

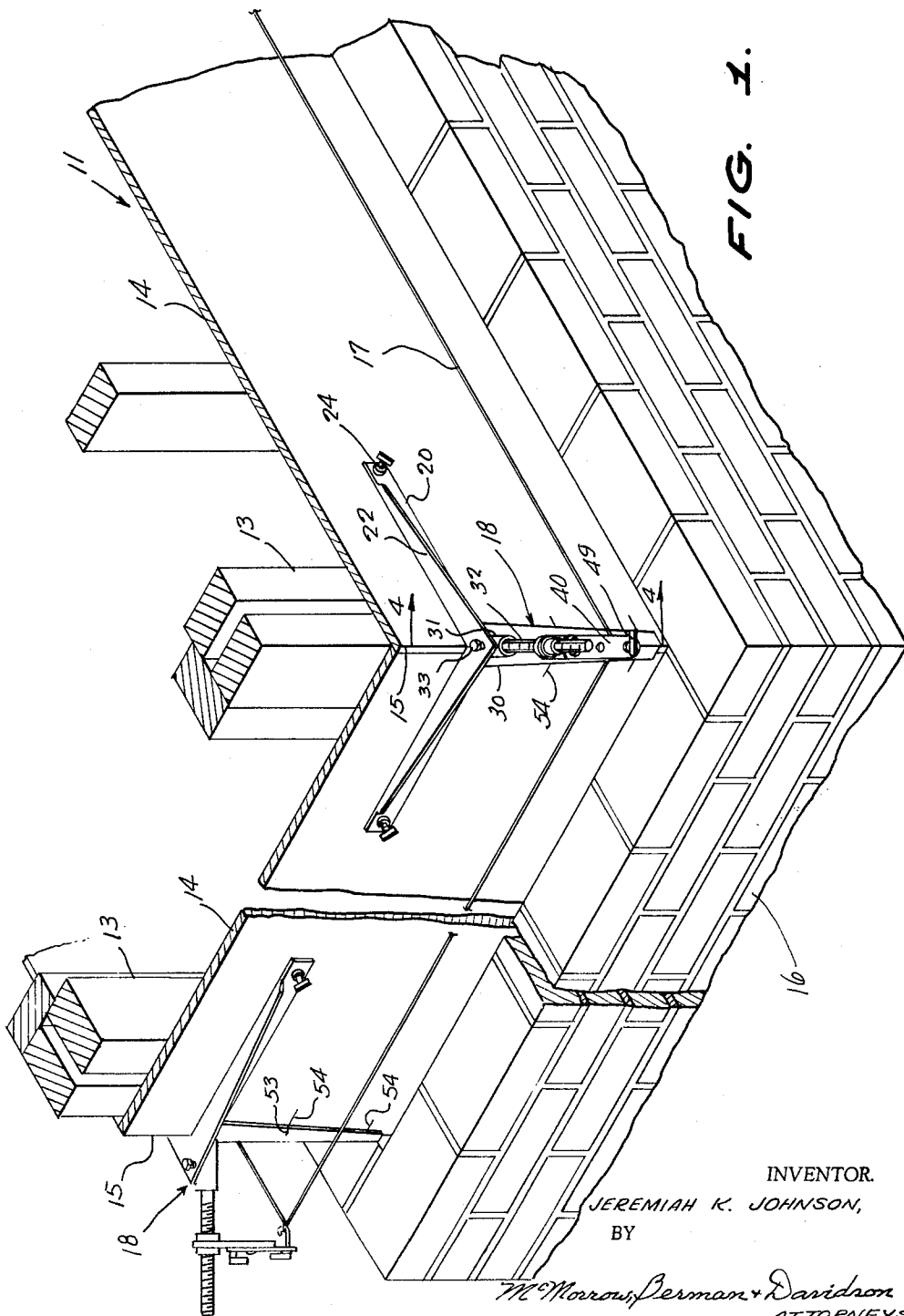
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J. K. JOHNSON
MASONRY GUIDE

