

Feb. 14, 1933.

H. F. SIELAFF

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KNOCKDOWN GARBAGE RECEPTACLE MOLD

Filed June 8, 1928

2 Sheets-Sheet 1

FIG. 1

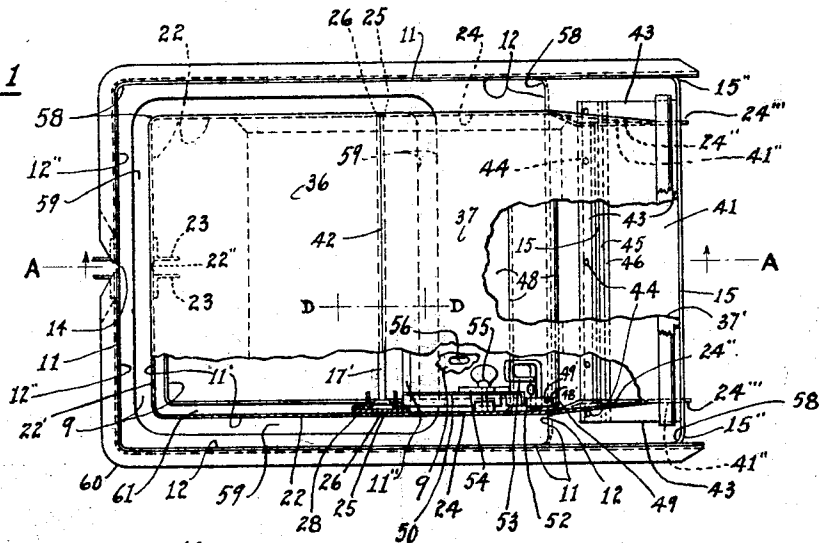
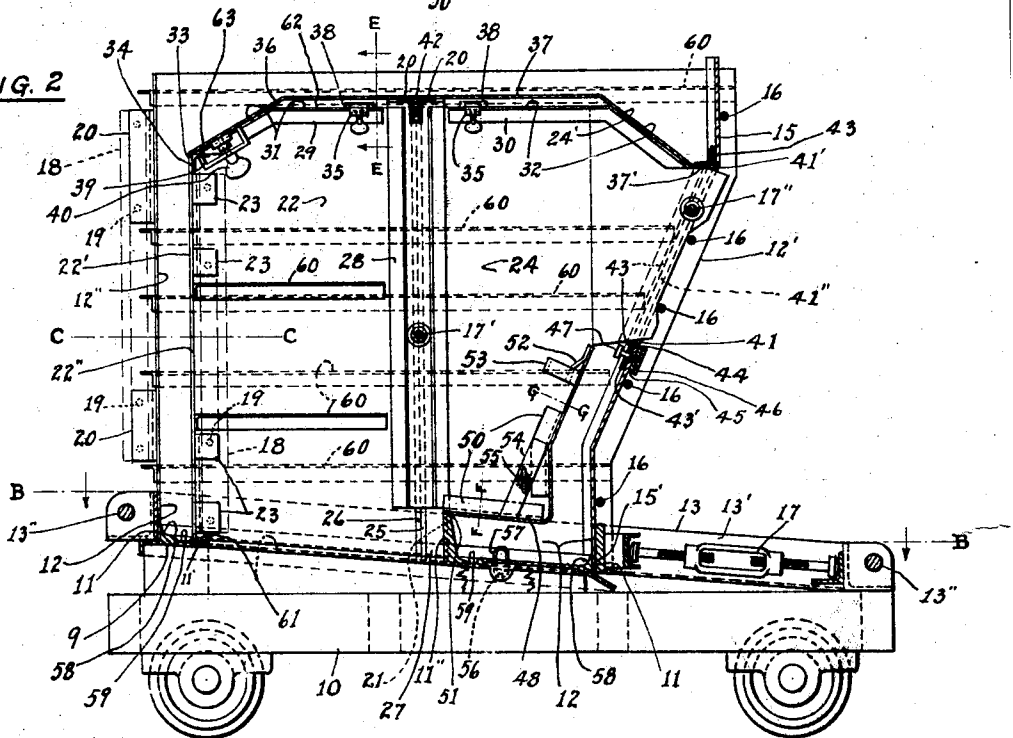


