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GB 1175164 A **DE 029706515 U**
NL 001021904 C

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(54) Title of the Invention: **Brick laying guide**
Abstract Title: **Brick laying guide**

(57) A guide for setting the height of a course of bricks to be laid in the form of a height adjustable block, especially for adjusting to match the height of the brick course, comprising upper 16, 18, 20 and lower 22, 26, 28 parts connected by a threaded engagement 30, the upper part has a planar top surface 16 and the lower part has a bottom edge parallel to the top surface. Preferably the lower part includes a downwardly open recess 28 and the upper part includes an overhang 20 which extends beyond side surfaces of the lower part. There may also be a spring 34 between the upper and lower parts to bias them apart. In one embodiment (Fig 4) the upper and lower parts include threaded cylindrical side walls which are screwed together to provide the height adjustment.

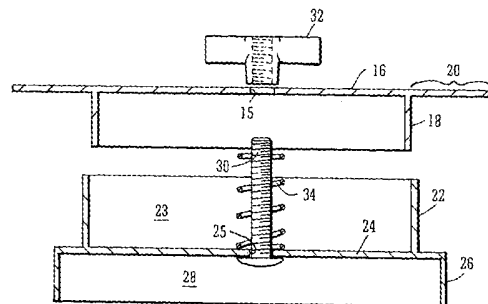


FIG. 2

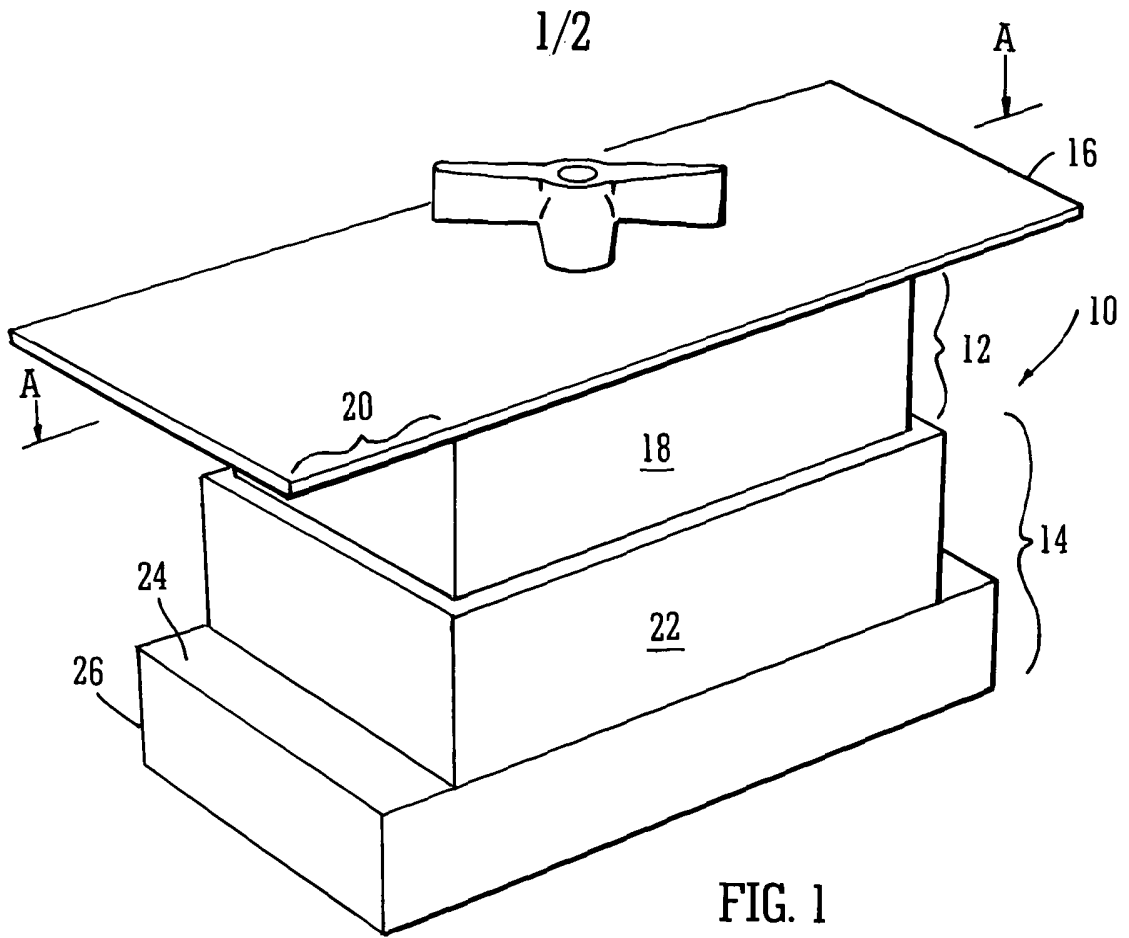


FIG. 1

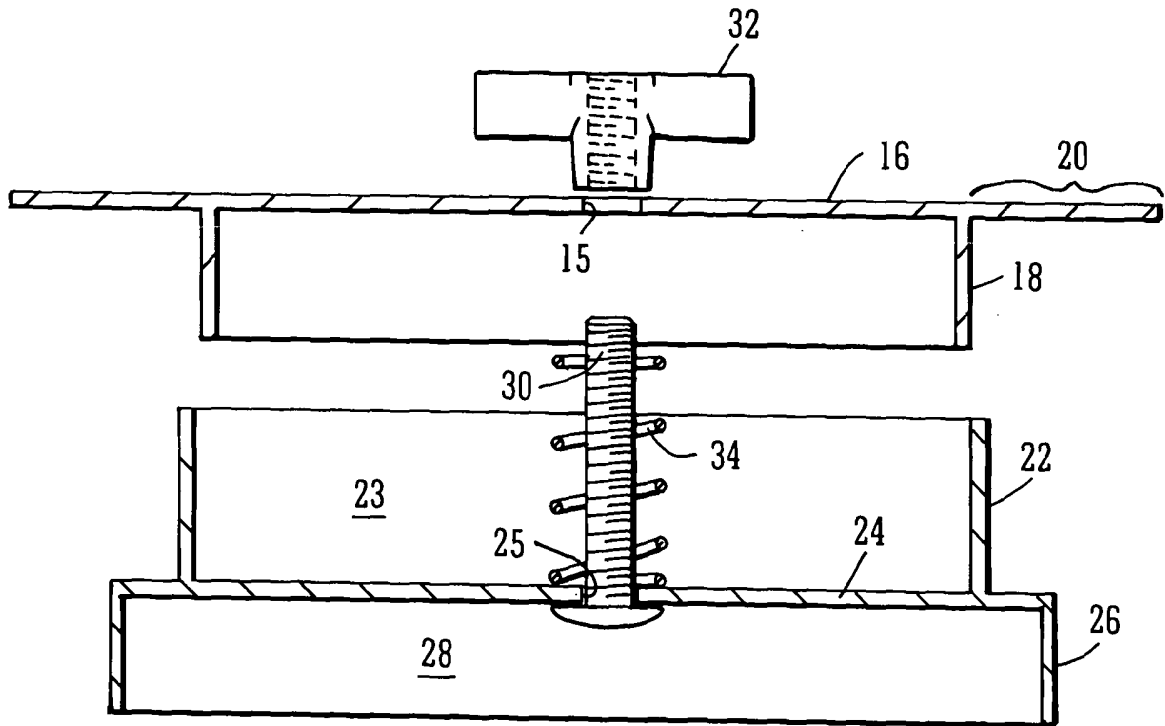
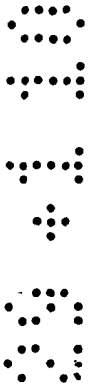


