

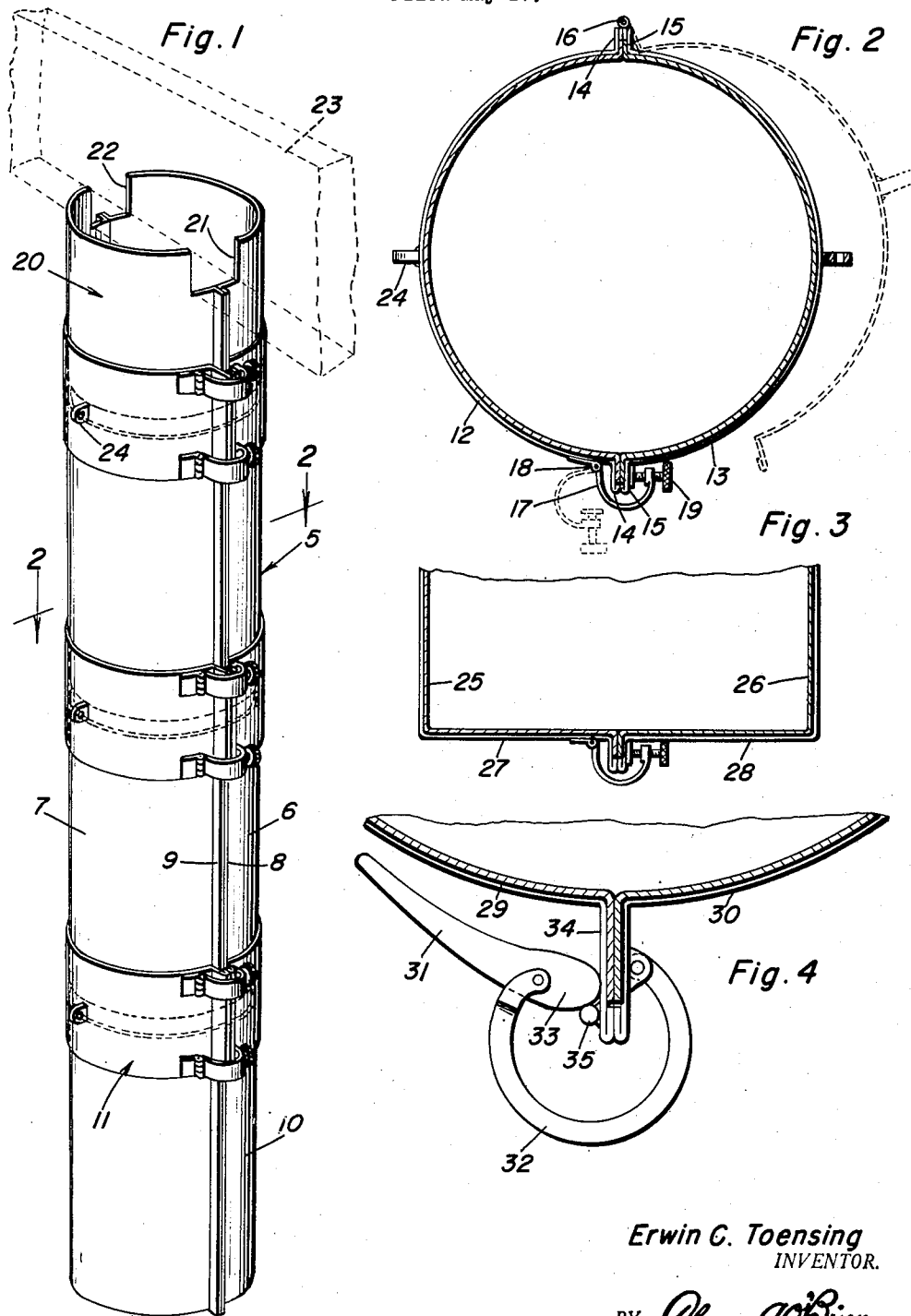
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E. C. TOENSING

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ADJUSTABLE AND COLLAPSIBLE PIER MOLD

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Erwin C. Toensing
INVENTOR.

BY *Oliver A. Olson*
and *Harvey B. Jacobson*
Attorneys

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ADJUSTABLE AND COLLAPSIBLE PIER MOLD

Erwin C. Toensing, Albuquerque, N. Mex.

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3 Claims. (Cl. 25—118)

The present invention relates to new and useful improvements in molds for use in pouring concrete piers or columns used in building construction.

An important object of the invention is to provide a sectional tubular mold adapted for supporting a beam or girder thereon at a desired height and having adjustable telescoping connecting sleeves at the meeting ends of the sections of the mold for adjusting the sections vertically within a limited range to level the beam or girder before pouring the concrete.

Another object is to provide novel clamping means for easily and quickly securing the mold sections and the connecting sleeves in assembled relation.

A further object is to provide a device of this character of simple and practical construction, which is strong and durable, relatively inexpensive to manufacture and otherwise well adapted for the purpose for which the same is intended.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing the mold in erected position;

Figure 2 is an enlarged transverse sectional view taken on a line 2—2 of Figure 1;

Figure 3 is a fragmentary enlarged transverse sectional view of a modified cross-sectional shape of the mold; and

Figure 4 is an enlarged fragmentary transverse sectional view illustrating a modified clamping device for the connecting sleeve.

