Sept. 14, 1954 L. A. PINNER 2,688,786

CONVERTIBLE CONCRETE FORM FOR STADIUMS

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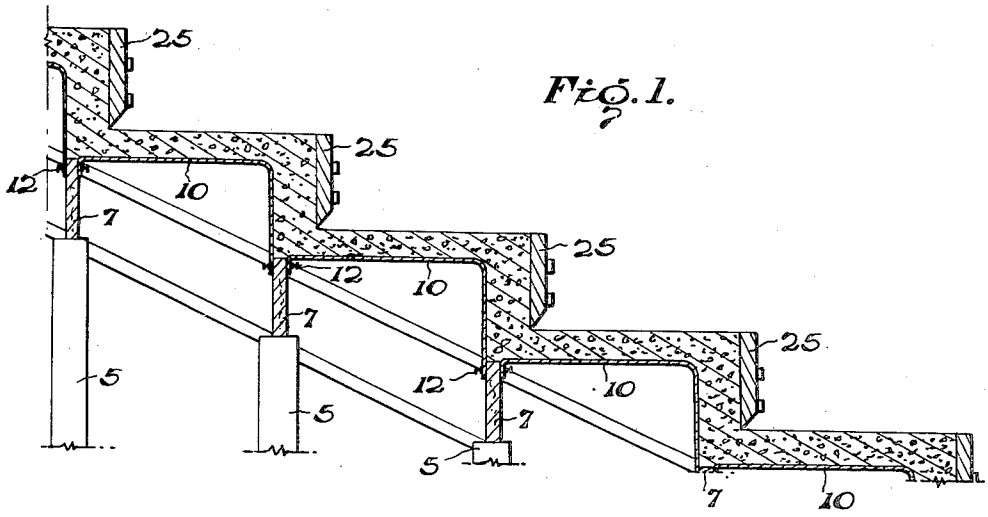
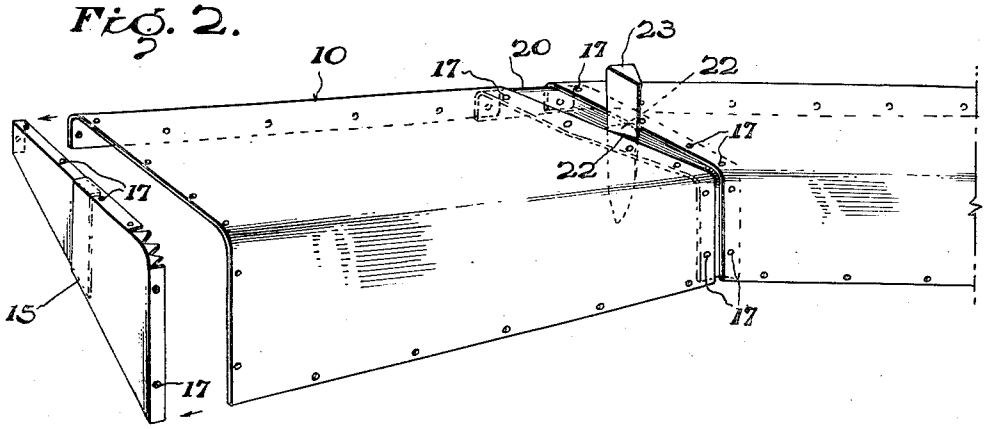


Fig. 1.

Fig. 2.



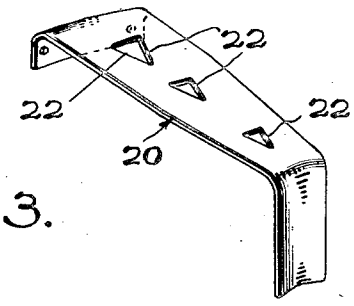


Fig. 3.

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CONVERTIBLE CONCRETE FORM FOR STADIUMS

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7 Claims. (Cl. 25—118)

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This present application relates to concrete forms and more particularly to concrete forms for the creation of viewing stands or stadiums and again especially to forms convertible from use in erecting straight line stadiums to the use in erecting bowl-type or more correctly polygonal stadiums which extend on more than one side of the field.

The general object of the invention is a concrete form suitable for the erection of straight line stadiums and by the addition of a bridging member or members adapted for erecting polygonal stadiums of a variable number of corners and angles depending thereon.

A further object of the invention is the provision of a form or forms of the type described which is simple, durable, and of low production cost and quickly removable.

The forms of my invention may be removed within twenty-four hours after the concrete has been poured. This allows a maximum reuse of the forms in a job and consequently a saving in the number of forms necessary to do a job.

With these and other objects in view which will become apparent as the invention is fully comprehended, the same consists in the construction, combination and arrangement of elements hereinafter specifically described and distinctly claimed in the subjoined claims.

The description should be read in connection with the accompanying drawing forming part of the application and wherein:

Fig. 1 is a sectional elevation of a preferred embodiment of my invention and of a stadium cast thereby;

Fig. 2 is a perspective of a pair of forms adapted for erecting a part of a polygonal stadium by the addition of a bridge member bridging the angular space between adjacent form ends;

Fig. 3 is a modification of the bridging member.

