Nov. 16, 1948. A. W. SKINNER 2,454,225

APPARATUS FOR SUPPORTING BODIES OF RAILWAY VEHICLES IN CONNECTION WITH REMOVAL AND REPLACEMENT OF THE TRUCKS THEREOF

Filed July 31, 1947 4 Sheets-Sheet 1

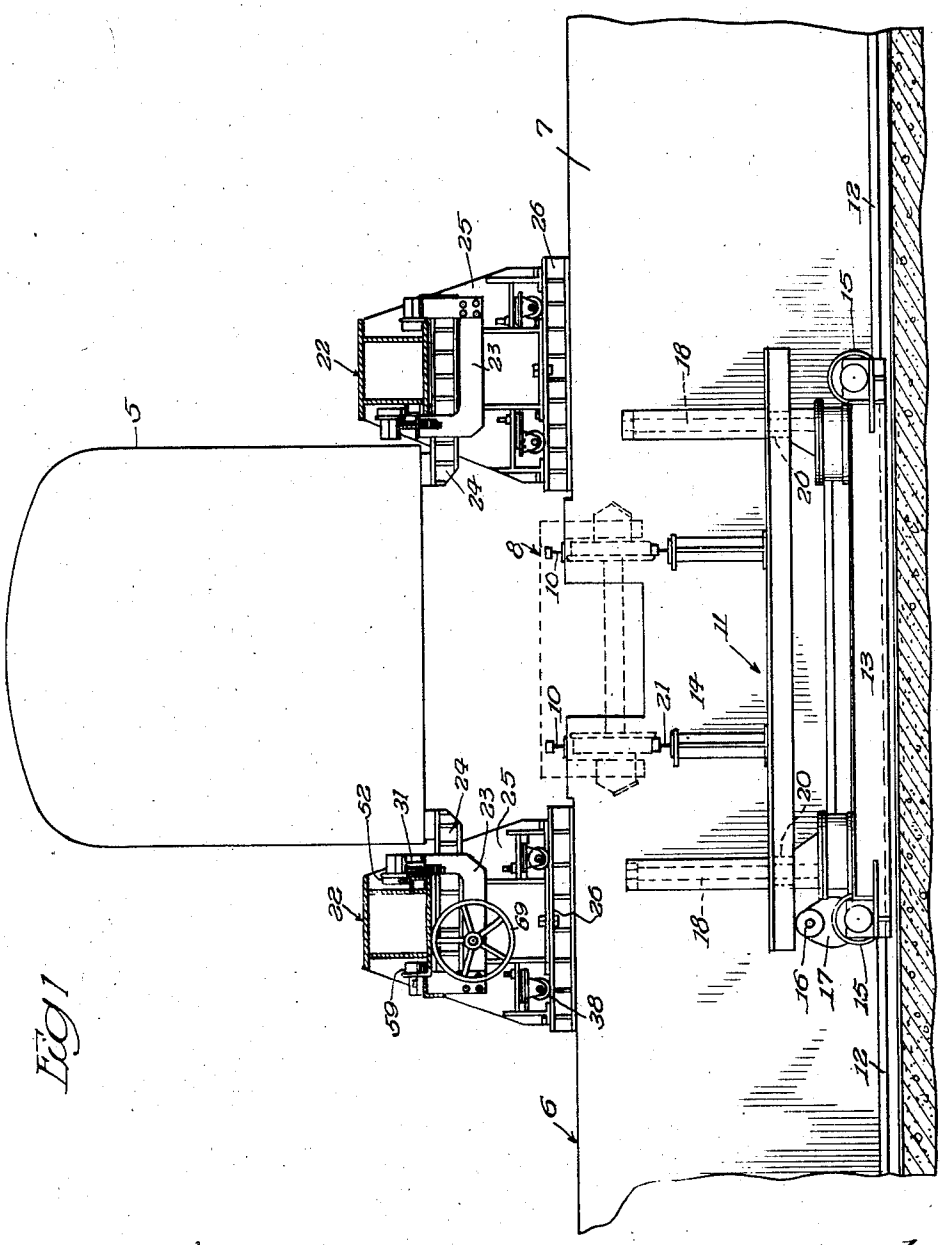


FIG 1

