J. B. FELICETTI.

MANUALLY PROPELLED ARMORED VEHICLE.

APPLICATION FILED JUNE 15, 1917.

1,273,593.

Patented July 23, 1918.

3 SHEETS—SHEET 1.

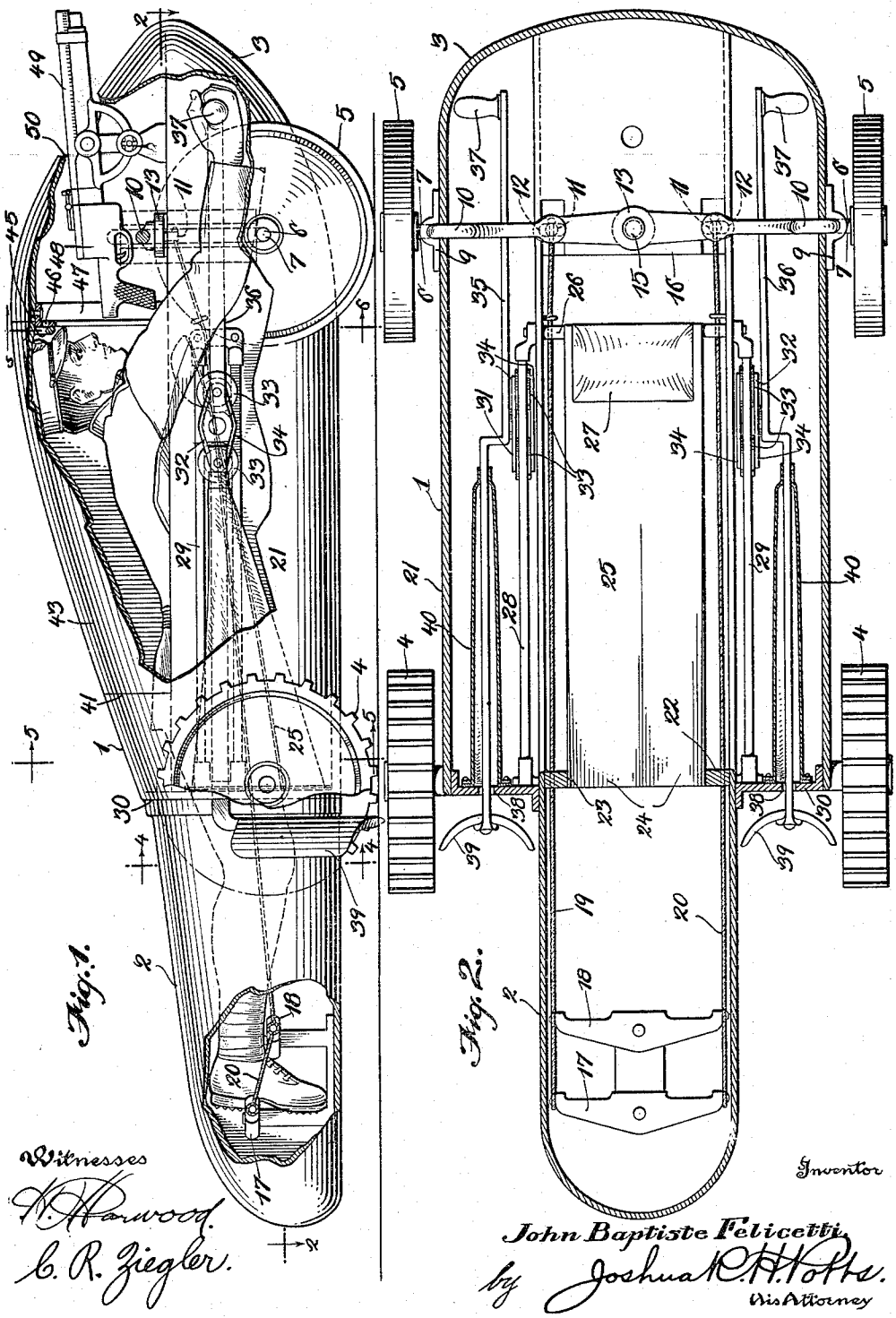


Fig. 1.

Fig. 2.

Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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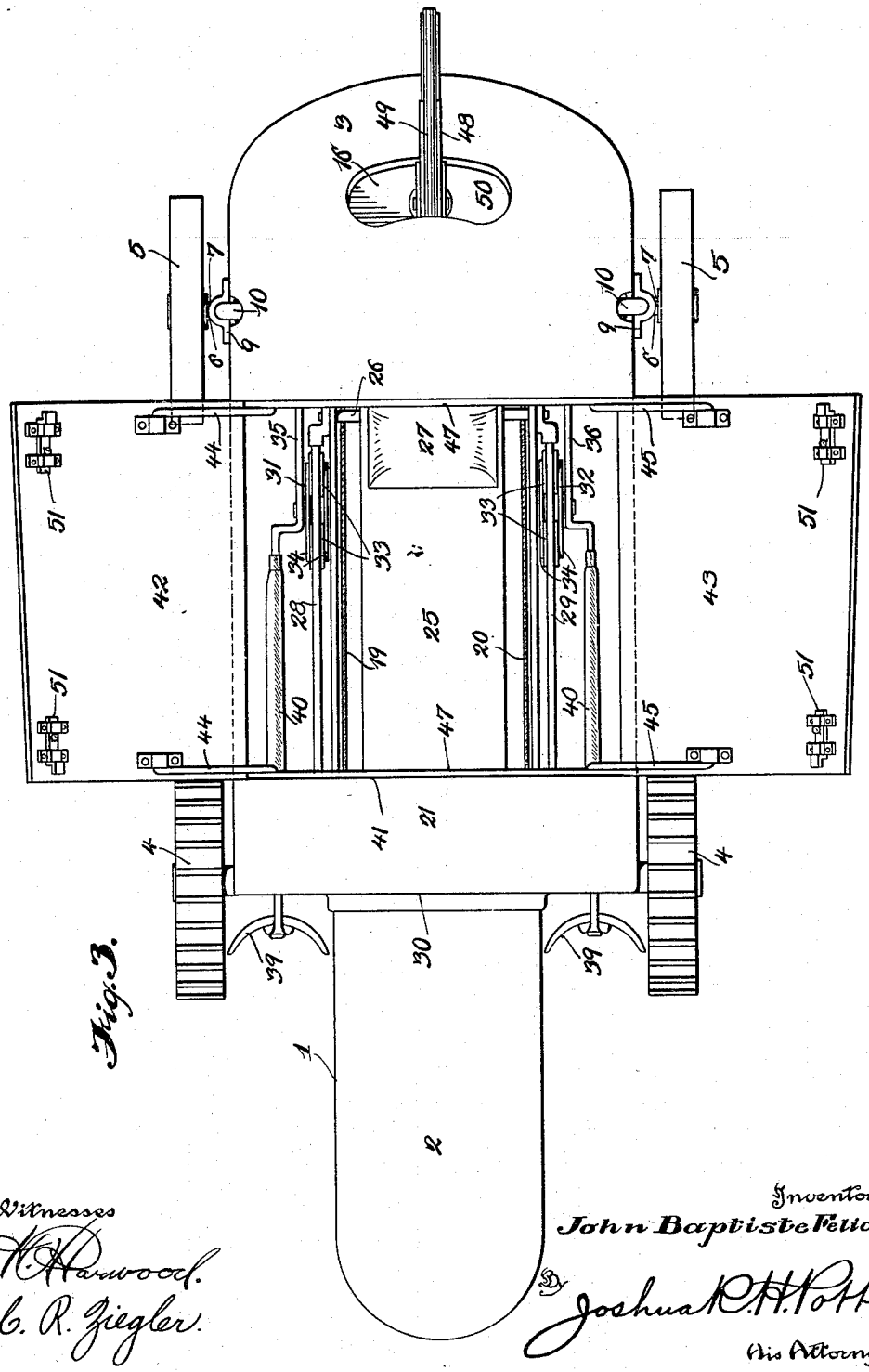


Fig. 3.

Witnesses

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3 SHEETS—SHEET 3.

Fig. 4.

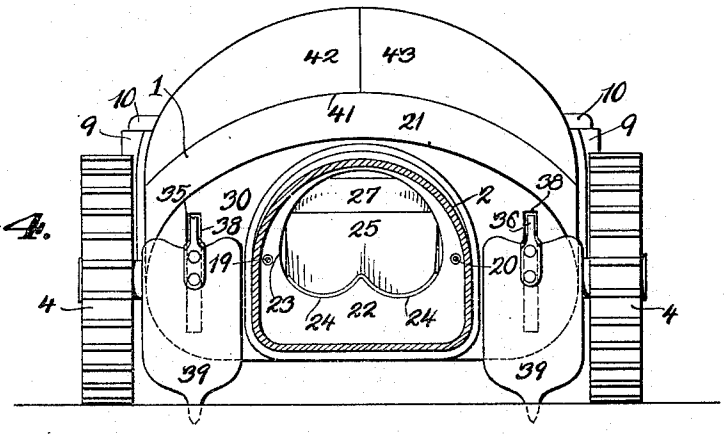


Fig. 5.