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3 Sheets-Sheet 1



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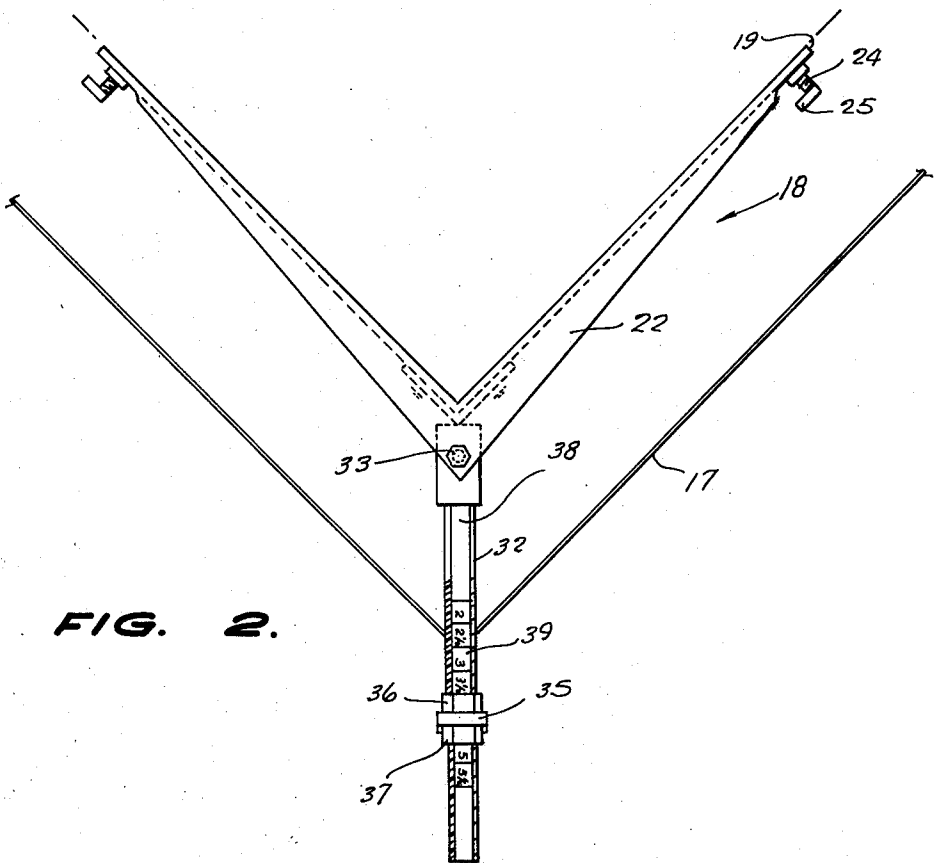


FIG. 2.

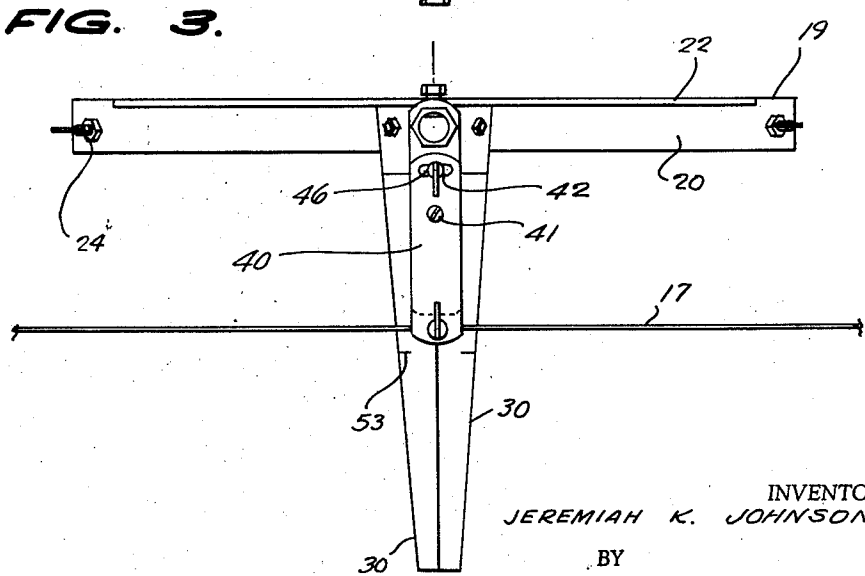


FIG. 3.

