G. W. JOHNSON.

MOLD.

APPLICATION FILED JAN. 20, 1914.

1,128,150.

Patented Feb. 9, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

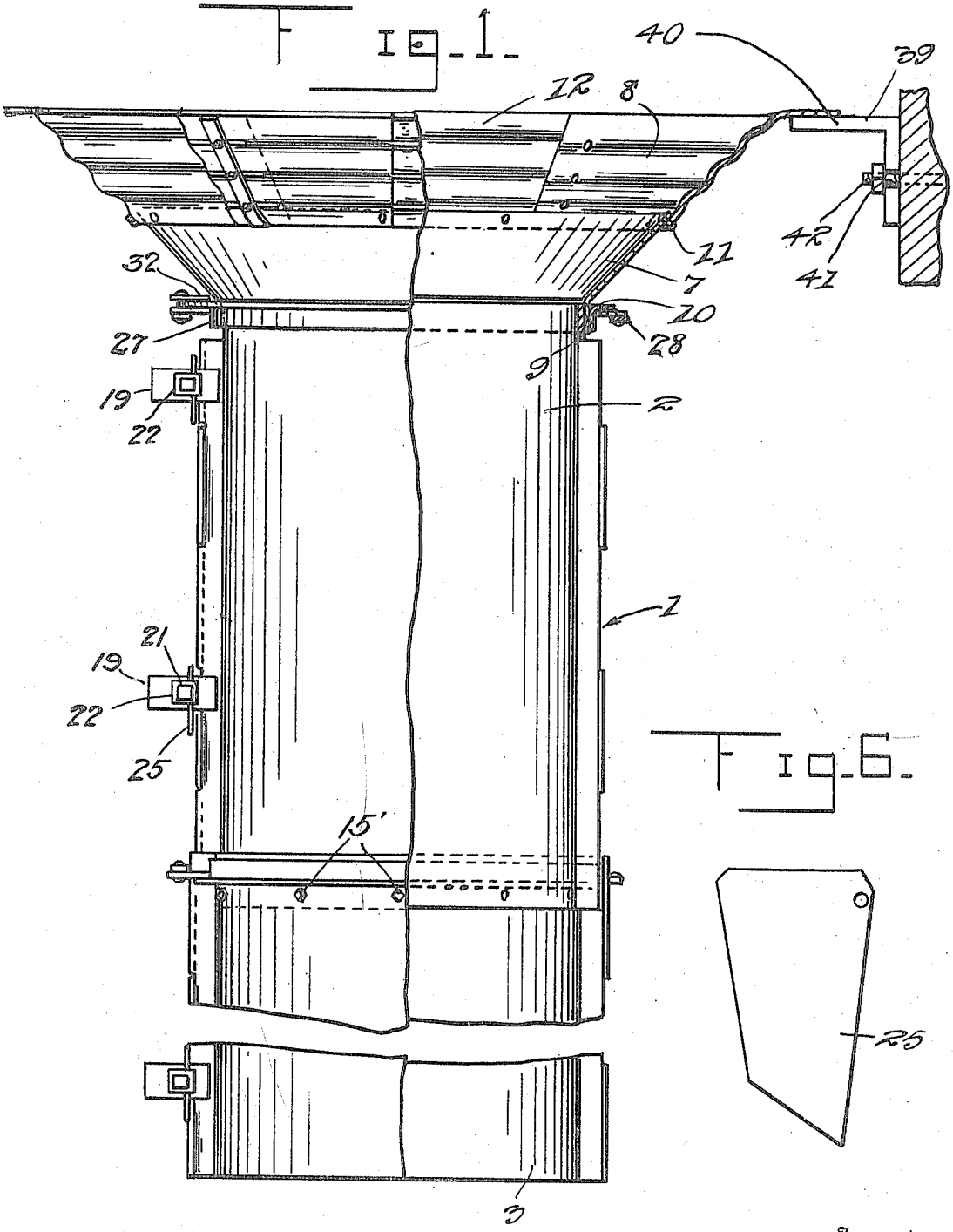


Fig. 6.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

