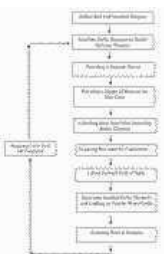
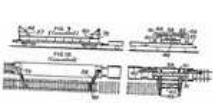
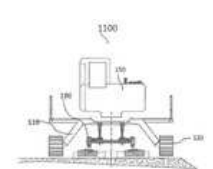
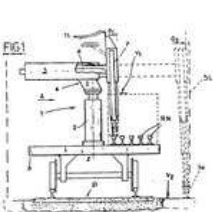
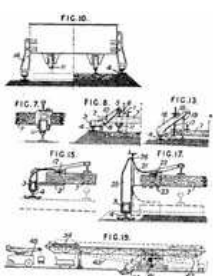
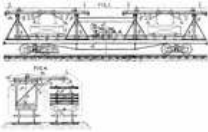
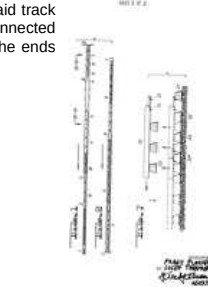
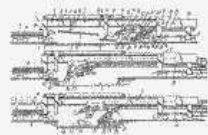
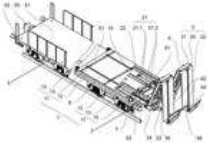
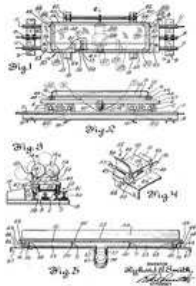
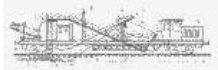
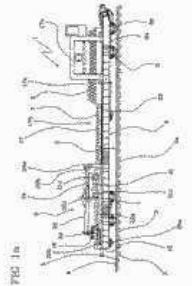
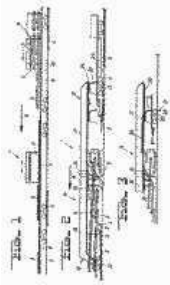
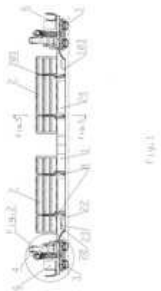
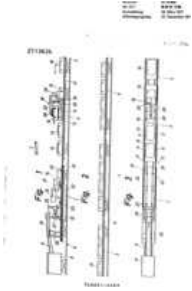
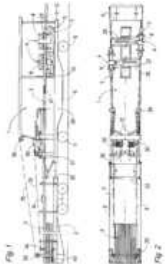
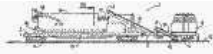


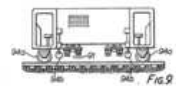
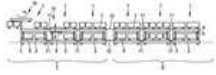
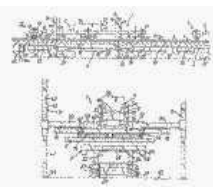
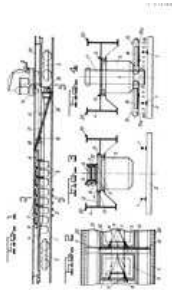
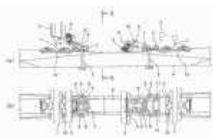
Patent families - 33 results

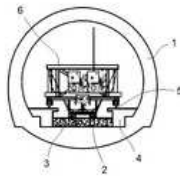
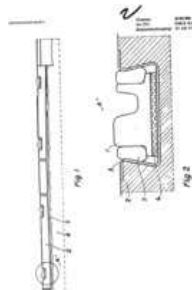
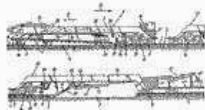
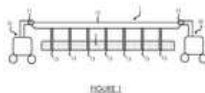
#	  Title	Publication number	Publ. date	Applicant/Assignee		
1.	Method for the installation of railway tracks on ballast, without an auxiliary track	EP2270282	2011-01-05	FCC CONSTRUCCION FCC CONSTRUCCION FKK KONSTRUKSION		100 %
A method is being described for the installation of railway tracks onto ballast beds, which avoids the need for the installation of any type of auxiliary track. The method simplifies the method of operation of the current state of the technique in an appreciable manner, and contains the successive stages carried out after having located the sleepers onto the ballast bed, consisting in a summarised form of the fixing and laying of a pair of rails from a mini train, for the transport of the rails with the fastening and traction of same up to their complete unloading, the operation being guided by means of a discharge wagon; the support of the rails on longitudinal movement rollers; the cutting, squaring and fixing of the adjacent ends to the consecutive rails; the raising of the rail with the help of a crane, and the removal of the rollers; partial screwing of the track and placement of the rollers for the next cycle, and the removal of the tractor device from the mini train, and the final screwing. 						
