July 14, 1942. C. N. WIRTANE 2,289,819

FORM FOR POURED CONCRETE

Filed July 1, 1940

Fig-1-

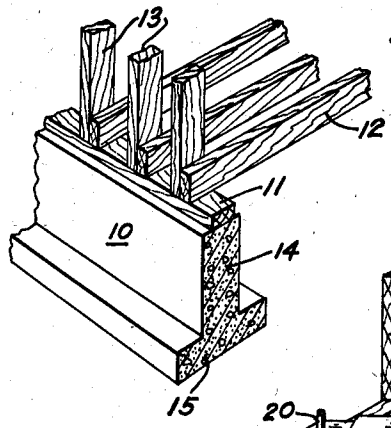


Fig-2-

Fig-5-

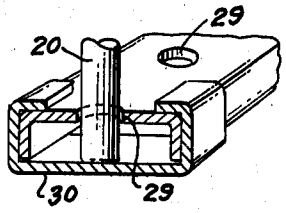


Fig-3-

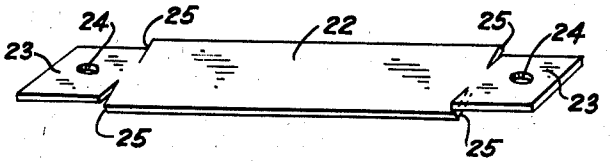
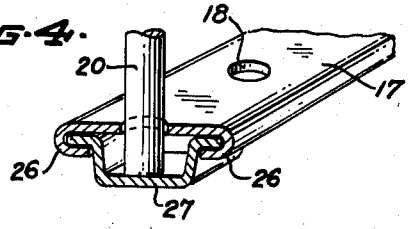


Fig-4-



INVENTOR.
Charles N. Wirtane
BY
M. F. Thompson
ATTORNEY

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FORM FOR POURED CONCRETE

Charles N. Wirtane, Sebastopol, Calif.

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4 Claims. (Cl. 25—131)

The present invention relates to concrete forms, and more particularly to a knock-down form for pouring a foundation wall having a footing integral therewith.

An object of the invention is to provide an improved form for pouring concrete foundation walls which is simple in construction, inexpensive and which possesses advantages not provided in prior art devices of this character.

Another object of the invention is to provide a novel form of tie means for securing the sides of the form in spaced relation for the reception of the poured concrete.

In the construction of foundation walls, building ordinances generally require the provision of a footing of specified dimensions, as will be determined by the thickness of the wall which is to be laid thereupon. It is, therefore, a further object of the present invention to provide a form by means of which a footing and wall, each having different thicknesses, may be poured in a single operation and which can be later removed from the wall in a simple and convenient manner.

Other objects and advantages of the invention will be in part evident to those skilled in the art and in part pointed out hereinafter in the description taken in connection with the accompanying drawing, wherein there is shown by way of illustration and not of limitation preferred embodiments thereof.

In the drawing:

Figure 1 is a fragmentary perspective view showing a foundation wall having a footing, as contemplated by the present invention,

Figure 2 is a fragmentary perspective view showing the details of a preferred embodiment of the invention,

Figure 3 is a perspective view showing a preferred form of spacing means,

Figure 4 is a detailed view showing the construction of another detail of the invention, and

Figure 5 shows a modified form of the detail illustrated in Figure 4 of the drawing.

The provision of stone or concrete foundations for frame buildings is an ordinance requirement in most municipalities and while a foundation wall having a particular thickness may be sufficient to carry the load of a building, consideration must be given to the load carrying characteristics of the earth upon which the foundation is placed. Therefore, to provide a sufficient bearing surface between the foundation wall and the earth, it is generally required that the wall be provided with a footing having a width greater than the required thickness of the wall proper. At the present time, so far as I am aware, where footings are provided with concrete foundations, it is a practice to first pour the footing portion of the foundation and after the footing has set, to then pour the wall forming portion thereupon. In order to secure the wall forming portion to the footing portion by such a procedure, it is a requirement that reenforcing rods be embedded in the footing portion so as to project upwardly and interlock with the wall forming portion when the latter is poured. With my present invention, however, it is possible to dispense with these reenforcing rods and also pour the wall forming portion and the footing portion as an integral unit in a single operation.

In Figure 1 of the drawing there is shown a poured concrete foundation, designated by the numeral 10, having a sill 11 upon which floor joists 12 and wall studding 13 of a frame building are secured. As shown, the foundation has an upwardly extending wall forming portion 14 and a horizontally disposed footing 15.

As indicated in Figure 2 of the drawing, my improved form is preferably built up with standard lumber and requires only three different additional elements which are of an inexpensive character. It is to be understood, however, that I may use sheet iron members instead of lumber. As here shown, the invention contemplates two vertically disposed and parallel extending footing defining members or boards 16 which are positioned upon the ground or in a trench where the foundation is desired. These boards are shown as held in a spaced edgewise position by means of a supporting rail 17 that has spaced apertures 18, the purpose of which will hereinafter appear. In order to secure the supporting rail 17 against endwise movement, it is secured to the edges of the footing defining boards or members 16 by means of spikes 19. It will be understood that the spacing of the footing defining members 16 will be determined by the width desired for the footing. Intermediate the ends of the supporting rail 17 and carried thereby, I show two spaced vertically extending rods 20 against which a tier of edgewise superimposed boards or wall side forming members 21 are positioned. In order to hold the vertically extending rods 20 in their properly spaced relation, the invention also contemplates the use of spacing members 22 of sheet metal which have flat ends 23 that extend between the superimposed boards 21 of each tier and have an opening or hole 24 through which the rods 20 are threaded. These spacing members 22, as is more clearly illustrated in Figure 3 of the drawing, have their opposite edges cut and struck out of the normal plane of the extending ends 23 to form shoulders 25 which are adapted to engage the inner surface of the wall side forming members 21 and hold them in spaced relation against the vertically extending rods 20. With this arrangement it will be seen that after the footing defining members 16 have been properly spaced by means of the supporting rail 17

