MASON'S GUIDE FOR ALIGNING BUILDING BLOCKS

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ABSTRACT

A Mason's Guide for Aligning Building Blocks consisting of (1) a clamp element having an aperture, (2) a pair of screws extending through the aperture, and (3) having at one end a pair of washers, one of which is a flat washer and the other of which is a dished washer, (4) nuts on one end of each screw and securing the washers against the clamped element, and (5) a cord secured to the clamp by being interposed between the two washers. The aperture is elongated and the clamp element has a channel parallel with and registering with the aperture on one side thereof. The screws extend through the aperture and are slidable along the length thereof. A nut is threaded on each screw at one end thereof and is positioned in the channel. A wing nut is threaded onto the opposite end of each screw for co-operating with the first named nut which is positioned in the channel for clamping the clamp element between said nuts. The cord is secured at the opposite end thereof to a fixed point and at its nearest end to the clamp by being wound around the screw between the two washers.

5 Claims, 9 Drawing Figures
MASON'S GUIDE FOR ALIGNING BUILDING BLOCKS

BACKGROUND OF THE INVENTION

My invention relates to a Mason's Guide which is utilized to provide means whereby building blocks such as bricks, cement blocks, etc. may be correctly aligned when they are being laid by the mason. Such guides have heretofore been provided and my invention relates to an improvement on such guides, especially in that the guide and the clamp thereof may be adjusted to arrange it so that it can be secured either to a brick having holes therein, a conventional concrete building block, or a brick which is solid without holes. One example of the prior art devices is shown in the Munn U.S. Pat. No. 2,585,160.

One disadvantage present in previously known bricklayer's guides is that the guide cannot be adjusted in order to be efficiently used with different size bricks, different size cement blocks and different kinds of bricks.

In none of the structures of the prior art of which we have knowledge is the clamping device readily attached to a building block regardless of the size or arrangement of the block or easily disconnected and attached to another building block of different size and construction.

A further more important defect in the prior art devices is the danger inherent in the usual arrangement. For example, an alignment line may be secured to nails driven in masonry at points at opposite ends of the line. In order that the line may not sag appreciably, it is usually tightened to a pull of about 100 pounds. Under this force, the nails often pull out. When they do, the nail pulling out shoots like an arrow from a bow at terrific speed and force. The masons are of necessity near the line because the bricks or other masonry blocks are being laid to the line. The applicant has seen a mason's finger broken by the force of a nail flying down the line after the nail had pulled from the masonry. He has not seen a nail strike the head or eye of a mason but believes it could happen. Thus the invention is a safety device.

OBJECTS

It is therefore an object of the invention to provide a device to be used as a mason's guide which is simple in construction, inexpensive to manufacture, and yet effective and efficient in use.

A further most important object is to provide a device which is safe to use.

A further object of the invention is to provide a mason's guide which will eliminate the necessity of inserting screws or nails into the building blocks being laid.

A further object of the invention is to provide a mason's guide to which an aligning cord may be attached very quickly and efficiently.

Further objects and features of the invention will be apparent from a reading of the following specification and claims when considered in connection with the accompanying drawings illustrating a preferred embodiment of my invention.

SUMMARY OF THE INVENTION

We have found that the foregoing and other objects may be attained by an apparatus wherein there is provided a clamp element having an elongated aperture and having one or more screws extending through the aperture and having an abutting element on one end of each screw abutting against one side of the clamp element, and having the opposite end of the screw extending out of the clamp element on the opposite side of the clamp element. Preferably, there are a pair of washers on the outwardly extending end of the screw and a nut is provided secured to the outer end of the outwardly extending end of the screw and securing the washers against the clamping elements. Preferably, the two washers consist of a flat washer and a dished washer contacting therewith. Nuts are secured on the opposite ends of the screws and secure the screws to the clamp element. A building block is contacted by the screws and thus the clamp element is secured to the building block. A cord is secured to the clamp by being interposed between the two washers. The screws are slideable in the elongated slot so that they may be spaced at any desired spacing and may thus clamp the building block. It is obvious that, if desired, a pair of apertures may be provided with one of the screws located in each of the apertures, and also, if desired, one or both of the apertures may be elongated.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view in top plan showing a pair of clamp elements each clamped to a brick and having an aligning cord secured to each clamp adjacent its ends so that the cord provides means for aligning intermediate bricks between the bricks shown in FIG. 1;