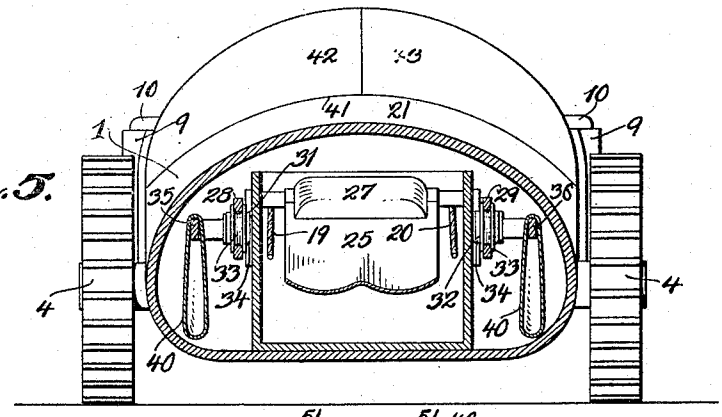
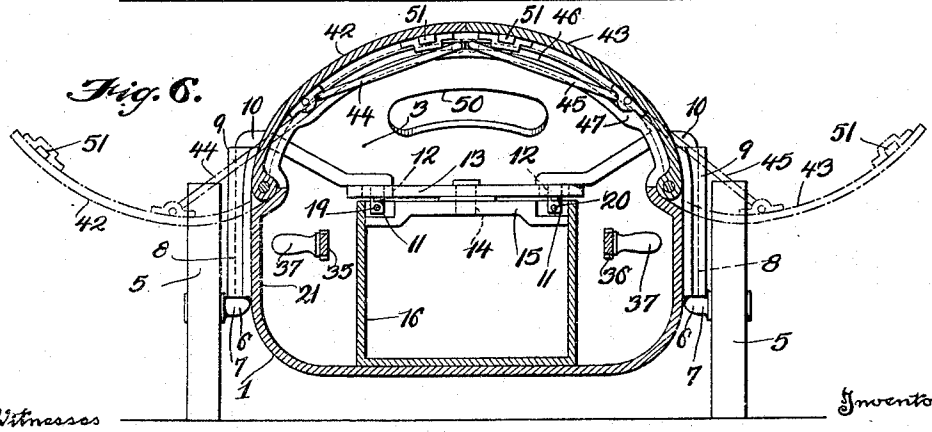


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN BAPTISTE FELICETTI, OF PHILADELPHIA, PENNSYLVANIA.

MANUALLY-PROPELLED ARMORED VEHICLE.

1,273,593. Specification of Letters Patent. Patented July 23, 1918.

Application filed June 15, 1917. Serial No. 174,908.

To all whom it may concern:

Be it known that I, JOHN BAPTISTE FELICETTI, a subject of the King of Italy, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Manually-Propelled Armored Vehicles, of which the following is a specification.

My invention consists of an improved manually propelled armored vehicle. One object of my invention is to provide a vehicle of the above mentioned type which can travel over land, sea, snow, and sand, or through water and mud.

Another object is to so construct my improved vehicle that it will be capable of climbing hills and descending valleys with ease and safety.

A further object is to so design my improved vehicle that it will be particularly useful for war purposes.

A still further object is to make my improved vehicle of comparatively simple construction and so that it can be operated by a man while in either a sitting or reclining position.

Another object is to make my invention of sufficiently light weight so that it can be operated by a man or if necessary can be carried a short distance by the operator.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a side elevation of my invention partly broken away.

Fig. 2 is a sectional plan view on the line 2—2 of Fig. 1.

Fig. 3 is a top plan view showing the doors in an open position.

Fig. 4 is a transverse section on the line 4—4 of Fig. 1.

Fig. 5 is a transverse section on the line 5—5 of Fig. 1.

Fig. 6 is a transverse section on the line 6—6 of Fig. 1.

Referring to the drawings, the body portion 1 comprises a shell which is preferably made of metal and is capable of inclosing a man and the operating elements as will hereinafter be described.

The body portion 1 includes a tail section 2 and a tapered front end 3. The body portion is mounted on two pairs of wheels 4 and 5, the wheels 4 preferably having ribs on their peripheral surfaces to dig into and grip the ground over which the vehicle travels. The wheels 5 which form the steering wheels, are mounted on axles 6. These axles 6 have substantially horizontal portions 7 on which the wheels 5 are journaled, and vertical portions 8 which are free to rock within bearings 9 are mounted on the outer surface of the shell 1 as clearly shown in Figs. 2, 3, and 6.

