P. PERSSON.

MOLD.

APPLICATION FILED MAY 3, 1920.

1,365,124.

Patented Jan. 11, 1921.

4 SHEETS—SHEET 1.

Fig. 2

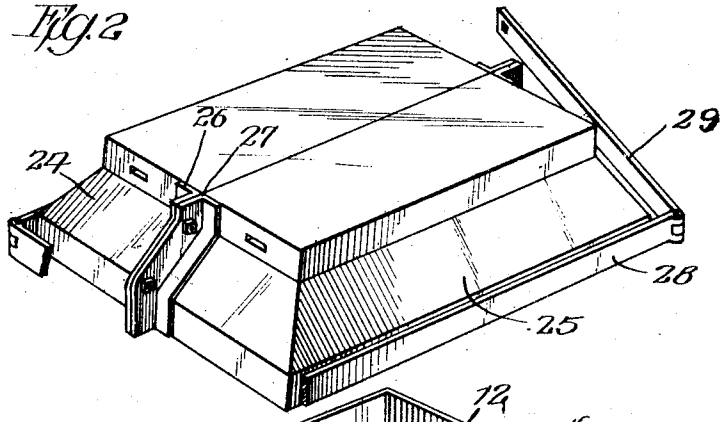
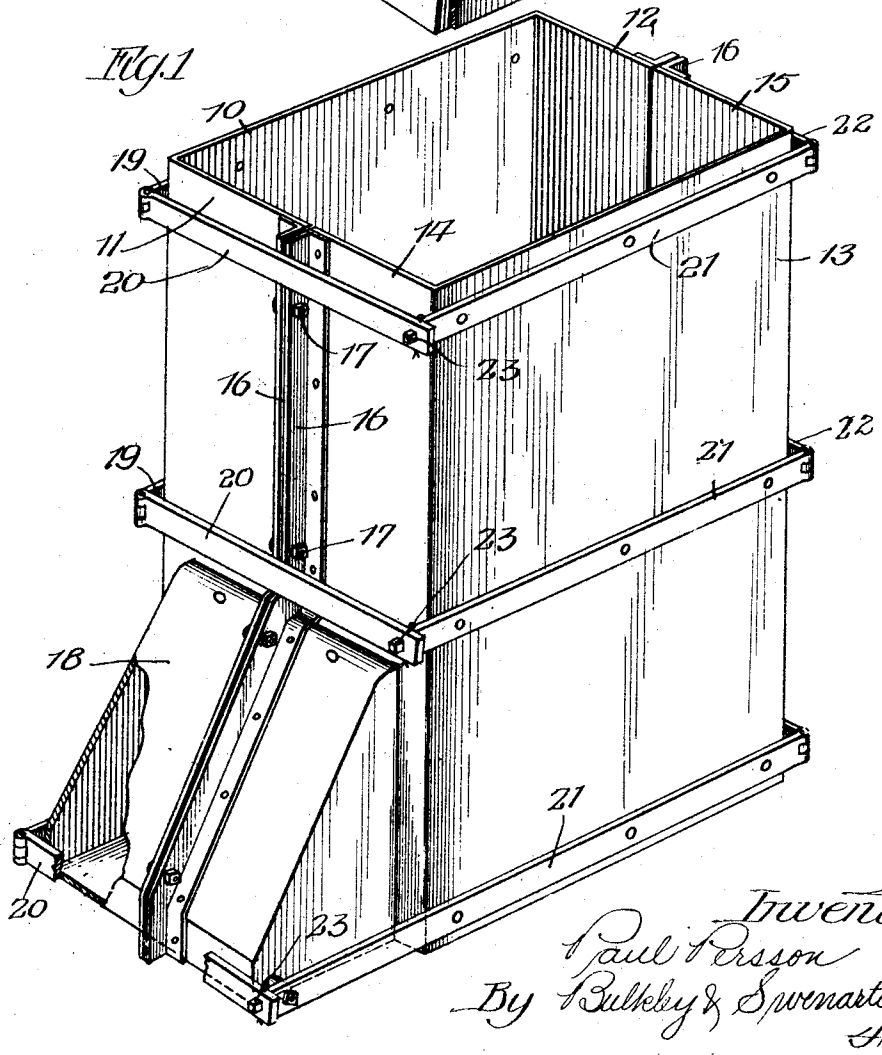


Fig. 1



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4 SHEETS—SHEET 2.