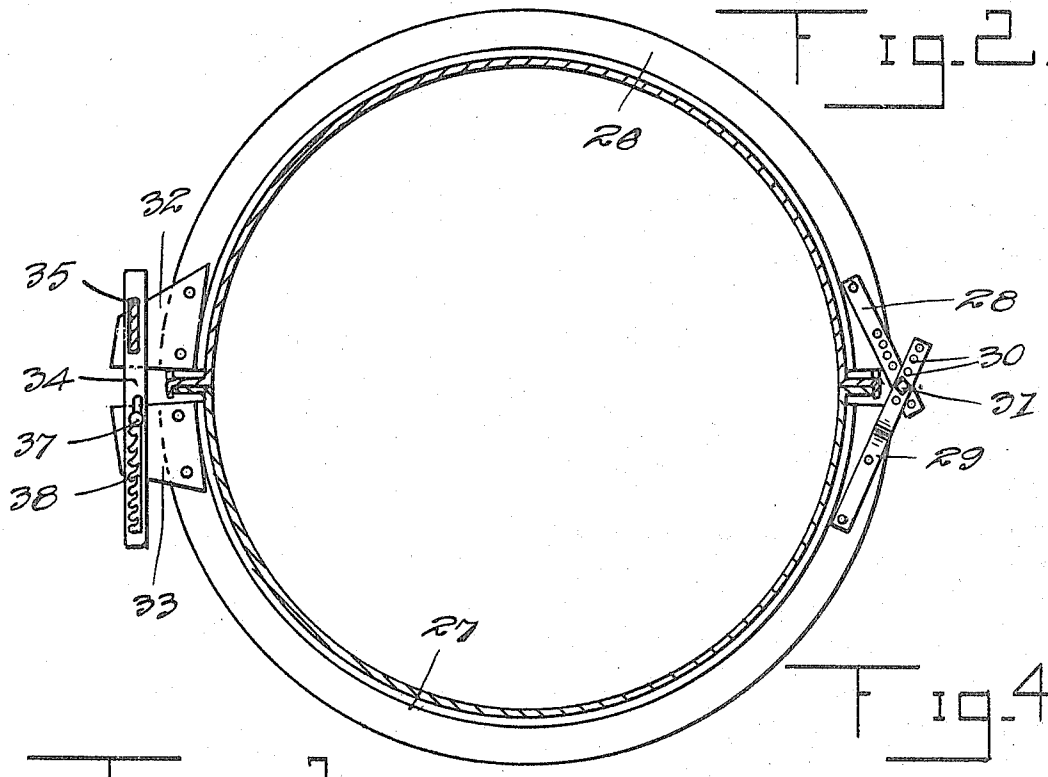


Fig. 4.

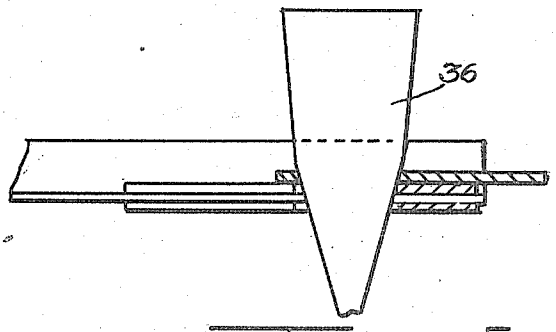


Fig. 3.

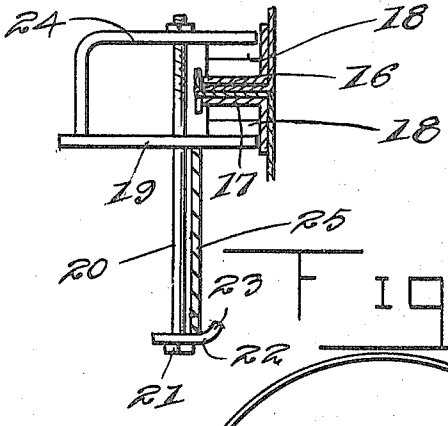


Fig. 7.

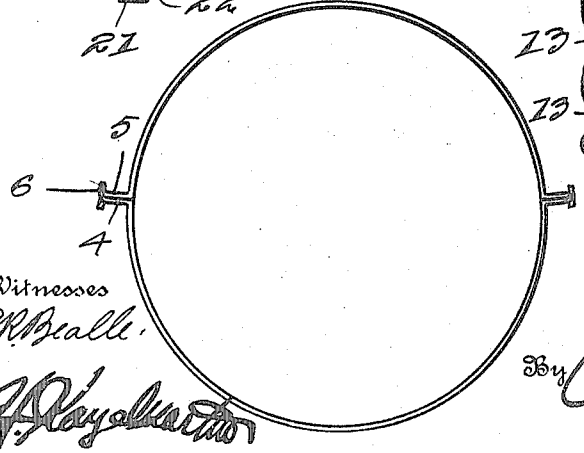
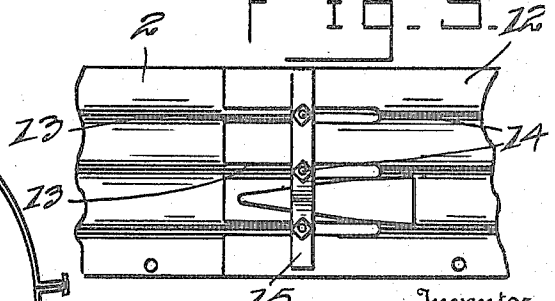


Fig. 5.



