, 17 of the bars are located. Inside the handle 15 the bars are welded together. The handle 15 is preferably manufactured from a durable rubber or plastics material shrouded over the bars after they have been welded together. The bars project from the handle portion 15 and bifurcate outwardly and downwardly to form two parallel running elongate forks 11,12. The bars are bent back on one another through approximately 180º, being 140º-195º but preferably between 160º to 175º and more preferably, 170º, so that, as shown in figure 3, the handle 15 is angled slightly upwardly when the forks 11,12 are laid on a flat horizontal surface. The handle 15 sits above and spaced apart from the forks 11,12.

The tool has a handle portion 15 and a fork portion 11,12 with a transition between the two which is the support portion.

A bridging piece 18 is welded substantially at the apex of the bent bars, in the transition portion, to space the forks 11,12 in the fork section accurately apart from one another. The bridge 18 is longer or shorter depending upon the spacing required between the forks 11,12. Alternatively, the same bridge 18 may be used but welded into a position in the support section along the bars closer to the fork ends or closer to the handle portion 15 depending on whether the spacing between the forks 11,12 is required to be respectively, narrower or wider.

It is important that the forks 11,12 are spaced apart from one another by a spacing which is determined by the type of brick the tool is to lift. Almost all bricks having through holes 2 have the through holes spaced apart by approximately 150mm – centre to centre. The forks 11,12 are likewise spaced apart by approximately 150mm. The forks 11,12 run substantially parallel to one another but it is not essential for them to run exactly parallel to one another. Indeed, the forks 11,12 can be spaced closer together at their ends 13,14 than at the other end. The forks 11,12 are spaced apart along their

length such that the ends 13,14 of the forks can be readily inserted in the through holes 2 of first and subsequent bricks arranged in a line, side-by-side as they are commonly stacked on a pallet.

The rounded tips 13,14 of the forks allow some degree of latitude as to the initial positioning of the tips within the holes 2 and the rounded surfaces help direct the forks correctly into the holes.

There is a slight springiness between the bars of the forks so that the forks 11,12 can be urged inwardly towards one another or urged outwardly away from one another as they are located into the holes 2 of the line of bricks if there is any misalignment or wayward tolerancing of the holes 2.

The forks are spaced apart so as to be easily inserted in at least a pair of through holes formed in a brick or through aligned holes in a line of bricks lying side-by-side. The handle portion is, in use, spaced apart from and located over a mid-portion of the forks which thus hang below the handle portion.

In use, a builder holds the tool by the handle portion 15 with the forks 11,12 pointing substantially horizontally and forwardly. The builder approaches the brick stack and positions the forks ends 13,14 in the holes 2 of a line of bricks lying side-by-side in a stack of bricks on the top of a pallet. The tool slides forwards with the forks 11,12 passing into the through holes 2 and the tool 10 sinks to its hilt when the apex of the bent rods contacts the first brick inserted. The bricks are thus loaded onto the tool. The builder then tilts the tool backwards slightly so as to lift the tips 13,14 of the forks and lifts the tool 10 vertically to part the line of bricks on the forks from the stack. The bricks are carried to their intended location on the site and deposited neatly in their line by lowering the tool to the ground, resting the bricks on the ground and then retracting the tool from the line of bricks. The line of bricks is left neatly in line.

In the order of six bricks can be carried quickly and easily with no actual handling of the brick or the brick surface by the carrier. If a brick layer uses two of the tools, that is one on each hand, then the brick layer is able to move twelve bricks at a time which is a vast improvement over conventional brick tongs which clamp around the bricks. Using two tools is also advantageous since the weight is spread evenly and the handle position over the middle of or slightly forwards of the middle of the bars results in a balanced load with the bricks sliding down the forks towards the hilt of the tool in normal carrying mode.

It is important that the handle 15 is not gripped behind the centre of mass of the bricks being carried on the fork as this would result in the forks tipping downwardly and the bricks sliding off the forks. The normal carrying mode is also the natural carrying mode since the slightly upwardly angled handle potion 15 encourages correct and well balanced carrying techniques.

One or both ends of the forks has/have an upturned lip 20 or finger to prevent bricks loaded on the forks from sliding off the end of the forks. This embodiment is shown on the left hand part of figure 3.

The support portion is shown in the figures as being arcuate but may be square or triangular or any other profile which allows the handle portion to be bent back over the forks.

The tool 10 is well adapted to be sold in combination with pallets or blocks of bricks.

Claims:

1. A tool for carrying bricks having at least a pair of through holes formed therein, the tool comprising:
a handle portion for holding the tool;
a pair of forks substantially parallel to one another and spaced apart by a predetermined distance along the fork length, the forks being insertable in a pair of through holes formed in a brick; and
a support portion linking the handle portion to the forks, the handle portion being, in use, spaced apart from and located over a mid-portion of the forks which hang below the handle portion.

2. A tool according to claim 1, wherein the forks are a pair of bars which are bent back through approximately 180^{o} at the support portion and which terminate at their other end in the handle portion.

3. A tool according to any preceding claim, wherein the support portion incorporates a spacer to dictate the spacing between the forks.

4. A tool according to any preceding claim, wherein a pair of bars are used to manufacture the handle portion, the support portion and the forks.

5. A tool according to claim 4, wherein the bars are joined together in the handle and dictate the spacing of the forks.

6. A tool according to any preceding claim, wherein the handle portion is shrouded with a rubber or plastics material to act as a grip.

7. A tool according to any preceding claim, wherein the handle portion has a designated grip area which is closer to the tips of the forks than to the support portion.

8. A tool according to any preceding claim, wherein the handle portion is angled with respect to the forks through between 160° and 175°.

9. A tool according to any preceding claim, wherein an end of a fork has an upturned lip to prevent bricks loaded on the forks from sliding off the end of the forks.

10. A tool according to claim 9, wherein both ends of the forks have upturned lips.

11. A tool substantially as hereinbefore described and/or as shown in accompanying figures 3 and 4.

12. Any novel feature or combination of features disclosed herein.

Application No:	GB0812091.7	**Examiner:**	Mrs Judith Peake
Claims searched:	1-11	**Date of search:**	22 October 2009

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X,Y	X: 1-2, 4-8 Y:9-10	US3006679 A (GRAY) Figs 1-3
X	1-3, 7, 9-10	US2579826 A (INGRAM et al) See Figs 1 &3
X	1-3, 7	US849897 A (HALL) Figs 1-5
X	1, 3	GB570688 A (ELSBACH) See Figs 2-4
Y	9-10	DE29609828 U1 (MAERZ et al) See WPI Abstract Accession Number 1996-403390 [41] and Figures 1 and 2
A	-	GB2441762 A (MARSHALL)

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^{X} :

Worldwide search of patent documents classified in the following areas of the IPC

B65G; E04G

The following online and other databases have been used in the preparation of this search report

Online: WPI, EPODOC

International Classification:

Subclass	Subgroup	Valid From
E04G	0021/16	01/01/2006
B65G	0007/12	01/01/2006