2.	Improvements in means for laying railway tracks	GB352384	1931-07-03	LARS LOVEN		93 %
352,384. Permanent way; overhead transporters; unloading vehicles. LOVEN, L., 145, Libertad Street, Buenos Aires. Jan. 3, 1930, No. 337. [Classes 78 (iv) and 104 (ii).] Railway tracks are laid by a machine handling complete track sections fed from the lower ends of piled stacks carried by attached wagons. The machine 1, Fig. 1, has a braced support 3 carrying a beam 5 consisting of a pair of U-beams forming a runway for a trolley 7 with running wheels 8, and pulleys 9 for a hoisting cable 10. The cable 10 is driven from a drum 11 while the trolley is traversed by a chain 16 driven from a wheel 20. Drum 11 and wheel 20 are rotated from a drum 28 actuated either by a motor 25 or from the track wheels 2 of the machine 1. The machine 1 has a ramp 31 guiding the fishplates 48 of the track-sections N into position on the ground. The sections are fed by a cable wound on drum 28. Each wagon carries at each side sets of winches 33, 34, Fig. 5, with shoes 35 engaging the sleepers of alternate sections N, the sections being piled with sleepers staggered, so that the stack can be supported while the lowest section is lowered ready for feeding to the machine. The assembling ground layout comprises stacks D, Fig. 8, of sleepers arranged over narrow gauge tracks B leading to benches A where the rails are spiked to the sleepers. The sections are then transferred by cranes F to wagons H on main tracks G leading to supports I for stacking the sections. The tracks B are traversed by wagons C, adapted to carry the sleepers ready spaced for one or more lengths of rails, the rails being taken from stacks E and held to gauge on the bench A by end-stops, clamps, and chains. The sleepers are raised clear of the wagons C by bars 42, Fig. 15, carried by shoes 43 raised by screws and hand-wheels, and are held up to the rails during the spiking operation by levers 46 resting on beams 47. 						
3.	Lifting apparatus mainly for the laying and taking up of railway tracks	GB303529	1930-04-07	LOUIS PAUL GUILBERT MAURICE HENRI LEMAIRE		89 %
303,529. Lemaire, M. H., and Guilbert, L. P. Jan. 5, 1928, [Convention date]. Plant for laying track comprises means for rapidly taking up and releasing rails and sleepers, the release being automatic. The sleepers are handled by bridge cranes with electrically - driven bogies travelling on rails mounted on three adjacent trucks. The bridge carries a track extended by rails carried by swing- ing arms supported by rollers on circular tracks. The arms when not in use lie parallel with the main track. The track supports a carrier traversed by an electric motor and provided with an additional motor for raising and lowering a frame which supports a rectangular frame carrying the lifting-dogs for the sleepers. The frame shown carries eight sleepers at the correct spacing. The track-laying plant may be used for laying or relaying a parallel track or a single track; in the latter case, the track sections are assembled on the wagons by means of the plant, and are then deposited endwise on the roadbed by a jib crane. The Specification as open to inspection under Sect. 91 (3) (a) comprises also the use of cranes, Figs. 9 (Cancelled), 10 (Cancelled), for handling rails, each crane comprising a beam 54 turning on vertical support 73 and constituting a runway for a carriage with lifting-gear for a rectangular frame 60 provided with lifting-dogs spaced apart at the track gauge. This subject-matter does not appear in the Specification as accepted. 						
4.	Method for unloading, transporting and installing a railway track	EP3470576	2019-04-17	CONTRATAS & VENTAS FCC CONSTRUCCION FCC CONSTRUCCION		88 %
The invention relates to a method for unloading, transporting and installing a railway track, which does not require the rail-carrying train to be brought closer after each cycle of unloading continuous welded rail (CWR), the train remaining parked at the end of the track already laid until all the CWR has been completely unloaded. According to the invention, the method consists of: fastening two rails to a crane of an unloading wagon and moving same through windows along the wagon, facilitating the descent thereof to the track; transferring the rails to a machine for pulling and positioning which moves along, leaving the rails supported on transport elements that move along the track already laid; transferring the rails from the track already laid to a section of sleepers; and moving the rails to their final position, using sliding elements placed on the sleepers. 						
