Aug. 23, 1932. W. WINTER 1,872,860

CORNER GUIDE FOR BRICKLAYING

Filed June 25, 1928 3 Sheets-Sheet 1

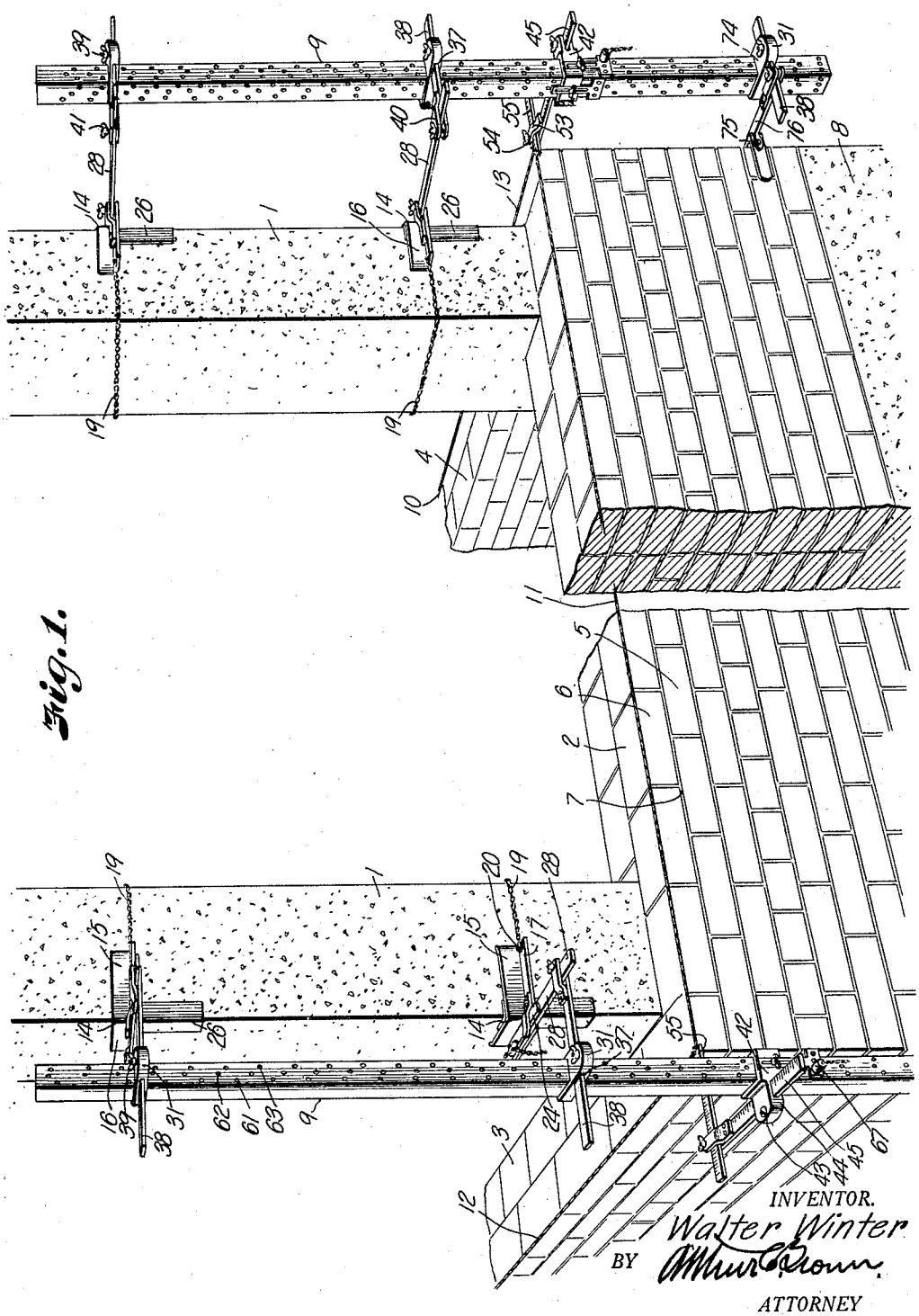


Fig. 1.

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Fig. 3.