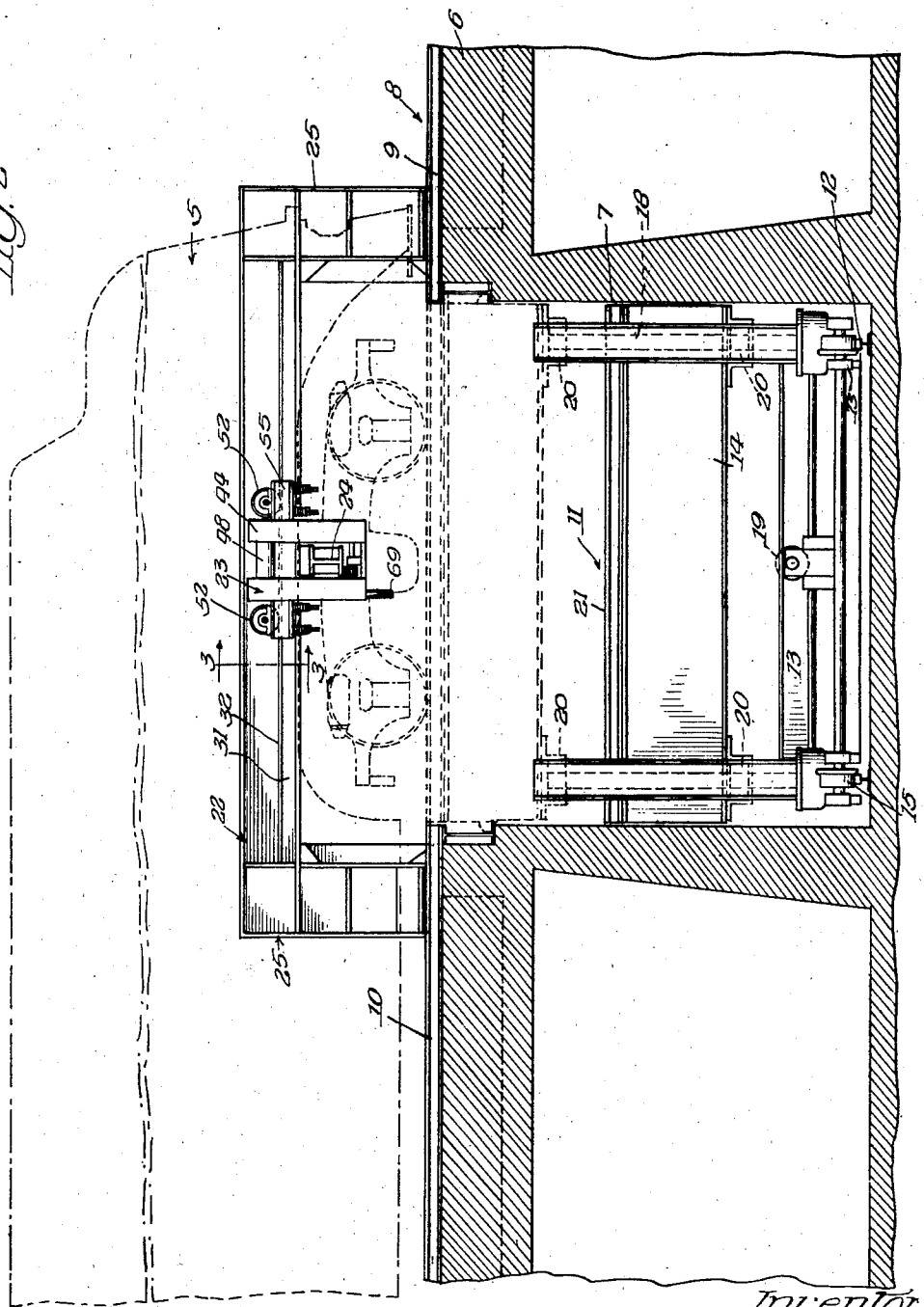
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Filed July 31, 1947 4 Sheets-Sheet 2

FIG. 2



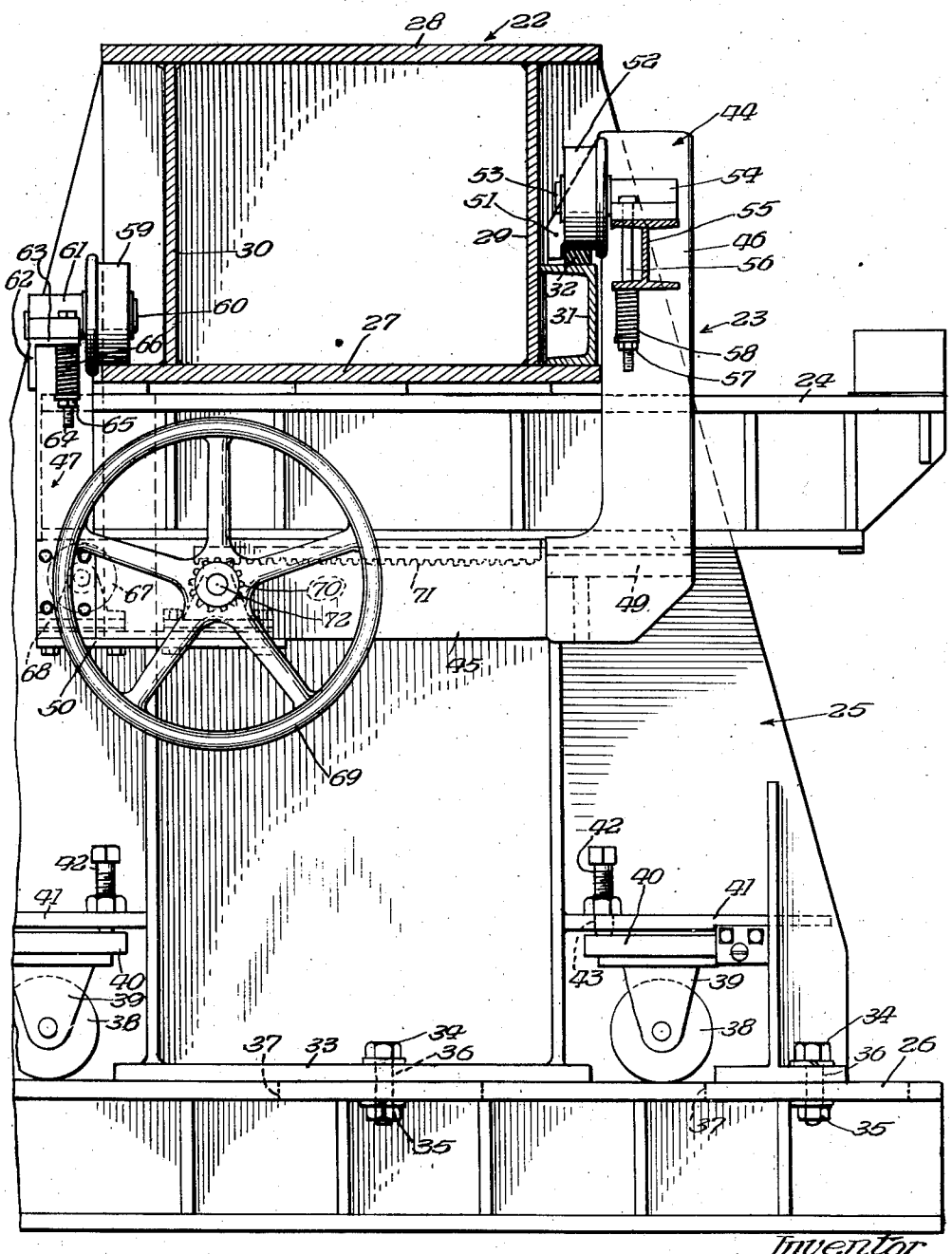
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Filed July 31, 1947 4 Sheets-Sheet 3

