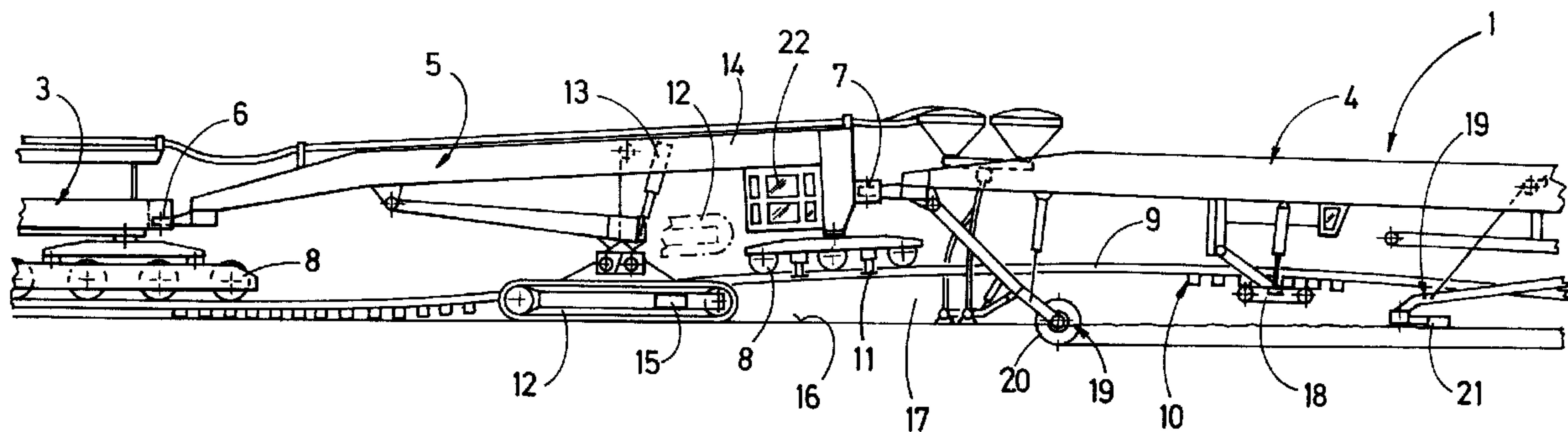




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(54) Titre : MACHINE POUR TRAITER LA PLATE-FORME D'UNE VOIE FERREE
(54) Title: A MACHINE FOR TREATING A TRACK BED



(57) **Abrégé/Abstract:**

A machine (1) for treating a track bed comprises a machine frame, mobile on a track (10) by means of on-track undercarriages (8), which consists of three frame parts (3,4,5) articulatedly connected to one another by frame joints (6,7). The central frame part (5) is connected to two caterpillar-tracked undercarriages (12) spaced from one another in the transverse direction of the machine and vertically adjustable by means of drives (13). With this, by supporting the caterpillar-tracked undercarriages (12) on an earth formation (16), a construction gap (17) of the track can be extended for a formation rehabilitation.

ABSTRACT

A machine (1) for treating a track bed comprises a machine frame, mobile on a track (10) by means of on-track undercarriages (8), which consists of three frame parts (3,4,5) articulatedly connected to one another by frame joints (6,7). The central frame part (5) is connected to two caterpillar-tracked undercarriages (12) spaced from one another in the transverse direction of the machine and vertically adjustable by means of drives (13). With this, by supporting the caterpillar-tracked undercarriages (12) on an earth formation (16), a construction gap (17) of the track can be extended for a formation rehabilitation.

A machine for treating a track bed

The invention relates to a machine for treating a track bed, comprising a machine frame mobile on a track by means of on-track undercarriages, the machine frame consisting of a first - with regard to the operating direction of the machine - and a second frame part which are articulatedly connected to one another by means of a frame joint, a further on-track undercarriage being arranged in the region of the frame joint.

A machine of this type for formation rehabilitation is known according to GB 2 261 455. In the region of the frame joint connecting the first to the second frame part, an on-track undercarriage is displaceable in the longitudinal direction of the machine in order to thereby extend a construction gap during working operations. Said construction gap must be designed with corresponding longitudinal extension in order to keep the deflection curve of the lifted track within allowable limits.

Known from GB 2 262 558 is a further machine for formation rehabilitation which comprises a single machine frame supported at the ends on on-track undercarriages. Two vertically adjustable caterpillar-tracked undercarriages are arranged in the region of the front end of the machine in order to thereby lift the front machine end together with the track during working operations.