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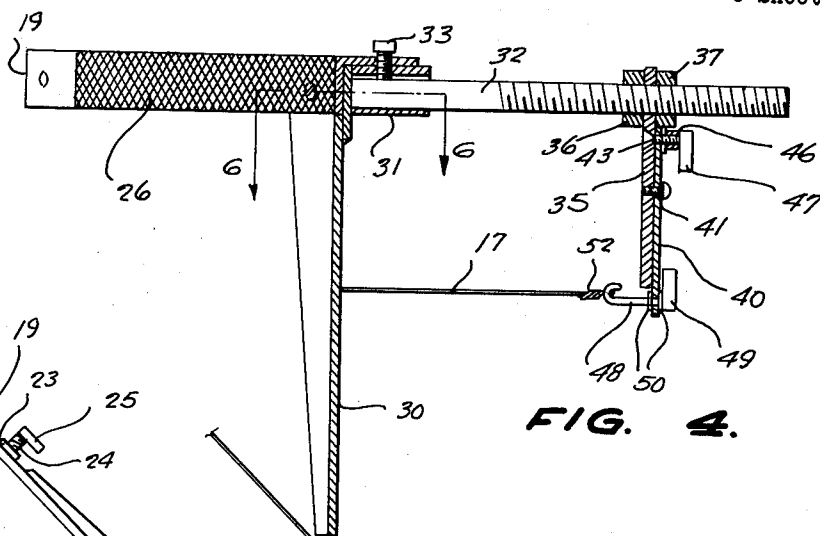


FIG. 4.