FIG. 2



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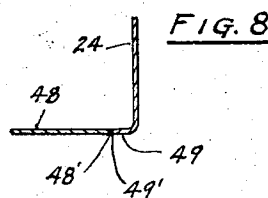
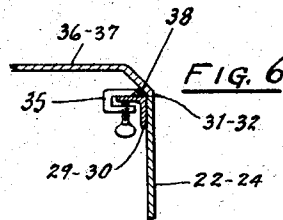
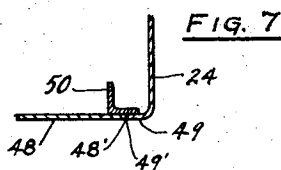
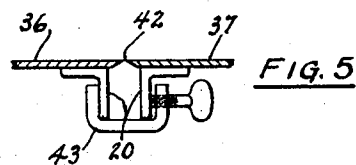
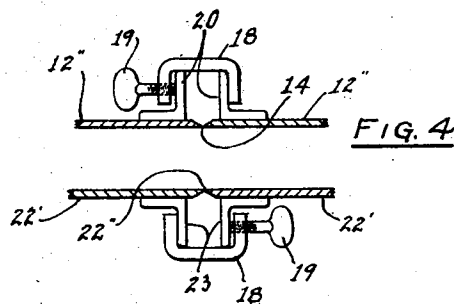
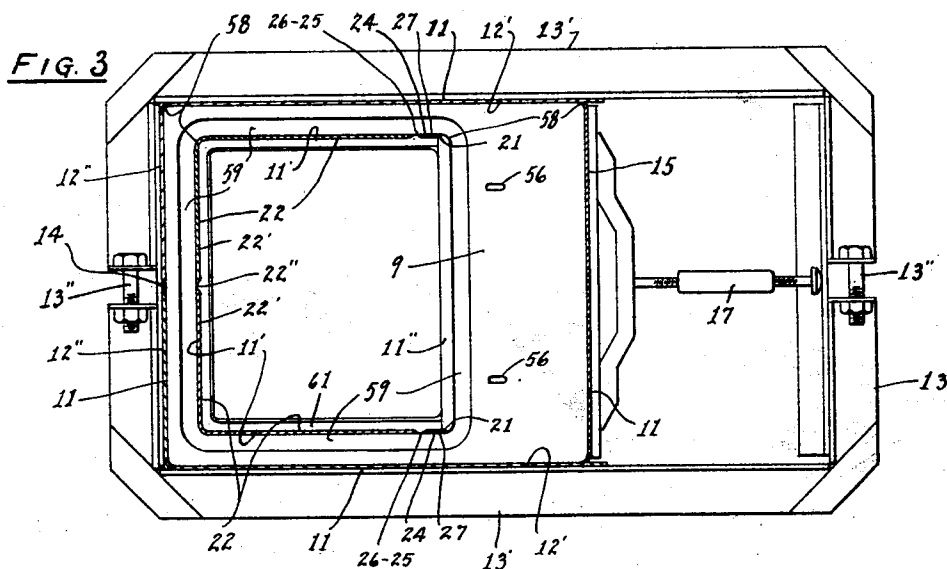
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KNOCKDOWN GARBAGE RECEPTACLE MOLD

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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

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KNOCKDOWN GARBAGE RECEPTACLE MOLD

Application filed June 8, 1928. Serial No. 283,877.

My invention relates, in particular, to improvements in knockdown molds for garbage receptacles of the style and form of my garbage receptacle described and claimed in an application for Letters Patent, Serial No. 266,363, filed March 31, 1928.

