Sept. 14, 1948. F. SPITZWIESER 2,449,336

SCOOTER FOR WINTER SPORTS

Original Filed Nov. 13, 1943 3 Sheets-Sheet 1

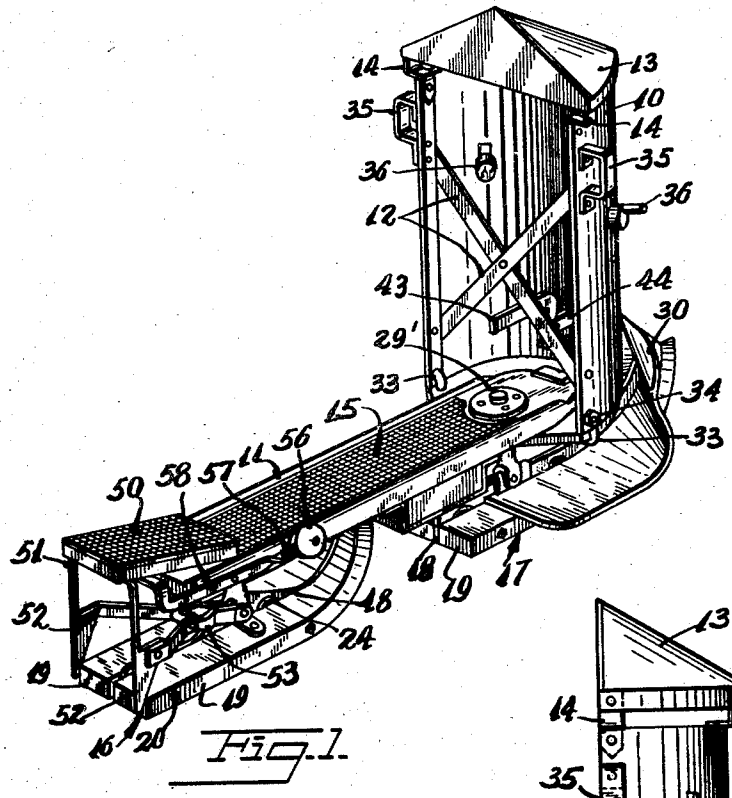


Fig. 1.