5.	A device for loading and unloading along the track, objects, particularly rails, on to and from railway trucks.	EP0044819	1982-01-27	PAGANELLI		86 %
The device has a crane with which it is possible to unload (or load) objects such as rails from the charging platform of a railway truck on to the ballast surface at the side of the line constituting the railway track in operation, without in any way deviating from the clearance gauge laid down in railway regulations. This is achieved through the use of a vertical turret (2) at the top of which is placed, in a way whereby it is able to rotate around the vertical axis thereof, a central module (4) that comprises a first arm (5) placed horizontally and extensible horizontally between two limit positions under the action of first hydraulic operating means (6); to the free extremity of the said first arm is connected a second arm (7) placed vertically and extensible vertically between the two limit positions for loading the rail on to the truck and for unloading the rail on to the ballast, under the action of second hydraulic operating means (8-9); the said second arm being provided, in the extremity of the free extremity thereof, with a hooking element (10). 						
6.	An improved method of relaying railway tracks and renewing the ballast, and devices adapted to carry out the method	GB302577	1929-08-15	AUGUST HENKES		85 %
302,577. Henkes, A. Dec. 17, 1927, [Convention date]. Plant for relaying track.-Tracks are relaid in a continuous forward operation by taking up and, carrying the old track complete, by excavating, cleaning and replacing the old ballast, and then bringing up and laying complete track sections, the tracks and vehicles being carried by detachable wheels on the existing track or on an auxiliary track laid at the excavated site. The rails are welded together and secured to sleepers, in a station yard, to make a track section up to 200 feet long. The track sections are then carried on the main tracks by rollers 11, Fig. 7, clamped to the rails, and on the auxiliary tracks 4, Fig. 15, by brackets 3' clamped to the sleepers 7 by longitudinal or transverse wedges 12. To adapt the brackets for wood or iron sleepers, the brackets 2, Fig. 8, have a jaw 5 engaging the rail 6 and a support 8 is inserted in the aperture 9 or 10 after the track has been raised by jacks 1. The jacks may be dispensed with by using brackets 16, Fig. 13, having a screw 17 and nut 18 for a support 8, the bracket being held while lifting or lowering the track by a prop 19. In an alternative arrangement Fig. 17, the sleeper is secured by a wedge 22 and pivoted cramps 23 in a sleeve 21 actuated by a screw 26 and guided on an upright 25 carrying the roller 3. The excavator wagon Fig. 19, may run on the road bed on endless tracks, and carries an excavator 40, ballast screen 41, and conveyer belts 42, 43 for dirt and cleaned ballast, the ballast tube being suspended from an overhead conveyer 34. The ballast is then rolled by a machine 45. The ballast wagons are carried over the auxiliary track 4 by attaching brackets 14, Fig. 10, which may be adjusted in height to run on the rails 4 laid on the new ballast. The entire train may be propelled by a locomotive or by a special engine supplying power for driving the machines and jacks and electric winches. 						

7.	Improvements in lifting and transporting gear for use in laying railway tracks	GB338296	1930-11-20	PAUL GUILBERT JULES LEGRAND	84 %	
338,296. Guilbert, P., and Legrand, J. Jan. 26, 1929, [Convention date]. Plant for laying track.-Apparatus for laying or removing track elements consisting of rail lengths mounted on sleepers, comprises a truck carrying several cranes having jibs movable lengthwise of the truck for transport and transversely thereof for action, the cranes being operated simultaneously and uniformly by a single longitudinal shaft. The track a carries four crane frames b each having a horizontal jib j mounted on a pivot g. The jibs are fitted with counterweights l to balance the unloaded jib and with struts n to rest on brackets o and lugs m to engage projections m<1> when in the operative position at right angles to the truck as shown in Fig. 4. The truck has a motor d driving a shaft c arranged longitudinally of the truck and fitted with winding drums e for the hoisting ropes f which pass over pulleys i on the jibs to slings k adapted to engage the track elements x. When laying the track, the truck a is brought adjacent to a truck z, carrying track elements x, the slings k are engaged and a track element is raised and transported by the truck a to the required position and is there laid on the ground and joined to the already laid track. In a modification the jibs are pivotally mounted on turntables carried by the truck. In another modification, the jibs are pivoted to the crane frames and braced thereto when in the outward operative position, but can be swung inwards for transport.						
