

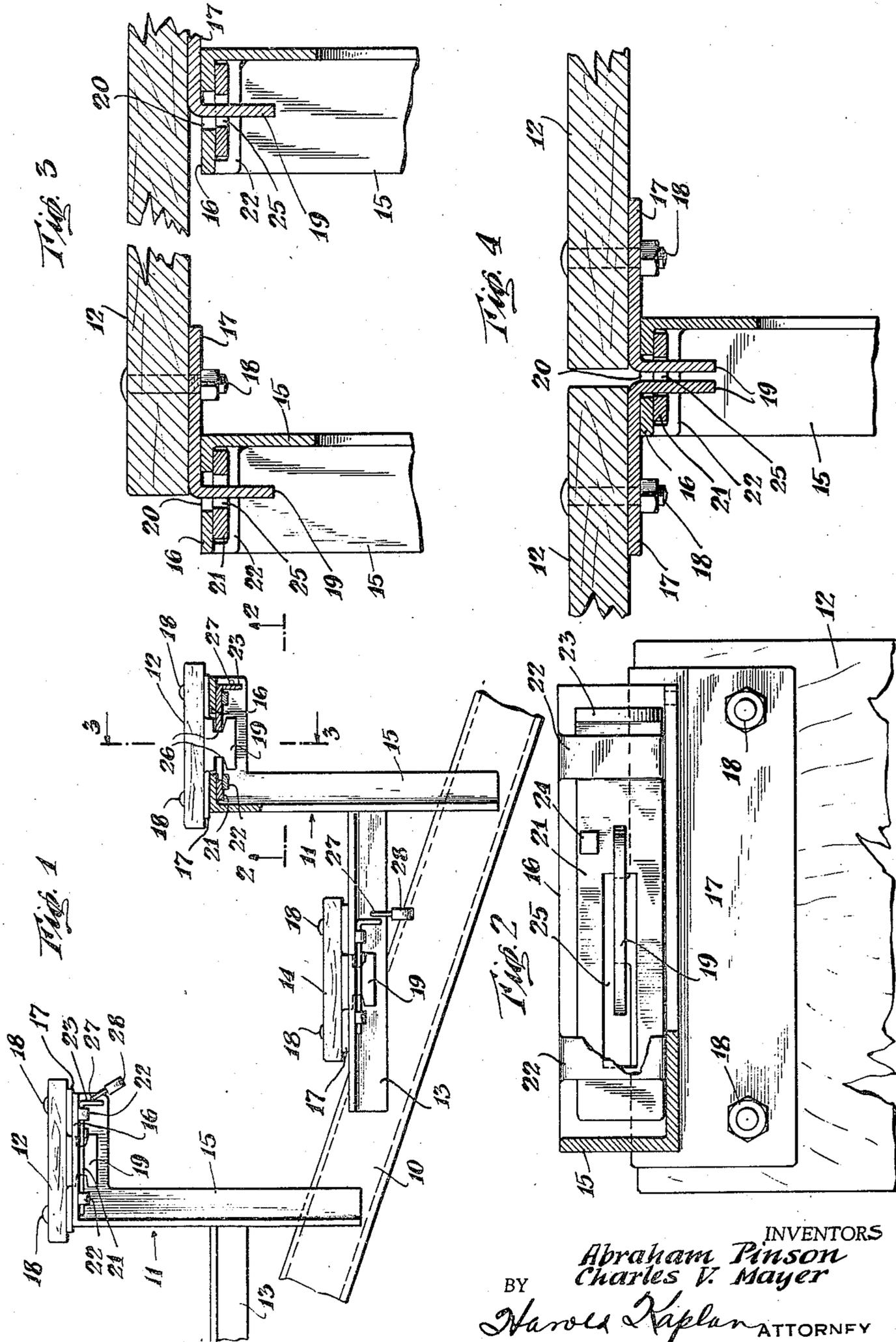
March 7, 1944.

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2,343,832

PORTABLE BLEACHER

Filed May 21, 1941



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2,343,832

PORTABLE BLEACHER

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Application May 21, 1941, Serial No. 394,428

2 Claims. (Cl. 155—130)

The present invention relates to the construction of portable bleachers such as are used to furnish temporary seating for the spectators or audience at athletic games, theatrical and musical performances, parades and the like.

The primary object of the present invention is to provide a portable bleacher of simple and rigid construction which may be easily erected at any desired location and which may be readily and conveniently taken apart and removed.

Another object of the invention is to provide a portable bleacher of the character mentioned wherein the seat and foot boards are firmly anchored in mounted position and can readily be removed when desired.