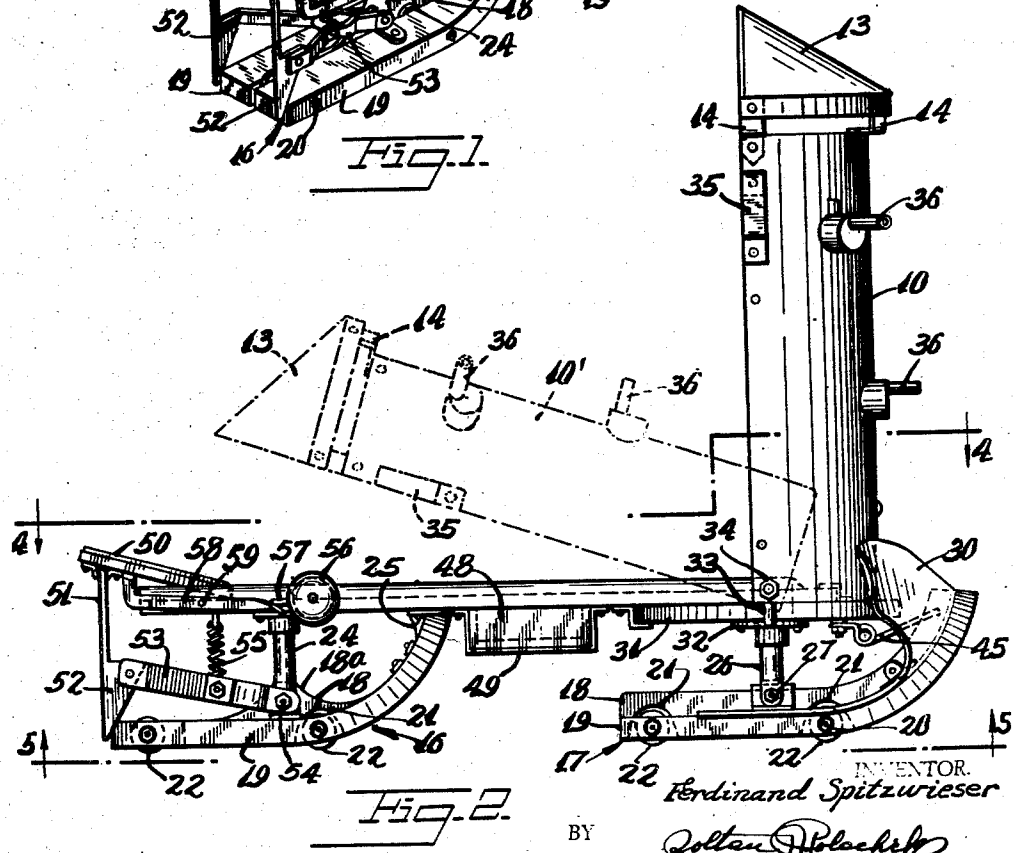


Fig. 2.

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SCOOTER FOR WINTER SPORTS

Original Filed Nov. 13, 1943 3 Sheets-Sheet 2

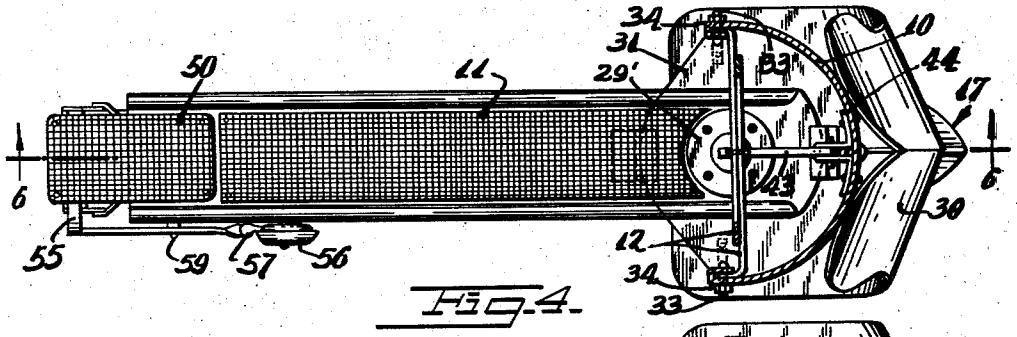


Fig. 4.

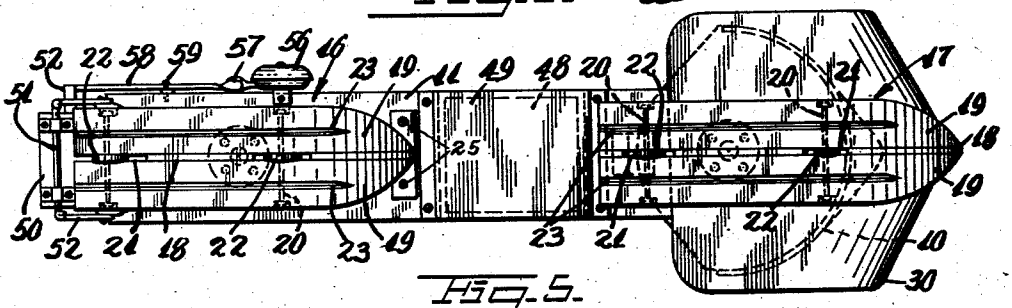


Fig. 5.

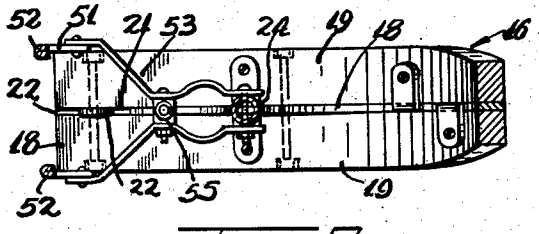


Fig. 7.

Fig. 6.

