April 25, 1939. L. SAMONDS 2,155,908

CONCRETE STEP MOLD

Filed Aug. 18, 1937

Fig. 1.

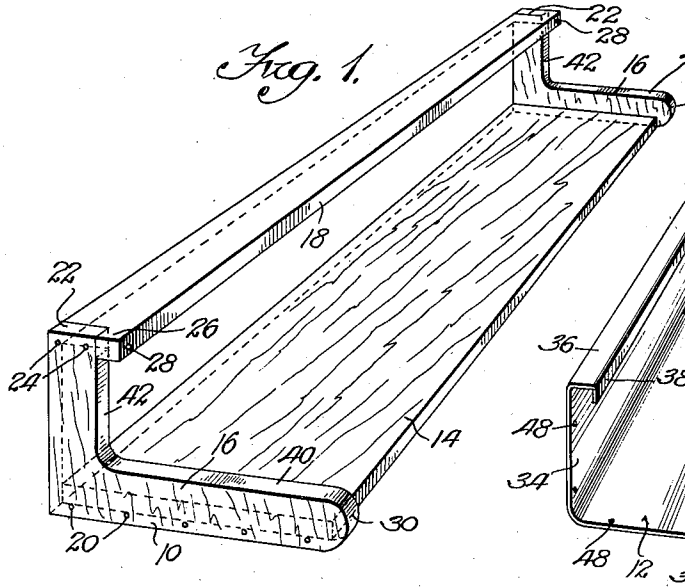


Fig. 2.

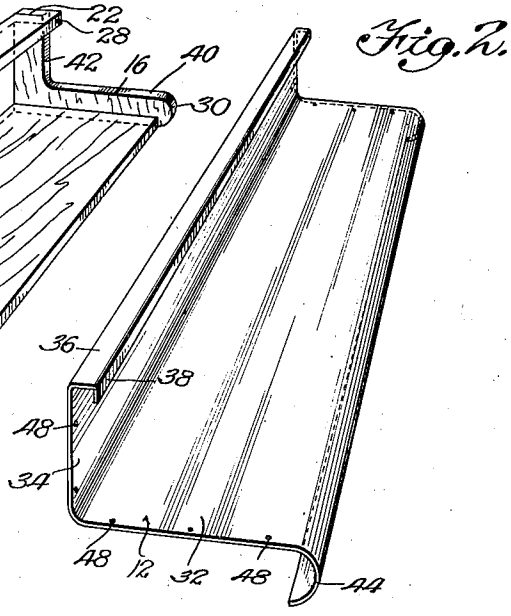


Fig. 3.

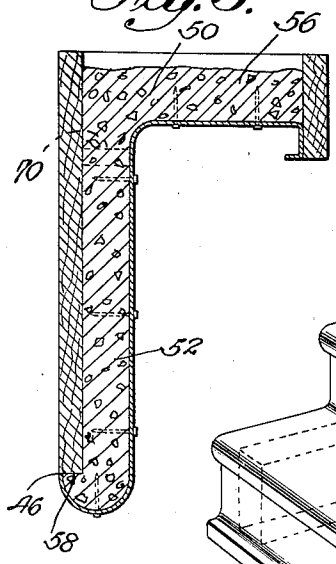
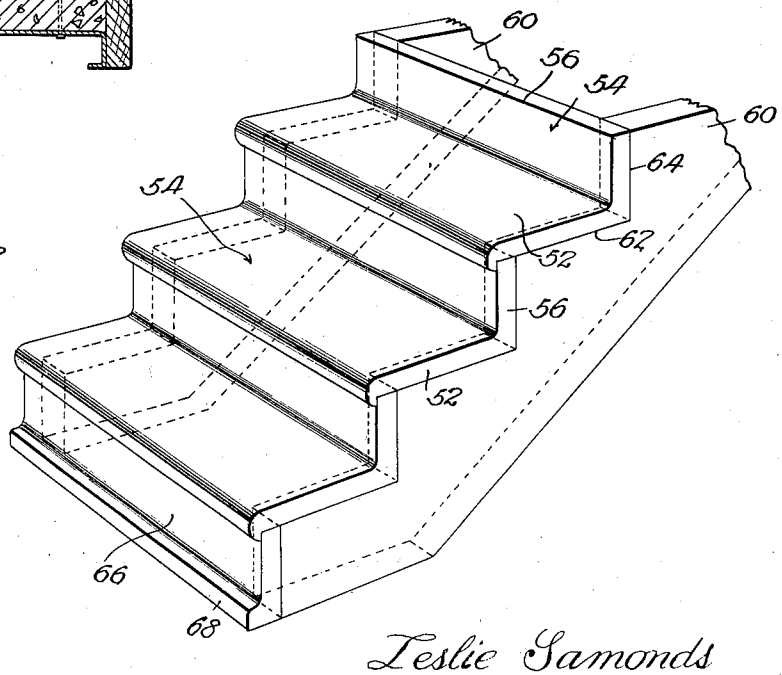


Fig. 4.



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CONCRETE STEP MOLD

Leslie Samonds, Chicago, Ill.

