

April 4, 1944.

A. KURNIT

2,345,706

PORTABLE TRACKAGE SYSTEM

Filed Jan. 23, 1942

3 Sheets-Sheet 1

Fig. 1.

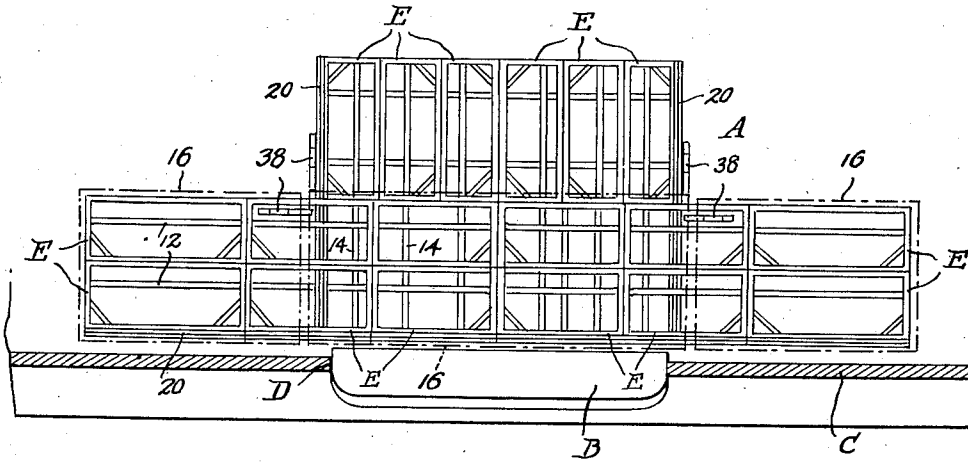
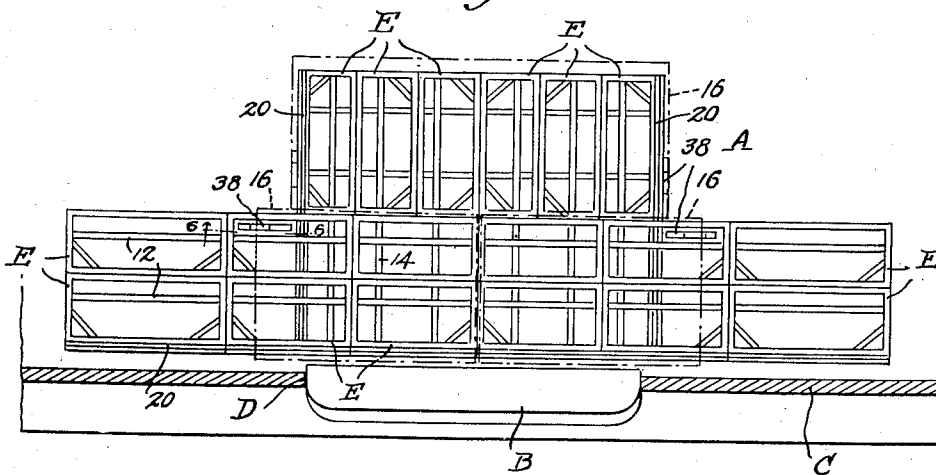


Fig. 2.



INVENTOR.
ABE KURNIT
BY
Clark & Ott
ATTORNEYS

April 4, 1944.

