

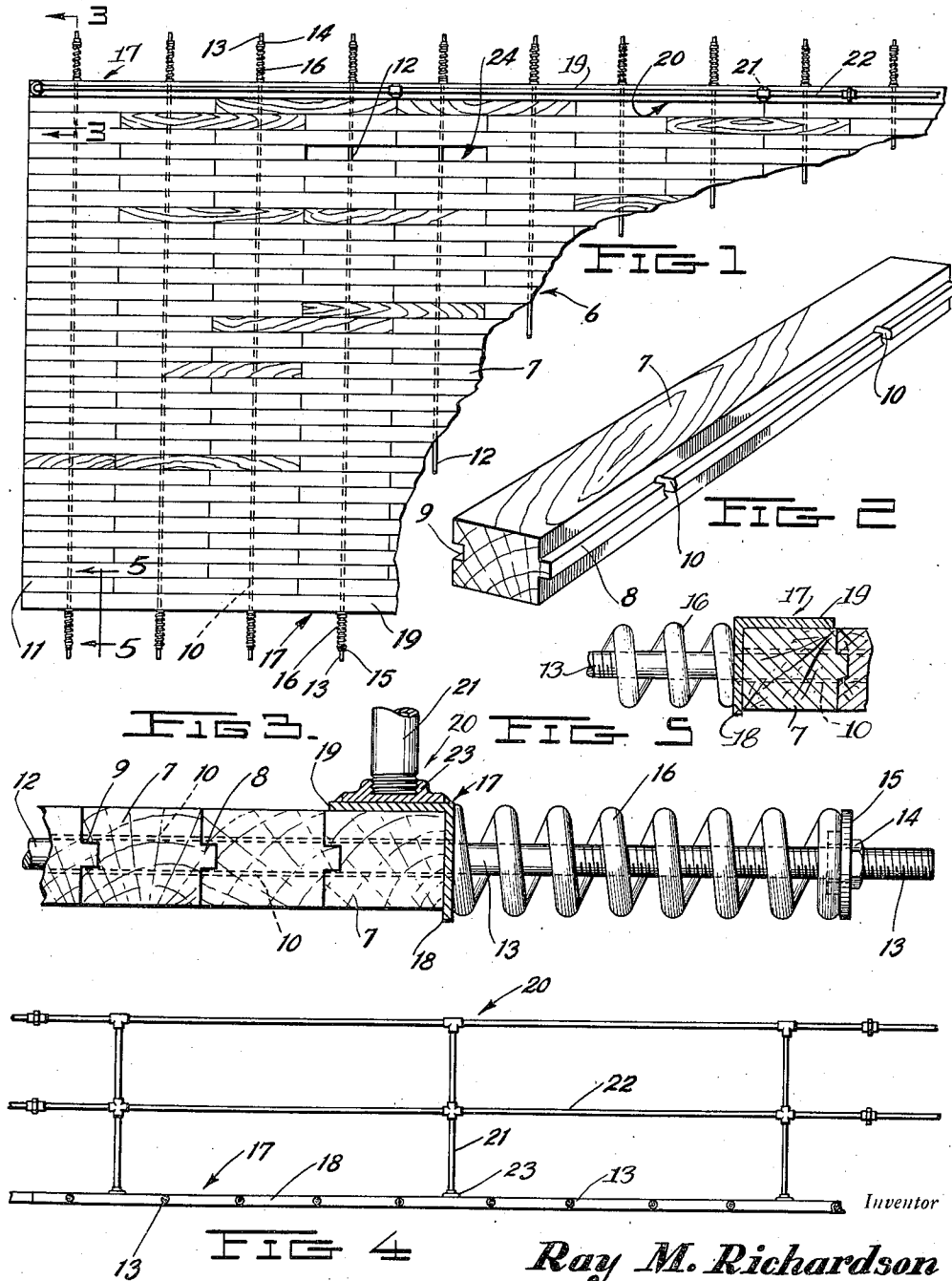
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PORTABLE KNOCKDOWN FLOOR CONSTRUCTION

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PORTABLE KNOCKDOWN FLOOR
CONSTRUCTION

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3 Claims. (Cl. 20—6)

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This invention relates to portable floor construction of a knockdown type and has reference in particular to an especially made up assemblage which is especially, but not necessarily, adapted to function as a dance floor, or, preferably, as a floor for a skating rink.