A particular feature of the invention is the provision of a novel and improved connecting and locking arrangement whereby the seat and foot boards are effectively anchored to their supports and securely held against accidental displacement, while permitting the seat and foot boards to be readily and conveniently removed from their supports when it is desired to disassemble the bleacher.

Other objects and advantages of the present invention will become apparent as the description of the selected physical embodiment of the invention herein disclosed progresses.

With the above and other objects in view, the invention resides in the novel features of construction, combination of elements and arrangement of parts hereinafter described and illustrated in the accompanying drawing.

In the accompanying drawing which forms an integral part of this disclosure,

Fig. 1 is a side elevational view of a fragmentary portion of a portable bleacher constructed in accordance with the present invention, the connecting and locking arrangement between one of the seat boards and its supporting bracket being shown in vertical section;

Fig. 2 is an enlarged bottom plan view of the connecting and locking arrangement between one of the seat boards and its supporting bracket, taken on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged detail sectional view taken on the line 3—3 of Fig. 1; and

Fig. 4 is an enlarged detail sectional view similar to Fig. 3, showing a pair of seat boards mounted in end to end relation on one supporting bracket.

Referring now in detail to the drawing wherein like reference characters indicate corresponding parts throughout the several views, it will be seen that the portable bleacher con-

structed in accordance with the present invention comprises a plurality of inclined stringers or beams 10 arranged in spaced parallel relation with their rear ends elevated. These stringers may be anchored and supported in any desired manner as by means of suitable props of conventional type and design. Each stringer 10 is provided at spaced intervals along its length with a plurality of upright brackets 11 for supporting the seat boards 12, while other brackets 13 are provided between the brackets 11 for supporting the foot boards 14. The supporting brackets 11 and 13 are preferably formed of angle iron stock, as shown, while the seat and foot boards 12 and 14 are preferably formed of selected wood board. The seat and foot boards 12 and 14 are adapted to span the distance between two or more stringers 10 and are supported respectively in horizontal position by two or more aligned brackets as illustrated in Fig. 3 of the drawing.

Each seat board supporting bracket 11 includes preferably an upright leg 15 having its lower end welded to the stringer 10, and a horizontally disposed leg 16 extending forward from the upper end of the leg 15 to provide a supporting member for the seat board 12. Each foot board supporting bracket 13 consists preferably of only a horizontally disposed supporting member, as shown, having its forward end welded to the upright leg 15 of one of the brackets 11 and its rearward end welded to the stringer 10. It will be apparent that there is thus provided a rigid and substantially integral structure for supporting the seat boards and foot boards.

In order to secure the seat boards and foot boards in position and to retain them against accidental displacement we have provided a novel and improved connecting and locking arrangement. This connecting and locking construction is substantially identical in form for either the seat boards or foot boards, and it will therefore suffice for the purpose of illustration to describe herein the improved connecting and locking arrangement as it is applied solely to the seat boards.

In pursuance of our invention each of the seat boards 12 is provided on the under surface thereof with a plurality of metal plates 17 which are suitably secured to the board as by the studs 18. The plates 17 are arranged at spaced intervals along the length of the board, the spacing between the plates 17 being such as to correspond to the spacing between the stringers 10. Each of the plates 17 is formed with a depending

tongue 19 which is adapted to seat in a slot 20 formed in the horizontal supporting member 16 of each supporting bracket 11. When the seat board 12 which carries the plates 17 is positioned to span the stringers 10 and to rest upon the horizontal supporting members 16 of the brackets 11, as shown in Fig. 3, the plates 17 will register respectively with the horizontal supporting members 16 and the tongues 19 of the plates will seat in the slots 20 of the horizontal supporting members.

Notches or slots 26 are formed in the forward and rearward edges of each tongue 19, as indicated particularly in Fig. 1, these notches or slots being designed to receive therein and frictionally engage one of the locking bolts hereinafter described. The purpose of providing notches 26 in both the forward and rearward edges of the tongue is, as will become apparent hereinafter, to assure that one of the notches is presented in a forward position no matter which edge of the seat board is positioned forwardly, thus facilitating the proper mounting of the seat board.

The means for anchoring the seat board to its supporting brackets consists of a series of bolts 21, formed preferably of substantially flat metal stock, each of which is slidably mounted within a pair of spaced guide loops 22 which are provided on the underside of each horizontal supporting member 16 as by welding. The guide loops 22 are preferably welded to the underside of the supporting member 16 and thus form a substantially integral part of the supporting bracket 11. The front end of the bolt 21 is preferably bent downwardly to form a suitable gripping member 23 for manual operation of the bolt. On the underside of the bolt 21 there is preferably provided a suitable stop lug 24 which is positioned between the spaced guide loops 22 and serves as an abutment for limiting the forward movement of the bolt. It will thus be apparent that the depending gripping member 23 and the stop lug 24 serve to retain the bolt in mounted position within the guide loops 22 and prevent removal of the bolt.

