Jan. 5, 1932. T. O. HOPPES 1,839,679

PORTABLE BLEACHER STAND

Filed Dec. 9, 1930 2 Sheets-Sheet 1

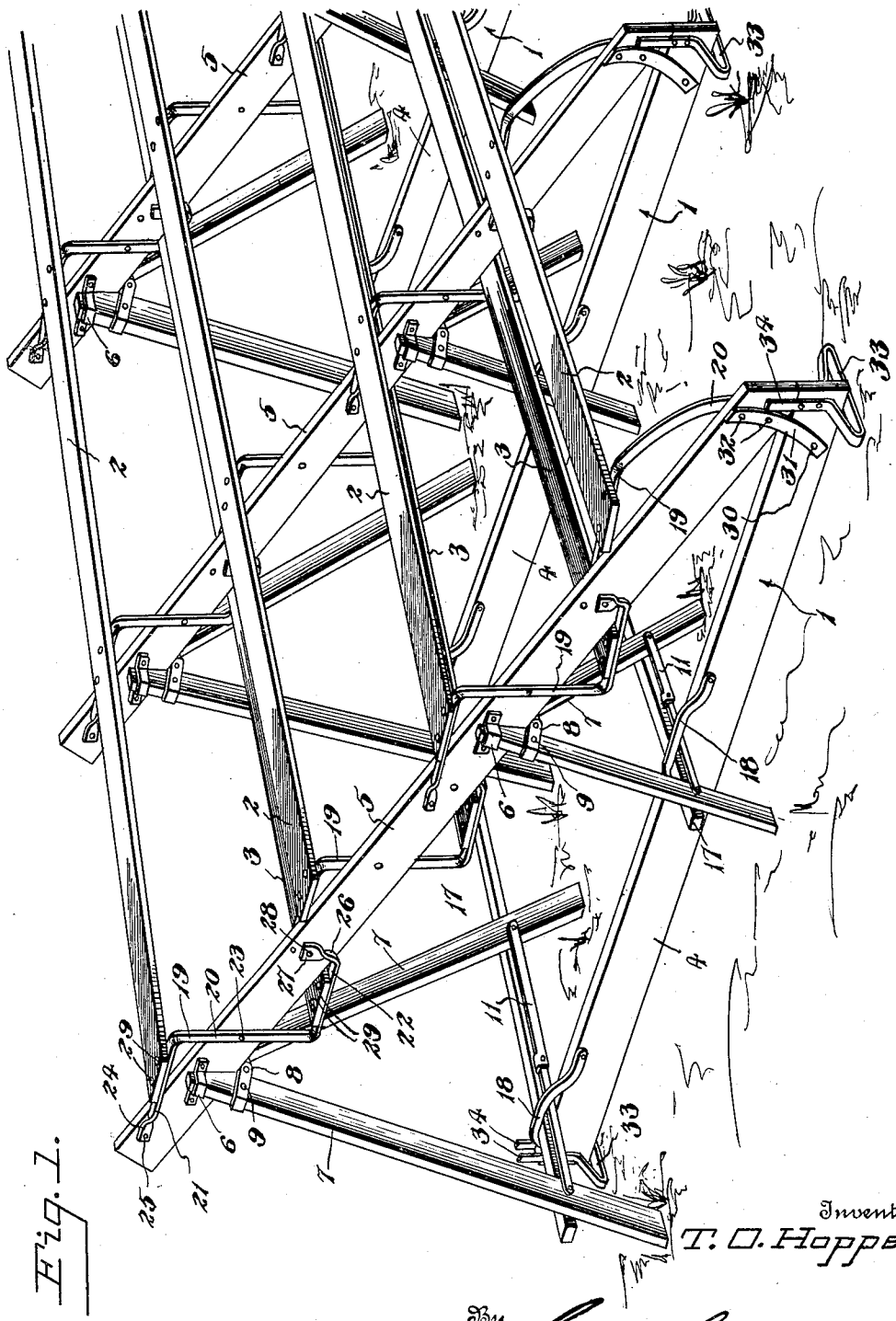


Fig. 1.