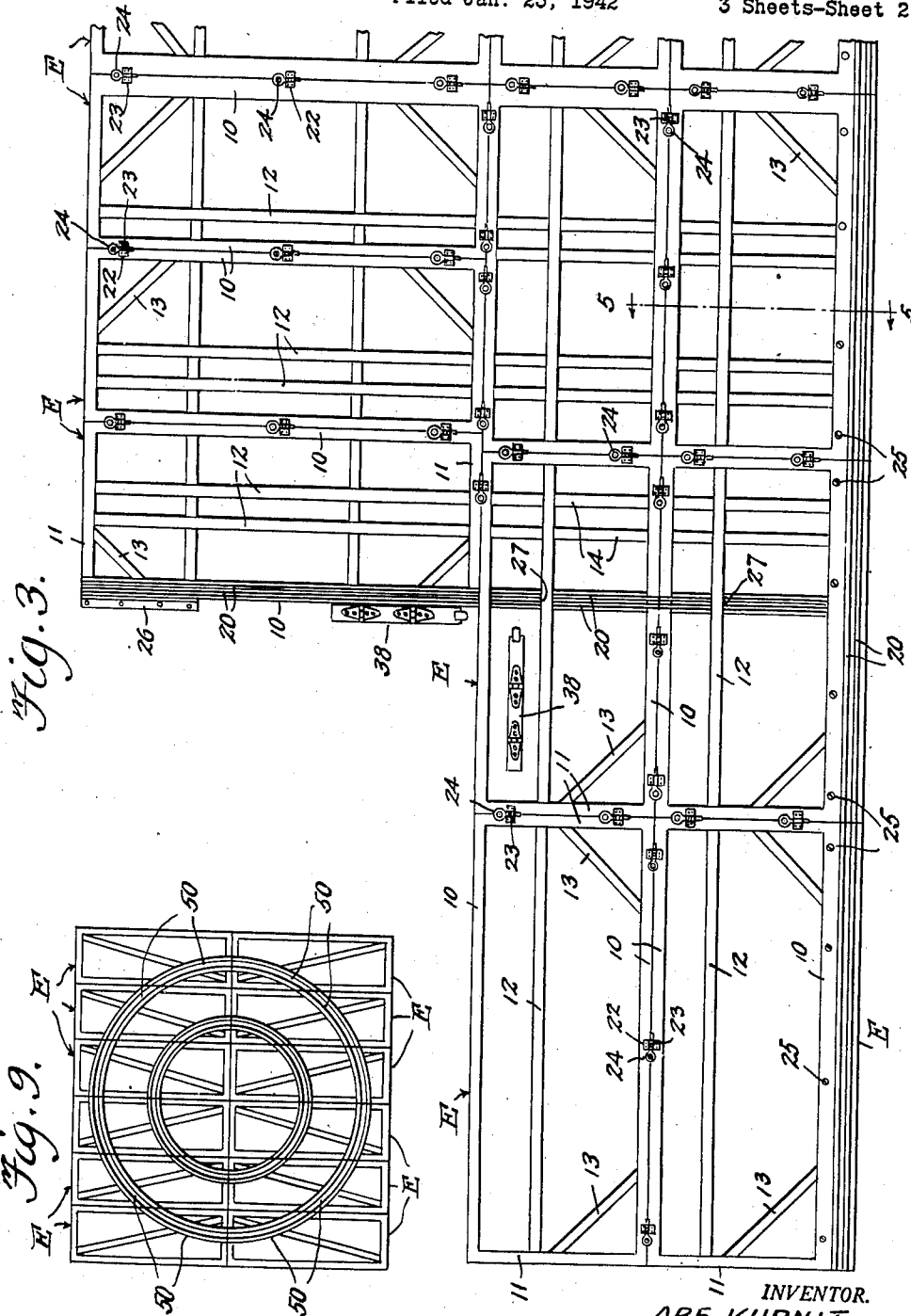
A. KURNIT

2,345,706

PORTABLE TRACKAGE SYSTEM

Filed Jan. 23, 1942

3 Sheets-Sheet 2



INVENTOR.
ABE KURNIT
BY *Clark & Ott*
ATTORNEYS

April 4, 1944.

A. KURNIT

2,345,706

PORTABLE TRACKAGE SYSTEM

Filed Jan. 23, 1942

3 Sheets-Sheet 3

Fig. 4.

