April 18, 1967 D. M. WEITZNER 3,314,494

COLLAPSIBLE LUGGAGE SCOOTER

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Fig. 1.

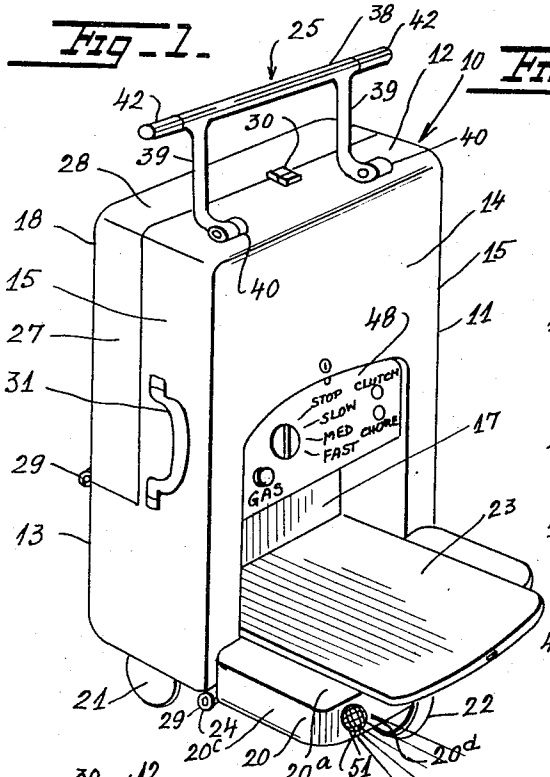


Fig. 2.

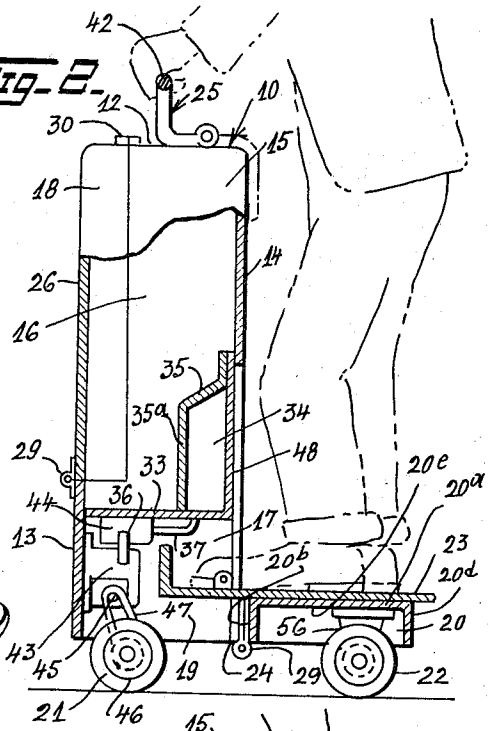


Fig. 3.

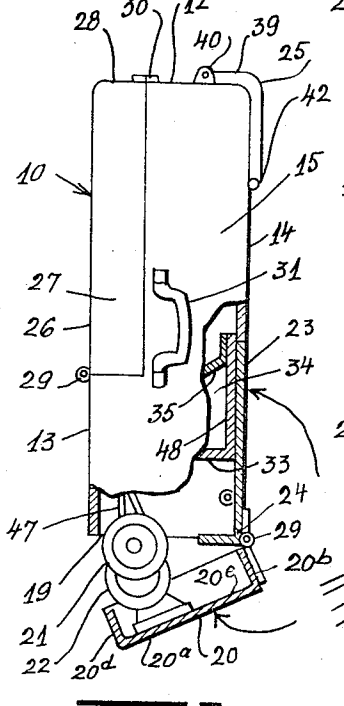


Fig. 4.