Fig. 4

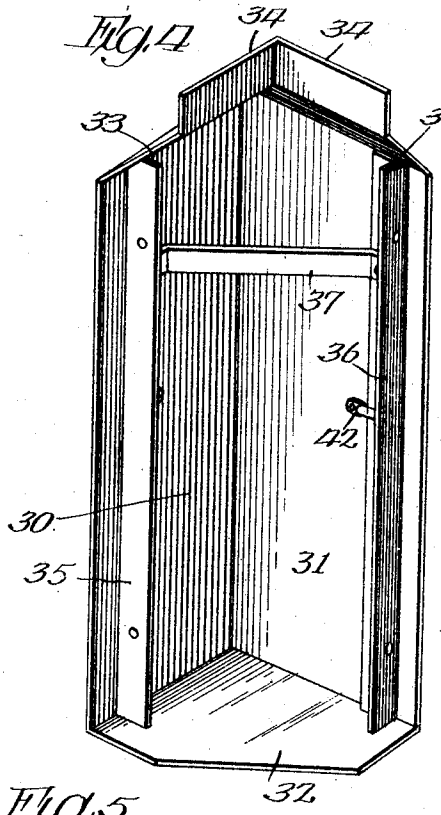


Fig. 3

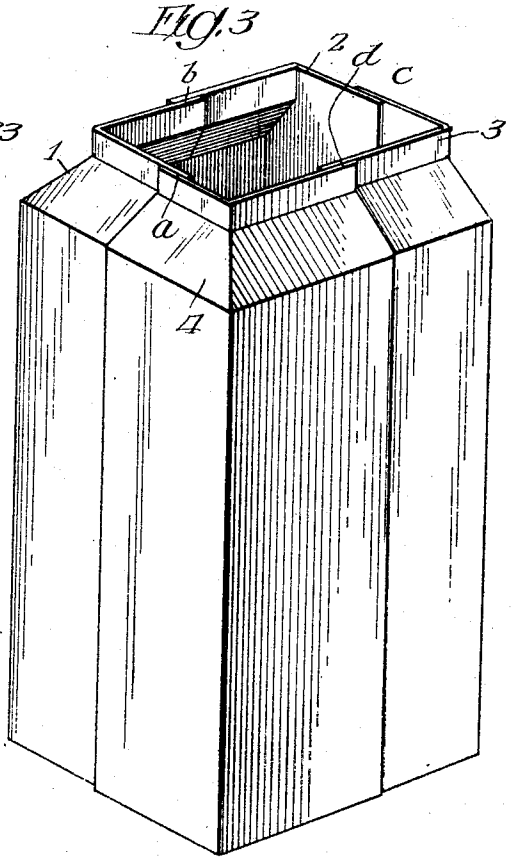


Fig. 5

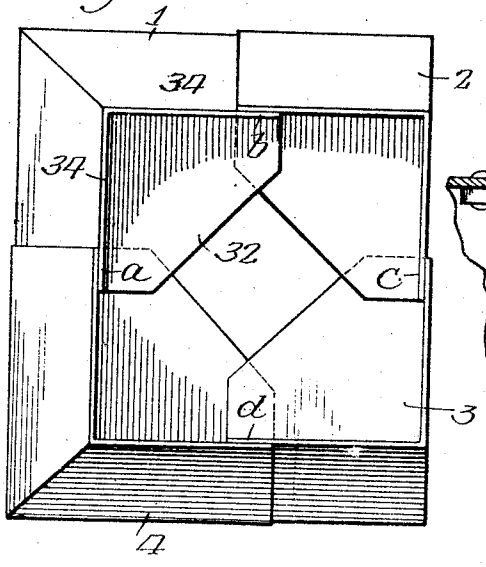
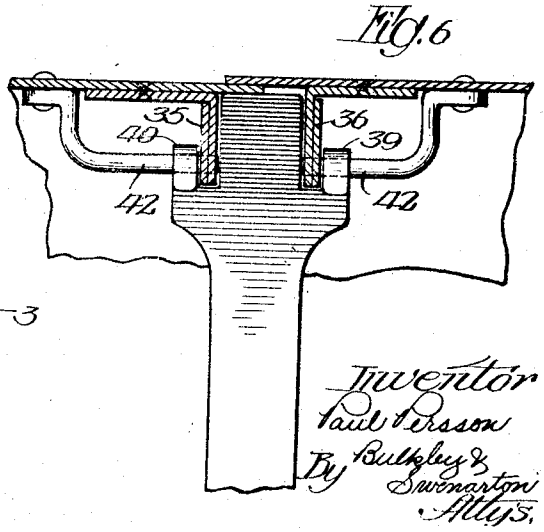


Fig. 6



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4 SHEETS—SHEET 3.

