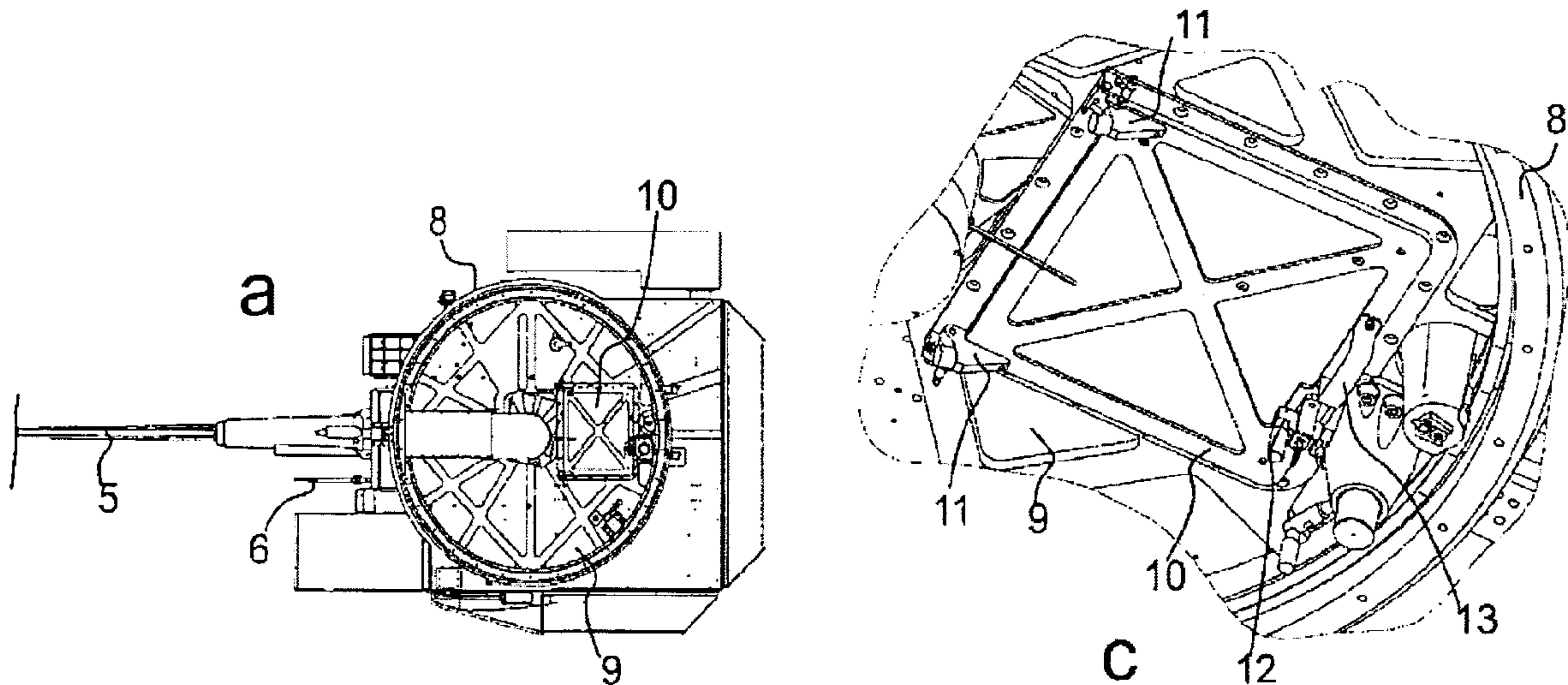




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(54) **Titre : VEHICULE EQUIPE D'UNE TOURELLE TOURNANTE**
(54) **Title: VEHICLE PROVIDED WITH REVOLVING TURRET**



(57) **Abrégé/Abstract:**

Vehicle provided with revolving turret comprising an armor-plated cockpit (2), a system for the motion of the central revolving turret (4) upon which a main armament (5) can be mounted. This turret is connected to the armor-plated cockpit of the vehicle by means of a circumferential fifth-wheel (8) which allows the revolving of the turret around a substantially vertical axis which passes through the center of this fifth-wheel. The basis (9) of this turret presents a hatch (10) for the communication between the interior of the turret and the interior of the cockpit (2) of the vehicle.

ABSTRACT

Vehicle provided with revolving turret comprising an armor-plated cockpit (2), a system for the motion of the central revolving turret (4) upon which a main armament (5) can be mounted. This turret is connected to the armor-plated cockpit of the vehicle by means of a circumferential fifth-wheel (8) which allows the revolving of the turret around a substantially vertical axis which passes through the center of this fifth-wheel. The basis (9) of this turret presents a hatch (10) for the communication between the interior of the turret and the interior of the cockpit (2) of the vehicle.

- 1 -

TITLE: "Vehicle provided with revolving turret".

The present invention relates to a vehicle, for instance a tracked vehicle or a rotated vehicle of military type, provided with revolving turret with artillery means.

To the state of the art are known armored vehicles movable by means of a system of tracks and provided with a central revolving
10 turret upon which it is mounted the main armament of the truck which is usually constituted by a cannon. This cannon is provided with thermal sensors and usually has a system for the gas recovery and fire damping and is also hydraulically and/or electrically stabilized.

