May 16, 1933. H. A. GOLT 1,909,267

GUIDE FOR BRICKLAYERS' USE

Filed May 23, 1930 2 Sheets-Sheet 1

Fig. 1.

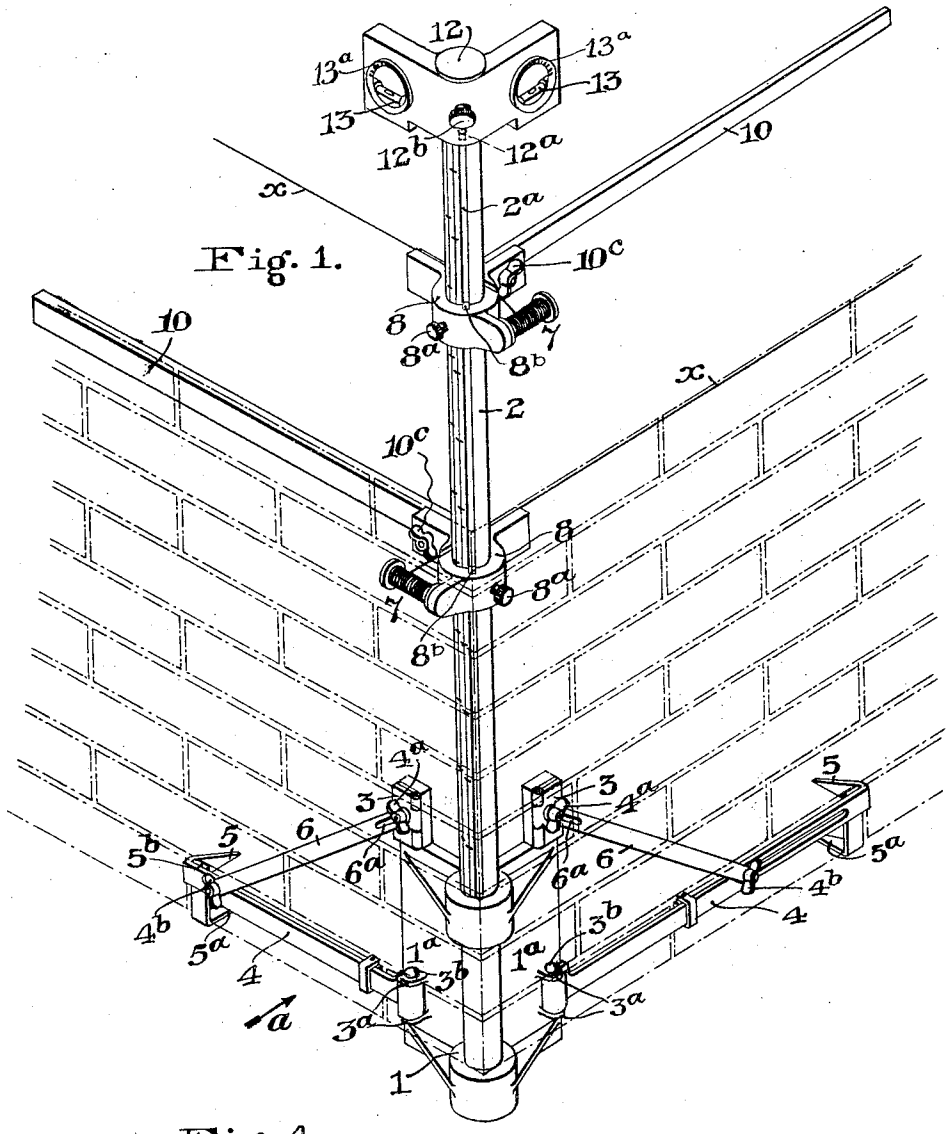
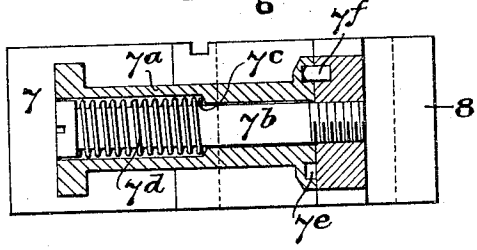


Fig. 4.