Fig. 8

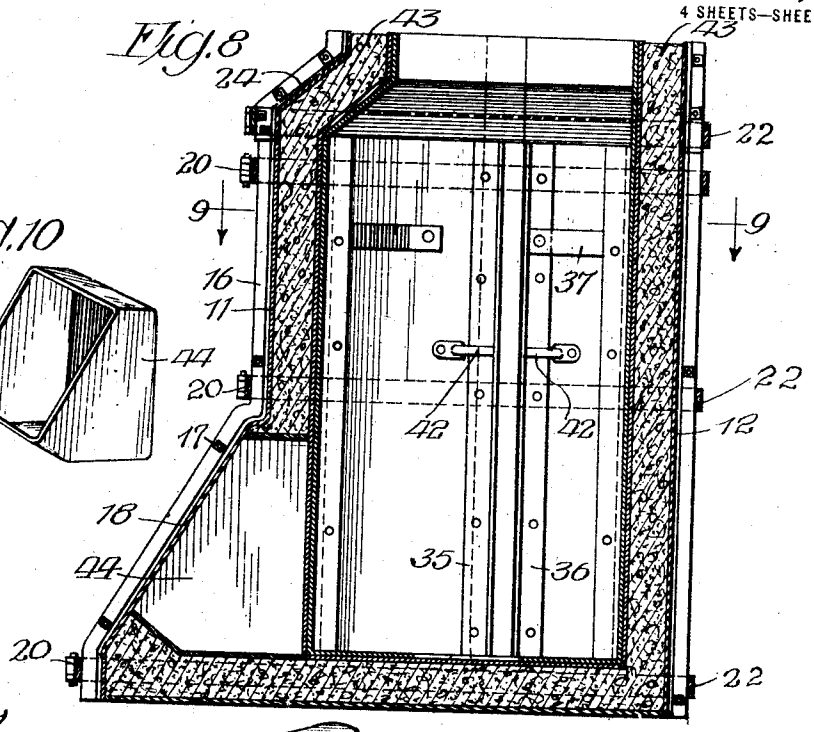


Fig. 10

Fig. 7

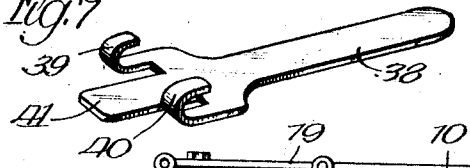
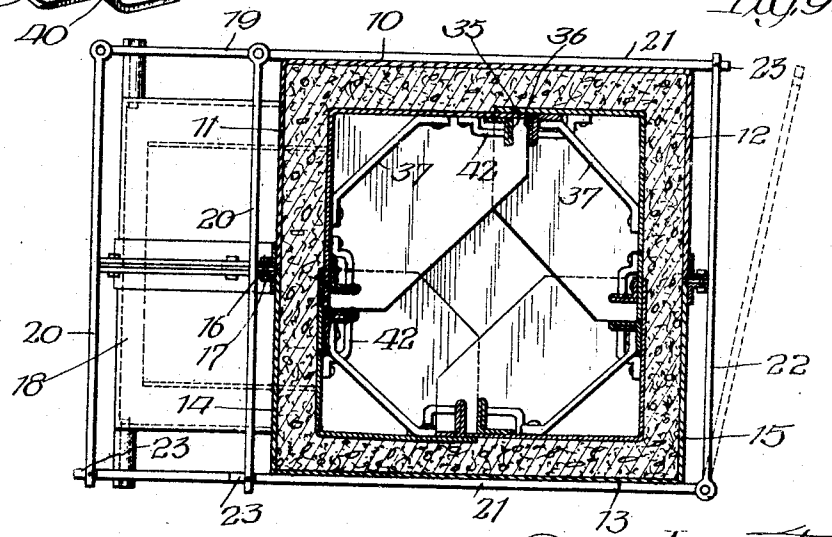


Fig. 9



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4 SHEETS—SHEET 4.

