S. KUPCHAK.

WAR AUTOMOBILE.

APPLICATION FILED APR. 17, 1917.

1,253,605.

Patented Jan. 15, 1918.

2 SHEETS—SHEET 1.

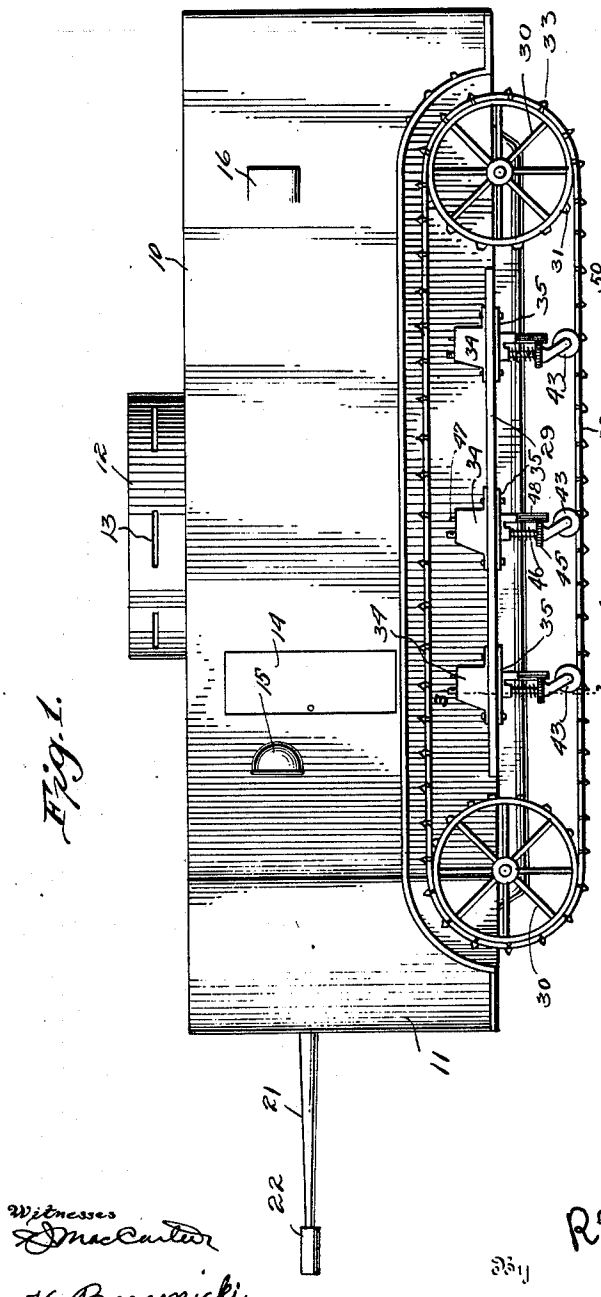

Fig. 1.

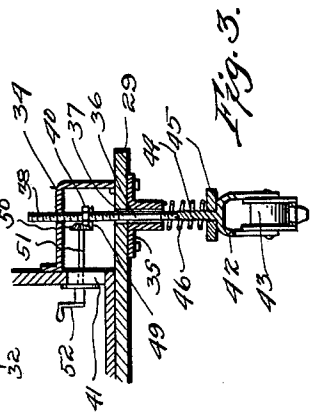

Fig. 3.