The turret is also usually provided with one or more machine guns and with various pointing and vision means or systems, such as a stabilized night/day periscopic viewer for the commander, a stabilized viewer with thermal view and laser telemeter for the
20 gunner, apart from a fire controlling computer. This last one receives data from the various sensors of the vehicle and is able to process all the data for determining the best firing conditions.

Normally, in these types of vehicles, classified as tanks, or combat vehicles or troops transport vehicles, the interior where there is the position of the pilot and the interior of the turret

-2-

are separated between them, for safety reasons united with strength reasons of the turret in general.

The Applicant has realized a vehicle provided with revolving turret with armament which communicates with the interior of the vehicle through an emergency hatch, preferably armor-plated, which opens at the bottom or the basis of the turret toward the interior of the armor-plated vehicle.

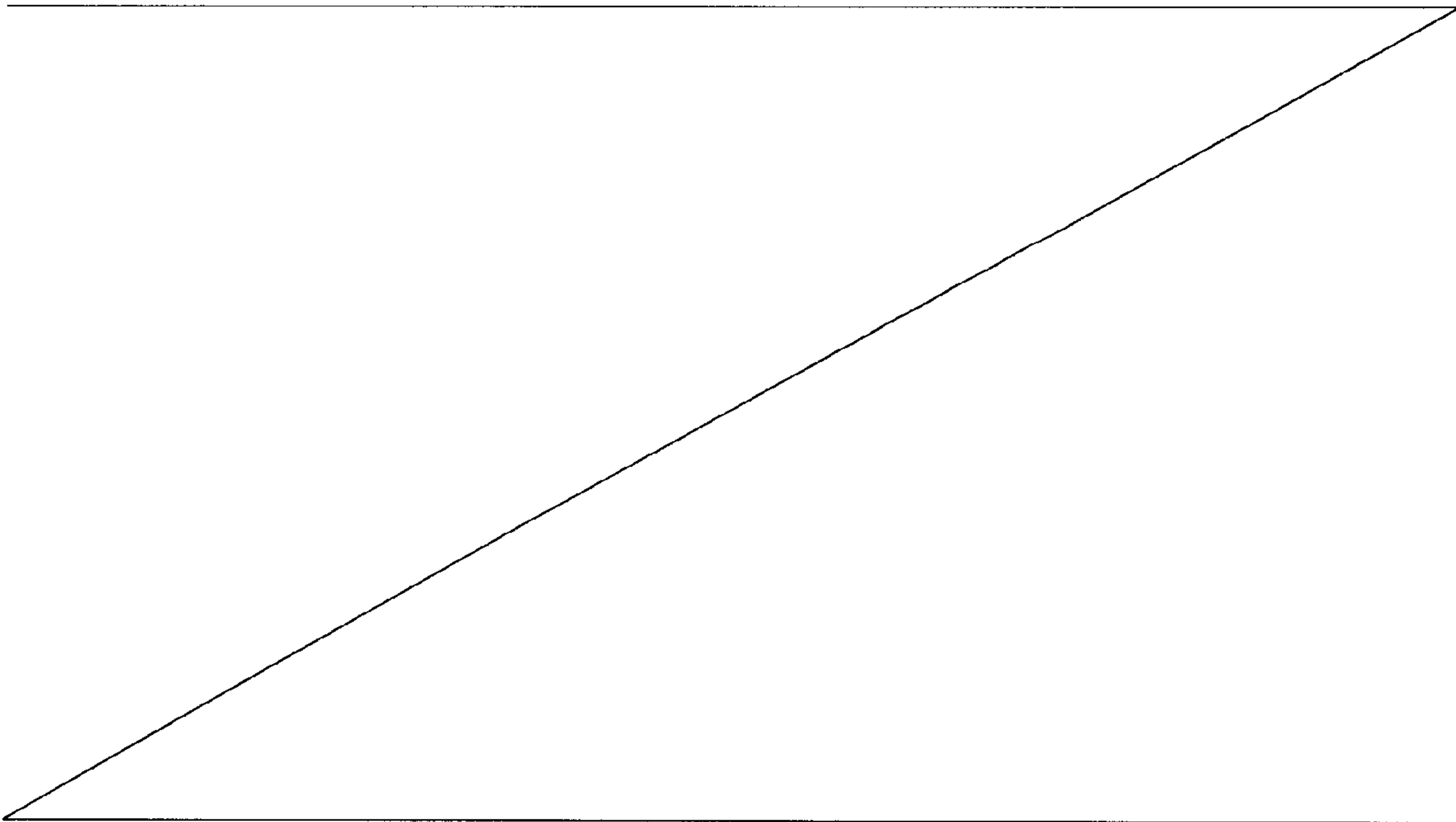
An aspect of the present invention relates to a vehicle provided with a central revolving overhead turret, said vehicle
10 comprising: an armor-plated cockpit comprising an interior space; an overhead turret, the turret having substantially no cockpit penetration, the turret being configured for mounting a main armament; a system for moving the central revolving overhead turret, the system for moving the central revolving overhead turret comprising a circumferential bearing, said overhead turret comprising a base and being connected to the armor-plated cockpit by said circumferential bearing to allow revolving of the overhead turret around a substantially vertical axis passing through a center of said bearing, said base comprising a floor located
20 completely external to the cockpit and a hatch attached to the floor by a pair of opposed hinges, wherein the hatch pivots about the hinges toward the interior space of the cockpit from a first position closing a passage in the floor to a second position providing communication between the overhead turret and the

- 2a -

cockpit.

