J. A. EARLEY AND J. L. HUMPHREY.

APPARATUS FOR DISMEMBERING AND ASSEMBLING ROLLING STOCK.

APPLICATION FILED AUG. 4, 1919.

1,341,501

Patented May 25, 1920.

5 SHEETS—SHEET 1.

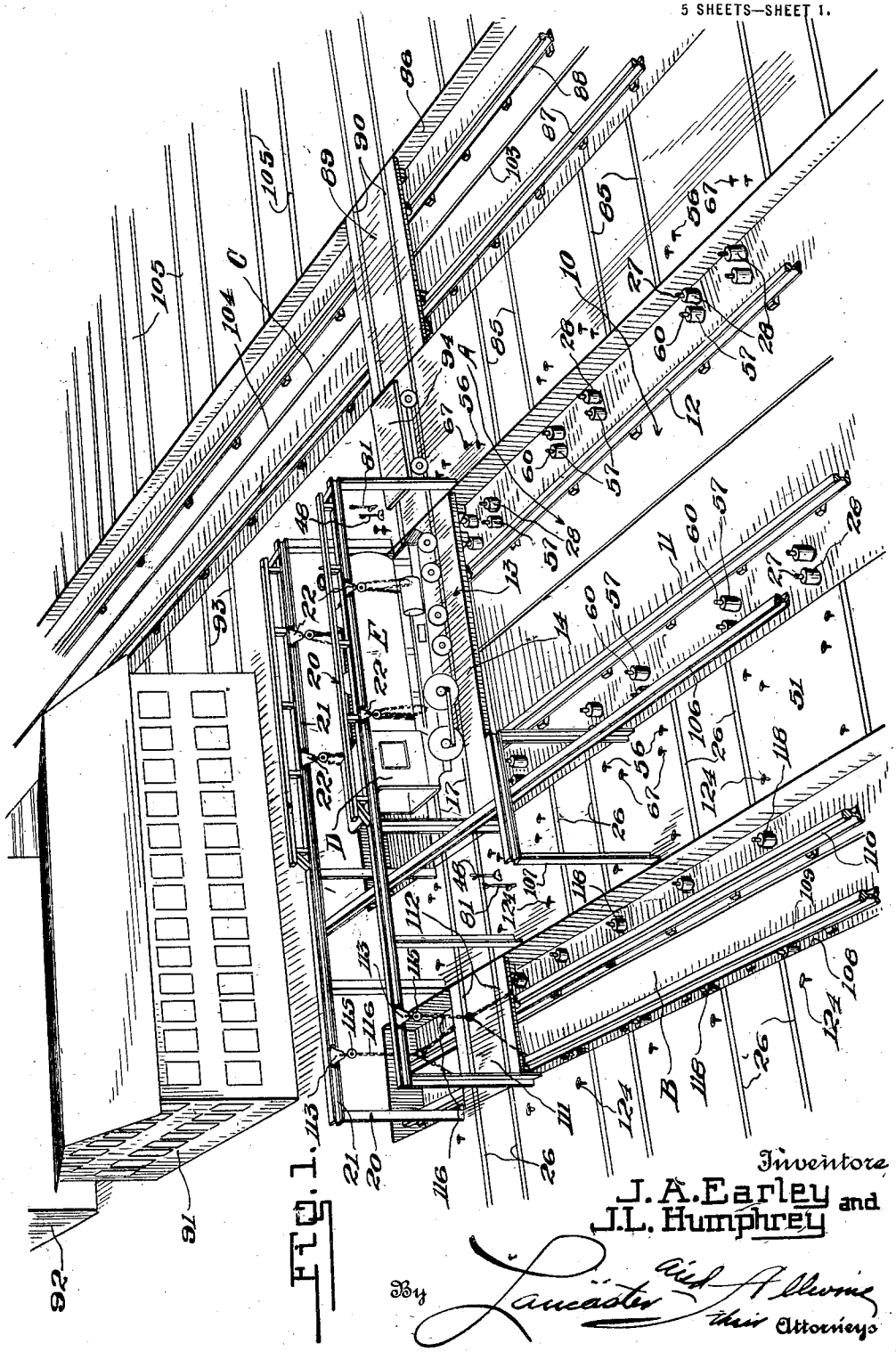


FIG. 1.

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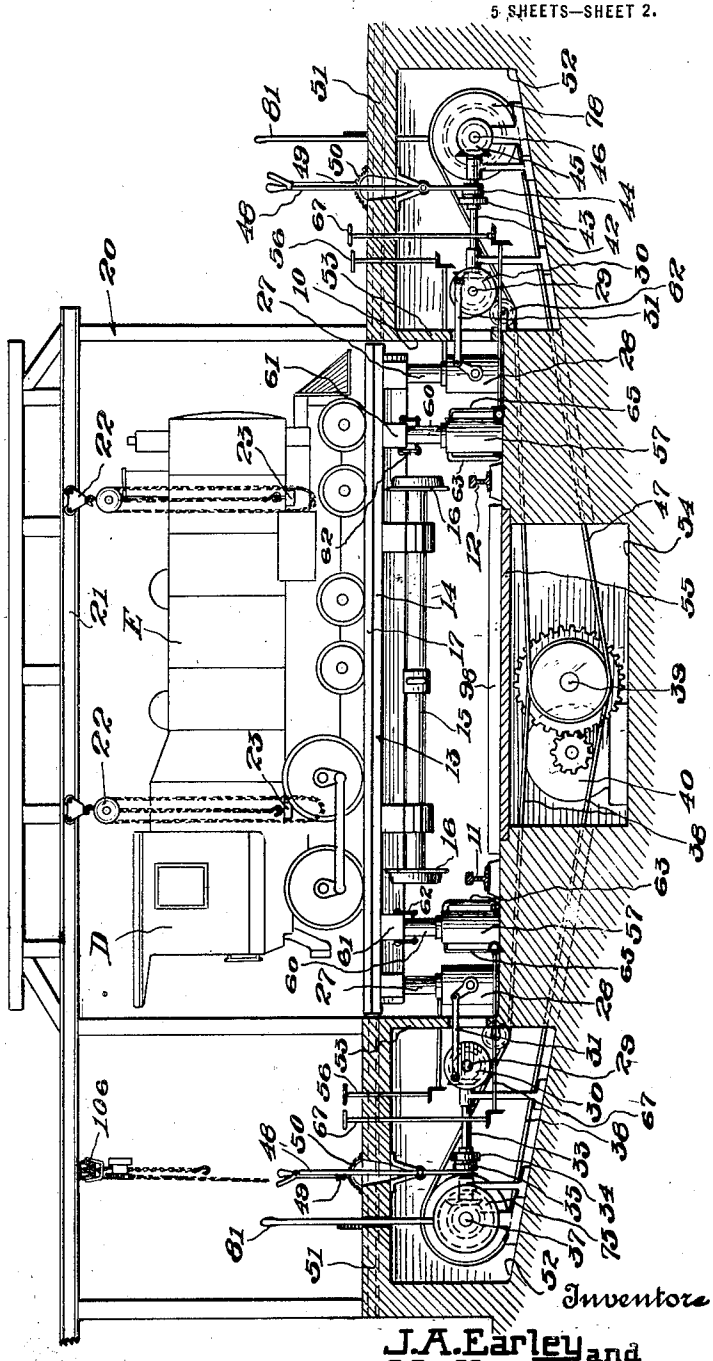
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5 SHEETS—SHEET 2.