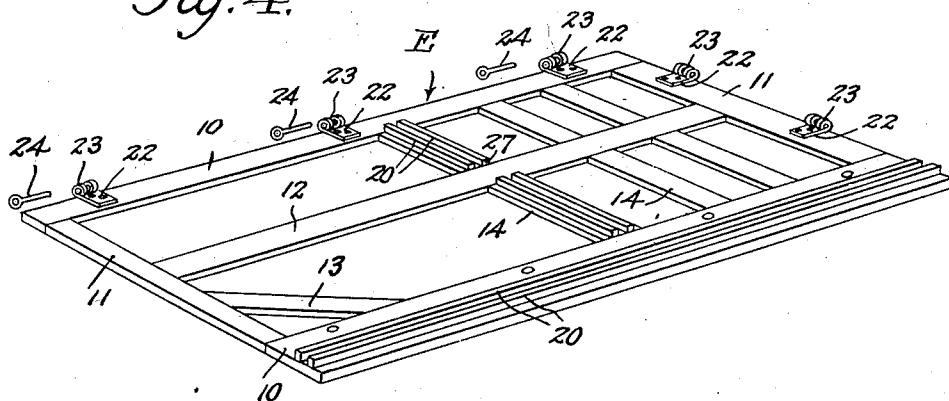


Fig. 5.

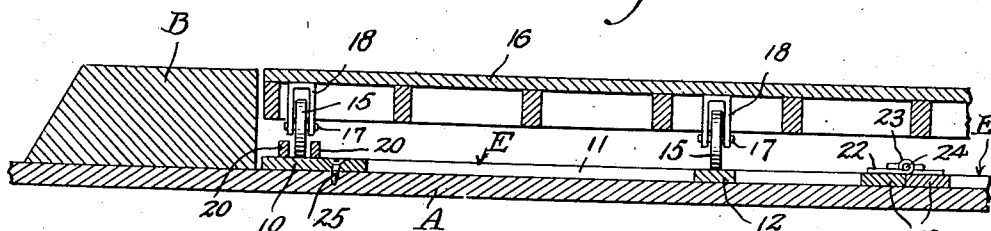


Fig. 6.

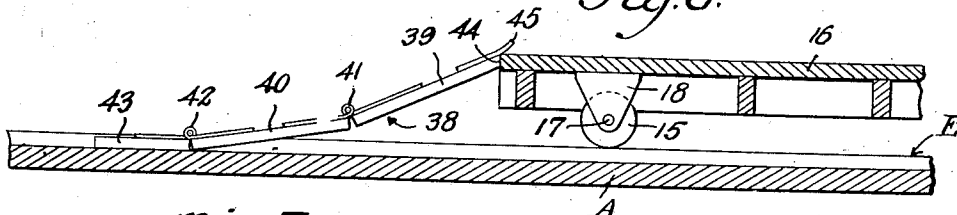


Fig. 7.

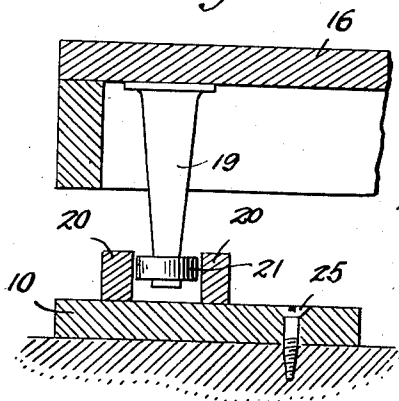
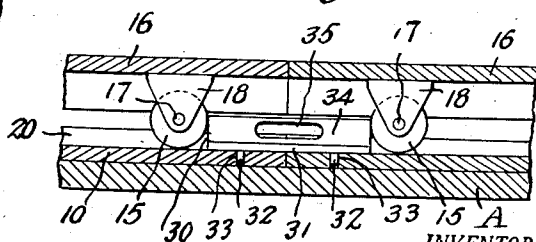


Fig. 8.



INVENTOR.
ABE KURNIT

BY

Clark & Ott
ATTORNEYS

UNITED STATES PATENT OFFICE

2,345,706

PORTABLE TRACKAGE SYSTEM

Abe Kurnit, Hollis, N. Y.

Application January 23, 1942, Serial No. 427,925

4 Claims. (Cl. 29—1.123)

This invention relates to portable trackage which may be utilized for various purposes and which, while not restricted thereto, is particularly designed for use on the floors of theater stages to provide means over which wheeled platforms supporting the sets are adapted to be moved or shifted when changing from one scene to another.