The characteristics and the advantages of the vehicle according to the present invention will be clearer and evident from the following description, exemplificative and non-limiting, of a form of embodiment of the invention with reference to the attached figures wherein:

- Figure 1 shows a schematic view of the vehicle provided with revolving turret according to the present invention;
- Figure 2a shows a schematic view from the bottom of the turret according to the present invention;
- Figure 2b shows a lateral schematic view of the turret according to the present invention;
- Figure 2c shows a schematic view from the top of the turret according to the present invention;



- 3 -

- Figure 3a shows a perspective schematic view of the turret according to the present invention;
- Figure 3b shows a front schematic view of the turret according to the present invention;
- Figure 3c shows a magnified particular of the turret in its lower part according to the present invention.

With reference to the above mentioned figures the vehicle according to the present invention comprises an armor-plated cockpit 2 and preferably a track motion system 3 or alternatively
10 rotated and is provided with a central revolving turret 4 upon which is mounted main armament 5 which is usually constituted by a cannon or by another weapon or actuator.

This cannon can be provided with thermal sensors and usually has a system for the gas recovery and fire damping and is also hydraulically stabilized.

The turret is also usually provided with one or more machine guns 6 and with various pointing and vision means or systems, such as a stabilized night/day periscopic viewer 7 for the commander, a stabilized viewer with thermal view and laser telemeter for the
20 gunner, apart from a fire controlling computer. The latter receives data from the various sensors of the vehicle and is able to process all the data for determining the best firing conditions.

- 4 -

The turret is connected to the armor-plated cockpit of the vehicle by means of a circumferential fifth-wheel 8 which allows the complete revolving (by 360°) of the turret with respect to a vertical axis passing through the centre of this fifth-wheel.

According to the present invention, basis 9 of this turret presents a hatch 10 for the communication between the interior of the turret where there are the controls for the main and auxiliary armaments, and the interior of cockpit 2 of the vehicle.

10 This hatch permits the access to the turret not only from outside and from the top of the vehicle, as traditionally happens, but also by the personnel who is inside the cockpit itself of the vehicle, for the purpose of, for instance, looking over through episcopes, refilling the ammunition chest, carrying out emergency shots, having another escape way from the cockpit of the vehicle itself and carrying out maintenance operations.

Preferably, this hatch opens at the bottom or basis of the turret toward the interior of the cockpit of the vehicle by means of a couple of opposed hinges 11.

20 Preferably, this hatch has a quadrangular or rectangular shape.

The hatch is also provided with closure means 12 and grasping means 13 which are accessible from the interior of the cockpit of the vehicle.

- 5 -

The turret according to a peculiar characteristic of the present invention does not have parts which enter the hull or the cockpit of the vehicle. The only communication or connection element is hatch 10.

-6-

CLAIMS

1. A vehicle provided with a central revolving overhead turret, said vehicle comprising: an armor-plated cockpit comprising an interior space; an overhead turret, the turret having substantially no cockpit penetration, the turret being configured for mounting a main armament; a system for moving the central revolving overhead turret, the system for moving the central revolving overhead turret comprising a circumferential bearing, said overhead turret comprising a base and being
10 connected to the armor-plated cockpit by said circumferential bearing to allow revolving of the overhead turret around a substantially vertical axis passing through a center of said bearing, said base comprising a floor located completely external to the cockpit and a hatch attached to the floor by a pair of opposed hinges, wherein the hatch pivots about the hinges toward the interior space of the cockpit from a first position closing a passage in the floor to a second position providing communication between the overhead turret and the cockpit.

2. A vehicle according to claim 1, wherein said hatch has
20 a quadrangular or rectangular shape.

3. A vehicle according to claim 1, wherein said hatch is provided with closure means and grasping means that are accessible from the cockpit.

4. A vehicle according to claim 1, wherein said vehicle

- 7 -

comprises tracks.

5. A vehicle according to claim 1, wherein said vehicle comprises a fire controlling computer determining best firing conditions.