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SCOOTER FOR WINTER SPORTS

Original Filed Nov. 13, 1943 3 Sheets-Sheet 3

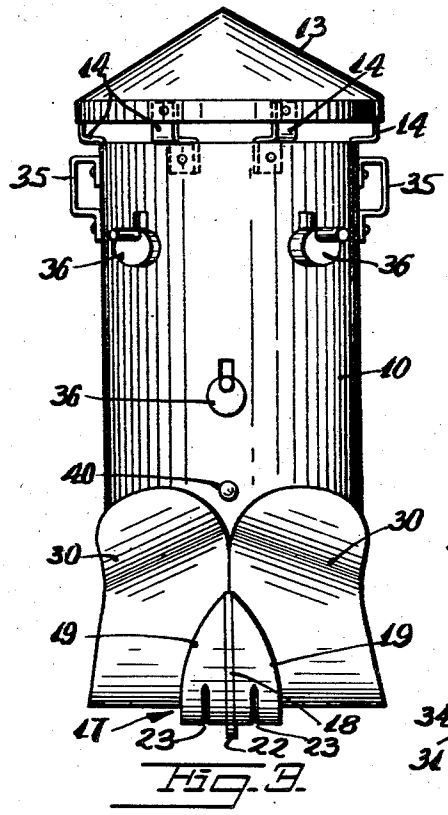


Fig. 8.

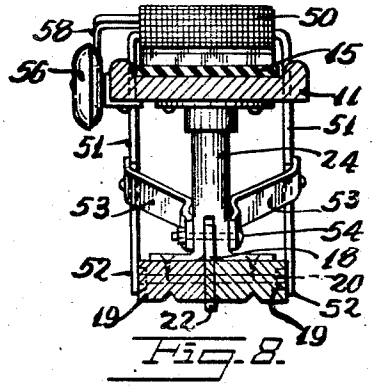


Fig. 9.

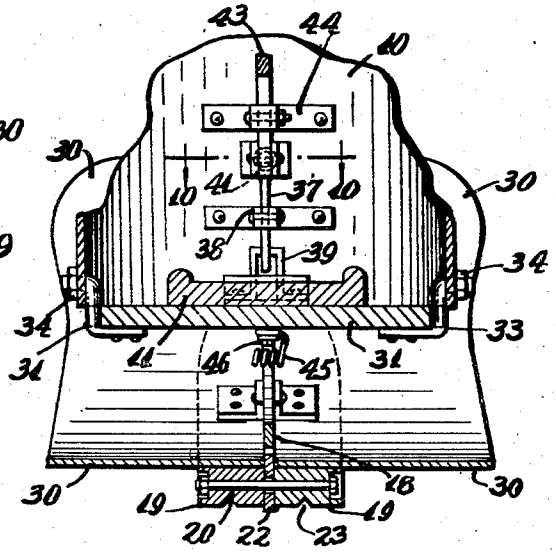
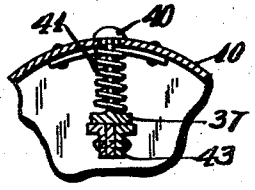


Fig. 10.



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UNITED STATES PATENT OFFICE

2,449,336

SCOOTER FOR WINTER SPORTS

Ferdinand Spitzwieser, New York, N. Y.

Substituted for application Serial No. 510,104, November 13, 1943. This application September 23, 1947, Serial No. 775,671

13 Claims. (Cl. 280—16)

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This invention relates to new and useful improvements in a scooter to be used as a toy or as a warfare device.

This is a substitute of my original application filed on November 13, 1943, Serial No. 510,104, now abandoned.

More specifically the invention proposes the construction of a scooter having a platform with a vertical semi-circular casing extending upwards from the front of the platform providing a means for steering the device and which may be constructed of armor plate providing a protective shield behind which a soldier may crouch.

A still further object of the invention is the provision of spaced runners mounted upon the bottom of the platform to permit the device to be conveniently propelled over the surface of snow.

It is further proposed to provide the front of the platform with turnably mounted disc upon which the bottom of the semi-circular casing is mounted and which also supports the front runner in a manner to cause the front runner to be turned when the casing is turned relative to the platform.