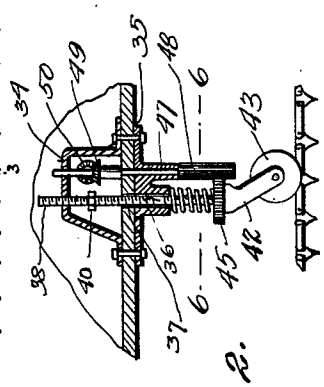

Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

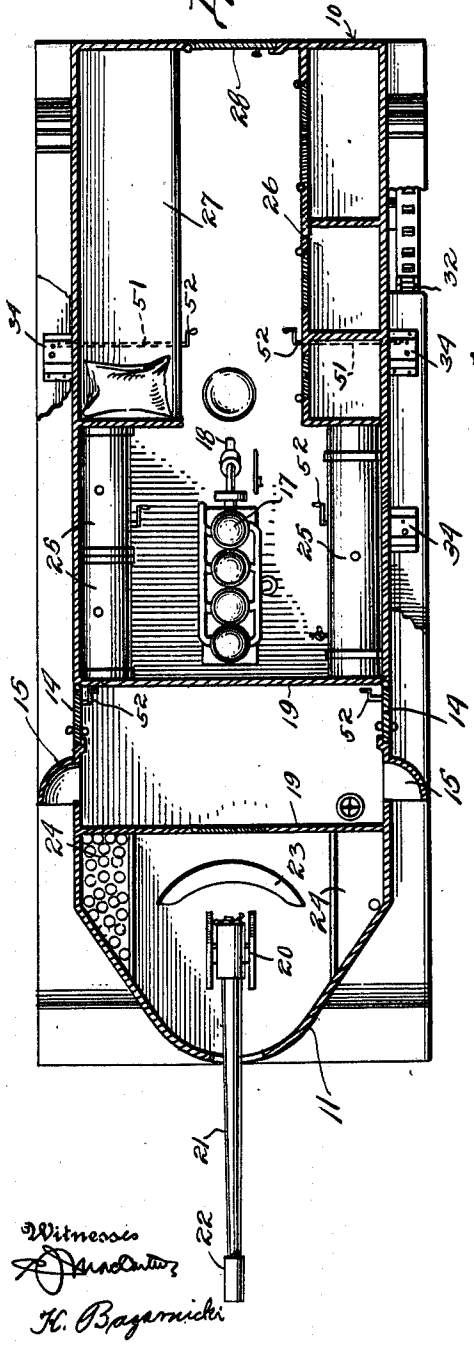


Fig. 5.

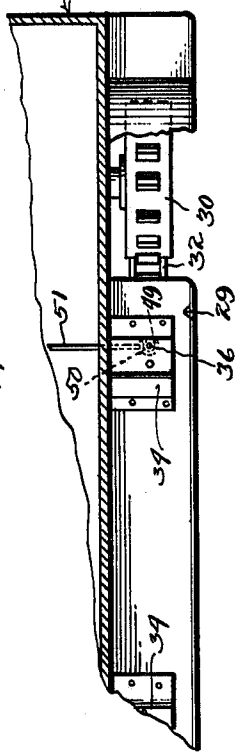


Fig. 6.

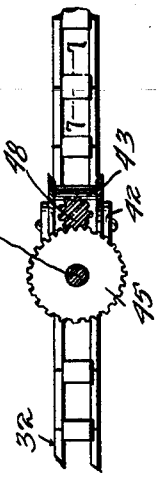
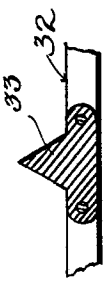


Fig. 7.



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UNITED STATES PATENT OFFICE.

STEPHEN KUPCHAK, OF ROSEVEAR, ALBERTA, CANADA.

WAR-AUTOMOBILE.

1,253,605. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed April 17, 1917. Serial No. 162,651.

To all whom it may concern:

Be it known that I, STEPHEN KUPCHAK, a subject of the King of England, residing at Rosevear, in the Province of Alberta and Dominion of Canada, have invented certain new and useful Improvements in War-Automobiles, of which the following is a specification.

This invention relates to war material and has special reference to an armored automobile car.

One important object of the invention is to improve the general construction of devices of this character.

A second important object of the invention is to provide an improved general construction of traction means for devices of this character.

A third important object of the invention is to provide improved means for maintaining a proper tension on a tractor machine in a device of this character.

A fourth important object of the invention is to provide means accessible from the interior of the car for regulating the tension on the machine above referred to.

With the above and other objects in view, as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawing, and specifically claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of an armored car constructed in accordance with this invention.

Fig. 2 is a longitudinal section showing one of the tensioning devices.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a horizontal section taken through the upper part of the car to show the plan of the interior, portions of the car being broken away to show the parts underneath.

Fig. 5 is an enlarged detail view of one of the rear corners of the car, the view being partly in horizontal section.

Fig. 6 is a section on the line 6—6 of Fig. 2.

Fig. 7 is an enlarged detail section through one of the spur bearing links of a tractor machine.

In carrying out the objects of this invention and in the form herein disclosed there is provided a car body 10 of suitable armor plate and having its forward end rounded as at 11. Projecting above the roof of this car body is a conning tower 12 provided with sight slots 13. Access to the interior of the car is obtained through a suitable door 14 and on the sides of the car are provided sight sponsors or hoods 15 and 16. In the interior of the car there is provided the propelling engine 17 which is connected by a shaft 18 with the rear wheels in the manner common to automobiles and not deemed necessary here to be particularly shown. Extending across the interior are partitions 19 and in front of the forward partition there is provided a gun mount 20 whereon is a rapid fire gun 21 carrying a silencer 22. At the rear of the gun is an operator's seat 23. At each side of this forward compartment containing the gun mount are magazine compartments 24 for holding shells and the like. In the engine compartment are provided the oil, fuel and water tanks 25 and on one side of the car to the rear of these tanks is a series of lockers 26 while on the other side is a suitable bunk or berth 27. A rear access door 28 is also provided. Projecting from each side of the car is an armored shelf 29 and the car body is supported on wheels 30 located in front of and behind each armored shelf. These wheels 30 are equipped with peripheral sprocket teeth 31 and connecting the wheels on each side of the car is a chain 32 made up alternately of plain links and of links provided with ground engaged spurs 33. Mounted on each shelf 29 is a series of upper castings 34 and lower castings 35 which together form housing through which are arranged the vertically slidable rods 36,

