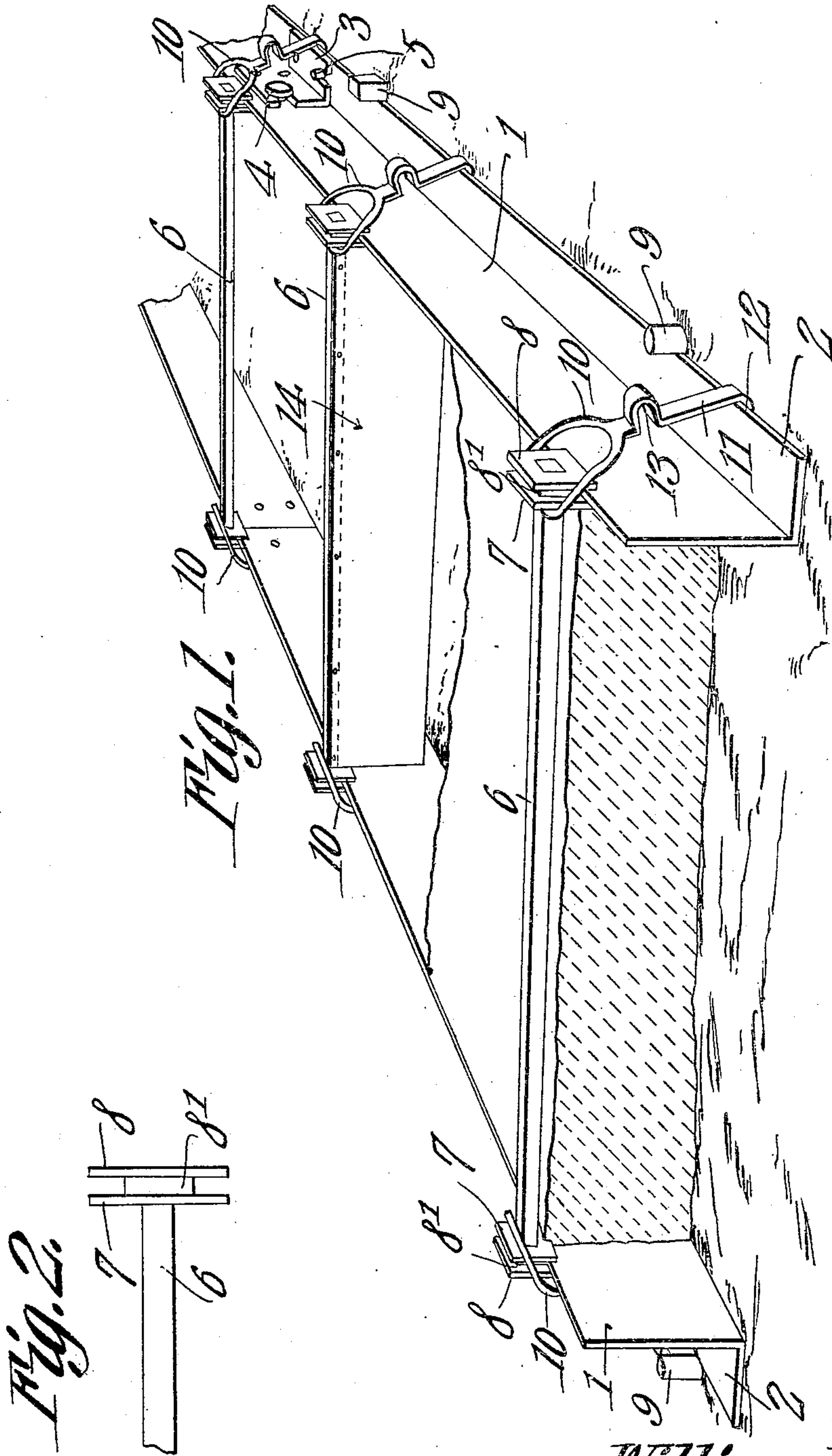


W. RAMEY & L. CHILCOTE.
 CONCRETE SIDEWALK FORM.
 APPLICATION FILED JUNE 10, 1909.

955,474.

Patented Apr. 19, 1910.



