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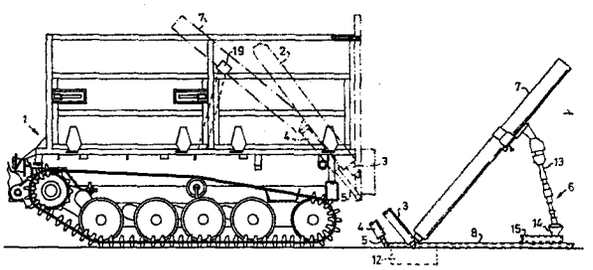
(54) Weapon-carrying vehicle.

(57) The invention relates to a vehicle (1) for transporting a heavy mortar (7) carried by a stand (6) which is connected to hydraulic cylinders (2, 4) with the aid of which the stand is movable from a position on the vehicle to a position on the ground. To prevent recoil force from being transferred to the hydraulic cylinders, the stand is provided with a foot plate (12), taking up recoil force and being movable in the direction of the recoil force relative the rest of the stand.



EP 0 148 739 A2

WEAPON-CARRYING VEHICLE

The present invention relates to a weapon-carrying vehicle including a stand carried by the vehicle chassis for the weapon.

The object of the invention is to achieve an arrangememt enabling the use of a light vehicle as a carrier for a weapon which gives very large recoil forces, e.g. a large-bore mortar.

This is achieved in accordance with the invention by the stand being connected with movement-translating means with the aid of which the stand is movable from a position on the chassis to a poistion on the ground, the stand having a ground support for taking up recoil forces, the support being at least limitedly movable in the direction of the recoil force relative the remaining part of the stand for damping the action of the recoil force on the movement translating means.

By the arrangement in accordance with the invention, it is possible to utilize light tracked vehicles for example as carriers for heavy mortars without the vehicle needing to be reinforced or provided with special retractable support legs for taking up the recoil force when the weapon is fired. The weapon can be rapidly brought into position for firing and rapidly moved back onto the vehicle with the aid of a relatively simple hydraulic cylinder arrangement, since no or only insignificant recoil forces are transmitted to it.

The invention is described in detail with reference to an embodiment illustrated on the accompanying drawings, of which

Fig. 1 is a side view of the rear carriage in a tracked vehicle consisting of a front and rear carriage and carrying a heavy mortar,

Fig. 2 is a simplified plan view of the carriage and mortar illustrated in Fig. 1, and

Fig. 3 is a side view illustrating mounting in the stand of the foot plate taking up recoil force.

The tracked carriage 1 illustrated in Figs. 1 and 2 is the rear part of a light tracked vehicle known per se, which is used for different transport purposes, both civil and military, and therefore does not need any further description.

A pair of hydraulic cylinders 2 are mounted, one on either side of the carriage, the rams 3 of which are each connected to a further hydraulic cylinder 4 which thus accompanies the motion of the rams 3. For this purpose the cylinders 2 are provided on their undersides with longitudinal, not further illustrated slots.

The rams 3 and the rams 5 of the cylinders 4 are articulately mounted in a stand, generally denoted by the numeral 6, for a mortar 7. The stand 6 includes a quadratic base plate 8 having mountings for the rams 3,5 and being formed with a circular opening 9 in which a turntable 10 is rotatably mounted via guides, not illustrated more closely, coacting with the edges of the opening 9 and turntable 10.

The turntable is formed with a substantially rectangular opening 11 for accommodating a foot plate 12, on which the lower end of the mortar 7 is mounted. As a further support for the mortar, there are a pair of support legs 13 the feet 14 of which are provided with rollers running on a circular track 15 on the base 8.

The mounting of the foot plate 12 in the turntable 10 is more clearly apparent from Fig. 3. On opposing sides of the opening 11, a pair of links 16 are pivotably mounted on journalling pins 17, associated with the turntable 10. The foot plate has rigidly attached pins 18 which project into the openings of the links 16. With this arrangement the foot plate 12 can be pressed down into the substructure from the position illustrated in Fig. 3 a distance determined by the length of the openings

of the links 16. In this way, large recoil forces are prevented from being transferred to the remaining part of the stand and thereby to the hydraulic cylinders 2,4. Since the links are pivotable, the foot plate is allowed to move obliquely downwards within the angular area denoted by the chain-dotted lines. To allow a given skew movement transversely as well, the links 16 are suitably mounted with clearance to the journalling pins.

When the mortar is to be moved, the ram 3 in the cylinder 2 is withdrawn simultaneously as the ram 5 is thrust out of the cylinder 4, the stand thus being lifted up and tipped into the position illustrated by chain-dotted lines in Fig. 1 where the base 8 forms a rear end wall on the carriage and the mortar barrel 8 rests against a support 19. In this position, a transportation clamp (not shown) may lock the foot plate to the turntable 10. By the implementation with coacting links 16 and pins 17, the lifting cylinders also contribute to wrenching the foot plate free from the substructure into which it has been thrust by the action of the recoil force.