According to FR 2 538 425 A1, it is also known to support a front frame part on an exposed ballast bed by means of caterpillar-tracked undercarriages when laying a new track, while the rear end of the machine is mobile on the track by means of an on-track undercarriage.

The object of the present invention is to create a machine of the specified kind with which a particularly long construction gap is possible while supporting the ends on the track.

According to the invention, this object is achieved with a machine of the kind mentioned at the beginning in that a third frame part is arranged between the first and the second frame part and is articulately connected by means of a frame joint in each case to the adjoining frame part, and that the third, central frame part is connected to two caterpillar-tracked undercarriages vertically adjustable by drives and spaced from one another in the transverse direction of the machine.

With these features, it is possible to achieve a significant extension of the construction gap with merely small additional structural expense. Due to the caterpillar-tracked undercarriages positioned at both sides of the track, an unimpeded support of the central section of the machine on the formation is possible, so that the track can be lifted without hindrance to the required height in the construction gap section delimited by the on-track undercarriages positioned at the ends. In an advantageous way, it is also possible to convert machines already in operation by supplementary installation of a third frame part for extending the construction gap.

Additional advantages and embodiments of the invention become apparent from the drawing.

The invention will be described in more detail below with reference to an embodiment represented in the drawing in which

Fig. 1 shows a schematic side view of the machine,

Fig. 2 shows an enlarged detailed view of the machine, and

Fig. 3 shows an enlarged cross-section in the region of caterpillar-tracked undercarriages.

A machine 1, visible in Figs. 1 and 2, is composed of a first frame part 3 - with regard to the operating direction represented by an arrow 2 -, a second frame

part 4, and a third frame part 5 situated between these. The third frame part 5 comprises frame joints 6,7, arranged at the ends, for articulated connection to the adjoining first and second frame parts 3,4. A respective on-track undercarriage 8 is arranged at each machine end and in the region of each frame joint 6,7. The on-track undercarriage 8 connected to the third frame part 5 is equipped with track lifting devices 11 designed for application to rails 9 of a track 10.

The third frame part 5 is connected to two caterpillar-tracked undercarriages 12 which are spaced from one another in the transverse direction of the machine and vertically adjustable by a drive 13. The caterpillar-tracked undercarriages 12 equipped with a motive drive 15 are positioned in a rear half 14, with regard to the longitudinal direction of the machine, of the third frame part 5 and are mobile on an earth formation 16 at both sides of the track 10.

The machine 1 is driven to the construction site with the aid of all of the on-track undercarriages 8, with the caterpillar-tracked undercarriages 12 being raised into an inoperative position (see dash-dotted line in Fig. 2). For forming a construction gap 17, the track lifting devices 11 are brought into form-fitting engagement with the rails 9, and the caterpillar-tracked undercarriages 12 are lowered onto the earth formation 16. As a result, the rear frame joint 7 is raised together with the on-track undercarriage 8 located thereunder. The track 10 is also raised for creating the construction gap 17 which is defined by distancing the track 10 from the earth formation 16. Additionally, the track 10 is raised by a further track lifting device 18 fastened to the second frame part 4. In order to further extend the construction gap 17, there is also the possibility to displace the second on-track undercarriage 8 forwardly relative to the first frame part 3.

As soon as the track 10 is distanced from the earth formation 16, working units 19 can be introduced. The latter consist, for example, of a mixing device 20 for mixing earth with lime, and a grading- and consolidating device 21 following behind. Naturally, it is also possible - depending on the purpose of

operation of the machine 1 - to use different working units requiring the track 10 to be distanced from the formation, such as, for example, an excavating chain guided around the track 10 for removing ballast. The two caterpillar-tracked undercarriages 22 can be steered from a work cabin 20 so that the frame joint 7 can be centered in the middle of the track also in track curves.

As can be seen in Fig. 3, the two caterpillar-tracked undercarriages 12 supported on the earth formation 16 are spaced from one another by a distance a which must be somewhat greater than a sleeper length, that is at least 2.5 meters under normal circumstances.

