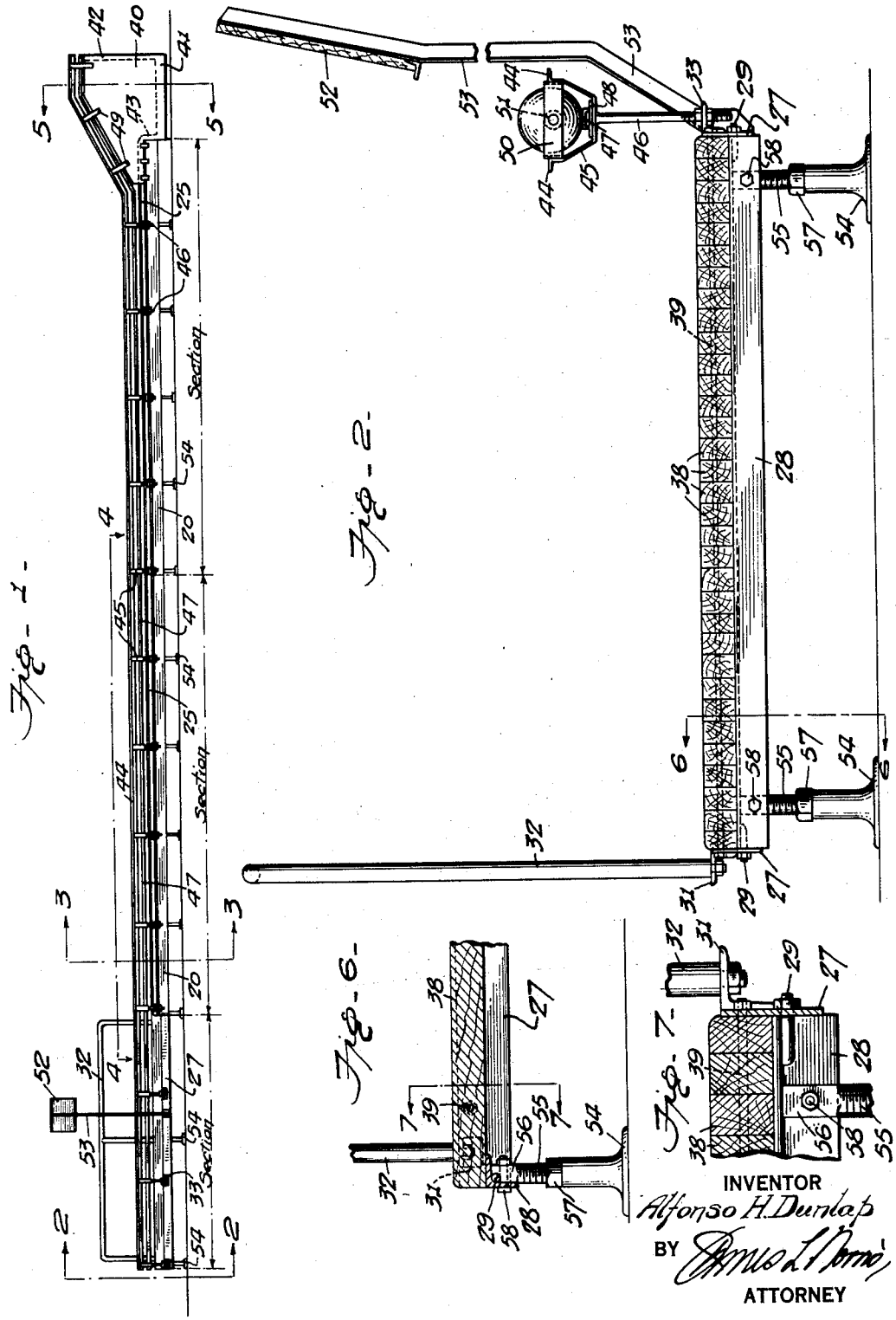
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PORTABLE BOWLING ALLEY

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PORTABLE BOWLING ALLEY

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Fig. 3.