FIG. 2 is a view in perspective showing a clamp element on an enlarged scale secured to a brick and having the aligning cord extending outwardly along one edge of the brick;

FIG. 3 shows my clamp element attached to a cement block and having the aligning cord extending outwardly along one edge of the cement block;

FIG. 4 is a view in side elevation of a clamp constructed according to my invention having a hidden channel and some hidden parts shown in phantom;

FIG. 5 is a plan view of the clamp as shown in FIG. 4;

FIG. 6 is a view in section of the clamp shown in FIG. 4, taken substantially on the line 6—6 of FIG. 4;

FIG. 7 is a plan view of a fragmentary portion of one of the clamp elements on an enlarged scale;

FIG. 8 is a view in section of the clamp of FIG. 7 taken along the line 8—8 of FIG. 7; and

FIG. 9 is an enlarged view of an alternative form of a screw assembly, being shown with some of the portions thereof separated.

In describing the preferred embodiments of the invention illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, it is not intended to be limited to the specific terms so selected, and it is to be understood that each specific term includes all technical equivalents which operate in a similar manner to accomplish a similar purpose.
DESCRIPTION OF PREFERRED EMBODIMENT

Referring to FIG. 1 of the drawings, it may be seen that I have shown a pair of bricks 11 and 12 to which there are clamped clamp elements 13 and 14 respectively. The clamp element 13 is secured to the brick 11 by means of two screws 15 and 16, and it will be noted that while the screw 15 is positioned to contact the upper side of the brick 11, the screw 16 extends through a hole in the brick. On the other hand, the element 14 is secured to the brick 12 by a screw 17 which bears on the upper side of the brick 12 and by a screw 18 which bears on the lower side of the brick 12. It can also be seen that the screw 18 has been moved in the elongated aperture 19 of clamp element 14 attached to brick 12 from a position adjacent to screw 17 to a position removed therefrom. This illustrates the adjustability of the clamp element whereby it may be operated with bricks of various sizes and various configurations.

Referring now to FIG. 2, it may be seen that the brick 11 is there shown on an enlarged scale and that the element 13 as well as brick 11 is seen from the opposite side. The screw 15, as may be seen, bears on the upper face of brick 11 and thereby the clamp 13 is positioned. Aligning cord 21 is secured to the device by being interposed and cinched between washers, as will be more fully described hereinafter, and then passing through a slot 23 formed in the end of the clamp 13, then along a channel 24 to the screw 15, around the screw 15, and along the edge of the brick 11. The screw 16, not shown in FIG. 2, extends into a hole in the brick 11, such as, for example, into the hole 25.

In FIG. 3, a cement block 37 has secured thereto a clamp element 32 which has associated therewith a screw 33 bearing on the top of the cement block 37 and a screw 34 extending through an opening 35 in the cement block and bearing on an upper surface of the opening 35, thus clamping the clamp element to the cement block in a manner similar to that which the clamp 13 is clamped to the brick 11.

In FIG. 4, there is shown a view in side elevation of the clamp 13; in FIG. 5 a view in plan; and in FIG. 6 a view in section of said clamp 13 wherein it may be seen that the screws 15 and 16 extend through the elongated aperture 20 (shown in FIG. 5) of the clamp 13. The screws, as for example 15, are each provided with a head 41, a square upper nut 42, a flat washer 43, a dished washer 44 and a winged nut 45. (See also FIG. 6). Similarly, the screw 16 is provided with a head 41a, a nut similar to nut 42, a flat washer 43a, a dished washer 44a and a winged nut 45a. The nut 42 and the corresponding nut on screw 16 are square and fit snugly in the elongated aperture 20, thus being secured against being loosened, and contacting with the clamp 13 and constituting an abutting element.

