No. 689,363. Patented Dec. 17, 1901.

C. McDONNER.

HOUSE MOVING DEVICE.

(Application filed Apr. 24, 1901.)

(No Model.)

Fig. 1.

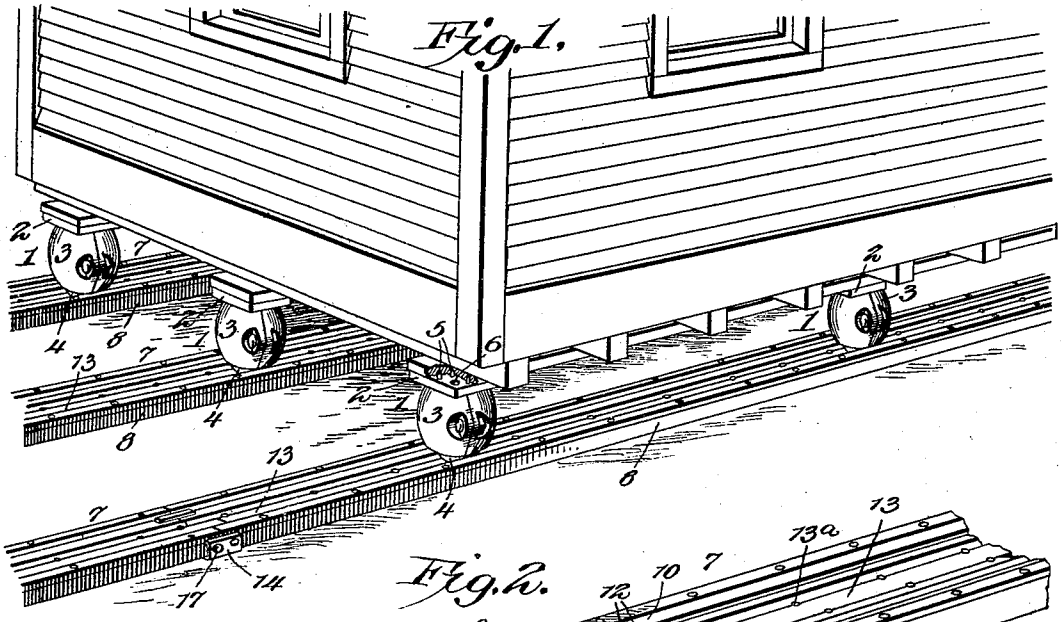


Fig. 2.

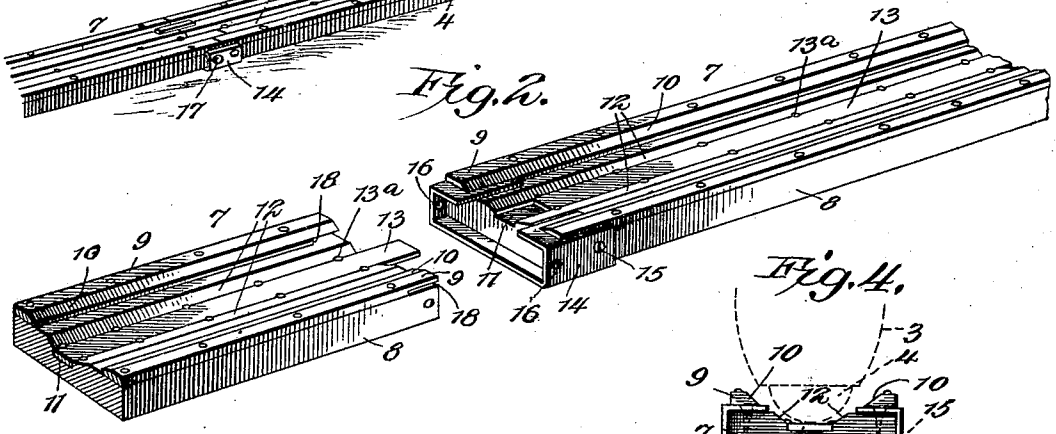
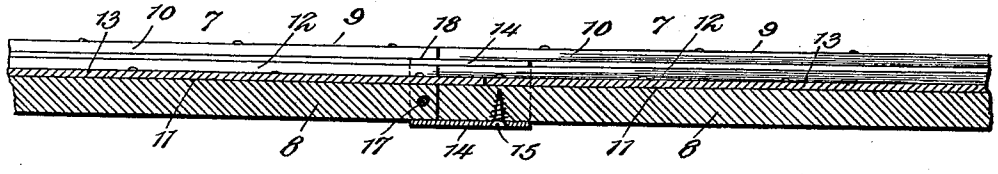


Fig. 4.