Witnesses
E. J. [Signature]
F. J. Chapman

Inventors
William Ramey
Lewis Chilcote
 By *Ca Snow & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM RAMEY AND LEWIS CHILCOTE, OF MELVERN, KANSAS.

CONCRETE-SIDEWALK FORM.

955,474.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed June 10, 1909. Serial No. 501,328.

To all whom it may concern:

Be it known that we, WILLIAM RAMEY and LEWIS CHILCOTE, citizens of the United States, residing at Melvern, in the county of Osage, State of Kansas, have invented a new and useful Concrete-Sidewalk Form, of which the following is a specification.

This invention has reference to improvements in means for the construction of concrete side walks, though adapted for the production of other concrete structures and is designed to provide a means whereby continuous structures such as sidewalks may be readily formed out of concrete without the necessity of building special forms.

In accordance with the present invention the side members of the continuous mold used in the construction of the side walk are made of angle irons which may be coupled together to form longitudinal side walls for the reception of the concrete and these side walls may be as long as desired being made up of readily joined short sections. In order to properly adjust the side members and to hold them in the adjusted positions, special spacing bars are provided, which bars may be readily moved from place to place as desired and will hold the side confining walls in place without movement toward or away from each other and at the same time without interference with the necessary troweling of the surface of the walk. Furthermore, retaining members are provided for the spacing bars so that these bars may not be accidentally displaced when once adjusted.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, in which drawings,

Figure 1 is a perspective view of the mold structure in place. Fig. 2 is a detail view of one end of one of the spacing bars.

Referring to the drawings there are shown angle irons 1 having plane faces of sufficient height to determine the thickness of the sidewalk or other structure to be built and these angle irons are formed with foot members 2 designed to rest upon the ground upon which the sidewalk is to be constructed, it being understood of course that the necessary grading is performed before the sidewalk is laid. In order to join the an-

gle irons in continuous lengths they may be each provided at one end with an angle plate 3 and at the other end with a headed stud 4 and a plain stud 5 on the outer face of the side wall and foot respectively while the plate 3 is provided with suitable recesses to engage the pins 4 and 5 when the next adjacent angle iron 1 is in abutting relation to the end of the angle iron carrying the plate 3. The headed pin 4 serves to prevent any displacement of adjacent angle irons out of alinement.

The angle irons 1 may be made in comparatively short lengths to facilitate handling while the side walls of the sidewalk may be made as long as desired by joining the requisite number of angle irons 1 end to end.

In order to hold the angle irons 1 in proper spaced relation one from the other and also to prevent these angle irons from tipping over there are provided spacing bars 6 which may be made of wood or metal as found most desirable or convenient and each bar has at each end two spaced heads 7—8. The heads 7 and 8 are separated by a spacing block 8' of greater diameter than the spacing bar 6 and the separation of the heads 7 and 8 is such that with the spacing block 8' resting on the upper edge of the side walls of the angle iron 1 the heads 7 and 8 will embrace the inner and outer faces respectively of the upper edge of the angle irons. In this manner the bar 6 serves to hold the angle irons in spaced relation against accidental displacement in either direction so far as the upper edges are concerned while the bar 6 is held a distance above the plane of the top edges of the angle irons by the blocks 8', this being for a purpose which will presently appear. The flanges 2 of the angle irons may be held from spreading by pegs 9 driven in the ground alongside of them.

In order to prevent the accidental lifting of the spacing bars 6 to a sufficient distance to permit the disengagement of either head 7 or 8 with the upper edge of the side wall of the angle irons 1 there are provided yokes 10 of sufficient size to straddle the head 7 and extend to outside of the head 8 and there the yoke is provided with a leg extension 11 formed at the outer or free end with a hook 12 adapted to engage under the flange 2

while at an intermediate point each leg 11 is provided with a loop 13 to render the leg slightly elastic in the direction of its length. When a loop 10 is passed over the head 7 so as to engage behind the same and the hook 12 is engaged under the flange 2 of the respective angle section 1 then the bar 6 is held to the angle iron against any force likely to be applied to the bar and tending to displace the same. While the separation of the heads 7 and 8 need not be especially chosen with reference to the thickness of the wall of the angle iron 1 with which these heads cooperate, still the separation should not be too great for otherwise there might be a twisting action with reference to the angle irons and thereby modify the spacing effect of the bar 6.

