CONCRETE COLUMN FORM CLAMP
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1 Claim

ABSTRACT OF THE DISCLOSURE

A form clamp for a generally rectangular column mold having an inwardly offset corner. The form clamp consists of first, second and third right-angle frames each consisting of a relatively wide metal plate that is bent upon itself to form a right angle and a pair of metal reinforcing strips projecting from a central line of the plate on one side thereof so that each frame has a T-shape in section.

This application is a continuation of copending application Ser. No. 624,604 filed Mar. 20, 1967, now abandoned, by the present inventors. This invention relates to improvements in clamping means for clamping the usual wood panels of a concrete form or mold and tightly securing the walls of the mold to prevent the spreading of the mold during the pouring and setting of the concrete.

Hereinafter clamping devices of this general character were comprised of pairs of bars or straps joined to form component halves which were secured together about a column form by means of clamps, wedges, pins, bolts and the like. However, such devices fail to afford positive means for squaring the form and they are also objectionable because of the multiplicity of separate locking devices required for securing them in position.

It is an object of the present invention to provide supplemental means of permanently squared clamp frames of a character adapted for use and to securely clamp the mold during the initial setting up of a form for concrete columns. Another object of the invention is to provide novel clamp frames of the character described which are easily assembled around a set up column form or panels and which interlock quickly and easily without the use of accessory locking elements to insure squaring of the form and to provide a rigid clamp for retaining said panels assembled and in position.

Still another object of the invention resides in mating pairs of clamp frames that embody few parts, are inexpensive to manufacture and easy to assemble and quickly disassemble, are light in weight, may be nested, stacked or packed compactly thus requiring little storage space and which because of their construction have firm flat surface contact with the column form walls to prevent wall distortion.

A further object of the invention resides in mating pairs of T-shaped frames with the flanges of each frame being notched upwardly and downwardly and with the flanges of the frame being relatively wide, presenting a wide clamping engagement with the forms of the mold and with each of the frames adapted to have fitment into the notches of the flanges.

Another object of the invention resides in the form of the frames, having a relatively wide plate that is bent upon itself at the corners, to form a right angle member, and with the plates receiving metallic strips intermediate their width that are fixed to the plates by welding or the like, forming a very desirable clamp that has very desirable clamping area against the column form boards, or the clamp may be integrally formed by hot rolling.

Novel features of construction and operation of the device will be more apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIG. 1 is a view illustrating a plurality of the clamps engaged with a column form,
FIG. 2 is a perspective view of a pair of clamps,
FIG. 3 is a top plan view of the clamp illustrated in FIG. 2,
FIG. 4 is a side elevation of the clamp illustrated in FIG. 3,
FIG. 5 is a sectional view through the column illustrated in FIG. 1,
FIG. 6 is a similar view but taken through an L-shaped column,
and FIG. 7 is a view similar to FIG. 5, but illustrating the clamped forms upon a T-shaped column.

Referring specifically to the drawings, each form embodies a clamp formed of a pair of right angled frames 6 and with the frames 6 being substantially identical and with the plates 5 of the frames being bent at a right angle as at 7 and having their upper and lower edges notched as at 8.

Fixed to the outer faces of the plates 5 are flat strips 9, welded to the plates 5 and whereby to hold the clamps in rigid nonflexible position and, as shown, one angled frame has its teeth 8 interlocking with the teeth of the mating clamp. The clamps may be initially fixed to the form boards, such as driving a nail through stamped openings 10 of the plates 5 which in effect permits the installation of the clamps to the form boards and to hold them in temporary position.

In the use of the device, the clamps are placed against the form boards at a desired elevation and initially fixed thereto by conventional carpenter's nails passing through the apertures 10. As illustrated in the drawings, one clamp illustrated as a whole by the numeral "A" is fitted around the form boards of the column form and with an upper clamp "A" shifted downwardly so that the lower marginal edge of the plate 5 will cause its notches to engage into the notches of the lower clamp.

FIG. 5 illustrates the application of the frames around the wood column form board 11. With all of the clamps fixed to the column "B," as in FIG. 1 the column can then be poured with concrete or the like and the clamps will securely hold the form against spreading.

In FIG. 6, the frames are fitted around the form boards 11 in an L-shaped column and in FIG. 7, the clamps are fitted into the corners of the T-shaped column.

It will be apparent from the foregoing that a novel type clamp has been provided. The relatively wide plates 5 permit of a wide clamping action against the form boards and the teeth 8 both upper and lower on the plate 5 greatly extends the useful application of the clamps to the form boards. The clamps are simple in construction, cheap to manufacture and most effective for securing clamping engagement about the form boards of a concrete form.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the scope of the subjoined claim.

I claim:

1. A clamp of the character described for clamping engagement with the form boards of a concrete column form, the clamp including a pair of L-shaped frames to embrace the outer sides of the form, each said L-shaped frame being formed of a relatively wide plate of metal cut in strip form and bent upon itself at a right angle inter-
mediate its ends and having upper and lower marginal edges, the plates being reinforced upon their outer surfaces by a metallic strip that is welded to the outer faces of the plate to give the frame a T-shaped section, the upper and lower marginal edges of the plates being provided with notches for their major length and with the notches forming teeth, the teeth of one frame adapted to have interlocking engagement with the teeth of an adjacent frame.