

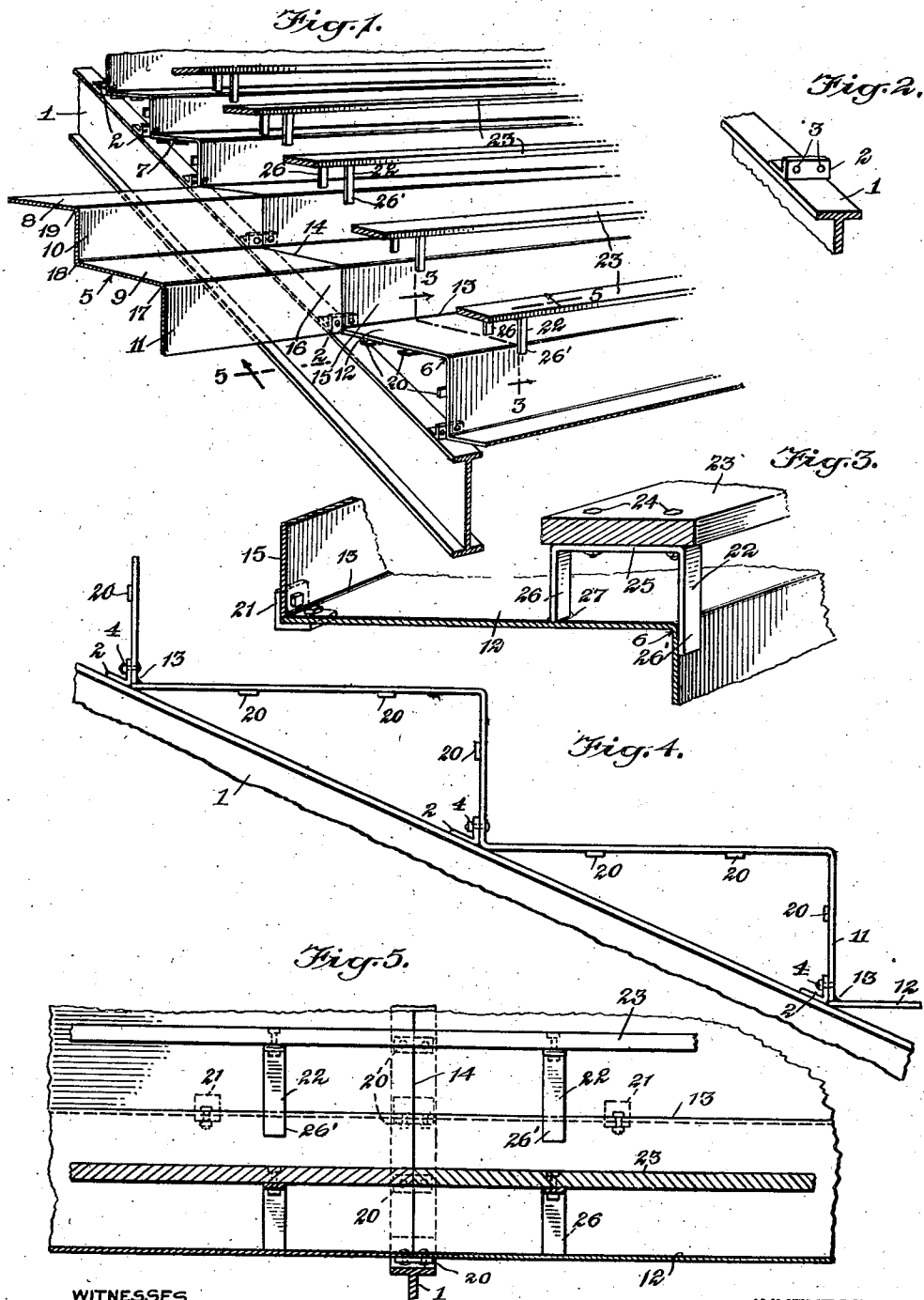
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GRANDSTAND CONSTRUCTION

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WITNESSES

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GRANDSTAND CONSTRUCTION

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1 Claim. (Cl. 189—1)

This invention relates to grandstand constructions and more particularly to a construction formed of steel, an object being to provide a strong and efficient construction which may be readily and quickly set up.

Another object of the invention is to provide a grandstand construction wherein all the parts may be pre-fabricated and then assembled at the place desired.

A further object, more specifically, is to construct a steel grandstand which will have a maximum strength and which will involve a minimum of cost through the formation of the various parts in groups and then connecting them together at desired points.

In the accompanying drawing—

Fig. 1 is a perspective view of part of a grandstand construction embodying the invention;

Fig. 2 is an enlarged detail fragmentary perspective view of part of one of the girders shown in Fig. 1 together with a construction clip;

Fig. 3 is a fragmentary perspective view in section showing how the tread or seat plate of one group of members is temporarily connected by an erection clip with the tread of the next group, the section being taken on the line 3—3 of Fig. 1;

Fig. 4 is an edge view of the upper part of a girder with one complete group of seat members and portions of other groups associated therewith;

Fig. 5 is an enlarged fragmentary sectional view through Fig. 1 approximately on the line 5—5.