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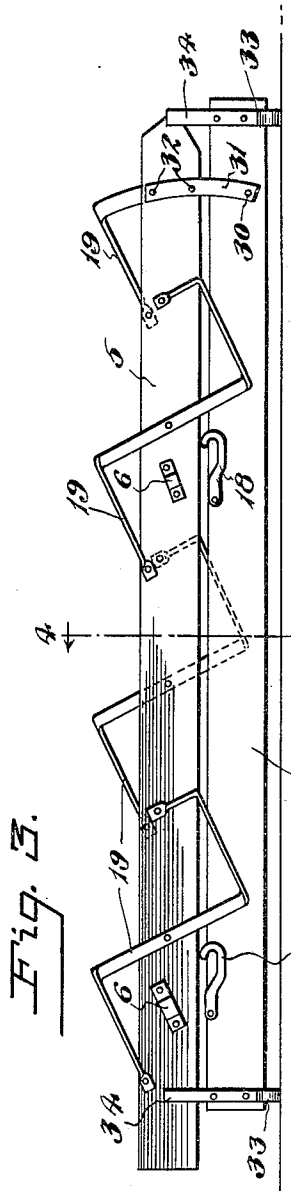


Fig. 3.

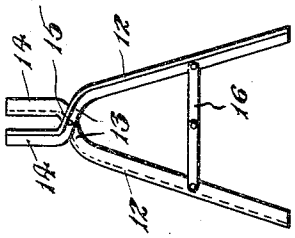


Fig. 6.

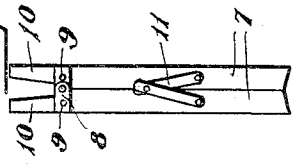


Fig. 5.

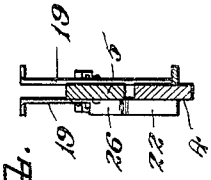


Fig. 4.

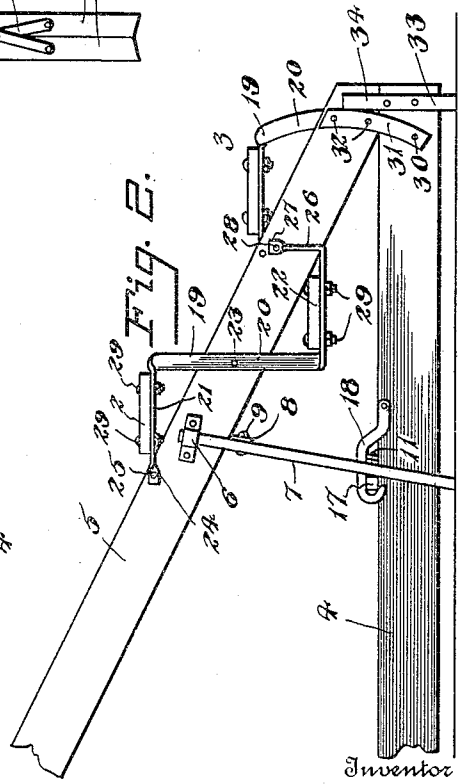


Fig. 2.

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UNITED STATES PATENT OFFICE

THOMAS O. HOPPES, OF TAMAQUA, PENNSYLVANIA

PORTABLE BLEACHER STAND

Application filed December 9, 1930. Serial No. 501,116.

This invention relates to a portable bleacher stand and one object of the invention is to provide a stand adapted to be erected upon a ball field, in a gymnasium, or other hall as a temporary seating structure.

Another object of the invention is to so construct the stand that it may be easily and quickly set up for use and also easily and quickly dismantled when no longer needed and to further so construct the stand that when it is erected it will be very strong and not be liable to collapse.

Another object of the invention is to provide the stand with improved uprights which may be easily and quickly set up for use and when not in use reduced to a compact mass capable of being stored in a small space.

Another object of the invention is to provide improved props for upper bars of the uprights and also provide improved means to brace these props when in use and prevent them from slipping rearwardly when in place and allowing the stand to collapse while in use.

Another object of the invention is to provide the upper bar of each upright with improved brackets to which seat boards and foot boards are to be attached and so apply these brackets to the upper bars of the uprights that the foot boards and seat boards may be firmly supported in proper spaced relation to each other.

Another object of the invention is to so dispose the brackets upon the upper bars of the uprights that when the stand is dismantled and the upper bars of the uprights lowered to a folded position portions of the brackets may engage opposite side faces of base bars to which the upper bars are attached and prevent the upper bars from moving transversely of the lower bars.

Another object of the invention is to provide the base bars of the uprights with ground engaging feet at their ends which serve to brace the base bars against transverse tilting and also are adapted to engage ends of the upper bars when lowered and assist the brackets in preventing the upper bars from moving transversely out of their proper positions above the base bars.

The invention is illustrated in the accompanying drawings, wherein

Figure 1 is a perspective view of the improved bleacher stand,

Fig. 2 is a fragmentary view looking at one end of the stand,

Fig. 3 is a view in side elevation of one of the uprights when folded,

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 3,

Fig. 5 is a view showing one of the props of the uprights when folded, and

Fig. 6 is a view illustrating a modified form of prop.