Fig. 2.



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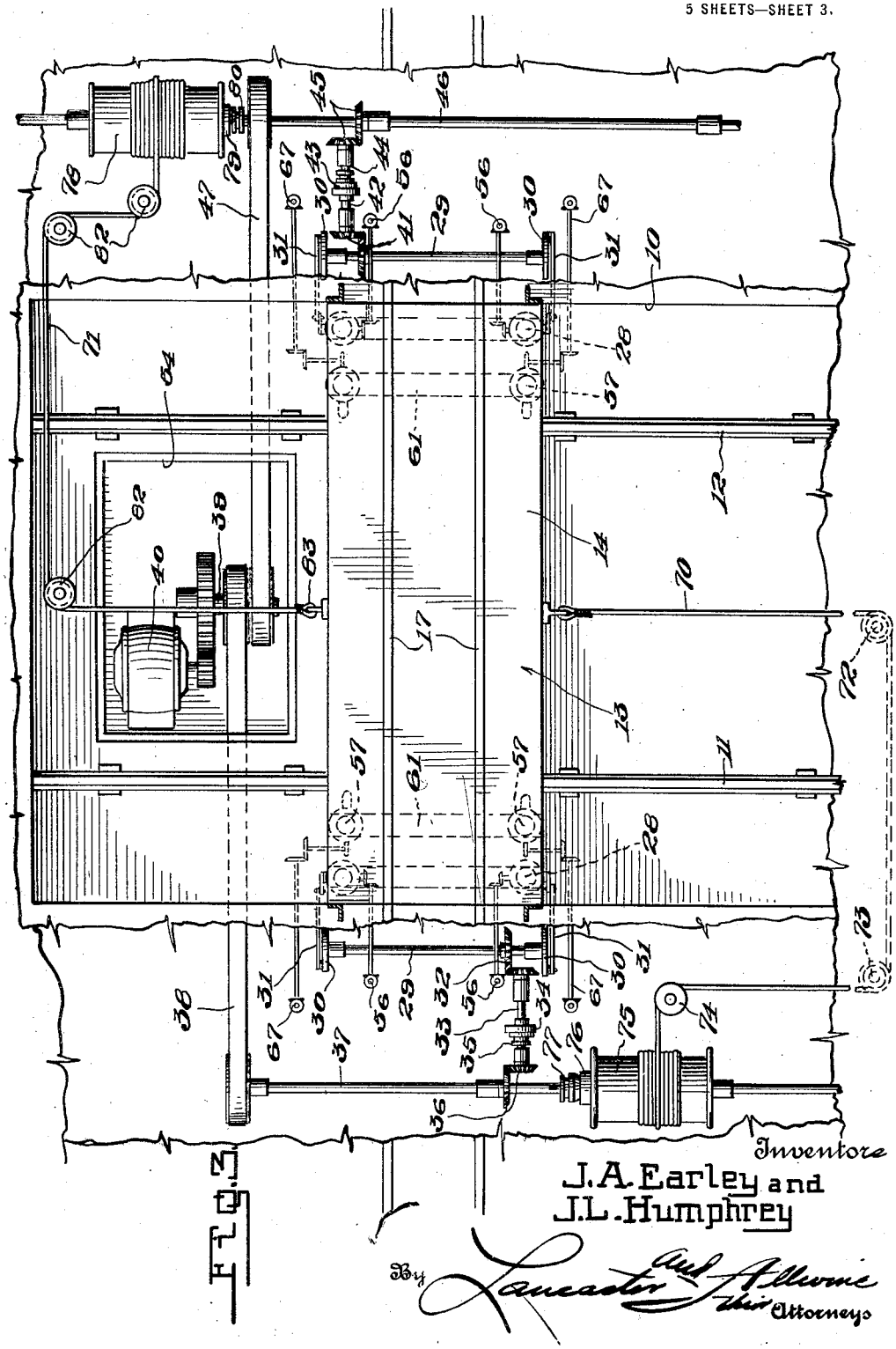


FIG. 3.

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5 SHEETS—SHEET 4.

Fig. 4.