FIG. 2



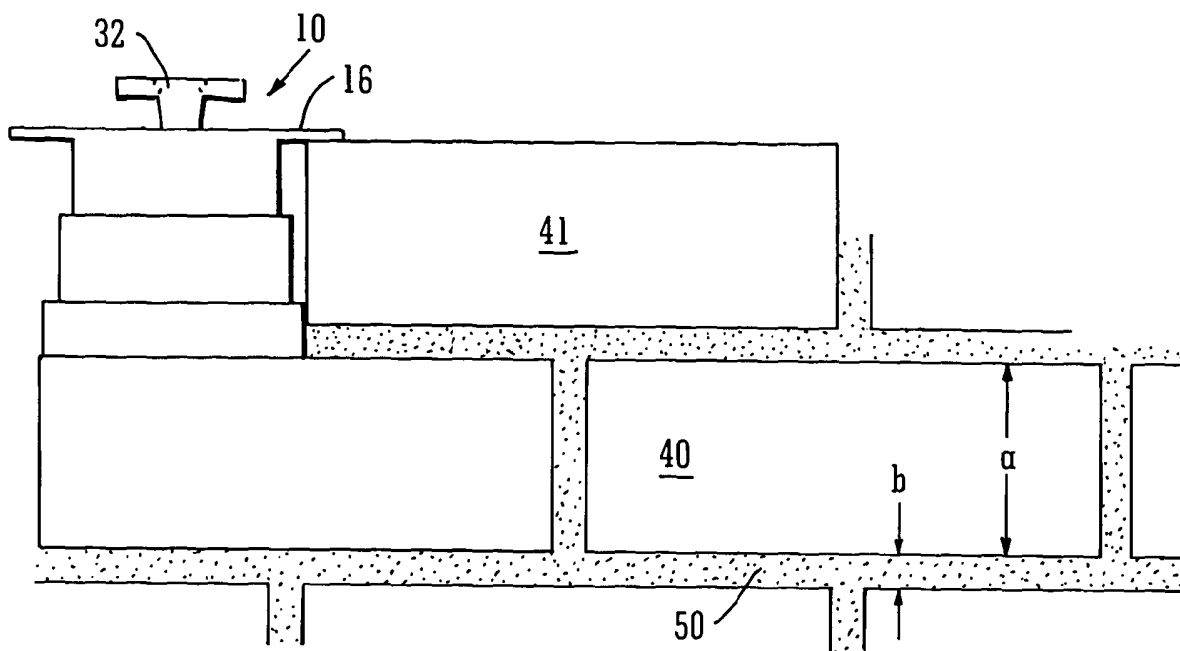


FIG. 3

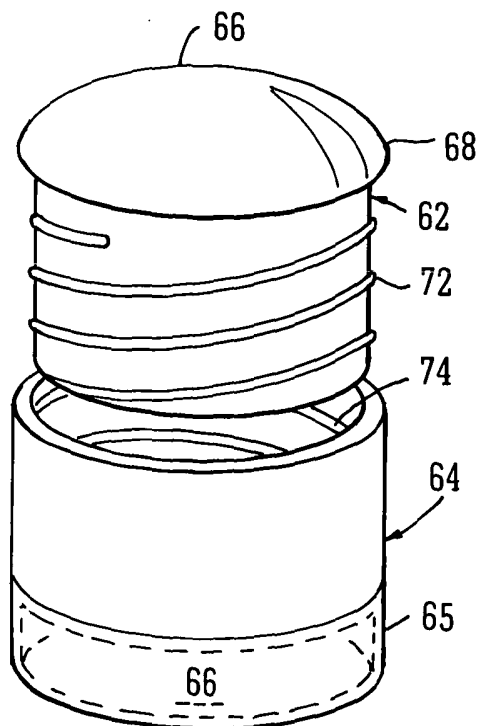
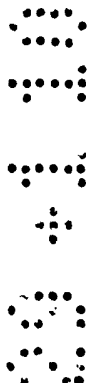


FIG. 4



BRICK LAYING GUIDE

The present invention relates to a guide device for use in brick laying to enable a brick layer to set the height of each course of bricks in order to keep this constant throughout the height of a wall under construction.

When constructing a building it is conventional to set up foundation corners and make use of plumb lines to ensure that the bricks laid between are in substantially horizontal courses and that the wall remains vertical. Similar measures are used when constructing a free standing wall, or a wall extending off from a location on a pre-existing wall. However, there is no means to ensure that each course of bricks remains of constant height with those above and below. Although the bricks used will have a constant height, the mortar joints between each course may vary in height. It is often important for aesthetic reasons, and customer requirements for same, that these should be kept even.