8.	Apparatus for replacing an old track by a new track	US3521565	1970-07-21	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN- INDUSTRIEGESELLSCHAFT MBH, WIEN INOSTRANNA FRANTS PLASSER BANBAUMASHINEN FA INOSTRANNA FRANTS PLASSER BANBAUMASHINEN FA INOSTRANTSY FRANTS PLASSER 2 more...	83 %	
A work train is moved continuously along a right of way, with a forward section moving on the rails of an old track section and a rear section moving on the rails of a newly laid track section. In an intermediate section, the ends of the old rails are lifted up and supported on the cars of the rear train section as the train advances and the old rail ends remain connected to the rails. Simultaneously, continuous lengths of new rails are supported on the cars of the forward train section and their ends are laid in the intermediate section while the ends remain connected to the rails. (From US3633513 A)						
9.	Device for lifting and transport on railway tracks	FR2543937	1984-10-12	SOTRAMEF	83 %	
Pair of motorised railway machines working jointly, designed for a novel method for lifting and conveying long and heavy loads, such as bridge decks, assembled track panels, stacks of sleepers, etc. These machines travelling on the tracks at a variable distance from each other each comprise two crane turrets which are mobile both in rotation and in translation. Each turret is provided with a teloscopic jib, of variable inclination, and these jibs may be equipped either with a lifting device or with a bearing plate. The innovation consists in having the ends of the load 33 taken up by the turret 14 of each machine, after the other turrets 4 have started to bear by means of a plate 35 on the adjacent track. The ends of the load which are thus lifted will be laid onto the respective platforms of the machines by a combined movement of rotation and of translation of the turrets, bringing the load along the axis of the track while freeing a bearing surface on the platforms of the machines. This method makes it possible to compensate for the tilting torque which exists during lifting, and enables the load to be transported without misalignment of mass. The convoy formed in this way may transport the load over short distances, or be drawn in the case of longer distances. <IMAGE>						
10.	Track work train	US4502389	1985-03-05	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIE FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT M B H WIEN	79 %	
A track work train for successively reconditioning ballast bed zones supporting respective assembled track section comprises a track building vehicle and a plurality of freight cars interconnected for common movement along the track. The track building vehicle includes an elongated frame and two undercarriages supporting the vehicle frame for movement on the track. A hoist is mounted on the vehicle frame for lifting an assembled track section off the ballast bed and the vehicle frame spans a ballast bed reconditioning zone resulting from the lifting of the assembled track section off the ballast bed. A vertically adjustably ballast bed excavator is mounted on the vehicle frame adjacent the hoist and a conveyor band is associated with the excavator. The hoist and the excavator with the associated conveyor band are displaceably mounted on a guide track on the vehicle frame for movement along the vehicle frame in the direction of the track.						
11.	Transport and loading system for rail-based vehicles	EP2885158	2015-06-24	LUDDENEIT MICHAEL Michel Ludengnaite SCHERF WILFRIED Shelf Wilfried Virgin Feld · Scheff	78 %	
The invention relates to a transport and loading system for rail-based vehicles when transport vehicles are used with a loading platform which is standardised for ISO containers, in particular for testing and maintenance machines of track systems. The aim of the invention is to find a new possibility for transporting and loading rail-based vehicles which enables rail-based vehicles to be reliably transported without special vehicles to operating locations at any distance and to be set down and picked up on a track system without extraneous lifting gear. According to the invention this aim is achieved in that the transporting and loading system has a sandwich structure composed of two base groups (11) in the ISO container format, an intermediate space (15) is provided between the base groups (11) for driving, transmission and control units for automated movement of the loading and unloading unit (2, 3; 8; 91, 92, 93, 99) and rails (6) for holding and guiding the rail-based vehicles (47) are provided on the sandwich structure (1).						
12.	Mobile arrangement and method for improving a track bed	US4479439	1984-10-30	FRANZ PLASSER BAHNBAUMASCH B H FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT M B H WIEN	77 %	
A mobile arrangement for continuously laying a sand layer between a subgrade and ballast of a track bed in a construction section of the track comprises a work vehicle supported on undercarriages mounting the vehicle for mobility on the track in an operating direction. The work vehicle comprises a ballast excavating chain including a chain part receiving the excavated ballast. A ballast conveyor conveys ballast to the track section in the operating direction has an output end discharging the conveyed ballast in the track section. A device for planing the sand layer leads the output end in the operating direction, and a sand conveyor conveys sand to the track section in the operating direction. The sand conveyor has an output end discharging the conveyed sand in the track section and laying the sand layer, the output end being positioned between the excavating chain part and the planing device, and the ballast and sand conveyors in their entirety trailing the chain part in the operating direction.						

13.	Load catapulting toy railway car	US2356280	1944-08-22	SMITH RICHARD G	77 %	
No abstract available						
14.	Mobile ballast cleaning machine	US3850251	1974-11-26	FRANZ PLASSER BAHNBAUMASCH FRANTS PLASSER BANBAUMASHINEN- INDUSTRIGEZELSHAFT M B KH FRANZ PLASSER BAHNBAUMASCHINEN- INDUSTRIEGESELLSCHAFT MBH, 1010 WIEN, AT PLASSER BAHNBAUMASCH FRANZ	72 %	
A mobile ballast cleaning machine comprises an endless bucket chain and a pair of guide arms mounted laterally of the machine frame and guiding the bucket chain between a first position wherein the bucket chain is immersed in the ballast underneath the track ties and extends widthwise transversely of the track, and a ballast discharge position above the track. The width of the bucket chain in the first position transversely of the track is adjustable.						