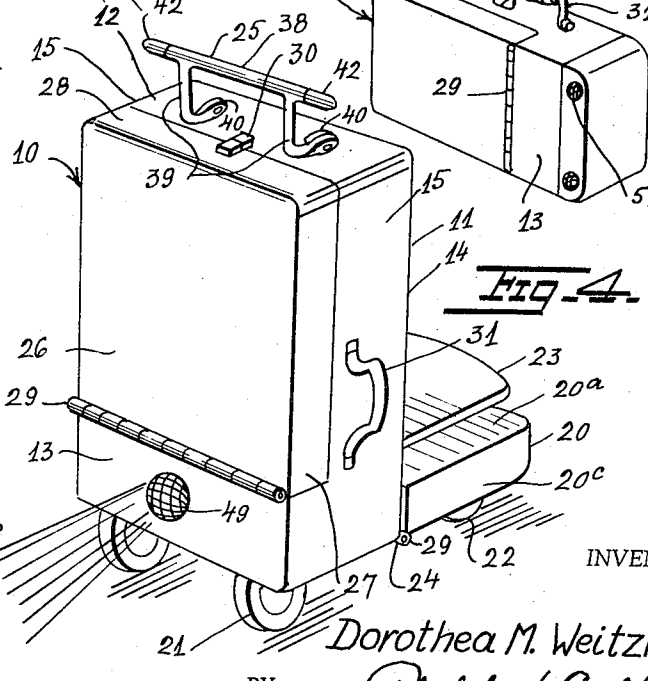


Fig. 5.

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COLLAPSIBLE LUGGAGE SCOOTER

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Fig. 6.

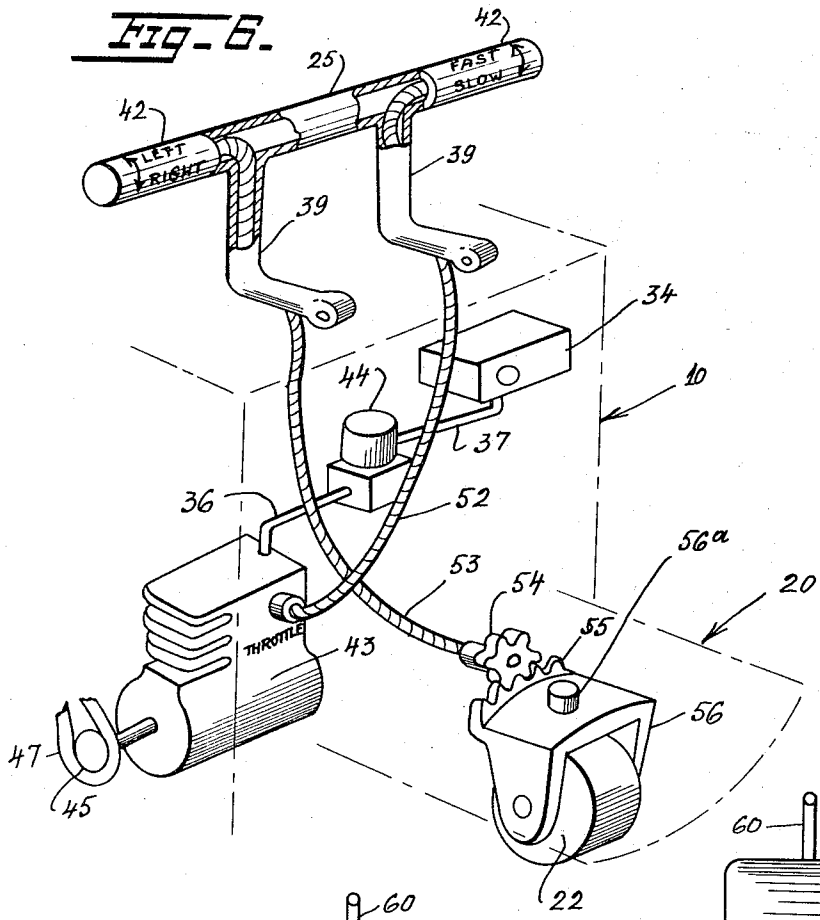


Fig. 7.

