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LEAD BLOCK FOR MASONS

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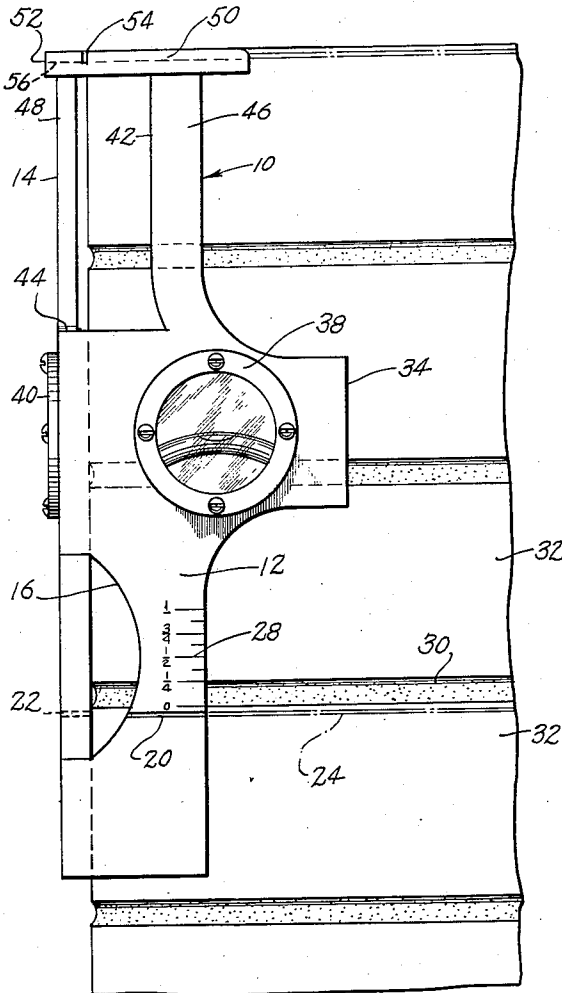


Fig. 1

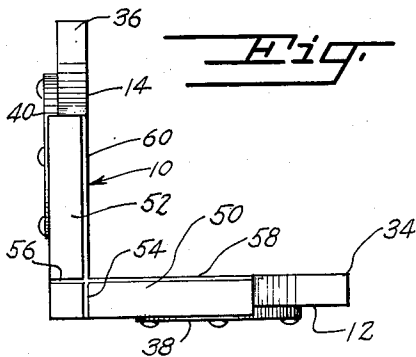


Fig. 2

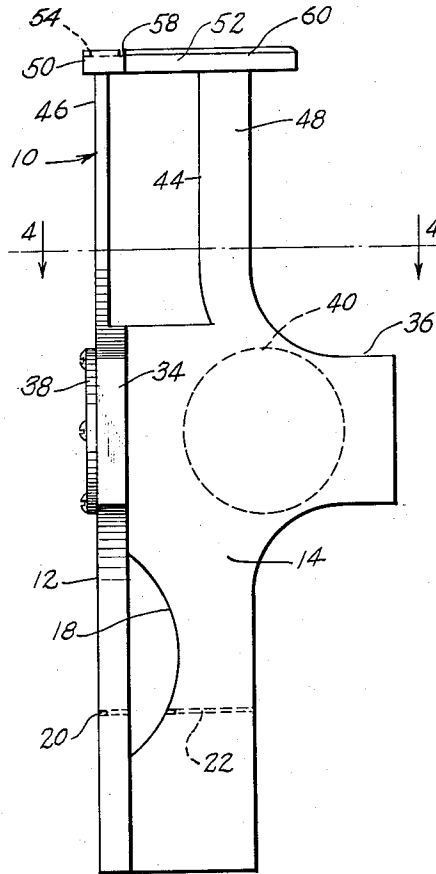


Fig. 3

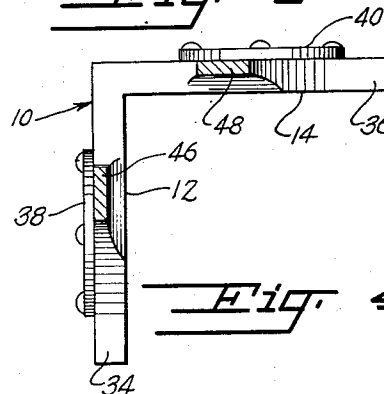


Fig. 4

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LEAD BLOCK FOR MASONS

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1 Claim. (Cl. 33—85)

This invention relates to a lead or corner block for masons, to be used in the laying of bricks, cinder blocks, and the like, at selected corners of the structure being erected.

In the laying of brick during the erection of buildings, the conventional practice is to build up a corner of a plurality of courses, from which lead lines are extended along the walls meeting at said corner, with said lead lines being tensioned along said walls between the corners at the opposite ends of the walls, for the purpose of providing a guide for the next course to be laid on each of the walls. As each course is laid up to the lead line, the lead line is raised a distance equal to the thickness of the next course.