15.	Automatic sorting system for loading units	DE202010001496	2010-05-20	KONECRANES GLOBAL	71 %	
Automatic sorting system for charging units (7), particularly containers and swap, a sorting device comprising at least one moving vehicles for (6) automatic Rut (2) to the loading units (7) with, at least one of expanding and trains (10) Bahngeleis (1) gantry crane (5), and at least one of the tracks of the loading units (7) (1, 2) Transport, a (fixed) superordinated host (material flow computer) using (logistics) Transport vehicles (6) on the track (2) Software and movement of the crane (5) and optimises coordinated, the vehicles (6) may be realized by the gantry crane (5) Rut (2) positioned directly on the parking accounts and required driving-and separate.						
16.	Construction of continuous welded rail track - involves string of two-storey flat wagons carrying overhead gantry crane which avoids construction of temporary track	FR2307914	1976-11-12	INSTALLATIONS FERROVIAIRES STE FRANCOIS MONTURET MEDITERRANEENNE INSTALLATIONS	71 %	
Railway construction involves laying sleepers and continuous welded rails onto a new track without the need for first laying an auxiliary track. All of the elements needed for construction are first loaded onto a string of flat wagons with two floors, the lower one being used for the rails arranged lengthwise side-by-side, and the upper one being removable and used for the sleepers which are arranged transversely. Each truck has along the lengthwise edges of the upper floor a rail on which a gantry crane can slide. At the front of the string of wagons is a similar wagon whose upper floor remains empty. Once in position, sleepers are placed on this floor by the gantry crane and are then placed on the track by a second crane. When sufficient sleepers have been laid, two rails are then withdrawn and put in place.						
17.	A wagon for laying railways tracks	EP1724396	2006-11-22	MAZZI TECNOLOGY	70 %	
A wagon (1) for laying railway tracks (2) comprises: a supporting frame (6) with a leading bogie (7) and a trailing bogie (8), both engaged under the frame (6) and mobile on a section (2a) of track already formed; pick up means (9) located on the frame (6) to place at least one sleeper (3) between the rails (4) of a section (2b) of track not yet formed; at least one lifting part (26a) for lifting the rails off the ballast and attached to the frame (6) at its front end. The pick up means (9) are positioned on a front portion of the frame (6a) above the section (2b) of track not yet formed and extending between the leading bogie (7) and a front end (10) of the frame.						
18.	Mobile apparatus for continuous track renewal	US4160418	1979-07-10	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT MBH WIEN PLASSER BAHNBAUMASCH FRANZ	67 %	
A track renewal train equipped for continuous replacement of track rails and ties has a first train section mounted for movement on an old track section, a second train section mounted for movement on a new track section, and an intermediate train section consisting of a carrier frame and linking the first and second train sections, the carrier frame bridging a trackless intermediate right of way section. The two ends of the carrier frame are coupled to undercarriages respectively running on the old and new track sections and the carrier frame consists of two parts. A vertical pivot couples the two carrier frame parts together for pivotal movement in a plane parallel to the track and a device is provided for pivoting the two carrier frame parts in this plane and for fixing the same in selected positions.						

19.	A hopper railway car	EP3152093	2017-04-12	KOLEJOWE ZAKŁADY NAWIERZCHNIOWE BIEŻANÓW KOLEJOWE ZAKŁ. NAWIERZCHNIOWE BIEŻANÓW SPÓŁKA Z O O KOLEJOWE ZAKŁ. NAWIERZCHNIOWE BIEŻANÓW KOLEJOWE ZAKŁADY NAWIERZCHNIOWE BIEŻANÓW KOLEJOWE ZAKŁADY NAWIERZCHNIOWE BIEŻANÓW SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNO	67 %	
A hopper railway car structure contains two pairs of rectangular swingarms to incline each loading platform (2), installed between a backbone beam (103) of the railway car undercarriage (1) and transverse beams (201) of the loading platform (2), along with a blocking mechanism of the inclined position of the platform (2) in transportation mode, two rotary cranes (4) with a vertical rotation axis (OZ), mounted via bases (5) on the undercarriage (1) of the railway car in a transition zone between the backbone beam (103) and a swivel beam (102), along with a mechanical lock of transverse position of the crane (4) in the transport mode, two pairs of extensible and rotating support legs (7) installed at the bases of cranes, along with a mechanical blocking of the vertical position of reversed support legs (7) in the transport mode, two power unit cabinets (6), comprising a motor and hydraulic equipment for each crane (4), installed on the swivel beam (102) between end sill (101) and the base (5) of the crane (4), two brake actuators (22), mounted on the side of the backbone beam (103) on the heel side of the railway car, with a brake lever (23) inserted into the centre of the backbone beam (103) through a side opening (20), two ballast boxes (24) installed under the loading platforms (2) on the side of the backbone beam (103) on the heel side of the railway car between a plates of horizontal bumpers (14).						