It has been the practice heretofore to secure by screws, nails or other fastening devices driven therethrough and into the stage floor, a number of individual strips of fiber or equivalent wear resistant material so as to provide tracks over which the wheeled platforms supporting the sets are shifted or rolled. This has been open to numerous objections among which is the amount of time and labor required in properly laying out and securing strips to the stage floor as well as the damage to the floor resulting from the driving of a large number of nails or screws into the same.

In order to overcome these objections, the present invention broadly comprehends a system of tracks made up of a plurality of units adapted to be assembled and secured to each other in contiguous relation with only one or a comparatively few of the sections being secured to the floor, the said units being so designed as to permit of their ready disconnection and disassembly for stacking or nesting of the same to occupy a minimum amount of space for storage and transportation.

More particularly the invention resides in a novel form of detachable connection between the trackage units or sections by virtue of which adjacent units are permitted a limited relative movement with reference to each other to thereby allow the trackage to intimately engage with and conform to the surface upon which it is laid and this feature has been found particularly desirable in theaters where the stage floors have become warped or otherwise distorted as a result of long use and considerable wear.

The invention is further directed to track units which are made up of frames having longitudinal and transverse frame members, certain of which members function as tracks over which the wheels of the platforms or vehicles are rolled and certain of which are constructed to provide guides with which the wheels of the platforms or vehicles engage to guide the same and the free wheels over the units of the trackage system.

As a further feature, the invention comprehends trackage units or sections in which cer-

tain of the guide tracks are formed with cut away portions to allow the platform or vehicle wheels to pass over intersecting tracks.

The invention also contemplates a trackage system which is so constructed as to insure the proper alignment of the trackage with reference to the proscenium wall and opening after the initial section or sections have been properly lined up with the permanent ramp or front piece at the front of the stage.

The invention also includes novel means for gaging the positioning and the retention of the platforms in their active position against movement.

With the above enumerated and other objects in view, the invention is set forth in greater detail in the following specification and illustrated in the accompanying drawings in which:

Fig. 1 is a diagrammatic plan view showing a trackage system constructed in accordance with the invention and illustrating in broken lines the forwardly and rearwardly movable platform in its active position in registry with the proscenium wall opening and with the laterally movable platforms in their inactive positions disposed within the wings of the stage.

Fig. 2 is a similar view illustrating in broken lines the laterally movable platforms in their active positions in registry with the proscenium wall opening and with the forwardly and rearwardly movable platform in its inactive position disposed at the rear of the stage.

Fig. 3 is an enlarged plan view of approximately one-half of the trackage system installed on the stage floor.

Fig. 4 is an enlarged perspective view of one of the forward frame units.

Fig. 5 is a fragmentary enlarged sectional view taken approximately on the line 5—5 of Fig. 3 illustrating the trackage and platform in juxtaposition.

Fig. 6 is an enlarged fragmentary sectional view taken approximately on the line 6—6 of Fig. 2 and illustrating one of the chocking members for retaining the platforms in their active position against movement.

Fig. 7 is an enlarged fragmentary vertical sectional view illustrating one of the guide rollers for the platforms in engagement with the guide track.

Fig. 8 is a fragmentary longitudinal sectional view illustrating the abutment element in applied position with the platform wheels engaging the same.

Fig. 9 is a diagrammatic plan view of a trackage

system embodying a modified adaptation of the invention.

The invention is illustrated and described herein as a trackage system for theatrical stage floors to provide means over which are adapted to be rolled the wheeled platforms which carry the scenery or sets, although it is to be understood that the trackage system may be employed for any other purpose desired and for supporting any desired type of wheeled vehicles to be rolled thereover.

Referring to the drawings by characters of reference, A designates the stage floor or other supporting surface for the trackage system and B the elevated front piece or permanent ramp which is usually provided on the floor in front of the proscenium wall C adjacent the proscenium opening D. The trackage system consists of a plurality of sections or frame units designated generally by the reference character E which units are adapted to be assembled and secured to each other in contiguous relation to rest upon the stage floor or supporting surface A and suitably anchored thereto.

