

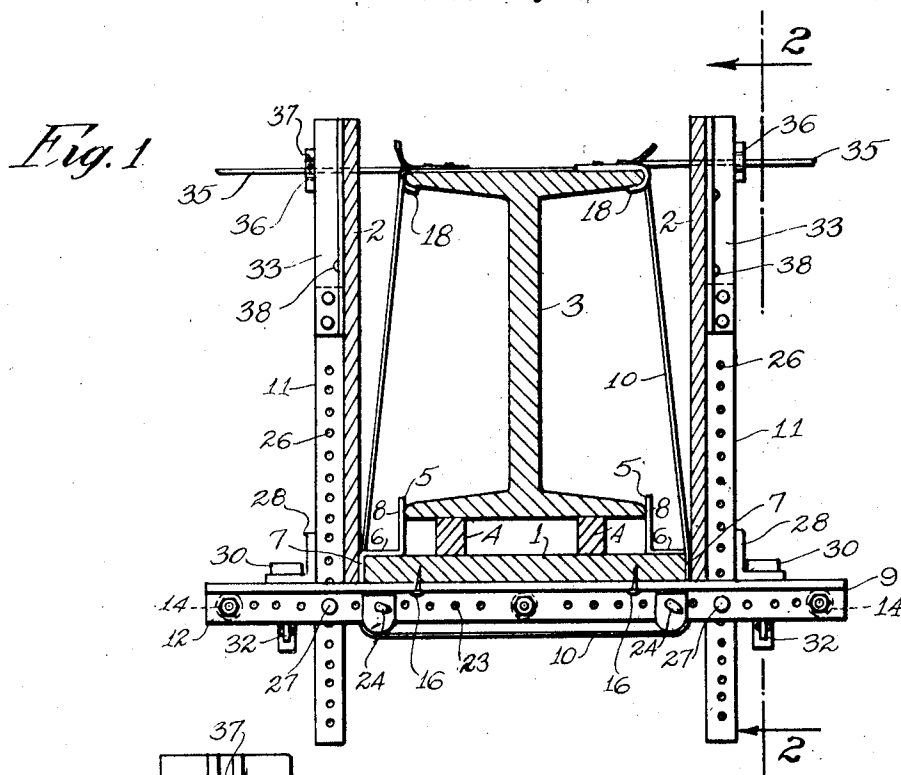
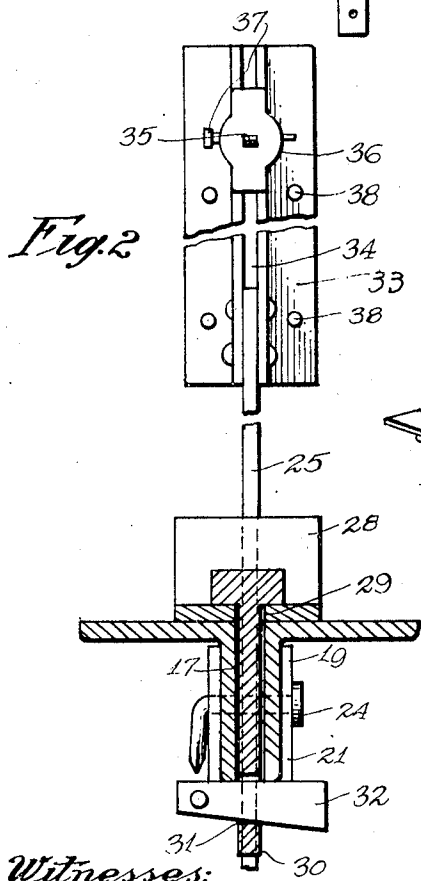
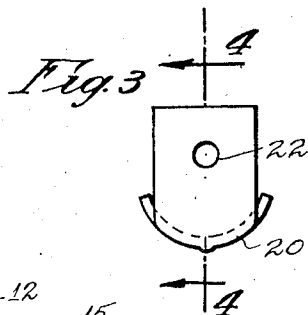
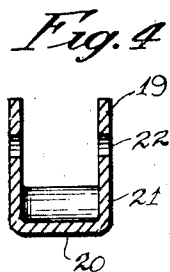
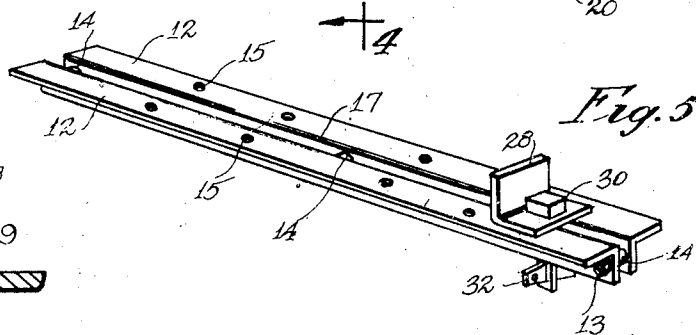
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FORM CLAMP