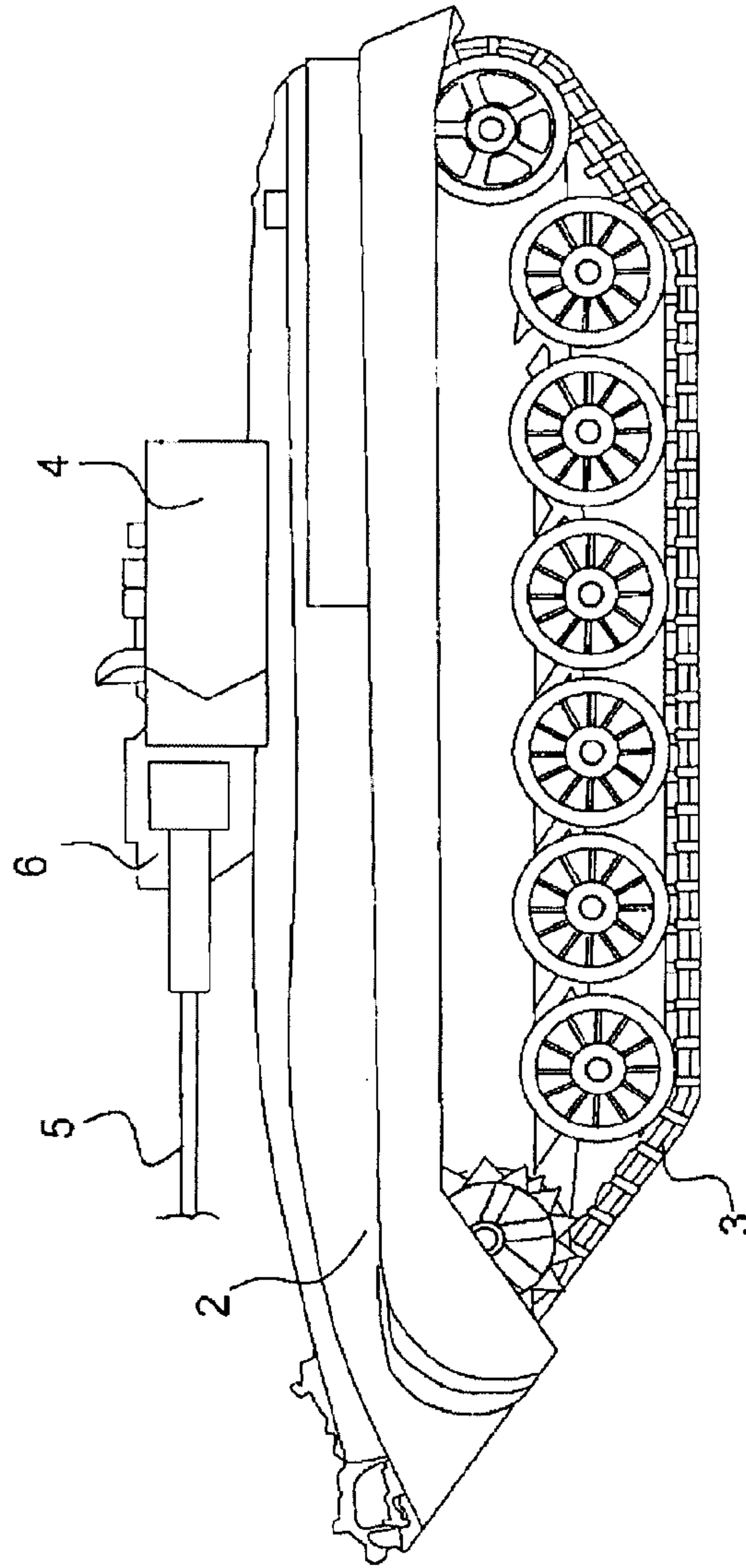


Fig. 1

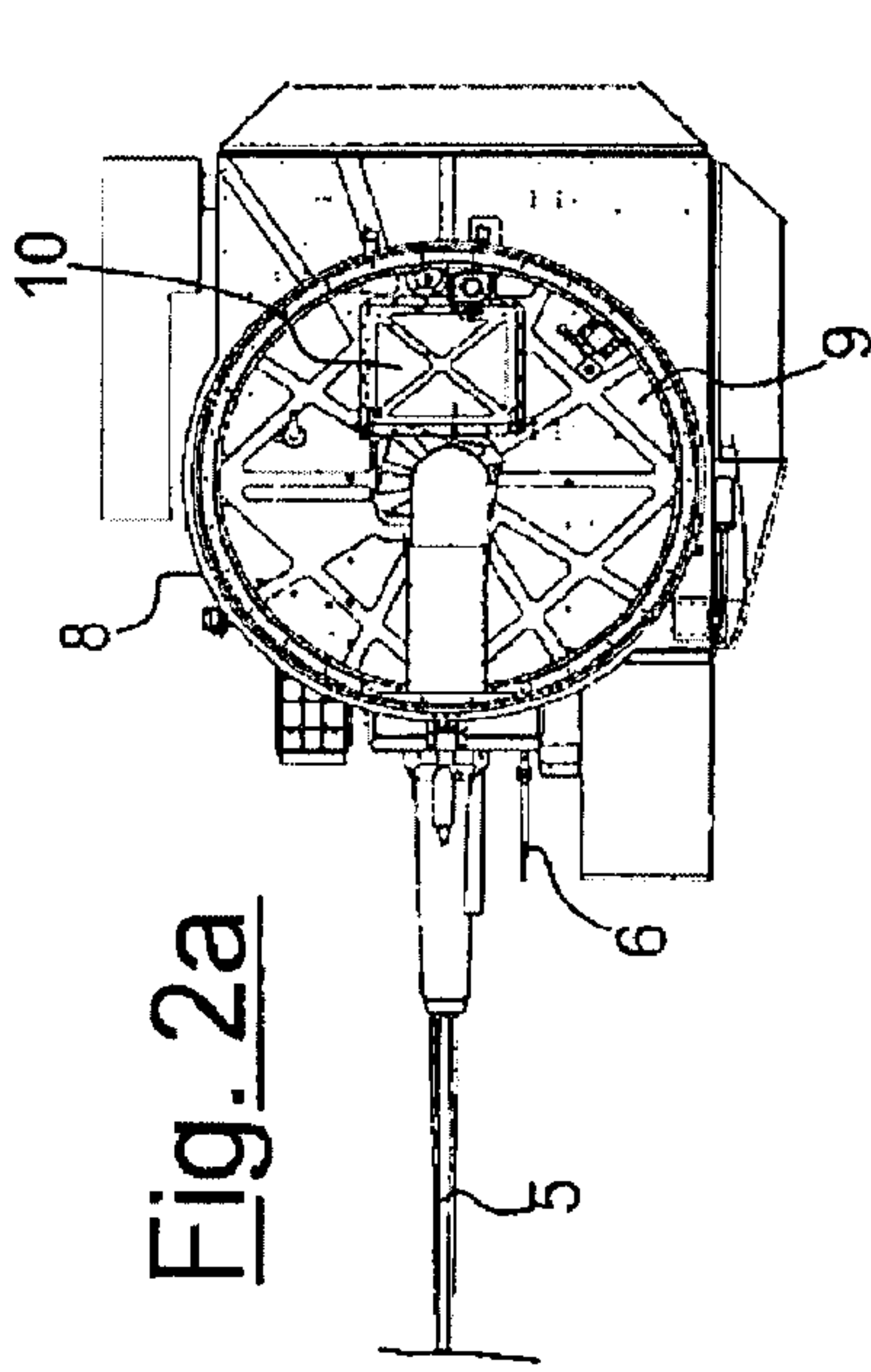