As above set forth, and although the form of the invention adopted is susceptible in serving in many capacities, the structural arrangement herein shown and described is expressly intended to serve as a skating rink in that it can be set up, taken down, or repaired and made practicable for use in various types of buildings and inclosures, as well as utilized out-of-doors wherever necessary or desired.

In carrying out the principles of the preferred embodiment of the invention, the floor proper is characterized by hardwood tongue and groove stock, the individual sections being relatively short pieces and these of standardized and predetermined dimensions so as to fit and nest properly together and so as to make for ready and satisfactory repairs whenever one or more sections become damaged or require replacement.

Another object and feature of the invention has to do with the adoption and use of longitudinal edging members for the opposite longitudinal runs or stretches of the complete floor structure, these being in the form of angle irons and said irons serving not only as re-inforcing cornice-pieces but as accommodation means for assembling rods and for rails or fences used as running guards on either one or both sides of the completed structure. Also, and in carrying out another phase of the invention, I provide a sectional knockdown floor in which the tongue and groove sections or pieces are not only standardized in dimensions for interchangeability and quick repairs but are provided with transverse bores, these being parallel to each other and located at specific points so that the bores of the respective sections and all of said sections can be lined up to accommodate the transverse assembling and retaining rods or bolts.

Other objects, features and advantages will become more readily apparent from the following description of the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a fragmentary top plan view of a so-called skating rink floor constructed in accordance with the principles of the present in-

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vention, one of the sections being removed to make way for a repair.

Figure 2 is a perspective view of one of the standardized tongue and groove sections.

Figure 3 is an enlarged fragmentary detail section taken on the approximate plane of the line 3—3 of Figure 1, and

Figure 4 is a fragmentary elevational view showing the manner in which the knockdown fence is setup for use on the floor as a marginal guide.

As before stated the entire assembly is of a portable knockdown type, the floor proper being denoted by the numeral 6 and being of sectional construction and in fact made up of the tongue and groove sections or pieces shown, one being illustrated in Figure 2 and denoted by the numeral 7. In other words, the entire floor 6 is made up of standardized tongue and groove stock 7, the tongue being indicated at 8 and the groove at 9. The aforementioned bores are denoted by the numerals 10.

In connection with the foregoing it is understood that certain pieces on the ends, that is, the opposite ends of the completed floor may be made shorter or longer than the regular or body pieces 7, such as for example the pieces 11 at the left in Figure 1. This is necessary in order to permit the overall structure to fit in certain limited or fixed areas, but in the main all of the pieces will be of the size and proportion as shown in Figure 2. The obvious purpose of this is that it proposes expeditious manufacturing and assembling and disassembling. Also, if one of the pieces in the middle of the floor, for example, becomes damaged so that it interferes with a smooth surface, the replacement of this can be readily accomplished. This is attainable in that the various pieces 7 are assembled and secured together by long rods or so-called bolts 12. These are identical and arranged at equally spaced points throughout the longitudinal dimension of the overall or complete floor as is evident in Figure 1. Thus, by assembling the pieces 7 and lining up the holes 10 the rods or bolts can be readily slipped through all of the holes for quick assembling and knockdown results. As brought out in Figure 3 the opposite end portions of the rods are screw-threaded as at 13. The threads serve to accommodate assembling and retaining nuts 14, the latter serving to bear against end thrust washers 14, and said washer engaging the outermost convolutions of the cushioning spring 16. Thus, the threaded ends of the bolts protrude through and beyond the longitudinal edges

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of the made up floor and carry springs and the springs serve as compensating elements for expansion and contraction and general cushioning purposes.

As before indicated I provide corner shields and re-inforcing members for the longitudinal edges of the completed floor structure. These shields are in the form of angle irons and are denoted by the numerals 17. The angle iron is the same on each side of the floor structure as seen in Figure 1. The vertical flanges 18 are apertured to permit the passage of the threaded ends 13 of the rods. The horizontal flanges 19 rest on the top of the endmost floor sections 7. On one side I desire to use a knockdown fence or guard 20 as shown in Figure 4. This is made up of vertical posts 21 and horizontal rails 22 properly connected together by suitable unions or couplings. The lower ends of the posts are threaded and are fitted into sockets 23, the sockets being fastened to the top flange 19 on the underlying angle iron 17. Thus the flange 19 on one side serves as a mount for the socket 23 which in turn serves to support the hand rail.