Referring now to the drawing in detail, the numeral 5 in Figure 1 designates the assembled pier or column mold generally and which is constructed of a predetermined number of semicylindrical metal sections 6 and 7 having outwardly projecting abutting flanges 8 and 9 at their vertical meeting edges, and when secured to each other, the semicylindrical mold sections 6 and 7 form a tubular cylindrical mold section 10.

The mold sections 10 are secured to each other in end-to-end vertical position by means of connecting sleeves designated generally at 11 and which are constructed of semicylindrical sections 12 and 13 positioned in telescoping overlapping relation with respect to the adjacent ends of the sections 10 and the meeting vertical edges of the sleeve sections 12 and 13 are also formed with outwardly projecting flanges 14 and 15 positioned in confronting relation at the outer surfaces of the flanges 8 and 9 to clamp the flanges 8 and 9 therebetween.

The flanges 14 and 15 at one side of the sleeve 11 are connected to each other by a conventional hinge structure 15 for swinging the sections of the sleeve inwardly

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and outwardly with respect to the mold, as shown by dotted lines in Figure 2.

The free end portions of the sleeve sections 12 and 13 are secured in closed position on the mold by means of a C-clamp 17 which is pivoted at one end to the sleeve section 12 by a conventional hinge structure 18 and a clamping screw 19 is threaded into the other end portion of the C-clamp for clamping engagement with the flange 15 of the sleeve section 13, as shown more clearly in Figure 2.

The connecting sleeves 11 are constructed of sufficient width to permit limited vertical or endwise adjustment of the mold sections 10 relative to each other.

The uppermost mold section designated at 20 is formed at diametrically opposite sides with aligned notches 21 and 22 in which a beam or girder 23 may be placed to rest on top of the mold. The notches are preferably formed at the vertical meeting edges of the semicylindrical sections of the mold.

The mold sections 10 are assembled and erected and supported in a perpendicular position by means of guy wires (not shown) attached to outwardly projecting eyes 24 on the connecting sleeves 11. The beam or girder 23 is then placed in the notches 21 and 22 of the uppermost mold section 20 and either or both the lower mold sections 10 or the upper mold section 20 adjusted vertically in the respective sleeves to level the beam or girder 23. Concrete is then poured in the upper end of the mold to the level of the top of the upper mold section 20 and it thus partly embeds the beam or girder 23 therein. After the concrete has set, the clamps 17 are released and the mold sections and sleeves may be separated and removed from the pier or column just constructed.

Figure 3 illustrates a modified mold construction wherein the mold sections 25 and 26 and the connecting sleeve sections 27 and 28 are of square cross-sectional shape and it will be understood the mold may be also constructed of hexagonal or other cross-sectional shape.

In Figure 4, I have illustrated a modified clamp construction for the meeting vertical edges of the clamping sleeve sections 29 and 30 and in which a lever 31 is pivoted to the free end of a C-clamp 32 at a point eccentric to the axis of a flat cam head 33 on the inner end of the lever and which bears against an adjacent flange 34 on the sleeve to tighten the sleeve sections by swinging the lever inwardly.

A stop lug 35 is provided on flange 34 in the path of locking movement of the cam head 33 to limit inward swinging movement of the lever toward the sleeve to maintain the lever spaced from the sleeve for gripping the lever to release the cam. The stop is positioned with respect to the pivot for the lever to permit movement of the cam head into a self-locking position.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A mold of the class described comprising a plurality of hollow mold sections open at their top and bottom portions and adapted for erecting in superposed relation with respect to each other, each of said mold sections including a pair of separable mold members having vertical meeting edge portions at opposite sides of the mold sections, confronting flanges at the meeting

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edge portions at said opposite sides of said separable members, a band telescopically fitted in overlapping relation at the meeting ends of the mold sections, said band comprising a pair of hingedly connected sections, flanges at the hinged portion of said band sections positioned in confronting engaging and clamping relation to adjacent flanges on the mold members at one side thereof, flanges at the free ends of the band sections, a C-clamp hingedly connected at one end to one of the band sections and swingable into and out of bridging relation with said last named flanges, and means carried at the other end of the C-clamp and engaging an adjacent flange of the band to clamp the flanges of the band to the flanges of the mold members, said flanges on the free ends of the band section clamping therebetween the flanges at the other sides of the mold sections.

2. The construction of claim 1 wherein said means comprises a clamping screw at the free end of the C-clamp and engaging an adjacent flange of the band.

3. The construction of claim 1 wherein said means

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comprises a cam lever pivoted to the free end of the C-clamp and having a cam head engaging an adjacent flange of the band, and a slop lug on said last named flange and engaged by the cam head to limit swinging movement of the lever inwardly toward the band in clamping position.

References Cited in the file of this patent

UNITED STATES PATENTS

862,123	Adams	Aug. 6, 1907
1,201,613	Novy	Oct. 17, 1916
1,282,200	Des Lauriers	Oct. 22, 1918
1,291,781	Des Lauriers	Jan. 21, 1919
1,374,063	Corbett	Apr. 5, 1921
1,443,459	Carty	Jan. 30, 1923
1,445,907	Novy	Feb. 20, 1923
2,093,346	Badt	Sept. 14, 1937

FOREIGN PATENTS

659,935	France	July 4, 1929
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