The objects of the improvements, as embodied in my invention, are, first, to provide a mold, together with its complementary parts, which may be used over and over again in which to form concrete garbage receptacles; and, second, to provide a knockdown mold which is, comparatively, easily and quickly assembled, and, just as easily and quickly taken apart and removed from the molded form when it has become sufficiently set.

Another object of the improvements, as embodied in my invention, is to provide a molding device which shall result in the production of a product more economically, and more efficiently, than can be obtained by any other of the present methods.

These and other objects of my improvements will be more fully outlined in the several views of the accompanying drawings and more fully described in the following specification, and more particularly pointed out in the appended claims.

In the several views illustrated in the accompanying drawings is presented the improvements as embodied in my invention.

Fig. 1 is a plan view of my knock-down mold with certain parts broken away to show more clearly some of the important features embodied in my invention. Also, certain other parts are omitted here in order not to complicate the drawings.

Fig. 2 is a sectional view taken, substantially, on the vertical plane A—A of Fig. 1, and shows the molding device supported on a portable platform.

Fig. 3 is a sectional view taken, substantially, on the plane B—B of Fig. 2, and shows the means by which the outer walls of the mold are clamped to the inclined base-plate as shown plainly in Fig. 2.

Fig. 4 is a sectional view taken on the plane C—C of Fig. 2, and shows the means by which the two similar halves of the inner and outer walls of the mold are clamped together.

Fig. 5 is a sectional view taken on the plane D—D of Fig. 1, and shows the means by which the two portions which form the inner contour of the bottom of the garbage receptacle are clamped together.

Fig. 6 is a sectional view taken on the plane E—E of Fig. 2, and shows the means by which the two portions which form the inner contour of the bottom of the garbage receptacle are held down against the inner side walls of the mold.

Fig. 7 is a sectional view taken on the plane F—F of Fig. 2, and shows how the inner side walls and the inner front wall of the mold are supported by each other.

Fig. 8 is a sectional view taken on the plane G—G of Fig. 2, and shows the flush joint made by the inner side walls and the inner front wall of the mold.

Similar characters refer to similar parts throughout the several views.

Essentially, the molding device consists of eleven separate form sections, which, when assembled in their proper relation form the style and shape of the inner and outer contour of my garbage receptacle, above mentioned.

In practice, it has been found best to mold the garbage receptacle with its top side down and its contour formed in the mold plate, 9, which is inclinedly supported on a portable platform, 10. Around the plate, 9, is a rectangular raised portion formed into a vertical wall, 11, against which the outer walls, 12, of the mold are clamped by means of the clamping device, 13, indicated in Figures 2 and 3. The clamping device, 13, is made up of angle irons formed into two identical C shaped clamping members, 13', which are drawn toward each other against the outer side walls, 12', of the mold, by means of the clamping screws 13''. It may be noted here, that the plates, or sheets, which form the outer side and back walls, are made up of two symmetrical (one right hand, and one left hand) L-shaped sections; the shorter portion, 12'', of the said L sections forming the outer back wall of the mold. The vertical edges of said shorter portions, 12'', meet to form a leak proof joint, 14. Before drawing the

said C clamps, 13', real tight against the side walls, 12', the front wall plate, 15, is put in place so that its top end, 15', is down and against the wall 11, of the mold plate 9, and, so that the outer surface of which rests against spaced tie rods, 16. Now, by means of the said C clamping device, together with the clamping device turnbuckle, 17, the outer sides, front, and back wall mold plates, may be firmly clamped around the said wall, 11. At this point, also, the vertical joint, 14 may be drawn firmly together by means of a long channel bar or C clamp, 18, (shown in light dash lines in Fig. 2) having several clamping screws, 19, therein, clamped over the angle bars, 20, which are secured on the outer surface of the walls, 12'', near the vertical edges which form the joint, 14. A leak proof joint between the sides, 15'', of the front wall, 15, and the inside of the outer side walls, 12', may now be made by drawing the said walls 12', firmly against the said sides 15'' by means of the tie rods, 16.