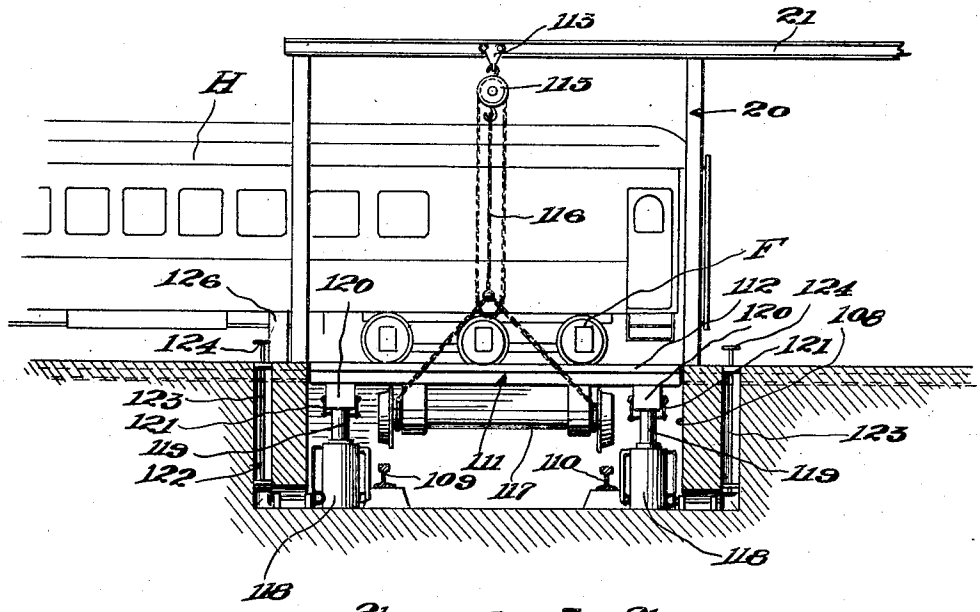
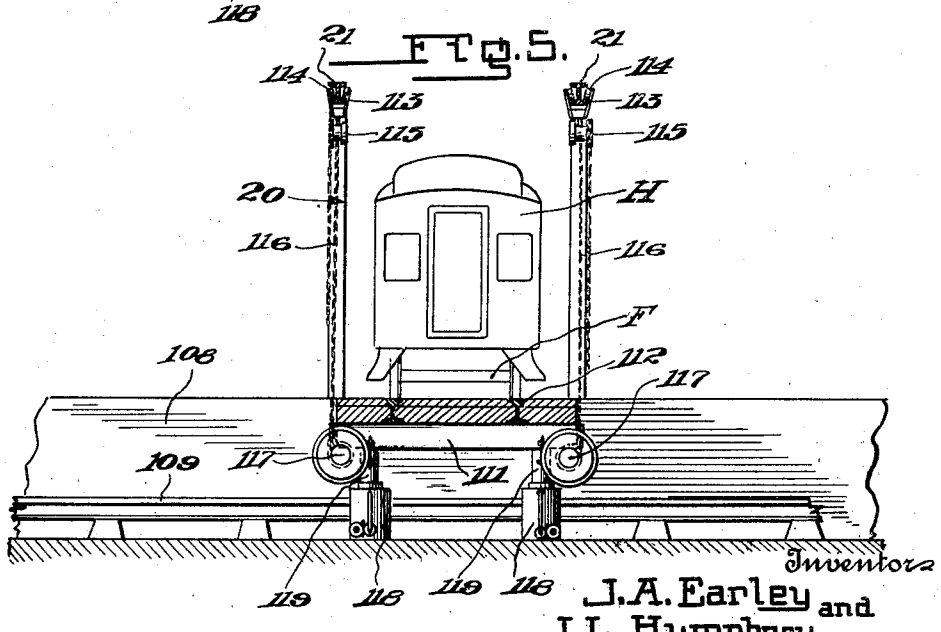


Fig. 5.



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5 SHEETS—SHEET 5.

Fig. 6.

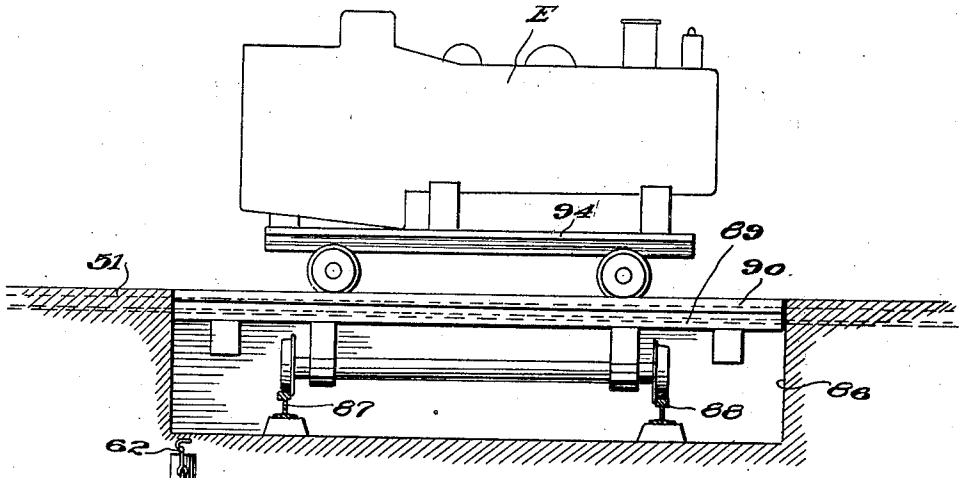


Fig. 7.

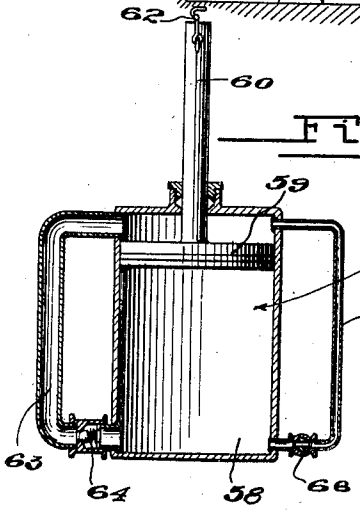


Fig. 9.

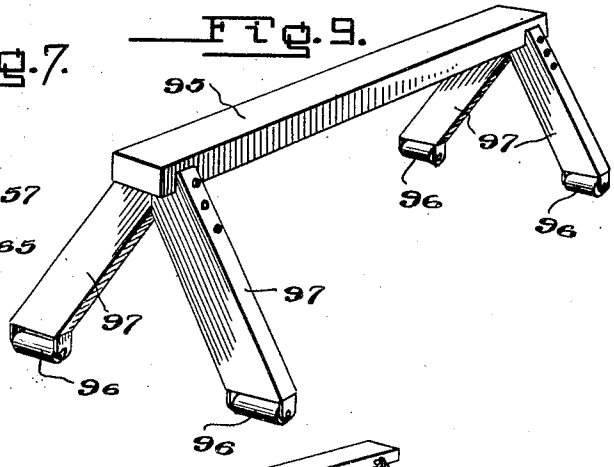
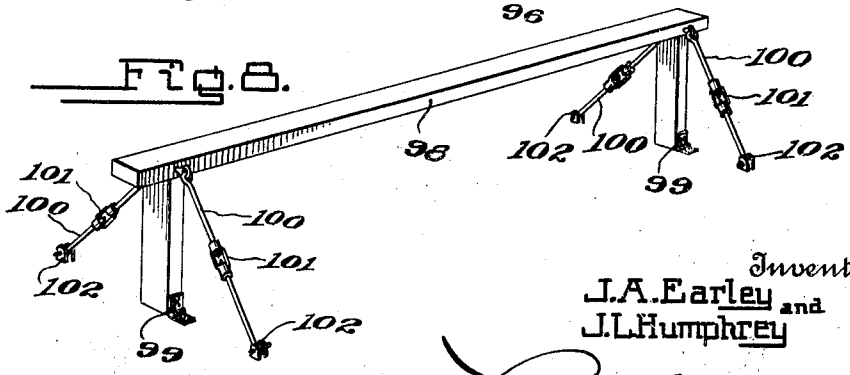


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES A. EARLEY, OF WASHINGTON COLLEGE, AND JAMES L. HUMPHREY, OF TELFORD, TENNESSEE.