A still further object of the invention proposes the provision of guns mounted on the semi-circular casing and having their muzzles directed to shoot in front of the device.

A further object of the invention proposes the provision of a means for pivotally mounting the semi-circular casing permitting it to be moved into a position in which it lies flush on the platform to permit the device to be conveniently carried in a truck or other transporting vehicle.

For further comprehension of this invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of a scooter constructed in accordance with this invention.

Fig. 2 is a side elevational view of Fig. 1.

Fig. 3 is a front elevational view of Fig. 1.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a bottom plan view on the line 5—5 of Fig. 2.

Fig. 6 is a vertical longitudinal sectional view on the line 6—6 of Fig. 4.

Fig. 7 is a horizontal sectional view on the line 7—7 of Fig. 6.

Fig. 8 is a vertical sectional view on the line 8—8 of Fig. 6.

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Fig. 9 is a partial vertical sectional view on the line 9—9 of Fig. 6.

Fig. 10 is a partial horizontal sectional view on the line 10—10 of Fig. 9.

The scooter, according to this invention, includes a vertical semi-circular casing 10 mounted on the front of a platform 11. It is pointed out that the scooter, as shown, may be constructed to be used as a toy by children or may be constructed of heavier, more durable material to be used as a means of transportation for soldiers. In the latter case the semi-circular casing 10 is preferably constructed of armor plate and is braced by means of strips of metal 12 extended diagonally across the open side thereof. A partial conical shaped hood 13 is supported upon the top of the semi-circular casing 10 by means of several brackets 14. The bottom edge of the hood 13 is spaced slightly above the top edge of the casing 10 providing space through which a soldier crouched behind the casing may look.

The platform 11 may be constructed of wood or other similar material and is provided with a rubber coating 15 upon which a person is adapted to stand and which acts as a friction element for preventing the foot from slipping when placed thereon.

Runners are provided for supporting the platform 11 and include a fixed rear runner 16 and a turnably mounted front runner 17 for steering the scooter and pivotally mounted for riding over obstacles with greater ease. Each of the runners 16 and 17 is substantially alike in construction and comprises a central rib 18 and a pair of side runner portion 19 attached thereto by means of bolts 20 extended completely through these elements (see Figs. 8 and 9). The central rib 18 arranged concentrically with the bolts 20 is provided with cutout areas 21 within which wheels 22 are disposed. These wheels 22 are rotatively supported on the bolts 20 which connect together the portions of the runners. The wheels 22 are provided for engaging the snow to maintain the vehicle on a straight course. The runner portions 19 mounted upon the sides of the central rib 18 are also provided with grooves 23 for assisting in maintaining the vehicle on an even course.

The rear runner 16 has an upwardly extending portion 18' on its central rib which is securely attached to a bracket 24 which in turn is mounted upon the bottom face of the platform 11 of the device. The front end of the rear runner 16 is also secured to the bottom face of the platform 11 by means of screws 25. The front runner 17 is supported in a slightly different manner. A shaft 26 is vertically extended and is provided

at its bottom end with an inwardly extended cut-out into which the top edge of the central rib 18 extends.

A bolt 27 is extended through the overlapping portions 18 and the shaft 26 for pivotally mounting the front runner upon the bottom of the shaft 26 permitting a slight pivotal motion to permit the front runner to more easily ride over obstacles in its path. The top end of the shaft 26 extends through a bearing 28 and is attached thereto by means of a pin 29. The free end of the shaft 26 extends through the platform 11 and engages into a thrust bearing 29' mounted on the top face of the platform 11. The front runner 17 is also provided with a protective shield 30 mounted on the top thereof, and extending rearwards along the top face of the runner portions 19. This shield 30 acts as a guard to prevent snow and ice from being thrown upwards into the rider's face.

A disc 31 is mounted on the front bottom face of the platform and is arranged coaxially with the swivel mounting of the front runner. This disc 31 is attached to the bracket 28 by means of several pins 32 and in turn supports the semi-circular casing 10 to cause the disc and front runner to turn when the casing is turned.