Gauge devices have been proposed in GB 2376711A and GB 2417514A marked with evenly spaced lines or pegs to indicate required height of consecutive brick courses for attachment to walls under construction. However, these are fixed for a particular combined height of brick and mortar joint, and there are different brick heights available, and may be requirement for different height of joint also.

An object of the present invention is to provide a guide device which is simple to use and inexpensive to produce to assist in setting the height of each course of bricks as a wall is constructed.

According to the invention a brick laying guide is provided in the form of a height adjustable block comprising two parts, namely a lower part and an upper part, the upper part having a substantially planar top surface and the lower part having a bottom edge which extends parallel to said top surface, and threaded engagement means whereby the upper part is connected onto the lower part and is also adjustable in height relative to the lower part.

In use, by means of the threaded engagement means the height of the upper part relative to the lower part is adjusted so that the height of the overall block is matched to the required height of brick course, namely the brick and joint height combined. This can readily be done by placing the device adjacent a brick laid in the first course or any

previous course which is appropriate to serve as a standard for the remaining brick course height. By turning the threaded engagement means to bring about aforesaid adjustment, the planar top surface of the device is brought into alignment with the top of the aforesaid standard brick to set the height of the device for the current job. Then, as the laying of each course of bricks is commenced, the guide device is placed upon the previous course and used to align the height of the new course of bricks by bringing the top surface of at least the first brick of the new course of bricks into alignment with the planar top surface of the device. The amount of mortar used in the joint below the brick can be adjusted accordingly, to achieve the correct height of joint, usually by compression and removal of excess.

Such an adjustable brick course height guide is advantageous in being adjustable to match the height of the particular bricklaying job in hand. For example, it may on occasions be required to match the height of new brick courses to pre-existing brickwork, particularly as regards the height of the joints as the bricks can be chosen to match the height of the existing bricks. Also, there are slight differences in the height of bricks of different types/manufacture and the proposed guide can be adjusted to accommodate which ever type of brick is to be used, along with the required joint height.

Preferably the lower part of the device includes a downwardly open recess so that in use it can be placed onto a surface on which fresh, moist mortar may have been applied, and pressed down through the mortar to contact the surface below, with the mortar being displaced into the recess so that the previously adjusted height of the device above that surface remains accurate. Such a downwardly open recess is conveniently provided by the lower part having a bottom section which comprises a peripheral downwardly extending skirt, i.e. a shallow downward rim or side wall. The lower edge of such skirt then defines the bottom edge of the lower part.

Preferably the planar top surface includes an overhang portion which extends outwards beyond side surfaces of the device. Such overhang portion may be as little as 0.5 cm or thereabouts, for example. It allows for abutment of the top surface against an adjacent brick and thereby greater accuracy of alignment of the top surface of the device with the top surface of such brick as it is being laid irrespective of any irregularity in the end surface of the brick, bearing in mind that such alignment is done by visual inspection. This makes the device easier to use, particularly by a less skilled bricklayer, such as a DIY enthusiast.

Preferred embodiments of the brick laying guide of the invention comprise an upper part which is connected to and adjustable relative to a lower part by means of a captive bolt or threaded stud projecting upwards from the lower part and a corresponding nut
5 provided in or above the upper part and engaging said bolt or stud. In such embodiments spring means are preferably provided to act between the upper and lower parts in order to brace the upper part away from the lower part and ensure the upper part remains in its adjusted position relative to the lower part. Thus, most simply, a helical compression spring may be provided around the bolt or stud. However,
10 alternative spring means may be provided and differently positioned.

In preferred embodiments the upper and lower parts are preferably of hollow form and telescopically inter fitted. This encloses aforesaid bolt or stud when provided, keeping it free of debris and damage which might otherwise impair the threaded engagement of
15 the parts and the adjustability of the device.

In preferred embodiments the upper and lower parts are preferably of rectangular form. However, embodiments of cylindrical configuration are also envisaged and such
20 embodiments may have the upper part directly threadedly engageable with the lower part, by respective helical threads on their connecting edge portions. Such direct threaded engagement would also be used to adjust the height of the upper part relative to the lower part.