Heretofore, corner blocks have generally been used, to which the lead lines are attached. However, the corner blocks that are in general use do not insure that the lead line will be extended from the built-up corner with complete accuracy, and in some instances the lead line may deviate from a proper path along which it is to extend, in either an inward direction, or in other instances in an outward direction.

It is apparent that considerable time and precision is involved in building up a corner properly, under these circumstances, to insure that the lead line will, as much as possible, be extended in a proper path away from the corner for the purposes of providing a guide for laying the courses of bricks that extend in opposite directions from the corner.

The main object of the present invention is to provide a lead or corner block which can be engaged about a corner after the corner has been built up to a height of three or four courses, with said corner block thereafter reducing to a minimum the possibility of inward or outward deviation of the lead lines extending therefrom, thus to insure the proper laying of courses on the walls extending into a meeting relationship at said corner.

Another object of importance is to provide a corner block as described which, due to its being so designed as to include no relatively movable parts, will insure against any portion thereof shifting out of a proper position, thus to add further insurance that the lead lines will be properly extended away from the lead or corner block.

Yet another object of importance is to provide a lead block as described which will be so designed as to facilitate the gauging of the thickness of the mortar joint which is to be provided between each pair of superposed courses.

Yet another object is to provide a lead block as described which can be shifted upwardly along the corner, as successive courses are laid, with a minimum of difficulty.

In carrying out still another object of the invention, it is proposed to incorporate in the lead block leveling means which will insure the proper plumbing of the corner and of the lead block, and which will accord-

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ingly correspondingly insure the laying of each course of bricks perfectly level.

Yet another object is to provide a lead block as described which will be capable of manufacture at low cost, will be relatively inexpensive, and will be rugged and durable, so as to be capable of usage over a long period of time.

Others objects will appear from the following description, the claim appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a side elevational view of a lead block formed in accordance with the present invention, a plurality of courses of brick at one corner of a structure being illustrated fragmentarily;

Figure 2 is an elevational view of the lead block per se, as seen from the right of Figure 1;

Figure 3 is a top plan view of the lead block;

Figure 4 is a sectional view on line 4—4 of Figure 2;

Figure 5 is a perspective view showing the lead block on a reduced scale, illustrating the lead block and corner prior to the laying of a course of bricks;

Figure 6 is a view similar to Figure 5 in which the course of bricks has been laid upon the last course shown in Figure 5; and

Figure 7 is a somewhat diagrammatic, fragmentary top plan view of the building structure during the process of erection, showing the relative arrangement of the several lead blocks at the corners of the structure.

A lead block generally designated 10 formed according to the present invention includes a pair of vertically elongated, relatively narrow side plates 12, 14, disposed at right angles to each other, and integrally connected along their meeting, inner side edges 15. Adjacent the lower ends of the side plates, in closely spaced relation to the juncture of the side plates, are semicircular openings 16, 18 the arcuate edges of which are bowed in the direction of the outer side edges of the respective plates. Extending between the arcuate edges of the openings and the outer side edges of the respective plates 12, 14, and continued to the meeting side edges 15 are horizontally disposed, narrow, securing line guide grooves 20, 22 (Figures 1 and 2) adapted to receive a single securing line passed through the groove around the corner of the device, or the ends of securing lines 24, 26 passed through openings 16, 18 (see Figures 5 and 6) for fastening, and extending away from the corner on which the lead block is mounted, to adjacent corners of the structure being erected.

Terminating at its lower end at the level of the securing line guide grooves 20, 22 on each side plate, is a series of calibrations 28, which can be marked off in selected fractions of an inch, with the scale ascending in value in a direction upwardly from the securing line guide grooves as shown in Figure 1. The scales of the side plates can be used for providing a gauge for the thickness of mortar joints 30 between adjacent courses of bricks 32. At this point, it should be noted that whenever the term "bricks" is used herein, it will be understood that this term embraces also concrete or cinder blocks, etc.

Intermediate their upper and lower ends, the respective side plates are formed with outwardly, laterally projecting extensions 34, 36 to increase the transverse area or width of the side plates for the purpose of the mounting of levels 38, 40 thereon, by means of which the lead block can be secured to the corner of the structure in a perfectly plumb position.

In the upper end portions of the respective side plates, there are formed large, angular recesses 42, 44, communicating with one another at the juncture of the side

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plates, and serving to define, on each side plate, up-standing, narrow extensions 46, 48 spaced outwardly from the meeting line of the side plates, and reduced in thickness relative to the thickness of the intermediate and lower portions of the side plates (see Figure 4).