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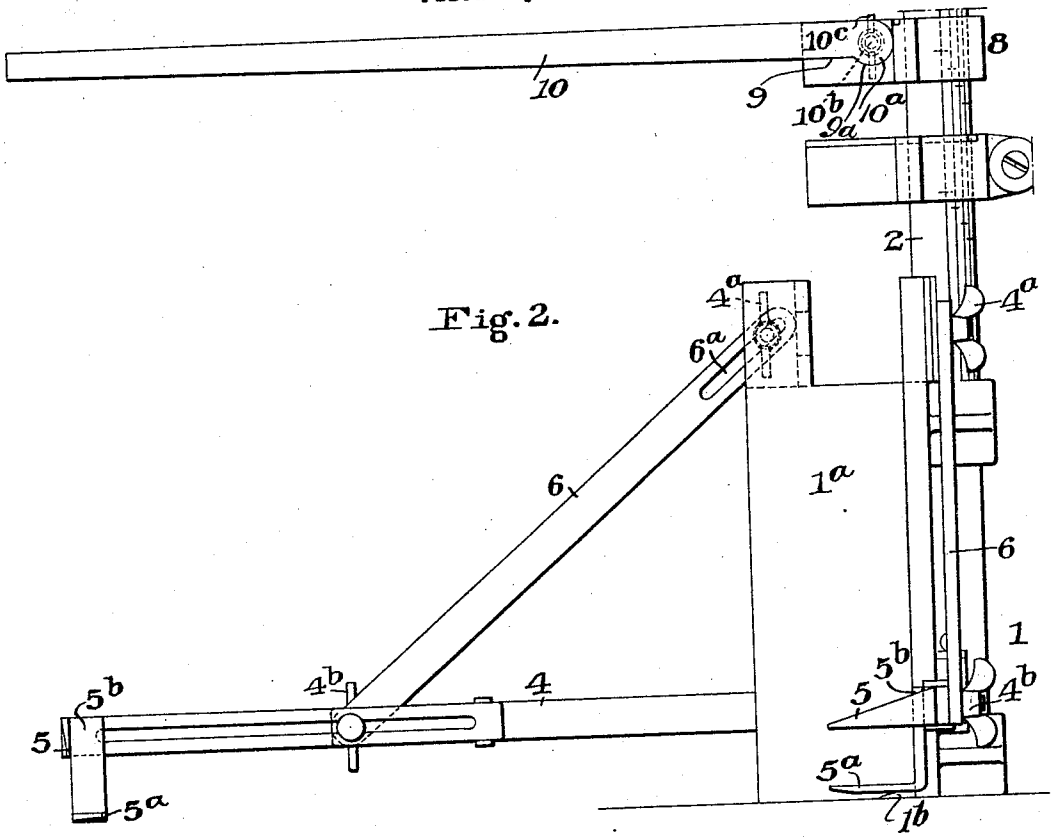


Fig. 2.

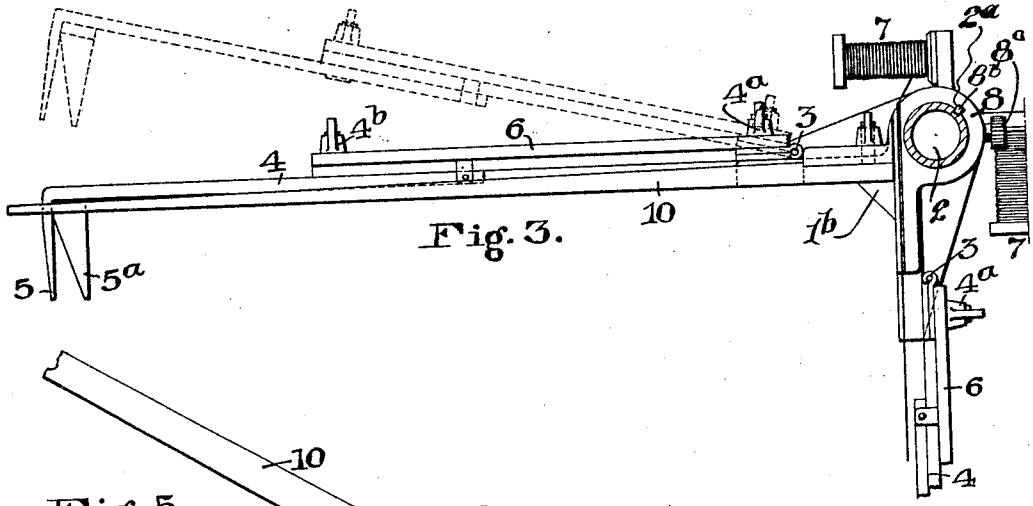


Fig. 3.