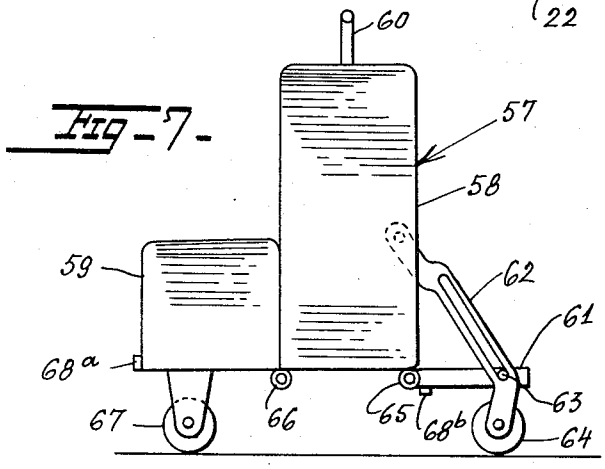
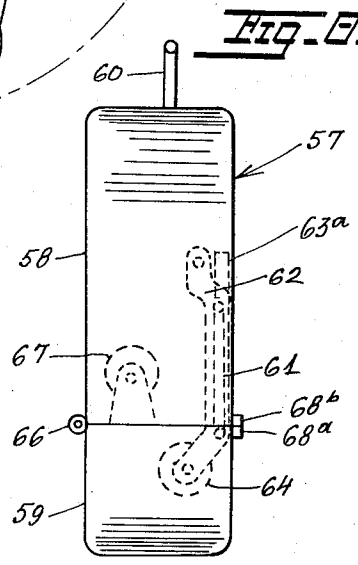


Fig. 8.



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COLLAPSIBLE LUGGAGE SCOOTER

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Fig. 9.

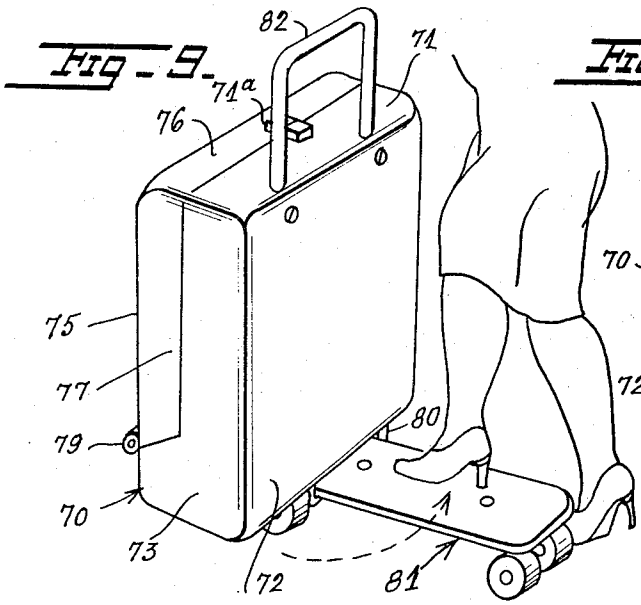


Fig. 10.

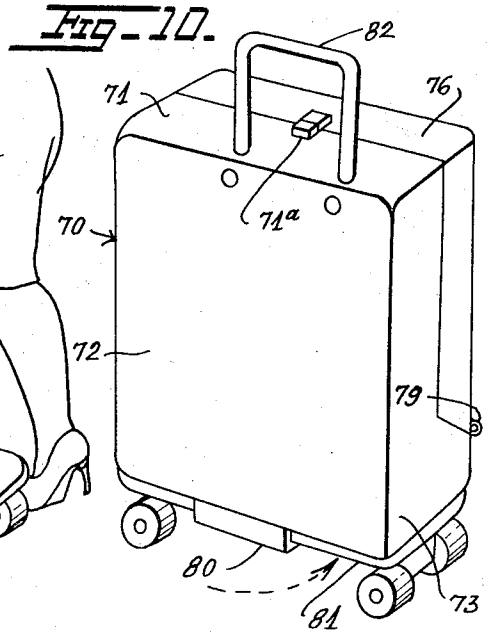


Fig. 11.

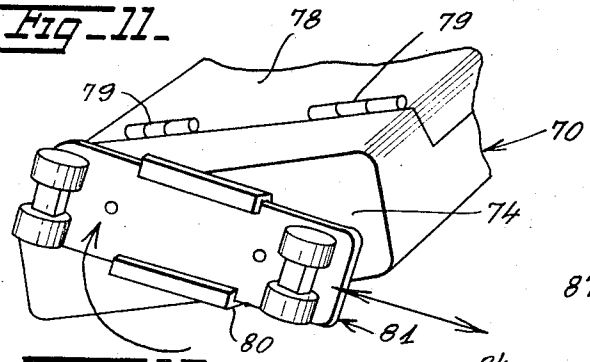


Fig. 13.