Fig. 2a

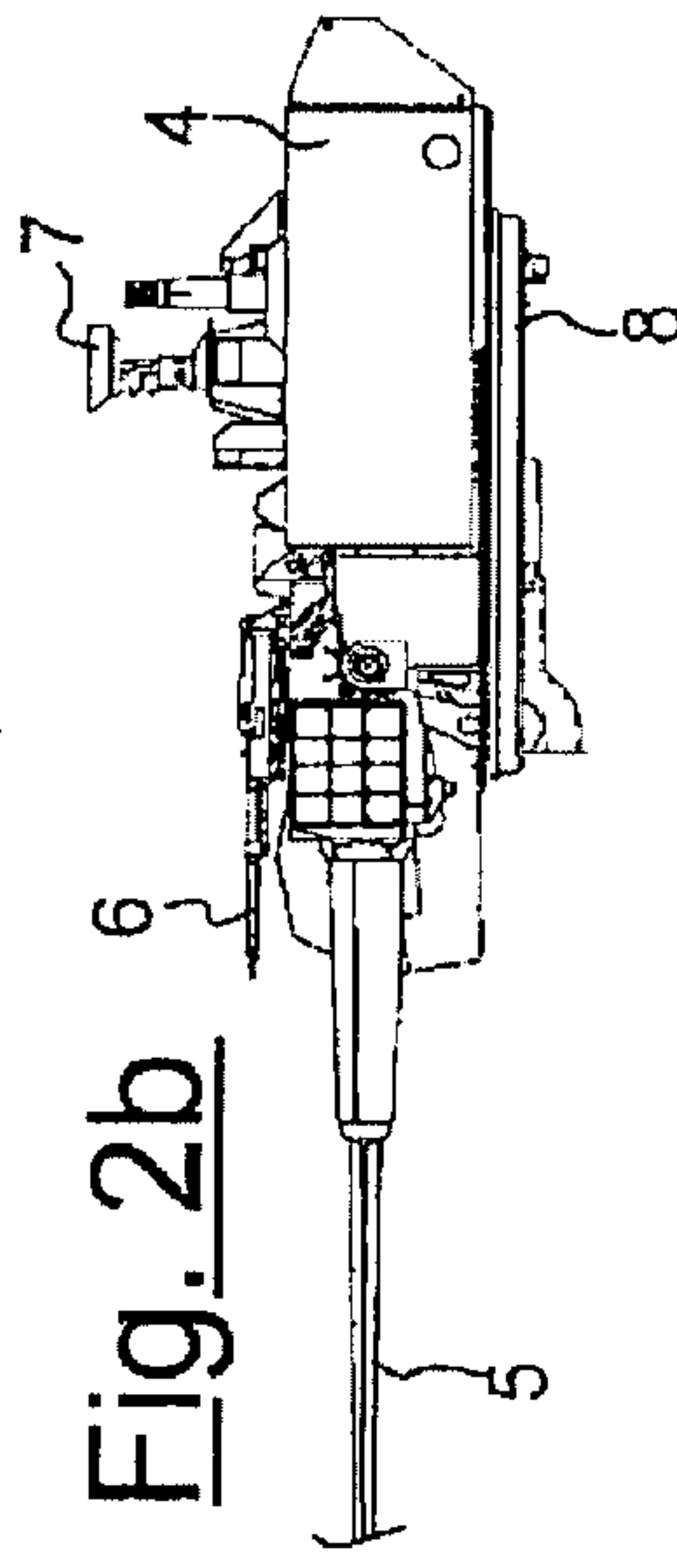