CLAIMS

1. Weapon-carrying vehicle including a stand carried by the vehicle chassis for the weapon, characterized in that the stand (6) is connected to movement-translating means (2-5) with which the stand is movable from a position on the vehicle chassis to a position on the ground, the stand having a foot plate (12) taking up recoil force and which is at least limitedly movable in the direction of the recoil force relative the remaining part of the stand for damping the action of the recoil force on the movement-translating means.

2. Vehicle as claimed in Claim 1, characterized in that the stand (6) includes a base (8) with a turntable (10) rotatably mounted in an opening in the base, and that the foot plate (12) taking up recoil force is limitedly movably connected to the turntable.

3. Vehicle as claimed in Claim 2, characterized in that the movement-translating means are formed by cylinder and ram devices (2,3,4,5), which are connected to the vehicle chassis and to the base (8).

4. Vehicle as claimed in Claim 2 or 3, characterized in that the base (8) is movable between a position on the ground and a lifted, tipped position in which it forms a rear end wall on the vehicle (1).

5. Vehicle as claimed in any one of Claims 2-4, characterized in that the foot plate (12) taking up recoil force and the turntable (10) have coacting pins (18) and vertical guides (16).

6. Vehicle as claimed in Claim 5, characterized in that the vertical guides are formed by links (16) pivotably mounted on the turntable (10) and having elongate openings into which thrust pins (18), rigidly connected to the foot plate, project.

7. Vehicle as claimed in any one of Claims 1-6, characterized by a transportation lock being arranged for fixing the foot plate relative the turntable.

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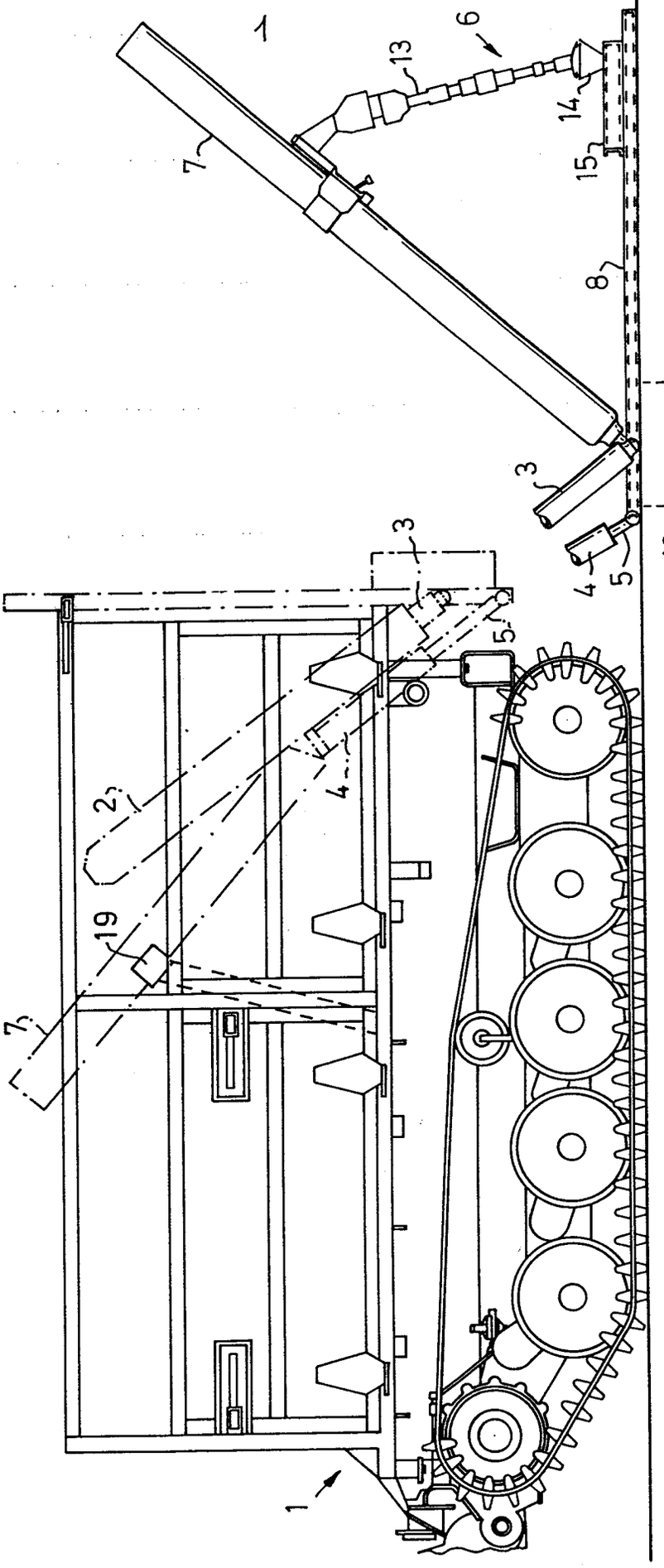