A means is provided for pivotally supporting the casing 10 upon the casing 31 to permit it to pivot rearwards, as indicated by the dot and dash lines 10' shown in Fig. 2, to assume a horizontal position and rest on the top face of the platform 11. To accomplish this the disc 31 is provided at diametrically opposite sides with trunnion elements 33 which pass through the lower corner of the semi-circular casing 10 and which are provided with nuts 34 for securely holding the casing 10 in position thereon. The trunnions 33 permit rearward pivoting of the casing 10 to reduce the over all size of the device and permit a number of superimposed scooters to be conveniently carried in a truck body to be transported from place to place.

For convenience of the operator the casing 10 is provided on diametrically opposite sides with handles 35 which may be gripped for turning the casing to steer the device. The casing 10 is also provided with a plurality of guns 36. If the device is to be used as a toy the guns 36 should also be toys. However, if the device is constructed for use in warfare the guns 36 might be of the machine gun or other semi-automatic type, capable of shooting a low calibre bullet.

A means is provided for latching the casing 10 in a vertical position on the platform 11 to prevent relative pivoting. This means comprises a bolt member 37 pivotally mounted upon a bracket 38 attached to the inside face of the casing 10. A keeper 39 is mounted on the top face of the disc 31 and is adapted to be engaged by the bolt 37 for locking the casing against pivoting. A means is provided for urging the bolt 37 into a position in which it engages the keeper 39. This means comprises a pin 40 attached to the free end of the bolt 37 and passing through an opening 42 formed in the front of the casing 10. A spring 41 is coaxially mounted upon the pin 40 and operates between the adjacent faces of the casing 10 and the bolt 37 for urging the bolt 37 to engage the keeper 39.

A means is provided for conveniently releasing the bolt 37 when it is desired to pivot the casing 10 rearwards. This means comprises a pivotally mounted bell crank 43. The bell crank 43 is mounted upon a bracket 44 attached to the inside face of the casing 10 above the bolt 37. The bell crank 43 has one arm bearing against the free end of the bolt 37 on the side opposed to the side engaged by the spring 42. The other arm of the bell crank 43 is free to be engaged by one's foot for pivoting the bell crank and in turn pivot the bolt 37.

A resilient means is provided between the disc 31 and the front end of the front runner 17 for urging the front runner into a normal horizontal position relative to the disc 31. This means comprises a spring 45 having a coiled central portion with one end secured to the bottom face of the disc 31 by means of a bolt 46. The other end of the spring 45 is looped and passed through an opening 47 formed in the central rib 18 of the front runner 17. The spring 45 normally acts to restrain the front runner 17 from pivoting about the bolt 27.

A drawer 48 is supported at an intermediate area on the bottom face of the platform 11. This drawer 48 is supported by means of a wide bracket 49 and is adapted to be used for carrying ammunition or other similar articles.

The rear runner 16 is also provided with a braking device for permitting the forward motion of the device to be conveniently retarded when desired. This means comprises a brake platform 50 having its front edge resting upon the top face of the rear portion of the platform 11. Pivotally mounted to the bottom face of the brake platform 50 is an inverted U-shaped member 51. This inverted U-shaped member 51 has its side arms directed downwards and provided at their free ends with pointed portions 52 which are adapted to engage the ground and dig into the same to retard the forward motion of the device when the operator steps upon the brake platform 50. A means is provided for holding the brake device in an inoperative position. This means comprises a bracket 53 having one of its ends pivotally attached to the downwardly extending arms of the inverted U-shaped member 51 and its other end pivotally attached into the pin 54 which attaches the rear runner 16 to the rod 24. A spring 55 operates between the bracket 53 and the bottom face of the platform 11 for raising the bracket 53 to in turn raise the inverted U-shaped member 51.

A bell 56 is mounted on the side of the platform 11 and has an operative member 57 extending rearwards therefrom to be urged upwards to cause the bell 56 to ring. A lever 58 is pivotally mounted intermediate of its ends upon a pin 59 mounted on the side of the platform 57. The rear end of the lever 58 is securely attached to the brake platform 50. The front end of the lever 58 is arranged immediately adjacent the operating lever of the bell 56. Thus when the operator steps upon the brake platform to retard forward motion of the vehicle the lever 58 will pivot causing the bell 56 to ring and indicate to the operators of following scooters that the front scooter is being slowed down and that they should take similar action to avoid collision.

