

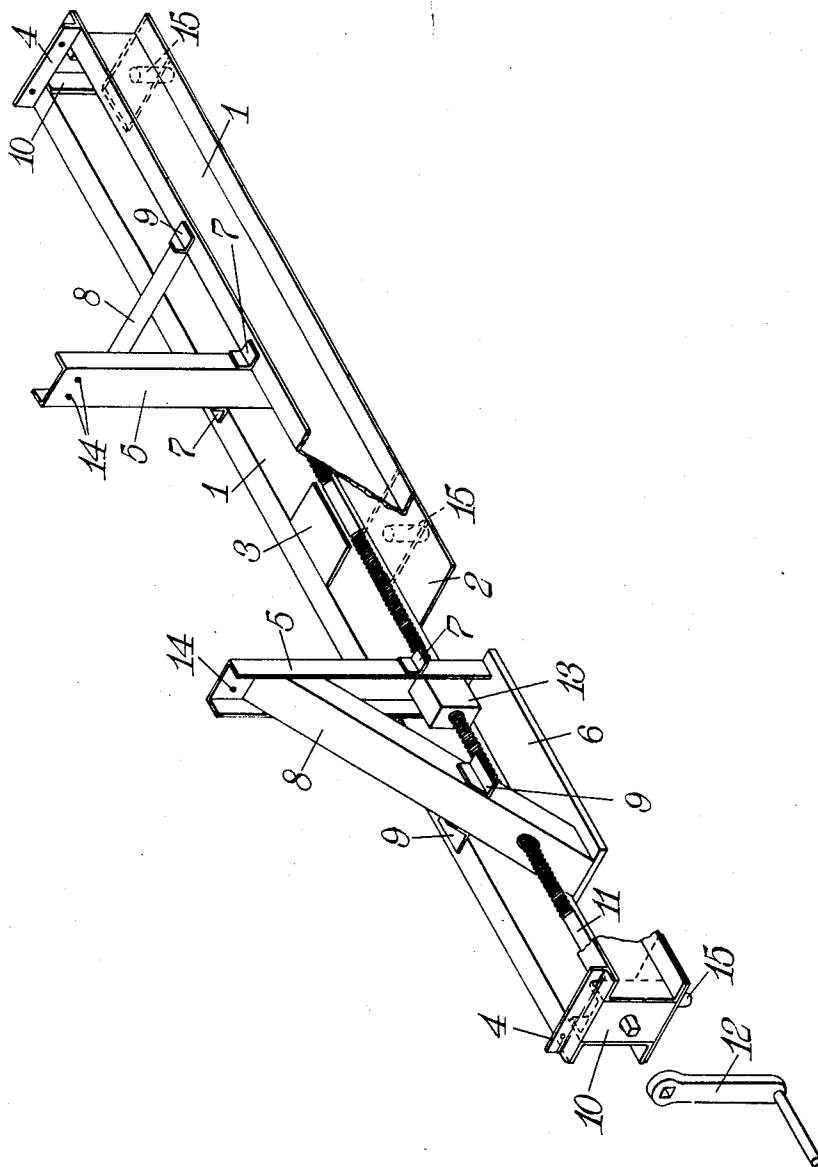
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STRAIGHT BEAM ADJUSTABLE JAW CLAMP

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1

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STRAIGHT BEAM ADJUSTABLE JAW CLAMP

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3 Claims. (Cl. 144—291)

This invention relates to clamps and more particularly clamps which are used for holding together the formwork of casing used for casting concrete beams in situ.

The invention consists of an open beam structure, a pair of clamping arms sliding therein and mounted respectively on left- and right-handed threaded portions of a screw member, whereby the arms can be adjusted from one side only by turning a key or handle which rotates the screw. This adjustment can easily be made and operates the arms quickly, precisely and to the exact measurement.

The invention will be further described with reference to an embodiment shown in the accompanying drawing.

In the embodiment, a beam structure comprises two flanged side-beams 1 joined at the bottom by a closing plate 2, the beam structure being left open at the top, except for a closing plate 3 in the middle and angle brackets 4 at the end as detailed later.

The front side-beam 1 in the drawing is shown partly cut away to show the structure beneath.