Fig. 3.



Witnesses:
Howard A. Orr.
R. M. Elliott.

Charley McDonner, Inventor;
By E. G. Siggers
Attorney.

UNITED STATES PATENT OFFICE.

CHARLEY McDONNER, OF APPLETON, WISCONSIN, ASSIGNOR TO MARK HAGLE, OF SOULE, MICHIGAN.

HOUSE-MOVING DEVICE.

SPECIFICATION forming part of Letters Patent No. 689,363, dated December 17, 1901.

Application filed April 24, 1901. Serial No. 57,319. (No model.)

To all whom it may concern:

Be it known that I, CHARLEY McDONNER, a citizen of the United States, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented a new and useful House-Moving Device, of which the following is a specification.

This invention relates to house-moving devices, and more particularly to that class wherein the truck is supported in operation upon a ball-bearing in lieu of cylindrical rollers, such as are generally in use.

The object of the invention is to reduce to a minimum the labor of moving heavy objects, such as houses, &c., and to effect positive guidance of the structure being moved, obviating thereby the necessity of employment of sledge-hammers, prizing-levers, and the like to keep the trucks in the desired position to effect proper moving of the object.

Generally stated, the invention comprises in its embodiment a ball-caster truck and a track or guideway therefor, the track to be provided with means to give direction to and keep the truck moving in the desired direction. The truck may be of any preferred construction and in this instance is shown as comprising a platform provided with pointed projections or other means for holding the same firmly against the object to be moved and with a socket bearing a ball, the ball to bear against smaller ball-bearings arranged within the socket. The track, which is composed of sections each the duplicate of the other, comprises a bed-piece carrying on its upper side guides having their inner faces inclined or beveled to engage the sides of the ball, the upper surface of the bed-piece to have a central groove in which is arranged a steel rail upon which the ball will bear, thereby preventing the ball from mashing down the bed-piece, which would result in the guides either being destroyed or exerting such friction to the passage of the ball as would interfere with its proper working. As a matter of further and specific improvement to hold the sections from sagging at their points of juncture and also to prevent any lateral movement or yield of the sections I provide at one end of each of the sections a socket or band extending beyond such section and to be engaged by the end of the next section, suitable means, as a bolt or the like, being employed to assemble the socket with the next section. In order that the guides or side flanges may be continuous throughout a length of as many tracks as may be assembled, the guides at that end of each section to engage with the socket on the next section are cut away on their under surface to permit the socket to slip thereunder, those portions of the socket bearing upon the top of the track being spaced apart a sufficient distance to permit uninterrupted passage of the ball of the truck therebetween.

Further and more specific details of construction will be hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, I have exhibited a form of the embodiment of my invention capable of carrying my ideas into effect, it being understood that the specific details of arrangement herein exhibited may be departed from in practice without departing from the spirit of my invention, and in these drawings—

Figure 1 is a view in perspective, showing the manner of supporting the house for moving upon the device of this invention. Fig. 2 is a perspective detail view of two of the track-sections. Fig. 3 is a longitudinal sectional view through two of the sections. Fig. 4 is a view in end elevation of one of the sections, showing more particularly the manner in which the socket is associated with the track.

Referring to the drawings, 1 designates the truck, the same comprising a platform 2, carrying a socket 3, in which is housed a ball 4. The inclosed portion of the ball will bear against the ball-bearings on the interior of the socket somewhat in the manner of ordinary ball-bearing casters, and as the precise construction of the ball-bearings forms no part of the present invention detailed description is deemed unnecessary. The platform 2 may be either integral with or be secured to the parts of the socket, and it is provided on its upper surface with a plurality of spikes or pointed projections 5 to bite into the wood of the sill of the house being moved or upon the

timber to be placed under the sill, thereby to prevent any shifting of the platform with relation to the sill, openings 6 being provided in the platform through which screws or bolts may be passed to bind the platform securely to the sill or the like. Ordinarily, however, the action between the pointed spikes of the platform and the sill of the house being moved will be found sufficient to keep the truck from moving or becoming disengaged in use; but should there be a tendency of the platform to shift the employment of the bolts or screws described will effectually obviate this.