The upper ends 10 of the axles 6 extend substantially horizontal and through holes in the shell 1. These latter mentioned portions of the axles are then bent downwardly as clearly shown in Fig. 6 and have pivot pins 11 which extend through slots 12 in a steering cross head 13, the latter being centrally pivoted at 14 to a supporting structure 15 within the shell.

By this construction it will be noted that if the steering cross head 13 is moved on the pivot 14, the axles 6 will be turned within the bearings 9 and the wheels 5 will consequently be steered in a corresponding direction.

An elongated trough 16 is mounted within the shell 1, and the operator can either sit or lie within this trough, the same being closed at its sides but open at the top. The tail section 2 is provided with two pivoted levers 17 and 18. The lever 17 is preferably mounted slightly higher than the lever 18 and is designed to be engaged by the feet of the operator when operating the vehicle while in a reclining position as clearly illustrated in Fig. 1.

The levers 17 and 18 are connected by ropes 19 and 20 to the pivot pins 11 which extend through the steering cross head 13. If the legs of the operator are comparatively short, he can steer the device by engaging the lever 18 with his feet, or if he can reach the lever 17 as shown in Fig. 1, the lever 18 serves as a support for his ankles during the steering action.

Adjacent the point of intersection of the tail section 2 with the wider or main section 21 of the body portion 1, I preferably provide a partition 22 (see Figs. 2 and 4). This partition 22 has a hole 23 cut therein through

which the legs of the operator can extend. The lower portion of this hole 23 is shaped to form pockets or recesses 24 which correspond with the cross sectional shape of a man's legs.

A hammock 25 has one end secured to the partition 22 and follows the contour of the recesses 24. The other end of the hammock is secured to a cross rod 26 which extends through the trough 16, and the hammock thus secured extends downwardly toward the rear as shown in Figs. 1, 2, 4, and 5.

A pad or cushion 27 is mounted on the forward front end of the hammock 25 and serves as a rest for the chest of the operator while operating the vehicle. The cross rod 26 forms a support at its opposite ends for two pairs of rails 28 and 29. The rails of each pair are spaced apart and arranged parallel. The rear ends of the rails are secured with the back 30 of the portion 21 of the shell 1, so that said rails are firmly secured within the shell and spaced from the outer side surfaces of the trough 16 as clearly shown in Figs. 2, 3, and 5.

Two carriages 31 and 32 each include two grooved wheels 33 which are connected together on opposite sides by plates 34. Hand operating levers 35 and 36 are pivoted within their lengths to the plates 34 of the carriages 31 and 32 respectively. The forward ends of the levers 35 and 36 have handles 37, the rear ends of the levers passing out through slots 38 in the back 30 of the shell 1.

The extreme rear ends of the levers 35 and 36 are provided with impact members 39 which are pointed at their lower ends and curved in cross section (see Figs. 1, 2, and 4).

Flexible hoods 40 which are made of water-proof material surround the levers 35 and 36 adjacent their rear portions, one end of each hood being tightly bound around a respective lever, the opposite ends of the hoods being secured to the inner surface of the back 30 and surrounding the slots 38. Thus, while the levers 35 and 36 are free to move longitudinally and on the pivots of the carriages 31 and 32, it will be impossible for water entering through the slots 38 to pass into the shell, the hoods 40 forming a seal to prevent such action.

The portion 21 of the shell 1 is open at its top as shown at 41, and this opening can be closed by doors 42 and 43 which are hinged to the sides of the shell. Retaining rods 44 and 45 are pivotally connected to the doors 42 and 43 and also have a portion designed to slide within slots 46 in a bracket 47, the latter being secured to the inner surface of the shell. The lower ends of the slots 46 are so arranged that when the doors 42 and 43 are opened, the rods 44 and 45 will abut the walls of the bracket 47 forming said lower ends of the slots and thereby support the doors. The doors thus supported in an open position can be used for conveying material or on a battle field can be used to carry wounded soldiers, the operator of the machine occupying his normal position within the trough 16.

A gun 48 is pivotally supported within the front portion of the shell 1 and the barrel 49 of this gun is adapted to project through a hole 50, the hole 50 being of sufficient size to permit the sighting of the gun through the hole by the occupant of the vehicle. The operator of the vehicle when the doors 42 and 43 are closed, is protected against gun fire and can approach the enemies line without fear of being injured.