The frame units preferably consist of longitudinal and transverse marginal frame members 10—10 and 11—11 of any suitable material such as hard wood, which members are secured together to provide a rectangular frame having at least one longitudinally extending intermediate strip 12 and where necessary provided with diagonal brace bars 13 to insure the necessary rigidity. Certain of the frame units E are provided with one or more transverse intermediate strips 14 which also tend to brace and strengthen the unit and the purpose of which intermediate longitudinal and transverse members is to serve as tracks over which are rolled the wheels 15 of set or scene supporting platforms 16 upon which the sets or scenes are mounted.

The wheels or rollers 15 are journaled on shafts 17 in bearing brackets 18 attached to the undersides of the platforms. The sections or frame units E which are located at the front of the stage adjacent the finish piece or permanent ramp B have their forward, longitudinal, marginal frame members 10 of relatively greater width to serve as tracks for supporting the wheels or rollers 15 of the platforms 16 to be moved thereover and said forward longitudinal marginal frame members or rails are provided with suitable guide means or channels to insure guiding of the platforms in a linear path coinciding with the tracks. As illustrated, the guide means consists of a pair of upstanding spaced parallel longitudinal beads 20 which are secured in any desired manner to the upper surface of the members or rails 10 so as to define together with the member a channel-shaped guideway.

The platforms 16 are provided with depending bearings 19 which have journaled at their lower ends on vertical axes guide rollers 21 which are of a slightly less diameter than the spacing of the beads so as to coact with one or the other of the confronting faces thereof to guide the platforms in their movement.

In order to detachably connect the units E to each other and facilitate their ready engagement and disengagement, the longitudinal and transverse marginal frame members which are adapted to abut with the longitudinal and transverse marginal frame members of adjacent units are provided with mating leaves or plates 22 having outwardly projecting pintle rolls or knuckles 23 for

receiving therethrough pintles 24. This form of connection functions to permit of a limited relative swinging movement of adjacent units to thereby allow the trackage to intimately engage with and conform to the surface upon which it is laid.

In practice, the foremost units E which are laid down stage and adjacent the elevated front piece or permanent ramp B are disposed parallel thereto and anchored to the stage floor by means of screws 25 which extend through the foremost marginal frame members at one side of the guide beads 20 where they are disposed out of the path of movement of the wheels or rollers 15 of the platform. The foremost units E when properly anchored in parallel relation to the front piece or proscenium wall insure the proper alignment of the remaining units or the trackage system and unless the stage floor is badly warped no additional anchorage means will be necessary, although in some instances angle iron cleats 26 may be secured to the floor and to the sides of certain of the units where necessary. The longitudinal marginal frame members 10 of the foremost units E provided with the guide beads 20 serve as a means for guiding the laterally shiftable platforms 16 in a linear path and insure the guiding of the supporting wheels or rollers 15 on the intermediate tracking strips 12.

As shown, the longitudinal marginal frame members 10 of the outermost rearwardly extending units E are provided with similar guide beads 20 and certain of the transversely extending forwardly disposed units E are provided with intermediate transverse strips 14 which are likewise provided with the guide beads 20 disposed in alignment therewith to form a continuation of the fore and aft guide track. It is, however, necessary wherever a transversely extending track 12 intersects a guide track that the beads be cut away as at 27 to permit the passage of a supporting wheel at the point of intersection.

It is also obvious that means is essential for gaging the positioning and the retention of the platforms in their active position against movement and to this end means is provided for these purposes which, as illustrated, consist of an abutment element 30 which, as here shown, is in the form of a T rail, the base flange 31 of which is adapted to fit between the guide beads of the front guide track at the center of the stage, the base flange being provided with depending pins 32 engageable in keeper openings 33 formed in the guide track rails or frame members, while the upstanding web 34 is formed with a finger receiving opening 35 for handling the abutment element when emplacing or removing the same. The abutment element is of such a length that its opposite ends engage with the platform supporting wheels of the laterally movable platforms as their confronting edges are disposed centrally of the stage. The means for retaining the platforms in active position consist of chocking elements, designated generally by the reference character 38, which are composed of sections 39 and 40 connected to each other by a hinge 41 with one of the sections connected at its other end by a hinge 42 to a floor cleat 43 anchored to the floor. The opposite end of the other section 39 is beveled as at 44 and provided with an outwardly projecting lug 45 on its upper face. When inactive the chocking element 38 lies flat on the upper surface of the stage floor A between the members of the frame units. When the platform 16 has been moved to active position,

the chocking member is swung upwardly and the beveled free end 44 is engaged with the edge of the platform 16 with the projecting lug 45 overlying the platform. The sections are then swung downwardly to a past center angular relation as illustrated in Fig. 6 to lock and retain the platform against movement.