the rods passing through suitable openings 37 in the shelves 29. Between each shelf 29 and the top of the respective housing the rod is threaded as at 38 and located on this threaded portion is a nut 40 the adjustment of which may be effected through a port 41 in the side of the car body 10 just above the floor. This nut 40 serves to limit the vertical movement of the respective rod 37 and by the adjustment of the nut the vertical limits of movement of each rod may be varied at will. On the lower end of each rod 37 is a fork 42 wherein is journaled a presser wheel 43 which engages on top of the lower run of the respective chain 32 so as to force this lower run downward into contact with the earth. In order to resiliently hold the wheel 43 in its lowermost position the lower end of each rod 37 is threaded as at 44 and on this threaded portion is provided a gear nut 45 between which and the bottom of the housing is arranged a spring 46. Now by adjusting the nut 45 upward or downward as the case may be the tension of the spring 46 is increased or decreased. In order to effect this adjustment from the interior of the car there is journaled in the housing a vertical shaft 47 which carries on its lower end a drum gear 48 meshing with a gear nut 45. On the upper end of the shaft 47 is a beveled gear 49 wherewith meshes a similar beveled gear 50 mounted on the horizontal shaft 51 which extends through the side wall of the car body and is provided on its inner end with a handled crank 52. It will be obvious that by rotating the handled crank 52 motion will be transmitted through the beveled gears and drum gear 48 so that this gear nut 45 will be raised or lowered on the rod 37 and thereby vary the tension of the respective spring 46.

It will be obvious that when traveling over certain classes of ground, as for instance on rocky ground a considerable play is advisable in the lower run of the machine in order to prevent breakage and this play may be permitted by proper adjustment of the nut 40 and spring 46 which adjustment may be effected from within the car so that the operators are at no time exposed to attack in the open. Furthermore, on very soft ground it is frequently advisable to maintain the chain 32 at all times in this lowermost position so that this may be effected by adjustment of the nut 40 into such position that it will at all times press against the top of the housing.

The operation of the car is effected in the usual manner through the engine and in passing over ground of varying kinds the springs and range of movement of the wheels 43 are from time to time adjusted as the operators deem necessary.

From the foregoing it will be seen that the operators within the car are at all times protected from small arm fire and under no circumstances is it necessary to go outside of the car to adjust the tension of the tractor chains.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that many minor changes may be made in the form and construction of the invention without departing from the material principles thereof. It is not therefore desired to confine the invention to the exact form herein shown and described but it is wished to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:—

1. In a device of the kind described, a car body, spaced wheels on each side of said body, sprocket teeth on said wheels, tractor sprocket chains each connecting the wheels on a respective side of said body, the lower runs of said chains constituting tread surfaces, shelves projecting laterally from said body between the wheels of each side, housings carried by said shelves, vertically movable rods mounted in said housings, rollers on the lower ends of said rods and bearing on the bottom runs of said chains, springs pressing said rollers downward, means accessible from within the body to vary the vertical limits of movement of said rods and rollers, and other means operable from within the body for varying the tension of said springs.

2. In a device of the kind described, a car body, spaced wheels on each side of said body, sprocket teeth on said wheels, tractor sprocket chains each connecting the wheels on a respective side of said body, the lower runs of said chains constituting tread surfaces, shelves projecting laterally from said body between the wheels of each side, housings carried by said shelves, vertically movable rods mounted in said housings, rollers on the lower ends of said rods and bearing on the bottom runs of said chains, gear nuts threaded on the lower ends of the rods beneath the housings, springs between said nuts and housings, vertically disposed drum and gears meshing with the gear nuts, and means to rotate the drum gears including handled cranks located within the car body.

3. In a device of the kind described, a car body, spaced wheels on each side of said body, sprocket teeth on said wheels, tractor sprocket chains each connecting the wheels on a respective side of said body, the lower runs of said chains constituting tread surfaces, shelves projecting laterally from said body between the wheels of each side, housings carried by said shelves, vertically movable rods mounted in said housings, rollers on the lower ends of said rods and bearing on the bottom runs of said chains, gear nuts

threaded on the lower ends of the rods beneath the housings, springs between said nuts and housings, vertically disposed drum and gears meshing with the gear nuts, and means to rotate the drum gears including handled cranks located within the car body, and adjustable means accessible from within the car body for varying the vertical limits of movements of said rods.

In testimony whereof I affix my signature.

STEPHEN KUPCHAK.

Witnesses:

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