APPARATUS FOR DISMEMBERING AND ASSEMBLING ROLLING-STOCK.

1,341,501. Specification of Letters Patent. Patented May 25, 1920.

Application filed August 4, 1919. Serial No. 315,298.

To all whom it may concern:

Be it known that we, JAMES A. EARLEY and JAMES L. HUMPHREY, citizens of the United States, residing at Washington College, Washington county, and State of Tennessee, and Telford, Washington county, and State of Tennessee, respectively, have invented certain new and useful Improvements in Apparatus for Dismembering and Assembling Rolling-Stock, of which the following is a specification.

This invention relates to an apparatus for dismembering and assemblying locomotives and rolling stock, and an object of the invention is to provide an apparatus of this nature which will eliminate many of the inconveniences contingent with the repair of locomotives and rolling stock when it is necessary to dismantle them or separate the relatively massive parts thereof, such as the boiler construction from the engine and truck constructions of a locomotive.

A further object of the invention is to provide an apparatus as specified, which comprises a hoist or derrick structure built over a pit in which are placed rails upon which a car travels, permitting the positioning of a locomotive on the car beneath the derrick structure, at which time the locomotive may be dismembered and the truck and engine structure carried on the car to the desired point for repair while the boiler may be held suspended by the derrick for quick replacing upon the engine structure when desired, and also to provide a track and suitable trucks or cars by means of which the engine structure and boiler structure may be conveyed to suitable shops or housings when extensive repairs are necessary.

Other objects of the invention are to provide hydraulic hoists for raising the supporting car which travels in the pit and also to provide cushioning cylinders to retard the lowering of the car to prevent sudden or jarring movement thereof; to provide a drum and cable structure for moving the car along the tracks in the pit; to provide suitable trestles to support the boiler or other parts of the locomotive to proper position upon the car; and to provide a second pit and tracks therein together with suitable hoisting mechanism such as block and tackle for use in dismembering rolling stock for repair.

Other objects of the invention will appear in the following detailed description taken in connection with the accompanying drawings, forming a part of this specification, and in which drawings:

Figure 1 is a perspective view of the improved dismembering and assembling locomotive or rolling stock.

Fig. 2 is a fragmentary vertical section through the apparatus illustrating the mechanism for controlling the raising and lowering of the car which runs in one of the pits of the apparatus.

Fig. 3 is a top plan of the mechanism for controlling the movement of the car, which travels in one of the pits.

Fig. 4 is a fragmentary cross section through the pit adapted to be employed for dismembering rolling stock and illustrating the means for raising the car which travels in the said pit together with the means for cushioning the movement of the car.

Fig. 5 is a fragmentary section through the structure illustrated in Fig. 4 and taken at right angles to Fig. 4.

Fig. 6 is a fragmentary section through the pit and track structure adapted for use in conveying the parts of a locomotive or other rolling stock to the shops.

Fig. 7 is a vertical section through one of the cushioning members employed for cushioning the vertical movement of the part.

Fig. 8 is a detail perspective view of a supporting trestle used in connection with the apparatus, and

Fig. 9 is a perspective view of a movable trestle adapted for use in connection with the apparatus.

Referring more particularly to the drawings, wherein like characters indicate like and corresponding parts throughout the several views, A indicates the structure or part of the apparatus which is particularly designed for use in the dismembering and assembling of locomotives, B indicates the structures particularly designed to facilitate the dismembering and assembling of rolling stock, such as passenger cars, freight cars, and the like, while the structure which is employed for carrying the parts of a locomotive or other rolling stock to the shops is generically indicated by the letter C.

In installing the apparatus, a pit 10 is dug longitudinally in which ordinary T-

rails 11 and 12 are mounted to form a track over which the car 13 travels. This car 13 includes a platform 14 which has suspended therebeneath axles 15 carrying flange wheels 16 adapted to ride over the T-rails 11 and 12 of the track structure. The platform 14 of the car 13 has rails 17 thereon the gage of which is equal to the gage of an ordinary rail track, with which the said rails are adapted to aline to permit the running of an engine or locomotive thereon, when it is desired to dismember the same.

A super-structure 20 is built over the pit 10 near one end of the same and it supports suitable I beams 21 forming tracks for block and tackle hoist structure 22, the chains of which are adapted to engage about the boiler of a locomotive, the tank of a tank car or the like for lifting the boiler or tank from the running gear structure of a locomotive or tank car. In the drawings a locomotive is shown positioned upon the car 13, and ready to be dismembered. Suitable saddles 23 may be provided for engagement beneath the boiler indicated at E of a locomotive D to support the boiler in position for remounting upon the truck structure of a locomotive.

The upper surface of the platform 14 of the car 13 normally lies below the ground surface in which the pit 10 is dug and when it is desired to run a locomotive upon the car, the latter is moved until it alines with any one of a series of transversely extending tracks 26 and the hoists or hydraulic jack structures 27 are operated by means of the pump 28, to elevate the car structure 13 to move the upper surface thereof flush with the ground surface upon each side of the pit 10. The pumps 28 are operated from shafts 29 by means of disks 30 and rods 31 which are eccentrically connected to the said disks 30 as clearly shown in Figs. 2 and 3 of the drawings.