Application August 18, 1937, Serial No. 159,755

2 Claims. (Cl. 25—118)

My invention relates to concrete stair constructions and has among its objects and advantages the provision of an improved stair and method of molding the same.

In the accompanying drawing:

Fig. 1 is a perspective view of one part of the mold;

Fig. 2 is a perspective view of the cooperating part;

Fig. 3 is a sectional view illustrating the two parts in assembled relation and illustrating the manner in which the concrete is poured; and

Fig. 4 is a perspective view of a portion of a stair constructed according to the invention.

In the embodiment selected to illustrate my invention I make use of two mold parts 10 and 12 constructed of wood and metal, respectively. Part 10 includes a wall 14, L-shaped end walls 16, and a narrow wall 18. End walls 16 are attached to the wall 14 at its ends by nails or screws 20 while the wall 18 is recessed at 22 for the reception of the end walls 16. Nails or screws 24 connect the end walls 16 with the wall 18 while the latter includes extensions 26 projecting across the edges of the walls 16 and secured thereto by nails or screws 28. In Fig. 1, I illustrate the end walls 16 as projecting beyond one edge of the wall 14 and curved, as at 30.

Part 12 comprises a single sheet of metal shaped to provide right angularly related walls 32 and 34. Wall 34 is bent to provide a narrow wall 36, which, in turn, terminates in a flange 38. Wall 32 lies upon the edges 40 of the end walls 16 while the wall 34 lies adjacent the edges 42 of the end walls, with the wall 36 fitting snugly underneath the wall 18. Wall 32 terminates in a curved reach 44 which extends about the curvatures 30 in the end walls 16 and terminates in abutting relation with one edge of the wall 14, as at 46 in Fig. 3. The part 12 is provided with openings 48 for the reception of nails or screws which may be imbedded in the end walls 16 for fixedly connecting the parts.

Fig. 3 illustrates the manner in which the mold is arranged for pouring the concrete 50. The space between the wall 14 and the wall 32 when filled with concrete forms the tread 52 of one of the steps 54 of Fig. 4. Wall 34 constitutes a floor for supporting the concrete which forms the riser 56 of the step. The edge of the curved reach 44 terminates flush with the outer face of the wall 14 and is offset from its inner face so as to provide an overhang 58 along the forward edge of the tread 52.

The mold is easily assembled for pouring purposes, and after the concrete has set, the mold parts are easily separated by merely removing the nails or screws which connect the two parts. The metal part 12 strips easily from the concrete while the units making up the part 10 may be partly loosened if the step does not otherwise remove easily from that part. The outer faces of the tread 52 and the riser 56 come from the mold with smooth and finished surfaces.

In assembling steps, a suitable supporting structure 60 is employed. This structure may consist in concrete beams, such as those illustrated at 60 in Fig. 4 or an original stair to be refaced. In the instant case, the beams 60 are recessed to provide horizontal and vertical reaches 62 and 64, respectively, which reaches have abutting relation with the rear faces of the treads 52 and the risers 56, respectively. Each tread 52 extends beyond the vertical reaches 64 underneath that tread and across the upper edge of the riser 56 underneath the tread with the overhang 58 abutting the forward face of the riser. The steps 54 may be cemented to their supporting structure. At the foot of the stair the starting unit 66 comprises a riser 56 with the tread 52 shortened, as at 68. Starting unit 66 may be formed in the same mold with a strip 70 bridging the space between the walls 14 and 32 to form a short tread, as at 68 in Fig. 4.

According to my invention concrete steps may be pre-fabricated at a relatively low cost. The faces of the treads and risers have a nicely finished surface, which enhances the ornamental appearance of the stair. Overhangs 58 extend downwardly partly over the front faces of the risers 56 so as to provide an ornamental bead, and the relation between the parts is such as to cover dividing lines, thus lending an appearance of an integral construction to the stair. The steps 54 have interlocking relation. In pre-fabricating the steps, I eliminate the necessity of constructing complicated forms at the place of erection of the stair. The steps may be pre-fabricated in any lengths as well as widths. In addition, a durable step is constructed with a minimum amount of material, and the steps may be pre-fabricated for refacing old and worn concrete steps. Flange 38 provides a convenient grip which facilitates handling of the part 12 as well as disconnection from the part 10.

Without further elaboration, the foregoing will so fully explain my invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

1. A concrete step mold comprising a first part including spaced walls and end walls connecting the spaced walls, a metallic second part co-extensive in length with the first part, means for connecting the two parts, said second part having an edge bent back upon itself to have abutting relation with one edge of one of said walls, but offset from the inner face of the said wall.

2. A concrete step mold comprising a wall, L-shaped end walls, one leg of each L-shaped end wall being connected to one end of said wall, each of said one legs being curved at its end and extending beyond said wall, the other leg of each L-shaped wall extending at right angles to said wall, a narrow wall connected to the ends of the legs arranged at right angles to said wall, an L-shaped metallic member shaped to lie adjacent the L-shaped walls, said L-shaped metallic member having a curvature embracing the curved ends of said legs and arranged in abutting relation with one edge of said wall, said metallic member being flanged to lie underneath said narrow wall, and means for detachably connecting the L-shaped metallic member wtih said L-shaped end walls.

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