On the mold plate, 9, which forms the contour of the top surface of the garbage receptacle, is a raised portion formed into a vertical wall, 11', which is similar to, and parallel with, the said wall, 11. The said wall, 11', being spaced a like distance from the outer back and outer side walls, 12'' and 12', respectively. It will be seen by referring to Fig. 3, that the said wall, 11', extends only as far as, and joins with, the ends of the upright wall, 11'', which is formed upwardly from the mold plate, 9, to a distance slightly greater than the distance between the parallel walls, 11 and 11'. Together with this wall, 11'', and the inside wall mold plates, an opening is formed in the top of the garbage receptacle, above mentioned. Into the ends of the said wall, 11'', is formed a vertical rectangular notch, 21, which forms a stop, and, as well, a lock, for the inner wall mold plates which are inserted at this point.

To form the inner back and side walls of the garbage receptacle there is provided four separate form sections. One pair, of which, is fitted to the said wall, 11'; this pair, indicated as 22, together form the inner back wall and, also, a portion of the side walls of the said receptacle. The back wall forming portions, 22', of the said pair, 22, are joined together at their vertical edges, 22''. And, by means of a long channel bar or C clamp, 18, (also shown in light dash lines in Fig. 2) together with its clamping screws, 19, clamped over the angle bars, 23, which are secured, alternately with respect to each other on the inner surface of both the portions, 22', near and parallel with the vertical edges, 22'', a leak proof joint may be secured. The reason of the alternate relation of the said angle bars, 23, is, that when knocking down the walls, 22, the said bars, 23, will swing by each other, permitting of

the easy removal of the said wall plates, 22. The other pair of inner side wall forming sections, 24, each have a vertical edge, 25, which matches with corresponding vertical edges, 26, of the inside wall mold plates, 22. Extending from each of the mold plates, 24, is a narrow parallel strip, 27, which snugly fits between the vertical edge 26, and the rectangular notch, 21. As the said strip, 27, is inserted between the said notch, 21, and the vertical edge, 26, it forces the mold plates, 22, back so that the wall mold portion, 22', fits snugly against the said wall, 11'. In order to cause the side wall mold portions, 22, and the strip 27 of the portions 24, to fit closely to the sides of the wall, 11', they are forced over against the said wall, 11', by means of a turnbuckle, 17', similar to that of 17, actuated between stiff parallel bars, 28, which, not only force the said wall plates, 22, and 24, over, but also, cause the corresponding edges, 25 and 26, to line up perfectly with each other, and, at the same time, form a leak proof joint around the said joining edges. However, before the said mold plates, 22 and 24, can be forced outwardly to any great extent, which would cause them to become out of line with each other, means must be provided which will act, not only as a means to prevent the said joining edges of the plates, 22 and 24, from becoming out of line with each other, but, also, as automatic limiting gauges or stops.

By referring to Figures 2 and 6, it will be seen that the mold plates, 22 and 24, each have angle bars, 29 and 30, respectively, fixed along their respective horizontal and diagonal edges, 31 and 32; and, along the edge, 33, of the wall mold portions, 22', is fixed an angle bar, 34. Spaced about equidistant each way from the said vertical edges, 25 and 26, are adjustably secured, to the angle bars, 29 and 30, the said limiting gauges, or stops, 35, which are adapted to not only act as lateral limiting gauges, or stops, for the inner side mold walls, 22 and 24, but, also, to act as clamping down means for the said receptacle floor forming plates, 36 and 37, by engaging, when forced over, triangle strips, 38, which are fixed to the said plates, 36 and 37, at the edges thereof, as indicated in Figures 2 and 6. Also, before finally forcing the side mold plates, 22 and 24, to their proper locked position by means of the turnbuckle, 17', and the bars, 28, the rear floor mold plate, 36, is first securely clamped in place along the edges, 33 and 31, by means of the clamp, 39, and the clamp screw, 40, as is indicated in Figure 2; and next, the forward floor mold plate, 37, is set in place on the edges, 32, by first inserting its front horizontal portion, 37', through the rectangular opening, 41, as at 41', then drawing the said plate, 37, by means of the clamping device, 43, which is similar to that shown in Figures 2 and 4, back so that its

diagonal surface will match up with the diagonal edges, 24', of the plates 24, and, so as to form a leak proof joint at, 42, where the said plates, 36, and 37, meet, as clearly indicated in Figures 1, 2 and 5.

