July 23, 1929. G. B. BOSCO 1,721,685

FORM TIE AND SPACER

Filed June 8, 1928

Fig. 1

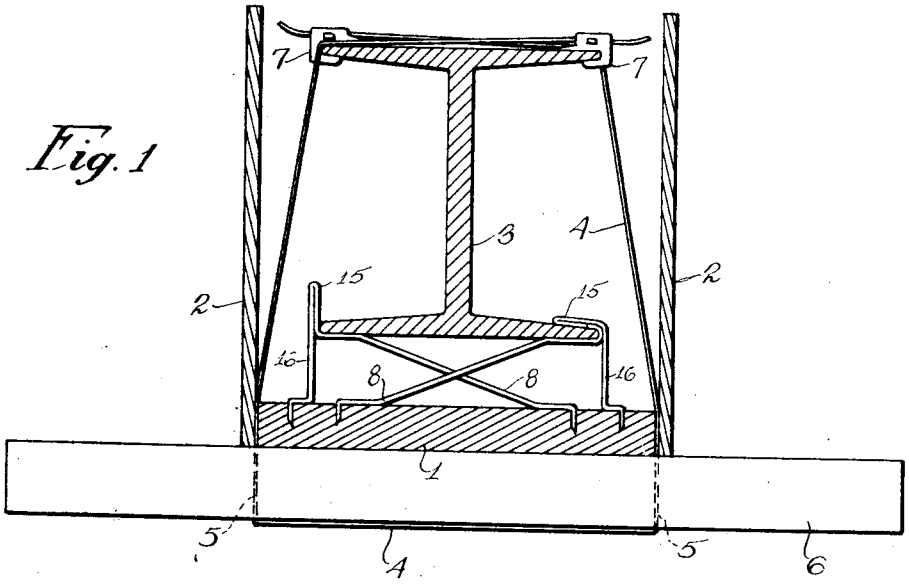
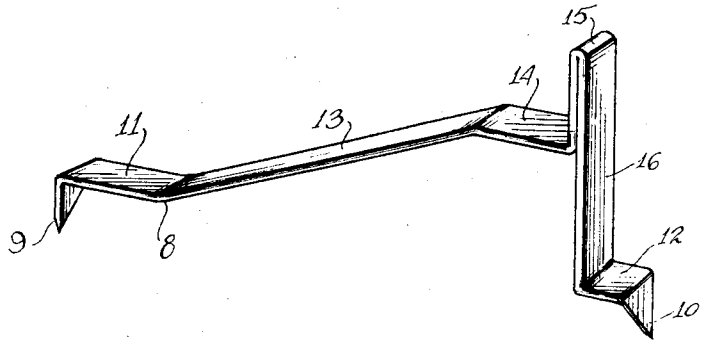


Fig. 2



Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE B. BOSCO, OF CHICAGO, ILLINOIS.

FORM TIE AND SPACER.

Application filed June 8, 1928. Serial No. 283,816.

The main objects of this invention are to provide an improved tie for molds used in the construction of concrete beams, joists and girders; to provide an improved form tie for securing the mold against lateral displacement relative to the structural shape; to provide improved means for spacing the soffit of the mold from the bottom of the structural shape; and to provide a combination form tie and spacer which is inexpensive and which may be readily applied.

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

Figure 1 is a transverse section of a beam mold having a pair of ties and spacers applied thereto.

Figure 2 is a perspective of one of the improved ties and spacers.

Building ordinances generally provide that, in the construction of buildings reinforced with structural steel shapes, the steel must be protected by fire-proofing material of a specified thickness. For this reason, in the construction of concrete beams, joists, and girders, the soffit and side members of the mold must be spaced the required distance from the I-beam or other steel shape, so as to permit the concrete to completely surround the beam.

In assembling the beam mold and suspending it from the steel beam, the mold sometimes has a tendency to shift laterally relative to the beam, with the result that the concrete on one side of the steel shape would be thicker than that on the other side.

The improved tie and spacer herein shown and described is adapted to be mounted directly on the soffit member of the mold and to engage the lower flange of the I-beam for spacing the mold the required distance from the beam and for securing it against lateral displacement.

In the form shown, the improved tie and spacer is applied to a beam mold comprising a soffit 1 and side sections 2, arranged to form a channel, which is suspended from a steel I-beam 3 by flexible metal bands 4. The bands 4 are looped to form slings, which pass through apertures 5 in battens 6 extending transversely of the mold. The ends of the bands 4 are secured to the top flange of the beam by clamps 7.

In the form shown, each of the improved tie elements comprises a flexible metal band 8, having prongs 9 and 10 formed on the extremities thereof for anchoring the device to the soffit section 1. Formed adjacent the prongs 9 and 10, are bearing portions 11 and 12, respectively, for engaging the top face of the soffit.

Between the bearing portions 11 and 12, the band 8 is bent to form an inclined brace part 13 and a seat portion 14. Adjacent the seat portion 14, the band is folded upon itself to form an upstanding finger 15 and a depending spacer leg 16.

In operation, the improved ties and spacers are arranged on the soffit member 1, before the mold is assembled, and the prongs 9 and 10 are driven into the soffit. The devices are arranged as shown in Fig. 1, so as to permit adjacent elements to engage respectively opposite edges of the beam.

After the devices have been mounted on the soffit, the mold is suspended from the beam and raised until the seat portions 14 engage the bottom flange of the beam 3. The fingers 15 are then bent over the bottom flange.

With this improved construction and arrangement of parts, the mold is secured against lateral displacement and the soffit section is spaced the required distance from the beam.

I claim:

A mold tie for securing a mold against lateral displacement relative to its beam, comprising a flexible bar having prongs on the ends thereof for attachment to the mold, bearing portions on said bar adjacent said prongs, and an inclined brace portion formed adjacent one end of said bar, the portion of said bar located between said brace and the other end of said bar being folded upon itself to form an upstanding finger for attachment to the beam and a depending spacer leg.

Signed at Chicago this 6th day of June, 1928.

GEORGE B. BOSCO.