The track 7, on which the balls of the trucks work, consists of a plurality of sections each the counterpart of the other and to be connected in use to present a continuous structure, the manner of assembling the trucks with relation to each other being such that when all of the trucks on the side of the building being moved are on one or more of the track-sections the section or sections immediately behind this may be detached and attached to the front part of the sections on which the trucks are bearing, so that the formation of a continuous track is readily accomplished. Each track-section comprises a bed-piece 8, of any desired length and of the thickness of lumber desired, and is provided on its sides with guides or side flanges 9, these to be, by preference, of metal bolted to the bed-piece, or, if preferred, they may be of wood shod with metal, the opposing faces of the two side flanges of each track being inclined toward the center of the bed-piece, as shown at 10, to form a guideway between which the balls of the trucks will work. The center portion of the upper surface of the track is provided with a longitudinal recess 11, the walls of which are beveled, as at 12, away from this recess, and in the recess is placed a steel rail 13, on which the ball of the truck will bear directly, the rails being secured in place within the recess 11 by screws or bolts 13^a, which to obviate the presentation of an obstruction to the balls of the truck will by preference be secured against the edges of the rail, as clearly shown in Fig. 2.

The inwardly and downwardly inclined side walls 10 form an important feature of the present invention, as they permit of the ball of the caster riding laterally upward thereon, so as to permit a lateral movement of the caster under such circumstances as may require a lateral movement thereof—as, for instance, should portions of the opposite tracks not be parallel. If the side walls were at right angles to the intermediate flat portion 13, there would be little or no lateral movement of the caster, and therefore the inclined walls have been provided to permit of a lateral movement of a caster without binding thereof upon the track, as well as to center the ball thereon.

One end of each of the track-sections carries a socket or band 14, the same being by preference made of cast-iron, although it may be made of wrought-iron, the socket being of a shape closely to fit the end of the bed-piece and to project beyond the same a sufficient distance to form a mortise, in which the end of the next section operating as a tenon fits. The socket may be held in place upon the end of the rails in any preferred manner, in this instance by bolts or screws 15, of which any number may be used, the sides of the socket on each side being provided with an opening 16, and through these openings and the end of the track resting in the socket passes a bolt 17, by which the two parts are firmly held assembled.

In order to permit the flanges 9 to present a continuous structure throughout any length of track desired, that portion of the flanges at the end of the track to be engaged by the socket is cut away, as shown at 18, and under this cut-away portion the socket fits. The rail 13 projects beyond that end of the track that is to engage the socket on the next succeeding section of track, so that there will be no joint formed at the juncture of the two rails, thereby presenting to the balls of the sockets a smooth and clear track-surface on which they can travel.

In operation the house to be moved is jacked up in the usual manner, and the foundation or other support under the sills is removed. The tracks are then arranged along under the sills and the trucks placed against the sill, after which the structure is lowered to bear on the trucks. Suitable windlass mechanism is then employed for moving the house, and as the sockets successively pass beyond a section that section is removed and connected with a section in front of the house, and so on, thereby providing a continuous track for the trucks. Should the ground over which the tracks are placed be uneven, these may be shored up in the usual manner by blocks of wood or the like.

By reason of the fact that the balls of the socket-bearings are provided with a smooth and even rail on which they bear, and, further, by the coaction between the guide or side flanges of the tracks and the balls of the sockets there will be absolutely no danger of the balls running off the tracks, so that the house will move forward in the desired direction, the arrangement described rendering it unnecessary for the employment of sledge-hammers, prizing-levers, or the like to keep the structure moving in the proper direction.

Having thus described the invention, what I claim is—

1. A track for the purpose set forth, comprising a bed-piece having a longitudinal ball-receiving way upon the upper face thereof, the bottom of the way being flat to form a ball-support, and the opposite longitudinal sides of the way being straight and inclined upwardly and outwardly at corresponding angles from the respective longitudinal edges of the back of the way.

2. A house-moving device comprising a ball-caster truck, and a track or guideway

therefor, the track being provided with side flanges having their opposed faces inclined, and a rail centrally disposed with relation to the track and upon which the ball of the truck bears.