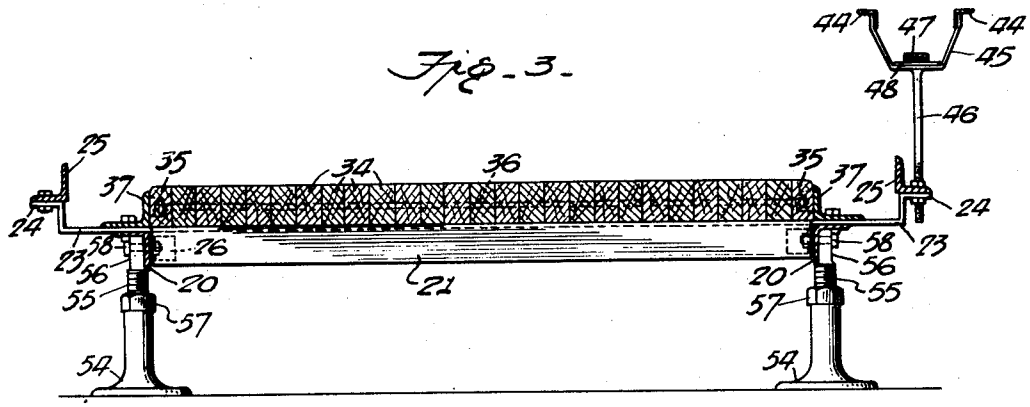


Fig. 4.

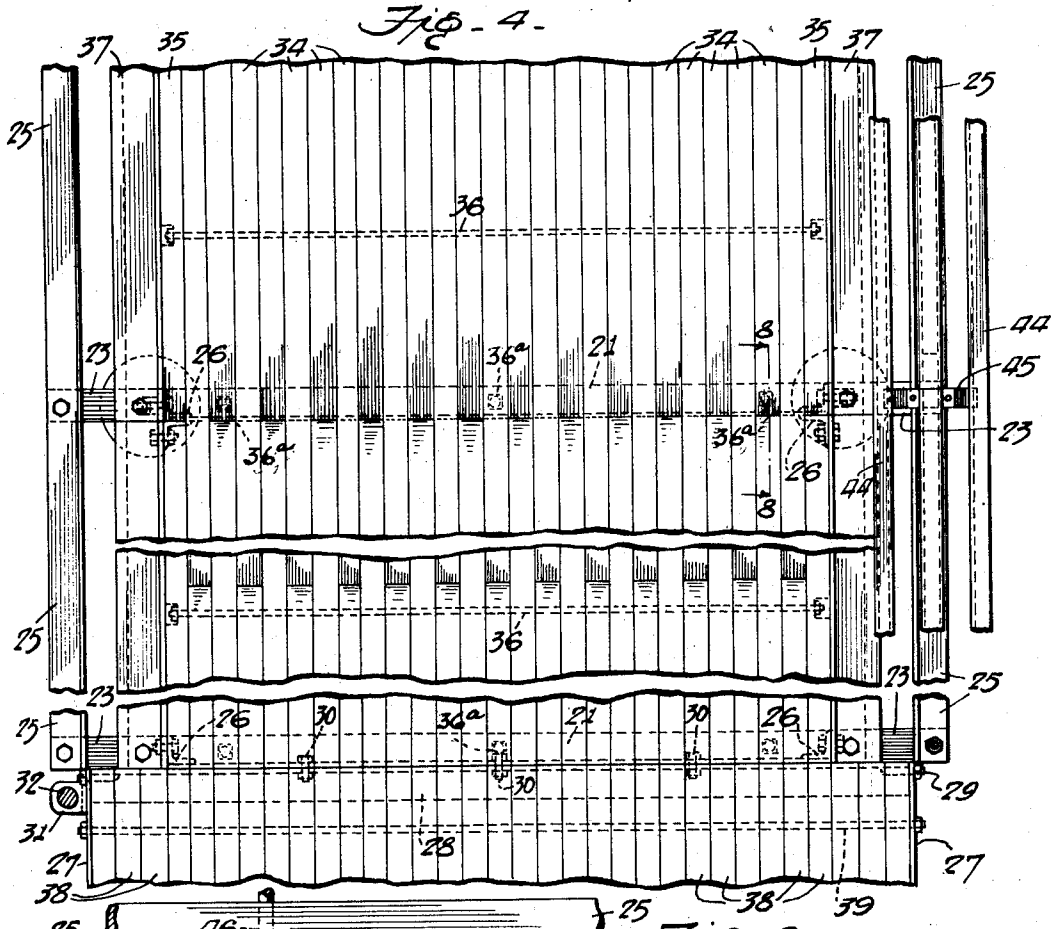
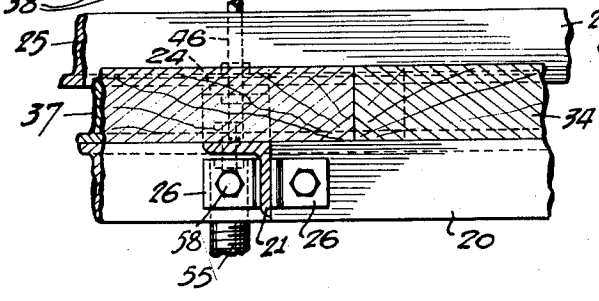


Fig. 8.