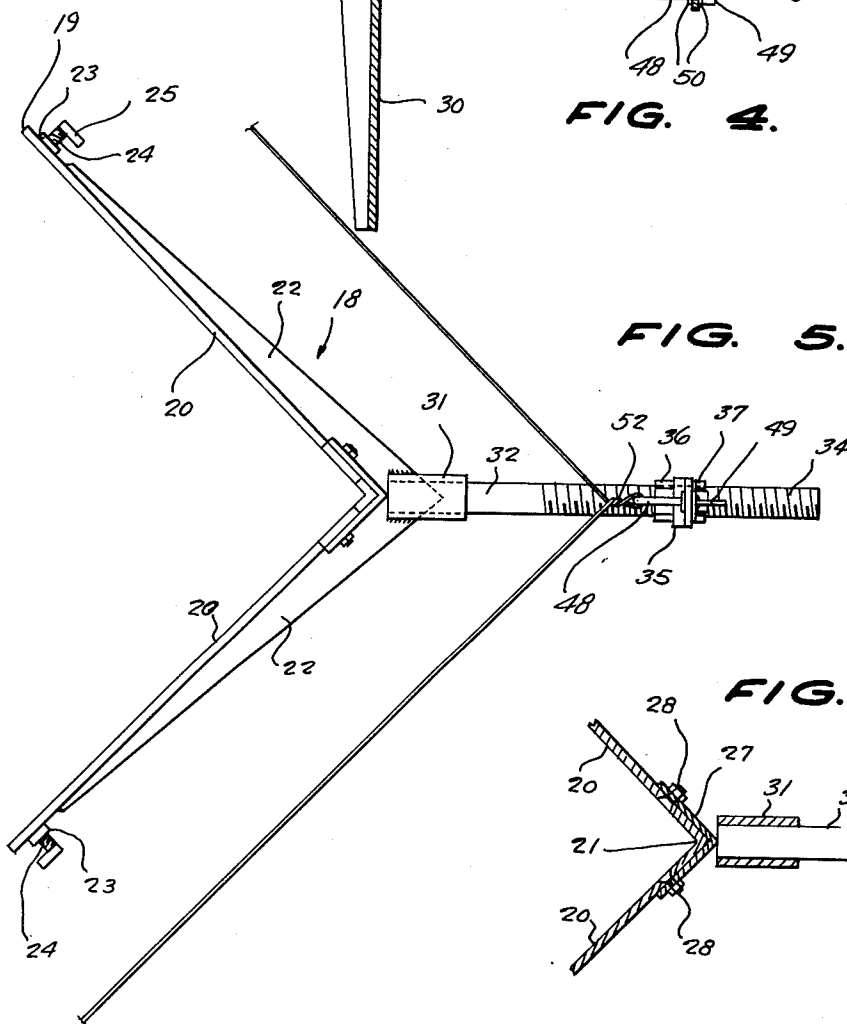


FIG. 5.

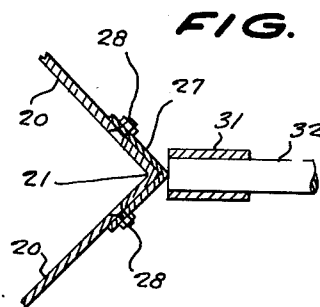


FIG. 6.

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MASONRY GUIDE

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4 Claims. (Cl. 33-85)

This invention relates to guide devices for supporting a mason's line in a position parallel to and spaced from a building wall structure for aiding a bricklayer in accurately laying bricks along the building wall structure.

The main object of the invention is to provide a novel and improved support device for a mason's line for supporting the line at the corner of a building, the device being provided with means for accurately establishing the position of the line and for keeping the bricks or other material being laid at the proper elevation as well as in alignment from one corner of the building to another.

A further object of the invention is to provide an improved masonry guide device adapted to be engaged with the corner of a wall or building and to support a line from said corner to another corner, employing another similar masonry guide device, the device being simple in construction, being easy to place in working position, and being provided with means for accurately adjusting the same to precisely establish the position of the line supported thereby.

A still further object of the invention is to provide an improved masonry guide device for assisting a bricklayer or mason in laying bricks or similar material along a line extending from a corner of a building, wall, or similar structure, the guide device being engageable with a corner of the structure with which it is to be employed and being held thereon by the tension of the associated line, requiring no other fastenings, the device being relatively inexpensive to fabricate, being durable in construction, being compact in size, and being relatively light in weight, so that it is easy to transport or store.

Further objects and advantages of the invention will become apparent from the following description and claims and from the accompanying drawings, wherein:

FIGURE 1 is a fragmentary perspective view of a portion of a building showing the manner in which a pair of masonry guide devices according to the present invention are employed to support a mason's line to assist a mason or bricklayer in laying bricks along the line and parallel thereto.

FIGURE 2 is an enlarged top plan view of one of the guide devices shown in FIGURE 1.

FIGURE 3 is a front elevational view of the masonry guide device of FIGURE 2.

FIGURE 4 is an enlarged vertical cross sectional view taken substantially on the line 4-4 of FIGURE 1.

FIGURE 5 is a bottom plan view of the guide device shown in FIGURES 2, 3 and 4.

FIGURE 6 is a fragmentary horizontal cross sectional view taken substantially on the line 6-6 of FIGURE 4.

Referring to the drawings, 11 generally designates a portion of a building under construction and including vertical framing members 13 and sheathing boards 14 secured thereto in the usual way and defining respective corner 15, 15. The structure includes outer brick walls 16 comprising bricks which are laid parallel to the sheathing boards 14 to form a brick veneer.

In accordance with the present invention, means are provided for supporting a guide line or cord 17 parallel to the sheathing boards 14 and at a predetermined level, so that the courses of bricks may be laid parallel to the line, enabling the brick courses to be straight and at predetermined heights. Thus, the line 17 is suitably secured at its ends to anchor same and is supported intermediate the ends by respective masonry guide devices 18,

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18, constructed in accordance with the present invention and engaged on the corners 15, 15.

Each device 18 comprises a right angled main body 19 having the respective depending vertical flange portions 20, 20 merging in a right angled corner 21, the arms 20 being provided with the outwardly extending horizontal top flange portions 22, 22 which likewise merge at the right angled corner of the main body 19.

