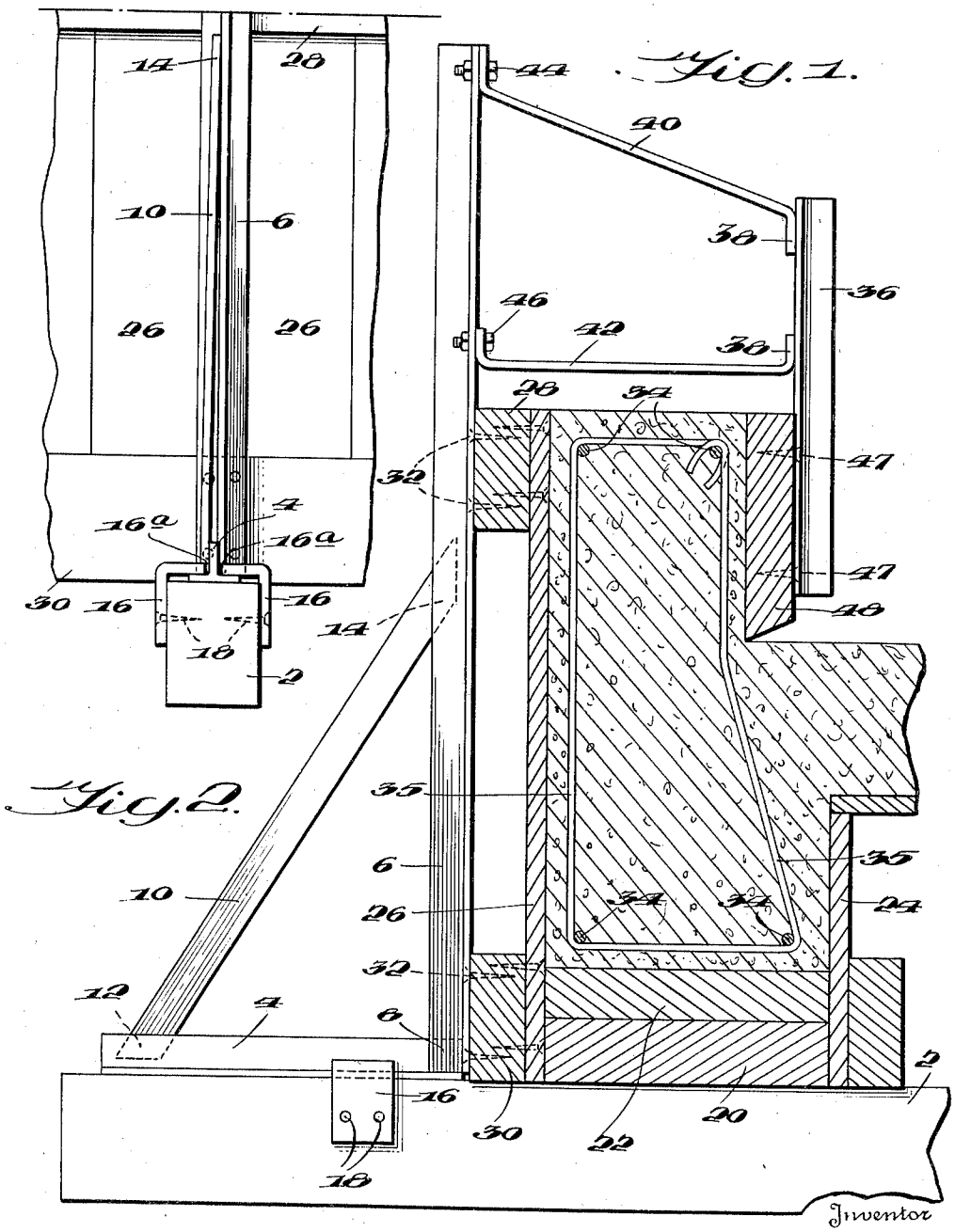
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APPARATUS FOR SETTING UP CONCRETE FORMS

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APPARATUS FOR SETTING UP CONCRETE FORMS

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2 Claims. (Cl. 25—118)

This invention is an apparatus for use in setting up concrete forms, particularly forms for use in forming spandrel beam and curb combined, that is customarily provided at sides or ends of concrete floors for various buildings, particularly for buildings of reenforced concrete slab and beam construction.

One of the important objects of the invention is to provide forms which may be set up accurately and quickly and which, after the concrete is set, may be readily taken down and quickly set up again in another place.

In the present practice, these forms are usually of wood and require a great deal of cutting and fitting of the lumber, involving a large amount of time for setting up of the forms. Unless set up with care and skill, there is a lack of uniformity in the resulting form. According to the present invention, there are provided accurately made and accurately positionable standards, against which exterior haunch forms and the like may be placed, necessarily resulting in a form accurately placed and of accurate dimensions. A considerable saving of lumber is effected, because the exterior haunch forms and the like are supported by light nailing to the apparatus of the present invention, thereby minimizing splitting, so that the lumber may be used repeatedly.

Very little measurement is required, because the forms may be provided with the necessary positioning marks and the lumber may be nailed to the forms in accordance with such positioning marks.

The spandrel beams and curbs forming the outer edge of borders of the concrete floors are customarily provided with iron or steel reenforcement. It is an object of this invention to provide a concrete form for forming such curbs, whereby a portion of the form is first set up, leaving the top of the form entirely open, so that the metallic reenforcements may be readily put in place.

The steel reenforcement is put in place in the form in the usual way, without interference from transverse, horizontal braces because the top of the form is open; after the steel or iron reenforcements are in place, the lateral braces forming a part of the present invention are secured to that part of the form that was set up first, thus completing the setting up of the form, and the concrete is poured.