Let it be assumed that the angle irons 1 are arranged in longitudinal series and properly spaced by a number of spacing bars 6 then the concrete mixture may be filled in between the inner faces of these angle irons and tamped without danger of displacing the said angle irons. Then the surface may be troweled off in the usual manner while the elevation of the lower edge of the spacing bars 6 from the upper surface of the cement mixture when smoothed off to the plane of the top edges of the angle irons 1 is sufficient for the introduction of the trowels thereunder and therefore these angle irons do not prevent the proper troweling of the surface of the sidewalk and may remain until the concrete has set.

It is desirable, especially in concrete sidewalks to divide the sidewalk into blocks and for this purpose certain of the spacing bars 6 may be provided with longitudinal webs 14 so arranged as to extend down into the space between the side walls of the mold formed by the angle irons 1 and so at these points divide the cement structure into distinct blocks.

While the spacing bars 6 are securely held in the adjusted positions they may be readily changed from place to place by pulling the hooks 12 of the legs 11 of the yokes 10 from under the flanges 2, thus enabling the removal of the yokes from the spacing bars, when the latter may be readily moved along the upper edges of the side walls of the angle irons 1 and may be again secured in new positions as desired.

It is to be understood that the reference to the angle irons 1 does not preclude the formation of the side walls of the elongated mold of wood if it be desirable, but generally considered angle irons are to be preferred to wooden walls of like structure. The spacing bars 6 will operate in conjunction with either angle irons or wooden side walls.

The elastic portion or loop 13 of the leg 11 of the yoke or stirrup 10 facilitates the

introduction of the hook end 12 beneath the flange 2 and at the same time causes the firm engagement of the ends of the spacing bar with the top edges of the side wall of the angle iron 1.

It is to be observed that the spacing bar 6 not only operates as a spacing bar for determining the distance between the angle irons 1 but also operates as the cross tie preventing the spreading of the angle irons during the placing of the concrete mixture between them.

The dividing web or plate 14 may be riveted on one or more of the bars 6 and may be used not only in dividing the concrete sidewalk into separate blocks but will be used at the beginning or end of the walk as may be desired.

The cross tie or spacing bar 6 also serves as a guide or straight edge for the creasing tool.

What is claimed is:—

1. In a means for the purposes described, mold members, a spacing bar or cross tie having spaced heads at each end separated by a spacing block of greater diameter than the diameter of the spacing bar or tie and adapted to embrace the mold members with the lower edge of the cross bar above the plane of the tops of the said mold members.

2. In a means of the character described, mold members spacing bars or cross ties having heads on the ends thereof adapted to embrace the edges of the mold members, and a yoke or stirrup adapted to embrace the head of the cross tie and provided with a leg or extension having a hook formed thereon at the end remote from the yoke to engage the mold member at a point remote from the head of the cross tie.

3. A means for the construction of concrete sidewalks comprising angle side members, spacing bars or cross ties each having at each end spaced heads separated by spacing blocks of greater diameter than the cross tie, and locking yokes each provided with an extension terminating in a hook adapted to engage under the side member with the yoke embracing the corresponding head of the cross tie.

4. A means for the construction of concrete sidewalks comprising side members, spacing bars or cross ties for maintaining the separation of the side members, each bar terminating at each end in spaced heads with a spacing block of greater diameter than the bar, and yokes or stirrups each having a portion adapted to engage over the head at the end of a spacing bar and having a leg or extension formed with an elastic portion and terminating in a hook and adapted to engage under the side members.

5. In a means of the character described, mold members, a spacing bar or cross tie provided with laterally extended ends

adapted to embrace one edge of the mold members, and a yoke or stirrup adapted at one end to engage over the head of the bar and at the other end formed into a hook
5 to engage the mold member and at an intermediate point bent to form an elastic loop.

In testimony that we claim the foregoing

as our own, we have hereto affixed our signatures in the presence of two witnesses.

WILLIAM RAMEY.
LEWIS CHILCOTE.

Witnesses:

A. C. BARTLETT,
M. D. WARNER.