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Fig. 5.

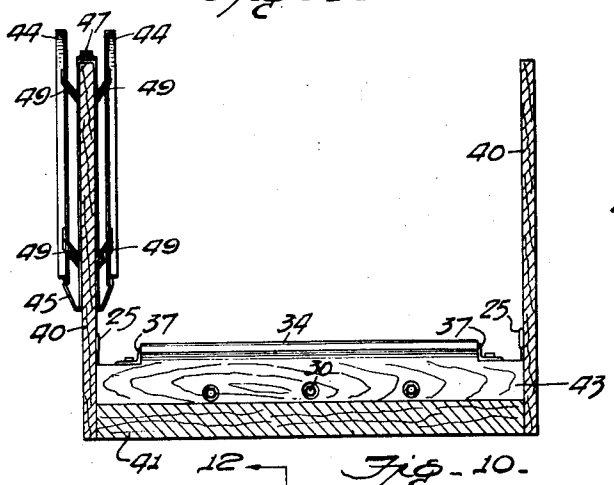


Fig. 12.

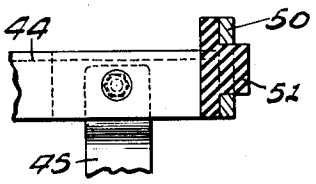


Fig. 10.

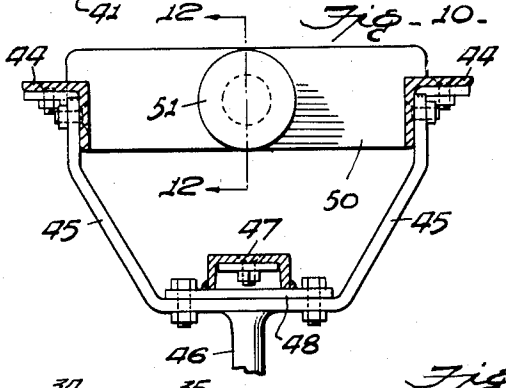


Fig. 11.

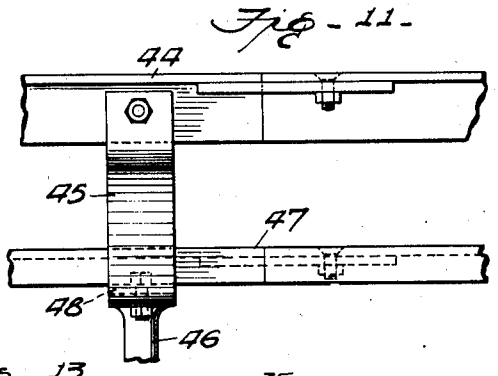


Fig. 13.

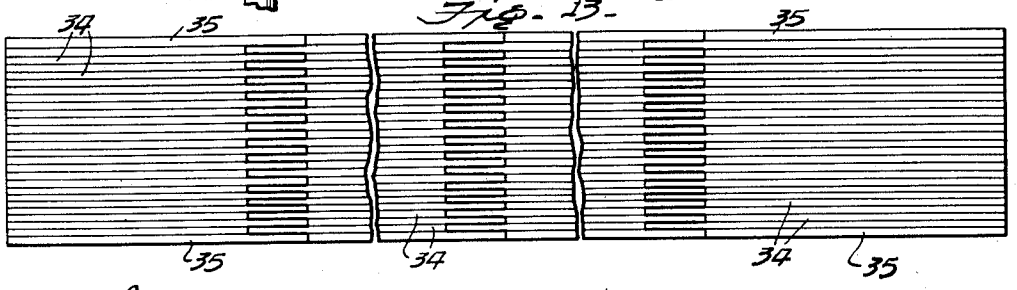
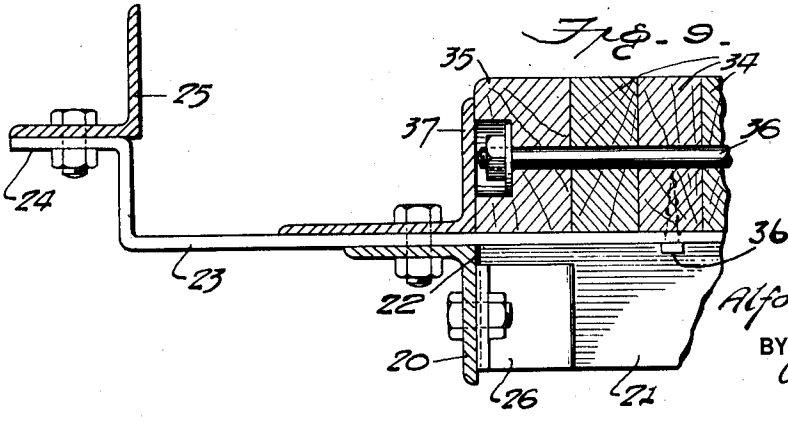


Fig. 9.