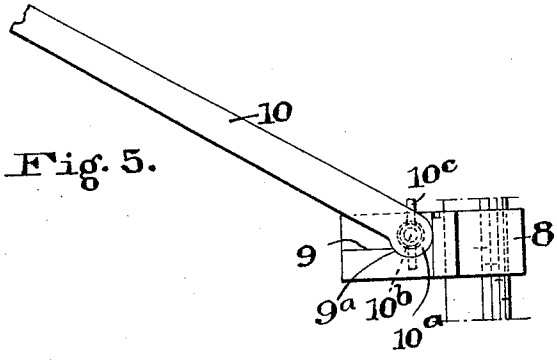


Fig. 5.

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UNITED STATES PATENT OFFICE

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GUIDE FOR BRICKLAYERS' USE

Application filed May 23, 1930. Serial No. 455,106.

My invention relates to guiding means for use by bricklayers in the erection of walls in the construction of buildings, and more particularly to means for use in the laying of brick at the corners of a building and for carrying adjustable aligning members and the usual guide line which may be supported by freely adjustable members.

One object of my invention is to provide simple and efficient guiding means including an angular corner abutment, a vertical standard projecting upwardly from the same, a plurality of aligning devices vertically adjustable on the standard; said aligning devices carrying reel supports for a guide line, and a pair of levels at right angles to each other mounted in a cap detachably secured to the upper end of the standard.

A further object of my invention is to provide the standard with guide marks to indicate the level of the courses with reference to joints of different width.

These and other features of my invention are more fully described hereinafter; reference being had to the accompanying drawings, in which:

Figure 1 is a perspective view of my improved guiding device in position with respect to a wall corner.

Fig. 2 is an elevation of the guiding means looking in the direction indicated by the arrow *a*, Fig. 1.

Fig. 3 is a plan view of the guiding means.

Fig. 4 is a sectional elevation of one of the adjustable guide line supports, and

Fig. 5 is a view illustrating a detail of my invention.

In the drawings 1 indicates an angular corner abutment and base comprising the integral wings 1^a, 1^a, set at right angles to each other to define a right angled corner. These wings may be provided with a narrow web 1^b across the inner part of the corner at the bottom of said base; such web being designed to fit between courses of brick and serve as a support as the guide is raised during the progress of erecting the wall. The height of the angular abutment or base is purely arbitrary and while its upper edge is truly horizontal it is not intended as a guide for a brick course inasmuch as the height of the courses will vary depending upon the width of the mortar joints.

Surmounting the base 1 and rigidly secured to the same, is a standard 2, preferably circular in cross section and truly vertical. These parts are preferably made of aluminum for the sake of lightness, although a brass tube may be employed for the standard.

In order that the base 1 may be braced and stayed with respect to the wall corner, I provide the same with adjustable members to engage the wall, which members may be hinged to such base externally of the same. For this purpose the outer walls of the base are provided with pivotal supports or hinges, which may include ordinary leaf hinges indicated at 3, and vertically disposed eyes 3^a, for the reception of pivot pins 3^b. If desired the lower pivotal support may be in the form of an ordinary leaf hinge. Upon the lower hinge connection, which may be the pivot pin 3^b, a sectional bar 4 is mounted; such bar being extensible and having a pointed projection 5 at its extreme end to fit a vertical joint between a pair of bricks, and a pointed projection 5^a to fit a joint between two horizontal courses of brick; such projection 5^a being disposed substantially in the plane of the web 1^b carried by the base.