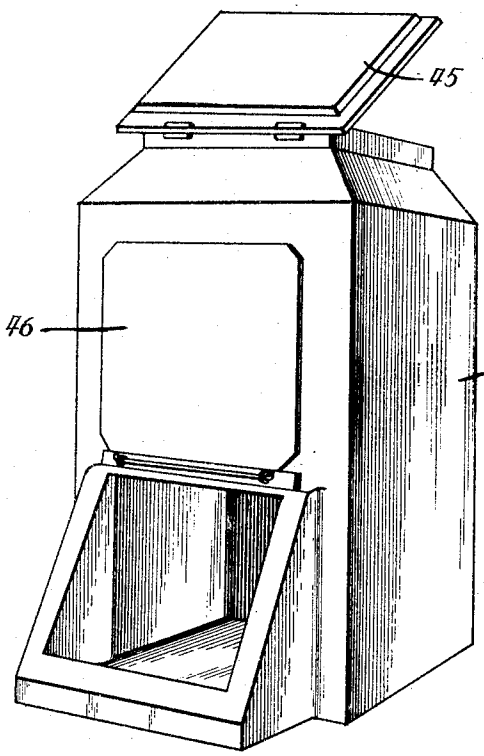


Fig. 11

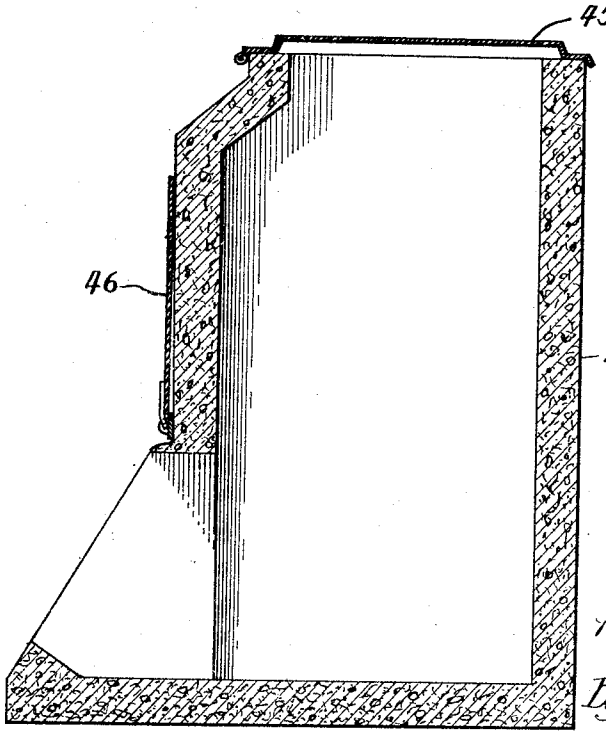


Fig. 12

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UNITED STATES PATENT OFFICE.

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MOLD.

1,365,124. Specification of Letters Patent. **Patented Jan. 11, 1921.**

Application filed May 3, 1920. Serial No. 378,597.

To all whom it may concern:

Be it known that I, PAUL PERSSON, a citizen of the United States of America, and resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Molds, of which the following is a specification.

My invention relates to an improvement in molds, and particularly a mold for forming hollow concrete receptacles having an opening of reduced size at the top, which receptacles are particularly adapted for use as garbage containers, although, of course, my molds may be employed for forming receptacles adapted for other purposes.

Among the features and objects of my invention is the provision of a rigid outside mold member which may be quickly and easily assembled.

A further feature consists in an improved collapsible core formed of a plurality of independent sections which are locked together, and which may be unlocked and independently removed through the reduced opening at the top of the formed receptacle.

A further feature relates to the improved locking and reinforcing means for holding and locking the sections of the core together.

These and other features and objects of my invention will be more readily understood by having reference to the accompanying drawings, in which I have illustrated one embodiment of my invention, showing the manner in which the same is employed for forming concrete garbage receptacles.

Figure 1 is a perspective view of the outside container.

Fig. 2 is a perspective view of the separable top member for forming the upper portion of the receptacle.

Fig. 3 is a perspective view of the assembled core.

Fig. 4 is a perspective view of one of the sections of the core.

Fig. 5 is a plan view of the assembled core.

Fig. 6 is a sectional detail showing the means for locking the sections of the core together.

Fig. 7 is a perspective detail of the locking member.