C l a i m s

1. A machine for treating a track bed, comprising a machine frame mobile on a track (10) by means of on-track undercarriages (8), the machine frame consisting of a first - with regard to the operating direction of the machine (1) - and a second frame part (3,4) which are articulatedly connected to one another by means of a frame joint (6), a further on-track undercarriage (8) being arranged in the region of the frame joint (6), **characterized in that** a third frame part (5) is arranged between the first and the second frame part (3,4) and is articulatedly connected by means of the frame joint (6,7) in each case to the adjoining frame part (3,4), and that the third, central frame part (5) is connected to two caterpillar-tracked undercarriages (12) vertically adjustable by drives (13) and spaced from one another in the transverse direction of the machine.
2. A machine according to claim 1, characterized in that a respective one of the on-track undercarriages (8) is arranged in the region of the two frame joints (6,7), and that the on-track undercarriage (8) arranged at the rear of the third frame part (5) - with regard to the operating direction of the machine (1) - comprises track lifting devices (11) designed for being brought into engagement with rails (9) of the track (10).
3. A machine according to claim 1 or 2, characterized in that both of the caterpillar-tracked undercarriages (12) are positioned in a rear half (14) - with regard to the operating direction of the machine (1) - of the third frame part (5).
4. A machine according to any one of claims 1, 2 or 3, characterized in that the caterpillar-tracked undercarriages (12) are arranged immediately in front of the on-track undercarriage (8) positioned in the region of the second frame joint (7).
5. A machine according to any one of claims 1 to 4, characterized in that the two caterpillar-tracked undercarriages (12) are spaced from one another in the transverse direction of the machine by a distance (a) of at least 2.5 m.

Fig. 1

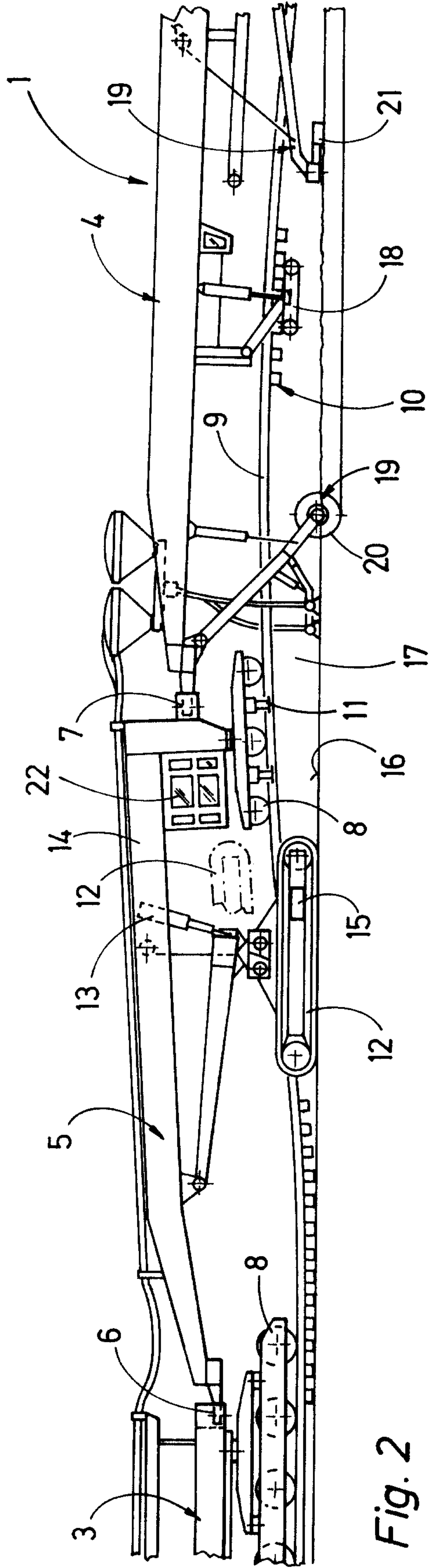
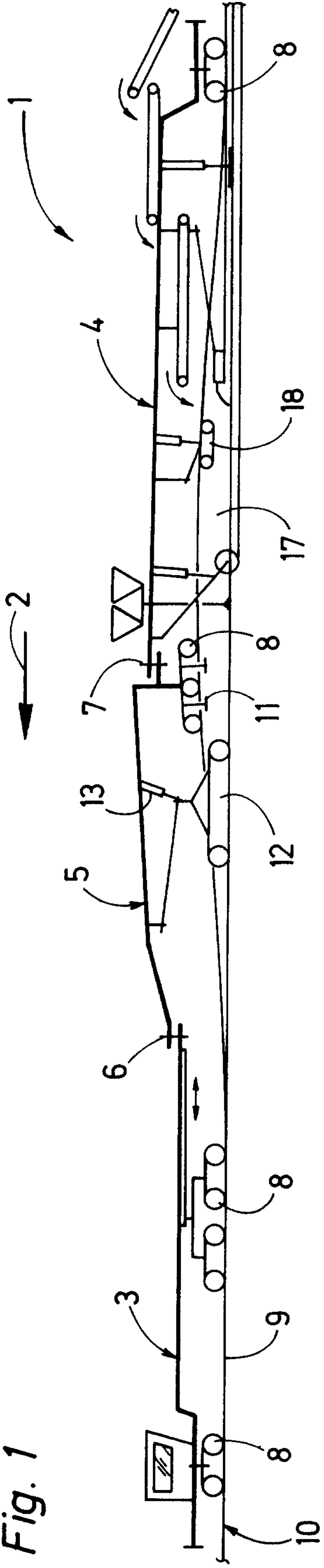