The sectional and extensible bars 4 may be supported in horizontal position and at any desired angular position in a horizontal plane, by means of angularly disposed braces 6 adjustably connected at their upper ends to the hinges 3 and pivotally connected at their lower ends to said extensible bars 4. These braces may be held by thumb nuts 4^a at their pivotal connection with the hinges 3 and by thumb nuts 4^b at their pivotal connection with the extensible bars 4. The thumb nuts 4^b also serve to hold the extensible bars 4 in their adjusted positions; one portion of such extensible bars having a strap overlying the other portion and being slotted for the reception of the threaded stud carrying the thumb nut 4^b. The upper end of each of the braces 6 is slotted as indicated at 6^a; such slot receiving a threaded stud carried by the movable member of the hinge 3; such stud carry-

ing the thumb nut 4^a whereby the braces may be held in the desired position.

These combined members, comprising the adjustable and extensible bars 4 and the braces 6, may be readily moved outwardly from the base on their hinged connections with respect to the wall when it is desired to raise the guide, as indicated by dotted lines, Fig. 3, and then returned to position. The sectional bar 4 is extensible in order that the part carrying the projection 5 may be adjusted lengthwise of the wall to accommodate itself to the different positions of the vertical joints of the respective courses. The sections may be held by suitable thumb screws or a screw stud with a thumb nut, as indicated at 4^b. It will be noted that projections 5^a are carried at the inner side of the end sections of these extensible bars 4 and their upper portions provide filler members 5^b, adjacent the pointed projections 5; the inner surface of such filler members being aligned with the inner faces of the wings 1^a of the base member.

For the purpose of carrying guide lines x paralleling the wall surfaces at right angles to each other the standard 2 carries a pair of reels 7 supported by collars 8 which may be disposed at various heights on said standard and suitably held by set screws 8^a, or otherwise. These collars are preferably guided on the standard and for this purpose the latter may be grooved at 2^a and the collars provided with lugs 8^b fitting said grooves. The reels may comprise drums 7^a mounted on stems or arbors 7^b, such drums having internal shoulders 7^c, and springs 7^d mounted on said stems 7^b serve to hold the reels against said shoulders. One of the members, the end of the reel, for instance, may have a series of perforations 7^e set relatively close together and the other member, a portion of the collar 8, for instance, may have a pin 7^f to fit one of said perforations; such arrangement serving to retain the drum in fixed position after it has been turned to wind the guide line to the desired taut condition and then hold the same in such condition.

In addition, these collars 8 carry seats 9 for long aligning bars 10 which are designed to lie against one wall at a corner while the other wall is being built up. These bars 10 are arranged to lie in exact parallelism with the inner faces of the wings 1^a of the base and they are of material length. They are of relatively small cross section, quite rigid and their pivotally connected ends may be arcuate as indicated at 10^a to fit curved seats 9^a in the collars 8. Each of these aligning bars may carry a screw stem 10^b passing through the wall of the projection on the collar 8 which provides the seat, which is held by a suitable nut 10^c. These aligning bars may be turned on their pivotal connections for any desired purpose. If, for instance, the standard 2 is tilted for any reason, the aligning bars 10 may be disposed in horizontal position by reason of this pivotal arrangement. The collars 8 may be set at any height desired and it will be understood that the upper surface of the aligning bars 10 is truly straight and provides a proper guide for the leveling of brick courses on return toothed corners.

In order that the guide may be set truly plumb and in proper position to perform its intended function, the upper end of the standard carries a detachable cap member 12 supporting a pair of horizontally disposed level bulbs 13 truly set at right angles to each other and normal to the perpendicular presented by the standard 2. The carriers 13^a for these bulbs may be scaled and adjustable in their seats so that they may be brought to proper horizontal position in case it becomes necessary to place the standard 2 in an inclined position. Various conditions in the repair of old walls may make it desirable or necessary to incline such standard. The cap member 12 is removable to permit attachment and removal of the collars 8, and it is provided with a lug 12^a engaging the groove 2^a of the standard so that when replaced it will occupy the desired angular position. It may be held in place by a set screw 12^b.

For the sake of lightness all of the parts may be of aluminum except, perhaps, the bracing guides hinged to the wings 1^a of the base.