Within the beam structure there are arranged to slide two L-shaped structures, the vertical members 5 of which form the clamping arms and the horizontal members 6 of which slide along the bottom of the beam. Two angle brackets 7 are provided, one on each side of the upright members to slide on the top faces of the side beams. The vertical members of the L-shaped structures are braced to the horizontal members by means of an inclined member 8 and this too has a bracket 9 on each side to slide on the top faces of the side beams.

At each end of the beam there is a flanged end member 10 the front one of which in the drawing supports one end of a screw member 11 which projects through the flanged end member 10 with a square end over which a handle or key 12 may be fitted for rotating it. The screw member 11 extends through an aperture in the transverse member 8 of one of the L-shaped structures and through an internally screw-threaded block 13 secured to the vertical member of the L-shaped structure; and a portion of the screw member 11 of opposite thread passes through a similar internally threaded block secured to the vertical member of the other L-shaped structure which forms the support for the other end of the screw member, the further extension of the screw member simply projecting beyond this second block.

Thus when the handle is turned in one direction, the two L-shaped structures are brought towards one another by equal amounts, and when the handle is turned in the other direction, the two L-shaped members are moved away from each other by equal amounts.

Conveniently, two holes 14 are drilled at the top of each of the vertical members of the L-shaped structures to enable these members to be lengthened should it be necessary.

Furthermore, two angle brackets 4 drilled through their vertical sides may be fixed one on each end of the top of the horizontal beam structure to enable other formwork to be secured by nails or screws when required; and a

2

closing plate 3 is secured in the middle of the top of the horizontal beam structure.

Also three spaced spigots 15 may be secured as by welding to the underside of the horizontal beam to locate adjustable steel props when supporting the beam clamps. The middle spigot may be used when light beams are being cased, and the outer spigots may be used when using formwork for larger beams.

Various other modifications may be made within the scope of the invention. Thus the side beams can be of angle iron.

What is claimed is:

1. A clamp for holding together the formwork of casing used for casting concrete beams in situ, comprising a beam structure having a longitudinally-extending channel formed therein which is closed at each end by closure plates fitted to the ends of said beam structure, said closure plates each having an aperture through which passes a rotatable screw-threaded member extending the length of said channel and arranged to pass through correspondingly-threaded apertures in a pair of opposed, braced, L-shaped clamping members having flat underneath surfaces which slide along the bottom of said channel, said screw-threaded member having a right hand thread over one part of its length and a left hand thread over another part of its length whereby rotation of said member is effective to move said clamping members in opposite directions through equal distances, said beam structure being provided on the underside thereof with means for locating adjustable steel props, and angle brackets on the sides of said L-shaped members slidable on the upper outer surfaces of the beam structure.

2. A clamp for holding together the formwork of casing used for casting concrete beams in situ, comprising a beam structure having a longitudinally-extending channel formed therein which is closed at each end by closure plates fitted to the ends of said beam structure, said closure plates serving as bearing members for the ends of a rotatable rod having a right hand screw thread and a left hand screw thread over different parts of its length, which rod extends longitudinally of said channel and passes through correspondingly-threaded apertures in a pair of opposed, braced, L-shaped clamping members having flat underneath surfaces which slide along the bottom of said channel, and provided with angle brackets on their sides which slide on the upper outer surfaces of said beam structure, said beam structure being provided on the underside portion thereof with three spigots, one at each end and one in the middle of said underside portion.

3. A clamp for holding together the formwork of casing used for casting concrete beams in situ, comprising a beam structure having a longitudinally-extending channel formed therein which is closed at each end by closure plates fitted to the ends of said beam structure, said closure plates each having an aperture therein, a rotatable screw-threaded member extending the length of said channel and passing through said apertures in the closure plates, a pair of opposed, braced L-shaped clamping members having flat underneath surfaces which slide along the bottom of the channel, said L-shaped clamping members being provided with threaded apertures through which the rotatable screw-threaded member passes, said screw-threaded member having a right hand thread over one part of its length and a left hand thread over another part of its length whereby rotation of said member is effective to move the said clamping members in opposite directions through equal distances, said beam structure being provided on the underside thereof with means whereby said beam structure may be located on supporting means, and the upright portions of both of said L-shaped clamping members being apertured near their upper ends whereby

extension members may be secured to said upright portions.

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