In FIGS. 7 and 8, it is shown that the clamp 13 is provided not only with the elongated aperture 20, but also with the slot 23 and the channel 24.

In FIG. 9, a screw assembly is shown on an enlarged scale with the wing nut 45 separated from the rest of the assembly. This shows a slight modification of the devices shown in FIGS. 1–6 inclusive, in that the nut 42a does not contact the clamp element directly but is nested in a square washer 47a which itself fits in the channel 24 and contacts the clamp element directly and constituting an abutting element.

It is to be understood that the cord 21 which is used for aligning bricks intermediate the ends of the cord and as suggested in FIG. 1, between bricks 11 and 12, is secured at one end of the cord to the clamp 13 by being cinched around the screw 15, between the dished washer 44 and the flat washer 43. It then passes over the end of the clamp element in the slot 23 and then through the channel 24 (shown in FIG. 2) and thence around the screw 15 and along the upper edge of the brick 11. It then extends towards the clamp 14 where it similarly extends along the upper edge of the brick 12, then around the screw 17 and over the clamp to be secured between the washers 44a and a flat washer similar to washer 43 and then the loose end which is on the spool 47 is left wound around the spool 47. The clamps may be quickly and efficiently secured to a brick or cement block or other form of masonry or building blocks and the aligning cord may be quickly and efficiently secured to one or two or more clamp elements. By the use of such device the aligning cord may be quickly secured in exactly the proper position and much time will be saved in the construction of buildings.

It is to be understood that while the detailed drawings given describe preferred embodiments of my invention, they are for the purpose of illustration only and various changes may be made therein without departing from the spirit of the invention which is defined by the following claims.

I claim:

1. In a mason's guide for aligning building blocks and for clamping an aligning cord to said guide and for clamping the guide and the cord to one of said blocks; a clamp element having an elongated aperture and having a channel parallel with and registering with said aperture; a pair of screws each having a head and each extending slidably through the aperture, having the end with the head extending outwardly a substantial distance from the aperture so that both heads bear on the building block to which the guide is clamped, and having the end opposite to the head extending out of the clamp element on the opposite side of said clamp element; an abutting element threaded on each screw and abutting against one side of the clamp element; said abutting element being of such size so as to fit non-rotatably in said channel and being too large to slip through said aperture, and being slidable longitudinally of said channel; means comprising a pair of washers on the end of one of said screws on the opposite side of the clamp element from said channel for clamping said cord to said clamp element; at least one washer on the end of the other screw on the opposite side of the abutting element from the channel; a nut secured to said end of each screw on the opposite side of the abutting element from said channel and securing the washers against the clamp element; and a cord interposed between the washers and secured by the washers to the clamp.

2. The schedule of claim 1, in which one of the washers is a dished washer and the cord is secured between the two washers.
3. The structure of claim 1 in which there is one flat washer and one dished washer and the cord is secured between the flat washer and the dished washer.

4. In a mason's guide for aligning building blocks and for clamping and aligning cord to said guide and for clamping the guide and the cord to one of said blocks; a clamp element having an elongated aperture and having a channel parallel with and registering with said aperture; a pair of screws each extending through said aperture and slidable along the length thereof, and each having an end with a head extending outwardly a substantial distance from the aperture so that the head bears on one face of the building block to which the guide is clamped; a nut threaded on each screw at one end thereof, both nuts positioned in said channel and both bearing against said clamp element, said nuts being of such a size so as to fit non-rotatably in said channel, and being too large to slip through said aperture, and being slidable longitudinally of said channel; a cord; a wing nut on the opposite end of each screw abutting the side of the clamp opposite from the first named nut, for clamping the clamp element between said nuts; means comprising a pair of washers interposed between the clamp element and the wing nut; on each of said screws, for clamping said cord, the cord being secured at one end to a fixed point and at its other end to said clamp by being wound around said screw between said pair of washers.

5. The structure of claim 4 wherein one of said pair of washers is a flat washer and one of said pair of washers is a dished washer and the cord is secured between said flat washer and said dished washer.

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