Fig. 3



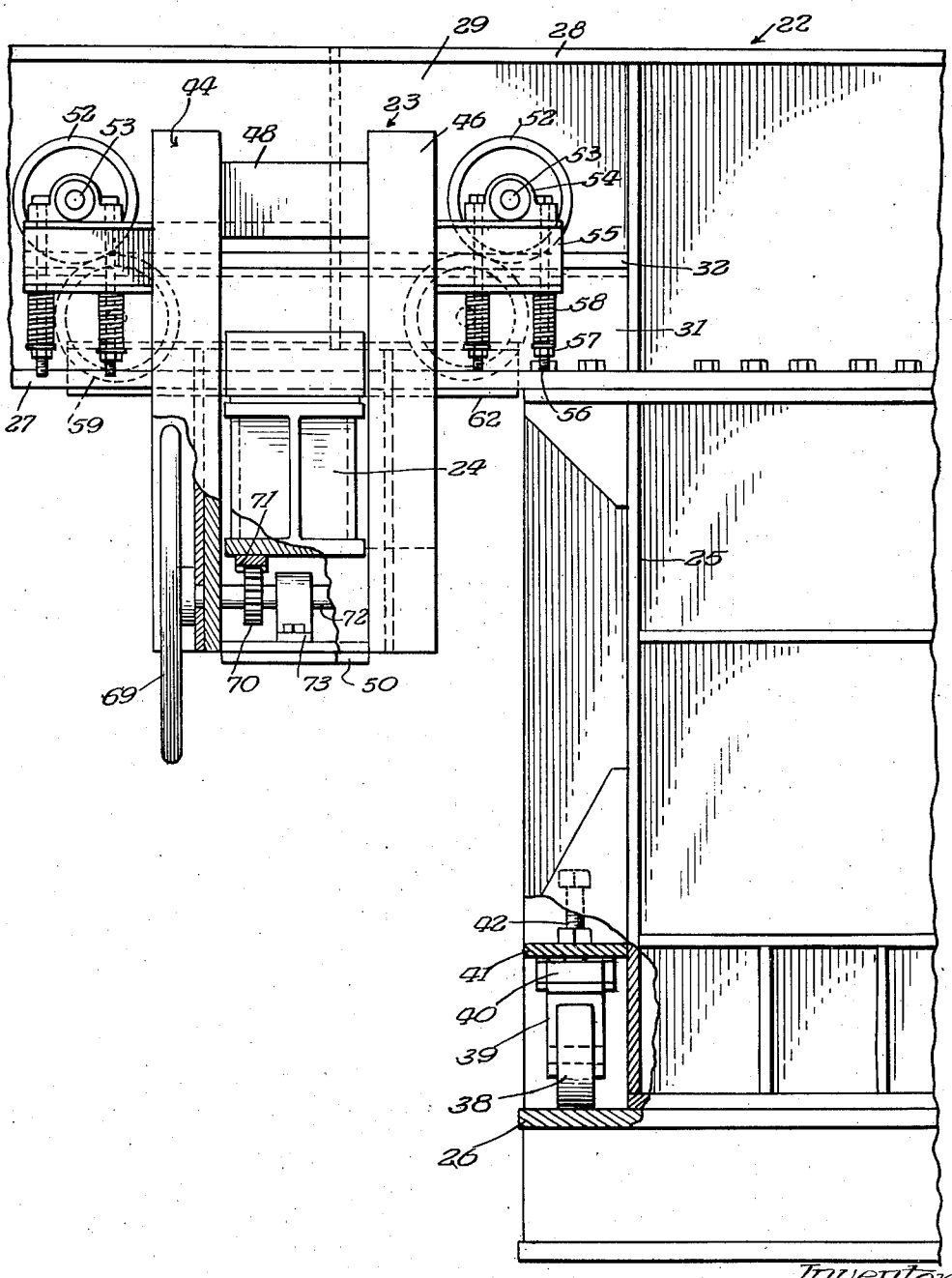
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APPARATUS FOR SUPPORTING BODIES OF RAILWAY VEHICLES IN CONNECTION WITH REMOVAL AND REPLACEMENT OF THE TRUCKS THEREOF

