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U.S. ARMY FOREIGN SCIENCE AND TECHNOLOGY CENTER

SUSPENSION FOR TRACKED VEHICLES

COUNTRY: USSR

TECHNICAL TRANSLATION

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SUSPENSION FOR TRACKED VEHICLES

by

V. V. Yemel'yanenko, et al.

SOVIET PATENT NO. 212073

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Soviet Patent No. 212073, Class 63c
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Applied for by the Chel'yabinsk Tractor Plant

Tracked vehicle suspensions are known which have a transverse balance beam spring-mounted on flat elastic rubber elements. The beam is hinged at the middle to the chassis of the vehicle while the ends are supported by the track carriers.

In the proposed suspension, the design is simplified by mounting the balance beam on a pivot at the center. The ends of the pivot are rigidly fixed to the midsection of supports whose ends rest on the chassis of the vehicle through rubber elastic elements.

The proposed suspension is shown in Fig. 1. Fig. 2 shows section A-A and Fig. 3 shows section B-B.

In transverse beam 1 of the chassis of the tracked vehicle is balance beam 2 resting at the ends on track carriers 3 while the center is mounted to turn on bearing 4 of pivot 5. The pivot is rigidly fixed to the midsection of supports 6 by means of caps 7 and bolts 8. Motion of pivot 5 in the axial direction is prevented by split rings 9 which fit into grooves in the supports and in the pivot. The end sections of the supports have receptacles for installation of flat elastic rubber elements 10 located on opposite sides of the longitudinal plane of supports 6. The elastic elements closer to the chassis beam are located between the receptacles of the supports and the receptacles of plates 11 fastened to the chassis beam, while the elastic elements further from the chassis beam are located between the receptacles of the supports and the receptacles of caps 12 fastened by bolts 13 to the chassis beam.

Loads from the weight of the vehicle chassis, the weight of the motor and the weight of overhanging equipment mounted on the vehicle are transmitted to the chassis beam and covers 12 through elastic elements 10 to supports 6 and pivot 5, and through bearings 4 to balance beam 2 and the track carriers.

Under considerable loads equal to the full limit of travel of the elastic elements, part of the load is transmitted directly through caps 12 to supports 6, and then through pivot 5 and balance beam 2 to track carriers 3. In this event, caps 12 act as limiters for dynamic travel of the elastic element.

THE INVENTION

A tracked vehicle suspension containing a transverse balance beam spring-supported by means of flat rubber elastic elements. The beam is hinged at the middle to the chassis of the vehicle and the ends rest on the track carriers. The design is simplified by mounting the balance beam on the midsection of a pivot, the ends of the pivot being rigidly fastened to the midsections of support beams whose ends rest on the chassis through elastic rubber elements.

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13. ABSTRACT

A tracked vehicle suspension containing a transverse balance beam spring-supported by means of flat rubber elastic elements. The beam is hinged at the middle to the chassis of the vehicle and the ends rest on the track carriers. The design is simplified by mounting the balance beam on the midsection of a pivot, the ends of the pivot being rigidly fastened to the midsections of support beams whose ends rest on the chassis through elastic rubber elements.

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