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UNITED STATES PATENT OFFICE

1,921,734

PORTABLE BOWLING ALLEY

Alfonso H. Dunlap, Chattanooga, Tenn.

Application July 11, 1931. Serial No. 550,207

3 Claims. (Cl. 273—51)

My invention relates to portable bowling alleys, and particularly to bowling alleys of the knock-down type which can be set up out-of-doors for use during the summer season, and taken apart and stored or set up and used indoors for the remainder of the year. To this end my invention comprises a sectional runway so constructed as to be easily and rigidly put together, and which, when in place, will not warp, buckle or become uneven. This runway rests upon a steel frame which is also made in sections the lengths of which are different from the lengths of the runway sections. The runway is flanked on each side by angle-iron protector bars, the sections of which differ in length from the lengths of the runway sections and also from the lengths of the frame sections. These details make an exceptionally rigid structure, since the joints of the various parts do not coincide. The structure also insures an absolutely straight runway with all its sections in the same plane, so that the surface will be as uniform as if it were built upon a stationary foundation.

My invention includes a platform for the players constructed similarly to the runway. The platform forms a separate section at one end of the runway and a box or pit of special construction is secured at the other end of the runway. A light trough rigidly constructed in sections of skeleton form is supported on the framework of the runway and platform. Especially constructed jacks support the entire structure.

My invention consists in the details and combinations of elements herein described and set forth in the accompanying drawings, in which:

Fig. 1 is a side elevation of the complete bowling alley;

Fig. 2 is an end view as viewed from the left-hand end of Fig. 1;

Fig. 3 is a transverse cross section on the line 3—3 of Fig. 1, looking in the direction of the arrows;

Fig. 4 is a top plan view of the bowling alley between the arrows 4—4 of Fig. 1;

Fig. 5 is a vertical cross section on the line 5—5 of Fig. 1, looking in the direction of the arrows;

Fig. 6 is a vertical section on the line 6—6 of Fig. 2, looking in the direction of the arrows;

Fig. 7 is a vertical section on the line 7—7 of Fig. 6, looking toward the left;

Fig. 8 is a section on the line 8—8 of Fig. 4, looking toward the right;

Fig. 9 is a view on a larger scale of a portion of the lefthand side of the alley shown in Fig. 3;

Fig. 10 is a view on a larger scale of the ball-return trough at the righthand side of Fig. 3;

Fig. 11 is a side elevation of a portion of the ball-return trough shown in Fig. 10;

Fig. 12 is a section on the line 12—12 of Fig. 10, and

Fig. 13 is a plan of the runway showing the sections with interengaging ends.

The same numerals represent the same parts throughout the specification and drawings.

The over-all length of the bowling alley is about 55 feet and the length of the runway is about 40 feet. These dimensions, of course, may be varied according to the choice of the owner or the particular circumstances under which the bowling alley is to be used. The supporting frame for the runway is made preferably in two sections, each of which comprises angle-iron side bars 20 and angle-iron cross bars 21. As shown in Figure 9, the lower flanges of the cross bars 21 are cut away as at 22 when they adjoin the lower flanges of the side bars 20 and the upper flanges of said cross bars extend outward beyond said side bars, as shown at 23. The extensions 23 of the cross bars 21 are bent upwardly and then outwardly to form elevated supports 24 for the guard rails 25, which extend longitudinally of the supporting frame and are also formed of angle-iron. The side bars 20 and cross bars 21 of the frame are held together by angle brackets 26 welded to the cross bars and bolted to the side bars.

The supporting frame for the bowlers' platform (best shown in Fig. 2) comprises a pair of side bars 27, one at each side of the platform, and angle-iron cross bars 28. The cross bars 28 are united to the side bars 27 by bolts 29 welded into the angles of the cross bars and extending through openings in the side bars. The supporting frame for the bowlers' platform is united to the runway frame by bolts 30 extending through the vertical flanges of the cross bars 21 and 28, as shown in Figure 4, and the sections of the runway frame are secured together in the same manner. As shown in Figures 2, 6 and 7, brackets 31 attached to the side bar 27 at one side of the platform support a rail 32, and similar brackets 33 attached to the side bar 27 at the other side of the platform support one end of the ball-return trough which extends alongside the platform.