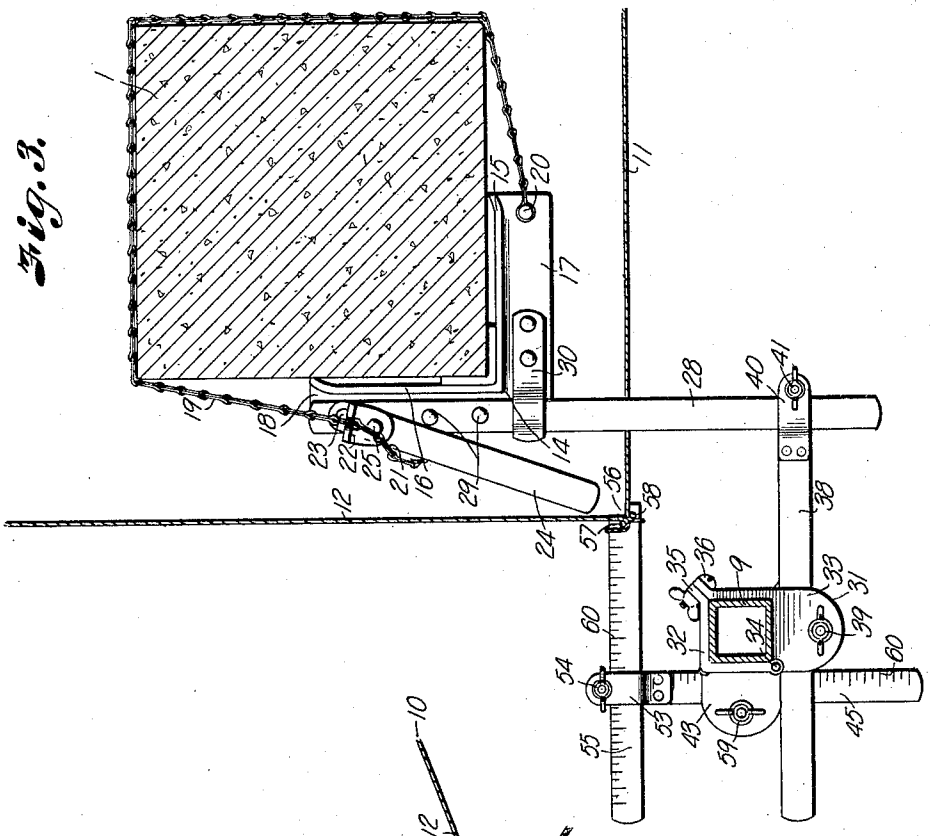
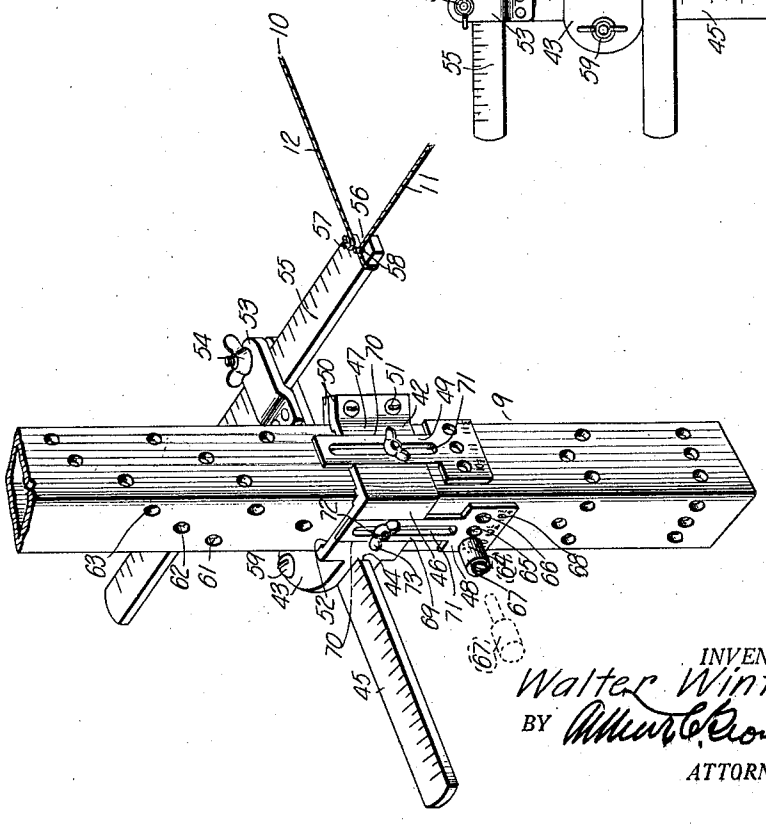


Fig. 2.