20.	Rolling equipment	FR2353475	1977-12-30	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT M B H WIEN FURANTSU PURATSUSERU BAANBAUMASHIINEN INDUSTRY PLASSER BAHNBAUMASCH FRANZ	66 %	
For the more efficient transport of ballast during the cleaning of the ballast bed of tracks, use is made of a train unit comprising a number of track vehicles (1 - 5). A track formed from two rails (17) extends across all the track vehicles. Each track vehicle has, arranged between said rails, a loading surface for a number of transport containers (12 - 16, 31) for receiving the ballast. A portal frame (20), a gripping, lifting and holding device (28) as well as a crane vehicle (18) having rail bogies (19) for conveying the transport containers are movable on the rails. The crane vehicle has its own drive (30) in order that it can move the empty transport containers (16) to a loading point provided on the first track vehicle (1) and can move the filled transport containers (12, 13) from said point onto the remaining track vehicles (2 - 5). <IMAGE> (From GB1559258 A)						
21.	Wagon for unloading long railway rails from a transport wagon	EP0853160	1998-07-15	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT MIT BESCHRANKTER HAFTUNG FRANZ PLASSER BAHNBAUMSCHINEN INDUSTRIEGESELLSCHAFT MBH PLASSER BAHNBAUMASCH FRANZ	62 %	
The rail withdrawal device comprises a continuous crawler chain (7) with a drive (11) running around two spaced apart deflector rollers with a rotary axis (10). In the withdrawal direction, contact plates are arranged one behind the other for location on the long rail (3). A buttress (8) is formed which can roll onto the long rail and is adjustable by a drive (23) in relation to the crawler chain. The rail withdrawal device (4) is fixed pivotably on the wagon frame (6) around a vertical axis. At least two double track rim rollers are arranged in the withdrawal direction one behind the other and constitute the buttress. They have shafts running parallel to the rotary axis and are positioned in a vertical direction above the crawler chain.						
22.	Machine for continuous collection and storage of detached rail fastening means	FR2668785	1992-05-07	FRANZ PLASSER BAHNBAUMASCH FRANS PLASSER BAHNBAUMASCHINEN INDUSTREGESEL LSCHA PLASSER BAHNBAUMASCH FRANZ	60 %	
The invention relates to a machine for continuous collection and storage of detached rail fastening means, placed on the sleepers or on the ballast bed and comprising a machine chassis (2) including carriages (4) running on rails, and a collection device (9) which can be moved heightwise by control devices for the continuous collection of the rail fastening means situated on the railway track or on the ballast bed. With the formation of a raised ejection location (13), a conveyor belt system (12), inclined in the longitudinal direction of the machine and a container (14) situated below the ejection location (13) of the conveyor belt system (12) are connected to the collection device (9), which container (14), instead of a floor surface, includes a floor conveyor belt (15) extending in the longitudinal direction of the machine and provided with an adjustable drive device (16). The invention is applicable to the maintenance of railway tracks. <IMAGE>						

23.	Method and apparatus for laying railway track	GB2006859	1979-05-10	FIELD K C MATISA	49 %	 
Railway track is relayed by manipulating the existing rails to be relayed so as to form a narrow gauge track. The new track is also initially relayed to the narrow gauge and subsequently manipulated to the standard gauge. New and old sleepers are moved on trucks running on the narrow gauge rails. An apparatus for altering the rail gauge comprises two sets of wheels, one set 94a for the standard gauge and one set 94b for the narrow gauge, the set 94b being movable vertically to enable them to be raised or lowered onto the track as desired, and lifting rollers 91 for turning the rails from the standard gauge to the narrow gauge. <IMAGE>						
24.	System, method and railway carriage for the rail-bound transportation of objects	EP2709893	2014-03-26	K & K MASCHINENENTWICKLUNGS	42 %	
The invention relates to a system and method for the rail-bound transportation of objects, e.g. for delivering or collecting material to and/or from railway working vehicles, comprising several interconnected railway carriages (1), which respectively comprise at least one conveyor track (6, 7) on which the objects can be driven in a longitudinal manner in relation to the railway carriages (1) and which are designed such that the conveyor tracks (6, 7) join together the interconnected railway carriages (1). According to the invention, said system comprises conveyor bodies (8) for the objects, said bodies being designed to move from one railway carriage (1) to another railway carriage (1) along the conveyor tracks (6, 7) which are connected one to the other. The invention also relates to suitable railway carriages therefor.						