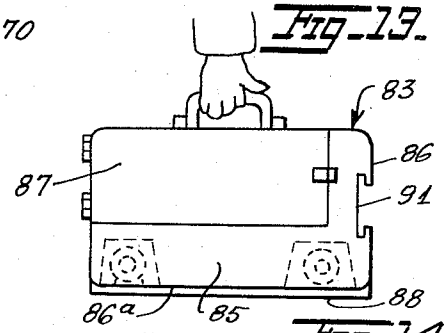


Fig. 12.

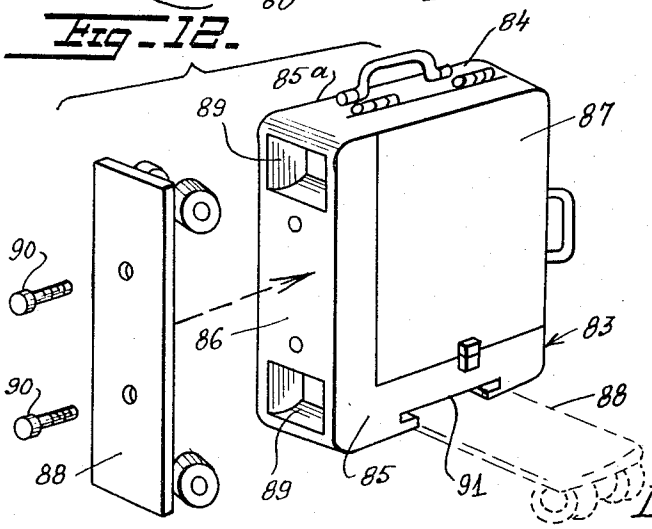
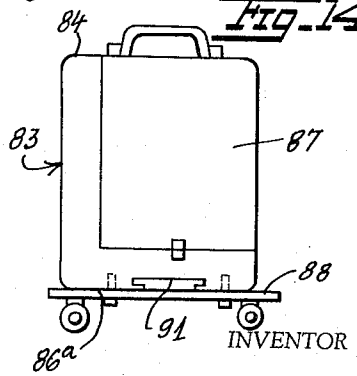


Fig. 14.



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Patented Apr. 18, 1967

3,314,494

COLLAPSIBLE LUGGAGE SCOOTER

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Filed July 12, 1965, Ser. No. 471,355
9 Claims. (Cl. 180—27)

This invention relates to collapsible motor scooters. Specifically, it relates to a collapsible luggage scooter that can be converted into a suitcase.

It is well known that luggage, such as suitcases and sea trunks can become burdensome when it is necessary to carry them over relatively long distances.

This is especially burdensome to the salesmen who have to make numerous sales calls and therefore have to carry the samples over relatively long distances in congested streets, or between the railroad trains and the like.

Therefore, it is a principal object of this invention to provide a case which selectively can be carried by hand, mounted on wheels and towed alongside, provided with a platform which in a perpendicular relationship extends from the suitcase, or converted into a motorized luggage scooter having an attached platform for a person to stand on.

Another object of the invention is to provide a case of conventional appearance which contains space for carrying articles and which further contains all the mechanical apparatus for quickly converting the case into a motorized luggage scooter.

Another object is to provide a case which is unfoldable to form a motorized scooter and which is instantly collapsible to form a conventional appearing suitcase.

Still another object is to provide a case, wherein the compartments are easily accessible without interference of any scooter component and wherein scooter mechanism is readily accessible for servicing without interfering with the article receiving compartments of the case.

Other objects are to provide a traveling scooter that is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawings wherein:

FIGURE 1 is a perspective view of the present invention set up as a motorized scooter.

FIG. 2 is a partially fragmentary side view of the present invention shown partly in cross section, assembled for a scooter operation.

FIG. 3 is a partially fragmentary side view of the present invention as the motor scooter is being collapsed into a suitcase.

FIG. 4 is a perspective view of the present invention set up as a motor scooter.