In the drawings in which like characters of reference designate like or similar parts, 5 indicates each of a plurality of shores resting with their lower ends on the ground and of different vertical lengths. On the top of each shore is secured the narrow edge of a horizontally disposed wood joist 7.

For the erection of a polygonal stadium shores of the same height and the wood joists resting thereon form a polygon and preferably are connected at adjacent ends.

Each stadium step form 10 is preferably of sheet metal especially steel, and includes a vertical front riser, the lower marginal edge portion of which is affixed by fasteners 12 to the rear

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side of a joist, a horizontal or tread section extending rearwardly from the riser and a flange depending from the tread part and affixed by fasteners to the front side of the next higher joist at the upper margin thereof.

The fasteners, if nails, can be pulled and the steel forms removed. The wooden joists stay in place to support the concrete until the same has acquired enough resistance to be self supporting. The top edge of the wood joist acts as a form by helping to form the underside of the tread. This combination of the wooden joist and metal forms affords a great economy in both labor and material.

Each end steel form of an assembly for casting a straight line or bowl-type stadium may carry a cover 15 consisting preferably of two sections slidable over one another and provided on three sides with flanges insertible into the outer end of the form section. When the cover sections are in a predetermined position the flanges engage the inner side of marginal portions of the steel form and may be secured by fasteners (not shown) inserted through holes 17 in the flanges and marginal portions of the form. Since the flange of one cover section is slidable on top of the flange of the other section, sliding of the former section will loosen the other section from the concrete.

Owing to the uniform length of the stadium step form parts adjacent ends of a pair of forms are angularly spaced when the latter are arranged for casting a polygonal stadium. A bridging member 20 has in common with the stadium step form the general shape, but differs therefrom in that the riser is narrower than the rear flange, and the tread part tapers from the latter toward the former. The tread bridge part has a hole 22 preferably of triangular shape receiving a wedge 23 of corresponding cross section which diminishes downwardly.

By providing a plurality of wedges all insertible in the hole 22, but differing in the width of the portion above the bridge and lengthwise of the tunnel forms, it is possible to space adjacent form ends by different angles. The wedge engaging and angularly spacing the form ends is held thereby in a position in which the wedge may be free from the edges of hole 22 or engage same.

A single wedge of lengthwise taper would hold adjacent form ends spaced by different angles depending on the length of the wedge portion below the form or bridge.

The horizontal bridge part of the modification

of Fig. 3 has several holes of a size increasing toward the rear flange. A wedge of the type described would be held in these holes at different cross sections.

The wedge may also form an integral part of the bridge member. The two lateral margins of the bridge member have holes **17** each registering with a hole in the marginal end portions of the forms. A fastener passes through each pair of registering holes and some of the fasteners connect the bridge riser to the joists.

The front side of the stadium treads is formed by riser strips **25**, preferably of plywood.

While I have described and illustrated the preferred embodiment of my novel form assembly, it is to be understood that the same is a mere example, not a limitation of my invention, and that changes and modifications may be resorted to without departing from the spirit of the invention or scope of the appended claims.

What I desire to secure by Letters Patent is:

1. In a form assembly for casting bowl-type stadiums and the like the combination comprising supporting means of stepped height and angularly arranged, a plurality of stadium step forms each including a riser, a tread part connected to the riser, a rear flange connected to the tread part and of a width narrower than that of the riser and having adjacent ends in angularly spaced arrangement supported by the supporting means in stepped formation and each having a tread-portion flush with the supporting means in the rear of the stadium step form, a plurality of bridge members of stadium step shape and supported by the supporting means and bridging the angular space between the ends of adjacent stadium step forms, and means each cooperating with a bridge member and spacing adjacent stadium step forms.

2. The combination according to claim 1 and wherein the supporting means comprise shores of stepped height and joists each secured on the top of a shore and having its front side affixed to the rear flange of a stadium step form and its rear side to the riser of the stadium step form.

3. The combination according to claim 2 and wherein the bridge member is affixed to two joists and the adjacent stadium step forms.

4. The combination according to claim 2 and wherein the tread part of the bridge member has at least a hole and the last mentioned means are wedges each insertible in a bridge hole and engaging adjacent stadium step forms to space same in angular relation.

5. The combination according to claim 2 and wherein each of the last mentioned means is integral with a bridge member.

6. In a form assembly for casting bowl-type stadiums and the like the combination comprising a plurality of shores of stepped height, a joist on each short, a plurality of stadium step forms including a riser affixed to the rear side of a joist, a tread part connected to the riser and a rear flange connected to the tread part and of a width narrower than that of a user and affixed to the front side of another higher joist having its upper end flush with the tread part, a plurality of bridge members each underlying and affixed to adjacent ends of a pair of stadium step forms and having at least one hole, and wedge means each insertible in a hole and engaging adjacent stadium step forms to space same in angular relation.

7. The combination according to claim 6 and wherein the bridge member has a plurality of holes of sizes increasing toward the rear flange.

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