Witnesses

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MOLD.

1,128,150. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed January 20, 1914. Serial No. 813,240.

To all whom it may concern:

Be it known that I, GEORGE W. JOHNSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in molds for concrete, and similar materials, and has for its object to provide a simple and effective mold which may be easily and quickly put in place and removed when it is so desired.

Another object of the invention is to provide a device which may be constructed of sheet metal in such a way that the cost of manufacture will be reduced to a minimum.

A further object of this invention is to provide a simple and effective means for locking the mold in place and provide locking means which are capable of being used on molds of different sizes.

A still further object of the invention is to provide a simple and effective seam which will prevent the leakage of the wet material and also act as a stiffening rib to reinforce the mold throughout its entire length.

With the above and other objects in view, the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which

Figure 1 is a view of a mold constructed in accordance with this invention showing the same partly in section to more clearly illustrate the construction thereof, Fig. 2 is an enlarged transverse sectional view of a mold constructed in accordance with this invention showing the locking band in place, Fig. 3 is an enlarged detail sectional view of the joint and stiffening rib and also of the locking means for holding the stiffening rib in place, Fig. 4 is an enlarged detail sectional view of the locking means for the ring which surrounds the mold, Fig. 5 is an enlarged view in elevation of the crown which is used in connection with this device showing the method of securing the ends of the same, Fig. 6 is an enlarged detail view of one of the wedges which is used in conjunction with this invention, and Fig. 7 is a top plan view of the column mold showing the interlocking longitudinal seam in detail.

Referring now to the drawings by characters of reference, the numeral 1 designates as an entirety a column mold constructed in accordance with this invention and comprises a plurality of sections 2 and 3, which are joined in a manner which will be more fully described. Each of these sections 2 and 3 is semicircular in cross section and each is provided at its longitudinal edges with the out-turned flange 4 which cooperates with the flange 5 formed on the opposite section to form the cylindrical member which is illustrated in the drawings. The free ends of the flanges 4 and 5 are preferably bent in opposite directions as at 6 and are separated by a plurality of recesses which form oppositely extending tongues. The interlocking of these elements is best illustrated in Figs. 3 and 7.

A suitable neck member 7 which is made up of a plurality of semi-frusto conical elements, is provided and is adapted to rest upon the upper edges of the assembled column and support the crown piece designated generally by the numeral 8. Each of the sections forming the neck 7, is provided with a down-turned flange 9 which has secured thereto the angle iron 10 which is provided at its ends with a suitable clamp which will be more fully hereinafter described. A plurality of bolts 11 are arranged to extend through apertures in the neck and secure the crown piece 8 in place.

The crown piece 8 mentioned in the foregoing paragraph is provided with a plurality of sections 12 which are stamped to form any desired molding face on the concrete and one end of each of these members 12 is provided with a plurality of slots 13 which are arranged to receive the bolts 14, which bolts are carried by the opposite end of the coöperating member 12. A suitable strip of metal 15 is secured to the bolts near their ends and is adapted to overlie the tongues on the coöperating member when the device is in its assembled position.

The sections 2 and 3 telescope one another and are fastened together by means of bolts 15′. The member 7 is secured to the main column form by one of the clamps that is illustrated particularly in Fig. 2 so that it may be readily attached and detached.

Having described the several elements

forming the mold, it now remains for the description of the locking clamp which holds the afore-mentioned elements in place.