FIG.1

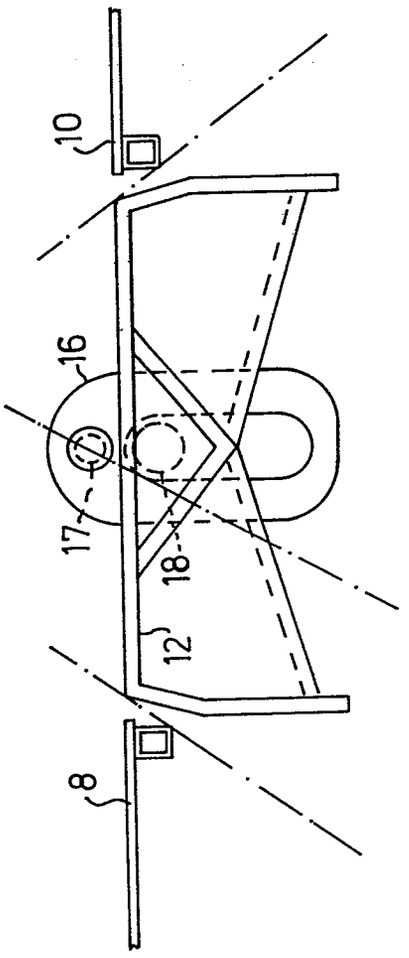

FIG.3

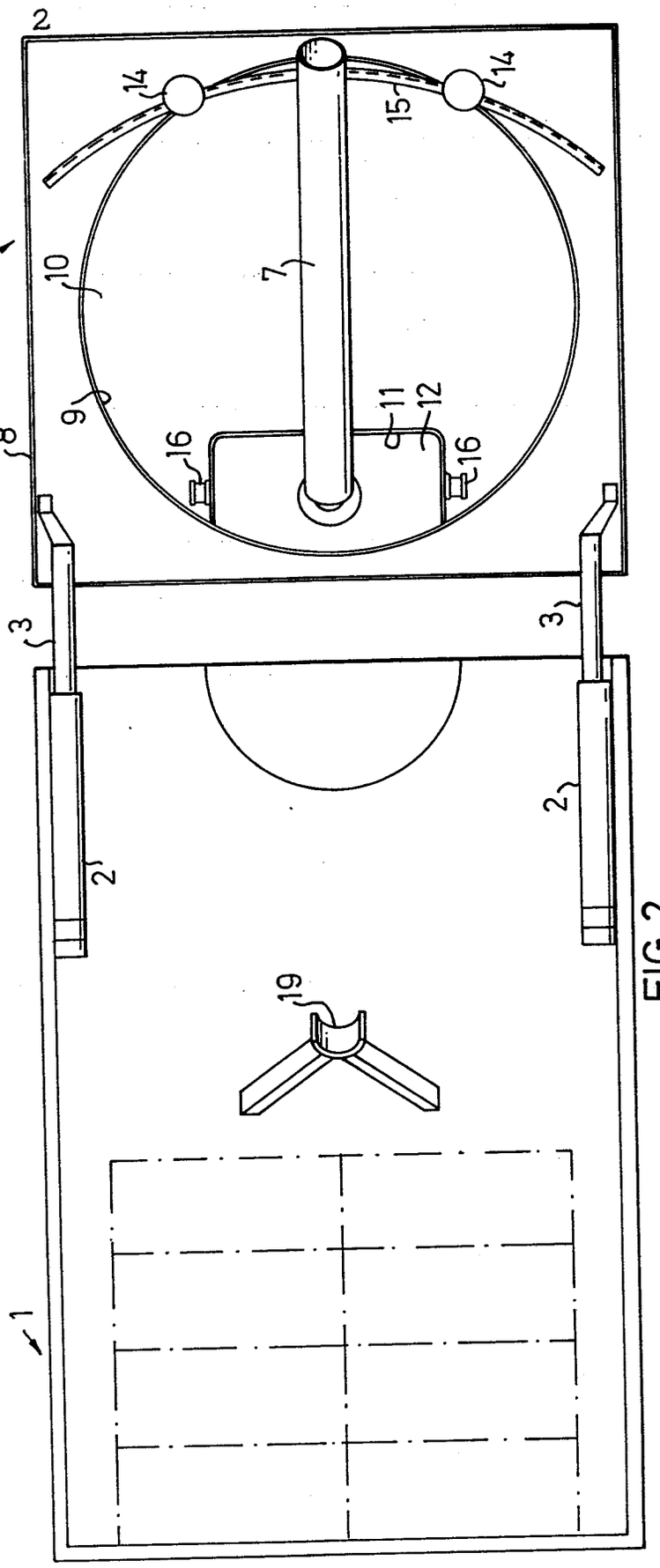

FIG.2