The shafts 29 at one side of the pit 10 is connected by means of beveled gears 32 to a shaft 33 which is adapted for operative connection to a clutch structure 34 with a shaft 35 which is in turn connected by means of miter gears 36 with a shaft 37 which extends longitudinally along the side of the pit 10. The shaft 37 is operatively connected, by means of a belt and pulley transmission structure 38 with a shaft 39 which is in turn connected to a motor 40 or other analogous prime mover as clearly shown in Fig. 3 of the drawings. The shaft 29 at the opposite side of the pit 10 from that just described is connected by means of a beveled gear 41 to a shaft 42 which is connected through the clutch structure 43 with a shaft 44. The shaft 44 is connected by means of miter or beveled gears 45 with a second shaft 46 which extends longitudinally along the pit 10. This shaft 46 is connected by means of a belt and pulley transmitting structure 47 with the shaft 39. While in the drawings a two shaft and cone clutch structure is illustrated for connecting the shafts 39 and 27 and 29 and 46 respectively, it is to be understood that any approved type of clutch mechanism used in connection with a single shaft may be employed in lieu of the two shaft and cone clutch structure without departing from the spirit of this invention. The clutches 34 and 43 are operated by means of hand levers 48, which carry the usual type of dog mechanism 49 adapted for co-action with quadrants 50 for holding the hand levers in adjusted positions and these levers preferably project upwardly through openings formed in the platform 51 positioned at each side of the pit 10, while the various shafts are preferably positioned in pits 52 placed at each side of the pit 10 and separated from the pit 10 by partitions 53.

The motor or prime mover 40, together with the shafts 39 and the pulleys carried by said shafts for connection with the shafts 37 and 46 respectively are preferably placed in a pit 54 located beneath the pit 10 and separated therefrom by a removable cover 55, countersunk so that its upper edge will lie flush with the bottom of the pit 10.

Suitable controls 56 for the valves of the hydraulic jack or pump structures 27 and 28 are provided which also project upwardly through the platforms 51.

Cushioning structures 57 are provided for cushioning the downward movement of the car structure 13 or for holding the car structure against accidental movement under its own weight should the hydraulic pump or jack structure break or otherwise fail to operate.

These cushioning structures include cylinders 58 in which are mounted pistons 59, the piston rods 60 of which engage against the under surfaces of girders 61 carried by the car structures 13 and to which girders the piston rods 60 are connected by means of hooks or analogous coupling means 62 so that when the car structure 13 is elevated by the operation of the jack structures 28, the piston 59 will be moved upwardly in the cylinders 58. A relatively large pipe 63 has communication with the cylinder 58 at its upper and lower ends and a check valve 64 is positioned in each of these pipes 63 near their lower ends, so as to permit fluid to pass from the cylinder 58 above the piston 59 through the pipe 63 past the check valve structure 64 and into the cylinder below the piston 59, but prevents fluid from passing out of the cylinder 58 below the pistons to the pipe into the cylinder above the piston. The passage of fluid from within the cylinder below the piston 59, into the cylinder above the piston is had through

a relatively small pipe 65 in which a valve 66 is placed, near its lower end, and by operation of this valve through the medium of the valve operating structure 67, the flowing of the fluid from the cylinder below the piston into the cylinder above the piston may be controlled. By making the pipe 65 much smaller than the pipe 63, the upward flow of fluid out of the cylinder will be materially less than the downward flow of fluid through the pipe 63, providing sufficient retarding to allow the car structure 13 to slowly move downwardly into the pit to prevent shock or jars being administered to the car structure and its load during its lowering movement.

After the car 13 and its load has been lowered into the pit so that the wheels 16 ride upon the rails 11 and 12 the said car is moved longitudinally in the pit by cables 70 and 71 one of which is connected to the platform 14 of the car 13 at each side thereof. The cable 70 extends substantially the full length of the pit 10 intermediate the rails 11 and 12 and passing about a suitable guide sheave 72 at the end of the pit extending transversely to the pit from this sheave and about a second guide sheave 73 from which it extends parallel to the pit until it reaches the guide pulley 74 which directs it again in a direction transversely to the length of the pit where it is connected to a drum 75 loosely mounted upon the shaft 37. A clutch section 76 is carried by one end of the drum 75 and is adapted for co-action with a clutch section 77 feathered upon the shaft 37 for rotating the drum 75 by the rotation of the shaft to wind the cable 70 thereon to draw the car and its load longitudinally in the pit 10. During the winding of the cable 70 upon the drum 75, the cable 71 will unwind from its carrying drum 78, which drum is rotatively mounted upon the shaft 46 and has a clutch section 79 carried thereby adapted for coaction with a clutch section 80 feathered upon the shaft 46 to rotate the drum 78 by the rotation of the shaft 46 to wind the cable 71 thereon to move the car 13 in a direction reversely to that which it is moved in when the cable 70 is wound upon the drum 75.

The clutch sections 77 and 80 are shifted by hand levers 81. The cable 71 passes over suitable guide pulleys 82 between its connection with car 13 as shown at 83 and the drum 78.

A plurality of tracks 85 extend across the platform 51 between the pits 10 and 86. Rails 87 and 88 are positioned in the pit 86, to form a track therein upon which is mounted a car 89, having a track structure 90 upon its upper surface adapted for alinement with any one of the tracks 85 to permit the movement of a locomotive, car or a part thereon onto the car 89, for moving over the tracks formed by the rails 87 and 88, to carry the said part of the locomotive or rolling stock to a shop or house as shown at 91 and 92 in Fig. 1 of the drawings. For instance, the shop 91 is provided with machinery for the repairing of the engine and truck of a locomotive, when the excessive repairs are needed thereon, and in such cases, a locomotive is run from the car structure 13 over one of the tracks 85 upon the car structure 89 which latter car structure is moved along the rails 87 and 88 upon the tracks 90 upon the car alined with the tracks 93 which lead into the shop 91 at which point the engine and truck structures of the locomotive are run off the car 89 into the shop 91. In cases where excessive repairs are needed upon the boiler structure of the locomotive, the same is placed upon a car 94, which car is run upon the track 90 upon the car 89 after which the car 89 is moved along the rails 87 and 88 until it alines with the tracks leading into the shop 92, at which point the car 94 carrying the boiler structure E is run off the car 89 into the shop 92. A suitable truck structure 95 of the trestle type is provided, having rollers 96 carried by the lower ends of its legs 97 which trestle or truck structure is adapted to support the boiler E when the latter is moved into the shop 92 to permit movement of the shop for repairs, in places where no tracks are provided.