The arms 20, 20 are apertured at their outer ends and have respective nuts 23, 23 welded thereto over the apertures, said nuts receiving abutment screws 24, 24 which may be adjusted so that their inner ends extend inwardly of the inside surfaces of the flanges 20, 20 under conditions wherein the corner between the sheathing boards 14, 14 is less than a right angle. The abutment screws 24 are provided with adjusting arms 25 enabling the screws to be manually rotated. The inside surfaces of the flanges 20, 20 are roughened or serrated, as shown at 26, to provide frictional interengagement between said inside surfaces and the surfaces of the sheathing boards 14 such that the tension of the guide line 17 is sufficient to hold the devices 18 in place without the necessity of using any additional fastening means.

Secured externally to the corner 21 is a right angled bracket 27, the bracket 27 being fastened to the portions of arms 20, 20 adjacent the corner 21 by respective bolts 28, 28, the bolts extending outwardly and having flat conical heads which are received in the arms 20 so that said heads are flush with the inside surfaces of said arms. Welded to the lower portion of the bracket 27 and depending therefrom substantially flush with the corner portion defined between the arms 20, 20 is a vertical arm 30 of right angled shape adapted to receive the corner 15 between a pair of sheathing boards 14, 14 and to support the device 18 against outward rocking movement.

Welded to the underside of the corner portion defined between the horizontal flange elements 22, 22 is an outwardly extending sleeve member 31 whose axis is on a line which bisects the angle between the flanges 20, 20. A rod member 32 is received in the sleeve 31 and is locked therein by a set screw 33. The rod member 32 is provided with external threads 34 and adjustably secured thereon is a depending arm 35, the arm 35 being clamped between a pair of lock nuts 36 and 37 engaged on the threads 34. The rod 32 is provided with a flattened top surface 38 inscribed with a scale 39 calibrated in units of distance corresponding to the desired normal distance from the sheathing boards 14, 14 of the adjacent portions of the mason's line 17. Thus, since the line 17 is to coincide with the plane of the outside surfaces of the bricks to be laid, the scale 39 will indicate what distance said plane is from the adjacent sheathing board 14.

A vertically extending plate member 40 is pivotally connected at 41 to the depending arm 35, for example, by means of a pivot screw, as shown in FIGURES 3 and 4. Plate member 40 is formed at its upper end portion with an arcuate slot 42, said slot 42 being concentric with the pivot screw 41, and a bolt member 43 extends through said slot, the bolt member having its head seated in the arm 35. A clamping nut 46 is threadedly engaged on the shank of the bolt member 43 and is clampingly engageable with the margins of the slot 42 to lock the plate 40 in a desired position of angular adjustment. The clamping nut 46 is provided with a gripping arm 47 for manually rotating the nut.

Rotatably supported in the lower end portion of the plate member 40 is an inwardly directed hook 48 provided at its outer end with a gripping arm 49 for manually rotating the hook. The shank of the hook is provided with suitable restraining collar elements 50, 50

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which support the hook horizontally and prevent end-wise movement thereof. As shown in FIGURES 4 and 5, the guide line 17 is looped on the hook and the hook is positioned to twist the line adjacent the loop thereof, as shown at 52.

The flanges of the depending leg 30 may be provided with index marks 53 which may be aligned with level marks 54 provided at the corners 15 to accurately position the guide devices 18 at a predetermined height in accordance with the height of the bricks and thicknesses of the mortar joints employed therebetween in the wall structure 16.

With the elevation of the desired wall structure 16 known, the elevation marks indicating the location of designated courses are drawn on the corners 15 of the building, thus providing the reference marks 54. The devices 18 may be engaged on the corners 15 with the line 17 anchored at its ends in any suitable manner to place the line 17 under tension, the devices 18 being held against the corners 15 by the tension in the line. The devices 18 may be positioned at the required elevations, in accordance with the desired height of the designated courses of bricks or blocks as the work progresses by placing the devices 18 in positions wherein the marks 53 on the legs 30 of the devices are aligned with the respective elevation-indicating marks 54.