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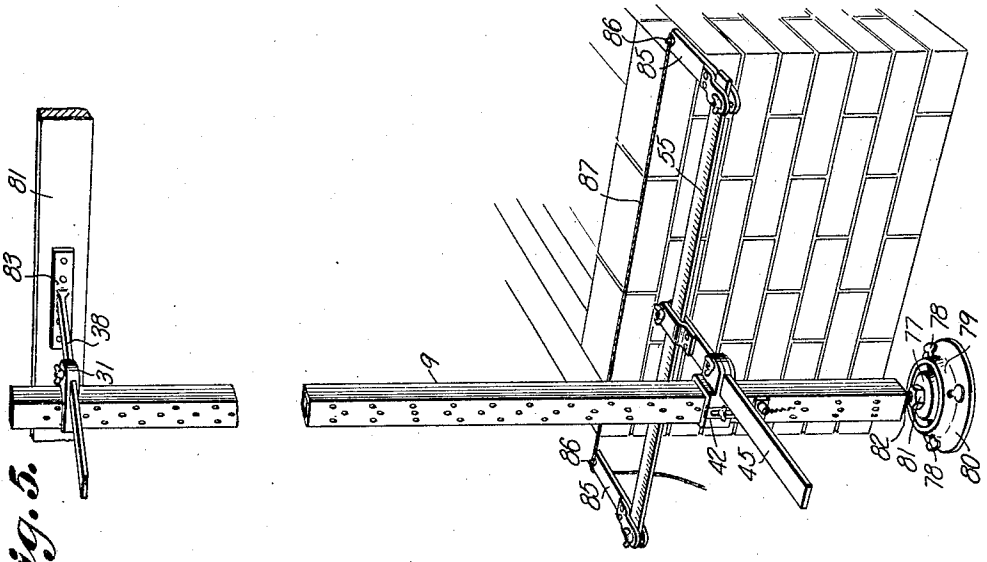


Fig. 5.