This improved stand consists of a number of uprights, indicated in general by the numeral 1, and serving as supports for seat boards 2 and foot boards 3 which extend longitudinally of the stand between the uprights in crossed relation thereto.

The uprights are of a duplicate construction and each has a base bar 4 and an upper bar 5 which may be moved from a folded position in which it extends longitudinally of the base bar closely above the same, as shown in Figure 3, to a raised position, as shown in Figure 1, in which it extends rearwardly in upwardly diverging relation to the base bar. Sockets 6 are secured against side faces of the upper bar in opposed relation to each other to receive upper ends of props by means of which the upper bar is to be supported in a raised position. In the present illustration, two props have been used to support an upper bar of each upright but it will be understood that as many props may be used as found necessary according to the size of the stand. These props may be constructed as shown in Figures 1 and 5 or as shown in Figure 6. In the form shown in Figures 1 and 5, each prop consists of side bars 7 formed of wood and they are pivotally connected by straps 8 extending transversely of the bars and secured thereto by bolts or equivalent fasteners 9 passed through the bars and end portions of the straps. Therefore, each side bar defines a supporting leg having a jaw 10 at its upper end, and it will be readily seen that, when the prop is set in place with the jaws at its upper ends engaged through the sockets

6, the upper bar will be firmly supported as it will be gripped between the jaws 10 and also supported against downward movement by the sockets and by resting upon the straps 8 which pivotally connect the side bars of the props. The companion straps are pivotally connected by pins 9′ which engage through openings in the overlapping end portions of the straps. Braces 11 of the break joint type are provided to limit movement of the lower ends of the side bars 7 of the props away from each other.

The prop shown in Figure 6 is formed of angle metal and consists of side bars 12 which have their upper end portions bent, as shown at 13, to extend in cross relation to each other and terminate in upwardly extending jaws 14 to engage in the sockets 6 and firmly grip the upper bar of an upright. A fastener 15 extends through the crossed portions 13 to pivotally connect the side arms of the prop, and in order to limit movement of the lower ends of the side arms away from each other, there has been provided a break joint brace 16 similar to the brace 11.

When these props are set in place, they are disposed in straddling relation to the base bar of an upright and are disposed at a rear incline, as shown in Figure 2, so that strain will be applied longitudinally of the props when the stand is occupied. Bracing bars 17 extend between the uprights and rest upon the upper edge faces of the base bars 4 back of the props and these bracing bars are engaged by hooks 18 which are pivoted in the base bars and adapted to be swung into and out of position to engage the bracing bars. By this arrangement the bracing bars will be prevented from moving rearwardly along the base bars 4 of the uprights and since the legs or side bars of the props engage the bracing bars, as shown clearly in Figure 2, the props will be prevented from slipping rearwardly and the stand will be prevented from collapsing.

In order to mount the seat boards 2 and foot boards 3, there has been provided brackets 19 which are secured against side faces of the upper bar of each upright in spaced relation to each other longitudinally thereof. Each of these brackets is formed from a strip of strong metal and each strip is bent in spaced relation to its ends to form a bracket having a vertically disposed intermediate portion 20 and upper and lower horizontal portions 21 and 22 extending from its ends. The vertical portion is secured against the side face of the upper bar 5 of the upright by a bolt or other suitable fastener 23 and the rear end of the upper horizontal portion is twisted, as shown at 24, to form a foot through which a fastener 25 is passed. The forward end of the lower horizontal portion is bent upwardly as shown at 26, and then twisted to form a foot 27 through which a fastener 28 is passed. It will thus be seen that the bracket will be very firmly secured to the upper bar of the upright with its upper horizontal portion 21 disposed above the upper bar and its lower horizontal portion disposed below the upper bar. Therefore, the seat boards and foot boards may be removably secured to the brackets by bolts 29 and they will be firmly secured in proper spaced relation to each other for convenient use as seats and foot rests. Since the seat boards and foot boards are secured by bolts, they may be easily detached when the stand is to be dismantled. Referring to Figures 1 and 3, it will be seen that the brackets carried by the upper bar of each upright are laterally disposed against opposite side faces of the upper bar. Therefore, when the upper bar is swung downwardly to the folded position shown in Figure 3, the depending portions of the brackets will engage opposite side faces of the base bar and the upper bar will be prevented from moving transversely out of its proper position directly above the base bar. The forward bracket of each upright has the lower horizontal portion omitted and its vertically disposed portion extends downwardly at a curve and terminates near the lower edge of the base bar where it is secured by a bolt or equivalent fastener 30 which also engages through the lower end of a strip 31 disposed against the opposite side of the base bar. This strip 31 extends upwardly and is secured against the adjacent side face of the upper bar 5 by bolts or equivalent fasteners 32 which also pass through the vertically disposed portion of the front bracket. By this arrangement the front bracket and the strip 31 will be mounted to turn about the bolt 30 as a pivot and the upper bar will be mounted for swinging movement from the raised position shown in Figures 1 and 2 to the lowered or folded position shown in Figure 3. There has also been provided feet 33 which are secured adjacent ends of the base bar of each upright and these feet have portions projecting from opposite sides of the base bar and other portions or arms 34 which project upwardly above the base bar and are adapted to engage opposite side faces of ends of the upper bar when the upper bar is in the lowered folded position and assist the brackets in preventing transverse movement of the folded upper bar. Therefore, the upper bar when folded will be firmly held in its proper position above the base bar and the folded upright may be stacked in a pile along with others when not in use without danger of the base bar and upper bar moving transversely of each other and causing the strip 31 and vertically disposed portion of the front bracket to be twisted out of shape.