Filed July 31, 1947 4 Sheets-Sheet 4

FIG. 4



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UNITED STATES PATENT OFFICE

2,454,225

APPARATUS FOR SUPPORTING BODIES OF RAILWAY VEHICLES IN CONNECTION WITH REMOVAL AND REPLACEMENT OF THE TRUCKS THEREOF

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13 Claims. (Cl. 104—32)

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The present invention relates generally to apparatus for supporting the bodies of railway vehicles, such, for example, as Diesel locomotives, in connection with removal and replacement of the trucks thereof. More particularly the invention relates to that type of body supporting apparatus which is adapted for use with an elongated pit having truck raising and lowering mechanism therein.

One object of the invention is to provide a body supporting apparatus of this type which embodies a novel arrangement of parts and may be manipulated with facility.

Another object of the invention is to provide a railway vehicle body supporting apparatus which as its principal components comprises (1) a pair of parallel, horizontally extending, laterally spaced beams which are disposed above and transversely of the pit and are arranged at the sides of a track consisting of rails leading to the sides of the pit; and (2) a pair of horizontally extending bar type supporting members which are associated respectively with, and extend transversely of, the beams and are mounted to slide towards one another into an operative position wherein the inner ends thereof underlie the side sills of the body of the vehicle and away from one another into an inoperative position or retracted position wherein their inner ends are clear or free of the vehicle body.

Another object of the invention is to provide a supporting apparatus of the last mentioned character in which the bar type supporting members are slidably mounted on carriages which are mounted on the beams and are capable of travelling lengthwise of, or along, the beams to the end that the supporting members may be adjusted transversely with respect to the pit into a proper vehicle body supporting position.

Another object of the invention is to provide a railway vehicle body supporting apparatus of the type and character under consideration in which the carriages have mounted thereon power means for shifting the bar type supporting members to and from one another.

A further object of the invention is to provide a supporting apparatus of the aforementioned character in which the beams are supported and mounted so that they are adjustable to and from one another in order to accommodate between them vehicle bodies that vary in width.

A still further object of the invention is to provide a railway vehicle body supporting apparatus which is generally of new and improved

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construction and effectively and efficiently fulfills its intended purpose.

Other objects of the invention and the various advantages and characteristics of the present supporting apparatus will be apparent from a consideration of the following detailed description.

The invention consists in the several novel features which are hereinafter set forth and are more particularly defined by claims at the conclusion hereof.

In the drawings which accompany and form a part of this specification or disclosure and in which like numerals of reference denote corresponding parts throughout the several views:

Figure 1 is a vertical transverse section showing a railway vehicle body supporting apparatus embodying the invention in associated relation with an elongated pit with truck raising and lowering mechanism therein and illustrating the manner in which the slidably mounted supporting members serve when in their operative position to support the vehicle body while one of the trucks thereof is disconnected therefrom;

Figure 2 is an inner side elevation of one of the horizontally extending beams together with its carriage;

Figure 3 is an enlarged vertical transverse section taken on the line 3—3 of Figure 2 and illustrating in detail the manner in which the carriages are mounted on the beams and the body supporting members are slidably supported on the carriages; and

Figure 4 is an enlarged fragmentary inner side elevation of one of the carriages.

The apparatus which is shown in the drawings constitutes the preferred embodiment of the invention. It is designed and adapted to support a vehicle body, such for example, as a Diesel locomotive 5, in connection with removal and replacement of one of the trucks thereof and rests on a floor 6 having an elongated pit 7 therein. A track 8 along which the Diesel locomotive 5 is adapted to travel extends transversely of the pit 7 and consists of a pair of laterally spaced rails 9 and a pair of laterally spaced rails 10. The rails 9 rest on and are suitably anchored to the floor 6 and lead from one side of the pit 7. The other rails, i. e., the rails 10, are arranged in aligned relation with the rails 9. They rest on, and are suitably anchored to, the floors 6 and lead from the other side of the pit. Within the pit 7 is mechanism 11 for raising and lowering one of the trucks of the locomotive when the locomotive is positioned on the track 8 so that