Before the line 17 can be used, it has to be adjusted so that it will be the proper distance from the sheathing boards 14. If the corners 15 are plumb, namely, truly vertical, the plate member 40 of the device 18 employed at a corner may be maintained in a centered position. If the corner is crooked or out of plumb, the plate 40 may be swung laterally in one direction or the other to make the required correction. The plate 40 is locked in adjusted position by tightening the clamping nut 46.

The scale 39 is calibrated in accordance with desired distances of the line 17 from the sheathing boards 14, taking into consideration a designated amount of twist at 52. In engaging the line with the devices 18, the hook elements 48 of the devices are first arranged with their light or hook portions extending downwardly, whereupon the line 17 is engaged thereon and the hooks 48 are then rotated a designated amount, for example, one and one-half turns, to place the hook or light portion in an upwardly directed position, as shown in FIGURE 4, and to provide the required amount of twist at 52.

As above mentioned, the abutment screws 24 may be employed to correct for corners which are not precisely right angles.

In the conventional procedure employed in laying brick or blocks to a mason's line, a lead at each corner is first built and a line is employed to lay the brick or block between the corner leads. The devices 18 of the present invention eliminate the necessity of building the brick leads at all the corners, since in using the devices 18, the mason has only to erect one corner and then adjust the line 17 thereto. The line 17 can thus be adjusted so that it is accurately parallel to the sheathing boards 14 by merely providing identical adjustments of the devices 18 at the different corners of the building.

While a specific embodiment of an improved mason's line support and guide device has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A mason's line support and guide comprising a main body having a pair of horizontally extending arms at right angles to each other engageable on a vertical

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corner, a calibrated horizontal rod secured to said body at the junction of said arms and projecting outwardly from said junction, a depending vertical arm adjustably mounted on said rod, a vertical plate member imposed upon said arm and connected to said arm for limited arcuate movement, and an inwardly-projecting hook member secured to the lower portion of said plate member and being engageable with a mason's line, whereby to support said line at a predetermined distance from said horizontal arms.

2. A mason's line support and guide comprising a main body having a pair of horizontally extending arms at right angles to each other engageable on a vertical corner, a calibrated horizontal rod secured to said body at the junction of said arms and projecting outwardly from said junction, a depending vertical arm adjustably mounted on said rod, a vertical plate member pivotally secured on said last-named vertical arm, means for clamping said plate member in an angularly adjusted position on said last-named vertical arm, and an inwardly projecting hook member secured to the lower portion of said plate member and being engageable with a mason's line, whereby to support said line at a predetermined distance from said horizontal arms.

3. A mason's line support and guide comprising a main body having a pair of horizontally extending arms at right angles to each other having roughened inside surfaces frictionally engageable on a vertical corner, a sleeve member secured to said body at the junction of said arms and projecting outwardly from said junction, a calibrated rod secured in said sleeve member, a depending vertical arm adjustably mounted on said rod, a vertical plate member pivotally secured on said last-named vertical arm, means for clamping said plate member in an angularly adjusted position on said last-named vertical arm, and an inwardly projecting hook member rotatably mounted horizontally in the lower portion of said plate member and being engageable with a mason's line, whereby to support said line at a predetermined distance from said horizontal arms.

4. A mason's line support and guide comprising a main body having a pair of horizontally extending arms at right angles to each other having roughened inside surfaces frictionally engageable on a vertical corner and having a depending arm of right angled cross section extending downwardly from the junction of said horizontal arms to receive the vertical corner, a sleeve member secured to said body at the junction of said horizontally extending arms and projecting outwardly from said junction, a calibrated rod secured in said sleeve member, a depending vertical arm adjustably mounted on said rod, a vertical plate member pivotally secured on said last-named vertical arm, means for clamping said plate member in an angularly adjusted position on said last-named vertical arm, and an inwardly projecting hook member rotatably mounted horizontally in the lower portion of said plate member and being engageable with a mason's line, whereby to support said line at a predetermined distance from said horizontally extending arms.

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