Referring to Figures 1, and 2, it will be seen that a portion of the side plates, 24, are bent toward each other, as at, 24'', and the forward portions thereof inserted through the opening, 41, so that their parallel faces, 24'', will be in contact with the vertical edges, 41'', of the said opening, 41. After all the said sections, which compose the mold, have been securely locked in place by the several locking means mentioned, a turnbuckle, 17'', which is similar to that of 17, shown in Fig. 2, is inserted between the said faces, 24'', opposite the said edges, 41'', and, by means of the said turnbuckle, 17'', the inner and outer mold sections are rigidly secured to each other.

Around the said opening, 41, are secured narrow strips, 43, which molds a recess all around the clean out opening of the said receptacle. The strip, indicated as 43', has a series of holes, 44, and on the other side of the said plate, 15, opposite the said strip, 43', is secured a strip, 45, through which, and also the plate 15, the holes, 44, are extended, and, over the said strip, 45, is secured a plain, or blind strip, 46, which acts as a stop for the bolts, 47, which are inserted in each of the said holes, 44, as indicated in Fig. 2.

The inner front wall and top mold plate, 48, which, together with the front plate, 15, and the mold plate, 9, form the front and top of the said receptacle.

Referring to Figures 1, 7, and 8, it will be noted that the mold plates, 24, are flanged as at 49. Between the edges, 49', of the said flanges, 49, is secured the said plate, 48. The said plate, 48, however, has secured to it overhanging angle bars, 50, which are adapted to support the said plate, 48, so that the edges, 48', of the said plate, 48, will coincide with the edges, 49', of the flanges, 49. The said plate, 48, is also supported against the wall, 11'', as indicated at 51, in Fig. 2. To further support the form plate, 48, and keep it in co-relation with the flanges, 49, latching devices are provided. The said latching devices consist of clips, 52, secured to each of the flanges, 49, and clip engaging latch bars, 53, pivotally secured to the form plate, 48, as shown in Figures 1, and 2. After the said form plate, 48, is properly located, it is firmly locked in place by means of clamp bars, 54, and clamp screws, 55, threaded into a nut secured to each of the inner side plates, 24, in the manner indicated in Figures 1, and 2.

In the mold plate, 9, are pockets, 56, into which are supported links, 57, while like the said bolts, 47, will be molded into the concrete. The embedded bolts, 47, will protrude sufficiently above the surface of the recess in

the concrete to permit of two thicknesses of about No. 14 ga. metal strips and the nut accompanying the said bolt. Likewise, the said links, 57, will extend above the top surface of the concrete to permit of their use as part of a door hinge.

One of the important features of my molding device is, that it molds round corners, which are indicated in the several views as 58, both, on the exterior, as well as the interior, of the said concrete formed garbage receptacle.

Referring to Figures 1, 2 and 3, and particularly to Fig. 2, it will be seen that a groove, 59, surrounds the walls 11', and the wall 11'', in the said mold plate, 9. The purpose of this groove is to form a ridge around the top opening of the said garbage receptacle.

In order to reinforce the outer and inner wall mold plates, angle-bar stiffeners, 60, are suitably spaced as indicated in Figures 1, and 2.

Should any leakage occur around the said wall 11', when pouring, sand, or dust, is thrown on the ledge, 61, and immediately the leak is stopped. And, should any leakage occur at the horizontal edge, 31 and 32, sand, or dust, is thrown onto the flanges, 62 and 63, respectively, of the angle-bars, 29 and 30, which, also, immediately stops the leak.