FIG. 5 is a perspective view of the present invention appearing as a suitcase.

FIG. 6 is a perspective view of the handle bar means and the associated components, connected thereto.

FIG. 7 is a side view of a modified form of invention set up in its expanded form.

FIG. 8 is a modified form of invention shown in its collapsed form.

FIG. 9 is a perspective view of a modified form of invention in its expanded form.

FIG. 10 is a perspective view of a modified form of the invention as in FIG. 9, wherein the platform means is retracted.

FIG. 11 is a bottom view of the modified view of the invention as shown in FIG. 9, wherein a platform means is turned away from the base of the suitcase.

FIG. 12 is a perspective view of a modified form of invention wherein the suitcase is provided with receptacles for the platform means.

FIG. 13 is a side view of a modified form of invention showing a recess on the side of the suitcase.

FIG. 14 is a side view of a modified form of the invention showing a recess on the bottom of the suitcase.

Referring now to the drawings 1 to 6 in detail, the numeral **10** represents a traveling luggage scooter wherein there is a case or suitcase **11**. The case is generally of rectangular configuration and is bonded by a top wall **12**, a front wall **13**, rear wall **14**, side walls **15** and a bottom end **19**.

The case **11** has a front opening **16** (see FIG. 2) which is used for storing articles to be transported by the luggage scooter. Cover **18** is used to enclose the front opening **16**. Cover **18** consists of front panel **26**, side panels **27** and top panel **28**. Front panel **26** of the cover **18** is connected to the front wall **13** of the case **11** by means of hinges **29**. The top panel **28** and top wall **12** can be secured together by means of any suitable locking device **30**. On the top wall **12** there is handle bar means **25** including a horizontally disposed handle bar **38**, two L-shaped arms **39** spaced from each other and being positioned in parallel. The top portions of arms **39** are connected to bar **38** near the end portions of bar **38**. Two clamp units **40** spaced from each other and fixedly mounted on the top wall **12** of the case **11** are provided. Each of the arms **39** is pivotally connected and secured to each of the clamps **40** in the usual manner. Each one of the end portions of the bars **38** is surrounded by a turnable sleeve **42** which sleeve is capable to control the traveling of this scooter. This will be explained later in the following paragraphs.

The rear wall **14** of case **11** shows a rear opening **17**, and on the top of rear opening there is a vertically disposed panel **48** which features clutch and choke buttons, a turnable knob depicting variations of speed and stop means, and a gas inlet to the gas tank **34** one side of which is located behind the control panel **48** and suitably mounted thereto. The bottom of gas tank **34** is placed on a vertically disposed frame **33** which is integrally connected with the previous mentioned control panel **48**. On the other side of the frame **33** there is front wall **13** of case **11** with which frame **33** is integrally connected. The other side **35** of gas tank **34** is shielded from the opening **16** by a metallic shield **35**, one end of which is connected with the top portion of the control panel **48**, the bottom portion of shield **35** being connected with the upper surface of frame **33**. This frame has a hole (not shown) adapted to accommodate a pipe **37** which connects gas tank **34** with carburetor **44** which, in turn, is connected to engine **43** by means of another pipe **36**. A gasoline driven engine **43** provides the power means for driving the scooter and is connected through its power shaft **45** to a pulley **46** of the wheels **21** by means of a pulley belt **47**. Engine **43** is mounted on the inside of the front wall **13** by any suitable means (not shown) and carburetor **44** is mounted to the bottom part of the frame **33** by any acceptable means.

A lamp **49** is mounted centrally on the outer portion of the front wall **13** of the case and is powered by a battery (not shown). One of the sides **15** features a handle **31** which is pivotably mounted thereto. The bottom end **19** of case **11** accommodates two wheels **21** which are positioned in parallel to each other and connected to each other in any suitable manner. These wheels are capable of delivering various speeds for the luggage scooter in accordance with turning of a control sleeve **42** having markings FAST-SLOW inscribed therein. Sleeve **42** is directly connected to the throttle of the engine **43** by means of supply line **52** thus causing wheels **21** to rotate in accordance with turning of FAST-SLOW sleeve **42**.