25.	Installation for taking-up or laying as well as transporting lengths of assembled track	EP0276646	1988-08-03	PLASSER BAHNBAUMASCH FRANZ FRANZ PLASSER BAHNBAUMASCH FRANZ PLAYZEL BAUMBOOMACHINEEN INDUSTRIE GESELLSCHAFT MITT BESHRENKTER HAAFSK	41 %	
A mobile apparatus for loading, transporting and laying an assembled track section comprises a track section carrier comprising an elongated carrier frame, track section gripping and holding devices mounted on the elongated carrier frame, and two pairs of transversely opposite lifting jacks arranged on the carrier frame for lifting and lowering the carrier frame, the jacks of each pair being fixedly connected to each other and the pairs of jacks being widely spaced from each other in a longitudinal direction to provide a high stability during lifting and lowering of the carrier frame. A self-propelled auxiliary vehicle is movable independently of the track section carrier and comprises a flatbed frame having two opposite ends and capable of receiving and supporting the carrier with the assembled track section gripped and held thereon, and a track-bound undercarriage and an off-track undercarriage at each end of the flatbed frame. (From US4784063 A)						
26.	Track leveling and ballast tamping machine	US4794862	1989-01-03	PLASSER BAHNBAUMASCH FRANZ FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER RAILWAY CONSTRUCTION MACHINE BUILDING	30 %	
A track leveling and ballast tamping machine comprises a standard vehicle capable of being coupled to a train, two undercarriages supporting the frame for movement in an operating direction along a track and a drive for moving the frame along the track. A ballast tamping unit is connected to the frame between the undercarriages and a track lifting unit is connected to the frame between the undercarriages ahead of the ballast tamping unit in the operating direction, a track leveling reference system controlling the lifting of the track by the track lifting unit. A ballast receiving and storage container is mounted on the frame ahead of the ballast tamping and track lifting units in a forward portion thereof, the container having adjustable outlet ports for distributing ballast in respective ones of the cribs, and a ballast conveyor is arranged on the frame for conveying ballast to the ballast receiving and storage container in the forward portion of the frame, in the operating direction.						
27.	Mobile machine for depositing and storing used rail fastening means parts in receptacles	US3731455	1973-05-08	FRANZ PLASSER BAHNBAUMASCH FRANTS ALASSER FRANZ PLASSER BAHNBAUMASCHEN INDUSTRIEGESELLSCHAFT MBH WIEN	29 %	
A succession of receptacles are mounted on the underside of a mobile machine frame in the direction of track elongation for receiving and storing removed used rail fastening means parts. A conveyor band is mounted on the machine frame above the receptacles and extends in the same direction. The conveyor band has a receiving end adjacent a working station where removed used rail fastening means parts may be placed on the conveyor and two lateral edges extending above the open tops of the receptacles. Deflecting means are mounted in the range of the receptacles and are operable to contact the conveyor band surface for selective deflection of the parts on the conveyor band to respective receptacles.						
28.	Device for discharging multi-component adhesives onto a granular mixture, discharging method, and use of the device	EP3445596	2019-02-27	HUERLIMAN BAUTENSCHUTZ FURYMAN RAILTECH HUERLIMANN BAUTENSCHUTZ HUERLIMANN RAILTEC HÜRLIMANN BAUTENSCHUTZ 2 more...	24 %	
The device for discharging multi-component adhesives consisting of at least two fluid components (A, B) onto a granular ballast bed (6) of a railway rail section (4) consists of at least two separate carriages, preferably three carriages (1, 2, 3). The carriages can be loaded into a vehicle or a trailer (48) by only two people in that the interior of the vehicle or the trailer is equipped with rails (50, 51) on which the carriages (1, 2, 3) can be rolled. Thus, the carriages can be transported on roadways so as to be brought to the location of use quickly and be put into operation, wherein the carriages are placed on the tracks (4) of the railway from the trailer (48) via retractable rails (51). The device allows adhesives to be applied onto a ballast bed (6) over long distances in a fully automated manner such that all specifications are met and the ballast bed is adhered such that normal train traffic can continue. The entire device can be loaded, transported, unloaded on-site, and put into operation by only two people.						