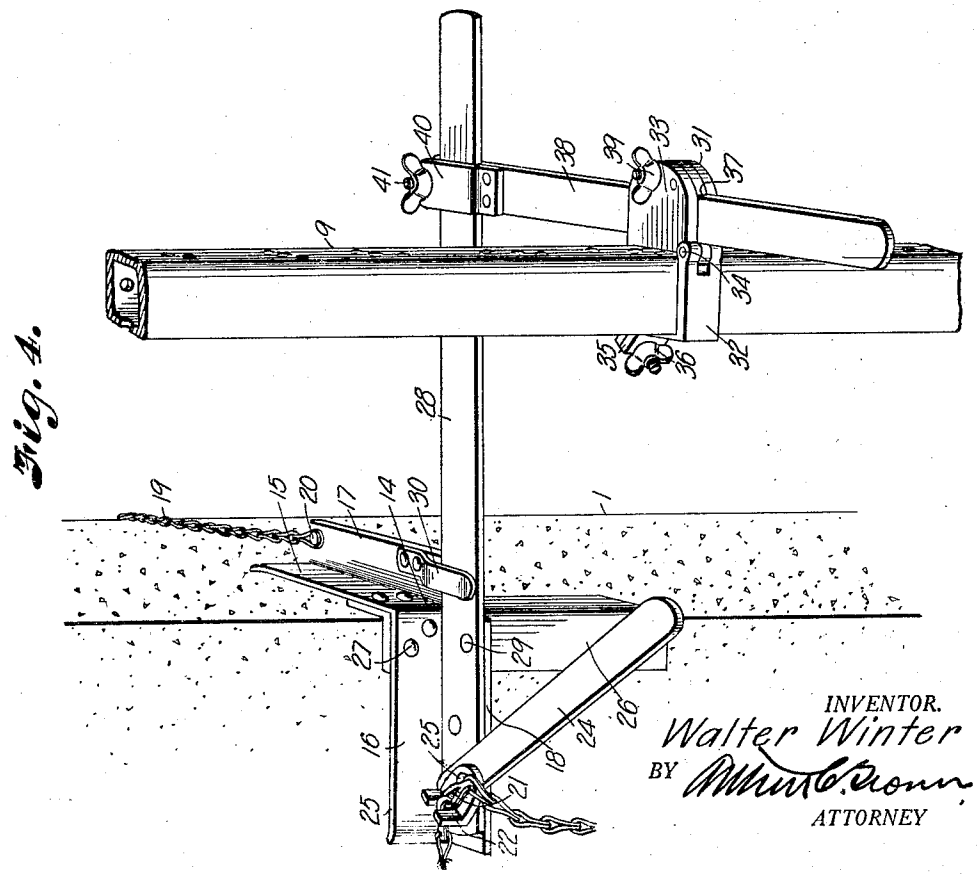


Fig. 4.

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Patented Aug. 23, 1932 1,872,860

UNITED STATES PATENT OFFICE

WALTER WINTER, OF OSBORNE, KANSAS

CORNER GUIDE FOR BRICKLAYING

Application filed June 25, 1928. Serial No. 288,132.

My invention relates to masons' gauges and more particularly to devices of that character having means for plumbing a gauge standard and adjustably positioning a bricklaying guide on the standard, the principal objects of the invention being to insure uniformity of courses in a wall constituted of bricks, to promote accuracy in installing brick and mortar, and to enable relatively unskilled workmen to lay walls and corners having symmetrical courses. Further objects of the invention are to support a standard from a column, to clamp a standard-plumbing bracket to a column, to horizontally align the guide-line-supporting members on adjacent standards, and to adapt the device for differential spacing of positions of the guide line.

In accomplishing these and other objects of the invention, I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of my invention associated with a wall partly broken away, and illustrating application of the invention to bricklaying operations.

Fig. 2 is a detail perspective view of a gauge-line-supporting bracket applied to a portion of a standard constructed in accordance with my invention.

Fig. 3 is a plan view of the invention illustrating its attachment to a column shown in cross section.

Fig. 4 is an enlarged perspective view of a standard plumbing and spacing device and portions of a column and a standard engaged thereby.

Fig. 5 is a perspective view of a modified form of the invention applied to a narrow wall or chimney.

Referring in detail to the drawings:

1 designates building members such as vertical concrete columns, illustrated as comprising corner columns, and 2, 3 and 4 designate end and side walls comprising courses 5 of blocks 6 such as brick spaced by mortar 7 and laid on a foundation 8.

Standards 9 preferably rectangular in cross section are adapted for support from the columns in parallel relation therewith, to support a vertically adjustable horizontal guide line 10 comprising branches 11, 12 and 13 extending respectively along the end and side walls, the guide line being carried by means adjustable on the standards as later described.

Clamps 14 comprising column branches 15 and 16 extend along the adjacent face portions of the column, the branches having flanges 17 and 18 extending outwardly from their lower edges, and a flexible binding member 19 preferably a chain, extends around the column and has one end connected with one branch by a fastener 20 and a portion such as a link 21 engaged with a hook member 22 pivotally connected with the opposite end of the opposite branch.

Pivotally mounted by a pin 23 on the flange 18 of the clamp, is a lever 24, the inner end of which is freely movable over the flange, and the hook member is pivotally supported on a pin 25 mounted in the lever whereby rotational movement of the lever may tauten or relieve the chain for securely fastening the clamp to the column or releasing it therefrom. An elongated reinforcing guard or abutment plate 26 is preferably interposed between the clamp and the column, and fixed to the clamp by means such as rivets 27.

A spacing bar 28 extending outwardly and horizontally from the column clamp has an inner end portion overlying the flange 18 and attached thereto by rivets 29 for support from the clamp, the lever being movable over the bar and the pivot pin 23 preferably extending through said bar. A clip-like latch 30 is attached to the flange 17 for frictional-

ly latching the lever in engagement with the bar in chain-tautening position.

Standard clamp 31 comprises mated members 32 and 33 adapted to embrace a standard and are hingedly connected at 34 and have ears 35 to receive fastening means 36, such as a bolt and wing nut for securing the clamp in selected position on the standard. The member 33 has a slot 37 in which a spacing arm 38 is slidable, the arm being fixed by a bolt 39 in selected position for spacing the standard from the column suitably for guiding the laying of courses of brick in a wall such as 3.