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UNITED STATES PATENT OFFICE.

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FORM CLAMP.

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This invention relates to clamps and particularly to form clamps for use in the construction of concrete girders, beams and joists.

The main objects of this invention are to provide a form clamp having improved means for supporting the soffit section of the mold without the use of battens heretofore commonly employed; to provide a form clamp of this kind having improved means for bracing the side wall sections of the mold and for detachably securing them to the soffit section; and to provide an improved form of adjustable bearing blocks arranged to permit a tie band to be looped around a portion of the clamp without abruptly kinking the band.

An illustrative embodiment of this invention is shown in the accompanying drawing, wherein:—

Figure 1 is a transverse section of a girder mold having an improved clamp applied thereto.

Fig. 2 is an enlarged section, partly broken away, taken on the line 2—2 of Fig. 1.

Fig. 3 is a side elevation of one of the improved bearing members.

Fig. 4 is a section, taken on the line 4—4 of Fig. 3.

Fig. 5 is a perspective of part of the clamp. In the form shown, the improved clamp is applied to a mold comprising a soffit section 1 and a pair of side wall sections 2.

The soffit section 1 is spaced from the bottom of a structural shape 3 by a plurality of spacers 4, and is properly centered by a pair of gauges or spacers 5. Each of the gauges 5 comprises a metal sheet bent to form a seat 6, supported on the soffit 1, a depending arm 7 located between the end of the soffit and the adjacent side section, and an upstanding arm 8 engaging the flange of the structural shape 3.

In the construction illustrated, the improved clamp comprises a beam 9 adapted to be suspended from the structural shape 3 by a tie 10 for supporting the mold sections and having adjustable braces 11 adapted to engage the outer faces of the side sections.

The beam 9 comprises a pair of angle bars 12 arranged in substantially parallel spaced relation and secured together by bolts 13 having spacer blocks 14 located between the bars.

Formed in the bars 12, are apertures 15 for receiving nails 16 whereby the beam 9 may

be temporarily secured to the lower face of the soffit 1.

The space between the bars 12 forms a slot or guideway 17 for receiving the bight of the tie band 10 which extends between the abutting edges of the mold sections 1 and 2. The ends of the tie 10 are secured to the top flange of the structural shape 3 by suitable clamps 18.

The bight of the tie 10 is looped around a pair of bearing members 19 which are adjustable longitudinally of the beam 9 for accommodating tie slings of different sizes.

The bearing members 19 may be sheet metal stampings and each comprises a convex bearing face 20 and a pair of spaced ears 21. Formed in the ears 21, are apertures 22 adapted to register with any pair of a series of apertures 23 formed in the beam 9 for receiving pins or nails 24 which detachably secure the bearing members to the beam 9.

The bearing members 19 span the guideway 17 and the convex faces 20 thereof cause the tie band to assume a curved form at the corners of the sling, thereby preventing abrupt kinks in the tie band which would interfere with the tightening of the band.

The bearing members 19 also space the lower portion of the tie sling from the beam 9, as shown in Fig. 1, so as to permit this portion of the sling to be readily clipped in dismantling the mold.

In the form shown, the braces 11 comprise a bar 25 disposed transversely of the beam 9 and extending through the guideway 17. Formed in the bars 25, are apertures 26 for receiving nails or pins 27 removably seated in certain of the beam apertures 23.

The bars 25 are adapted to engage the outer faces of the wall sections 2 and they are secured against outward movement at their lower ends by adjustable cleats 28 mounted on the beam 9.