29.	A safety device for a rail	EP2166151	2010-03-24	TOKAI RYOKAKU TETSUDO YAMATO TRACKWORK SYSTEM	24 %	
A derailment prevention guard, wherein a rail fastening device comprises a fixed block (75) and a first fixed metal fitting (76) and a second fixed metal fitting (77), and the upper surface (65a) of the sleeper (65) or the concrete slab track slopes a little upward from the center toward both ends, and the fixed block comprises a pseudowedge-shaped projection (81) along the slope of the upper face (65a) of the sleeper (65) or the concrete slab track and a plate-shaped member (79) being able to come into contact with the edge face of the sleeper or the concrete slab track, and the first fixed metal fitting (76) comprises a left side member and a right side member and a bottom member, and an upward projection is provided around the edge of the bottom member. The pseudowedge-shaped projection (81) of the fixed block (75) is put between the second fixed metal fitting (77), the left side member and the right side member of the first fixed metal fitting (76), and the plate-shaped member of the fixed block (75) is received in a gap between the projection (80) provided at the bottom member of the first fixed metal fitting (76) and the end face of the sleeper (65) or the concrete slab track, and one rail base end of the guard rail is received at a recess of the fixed block (75) and the other rail base of the guard rail is fastened by a fastening member (74).						

30.	Method and system for concreting railway slab track	EP3098349	2016-11-30	TECSA EMPRESA CONSTRUCTORA	20 %	
Method for concreting railway slab track which envisages placing two parallel rails (5) one at each side and at the exterior of the track (2) under construction, supported and fixed on the platforms, semi-platforms (4) or lateral spaces, on which at least one autonomous device or hopper (6) moves, capable of loading concrete and/or pouring it in a controlled manner, distributing it uniformly along the track under construction to form the concrete slab (3) of the slab track; transporting the concrete from a supply area (PS) to the pouring area on the track under construction (2) is also carried out by means of devices or hoppers which move by rolling on the auxiliary rails (5), which are either the same devices that carry out the pouring, or are auxiliary transport devices or hoppers.						
31.	Rubber mounted railway track rail - has rail resting on resilient strip within tapered channel and secured by wedge section	FR2284708	1976-04-09	BUDAPESTI KOEZLEKEDESI VALL BETON ES VASBETONIPARI MUEVEK BUDAPESTI KEZLEKEDESHI VALLAL BUDAPESTI KOEZLEDEDESI VALLALA BVM EPELEM ELOEREGYARTO ES SZOLGALTATO KFT 1 more...	14 %	
In this track structural system a filled section rail (1) is fitted on the rubber strip (4) which is inserted in the rail channel (3) of the track slab (2) which forms the permanent way surface. In this position the filled section rail is secured with the aid of a rubber bracing strip (5) inserted between the inner walling of the rail channel and the side of the rail. A bracing strip of rubber may be provided on both sides of the rail channel, which widens downwards in cross section and of the filled section rail. A bedding layer of sand may be inserted between the compact rail bed and the track slab.						
32.	Mobile arrangement and method for improving a track bed	US4357874	1982-11-09	FRANZ PLASSER BAHNBAUMASCH FRANZ PLASSER BAHNBAUMASCHINEN INDUSTRIEGESELLSCHAFT M B H WIEN PLASSER BAHNBAUMASCH FRANZ	11 %	
A mobile arrangement for improving a track bed by interposing a layer of sand between the subgrade and ballast comprises a first self-propelled vehicle including a frame, a hoist mounted on the frame for lifting an assembled track section off the track whereby a trackless renewal section is created and a conveyor and discharge and distributing chute for ballast and sand, the vehicle frame having a length bridging the trackless renewal section and respective track sections adjoining the trackless renewal section at respective ends thereof in the regions of the vehicle frame ends. A second self-propelled vehicle includes a frame whose one end faces one end of the frame of the first vehicle in one of the adjoining track sections, a ballast excavating chain and a conveyor for the excavated ballast. A respective triple-undercarriage arrangement supports the one end of each vehicle frame, each triple-undercarriage arrangement consisting of two on-track undercarriages and an off-track undercarriage. Another undercarriage supports the frame of the first vehicle and the distance between the triple-undercarriage arrangement and the other undercarriage supporting the first vehicle frame exceeds the length of the assembled track section.						
33.	Structural beam suitable for supporting a device	EP2993264	2016-03-09	CIPAL SNCF RESEAU FRENCH NATIONAL RAILWAY MOBILE	10 %	
A structural beam (1) adapted to support equipment (2), in particular a railway rail, said beam (1) including a longitudinal body (10) comprising a first connecting end (11) and a second connecting end (12) adapted for connecting to movement means (31, 32), and a plurality of linking elements (13), distributed along said longitudinal body (10), which are adapted to be linked to said equipment (2) in order to suspend said longitudinal body (10). (From CA2902330 A1)						