Fig. 2b

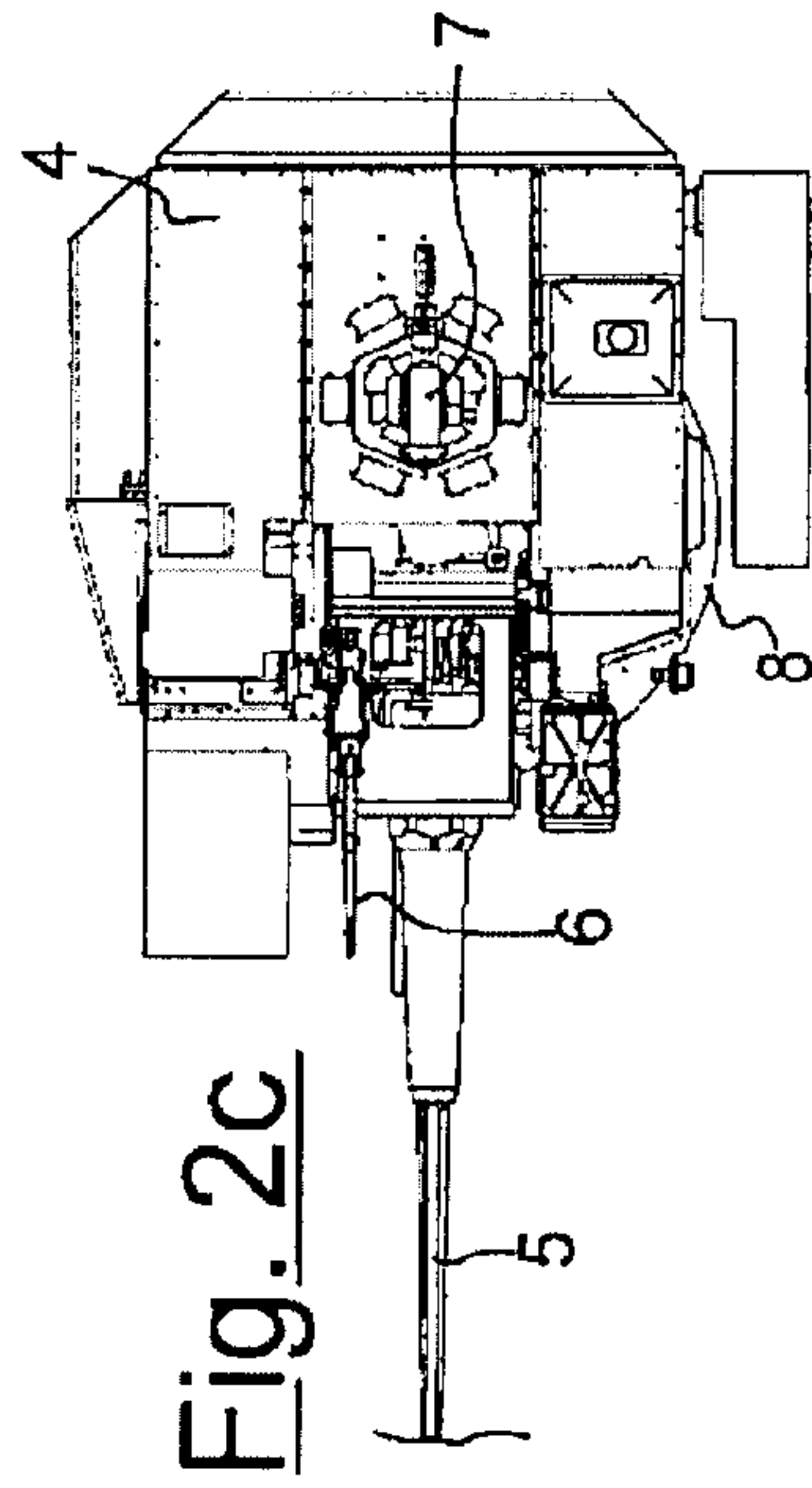


Fig. 2c