Fig. 8 is a longitudinal sectional view of the mold when in assembled position, and with the material poured between the outer and inner sections of the mold.

Fig. 9 is a transverse sectional view of the structure shown in Fig. 8.

Fig. 10 is a perspective detail of the member inserted in the mold for forming an opening in the lower portion thereof.

Fig. 11 is a perspective view of the finished receptacle.

Fig. 12 is a longitudinal sectional view of the same.

As illustrated in the drawings, the outside container or member of the mold consists of two independent sections, one consisting of a side member 10 and end members 11 and 12, and the other consisting of the side section 13 and end members 14 and 15. The end members 11 and 14, and 12 and 15 are reinforced by suitable angle iron flanges 16 which, when the mold is assembled, are secured together by means of bolts 17. The lower portion of the end members 10 and 14 are extended downwardly and outwardly, as indicated at 18, for the purpose of forming an outwardly flared face to the receptacle being formed. In order to reinforce these outer mold sections, there is riveted to the side section 10 a series of metallic bars 19 to one end of each of which a bar 20 is hinged. Likewise, secured to the section 13, there is a series of bars 21 to which the bars 22 are hinged. By this construction, each of the two sections of the mold carry one series of flat bars riveted thereto, to each of which a swinging bar is hinged, and then these hinged bars are adapted to be connected to the stationary or riveted bars of the opposite section by means of suitable cotter pins 23.

In Fig. 2, I have shown the section of the mold which is adapted to fit upon the top of the section shown in Fig. 1, for the purpose of forming the top of the receptacle, this top having sloping sides so as to form an opening of a reduced size in the top of the receptacle. This upper portion consists of two parts 24 and 25, provided with angle iron reinforcing and connecting members 26 and 27, similar to those on the lower sections, and with reinforcing bars 28 and 29, similar to the corresponding reinforcing

bars employed for the lower section. This top section is adapted to be placed upon the top of the lower sections 10 and 13.

Within the outer section of the mold, I place a collapsible core, shown in detail in Figs. 3, 4 and 5. This core consists of four independent sections, one of these sections being shown in Fig. 4. As there shown, each section consists of two side members 30 and 31, connected together by a bottom member 32 and forming a right angle with each other. The upper portion of these two side sections is formed with an inwardly incline 33 and an upwardly extending flange 34. In order to reinforce these side sections, I provide longitudinally extending angle irons 35 and 36, near the marginal edge of the members 30 and 31, and also provide a cross brace 37, which brace likewise may be used as a handle for enabling the sections to be removed in a manner hereinafter described. These four sections are assembled as shown in Figs. 3 and 5, and differ slightly in size. Thus the section indicated as 1 in Fig. 5, is the smallest of the sections, and the marginal edges of this section fit within the adjacent sections, as indicated at *a* and *b*. The section 2 fits outside of section 1, as indicated at *b*, and inside of section 3 as indicated at *c*. Section 3 fits outside of section 2 and inside of section 4, as indicated at *d*. Section 4 fits outside of both adjacent sections 3 and 1. The purpose of having the sections interlocked in this manner will become apparent from the description of the manner in which the sections of the core are removed.

In order to lock the sections of the core together, and also to reinforce the same, I provide a locking member shown in detail in Fig. 7. This member consists essentially of a main body portion 38 formed with a pair of curved hooks 39 and 40, which are suitably spaced apart by a forwardly extending tongue 41. When the two adjacent sections are assembled, as shown in Fig. 6, the hooks 39 and 40 are adapted to engage on opposite sides of the angle iron flanges 35 and 36 secured to adjacent sections, while the tongue 40 is adapted to be inserted between these angle irons and thus prevents these sections being locked too closely together, and this tongue also bears against the outer marginal edges of the two adjacent sections so as to reinforce the same. Secured to each of the sections, there is a round rod 42 curved slightly outwardly and secured to the adjacent angle iron so as to form a loop or eye with which the hooks 39 and 40 may engage. With this construction, it will be seen that when the member 38 is inserted within the mold in a nearly vertical position that the hooks 39 and 40 can be hooked under the rods 42, and then by swinging the member 38 downward, the hooks 39 and 40 loop around the rods 42 and the tongue 41 presses outwardly against the marginal edges of the interlocking sections, and in this manner this locking member not only firmly locks these two sections together in their proper relative position, but likewise strengthens and reinforces the marginal edges of the sections. While I have illustrated one of these locking members to be used between each pair of adjacent sections, it will be understood that if desired, several of these locking members could be placed one above the other.