I have described the frame as made in two sections. I construct the runway or alley floor preferably in four sections of approximately equal length in order to facilitate transportation and storage of same, although the longer strips comprised in the end sections are of greater

length than the strips comprised in the intermediate sections, due to the indented ends of the sections where the sections are connected together.

The alley floor is constructed of strips 34, preferably of yellow pine, set on edge and side strips 35, which preferably are thicker than the strips 34. The strips 34 and 35 forming each section of the floor are connected together by bolts 36 which extend through aligned transverse openings in said strips, and the side strips 35 are recessed to receive the heads and nuts of the said bolts. At the meeting ends of the sections alternate strips extend beyond the intermediate strips, and the projecting strips of one section enter the recesses between the projecting strips of the other section, not only breaking joints but insuring a smooth, even surface and accurate alignment of the sections. The sections may therefore be made up at the factory and be shipped ready to be laid upon the supporting frame, and, when it is desired to take the alley apart for storage or for shipment to another location, each complete section may be separated from the adjacent section or sections. As shown in Figure 3, the sections of the alley floor are flanked at each side by the vertical flanges of protecting angle-iron bars 37 bolted to the extensions 23 of the cross bars 21. The bars 37 may be bolted to the horizontal flanges of the cross bars 21 and the flooring may be secured in place in its supporting frame as by means of lag-screws 36^a extending through openings in the horizontal flanges of the cross bars 21 into the lower sides of said sections. The protecting bars 37 are in sections of approximately uniform length, the aggregate length of same being the same as the aggregate length of the four sections of flooring. The protecting bars are each therefore of a different length than that of the floor sections which additionally insures alignment of the floor sections.

The floor of the players' platform is wider than the alley floor and is formed of strips similarly to the alley floor. The strips 38 constituting this floor are of equal length and all terminate in straight transverse lines at the ends of the platform. The strips are assembled and secured together by bolts 39 extending through transverse aligned openings in said strips and the side bars 27, as best shown in Figure 4.

The box or pit in which the pins are set up comprises side walls 40 resting at their forward ends on the horizontal flanges of the guard rails 25 (see Figs. 1 and 5). The box also comprises a floor 41 and an end wall 42. A board 43 encloses the front end of the box, while exposing at least the upper portion of the end of the runway. The ball-return trough, which extends throughout the length of the alley, comprises two parallel angle-iron side bars 44 connected by yokes 45 (Figures 3 and 10). The yokes 45 are supported on standards 46, which in turn are carried by the lateral extensions 23 of the cross bars 21 and the brackets 33. In the bottom of each yoke is a plate 48, and each of the plates carries an inverted channel bar 47, which forms the bottom of the skeleton trough. At the pit end beyond the runway the yokes are carried by straps 49 secured to the sides 40 of the pit or box. The ends of the trough carry transverse bars 50 in which are mounted buffers 51.

A standard 53 extending upwardly from one of the side plates 27 carries a score box 52.

The runway and platform are supported by jacks comprising base portions 54, screw-threaded portions 55, and nuts 57 on said screw-threaded portions. The screw-threaded portions are flattened adjacent their upper ends, as at 56, and such flattened portions are secured to the cross bars 21 and 28 by bolts 58.

What I claim is:

1. A portable bowling alley comprising a sectional supporting frame, each section comprising side bars and angle-iron cross bars, the vertical flanges of the cross bars being cut away where they meet the end bars and the horizontal flanges extending across and beyond the side bars, the extended portions being offset at their ends to form elevated seats, and angle-iron guard rails supported on said seats.

2. A portable bowling alley, comprising a sectional runway, angle-iron guard bars spaced from the sides of said runway, each of said guard bars having one of its flanges disposed horizontally, and a box or pit for pins at one end of said runway, said box or pit comprising side members each resting upon and secured to the horizontal flange of one of said guard bars, an end wall and a floor.

3. A portable bowling alley, comprising a sectional runway, a pair of guard bars supported, respectively, from the opposite sides of said runway and spaced therefrom, each of said guard bars having one of its ends projecting beyond one end of said runway, and a pit for pins comprising side members each supported by the portion of one of said guard bars which projects beyond said runway, a floor and an end wall carried respectively by said side walls.

ALFONSO H. DUNLAP.