3. A house-moving device comprising a ball-caster truck, and a track therefor, the track being provided with side flanges, the opposed faces of which are inclined inward, the central portion of the track being depressed, and a rail secured in the depressed portion upon which the ball of a truck bears.

4. A house-moving device comprising a ball-caster truck and a track therefor, the track being provided with side flanges and with a centrally-located longitudinally-disposed recess, the opposed faces of the walls of the flanges and of the recess being beveled toward the center of the track, and a rail seated in the recess.

5. A house-moving device comprising a ball-caster truck and a track therefor, the track being provided with side flanges and with a centrally-located longitudinally-disposed recess, the opposed faces of the walls of the flanges and of the recess being beveled toward the center of the track, a rail seated in the recess, and fastening means along the edges of the rail to hold the same seated in the recess.

6. A track-section of the character described, having an intermediate longitudinal ball-receiving way, and longitudinal ball-centering devices at opposite sides thereof, said centering devices being equally terminated short of one end and projected outwardly beyond the opposite end of the section.

7. In a house-moving device, a track provided with side flanges and with a centrally-located longitudinally-disposed recess, the opposed faces of the walls of the flanges and of the recess being beveled toward the center of the track, and a rail seated in the recess one end of the rail terminating short of one end of the track and the other end of the rail projecting beyond that end of the track.

8. In a house-moving device, a track composed of a plurality of sections adapted to be secured together, each section comprising a track or bed-piece provided with side flanges and with a centrally-located longitudinally-disposed recess or depression, the opposed faces of the flanges and of the recess being inclined toward the center of the track, and the flanges at one end of the track being undercut, a rail secured in the lowest portion of the recess, the end of the rail projecting beyond that end of the track wherein the undercuts of the side flanges are provided, and a socket secured at the other end of the track and projecting beyond the same, the rail terminating short of the latter end of the track, leaving a recess, whereby when two sections of the track are united with the flanges of the socket in the undercut portions of the guideways of the adjacent section, the projecting end of the rail will engage with the said recess thereby presenting a solid track at the point of juncture of the two sections.

9. In a house-moving device, a track composed of a plurality of sections adapted to be secured together, each section comprising a track or bed-piece provided with side flanges and with a centrally-located longitudinally-disposed recess or depression, the opposed faces of the flanges and of the recess being inclined toward the center of the track, and the flanges at one end of the track being undercut, a rail secured in the lowest portion of the recess, the end of the rail projecting beyond that end of the track wherein the undercuts of the side flanges are provided, and a socket secured at the other end of the track and projecting beyond the same, the rail terminating short of the latter end of the track, leaving a recess, whereby when two sections of the track are united with the flanges of the section in the undercut portions of the guideways of the adjacent section, the projecting end of the rail will engage with the said recess thereby presenting a solid track at the point of juncture of the two sections, and means for holding the socket assembled with the adjacent track-section.

10. In a house-moving device, a track composed of a plurality of sections to be secured together, each section comprising a track or bed-piece provided with side flanges and with a centrally-located longitudinally-disposed recess or depression, the opposed faces of the flanges and of the recess being inclined toward the center of the track, and the flanges at one end of the track being undercut, a rail secured in the lowest portion of the recess, the end of the rail projecting beyond that end of the track wherein the undercuts of the side flanges are provided, and a socket secured at the other end of the track and projecting beyond the same, the socket comprising a rectangular structure fitting over the end of the rail and having its top portion open, the rail terminating short of that end of the track to which the socket is secured, leaving a recess, whereby when two sections of the track are united with the flanges of the socket in the undercut portions of the guideways of the adjacent section, the projecting end of the rail will engage with the recess to form a continuous passage past the juncture of the two sections.

11. A track-section of the character described, having an intermediate longitudinal ball-receiving way, and longitudinal centering-strips applied at opposite sides of the way and having their inner edges beveled or inclined inwardly and downwardly to form centering-walls, said strips being projected at one end of the track-section and terminated short of the opposite end thereof.

12. A track of the character described, comprising a body having a terminal socket at one end only, an intermediate longitudinal

ball-receiving way, and longitudinal ball-centering devices at opposite sides of the way, said devices being terminated short of the socketed end of the section and projected an equal distance beyond the opposite end thereof.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLEY McDONNER.

Witnesses:
G. T. MOESKES,
PETER HEID.