The outer mold section and collapsible core are assembled together in the manner shown in Figs. 8 and 9, and the concrete or other material 43 poured in the space between these sections. In order to form a suitable opening in the base of the receptacle to permit the removal of the garbage or other material therein, I provide a supplemental core member 44 which consists of a hollow box-like structure adapted to be inserted in the outwardly inclined base portion of the mold, as indicated in Fig. 8. After the material has set, the core may be removed by first unlocking the section 1 from the adjacent sections, and then this section, being smaller than the other sections of the core and overlapping on the inside of the adjacent sections, can be tipped inward by grasping the handle or bar 37 and can then be removed through the reduced opening in the top of the mold. The section 2 can then be unlocked from the section 3 and removed in a similar way, after which the section 3 can be removed, and finally the section 4. The core having been removed, the supplemental core or insert 44 can be removed from the inside and out through the top of the mold. The outside section can then be easily removed by merely removing the cotter pins 33, permitting the reinforcing members to swing outwardly and then removing the bolts 17. After the mold sections are thus removed, the top cover 45 and side cover 46 are then secured to the receptacle 43, as indicated in Figs. 11 and 12, and the receptacle is complete.

It will thus be seen that I have devised a very efficient mold, and one in which the outer members can be quickly and easily assembled, and in which suitable reinforcing means are provided for giving these members sufficient rigidity to stand the strain placed upon them during the molding operation, and have likewise provided a very efficient core consisting of a plurality of independent sections which are locked together but can be quickly and easily unlocked and then individually removed through an opening of reduced size in the top of the mold.

While I have illustrated and described

one particular embodiment of my invention, it will be understood that I do not wish to be limited to the exact construction shown and described but that various changes and modifications may be made without departing from the spirit and intent of my invention.

What I claim as my invention is:

1. In a mold, a collapsible core consisting of a plurality of adjacent overlapping sections, such sections being of varying sizes, the smallest of said sections overlapping on the inside of both adjacent sections, the second section overlapping upon the outside of the smaller section and upon the inside of the next adjacent section, the third section overlapping upon the outside of the second section and upon the inside of the next adjacent section, and the last and largest section overlapping upon the outside of the previous adjacent section and the outside of the smallest section.

2. In a mold, a collapsible core consisting of a plurality of adjacent overlapping sections, such sections being of varying sizes, the smallest of said sections overlapping on the inside of both adjacent sections, the second section overlapping upon the outside of the smaller section and upon the inside of the next adjacent section, the third section overlapping upon the outside of the second section and upon the inside of the next adjacent section, and the last and largest section overlapping upon the outside of the previous adjacent section and the outside of the smallest section, and means for locking the adjacent sections together.

3. In a mold, a collapsible core consisting of a plurality of adjacent overlapping sections, such sections being of varying sizes, the smallest of said sections overlapping on the inside of both adjacent sections, the second section overlapping upon the outside of the smaller section and upon the inside of the next adjacent section, the third section overlapping upon the outside of the second section and upon the inside of the next adjacent section, and the last and largest section overlapping upon the outside of the previous adjacent section and the outside of the smallest section, means for locking the adjacent sections together, said locking means consisting of a member provided with a pair of hooks adapted to engage in eyes formed on the adjacent members in the mold, and a central tongue adapted to bear against the engaging marginal edges of the sections to reinforce the same.

4. In a mold, a collapsible core consisting of a plurality of adjacent overlapping sections, each of said sections being provided with an inwardly extending reinforcing flange near the overlapping edges of said sections, and a locking member adapted to engage upon the opposite sides of the flanges of the two adjacent members for locking said sections together, said locking member being provided with an intermediate tongue adapted to engage between the engaging flanges to hold the adjacent sections in proper position and to bear against the outer edge of said sections to thereby reinforce the same.

5. In a mold, an outside member consisting of separable sections, a series of members rigidly secured to each of said sections, and each of said members having hinged thereto a bar, means for detachably connecting the opposite end of said bars to the bar of the adjacent section, and a collapsible core consisting of a plurality of independent sections adapted to be inserted within said outer section.

Signed by me at Chicago, Illinois, this 21 day of April, 1920.

PAUL PERSSON.