In the use of my improved guiding instrument, four courses of brick and a level base are required before it may be placed in position. The instrument is long (high) enough to run a header course and nine stretcher courses high before resetting, and it is of a character that will permit striking up of the wall with the instrument in position, without any interference. Then while the bricklayers are backing up the face, the corner men can set the instrument in place for the next header in a very short period of time.

With the use of the steel guides or aligning bars 10, return toothed corners can be built from three and one half to four bricks long without leveling courses. The instrument can also be used in the construction of tapering walls or the repair thereof, and in chimney construction. Levels can be set to any degree per foot.

Scales indicating thicknesses of mortar joints, from ten inches for four courses to twelve inches for four courses, are laid out on the surface of the standard 2 which carries the collars 8, at one quarter inch intervals for four courses.

By keeping the lower collar 8 in a position two courses below the upper collar, it will relieve the strain on the standard when either or both of the lines x are stretched taut. By mounting the levels on the standard and in full view of the bricklayer, he is enabled to

notice very quickly if any variation occurs in the position of the instrument.

My improved guide is simple in construction and mode of operation. Its use will enable the contractor to save time and expense, and the workmen will be freed from all worriment in connection with keeping the corners ahead of the line.

I claim:

1. In a bricklayer's guide, the combination of a base element having wing flanges at right angles to each other and adapted to embrace the corner of a brick wall, supporting members hinged to said flanges; said supporting members having prongs adapted to enter joints between the bricks, a vertical standard supported by said base, and angularly arranged adjustable connections between said supporting members and the upper portion of each of the wing flanges of said base element.

2. In a bricklayer's guide, the combination of a base element having wing flanges at right angles to each other and adapted to embrace the corner of a brick wall, a connecting web at the bottom of said flanges adapted to engage the corner of a wall between brick courses, horizontally disposed supporting members hinged to said flanges; said supporting members having prongs adapted to enter joints between the bricks, angularly arranged adjustable connections pivotally attached to said supporting members and hinged to the upper portions of each of the wing flanges, a vertical standard supported by said base, independently adjustable collars carried by said standard, and adjustable aligning bars detachably carried by said collars.

3. In a bricklayer's guide, the combination of a base element, wing flanges forming a part of said base element at right angles to each other and adapted to embrace the corner of a brick wall, extensible supporting members hinged to the outer faces of said base element, prongs forming part of said supporting members adapted to enter joints between the bricks, adjustable diagonal braces between said supporting members and the upper portions of each of the wing flanges of said base element, and hinged supports for the upper ends of said diagonal braces.

4. In a bricklayer's guide, the combination of a base element having wing flanges at right angles to each other and adapted to embrace the corner of a brick wall, supporting members hinged to said flanges; said supporting members including adjustable sections having prongs adapted to enter the joints between the bricks, a vertical standard supported by said base, independently adjustable collars carried by said standard; said collars having arcuate seats therein, aligning bars detachably carried by said collars, and means for securing said aligning bars in said arcuate seats.

5. In a bricklayer's guide, the combination of a base element having wing flanges at right angles to each other and adapted to embrace the corner of a brick wall, supporting members hinged to said flanges; said supporting members having prongs adapted to enter the joints between the bricks, a vertical standard supported by said base, independently adjustable collars carried by said standard, arbors on said collars adapted to support guide line reels; said arbors being of such size with relation to said reels that said reels may be moved longitudinally thereon, aligning bars detachably carried by said collars, adjustable and detachable leveling means supported by the upper end of said standard, and spring means for maintaining said guide line reels in adjusted position on said arbors.

6. A guide for bricklayers' use, comprising a base with flanges at right angles to each other, a narrow web connecting the bottom of said flanges, a vertical standard connected to said base, two sets of adjustable supporting means for said base including diagonal braces normally disposed at right angles to each other, and hinged connections carried by said base for said supporting means and said diagonal braces whereby said supporting means and diagonal braces may be swung toward and away from each other.

7. In a structure such as set forth in claim 6, a plurality of collars vertically adjustable on the standard independently of each other and having arcuate seats, and an adjustable aligning bar carried by each of said collars; said aligning bars being disposed in said seats at right angles to each other, and securing means for said aligning bars permitting adjustment in said seats for angular disposition in vertical planes.

In witness whereof I have signed this specification.

HENRY A. GOLT.