Integrally or otherwise fixedly secured to the upper extremities of the reduced extensions 46, 48 are horizontally disposed lead line guide bars 50, 52 disposed at right angles to one another as shown in Figure 1, and integrally or otherwise fixedly secured at their meeting, inner ends. The bars 50, 52 are formed, at their meeting ends, with transverse grooves 54, 56 disposed at right angles to one another and intersecting at the juncture of the inner surfaces of the respective bars, that is, at the juncture of perpendicularly related, vertical planes in which said surfaces lie. The grooves 56, 54 merge, at this location, into longitudinal guide grooves 58, 60 respectively formed in the upper longitudinal edges of the inner surfaces of the bars 50, 52, so that a lead line 62 can be extended along each wall to the lead line block 10, within the grooves 60, 58, and looped about the meeting, fixedly joined ends of the bars 50, 52 as shown in Figures 5 and 6 at 64, the looped portion of the lead line 62 in each corner of the structure passing through the transverse grooves 54, 56, with the recesses 42, 44 serving to provide an open space through which the lower portion of the loop 64 can extend.

In use of the device, it should of course be perfectly plumb. In building up the corner, the lead block is used, since after the first course is laid, the lower end portion of the lead block can be placed in engagement with the corner of the first course, and held in place by the securing lines 24, 26.

It will be understood, in this connection, that the calibrations 28 serve to permit accurate determination of the thickness of the mortar joint that is to be disposed between the lowermost course and the course next above the same. In other words, after the lowermost course is laid, the lead block is placed in position, it being understood that a plurality of the lead blocks can be used, as for example four of them as shown in Figure 7, with the securing lines 24, 26 extending between adjacent lead blocks to hold the several lead blocks in place. The lead lines would be of nylon or similar material, and when fully tensioned within their grooves 20, 22, serve to dispose the lead blocks in a perpendicular or plumb position. The levels 38, 40, of course, are used at this time to insure that the lead block is perfectly vertical, with the securing lines being adjusted as necessary to permit the vertical positioning of the lead block.

After the first course has been laid, and a mortar joint of proper thickness laid thereon through the medium of the calibrations 28, a second course is laid above the lowermost course, and during the laying of the second course, the lead block can be adjusted upwardly so as to permit the calibrations to be used in determining the thickness of the next mortar joint. In this way, successive courses are built up at the corners of the structure, and after all the corners have been laid, the lead block is ready for use in laying courses between the built-up corners. The lead block, during laying of courses between corners, first appears as in Figure 5, that is, the lead block is at an elevation such that the lead line 62 will be disposed at the level of the mortar joint that is to be used on the course that extends over the full length of the wall. The course will now be laid, with the lead line 62 properly tensioned between the adjacent lead blocks at adjacent corners of the structure. In this connection, a gauge could readily be provided upon the lead block to set the spacing for each course, as will be readily understood.

Since the lead blocks are perfectly plumb as previously noted herein, the several lead lines will be extended

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accurately between the lead blocks, and will not deviate either in inward or outward directions.

As each course is laid, the lead block is adjusted upwardly a distance equal to the thickness of one course, to dispose the lead line 62 once again above the last course laid, for laying the next higher course.

The device can be used in pairs, and although four lead blocks are shown in Figure 7, two can be used, at diametrically opposite corners of the structure, without loss of efficiency. In erecting structures having chimneys, two pairs would preferably be used, in the arrangement shown in Figure 7, it being found that the device is particularly well suited to the erection of chimneys.

It is an important characteristic of the invention that the device is made as a completely rigid member, having no moving parts, thus eliminating the danger of certain parts of the device moving to positions in which they are not in a proper relationship to other parts, a characteristic which would tend to prevent the completely accurate laying of the successively following courses of brick.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claim.

What is claimed is:

A lead block for masons comprising a pair of vertically elongated side plates fixedly connected at right angles to each other, said plates having flat outer and inner faces, the outer faces lying in perpendicularly related, vertical planes and the inner faces also lying in perpendicularly related, vertical planes, the plates having intermediate their ends a pair of securing line grooves lying in a common horizontal plane, said grooves being formed in an opening over their full lengths laterally outwardly onto said outer faces of the plates; and a pair of horizontally extending lead line guide bars mounted fixedly on the respective plates at the upper ends of the plates and joined at right angles to each other at one end, each of said bars having a flat inner side surface coplanar with the inner face of the plate on which it is mounted, said bars having longitudinal guide grooves formed in the upper longitudinal edges of the inner side surfaces of the bars and lying in a common horizontal plane, the guide grooves opening over their full lengths upwardly onto the top surfaces of the bars and laterally inwardly onto the inner side surfaces of the bars, each of the bars having a transverse groove extending from the outer side surface of the bar to the inner surface thereof in longitudinal alignment with the longitudinal guide groove of the other bar, said plates being recessed below the transverse grooves and below said ends of the bars for looping, under said ends of the bars, of a line received in the respective transverse and longitudinal grooves.

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