The main object of this invention is to provide in steel stair construction, a plain riser and a safety tread formed of steel; and to provide a design which is cut from a single sheet of steel and which is formed into the pan for the cement tread, a plain steel wall for the riser and a steel toe tread, all in one piece; to provide an integral steel stair, a pan, riser and toe tread to stiffen and strengthen the stringers; to provide a safety toe tread formed of sheet steel supported by a special brace to be capable of use without damage during the construction period of the building, of which the stair forms a part; to provide a form which will give coved curvature between the tread and the riser; to provide a construction in which all of the bolts and rivets will be buried in cement and will not be visible from the normally exposed surfaces and in which the safety toe tread brace forms an anchor in the cement; and to provide a safety toe tread formed by rolling or punching the toe tread to form an abrasive or friction surface.

Curvature in the face of the riser, when it meets the cement, provides for a coved joint between the surface of the cement and of the riser of the stair section 3.

The complete stair section 3 provides a very simple, easy, and substantial method of assembly, in that when the lowest step has been bolted in place, it provides a surface upon which the second step can be placed and bolted. The bolting between the stair sections holds them securely, and as fast as the stair sections are assembled, they act as stiffeners for the stringers. This arrangement makes it possible to ship the stairs knocked down or made up in separate sections, either with or without posts and rails. After the stairs have been placed in position at any time when it is convenient in the process of construction, the masons can fill in the treads with the usual cinder concrete, and the form and strength of the safety tread, due to the presence of the toe bracket, make it possible for the masons to do their work on the stairs, without placing temporary treads.

My invention provides that when the whole stair is assembled and filled with concrete, the friction surface forms a safety toe tread which is an integral part of the stair and armored corner cover for the most vulnerable part of the stair.

Although but one specific embodiment of this invention has been herein shown, and described it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:
1. In a steel stair construction, a stair section comprising a pan, a riser, and on said riser a backwardly overhung safety tread, all formed integrally from one piece of sheet steel, in combination with a compression brace supporting the main body of said safety tread.

2. In steel stair construction, stringers, brackets secured to said stringers, and an integral stair section carried by said stringer and brackets, said section comprising a tread, a riser, and a safety toe tread formed integrally, and a brace secured to the back side of said riser and supporting the main body of said safety toe tread.

3. A flight of stairs including a plurality of sheet metal sections, one section for
each step respectively, said sections each comprising a horizontal tread pan part to receive a cementitious filler or the like, an upwardly turned riser on its back side, a joint flange on its front edge and an upwardly projecting rearwardly turned safety tread at the upper edge of said riser, said sections being formed and adapted for nesting together compactly for shipment or storage.

4. A stair construction comprising in combination a pair of sheet metal members fastened together rigidly in ascending series, and a brace member therefor, said members each including a pan, a riser and a safety tread formed on the upper edge of the riser to overhang the next adjacent pan, and said brace being disposed in compression with its upper end fastened to the remote edge of one of said treads and its other end fastened to a downwardly medial part of the corresponding riser with the adjacent edge of the upwardly adjacent pan fixedly interposed.

Signed at Chicago this 23rd day of May, 1924.

WILLIAM A. GALVIN.