In operation, the operator of the vehicle grasps the handles 37, and by a pivotal and longitudinal movement of the latter, causes the impact members 39 either to dig into the ground when the vehicle is operated on land or to engage the water as oars if the vehicle is to be operated in water.

The carriages 31 and 32 will move relatively to the rails 28 and 29. In other words, the pulling of the levers 35 and 36 will impart a relative pushing movement of the vehicle on the wheels 4 and 5. If the operator desires to sit within the vehicle, the doors 42 and 43 can be opened and the hammock 25 detached. He can then sit within the bottom of the trough 16 and can steer the device by placing his feet upon the steering cross head 13.

The doors 42 and 43 are provided with bolts 51 which may be slid into engagement with the body portion of the shell 1 and thereby lock the doors in their closed position.

A machine constructed in accordance with my invention can be made so small in size as to render it almost invisible to the enemy even at short range, so that an army equipped with machines made in accordance with my invention can enter an enemies' territory practically unobserved.

Furthermore, since this machine is manually propelled, it makes practically no noise as compared to a machine which is driven by an internal combustion engine, and therefore the approach of an army equipped with machines of this type could not readily be detected by the enemy.

Another advantage of my improved vehicle is that ammunition and stores can be carried therein. The construction of the steering axles as above described permits their entrance within the shell at such height as to be above the water level when the device is operated in water, so that no water can enter through the openings necessary to permit the front axles to enter the shell 1. The steering of the vehicle when in the water can be done by the aid of the impact mem-

bers 39 in very much the same order as with the oars in a row boat, hence from the above noted description it will be understood that my invention is of extremely practical use, both as an ordinary means of conveyance, or for war purposes.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, and means extending from said impact members into said shell and designed to be actuated by the operator to propel the vehicle, substantially as described.

2. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, levers extending from said impact members into said shell, rails mounted within the shell, carriages movable along said rails, and means forming pivotal connection between the levers and the carriages, substantially as described.

3. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, levers extending from said impact members into said shell, rails mounted within the shell, carriages movable along said rails, means forming pivotal connection between the levers and the carriages, said carriages including grooved wheels for engagement with the rails, substantially as described.

4. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, means extending from said impact members into said shell and designed to be actuated by the operator to propel the vehicle, certain of said wheels having axles pivotally supported on the shell, and steering means within said shell connected with said axles whereby the latter can be moved on their pivots, substantially as described.

5. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, means extending from said impact members into said shell and designed to be actuated by the operator to propel the vehicle, certain of said wheels having axles pivotally supported on the shell, a steering arm pivotally mounted in said shell, and means pivotally connecting the steering arm with said axles, substantially as described.

6. A vehicle including a shell forming a complete closure for the operator, wheels supporting said shell, impact members outside of said shell, means extending from said impact members into said shell and designed to be actuated by the operator to propel the vehicle, certain of said wheels having axles pivotally supported on the shell, said shell having a tail portion into which the feet of the operator can be projected, a pivoted steering lever in said tail portion, and means connecting said latter lever with the pivoted axles whereby the latter can be moved on their pivots, substantially as described.

7. A vehicle including a shell having slots therein, impact members on the outside of said shell, levers connected to said impact members and extending through said slots, and means forming a seal for said slots and permitting movement of said levers, substantially as described.

8. A vehicle including a shell having slots therein, impact members on the outside of said shell, levers connected to said impact members and extending through said slots, and flexible hoods surrounding said levers and the slots, substantially as described.

9. In a device of the character described, a shell having a tail portion, a partition separating the tail portion from the forward portion, a hammock suspended within the shell and having a portion extending to said partition, substantially as described.

10. In a device of the character described, a shell having a tail portion, a partition separating the tail portion from the forward portion, a hammock suspended within the shell and having a portion extending to said partition, said partition having a hole therein through which the legs of the operator can be projetced into the tail portion, the bottom of said hole having recesses forming supports for the legs of the operator, substantially as described.

11. A vehicle of the character described including a shell forming a complete closure for the operator, bearings mounted on said shell, wheel supporting axles having substantially vertical portions pivoted within said bearings, said axles at their upper ends extending into said shell, and steering means within said shell operatively connected to the inwardly projecting portions of the axles, substantially as described.

12. A vehicle of the character described including a shell forming a complete closure for the operator, bearings mounted on said shell, wheel supporting axles having

substantially vertical portions pivoted within said bearings, said axles at their upper ends extending into said shell, a steering head having slots therein, and pivot pins on said inwardly projecting portions of the axles and engaging said slots in the steering head, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN BAPTISTE FELICETTI.

Witnesses:

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C. R. ZEIGLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."