the portion thereof to which the one truck is normally connected overlies the pit (see Figures 1 and 2). In the bottom of the pit is a longitudinally extending track consisting of a pair of laterally spaced rails 12. The raising and lowering mechanism 11 is in the form of an elevator and transfer car comprising a rectangular, horizontally extending truck 13 and a vertically movable platform 14. The truck 13 embodies at the corners thereof wheels 15 and these rest on, and are capable of travelling along, the rails 12 and permit the elevator and transfer car to be wheeled along the pit. A reversible electric motor 16 is connected to certain of the wheels 15 by way of speed reducing gearing 17 and operates when driven to propel the elevator and transfer car along the track that is formed by the rails 12. At the corners of the truck 13 are four upstanding, rotatably mounted screw shafts 18 which have the lower ends thereof connected by gearing to a reversible electric motor 19 on the truck 13. The last mentioned gearing is so designed and arranged that when the motor 19 is driven in one direction the screw shafts 18 are conjointly rotated in one direction and when the motor 19 is reversely driven the screw shafts are conjointly driven in the opposite direction. The platform 14 is rectangular and has at its corners fixedly mounted nuts 20 which are mounted on the screw shafts 18. When the screw shafts are conjointly driven in one direction the platform 14 is caused to be lowered and when the screw shafts are conjointly driven in the opposite direction the platform is caused to be raised. On the top of the platform 14 are two horizontally extending, laterally spaced rails 21. The latter extend transversely of the pit and are adapted when the transfer and elevator car is positioned under the subjacent end of the locomotive 5 and the platform 14 is raised to its fullest extent to bridge and complete the rails constituting the track 8. It is contemplated that, when one of the trucks of the locomotive 5 is to be removed for purposes of repair or servicing, the locomotive, after raising of the platform 14 so as to cause the rails 21 thereon to bridge the rails 9 and 10, will be propelled along the track 8 until the truck rests on or overlies the rails on the platform 14 of the elevator and transfer car. After the locomotive 5 is properly positioned the truck is disconnected from its mounting and is then lowered by lowering the platform 14. After lowering the truck the elevator and transfer car is propelled along the rails 12 to any desired point or location where repair of the locomotive truck is effected. After the locomotive truck is repaired the elevator and transfer car is propelled back under the portion of the locomotive body that overlies the pit, and then the platform is raised so as to position the locomotive truck for attachment to the body of the locomotive. As heretofore indicated, the apparatus serves as a medium or instrumentality for supporting the body of the locomotive 5 while the truck to be serviced is disconnected from the locomotive body. As its main or principal components the apparatus comprises a pair of beams 22, a pair of carriages 23 and a pair of supporting members 24.

The beams 22 are arranged in parallel relation and extend horizontally. They are spaced laterally apart and extend across, i. e., transversely of, the pit 7 in the floor 6. As best shown in Figure 1, the beams 22 are disposed outwards of, and in parallel relation with, the rails constituting the locomotive track 8 and are supported at the ends thereof by pedestals 25. The latter serve to support the beams 22 in an elevated position with respect to the track 8 and rest on base plates 26. Such plates are suitably anchored to the floor 6 and are positioned a slight distance outwards of the sides of the pits 7 in which the elevator and transfer car constituting the raising and lowering mechanism 11 is disposed. The beams 22 are of box type cross section and consist of horizontally extending bottom plates 27, horizontally extending top plates 28, vertically extending inner side plates 29 and vertically extending outer side plates 30. The side plates 29 and 30 extend between, and serve to space vertically apart, the bottom and top plates 27 and 28. They are located inwards of the side edges of the bottom and top plates and have the upper edges thereof welded to the side marginal portions of the top plates. The lower edges of the vertically extending side plates 29 and 30 are welded to the side marginal portions of the bottom plates 27. Disposed above the inner side marginal portions of the bottom plates 27 are two small sized channel beams 31. These beams are substantially the same in length as, and extend lengthwise of, the beams 22 and consist of vertically extending webs, inwardly extending bottom flanges and inwardly extending top flanges. The bottom flanges of the channel beams 31 rest on, and are welded to, the inner side marginal portions of the bottom plates 27 of the beams 22. The inwardly extending top flanges of the beams 31 underlie and are welded or otherwise fixedly secured to bar type rails 32. The latter are coextensive with the channel beams and are two in number, there being one rail on each of the channel beams. The pedestals 25 are formed of welded together plates and have at the lower ends thereof laterally extending flanges 33 which extend transversely of the beams 22 and lengthwise of the pit 7. The upper ends of the pedestals are welded or otherwise fixedly secured to the ends of the beams 22. The beams 22 are capable of being shifted bodily to and from one another in order to accommodate between them vehicle bodies that vary in width. They carry and support the carriages 23 as described hereafter and are releasably secured in their various adjusted positions by bolts 34. The latter extend vertically and are arranged so that the heads thereof are at the top. The shanks of the bolts carry nuts 35 at their lower ends and extend through circular holes 36 in the laterally extending flanges 33 on the lower ends of the pedestals 25 and slots 37 in the base plates 26. The slots extend lengthwise of the pit 7 and the nuts 35 on the lower ends of the shanks underlie the base plates 26. When the nuts 35 are tightened the bolts and nuts together clamp the flanges 33 against the base plates 26 and thus hold the beams and pedestals in a fixed position. When the nuts 35 are loosened the pedestals 25 are released from the base plates 26 and hence may be slid relatively to the base plates in connection with adjustment of the beams 22 to and from one another. During such adjustment of the beams the shanks of the bolts 34 slide in the slots 37 in the base plates 26. In order to facilitate shift of the pedestals with respect to the base plates in connection with adjustment of the beams 22 to and from one another the pedestals are provided at the lower ends thereof with rollers 38. The latter are mounted rotatably on inverted U-shaped brackets 39 which are connected to, and depend from, substantially hori-

zontally extending arms 40. The latter underlie laterally extending plates 41 on the lower ends of the side plates of the pedestals 25 and have certain ends thereof pivoted in order that they are free to swing upwards and downwards. Vertical bolts 42 extend through screw threaded holes 43 in the laterally extending plates 41 and are arranged so that the lower ends thereof abut against the distal ends of the arms 40. The rollers 38 rest on the top surfaces of the base plates 26. When the bolts 42, in response to proper turning thereof, are fed downwards the pedestals 25 are shifted upwards into an elevated position wherein they are disposed above the base plates 26 and are supported by the rollers 38. In such position the pedestals may be rolled readily back and forth over the base plates in order to effect the desired lateral adjustment of the beams 22. After the beams are adjusted as desired the bolts 42, by proper turning, are fed upwards relatively to the laterally extending plates 41. This results in lowering of the pedestals 25 until the lower ends of the latter are brought to rest on the base plates 26. As soon as the pedestals are lowered the nuts 35 are tightened so as to secure the pedestals against lateral displacement with respect to the base plates.