Having thus described my invention, it can be readily understood that the minor details of my construction may be altered in several ways without departing from the spirit of my invention, therefore, what I claim and desire to secure by Letters Patent is—

1. The combination in knock down molding devices of the class set forth, of a pair of combined outer side and back wall mold plates detachably secured to each other, an outer front wall mold plate removably secured between the said outer side wall mold plates, and a pair of combined inner side and back wall mold plates detachably secured to each other, and a pair of inner side wall mold plates detachably secured to the side wall mold plate of the said combined inner wall mold plates, and, a combined inner front wall and top mold plate removably secured between flanges of the said pair of the inner side wall mold plates, and an inclined outer top surface mold plate supporting each of the said mold plates, and, a pair of floor mold plates detachably secured to each other and supported by the inner wall mold sections, substantially as described and for the purpose specified.

2. The combination in knock down molding devices of the class set forth, of a set of outer side wall mold plates, an inclined outer top surface mold plate supporting said plates, outer vertical walls raised from the said top surface mold plate and set in from the edges thereof to form a surrounding ledge, and

means to clamp said side wall mold plates, supported by the said ledge, snugly and securely to the said vertical walls to secure, substantially, a leak proof joint; a set of inner side wall mold plates supported by the said inclined mold plate, and, inner vertical walls spaced a uniform parallel distance in from the said outer vertical wall and the said wall set in from the edges of a rectangular opening in the said top surface mold plate to form a ledge around the said opening, and the said inner vertical wall adapted to space the said set of inner wall mold plates relative to the said set of outer wall mold plates so as to secure a suitable thickness of the walls of the concrete garbage receptacle molded thereby, substantially as described and for the purpose specified.

3. The combination in knockdown molding devices of the class set forth, of a garbage receptacle outer top surface mold plate having an outer rectangular filleted right wall formed around the edges thereof, and the said wall set in from the edges of the said plate to form a surrounding ledge; a rectangular opening in the mold plate and an inner filleted right wall formed around three of its edges which are in parallel relation with the back and side right walls formed around the back and sides of the said mold plate, and the said inner right wall set in from the edges of the opening to form a surrounding ledge; an upright wall forming one of the edges of said opening and extending crosswise of the said mold plate and joining the said side right walls, and, a vertical notch in the ends of the said upright wall joining the said right walls; pockets formed in the said mold plate, and each of the said pockets adapted to support a link therein, substantially as described and for the purpose specified.

4. The combination in knockdown molding devices for molding garbage receptacles, comprising; combined inner back and inner side wall mold plates, said plates being respectively disconnectably secured with one another, joining portions of said back wall plates being provided with a series of spaced bars along their joining edges, the bars along one of said edges being arranged in alternate relation with those arranged along the opposite edge of said joining portions, and means, comprising the arrangement of said bars, whereby said inner wall mold plates may be readily removed from within a molded form as composed in said molding device.

5. The combination in knockdown molding devices for molding garbage receptacles, comprising; a set of bent joining floor mold plates having inclined sides, a set of combined back and side inner wall molding forms disconnectably secured one with the other, said forms having angle bars secured along their edges and arranged to support said floor plates along the edges of their bent and in-

clined sides, and means to automatically secure said floor plates with said inner set of molding forms when clamping said forms in place, substantially as described and for the purpose specified.

6. The combination in knockdown molding devices for molding garbage receptacles, comprising; an inner set of combined inner back and inner side wall molding forms disconnectably secured to one another and arranged to form the inner back wall surface and the inner side wall surfaces of a garbage receptacle, a set of bent disconnectably secured horizontal floor mold plates having inclined sides, said bent plates being adapted to form a horizontal floor surface and upwardly inclined floor surfaces and beveled corners when arranged to mold a garbage receptacle form, triangular strips, or stops, secured along the edge of said inclined sides, and means, comprising said strips, for automatically securing said floor plates with said wall forms when clamping said wall forms in place, substantially in the manner described.

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