The inner end of the spacing arm 38 is slidably engaged with the spacing bar 28 by a strap 40 and fixing bolt 41 for spacing the standard suitably from the column for guiding the laying of an adjacent wall such as 2.

The pair of vertically spaced column clamps cooperate to support the standard and space it from the column in parallel relation therewith for supporting guide line elements including sleeve-like standard clamps 42 particularly illustrated in Fig. 2. Each clamp is slidable on a standard and comprises a laterally extending side member 43 provided with a slot 44 to receive a guide-supporting bar 45, and side members such as 46 and 47 with which interval indicating plates such as 48 and 49 are slidably engaged.

The sleeve is split and has a slight degree of flexibility for relatively free movement on the standard, and ears 50 are provided on the divided end to receive bolts 51 for bringing the sleeve member into close frictional engagement with the standard. The side members preferably have recesses 52 on their inner faces to reduce friction and facilitate sliding of the sleeves on the standard when the ears are spaced.

Slidably retained on the outer end of the guide-supporting bar 45 by a strap-like clamp 53, and latchable to the bar by means 54 such as a bolt and wing nut, is a line-supporting arm 55 having a notch 56 in its outer end and spaced pins 57 and 58 mounted in the upper face thereof adjacent the notch, whereby the continuous guide line 10 may be engaged with the arm for extension of the branches in desired directions to guide the laying of brick.

The bar 45 is adapted to space one branch of the line from the column and is latchable in selected position by a bolt 59, while the arm 55 is adapted to space an adjacent branch from the column, for guidance in building the adjacent wall. The bar and arm are respectively provided with graduations 60 measuring inches and subdivisions thereof for adjustments.

The bar and arm are preferably flat, whereby they are more securely retained by the respective straps against rotation, and bending is obviated.

In erecting walls comprising blocks such as bricks of known and regular dimensions, it is desirable to predetermine the number of courses which will constitute the height of a given portion of the wall, and to vary the amount of mortar between courses in different walls so that the predetermined number of courses will fill the allotted vertical space.

For this purpose, the standards are provided with a plurality of series such as 61, 62 and 63 of aligned sockets extending longitudinally of the standards in two or more sides thereof, the sockets of each series being regularly spaced, and the spacing being different in the several series. The above mentioned interval-indicating plates such as 48 and 49 are adapted to be secured to the sleeves by means presently described, and have pin-receiving portions extending transversely across the sides of the standard provided with a plurality of horizontally spaced openings, 64, 65 and 66 registrable respectively with the sockets in one of the series of sockets in the standard, whereby a pin 67 may be inserted to latch the plate and clamping sleeve in a selected position.

The measuring character of the sockets and openings is identified by indicia 68 provided on the several plates adjacent the several plate openings, for example, the series of sockets 61 being identified by the numeral "10" inscribed on the plate adjacent the opening which is registrable with that series.

The numeral "10" may represent the thickness of four courses of brick, including the layers of mortar in which the bricks are embedded, and the series so identified may be selected for use in the laying of a wall the height of which requires that four courses will occupy ten inches.

When the line-supporting clamps are shifted to position the line for guiding the laying of a succeeding course, the registry of the opening indicated on the plate by the numeral "10" with the next higher socket in the standard and the insertion of the pin in the registering opening and socket will assure the provision of the amount of mortar suitable for the predetermined number of courses, each course will be substantially horizontal, and all courses will have the same amount of mortar.

It is assumed that the corresponding sockets in the several standards will be horizontally aligned; and to effect such alignment I provide for the vertical adjustment of the pin-receiving plates in relation to the brackets. For this purpose the plates have stem portions 69 slidable in grooves 70 in the plate-supporting side members of the sleeves, and longitudinal slots 71 receiving bolts 72 fixed in the sleeves, and wing nuts 73 on the bolts are adapted to secure the stems to the sleeves in adjusted positions.

A supplemental spacing bracket 74, illustrated in Fig. 1, is provided for retaining the lower end of the standard in plumb position while the lower of the pair of supporting elements is removed when the element interferes with laying the brick wall. The bracket includes a standard clamp 31 and spacing arm 38, and a wall-engaging angle member 75 is slidably supported from the arm, the angle member having a bar 76 equivalent to the spacing bars 28 of the column-engaging assemblies.