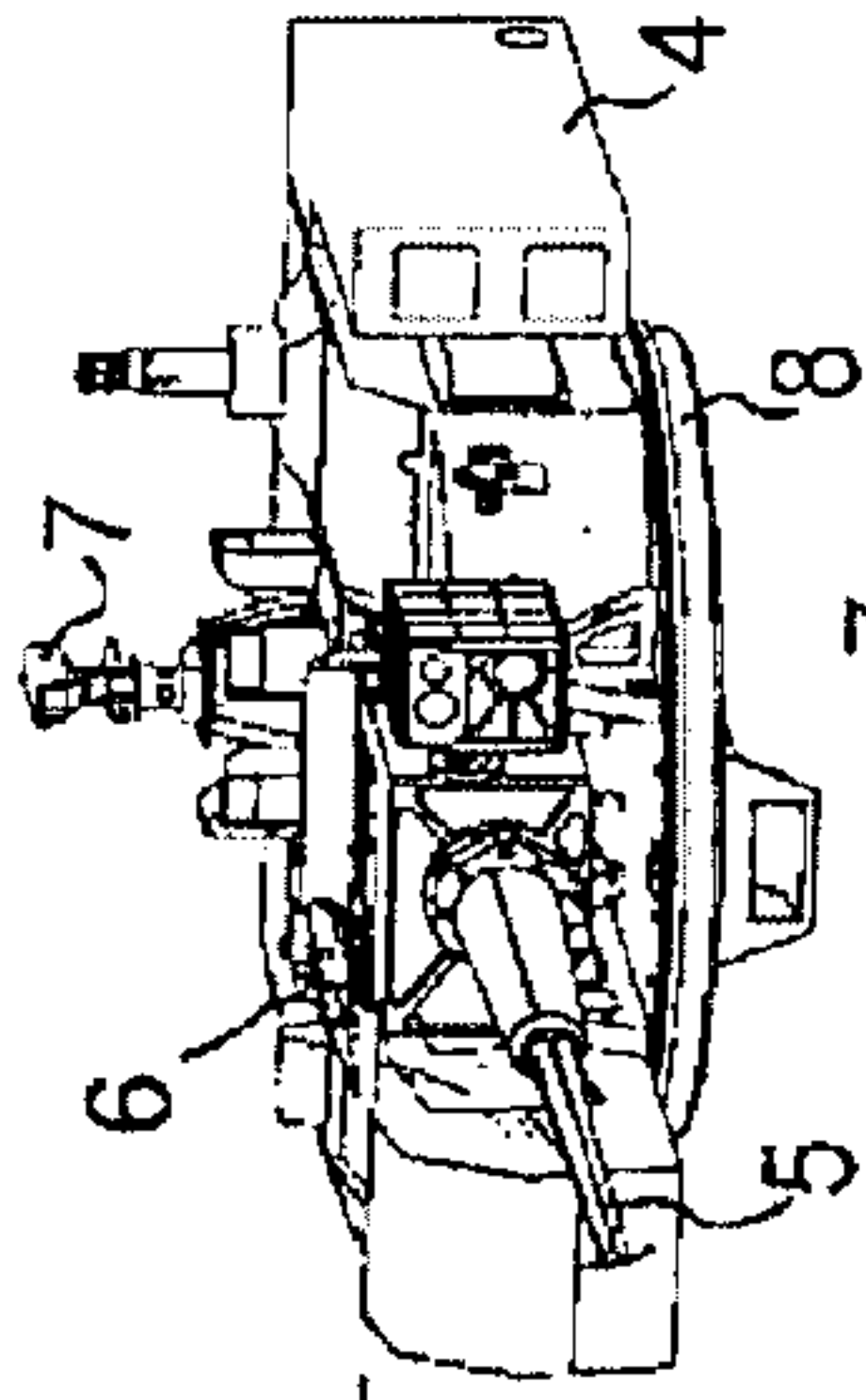


Fig. 3a

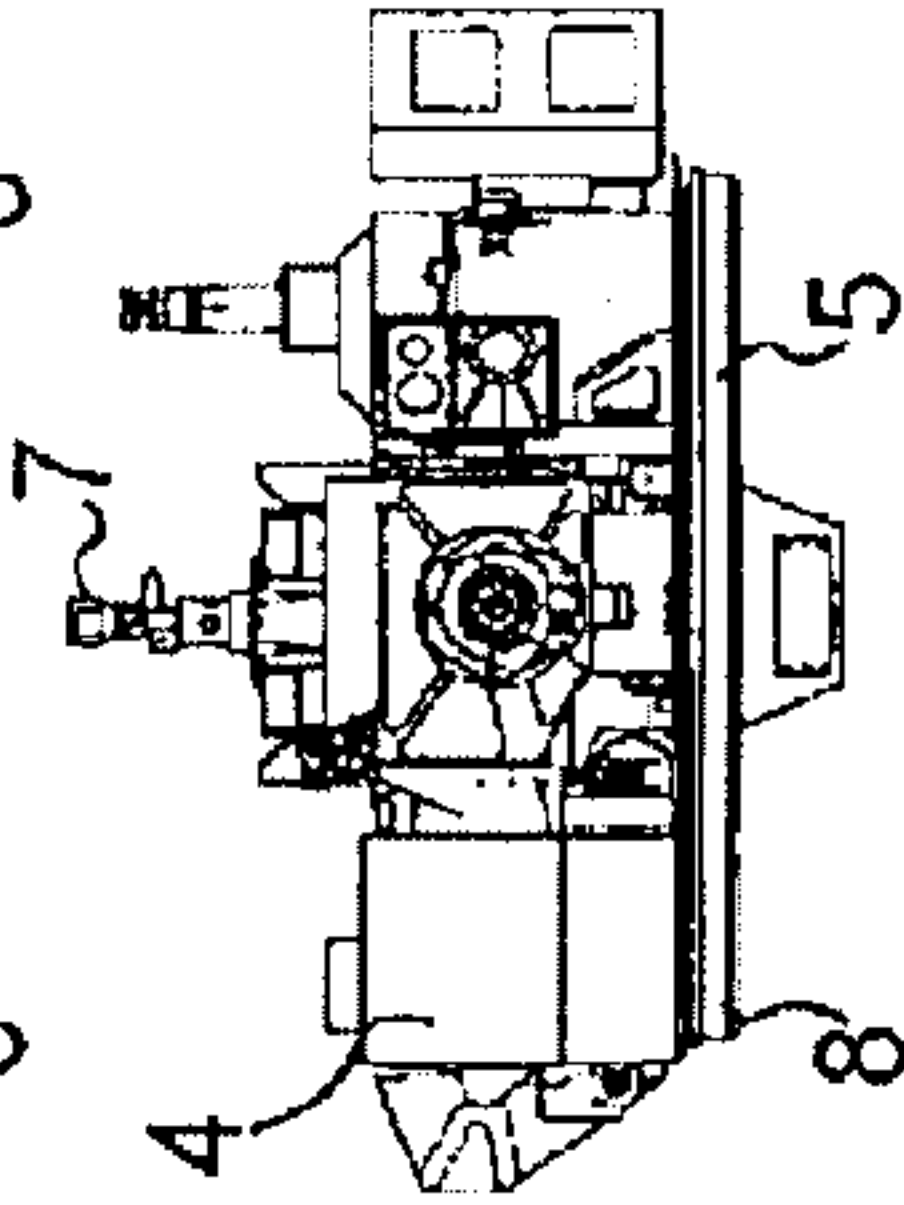