The operation of the device is as follows:

Assuming that the device is constructed for use in warfare, the soldier stands upon the platform 11, grips the handles 35 and propels himself forward across the snow by using one foot to push on the ground while the other foot rests upon the platform. To turn the device the casing 10 is turned and this movement is transmitted to the front runner 17 through the connection of the front runner with the casing 10 through the

medium of the disc 31. When the enemy is encountered the soldiers may crouch beneath the casing 10 using the same as a shield and peering through the space between the top edge of the casing 10 and the partial conical shaped hood 13 he may turn the casing to direct his guns 36 to fire directly upon the enemy.

To retard the forward motion of the vehicle the brake device may be used by a stepping on the brake platform 50 causing the U-shaped member 51 to be moved downwards against the holding action of the spring 55 engaging the pointed elements 52 into the surface of the snow and restrain movement thereof.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc.

2. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, said scooter being constructed as a toy or for use in warfare.

3. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner urging said front runner in a normal horizontal position relative to said disc, said semi-circular casing being provided with guns pointing forwards and being either real or toy.

4. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, and semi-circular partial conical shaped hood supported at a spaced position above the top of said semi-circular casing providing a space through which a person crouching behind the casing may look.

5. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, each of said runners being substantially alike in construction and comprising a central rib to which runner portions are mounted on either side thereof.

6. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, each of said runners being substantially alike in construction and comprising a central rib to which runner portions are mounted on either side thereof, and bolts attaching said ribs and runner portions together as a unit and said ribs being provided with cutouts arranged concentrically with said bolts and in which wheels are disposed to be engaged upon said bolts.

7. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over

obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, said means for latching said casing comprising a bolt pivotally mounted upon said casing and engaging a complementary keeper mounted upon said disc, resilient means urging said bolt to continually engage said keeper, and means for releasing said bolt when desired.

8. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, said means for latching said casing comprising a bolt pivotally mounted upon said casing and engaging a complementary keeper mounted upon said disc, resilient means urging said bolt to continually engage said keeper, and means for releasing said bolt when desired, said latter means comprising a pivotally mounted bell crank having one arm engaging said bolt and a free arm to be engaged by one's foot to be pivoted to correspondingly pivot said bolt to disengage it from said keeper.

9. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, said resilient means comprising a spring having one end secured to said disc and the other end secured to said runner.

10. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, and a drawer supported upon the bottom face of said platform intermediate the ends thereof for carrying ammunition and other similar articles.

11. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, and a brake device provided on the rear portion of said platform for retarding the forward motion of said device when stepped upon.

12. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner for urging said front runner in a normal horizontal position relative to said disc, and a brake device provided on the rear portion of said platform for retarding the forward motion of said device when stepped upon, said brake comprising a brake platform resting upon the top face of said platform, an inverted U-shaped member pivotally mounted on said brake platform and having pointed side arms directed downwards to engage the surface over which said device is traveling, and means for causing said brake to be moved to a normal inoperative position.

13. In a scooter having a vertical semi-circular casing positioned at the front of a platform, runners supporting said platform and including a turnably mounted front runner for steering the scooter and pivotally mounted for riding over obstacles with greater ease, a disc supporting said semi-circular casing and being turnably mounted on the front of said platform coaxially of said turnably mounted runner, a trunnion mounted on said disc and connected with the rear side portions of said semi-circular casing for pivotally supporting said casing so that it may pivot rearwards, means for latching said casing in its vertical position on said disc, and resilient means between said disc and said front runner urging said front runner in a normal horizontal position relative to said disc, and a brake device provided on the rear portion of said platform for re-

tarding the forward motion of said device when stepped upon, and a bell arranged to ring when said brake is operated to indicate that the brake is being applied.

FERDINAND SPITZWIESER.

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