The two carriages 23 are mounted respectively on the two beams 22 so that they are slidable lengthwise thereof. They are generally U-shaped so far as configuration is concerned and each comprises a pair of similarly shaped, laterally spaced U-shaped members 44. Such members consist of horizontally extending intermediate pieces 45, inner upstanding pieces 46 and outer upstanding pieces 47. Each carriage has its U-shaped members 44 cross connected by tubular members 48, inner plates 49 and outer plates 50. The intermediate pieces 45 of the U-shaped members are located a short distance beneath the extend transversely of the bottom plates 27 of the beams 22. The inner upstanding pieces 46 of the U-shaped members 44 are disposed inwards of the inner side plates 29 of the beams 22 and are of such height that the upper ends thereof terminate above the channel beams 31. The outer upstanding pieces 47 of the U-shaped members 44 are located outwards of the outer side plates 30 of the beams 22 and are of such height that their ends terminate a comparatively small distance above the bottom plates 27. The tubes 48 extend between, and have the ends thereof welded to, the upper ends of the inner upstanding pieces 46. The inner plates 49 are horizontal. They extend between and are welded to the lower ends of the inner upstanding pieces 46 and are so arranged or disposed that the top faces thereof are substantially flush with the upper edges of the intermediate pieces 45. The outer plates 50 extend horizontally and underlie and are bolted or otherwise fixedly secured to the outer ends of the intermediate pieces 45. The upper ends of the inner upstanding pieces 46 are provided with inwardly extending lugs 51 and these overlie the rails 32 on the channel beams 31 and are adapted, when the carriage is shifted downwards in response to a load being imposed on the carriages, to rest on said rails and thus support the inner portions of the carriages as a whole. When there is no load on the carriages the inner portions of the carriages are supported by flanged wheels 52. Such wheels rest on, and are adapted to travel along, the rails 32 and are fixed to the inner ends of horizontally extending stub axles 53. The outer ends of the stub axles are journalled

in bearings 54 which overlie short I-beams 55. The latter are connected to, and project outwards from, the upper ends of the inner upstanding pieces 46 of the U-shaped members 44 and are operatively connected to the bearings 54 by vertically extending bolts 56. Such bolts are arranged so that the heads thereof are at the top and the shanks extend through vertically aligned holes in the sides of the bearings 54 and the inner portions of the flanges of the I-beams 55. The lower ends of the shanks of the bolts 56 project an appreciable distance beneath the lower flanges of the I-beams and are provided with nuts 57. Helical compression springs 58 are mounted on the lower ends of the shanks of the bolts 56 and are interposed between and abut against the nuts 57 and the lower flanges of the I-beams 55. Such springs urge the inner portions of the carriages upwards to the end that as soon as the carriages are released from a load they are shifted upwards into a position wherein the lugs 51 are out of engagement with the rails 32 and the wheels 52 serve as the sole medium for supporting the inner portions of the carriages and hence permit the carriages to be slid readily back and forth along the beams 22. The outer portions of the carriages are supported by way of flanged wheels 59 which are fixedly secured to the inner ends of horizontally extending stub axles 60 and rest on, and are adapted to travel along, the outer side marginal portions of the bottom plates 27 of the beams 22. The outer ends of the stub axles 60 are journalled in bearings 61 which overlie angle bars 62 on the upper ends of the inner upstanding pieces of the U-shaped members 44. The angle bars 62 are welded or otherwise fixedly secured in place and embody inwardly projecting, horizontally extending flanges 63. The bearings 61 are operatively connected to the angle bars 62 by way of vertically extending bolts 64 which are arranged so that the heads thereof are at the top. The shanks of the bolts extend downwards through aligned holes in the sides of the bearings 61 and the flanges 63 of the angle bars 62 and have nuts 65 on their lower extremities. Helical compression springs 66 surround the central portions of the shanks of the bolts 64 and are interposed between the nuts 65 and the flanges 63. These compression springs function in the same manner as the compression springs 58 on the bolts 56 and urge upwards the outer portions of the carriages 23. Preferably each carriage has two wheels 52 and two wheels 59. The wheels support the carriages so that when there is no load on them they are free to be shifted back and forth along the beams 22. As heretofore pointed out, when a load is imposed on the carriages the latter move downwards relatively to the wheels until they are supported by the inwardly extending lugs 51 on the upper ends of the inner upstanding pieces 46 of the U-shaped members 44. As a result of the yielding connections between the wheels and the carriages the wheels are not subjected to the full weight of any load that is placed or imposed on the carriages.