I have therefore, provided a bleacher stand which may be easily and quickly set up for temporary use and then taken down and stored away until again needed. I have fur-

ther provided a portable bleacher stand which when set up will be very strong and durable and may be occupied without danger of its collapsing.

Having thus described the invention, I claim:

1. A portable seating structure comprising uprights spaced transversely from each other, substantially Z-shaped brackets carried by said uprights and each consisting of a metal strip bent in spaced relation to its ends to form an intermediate portion extending above and below an upright and end portions disposed in vertically spaced horizontal planes and secured to the upright, seat boards extending transversely of said uprights and releasably secured upon the upper horizontally disposed portions of said brackets, and foot boards extending transversely of the uprights and releasably secured upon the lower horizontally disposed portions of said brackets.

2. A portable seating structure comprising stringers spaced transversely from each other and extending rearwardly at an upward incline, brackets carried by each stringer in spaced relation to each other longitudinally thereof and each having a vertically disposed intermediate portion and horizontal disposed upper and lower end portions projecting in opposite directions from the intermediate portion, seat boards extending transversely of said stringers and releasably secured to the upper horizontally disposed portions of said brackets, and foot boards extending transversely of the stringers and releasably secured to the lower horizontally disposed portions of said brackets.

3. A portable seating structure comprising uprights spaced transversely from each other, each upright consisting of a base bar, an upper bar disposed above said base bar longitudinally thereof, props straddling the lower bar and engaging the upper bar to support the upper bar in a raised position in rearwardly diverging relation to the base bar, brackets carried by said upper bar in spaced relation to each other longitudinally thereof and each having a vertically disposed intermediate portion and horizontally disposed upper and lower end portions projecting in opposite directions from the intermediate portion, the brackets being alternately disposed against opposite side faces of the upper bar and adapted to have their depending portions engage opposite side faces of the base bar when the upper bar is lowered to a folded position, the upper bar being pivotally mounted adjacent its front end for swinging movement from a raised position to a folded position, seat boards extending transversely of said uprights and releasably secured to the upper horizontally disposed portions of said brackets, and foot boards extending transversely of the uprights and releasably secured to the lower horizontally disposed portions of said brackets.

4. A portable seating structure comprising uprights spaced transversely from each other, each upright consisting of a base bar, an upper bar disposed above said base bar longitudinally thereof, props straddling the lower bar and engaging the upper bar to support the upper bar in a raised position in rearwardly diverging relation to the base bar, brackets carried by said upper bar in spaced relation to each other longitudinally thereof and each having a vertically disposed intermediate portion and horizontally disposed upper and lower end portions projecting in opposite directions from the intermediate portion, a strip secured against a side face of the upper bar near the front end thereof opposite the vertical portion of the front bracket and together therewith pivoted to the base bar, seat boards extending transversely of said uprights and releasably secured to the upper horizontally disposed portions of said brackets, and foot boards extending transversely of the uprights and releasably secured to the lower horizontally disposed portions of said brackets.

5. An upright for a portable bleacher comprising a base bar, an upper bar movable from a raised position in rearwardly diverging relation to said base bar to a lowered folded position, brackets carried by said upper bar in spaced relation to each other longitudinally thereof and each having a vertically disposed intermediate portion and upper and lower horizontal portions projecting in opposite directions from ends of the intermediate portion longitudinally of the upper bar to support seat boards and foot boards, said brackets being alternately secured against opposite side faces of the upper bar to engage opposite side faces of the base bar when the upper bar is folded, and props to support the upper bar in a raised position having their upper ends removably engaged with the upper bar.

In testimony whereof I affix my signature.

THOMAS O. HOPPES. [L. S.]