The modified form of the device illustrated in Fig. 5 is adapted for use in laying a relatively narrow wall, and employs a single standard supported on a block 77 laterally adjustable by screws 78 extending through a collar-like boss 79 of a foot or base 80 in which the block is positioned, the standard being vertically adjustable by turning a polygonal nut 81 of a supporting-screw 82 fixed in the standard and slidable in the block 74. On the upper end of the standard is a spacing arm 38 but the inner end of this arm is provided with a bracket member 83 for attachment to a building element 81 such as a cornice board.

The spacing bar 45 of the line-supporting assembly is constructed as in the preferred form, but an elongated spacing arm 55 is slidably supported by the bar and supplemental line-supporting fingers 85 extending at right angles to the arm are mounted on the outer ends thereof and provided with pins 86 for engaging a line.

What I claim and desire to secure by Letters Patent is:

1. A device of the character described comprising standards having a plurality of series of vertically aligned regularly spaced openings, means for stabilizing the standards in parallel spaced relation with the vertical plane of the face of a building wall, and means including pins insertable in the openings for supporting a gauge line in horizontal position.

2. In a mason's gauge of the character described, a standard adapted for support from the ground and having a plurality of series of vertically aligned regularly spaced openings, means for plumbing the standard, and gauge line-supporting elements including a member engageable in a selected opening of a selected series of openings, a laterally adjustable gauge line arm, and means adjustable with reference to said member for supporting the arm from the standard.

3. In a gauge line-supporting device of the character described, a standard having a plurality of longitudinal rows of regularly spaced openings, means for engaging the standard with a building element in parallel relation therewith, and means for selectively spacing the successive positions of the gauge line including a clamp slidable on the standard and having means for selective engagement in said openings, and a line-engaging member adjustable laterally and longitudinally on said clamp.

4. In a gauge line-supporting device, a standard adapted for support from the ground, a standard-plumbing means including a spacing bar for having a column-engaging portion spaced from said standard, and guide line elements vertically adjustable on said standard and having a body portion engaging said standard and a spacing arm spaced from said standard and adjustable relative to said body portion.

5. In a gauge line-supporting device, including a standard, standard-plumbing means including a clamp having a flexible member for embracing a building column and a lever for tensioning the flexible member, a bar extending horizontally from the clamp; a sleeve slidable on the standard, and a spacing arm slidable in the sleeve and on the bar.

6. In a gauge-supporting device including a standard, standard-stabilizing and plumbing means comprising a column clamp having branches adapted to embrace a column, a flexible member, a lever pivotally connected with the branches, and a hook pivotally mounted on the lever and engaging the flexible member whereby the lever may tension the clamp, a spacing bar secured to said column clamp, a standard-clamp comprising hinged portions adapted for mounting on the standard, a spacing arm slidable in one of said hinged portions and having a sleeve slidably mounted on said spacing bar.

7. In a gauge device of the character described, a standard, means for supporting the standard from the ground in substantially vertical position, including a column clamp, spacer elements connecting the clamp with the standard, and gauge line-supporting means including a clamp adjustable on the standard and adapted to be secured thereto in adjusted position, a line-engaging arm slidably supported by the clamp, and means for regularly spacing the adjusted positions of the clamp including a pin adjustably secured to the clamp, the standard having regularly spaced openings to receive said pin.

8. In a device of the character described, a standard having a plurality of series of regularly spaced openings, a guide line support, and means including a pin insertable in one of said openings for latching the support to the standard.

9. In a device of the character described, a standard, a plate, means for latching the plate to the standard, a guide line supporting member movable along the standard for adjustment to the latched plate, and means for latching said member to said plate for retaining said member in adjusted position.

10. In a device of the character described including a standard, a spacing bar, means for securing said bar to a building element, and means on the standard adjustable along said bar for fixing the standard in spaced relation with said building element.

11. A corner guide for brick laying including a spacing bar, means for securing said bar to a building element, a spacing arm slidable on the bar, a standard, means on the standard slidably engaging said arm for adjustably connecting the standard with said building element, and guiding means carried by said last mentioned means.

In testimony whereof I affix my signature.

WALTER WINTER.