The supporting members 24 are horizontally elongated and are disposed beneath, and extend transversely of, the beams 22. They are mounted on the carriages 23 to slide horizontally to and from one another and are adapted when slid toward one another into their operative position to have the inner ends thereof underlie the side sills of the body of the locomotive 5. When the side sills of the locomotive body rest on the inner ends of the supporting members 24 the body is so supported that the truck that overlies the pit may

be readily disconnected. As best shown in Figure 3 of the drawings, the supporting members 24 are substantially rectangular in cross section and overlie the intermediate pieces 45 of the U-shaped members 44 of the carriages. The bottom portions of the supporting members 24 are supported by, and are slidable with respect to, the inner horizontally extending plates 49 between the lower ends of the inner upstanding pieces 46 of the U-shaped members 44. The outer ends of the supporting members are movably or slidably supported by way of rollers 67. The latter are supported rotatably by way of U-shaped axle carrying brackets 68 which are mounted on the outer horizontally extending plates 50. Each of the carriages 23 is provided with power means for shifting its supporting member 24 outwards and inwards, and such means consists of a hand wheel 69, a pinion 70 and a rack 71. The hand wheels 69 are positioned at one side of the carriages and are keyed or otherwise fixedly secured to horizontally extending shafts 72. The latter extend transversely through holes in the rear portions of the intermediate pieces 45 of the U-shaped members 44 and have the central portions thereof journalled in bearings 73 which, as shown in Figure 4, are mounted on the outer horizontally extending plates 50. The pinions 70 are mounted fixedly on the central portions of the shafts 72 and mesh with the racks 71. The latter are connected to the bottom portions of, and are in parallel relation with, the supporting members 24. When the hand wheels 69 are turned in one direction the supporting members 24 are slid bodily towards one another into their operative position wherein the inner ends thereof are adapted to support the body of the locomotive 5. When the hand wheels 69 are turned in the opposite direction the horizontally elongated supporting members 24 are slid or shifted outwards into their inoperative position wherein the inner ends thereof are free or clear of the side sills along the bottom of the locomotive body.

When it is desired to use the supporting apparatus in connection with removal and replacement of one of the trucks of the Diesel locomotive 5 the hand wheels 69 are turned so as to effect retraction of the supporting members 24. Thereafter the elevator and transfer car constituting the raising and lowering mechanism 11 is propelled into a position wherein it is disposed midway between the beams 22. After this operation the platform 14 is raised so as to bring the rails 21 on the top thereof into bridging relation with the rails 9 and 10 constituting the track 8. As soon as the platform 14 is elevated and locked in place by suitable locking means on the platform 14 the locomotive 5 is propelled along the track 8 until the truck to be serviced rests on, and is supported by, the rails 21 on the platform 14. After this is accomplished the supporting members 24 are, by proper turning of the hand wheel 69, slid towards one another into their operative position wherein the inner ends thereof underlie the side sills of the locomotive body. In the event that it is desired to change the position of the supporting members in a lengthwise direction with respect to the side sills of the locomotive body the carriages 23 are slid back and forth along the beams 22 until they are positioned as desired. As soon as the supporting members are in their proper operative position the truck above the pit 7 is detached from its mounting structure and is then lowered by lowering the platform 11 of the elevator and transfer car. In connection with initial lowering of the locomotive truck the side sills of the locomotive body drop slightly downwards into abutment with the inner ends of the supporting members and cause the load of the locomotive body to be imposed on the members and the carriages. As heretofore indicated, the carriages, as soon as they are subjected to a load, move slightly downwards until the lugs 51 rest on the rails 33 and afford the desired support for the carriages and their respective supporting members. After servicing the locomotive truck it is raised into place by elevating the platform 14 into a position wherein the rails 21 bridge the rails 9 and 10. After connection of the truck to its mounting structure on the locomotive body the supporting members 24 are slid inwards into their inoperative or retracted position by the proper turning of the hand wheels 69. As soon as the supporting members 24 are in such position the Diesel locomotive 5 may be propelled along the track 8. In the event that it is desired to utilize the apparatus to support a vehicle body of abnormal width the nuts 35 are loosened and the pedestals 25, after proper manipulation of the rollers 33, are rolled outwards so as to effect the desired separation of the beams 22. The pedestals, by proper feeding of the screws 42, are lowered and thereafter the nuts 35 are tightened.

The herein described vehicle body supporting apparatus is comparatively simple in design and effectively and efficiently fulfills its intended purpose. It may be manipulated with facility and because of the various adjustments it is capable of being used in connection with vehicle bodies that vary in width.

Whereas the apparatus has been described in connection with a Diesel locomotive it is to be understood that it may be used as a supporting medium or instrumentality for the bodies of other railway vehicles in connection with servicing of the trucks thereof. It is also to be understood that the invention is not to be restricted to the details set forth since these may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:

1. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams disposed in an elevated position with respect to the track and at opposite sides of the interruption, a pair of carriages mounted on the beams to move lengthwise thereof, and a pair of vehicle body supporting members mounted on the carriages so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

2. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative

when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams disposed in an elevated position with respect to the track and at opposite sides of the interruption, a pair of carriages mounted on the beams to move lengthwise thereof, and a pair of horizontally elongated vehicle body supporting members extending transversely of the track and mounted on the carriages so that they are slidable toward one another into an operative position wherein their inner ends underlie and support the vehicle body and away from one another into a retracted position wherein the inner ends thereof are clear of the vehicle body.

3. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams disposed in an elevated position with respect to the track and at opposite sides of the interruption, a pair of carriages mounted on the beams to move lengthwise thereof, a pair of horizontally elongated vehicle body supporting members extending transversely of the track and mounted on the carriages so that they are slidable toward one another into an operative position wherein their inner ends underlie and support the vehicle body and away from one another into a retracted position wherein the inner ends thereof are clear of the vehicle body, and gearing between the carriages and the members for sliding said members back and forth between said positions.

4. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams disposed in an elevated position with respect to the track and at opposite sides of the interruption and mounted so that they are adjustable to and from one another, a pair of carriages mounted on the beams to move lengthwise thereof, and a pair of horizontally elongated vehicle body supporting members extending transversely of the track and mounted on the carriage so that they are slidable toward one another into an operative position wherein their inner ends underlie and support the vehicle body and away from one another into a retracted position wherein the inner ends thereof are clear of the vehicle body.

5. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams supported in an elevated position with respect to the track and at opposite sides of the interruption and having outwardly and oppositely extending flange like parts extending lengthwise along their bottom portions, a pair of U-shaped carriages positioned under and in straddled relation with the beams and having on the upper ends of the upstanding pieces thereof wheels arranged to ride over and along said flange like parts and to support the carriages so that they are movable lengthwise of the beams, and a pair of vehicle body supporting members associated with the supporting structures, respectively, and mounted on the carriages so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

6. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams positioned at opposite sides of the interruption and provided at the ends thereof with pedestals whereby they are supported in an elevated position with respect to the track, large sized fixed supports directly underlying the pedestals and embodying between them and the pedestals releasable clamping means for securing the pedestals in different adjusted positions on the supports, a pair of carriages mounted on the beams to move lengthwise thereof, and a pair of vehicle body supporting members mounted on the carriages so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

7. An apparatus designed for use with a railway track having an interruption therein and a vertically movable rail equipped element positioned adjacent the interruption and operative when raised to have the rails thereof bridge and complete the track, adapted after a railway vehicle is propelled along the track to a position wherein one of the trucks thereof is supported on the element to support the body of the vehicle so that the one truck may be released from the vehicle body and then lowered by said element, and comprising a pair of horizontal, laterally spaced beams positioned at opposite sides of the interruption and provided at the ends thereof with pedestals whereby they are supported in an elevated position with respect to the track, large sized fixed supports directly underlying the pedestals and embodying between them and the ped-

estals releasable clamping means for securing the pedestals in different adjusted positions on the supports, and a pair of vehicle body supporting members associated respectively with the beams and mounted so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the body.

8. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of opposed supporting structures spaced laterally apart, located at the sides of the track and mounted so that they are adjustable to and from one another, and a pair of vehicle body supporting members associated with the supporting structures, respectively, and mounted thereon so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

9. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of opposed supporting structures spaced laterally apart and located at the sides of the track, and a pair of vehicle supporting members associated with the supporting structures, respectively, and mounted thereon so that they are adjustable horizontally in parallel relation with the track and are also movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

10. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of horizontal, laterally spaced beams disposed in an elevated position with respect to, and at opposite sides of, the track, a pair of carriages mounted on the beam to move lengthwise thereof and a pair of vehicle supporting members mounted on the carriages so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of said vehicle body.

11. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of horizontal, laterally spaced beams supported in an elevated position with respect to, and at opposite sides of, the track and having outwardly and oppositely extending flange-like parts extending lengthwise along their bottom portions, a pair of U-shaped carriages positioned under and in straddled relation with the beam and having on the upper ends of the upstanding pieces thereof wheels arranged to ride over and along said flange-like parts and to support the carriages so that they are movable lengthwise of the beams, a pair of horizontally elongated vehicle body supporting members extending transversely of the track and mounted on the carriages so that they are slidable toward one another into an operative position wherein their inner ends underlie and support the vehicle body and away from one another into a retracted position wherein the inner ends thereof are clear of the vehicle body, and gearing between the carriages and the members for sliding said members back and forth between said positions.

12. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of horizontal, laterally spaced beams positioned at opposite sides of the track and provided at the ends thereof with pedestals whereby they are supported in an elevated position with respect to the track, large sized fixed supports directly underlying the pedestals and embodying between them and the pedestals releasable clamping means for securing the pedestals in different adjusted positions on the supports, a pair of carriages mounted on the beams to move lengthwise thereof, and a pair of vehicle body supporting members mounted on the carriages so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of the vehicle body.

13. An apparatus designed for use with a railway track, adapted to support the body of a railway vehicle on the track in connection with release of one of the trucks of the vehicle, and comprising a pair of opposed supporting structures spaced laterally apart, located at the sides of the track and mounted so that they are bodily adjustable relatively to said track, and a pair of vehicle body supporting members associated with the supporting structures respectively and mounted thereon so that they are movable back and forth between an operative position wherein they underlie and support the vehicle body and a retracted position wherein they are clear of said vehicle body.

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REFERENCES CITED

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

FOREIGN PATENTS

Number	Country	Date
7,799	Great Britain	June 29, 1888

OTHER REFERENCES

1931 Car Builder's Cyclopedia, page 1148.