The bolt 21 is provided with a longitudinal slot 25 which is adapted to receive therethrough the tongue 19 of the plate 17. When it is desired to mount the seat boards upon their supporting brackets each of the bolts 21 is retracted to unlocking position by moving the bolt forwardly so that the stop lug 24 abuts the edge of the forward guide loop 22. In this position of the bolt, the slot 25 of the bolt will directly underlie and coincide with the slot 20 of the horizontal supporting member 16, and one of the tongues 19 which depend from the underside of the seat board will be permitted to enter into and seat within the slots 20 and 25 thereby bringing the seat board to rest upon the horizontal supporting member 16.

After the seat board has been brought to rest upon the supporting member 16 and the tongue 19 is seated in the slots 20 and 25, the bolt 21 is moved rearwardly by pressure against the gripping member 23. By this movement the forward portion of the bolt is projected into the slot 26 of the tongue 19. The bolt 21 is thus interlocked with the tongue 19 and prevents any upward movement of the seat board. When it is desired to remove the seat board the lock bolt 21 is moved forwardly and is thus withdrawn from locking engagement with the tongue 19.

Thereupon the seat board may be readily lifted from its supporting brackets and removed.

In Fig. 4 of the drawing there is shown a pair of seat boards 12 positioned in end to end substantially abutting relation, with the end portions of the two seat boards resting on one supporting bracket 11. This arrangement generally occurs at points intermediate the ends of the bleacher. In such instance two plates 17, carried respectively by the adjacent end portions of the two seat boards, will register with the horizontal supporting member 16 of the bracket and the depending tongues 19 of the two plates 17 will both be seated in the slot 20 of the horizontal supporting member 16 and in the slot 25 of the lock bolt 21, the slots 20 and 25 being designed to receive the two tongues 19 together. It will thus be apparent that in this instance the lock bolt 21 will operate to interlock with the two tongues 19 simultaneously and will thereby serve to anchor the two adjacent seat boards to the supporting bracket.

From the foregoing description of the connecting and locking arrangement for anchoring the seat boards and foot boards of the bleacher to their supports, it will be apparent that the present invention presents novel and improved mechanism for detachably securing the seat boards and foot boards in mounted position, and provides effective means for retaining the boards against accidental displacement. This novel and improved anchoring arrangement serves also to maintain the stringers firmly in spaced relation when the bleacher is erected and provides a rigid structure.

In order to prevent meddling with the locking mechanisms when the bleacher is in erected condition, and to safeguard the seat boards and foot boards against removal by vandals and the like, an aperture 27 may be provided in the horizontal member of the supporting bracket, positioned so as to be presented immediately adjacent to the front end of the lock bolt 21 when in locking position, and a suitable guard such as a padlock 28, shown in Fig. 1, may be passed through the aperture to prevent retraction and unlocking of the bolt. Two such padlocks may preferably be employed for each board, one attached to each bracket supporting an end of the board.

Although our invention is essentially disclosed in the preferred physical embodiment thereof hereinabove described and illustrated in the accompanying drawing, we desire it to be understood that the invention is not limited to the specific structure disclosed, and that changes in the details of construction are contemplated, which will nevertheless fall within the spirit and scope of the invention as defined in the appended claims.

Having thus described and illustrated our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a bleacher, a supporting bracket including a horizontal supporting portion having a slot formed therein and provided with means on the underside thereof for carrying and guiding a slide bolt, a manually operable slide bolt mounted within and guided by said guide means and having a slot therein similar to and in vertical alignment with the slot in said horizontal portion of the bracket, and a rest board supported by said horizontal portion of the bracket and having a metal plate secured to the underside thereof including a depending portion projecting

through both said slots, said depending plate portion having a notch in a vertical edge thereof adapted to receive a portion of said slide bolt operatively, whereby to detachably secure the rest board to the supporting bracket.

2. In a bleacher, a supporting bracket including a horizontal supporting portion having a slot formed therein and provided with means on the underside thereof for carrying and guiding a slide bolt, a manually operable slide bolt mounted within and guided by said guide means and having a slot therein similar to and in vertical alignment with the slot in said horizontal portion of the bracket, and a pair of rest boards arranged

5 in end to end relation and having their end portions supported by said horizontal portion of the bracket, said rest boards having metal plates secured to the undersides thereof adjacent their end portions including depending portions projecting through both said slots, said depending plate portions having notches in vertical edges thereof adapted to simultaneously receive a portion of said slide bolt operatively whereby to detachably secure the rest boards to the supporting bracket.

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