At one side **24** of the bottom end **19** of the case **11** there is a hinge **29** which connects the bottom end **19** with

a platform **20** which is adapted to be positioned with the bottom end **19**, i.e., closing the bottom end and thus forming a new bottom or when positioned in a perpendicular relationship with the rear wall **14** causing formation of a motorized luggage scooter. Platform **20** includes a top side **20***a*, front flange **20***b*, side flanges **20***c*, rear flanges **20***d* and bottom side **20***e*. A caster wheel **22** having a clamp **56** suitably connected thereto is suitably positioned and connected to the bottom side **20***e* of the platform **20** by means of stub **56***a*. One side of clamp **56** features a gear rack **55** which is adapted to meshingly engage a pinion **54** mounted on a flexible shaft **53**. Thus when it is desired to turn the luggage scooter to right or left a control sleeve **42** of the handle bar **25** marked LEFT-RIGHT is turned. This causes turning of the flexible shaft **53** which in turn rotates pinion **54** causing turning of the pinion rack **56** and simultaneously caster wheel **22**. Two parallel spaced rear or parking lights are mounted in the rear flange **20***d* of the platform.

In a modified form of this invention as shown in FIGS. 7 and 8, a case **57** includes upper portion **58** and lower portion **59** connected together by means of hinges **66**. Like in the previous arrangement, platform **61** can be positioned perpendicular by means of the hinge **65** to upper portion **53**. Two linkages **62** are slidingly connected to each side of platform **61** by means of pins **63**. Wheels **64** are connected to the bottom portions of linkages **62**. The upper portions of the linkages are suitably positioned within the upper portion **58** of the case. The upper portion **58** features a handle **60**. The lower portion has a suitably mounted caster wheel **67**, which, in conjunction with the wheels **62**, provides riding means for the case and the platform.

When the case **57** is folded up, all wheels, the linkage and the platform are located within the case. Holding clip **63***a* is provided to hold the platform **61** and linkage **62** in a vertical position and means **68***a*, **68***b* provide a locking device.

Another modification of this invention shows a case **70** bounded by a top wall **71**, a front wall **72**, side walls **73** and bottom panel **74**. A cover **75** including top **76**, front **78** and side **77** panels is shown. The cover **75** is connected to the case **70** by hinges **76** and adapted to secure the cover **75** and case **70** by means of suitable lock **71***a*. A flanged holding clip **80** is pivotably positioned on the bottom panel **74**. A platform arrangement **81**, which includes the wheels is adapted to slidingly move within the clip **81**.

A further modification shows a case **83** having a top wall **84**, a front wall **85**, a rear wall **85***a*, side walls **86** and a bottom wall **86***a*. There is also a cover **87** hingedly connected with the top wall **84**. It should be noted that this arrangement provides for recess **91** located either in the side wall **86** or in the bottom wall **86***a*. Recess **91** can be adapted to accommodate platform arrangement **88**, which includes wheels, as shown in FIG. 12. There are also openings **89** to accommodate the wheels of platform arrangement **88** and secure the platform arrangement to the wall **86** by means of screws **90**.

While various changes may be made in detail construction, it is understood that such changes will be in the spirit and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A luggage scooter comprising a case bounded by a top wall, a front wall, a rear wall, side walls and a bottom end having an opening therein, a handle bar means pivotally secured to the top wall of said case, said case having a front opening and a rear opening, wheel means secured to said bottom end, a platform means connected to one side of said bottom end, steerable caster wheel means secured to said platform means, a cover hingedly mounted on an edge of said front wall and adapted to enclose said front opening, a panel tiltably secured at lower portion of said rear wall, said platform means adapted to be positioned in a perpendicular relationship with said case, said panel capable of being horizontally disposed upon said platform means when said platform means is in perpendicular relationship with said case and both said wheel means of said case and said platform means are providing riding means.