The invention will be described further, by way of example, by reference to the
25 accompanying drawings, in which:

Figure 1 is a perspective view of a first practical embodiment of the brick laying guide of the invention;

30 Figure 2 is an exploded cross-section view of the guide along line A-A in figure 1;

Figure 3 shows the device of figures 1 and 2 in use on a course of brickwork; and

Figure 4 is a schematic perspective view of a second embodiment of the bricklaying
35 guide of the invention.

With reference to figures 1 and 2, a preferred practical embodiment of the guide device of the invention comprises a height adjustable block 10 which is generally box-like in form in that it is of rectangular cross-section, but formed of different sized sections. The block comprises two parts, namely an upper part 12 and a lower part 14. The upper part 12 has a planar top surface 16 and side walls 18 depending from this planar top surface to provide a downwardly open structure. The planar top surface 16 includes overhang portions 20 extending outwards beyond said side walls 18 at opposing ends. The lower part 14 comprises a platform 24 supported by a peripheral downwardly extending skirt 26, namely a surrounding lower side wall, which defines an underside recess 28. Additionally, the lower part 14 has side walling 22 upstanding from the platform 24 to define an upwardly open well 23 into which the downwardly open structure of the upper part 12 nests as the parts fit together.

As shown in figure 2, a threaded bolt 30 extends through from the underside recess 28 of the lower part 14 to above the top surface 16 of the upper part 12, via appropriate apertures 25,15 at central locations of the respective parts 24,16, and a corresponding winged nut 32 is provided above the top surface 16 for threaded engagement with this bolt 30. The head of the bolt 30 is held in position relative to the platform 24 of the lower part 14 in any conventional manner. A helical spring 34 is located around the bolt 30, enclosed within the hollow space between the upper and lower parts 12, 14. Thus, under bias of the spring 34 the upper part 12, specifically the top surface 16, is adjustable in height relative to the lower part 14 of the block by adjusting the height of threaded engagement of the nut 32 on the bolt 30. It is important, of course, that the top surface 16 should be maintained upon adjustment in parallel alignment with the bottom edge of the lower part 16, as provided in this instance by the lower edge of the skirt 26.

As shown in figure 3, the height of a course of brickwork consists of the height a of a brick 40, which is substantially constant for any type of brick, together with the height b of the horizontal mortar joint 50. It is desirable to maintain the height b of the mortar joints constant from one course of brickwork to the next, both for aesthetic reasons and structural reasons. Sometimes this can be difficult to achieve by inspection only. The device 10 shown in figures 1 and 2 is designed to be used as a guide by firstly being adjusted in height to the exact brickwork course height required, then used at the start of laying each brickwork course as a guide for alignment of the top surface of the bricks. The initial adjustment in height is readily achieved simply by placing the device 10 onto a foundation or previous course of brickwork next to a brick which has been laid at the

desired height, which then serves as a standard. Ideally, the device 10 will but up against aforesaid standard brick and the device will be adjusted in height in the manner already explained by turning the nut 32 until the top surface 16 is exactly in alignment with the top surface of the standard brick. This is illustrated in figure 3 where the brick 41 may be considered the standard brick.

In the next course of brickwork, the guide device 10 will then be used as a guide for laying the first brick by setting the height $(a + b)$ for the brick together with the required height of the mortar joint in exactly the same way, the first brick then having its top surface aligned with the top surface 16 of the guide 10. (Again, as illustrated in figure 3). If too much mortar has been laid initially for the correct height of joint, the brick is simply pressed downwards into the soft mortar to achieve top surface alignment and the mortar displaced sideways is then trimmed away and reused.

The underside recess 28 in the lower part 14 of the device 10 is useful in enabling the device 10 to be placed onto a surface of previous brickwork on which fresh, moist mortar may have been applied, and pressed down through the mortar so that its bottom edge contacts the surface below, with the mortar being displaced into the recess 28, so that the height of the device above that surface to the top surface 16 of the device remains accurate either during setting the height initially or during subsequent use as a guide for the laying of further courses.