and the vertically extending rods **20** are properly positioned thereupon, the wall side forming members **21** may then be placed upon the supporting rail **17** in pairs as the sheet metal spacing members **22** are threaded upon the vertically extending rods **20** until the form has been built up to a depth corresponding to the vertical dimension of the wall portion desired. As the wall side forming members **21** are thus superimposed upon each other, they will be held in spaced relation with each other and against the vertically extending rods **20** by the shoulders **25** upon the spacing members **22**.

As is shown in more detail in Figure 4 of the drawing, the supporting rail **17** has its edges rolled over to provide a semi-circular cross-section having reenforcing flanges **26** along each side thereof. While this supporting rail **17** may take many forms, it is desirable that its cross-section be limited to the smallest possible dimensions so that after the wall is poured, the projecting ends thereof may be broken away without difficulty. When the supporting rail is formed in this manner, the rolled edges **26**, in addition to providing a reenforcement, also provide a means of support for slidable members **27** that are adapted to be positioned in alignment with the particular apertures **18** into which the lower ends of the vertically extending rods **20** are positioned .

In Figure 5 of the drawing there is shown a modified form of supporting rail in which a length of standard channel iron **28** having spaced holes **29** is used. In order to prevent the vertically extending rods **20** from dropping through the holes **29**, this supporting rail is provided with slidable clips **30** that can be positioned beneath the lower ends of the vertically extending rods **20** where they are projected through the holes **29**.

After the several elements of my improved form have been provided and assembled in the manner described and as illustrated in Figure 2 of the drawing, it will be seen that the concrete which is to form the foundation wall and footing may be poured in a single operation by introducing the concrete between the wall side forming members **21**. In the case of an extremely wide footing **15**, it will also be possible to introduce the concrete for this portion of the foundation between the outside of the wall side forming members **21** and the footing defining members **16**. To remove the form after the concrete is set, it is only necessary to withdraw the vertically extending rods **20** after which the wall side forming members **21** can be removed from the wall portion **14** of the foundation. After this operation the extending ends of the supporting rail **17** can be bent up and broken off to permit removal of the footing defining members **16** from the foundation, and as a final operation it is only necessary to break off the projecting ends **23** of the spacing members **22** at the cuts which provide for the shoulders **25** thereupon.

While I have, for the sake of clearness and in order to disclose my invention so that the same can be readily understood, described and illustrated a specific form and arrangement of parts, I desire to have it understood that this invention is not limited to the specific means disclosed, but may be embodied in other ways that will suggest themselves to persons skilled in the art. It is believed that this invention is new and it is desired to claim it so that all such changes as come within the scope of the appended claims are to be considered as part of this invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a form for poured concrete walls having a wide footing of the character described, the combination of a supporting rail of semi-circular cross-section having spaced apertures extending therethrough, spaced means mounted upon said supporting rail defining a narrower wall section, vertically disposed retaining rods for positioning said wall defining means in spaced relation upon said supporting rail, the lower ends of said rods being held in spaced relation by engagement with spaced apertures of said supporting rail, and means carried by said supporting rail for holding said vertically disposed retaining rods against downward movement through said apertures.

2. In a form for poured concrete foundations of the character described, the combination of spaced parallel extending foundation footing defining members, a supporting rail supported at its ends by said foundation footing defining members, spaced vertical rods extending upwardly from said supporting rail, a plurality of wall side defining members arranged edgewise upon each other in spaced tiers inside of said spaced vertical rods and carried by said supporting rail, and a sheet metal spacing member having ends extending between the edgewise arranged wall side defining members of each tier for engaging and holding said vertical rods in spaced relation, said sheet metal spacing member having the entire portion thereof corresponding to the spacing of said wall side defining members notched and twisted out of the normal plane of its projecting ends and forming shoulders which engage and hold said tiers of wall side defining members in spaced relation against said spaced vertical rods.

3. In a form for poured concrete walls having a foundation footing of the character described, the combination of a transversely disposed supporting rail having rod-receiving apertures extending therethrough, vertical side forming members disposed in spaced relation below and forming a support at the outer ends of said supporting rail and defining the outer sides of a relatively wide foundation footing, spaced vertically disposed side forming members supported upon and intermediate the ends of said supporting rail defining a narrower wall section above said foundation footing, vertically disposed retaining rods engaging intermediate spaced apertures of said supporting rail for positioning said narrower wall section defining members with respect to said foundation footing defining members, and means for securing said vertically disposed retaining rods and said narrower wall section defining members in vertically extending spaced relation upon the transversely disposed supporting rail, whereby said narrower wall section and said relatively wide foundation footing may be poured as an integral unit in a single operation.

4. A tie member for spacing the side walls of poured concrete forms, comprising a flat metallic strip having vertically disposed rod-receiving apertures at its ends and a portion thereof corresponding to the thickness of the desired wall defined by oppositely disposed spaced notches between which it is twisted out of the normal plane of its projecting ends to form oppositely spaced shoulders intermediate its ends against which the side wall forming members will abut when in use.

CHARLES N. WIRTANE.