Referring to the accompanying drawing by numerals, 1 indicates a girder of any desired construction but preferably of an I-beam formation as illustrated in Fig. 1. It will be understood that any desired number of these girders may be provided according to the strength necessary. Each girder is provided with a number of construction clips 2, as shown in Fig. 2, which are preferably welded to the girder though they could be bolted or riveted thereto. Each of these clips is preferably formed with apertures 3 through which suitable bolts or rivets 4 are adapted to extend when first assembling the grandstand construction.

In forming the risers and treads or seat plates, a special construction is provided wherein these members are formed in groups so as to present a very strong and efficient structure and one which may be manufactured at a minimum cost.

The construction illustrated in Fig. 1 by the numeral 5 is one unit of the body of the grandstand; the construction indicated by the numeral 6 is a second unit, while the construction

shown at 7 is a third unit. Any desired number of these units may be provided without departing from the spirit of the invention.

Referring particularly to the unit indicated by the numeral 5, it will be seen that the same is provided with two tread or seat plates, namely treads 8 and 9. A riser 10 connects the treads 8 and 9, while depending from one edge of tread 9 is a riser 11 which is adapted to be welded to the tread 12 of group 6 along the juncture of the two parts, namely, along line 13. As indicated in Fig. 4, the riser 11 rests on top of the edge portion of tread 12 so that when the welded line 13 is applied the edge portions of these members are firmly connected together. Previous to the welding action the various bolts 4 are applied so as to temporarily hold the units in position whereby all the units may be built up or properly positioned before any of the welding action takes place.

From Fig. 1 it will be noted that there is provided a butt-welded joint 14 between all sections of group 5 or of the remaining groups as the case may be. This butt-welded connection is preferably positioned centrally of the girder 1 though this is not essential. It will be noted that the section 15 of group 5 is held in contact with the section 16 of group 5 by two bolts or rivets extending through the construction clip 2. If desired, after the welded joint 13 has been provided, the bolts 4 could be removed and the openings closed by suitable welding though ordinarily the bolts are left in place.

It will therefore be seen that each of the groups 5, 6 and 7 and other groups if needed are formed with two seat treads and each group presents a single unit with three bends, namely, bends 17, 18 and 19. It will further be seen that only one welded joint is needed between adjoining groups whereby a saving in the number of horizontal groups is provided and also a saving in the work of forming the bends. While two seat treads and corresponding risers are provided in each group, it will be evident that more than two could be provided if desired. Each group may be of any desired length, as for instance eighteen feet, though the groups could be longer or shorter. Where the parts are curved, for instance at the end of the grandstand, each group is made much shorter to take care of this condition. However, the sections 15 and 16 of each group are butt-welded and, therefore, in a certain sense, are one continuous structure. Also by the various welded lines 13 between the respective groups, the groups, in a certain sense,

are integral with each other so that a very rigid, strong and efficient structure is presented with a minimum amount of labor in assembling and securing the parts together as well as in the original formation of the respective parts. In addition to the construction clips 2, there are provided supporting clips 20 at one end of each of the sections 15 and 16, so that the end of the adjacent section may rest thereon to hold the parts in alignment during the welding action. Also erection clips 21 may be used at spaced intervals along the juncture of riser 11 and tread 12 and similar risers and treads. This is to hold the parts temporarily in place until the welding action has been completed. If desired, the treads could be welded to the clips 2 and also to the supporting girder 1.

Preferably after the various groups of risers and treads have been assembled and welded in place as just described, seat supports 22 are provided at suitable intervals for supporting the respective seats 23. The seats 23 are preferably wooden though they could be made of other suitable material. Bolts 24 connect the seat members 23 to the horizontal section 25 of the supports 22. The leg 26 of each support is preferably welded at 27 to a tread though it could be riveted or bolted thereto without departing from the spirit of the invention. The same is true of the other leg though preferably this leg is welded to the riser at 26' as indicated in Fig. 3.

After all the parts have been welded as just de-

scribed and the seats 23 placed in position the grandstand is ready for use and presents a very simple but strong construction. Also the stand when completed does not present unnecessary and objectionable bolts or other objects but, on the contrary, presents a very simple structure body with a desired form of seat, which is water-proof, easily cleaned and which will not catch into the clothes of persons using the stand.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claim.

I claim:

A steel grandstand comprising inclined girders, a plurality of units extending lengthwise and transversely of the girders, each unit formed of a single sheet of material and bent to provide a plurality of alternately disposed tread plates and risers, the end edges of the risers of one unit abutting similarly positioned edges of the adjacently disposed units, spaced angle irons secured to the girders, means securing the abutted end edges of the risers to the angle irons, the rear edge of the tread plate of each unit being aligned with the lower edge of a riser of an adjacently disposed unit and a welded seam connecting the aligned edges of said plate and riser.

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