The foregoing is illustrative and not limitative of the scope of the invention. Many variations in the detail of the structure and configuration of the device are possible in other embodiments. In particular, in other embodiments the upper part may not be of hollow form and may comprise a single rectangular block which provides a planar top surface to the device as well as overhang portions relative to side surfaces of the lower part. In other embodiments only one of the upper and lower parts may be of hollow form, the other part being of solid form and fitting into the hollow part in telescopic height adjustment of the device. In other embodiments the dependent wall section of the lower part, which provides the bottom edge and the downwardly open recess need not be continuous around the periphery and may be provided only at opposing ends or sides of the device or discontinuously in some other manner.

Figure 4 illustrates a particular alternative embodiment which does not employ any spring means acting between the upper and lower parts. In this embodiment both the

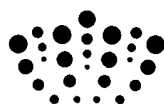
upper part 62 and the lower part 64 are of cylindrical configuration. The upper part has a top surface 66 with an overhang portion 68 beyond the cylindrical side walling for the same purpose as in the specific embodiment described in relation to figures 1 and 2. The lower part 64 also has a downwardly directed lower region 65 defining a downwardly directed recess 66 (shown in broken lines as internal), again for the same purpose as the previously described embodiment. However, the upper part 62 is provided with helical threads 72 on its outer surface and the lower part 64 is provided with corresponding helical threads 74 on its inner surface for mutual threaded inter-engagement. Such direct threaded engagement serves not only to connect the upper and lower parts but also to adjust the height of the upper part relative to the lower part.

Other variations in detail are possible as will be apparent to those skilled in the art. The adjustable block parts at least of most embodiments of the guide device of the invention may conveniently be made of suitable plastics material, but other material, such as metal or wood is possible.

CLAIMS

- 5 1. A brick laying guide in the form of a height adjustable block comprising two parts, namely a lower part and an upper part, the upper part having a substantially planar top surface and the lower part having a bottom edge which extends parallel to said top surface, and threaded engagement means whereby the upper part is connected onto the lower part and is also adjustable in height relative to the lower part.
- 10 2. A brick laying guide according to claim 1 wherein the lower part includes a downwardly open recess.
3. A brick laying guide according to claim 2 wherein said recess is defined by a peripheral downwardly extending skirt which provides said bottom edge.
- 15 4. A brick laying guide according to claim 1, 2 or 3 wherein the lower part has side surfaces and at least the planar top surface of the upper part includes an overhang portion which extends outwards beyond said side surfaces.
- 20 5. A brick laying guide according to claim 1, 2 or 3 wherein the upper part has side surfaces depending from its planar top surface and the planar top surface includes an overhang portion extending outwards beyond said side surfaces.
- 25 6. A brick laying guide according to claim 1,2 or 3 wherein the upper part has side surfaces depending from its planar top surface and the lower part is provided with an upwardly open well into which said side surfaces nest.
7. A brick laying guide according to claim 5 or claim 6 wherein the upper part side surfaces extend substantially perpendicular to its planar top surface.
- 30 8. A brick laying guide according to claim 1, wherein the upper part is hollow and has side walling dependent from the top surface, which side walling fits over or into the lower part in telescopic height adjustment of the block.

9. A brick laying guide according to any preceding claim wherein the threaded engagement means comprises a captive bolt or threaded stud projecting upwards from the lower part and a corresponding nut provided in or above the upper part.
- 5 10. A brick laying guide according to claim 9 further comprising spring means acting between the upper and lower parts to bias the upper part away from the lower part.
11. A brick laying guide according to any of claims 1 to 7 wherein the lower part includes an upwardly projecting cylindrical wall provided with helical threads and the
10 upper part is hollow and has cylindrical side walling provided with corresponding helical threads for direct threaded engagement with the threads of the lower part for connection and height adjustment relative thereto.
12. A brick laying guide substantially as hereinbefore described with reference to and as
15 illustrated by figures 1 and 2 or figure 4 of the accompanying drawings.



Application No: GB0901182.6

Examiner: Kingsley Robinson

Claims searched: 1-12

Date of search: 31 March 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	1,4-8,11	DE29706515 U (SCHABESTIEL) See whole document
A	-	NL1021904 C (NEEFJES) See whole document
A	-	GB1175164 A (VETCO) See whole document

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
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&	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

E04G

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

EPODOC, WPI

International Classification:

Subclass	Subgroup	Valid From
E04G	0021/18	01/01/2006