In cases where only slight repairs are needed upon the boiler structure E, the car 13, after the boiler structure and engine structure of the locomotive have been dismembered is lowered upon the rails 11 and 12 and moved longitudinally in the pit 10, moving it away from beneath the boiler, structure E where the necessary slight repairs may be made to the engine or truck structure, and the boiler is lowered so that it will be accessible to workmen from the bottom of the pit 10 and rests upon a suitable trestle structure 98 which is hingedly connected as shown at 99 to the bottom of the pit 10. Angled braces 100, which include turnbuckles 101 therein are provided for connection with the trestle 98 to rigidly support it in an upright position and they are adapted for detachable pivotal connection to suitable coupling structure 102 which are carried by the floor or bottom of the pit 10. If it is so desired, cables 103 and 104 may be connected to the car 89 and have any suitable type of operating means connected thereto for pulling the car 89 over the rails 87 and 88. However it is to be understood that this car 89 may be propelled manually over the rails or by any suitable structure without departing from the spirit of this invention.

A plurality of tracks 105 lead from the pit 86 out into the yard and the car 94 or

any part or parts of rolling stock may be run upon any one of these tracks if desired.

An I beam 106 is supported by the super structure 20 and by an auxiliary super structure 107, the said I beam forming a track or carrier to facilitate the movement of parts to the desired place for the repair of a locomotive or rolling stock. The pit 108 is formed upon the side of the pit 10 oppositely from the side upon which the pit 86 is mounted. This pit 108 extends parallel to the pit 10 and has a track structure positioned therein comprising rails 109 and 110 which are adapted to support a car 111 to permit the car to be moved toward or from beneath the superstructure 20. The car 111 has a track 112 carried by its upper surface which is adapted for alinement with any one of the tracks 26 and which tracks are adapted to receive thereon one of the trucks indicated at F of a passenger car 8 or freight car or other rolling stock such as used upon railways, as clearly shown in Figs. 4 and 5 of the drawings. Carriers 113 are supported by the rails 21 of the superstructure 20 for movement therealong, suitable rollers 114 being provided for engagement with the rails 21, and hoisting mechanisms 115 of the chain and block type are carried by the carriers 113. The supporting chains or flexible members 116 of the hoist structures 115 are connected to the axles 117 of the car structure 111 as clearly shown in Fig. 4 of the drawings in such manner that they may be quickly and easily disconnected therefrom if desired, and these hoist mechanisms 115 are provided for elevating the car structure 111 off the rails 109 and 110 to permit the upper surface of the car to be moved flush with the platform 51 and the surface of the ground outwardly of the pit 108.

Cushioning members 118 which are similar in construction to the cushioning members 57 are provided, the piston rods 119 of which engage against girders or beams 120 of the car structure to which girders or beams the piston rods 119 are connected by means of hooks or suitable fastening means 121 to draw the pistons upwardly within the cylinders upon the elevating of the car structure 111. The valve for controlling the passage of the fluid from beneath the piston of the structure 118 to above the piston is controlled by a suitable controlling mechanism 122 comprising a vertically extending rod 123 upon the upper end of which a suitable hand grip 124 is mounted to facilitate operation thereof. The car structure 111 may be lowered upon the rails 109 and 110 to permit the moving of the truck structure F to any desired point for repair, and during which time any suitable structure such as indicated at 126 may be provided for supporting the end of the car from beneath which the trucks have been removed. The tracks 112 of the car 111 are adapted for alinement with any one of the tracks 26 and with the tracks 17 carried by the car structure 13 to permit the moving of the truck structure F into either of the shops 91 or 92 if it is so desired.

Changes in details may be made without departing from the spirit of this invention, but;

We claim:.

1. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position the upper surface flush with the top of the pit, tracks leading laterally from the pit, tracks carried by the upper surface of said car and adapted to aline with any of said tracks leading laterally from the pit, and means for retarding the downward movement of the car into the pit.

2. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position the upper surface flush with the top of the pit, and means for retarding the downward movement of the car into the pit.

3. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car into the pit, and means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit.

4. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a plurality of tracks leading laterally from the pit, a track carried by the upper surface of said car adapted for alinement with any of said laterally leading tracks, means for retarding the downward movement of the car into the pit, and means for controlling the operation of said retarding means whereby the car may be supported at different elevations within the pit.

5. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over said pit, and a hoisting mechanism carried by said super-structure.

6. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, a super-structure over a

portion of said pit, tracks carried by said super-structure, and a hoist movable along and supported by said tracks.

7. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel in said pit, means for elevating the said car for positioning its upper surface flush with the top of the pit, a super-structure over a portion of said pit, tracks carried by said super-structure and a hoist mechanism movable along and supported by said track.

8. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a plurality of tracks leading laterally from the pit, a track carried by the upper surface of said car and adapted for alinement with any one of said laterally leading tracks, a super-structure over a portion of said pit, tracks carried by said super-structure, and a hoist structure movable along and supported by said tracks.

9. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a plurality of tracks leading laterally from the pit, a track carried by the upper surface of said car and adapted for alinement with any one of said laterally leading tracks, a super-structure over a portion of said pit, tracks carried by said super-structure, a hoist structure movable along and supported by said tracks, and means for retarding the downward movement of the car into the pit.

10. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a plurality of tracks leading laterally from the pit, a track carried by the upper surface of said car and adapted for alinement with any one of said laterally leading tracks, a super-structure over a portion of said pit, tracks carried by said super-structure, a hoist structure movable along and supported by said tracks, means for retarding the downward movement of the car into the pit, and means for controlling the operation of said retarding means whereby the car may be supported at different elevations within the pit.

11. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over said pit, a hoisting mechanism carried by said super structure and means for retarding the downward movement of the car into the pit.

12. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track and means at spaced intervals within said pit for engaging said car to elevate it to position its upper surface flush with the top of the pit, and means positioned alongside of said elevating means for retarding downward movement of the car in the pit, and means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit.

13. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track and means at spaced intervals within said pit for engaging said car to elevate it to position its upper surface flush with the top of the pit, means positioned alongside of said elevating means for retarding downward movement of the car in the pit, means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit, a plurality of tracks leading laterally from the pit, the tracks carried by the upper surface of the car and adapted for alinement with any one of said laterally leading tracks.

14. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over said pit, a hoisting mechanism carried by said super-structure, and an I rail supported by said super-structure and extending parallel to the pit.

15. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over a portion of said pit, tracks carried by said super-structure and a hoist mechanism movable along and supported by said track, and an I rail supported by said superstructure and extending parallel to the pit.

16. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position the upper surface flush with the top of the pit, means for retarding the downward movement of the car into the pit, means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit, a super-structure over a portion of said pit, a track carried by said super structure,

a hoist mechanism movable along and supported by said track, and an I rail supported by said super-structure and extending parallel to said pit.

17. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a car for movement in said pit, a plurality of tracks leading laterally from the pit, means positioned at spaced intervals in said pit and in alinement with said laterally extending tracks for elevating said car to position the upper surface flush with the top of the pit, and means positioned alongside said elevating means for retarding the downward movement of the car in the pit.

18. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first pit, a track in said second pit, a car over said last named track and having its upper surface flush with the top of the pit and a car adapted for movement on either of said first and second named cars.

19. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first pit, a track in said second pit, a car over said last-named track and having its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit and a car adapted for movement over said tracks and upon either of said first or second named cars.

20. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car in the pit, means for controlling the operation of said retarding means, whereby the car may be supported at different elevations in the pit, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having the upper surface flush with the tops of the pits.

21. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car in the pit, means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having the upper surface flush with the tops of the pits, tracks carried by said cars, tracks extending from one pit to the other, and a car adapted for movement over the last named tracks and upon either the first or second-named car.

22. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car in the pit, means for controlling the operation of said retarding means, whereby the car may be supported at different elevations in the pit, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having the upper surface flush with the tops of the pits, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over the last-named tracks and upon either the first or second-named car, a super-structure over a portion of said pit, tracks carried by said super-structure, and a hoist mechanism movable along and supported by said super-structure carried track.

23. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to the first pit, a track in said second pit, a car movable over said track and having its upper surface flush with the tops of the pit, tracks carried by said car, tracks extending from said pit to the other pit, a car adapted for movement of said first and last mentioned tracks upon either the first or second mentioned car, and means positioned in alinement with the tracks extending from one pit to the other for elevating said first-named car to position its upper surface flush with the top of the pit.

24. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel longitudinally in said pit, a second pit extending parallel to the first named pit, a car for longitudinal travel in said second-named pit and having its upper surface flush with the top of the pits, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for moving said last mentioned tracks upon either the first or second mentioned cars, means positioned within the

first named pit and in alinement with the said tracks extending from one pit to the other for elevating the car in the first named pit to position its upper surface flush with the top of the pit, and means positioned alongside of said elevating means for retarding the downward movement of the car into the pit.

25. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel longitudinally in said pit, a second pit extending parallel to the first-named pit, a car for longitudinally traveling in said second-named pit, and having its upper surface flush with the top of the pits, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for moving said last-mentioned tracks upon either the first or second mentioned cars, means positioned within the first-named pit and in alinement with the said tracks extending from one pit to the other for elevating the car in the first-named pit to position its upper surface flush with the top of the pit, means positioned alongside of said elevating means for retarding the downward movement of the car into the pit, a super-structure over a portion of said first-named pit, tracks carried by said super-structure, and a hoist mechanism movable along and supported by said track.

26. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel longitudinally in said pit, a second pit extending parallel to the first-named pit, a car for longitudinal travel in said second-named pit and having its upper surface flush with the top of the pits, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for moving said last-mentioned tracks upon either the first or second mentioned cars, means positioned within the first-named pit and in alinement with the said tracks extending from one pit to the other for elevating the car in the first-named pit to position its upper surface flush with the top of the pit, means positioned alongside of said elevating means for retarding the downward movement of the car into the pit, a super-structure over a portion of said first-named pit, tracks carried by said super-structure, a hoist mechanism movable along and supported by said track, and means for moving said cars longitudinally in said pit.

27. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over said last-mentioned tracks and upon either the first or second-named car, a super-structure over a portion of said first-named pit, tracks carried by said super-structure, and a hoist movable along and supported by said super-structure carried track.

28. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over said last-mentioned tracks and upon either the first or second-named car, a super-structure over a portion of said first-named pit, tracks carried by said super-structure, a hoist movable along and supported by said super-structure carried truck, and I rail supported by said super-structure and extending parallel to said pits.

29. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, a second pit extending parallel to said first-named pit, a track in said second pit, a car movable over said last-named track and having its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over the last-mentioned tracks and upon either the first or second named car, means positioned within said first-named pit and in alinement with the tracks extending from one pit to the other to elevate said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car in the pit positioned alongside of said elevating means, and means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit.

30. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, a second pit extending parallel to the said first-named pit, a track in said second pit, a car movable over said last-named track and having its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over the last-mentioned tracks and upon either the first or second-named car, means positioned within said first-named pit and in alinement with the tracks extend-

ing from one pit to the other to elevate said car to position its upper surface flush with the top of the pit, means for retarding the downward movement of the car in the pit positioned alongside of said elevating means, means for controlling the operation of said retarding means whereby the car may be supported at different elevations in the pit, a super-structure over a portion of said pit, tracks carried by said super-structure, and a hoist mechanism movable along and supported by said super-structure carried tracks.

31. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a track in said pit, a car for travel of said track, means for elevating said car to position its upper surface flush with the top of the pit, cables connected to said car, winding drums for receiving said cables thereon to move the car along the track in the pit, and means for operating said drum.

32. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for movement longitudinally in said pit, means positioned at spaced intervals along the pit for elevating the car to position its upper surface flush with the top of the pit, cables connected to said car, winding drums for receiving said cables thereon to move the car longitudinally in the pit, and means for operating said drum.

33. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for movement longitudinally in said pit, means positioned at spaced intervals along the pit for elevating the car to position its upper surface flush with the top of the pit, cables connected to said car, winding drums for receiving said cables thereon to move the car longitudinally in the pit, means for operating said drum, means positioned alongside of said elevating means for retarding the downward movement of the car into the pit, and means for controlling the operation of said retarding means.

34. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for movement longitudinally in said pit, means positioned at spaced intervals along the pit for elevating the car to position its upper surface flush with the top of the pit, cables connected to said car, winding drums for receiving said cables thereon to move the car longitudinally in the pit, means for operating said drum, means positioned alongside of said elevating means for retarding the downward movement of the car into the pit, means for controlling the operation of said retarding means, a super-structure over a portion of said pit, and a hoisting mechanism carried by said super-structure.

35. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for travel longitudinally in the pit, jack structures in the pit at spaced intervals and adapted to engage beneath said car, a prime mover, disks operatively connected to said prime mover, means connecting said disks and jacks to operate the jacks by rotation of the disks to elevate the car to position its upper surface flush with the top of the pit, cables connected to said car, winding drums for receiving said cables thereon, to move the car along the tracks of the pit, and means for operatively connecting said drums to said prime mover.

36. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, jack structures in the pit at spaced intervals and adapted to engage beneath said car, a prime mover, disks operatively connected to said prime mover, means connecting said disks and said jacks to operate the jacks by rotation of the disks to elevate said car to position its upper surface flush with the top of the pit, and means positioned alongside of said jack structures for retarding the downward movement of the car into the pit.

37. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a track in said pit, a car for travel over said track, jack structures in the pit at spaced intervals and adapted to engage beneath said car, a prime mover, disks operatively connected to said prime mover, means connecting said disks and said jacks to operate the jacks by rotation of the disks to elevate said car to position its upper surface flush with the top of the pit, means positioned alongside of said jack structures for retarding the downward movement of the car into the pit, and means for controlling the operation of said retarding means.

38. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over a portion of said pit, tracks carried by said super-structure, a hoist mechanism movable along and supported by said super-structure carried tracks, and a supporting trestle hingedly connected at the bottom of the pit beneath said super-structure and adapted to be moved into an upright supporting position after movement of the cars from beneath the super-structure.

39. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a super-structure over a portion of said pit, tracks carried by said super-structure, a hoist mechanism movable along and sup-

ported by said super-structure carried tracks, a supporting trestle hingedly connected at the bottom of the pit beneath said super-structure and adapted to be moved into an upright supporting position after movement of the cars from beneath the super-structure, and pivotally supported braces adapted for connection to said trestle to support it in an upright position.

40. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, cylinders in said pit, pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car to retard downward movement of the car by the displacement of fluid in the cylinders by downward movement of the piston.

41. In an apparatus for dismembering and assembling rolling stock, the combination, of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, cylinders in said pit, pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car to retard downward movement of the car by the displacement of fluid in the cylinders by downward movement of the piston, means to permit free displacement of the fluid in the cylinders for upward movement of the pistons therein, and means to permit relative retarded displacement of fluid in the cylinders upon downward movement of the pistons therein to retard and cushion lowering movement of the car.

42. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, cylinders in said pit, pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car to retard movement of the car downwardly by the displacement of fluid in the cylinders by downward movement of the piston, means to permit free displacement of the fluid in the cylinders for upward movement of the pistons therein, means to permit relative retarded displacement of fluid in the cylinders upon downward movement of the pistons therein to retard and cushion lowering movement of the car, and means to regulate the displacement of the fluid in the cylinders upon downward movement of the pistons therein.

43. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, jack structures in the pit at spaced intervals and adapted to engage beneath said car, means for operating said jack structures to elevate said car in said pit, cylinders in said pit, pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car to retard downward movement of the car by the displacement of fluid in the cylinders by downward movement of the pistons.

44. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, jack structures in said pit at spaced intervals and adapted to engage beneath said car, means for operating said jack structures to elevate said car in said pit, cylinders in said pit, pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car, means to permit free displacement of the fluid in the cylinders upon upward movement of the pistons therein, and means to permit relative retarded displacement of fluid in the cylinders for downward movement of the pistons therein, to retard and cushion lowering movement of the car.

45. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, jack structures in said pit at spaced intervals and adapted to engage beneath said car, means for operating said jack structures to elevate said car in said pit, cylinders in said pit pistons in said cylinders, piston rods connected to said pistons and adapted to engage beneath said car, means to permit free displacement of the fluid in the cylinders upon upward movement of the pistons therein, means to permit relative retarded displacement of fluid in the cylinders for downward movement of the pistons therein to retard and cushion lowering movement of the car, and means to regulate the displacement of the fluid in the cylinders upon downward movement of the pistons therein.

46. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, a super-structure over said pit and adapted for engagement with said car to elevate said car in the pit, and means positioned within said pit at spaced intervals and adapted for connection with said car to retard the downward movement of the car into the pit.

47. In an apparatus for dismembering and assemblying rolling stock the combination of a pit, a track in said pit, a car for travel over said track, a hoist mechanism positioned upon each side of said pit adjacent one end thereof and adapted for connection with said car to elevate said car in the pit tracks extending transversely from the pit, and a track carried by the upper surface of said car adapted for alinement with said transversely extending track.

48. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, a super-structure over a portion of said pit, hoist mechanisms carried by said super-structure and adapted for connection with said car to elevate the car in the pit, cylinders in the pit, pistons in said cylinders, piston rods connected to said pistons and adapted for connection with said car, means to permit free displacement of the fluid in the cylinders upon upward movement of the pistons therein, and means to permit relative retarded displacement of the fluid in the cylinders upon downward movement of the pistons therein to retard and cushion the lowering movement of the car.

49. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, a super-structure over a portion of said pit, hoist mechanisms carried by said super-structure and adapted for connection with said car to elevate the car in the pit, cylinders in the pit, pistons in said cylinders, piston rods connected to said pistons and adapted for connection with said car, means to permit free displacement of the fluid in the cylinders upon upward movement of the pistons therein means to permit relative retarded displacement of the fluid in the cylinders upon downward movement of the pistons therein to retard and cushion the lowering movement of the car, and means to regulate the displacement of the fluid in the cylinders upon downward movement of the pistons therein.

50. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first-named pit, a car for longitudinal travel in said second pit and having its upper surface flush with the top of the pit, and a third pit extending parallel to said first named pit, a car for longitudinal travel in said last-named pit, and normally having its lower surface resting below the top of the pit and means for elevating said last-named car to position its upper surface flush with the top of the pit.

51. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first-named pit, a car for longitudinal travel in said second pit and having its upper surface flush with the top of the pit, and a third pit extending parallel to said first-named pit, a car for longitudinal travel in said last-named pit, and normally having its lower surface resting below the top of the pit, means for elevating said last-named car to position its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, and a car adapted for movement of said last-named track, and for movement upon any of said cars.

52. In an apparatus for dismembering and assembling rolling stock, the combination of a pit, a car for longitudinal travel in said pit, means for elevating said car to position its upper surface flush with the top of the pit, a second pit extending parallel to said first-named pit, a car for longitudinal travel in said second pit and having its upper surface flush with the top of the pit, a third pit extending parallel to said first-named pit, a car for longitudinal movement in said last-named pit, and normally having its lower surface resting below the top of the pit, means for elevating said last-named car to position its upper surface flush with the top of the pit, tracks carried by said cars, tracks extending from one pit to the other, a car adapted for movement over said last-named track, and for movement upon any of said cars and means within said first and last mentioned pits and adapted for connection to the cars therein for retarding the lowering movement of the cars into the pits.

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