Fig. 2

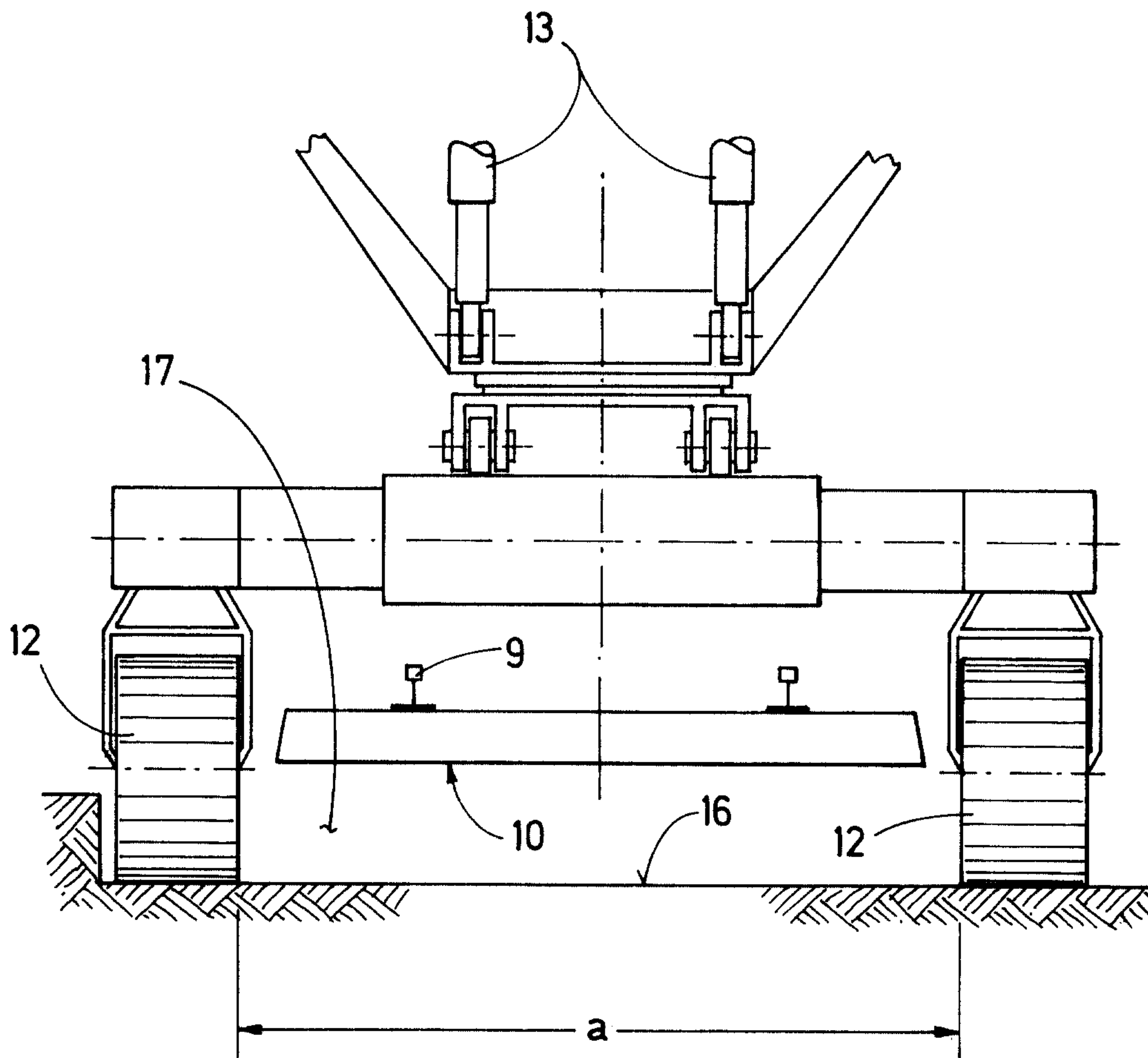


Fig. 3