By removing one of the sections 7 as shown at point 24 of Figure 1 another section, of a corresponding side can be readily inserted. This provides for the aforementioned quick repair result.

What I claim is:

1. A knockdown type portable floor expressly adapted and suitable for use in a skating rink comprising a sectional floor embodying a plurality of duplicate tongue-and-groove boards arranged in end-to-end abutting relationship and side-by-side interfitting relationship, said boards being relatively short in relation to the overall length of the finished floor and the boards of one row being in break-joint relation to the boards of the next adjacent row, each board having a pair of transversely located bolt-accommodating holes situated inwardly of the opposite end portions of said board, all of said bolt holes being grouped and lined up in relative order and relationship and thus providing passages extending transversely across the entire floor, and a plurality of bolts fitting in the respective passages and serving to clamp the floor boards together in abutting relationship, the opposite ends of the respective bolts being screw-threaded, assembling and clamping nuts on the respective screw-threaded ends, a pair of lengthwise extending floor-reinforcing and protecting angle irons, said angle irons being disposed along the opposite outer longitudinal edge portions of the complete floor, having their horizontal flanges resting upon the top surfaces of the boards of the outermost rows, having their vertical flanges resting in contact with the outer marginal edge portions of said outermost boards, the threaded ends of said bolts extending through and beyond bolt holes provided therefor in the coacting vertical flanges.

2. A knockdown type portable floor adapted for use in a skating rink comprising a sectional floor embodying a plurality of duplicate tongue-and-groove boards arranged in abutting end-to-end relationship and side-by-side interfitting relationship, said boards being relatively short in relation to the overall length of the finished floor and the boards of one row being in break-joint relation to the boards of the next adjacent row, each board having a pair of transversely located bolt-accommodating holes situated adjacent its opposite end portions, all of said bolt holes being lined up in relative relationship and thus providing a plurality of parallel passages ex-

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tending transversely across the entire floor, a bolt fitting in each passage and serving to clamp the floor boards together in abutting relationship, the opposite ends of the respective bolts being screw-threaded assembling and clamping nuts on the respective screw-threaded ends, a pair of lengthwise extending floor-reinforcing and protecting angle irons, said angle irons being disposed along the opposite outer longitudinal edge portions of the complete floor, having their horizontal flanges resting upon the top surfaces of the boards of the two outermost rows, having their vertical flanges resting in contact with the outer marginal edge portions of the boards of said outermost rows, the threaded ends of said bolts extending through and beyond bolt holes provided in the coacting vertical flanges, and a vertical fence of a length commensurate with the length of the floor and situated along one longitudinal edge portion of the floor, said fence embodying vertical posts connected together by horizontal hand rails, the lower ends of said posts being anchored on the horizontal flange of the coacting angle iron.

3. A portable and knockdown floor comprising a floor constructed from tongue-and-groove boards, substantially all of said boards being relatively short in their relation to the total length of the complete floor and all of said boards being of the same dimensions so that they are interchangeable and so that they may be removed and replaced for ready repair purposes, all of said boards being arranged in end-to-end row relationship, the boards of the respective and adjacent rows being staggered in relation to each other to provide break-joint relationship of the boards of adjacent rows, each floor board having transverse bolt holes, coacting bolt holes of associated floor boards being lined up to provide bolt passages extending transversely across the entire floor, a pair of angle irons situated along opposite longitudinal edge portions of the floor, the horizontal flanges of the respective angle irons resting atop the surfaces of the floor boards in the outermost rows of the finished floor, the vertical flanges resting in contact with the vertical marginal edges of said outermost boards, and a plurality of transverse longitudinally spaced bolts, the bolts extending through the passages in the floor and having their end portions extending through bolt holes provided therefor in the vertical flanges of the angle irons, the extending ends of all bolts projecting well beyond the vertical flanges of the angle irons and being screw-threaded and provided on their outer ends with nut-retained spring-accommodation washers, and coiled springs surrounding the outer threaded end portions of all bolts and situated between the nut-held washers and the adjacent vertical flanges on said angle irons.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
339,368	Black et al.	Apr. 6, 1886
432,000	Shimer	July 8, 1890
761,147	Casler	May 31, 1904
1,045,219	Tramill	Nov. 26, 1912
1,407,679	Ruthrauff	Feb. 21, 1922
1,501,573	Taylor	July 15, 1924
1,854,673	Rust	Apr. 19, 1932
2,102,086	Mueller	Dec. 14, 1937