After the concrete is set, the form of the present invention may be quickly disassembled and set up in another location.

Figure 1 is a side view, partly in section, showing my invention in use; and

Figure 2 is an end view, with parts broken away, of Figure 1.

Referring to the accompanying drawing, **2** indicates a main supporting "T-jack" beam, of a temporary nature. The apparatus of the present invention comprises the horizontal arm **4** of channel iron, and preferably of a T-shaped angle iron, which is welded or otherwise suitably secured to a main vertical standard **6** as by welding at **8**. Standard **6** is also preferably of T-shaped angle iron.

A brace member **10** is secured, as by welding at **12** and **14**, to the arm **4** and standard **6**.

The standard **6** is positioned in place on the beam **2** by L-shaped clamps or saddles **16**, which may be permanently secured to the horizontal flanges **4a** of arm **4** by welding; as at **16a**. Clamps or saddles **16**, instead of being permanently secured to flanges **4a**, may be detachably secured to such flanges, as by providing downwardly projecting pins or lugs on the underside of the horizontal parts of clamps **16**, which pins or lugs fit into suitable holes or recesses in the flanges **4a**. This detachable feature is useful where saddles or clamps of different sizes may be required for supporting beams **2** of different widths. The saddles **16** are secured to beam **2** by nails **18** passing through suitable nail holes in the clamps and into beam **2**. In use, the standard is positioned on beam **2**, on which it is slidable, whereby it may readily be moved along the beam to exactly the right position, and then secured there. It therefore may be quickly placed in exactly the right position, and also may readily be removed after the concrete has set.

In setting up the parts so far described, and assuming the "T-jack" beam **2** already in place, soffit board **22**, supported by cleats **20**, is put in place and then the interior haunch board **24** is positioned as shown. The interior haunch board **26** is nailed to upper and lower spacer beams **28** and **30** and these beams **28** and **30** are secured, as by nails **32**, to standard **6**. Standard **6** is next secured in proper position on the supporting beam **2** by securing saddles **16** to the beam, driving in nails **18** at the proper places into such beam for this purpose.

With this much of the form thus set up, the steel reenforcements, comprising longitudinally extending rods **34**, supporting rods **35** and the usual chairs are put in place in the form.

During this placing of the metallic reenforcements, the top of the form is entirely open, where-

by these metallic reenforcements may be very readily and quickly positioned without interference from any lateral, transverse bars or braces, as have been used in prior art.

After the metallic reenforcements have thus been positioned, the upper curb board is put in place. This is done by a clamp and brace member, comprising a vertical member **36** preferably made of T-shaped angle iron, to which is welded at **38** lateral supporting arms **40** and **42**, respectively, detachably secured to the upper part of the vertical standard **6** by bolts **44** and **46**.

The lateral flanges of the vertical part **36** are provided with nail holes **47** through which nails are driven to support an upper curb board **48**. The form is now complete and may be filled with wet concrete in the usual way.

After the concrete has set, the member **36** is removed by removing bolts **44** and **46** and the standard is removed by pulling out nails **18** of saddle **16** and pulling out nails **32** from standard **6**, thereby disassembling the apparatus, quickly and expeditiously and without fracturing or spalling the green concrete.

The standard **6** and its associated parts, together constitute an apparatus for positioning the exterior haunch form and the interior curb form, which can be quickly and accurately set up and as readily taken down for use in another position.

The apparatus of the present invention is preferably made of metal sufficiently stiff to avoid bending and breaking, so that when set up it is accurately positioned. Being made of metal, it is not subject to warping or splitting, as is the case of wooden forms, and being made of accurately dimensioned parts, the form as finally set up is in exactly the right position for pouring of the concrete.

The haunch boards and curb boards and the like that are used with the apparatus of the present invention may be held in place by relatively light nails so that they may be used over and over again without splitting, the major stresses being taken up by the metallic parts of the form.

The apparatus of the present invention has been found, in actual use, to result in a saving of time and labor in setting up the forms and in a saving of lumber because, as has been stated, certain of the wooden elements used with the form may be used repeatedly.

It has been found in actual practice that the apparatus of the present invention is particularly useful and advantageous in apartment housing developments, particularly where it is customary to use reenforced concrete floor and beam construction, involving a combination spandrel beam and curb, as shown in the drawing.

While the present preferred embodiment of the invention has been described in some detail, it should be understood that the invention is not limited to the exact details herein disclosed, but may be carried out in other ways.

I claim as my invention:

1. Apparatus for setting up concrete forms comprising in combination a vertical standard, a laterally and horizontally extending arm, secured to the foot of said standard, for bracing it, saddle means including a pair of oppositely disposed clamping members engaged with opposite sides of said laterally and horizontally extending arm, and extending downwardly therefrom in a position to straddle a supporting beam, whereby the assembly is slidable along the supporting beam to proper position, means for securing said clamping members to the supporting beam for holding the standard in said proper position, and spaced, superposed arms, carried by and extending laterally from the upper part of the standard, on the side opposite the arm at the foot of the standard, for supporting a curb board.

2. Apparatus for setting up concrete forms, comprising in combination a vertical standard, a laterally and horizontally extending arm, secured to the foot of the standard for bracing it, clamping means slidably engageable with a supporting beam for securing said horizontal arm and the standard in any desired adjusted position on said supporting beam, and a pair of arms, carried by and extending laterally from the upper part of the standard, on the side opposite said clamping means, for supporting a curb board, said arms being superposed and spaced a substantial distance apart in a vertical direction, for providing a rigid, two-place support for a curb board.

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