In the modified adaptation of the invention illustrated in Fig. 9 of the drawings, the units or sections E are illustrated as provided with mating supporting and guide tracks 50 of arcuate formation which, when the units are assembled, define circular tracks concentrically arranged to support a circular platform or turntable. It is also obvious that within the scope of the invention the tracks 50 may be of any desired shape or disposed at various angles with reference to the units.

I claim:

1. In a knock-down portable trackage system for stage floors, a plurality of mating trackage units arranged and detachably secured in contiguous relation and removably affixed to the stage floor to dispose the same adjacent to and rearwardly of the proscenium opening, said units each having fore and aft and transversely extending wheel supporting and guiding tracks, a plurality of mating trackage units arranged on said stage floor at the rear of and secured in contiguous relation to said first mentioned trackage units and having wheel supporting and guiding tracks aligned with the fore and aft tracks of said first mentioned trackage units, and a plurality of mating trackage units arranged upon said stage floor at the side of and secured in contiguous relation to said first mentioned trackage units and having wheel supporting and guiding tracks aligned with the transverse tracks of said first mentioned trackage units, said trackage system being adapted to mount wheeled vehicles on the supporting and guide tracks thereof and which constitute platforms for supporting the stage scenes and the actors.

2. In a knock-down portable trackage system for stage floors, a plurality of mating trackage units arranged and detachably secured in contiguous relation and removably affixed to the stage floor to dispose the same adjacent to and rearwardly of the proscenium opening, said units each having fore and aft and transversely extending wheel supporting and guiding tracks, a plurality of mating trackage units arranged on said stage floor at the rear of and secured in contiguous relation to said first mentioned trackage units and having wheel supporting and guiding

tracks aligned with the fore and aft tracks of said first mentioned trackage units, and a plurality of mating trackage units arranged upon said stage floor at the side of and secured in contiguous relation to said first mentioned trackage units and having wheel supporting and guiding tracks aligned with the transverse tracks of said first mentioned trackage units, said trackage system being adapted to mount wheeled vehicles on the supporting and guide tracks thereof and which constitute platforms for supporting the stage scenes and the actors, the means for securing the trackage units in contiguous relation consisting of hinge elements permitting of limited relative swinging movement between adjacent units.

3. A knick down portable trackage system adapted to be laid upon a stage floor and including a plurality of rectangular frame units each composed of longitudinal and transverse frame members, certain of said frame members defining flat upper surfaces over which the free supporting wheels of a movable set supporting platform are adapted to roll, others of said frame members defining flat upper surfaces and having upstanding spaced parallel longitudinal guide strips upon which surfaces and between which strips the combined supporting and guiding wheels of said platform are adapted to roll, means securing said frame units to each other in detachable contiguous assembled relation, and means for removably anchoring at least one of said units to the stage floor so as to insure retention of the trackage system in proper relation to the proscenium opening.

4. A knock-down portable trackage system adapted to be laid upon a stage floor and including a plurality of rectangular frame units each composed of longitudinal and transverse frame members certain of the frame members of certain units defining tracks having flat upper surfaces over which the free supporting wheels of a set supporting platform are adapted to roll, others of said frame members of certain of the units defining channel-shaped tracks by which the combined supporting and guiding wheels of said platform are guided for movement with reference thereto, said tracks being so arranged on the said units as to mate with each other when the units are assembled in a predetermined contiguous relation and interengageable detachable means of connection at the adjacent marginal edges of the assembled units for retaining the same in said predetermined contiguous relation.

ABE KURNIT.