Formed in the cleats 28, are slots 29 for receiving bolts 30 which extend downwardly through the guideway 17. The bolts 30 are provided with keyways 31 for receiving wedges 32 which are adapted to engage the lower edges of the bars 12 for locking the cleats against movement.

The upper end of each of the bars 25 is riveted to a pair of angle bars 33 which are spaced apart to provide a slot 34 for receiving a tie band 35. The inner end of each tie band 35 is secured to the structural shape 3 by a clamp similar to the clamp 18. The

outer end of each tie band 35 is secured to a clamp 36 by a wedge 37. The clamp 36 bears against the outer edges of the bars 33.

Formed in the bars 33, are apertures for receiving nails 38 whereby the bars 33 may be temporarily secured to the wall sections 2.

In operation, the beam 9 is suspended from the structural shape 3 by the tie sling 10. The wall sections 2 are then placed on the beam 9 and the braces 11 are mounted on the beam in engagement with the wall sections 2. The cleats 28 are then shifted into engagement with the braces 11 and the upper ends of the braces are secured to the tie bands 35.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A form clamp comprising a beam apertured to receive the bight of a tie sling, and a pair of spaced bearing members arranged to engage the inside of the sling, one of said bearing members being adjustable longitudinally of said beam.

2. A form clamp comprising a beam having a guideway for receiving the bight of a tie sling, and a pair of spaced bearing members arranged to engage the inside of the sling and being relatively adjustable longitudinally of said beam for accommodating slings of different sizes.

3. A form clamp comprising a beam having a guideway for receiving the bight of a tie sling, and a pair of spaced bearing members located in said guideway in position to engage the inside of the sling, one of said bearing members being adjustable longitudinally of said guideway.

4. A form clamp comprising a beam having a guideway for receiving the bight of a tie sling, and a pair of spaced bearing members detachably secured to said beam in position to engage the inside of the sling and being relatively adjustable longitudinally of said beam for accommodating slings of different sizes.

5. A form clamp comprising a beam having a slot extending longitudinally thereof for receiving the bight of a tie sling, and a pair of spaced bearing members arranged to engage the inside of the sling and being relatively adjustable longitudinally of said beam for accommodating slings of different sizes.

6. A form clamp comprising a beam having a slot extending longitudinally thereof for receiving the bight of a tie sling, and a pair of spaced bearing members arranged in

position to engage the inside of the sling, said bearing members being detachably secured to said beam and being adjustable longitudinally thereof for accommodating slings of different sizes.

7. A form clamp comprising a beam having a slot extending longitudinally thereof for receiving the bight of a tie sling, and a pair of spaced bearing members located in said slot and arranged in position to engage the inside of the sling, said bearing members being detachably secured to said beam and being adjustable longitudinally thereof for accommodating slings of different sizes.

8. A form clamp comprising a beam apertured to receive the bight of a tie sling, and a pair of spaced convex bearing members arranged to engage the inside of the sling, one of said bearing members being adjustable longitudinally of said beam.

9. A form clamp comprising a beam having one side adapted to bear against a form and being apertured to receive the bight of a tie sling, and a pair of spaced bearing members projecting beyond the opposite side of said beam for engaging the inside of the sling to space a portion of the sling from said beam.

10. A form clamp comprising a pair of bars arranged in substantially parallel spaced relation and secured together to form a beam, the space between said bars forming a guideway for receiving the bight of a tie sling, and a pair of spaced bearing members spanning said guideway in position to engage the inside of the sling.

11. A form clamp comprising a pair of bars arranged in substantially parallel spaced relation and secured together to form a beam, the space between said bars forming a guideway for receiving the bight of a tie sling, and a pair of spaced bearing members spanning said guideway in position to engage the inside of the sling, said bearing members being detachably secured to said bars and adjustable longitudinally of said guideway.

12. A form clamp comprising a pair of bars arranged in substantially parallel spaced relation and secured together to form a beam, the space between said bars forming a guideway for receiving the bight of a tie sling, said bars having a plurality of apertures therein spaced apart longitudinally thereof, removable pins seated in certain of said apertures, and a pair of bearing members secured to said pins and spanning said guideway for engaging the inside of the sling.

Signed at Chicago this 30th day of April, 1928.

HENRY H. LAMPERT.