Fig. 3b

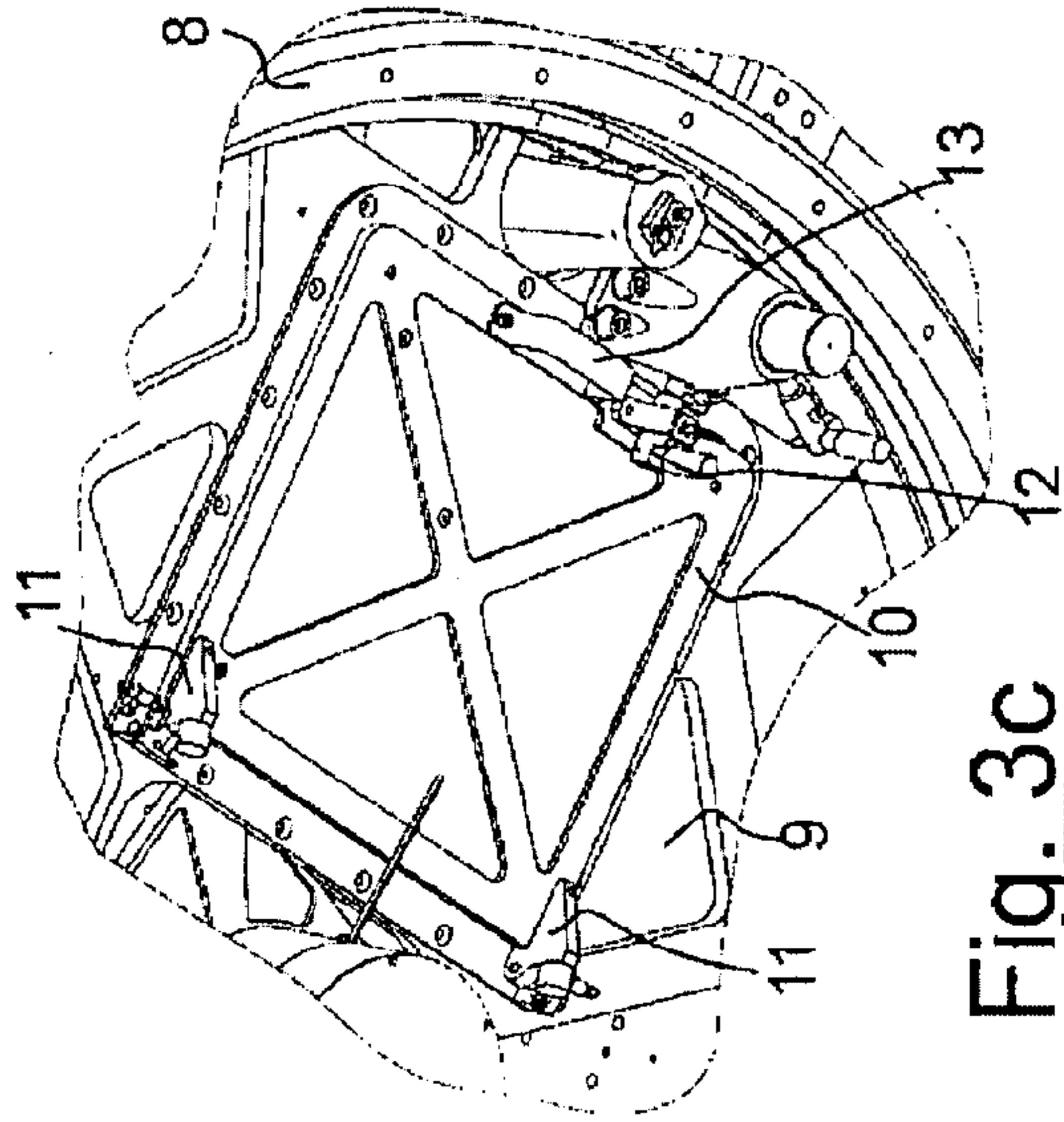


Fig. 3c