Passing now to the details of the description of the locking clamp for the longitudinal rib, attention is directed particularly to Fig. 3 in which a pair of angle members 16 and 17 are provided and have secured thereto the filler elements 18. A suitable plate of material 19 is secured to the outer surface of the filler blocks 18 which are secured to the angle member 17, and is provided with a suitable aperture which is adapted to receive the bolt 20. This bolt 20 is provided with the usual head 21 against which the plate 22 which is bent as at 23, to form a substantially L-shaped member, is adapted to rest. The end of the bolt opposite the head is provided with the usual screw threads and the nut which is arranged to hold the L-shaped angle member 24 in place. The free end of the long arm of the L-shaped member is secured to the filler blocks 18 which are secured to the angle members 16, and the short arm of said L-shaped member is adapted to abut the free end of the plate 19 as clearly shown. When it is desired to hold these members firmly in place, a suitable wedge 25, a detail of which is illustrated in Fig. 6, is forced between the plate 19 and the angle plate 22 and thus brings the angle members 16 and 17 into frictional engagement with the longitudinal flanges 4 and 5, and firmly clamps the flanges in place.

The coöperating clamp which is used to properly hold the shape of the mold, is best illustrated in Fig. 2, and comprises the semicircular angle bars 26 and 27. These clamps are used at the horizontal joint between the superposed telescoping members and serve to securely hold the members in operative relation to one another. The overlapping tongues on the edges of the flanges insure a rigid connection of the several parts of the device and increase the rigidity of the structure in general. Each of these angle bars is provided at one end with the bars 28 and 29 respectively. Each of the bars 28 and 29 is provided with a plurality of apertures 30, which are adapted to receive the bolts 31 to provide for adjustment of the clamp member. The ends of the members 26 and 27 opposite the bars 28 and 29 are provided with the plates 32 and 33 respectively, which plates are adapted to coöperate with the bar 34 in holding the members 26 and 27 in their adjusted position. The plate 32 is preferably provided with a slot which coöperates with the slot 35 in the bar 34. Each of these slots is so arranged as to receive and come in direct alinement with, the wedge 36 when the device is assembled. The plate 33 is preferably provided with a suitable bolt or rivet 37 which extends through the notched slot 38 formed in the bar at the end opposite the slot 35. Thus it will be seen that by adjusting the notched slot in the end of the bar 34 with relation to the bolt 37, the clamp may be used for several different sized columns.

It will be clearly seen from the foregoing that in use the device is assembled as shown in Fig. 1, and the clamp members illustrated in Fig. 3 are secured to the longitudinal rib of the several elements going to make up the column mold. After the several elements have been put in place, the clamp members illustrated in Fig. 2, are then placed on the column mold and adjusted to the proper size thereof. As soon as the mold has been built up to the proper size and height, the neck member 7 is placed in position and the crown member 8 is then secured to the neck by means of the bolts 11. To insure the proper positioning of the device, there is preferably provided the supporting element designated generally by the numeral 39 which comprises the angle plate 40 provided with the slot 41. This slot 41 extends transversely of the vertical portion of the angle plate and is adapted to receive the bolt or screw 42 by means of which the angle plate is held in place. The horizontal part of the angle plate extends parallel with the ceiling and is arranged to engage the outwardly extending flange formed at the upper edge of the crown member and hold the same firmly against the ceiling.

When it is desired to disassemble the device, it is evident that the clamps are loosened and the bolt 42 withdrawn, thus permitting the entire form to collapse and fall away from the finished column.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arangement of parts as will fall within the scope and spirit of the invention as claimed.

Having thus described my invention, I claim:

1. A device of the character described comprising a plurality of semi-circular sections, flanges formed at the edges of the semi-circular sections and extending longitudinally thereof, tongues formed at the free edges of the flanges, said tongues on one section being adapted to interlap with the tongues on the coöperating section, a clamp comprising an L-shaped plate and a flat plate, angle members secured to each of said plates, the short arm of the L-shaped plate being adapted to engage the free edge of the coöperating plate, a bolt extending through the plate, an angle member carried by one end of the bolt, and a wedge adapted to be forced between the angle member and one of the

plates and thereby force the several elements toward each other.

2. In a device of the character described, the combination with a column mold comprising a plurality of semi-circular sections, flanges at the edges of the sections, and clamps to hold the flanges in place, of a pair of semi-circular angle bars, an adjustable pivotal connection at one of the joints in the semi-circular angle bars, plates secured to the ends of the angle bars opposite the pivotal connection, a bolt carried by one of said plates, a notched bar adjustable on the bolt, said bar being provided with a slot in its free end, the other of the plates being provided with a slot and a wedge adapted to enter the slot in the bar and the plate and firmly clamp the semi-circular angle bars in place on the column mold.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. JOHNSON.

Witnesses:
JOHN ENGMAN,
WM. R. WHITE.