2. A luggage scooter comprising a case bounded by a top wall, a front wall, a rear wall, side walls and a bottom end having an opening therein, a handle bar means pivotally secured to said top wall of said case, said case having a front opening and a rear opening, wheel means secured to said bottom end, a platform means connected to one side of said bottom end, steerable caster wheel means secured to said platform means, a cover including front, side and top panels, hinge means connecting said cover with said front wall and enclosing said front opening, thus providing storage means for various articles, lock means capable of securing said cover and said case together, carrying handle attached to one of said side walls of said case, a power means, a gas tank, a frame means, one side of which shields said power means from said storage means and the other side of said frame means being perpendicular to said one side and provides mounting means for said gas tank, shield means adapted to cover said gas tank and space said tank from said storage means, a panel tiltably secured at lower portion of said rear wall, said platform means adapted to be positioned in a perpendicular relationship with said case, said panel capable of being horizontally disposed upon said platform means when said platform means is in a perpendicular relationship with said case and said both wheel means of said case and of said platform means are adapted to provide riding means.

3. A luggage scooter comprising a case bounded by a top wall, a front wall, a rear wall, side walls and a bottom end having an opening therein, a handle bar means pivotally secured to said top wall, said case having a front opening and a rear opening, wheel means secured to said bottom end, a platform means connected to one side of said bottom end, steerable caster wheel means secured to said platform means, a cover including front, side and top panels, hinge means connecting said cover with said front wall and enclosing said front opening thus providing storage means for various articles, lock means mounted on said top panel of said cover and said top wall of said cover, said lock means capable of securing said cover and said case together, carrying handle attached to one of said walls of said case, a power means, including a battery, secured within said opening of said bottom end, a gas tank disposed at lower end of said rear wall of said case, a frame means, central portion of which is horizontally disposed, for shielding said storage means from said power means, the other portion of said frame means being perpendicularly disposed from said central portion of said frame means and providing mounting means for said gas tank, shield means for said gas tank and spacing it from said storage means, a panel tiltably secured to the lower portion of said rear wall, said platform means adapted to be positioned in a perpendicular relationship with said case, said panel capable of being horizontally disposed upon said platform means when said platform means is in a perpendicular relationship with said case, and said both wheel means of said case and of said platform means adapted to provide riding means.

4. A luggage scooter comprising a case bounded by a top wall, a front wall, a rear wall, side walls and a bottom end having an opening therein, a pivotable handle bar means including a horizontally disposed handle bar, two L-shaped arms spaced from each other in parallel and having their top portions fixedly connected with said bar near the end portions of said bar, two clamp units spaced from each other in parallel and fixedly mounted on said top wall of said case, each of said arms pivotally connected with each of said clamps, two turntable control sleeves rotatably mounted on each of said end portions

of said bar for controlling the traveling capabilities of said container with a platform, said case having a front opening and a rear opening, wheel means secured to said bottom end, a platform means connected to one side of said bottom end, steerable caster wheel means secured to said platform means, a cover including front, side and top panels, hinge means connecting said cover with said front wall and enclosing said front opening thus providing storage means for various articles, lock means mounted on said top panel of said cover and said top wall of said case, said lock means capable of securing said cover and said case together, carrying handle attached to one of said walls of said case, a power means, including a battery, secured within said opening of said bottom end, a gas tank disposed at lower end of said rear wall of said case, a frame means, central portion of which is horizontally disposed, for shielding said storage means from said power means, the other portion of said frame means being perpendicularly disposed from said central portion of said frame means and providing mounting means for said gas tank, shield means for said gas tank and spacing it from said storage means, a panel tiltably secured to the lower portion of said rear wall, said platform means adapted to be positioned in a perpendicular relationship with said case, said panel capable of being horizontally disposed upon said platform means when said platform means is in a perpendicular relationship with said case, and said both wheel means of said case and of said platform means adapted to provide riding means.

5. A scooter as set forth in claim 4, wherein said power means includes an engine, a carburetor operatively connected with said engine, a motor power shaft of said engine, a pulley belt, a pulley connected with said shaft by means of pulley belt for turning said caster wheel of said case.

6. A scooter as set forth in claim 4, wherein the side opposite from the gas tank means of the perpendicular portion of said frame means includes control panel means having provisions for clutch and choke buttons, a turntable control knob designating various speeds and a gas inlet pipe for said gas tank.

7. A scooter as set forth in claim 4, wherein said front wall of said case includes a head lamp powered by said battery and said platform means includes two parking lights powered by said battery.

8. A scooter as set forth in claim 4, wherein said handle bar includes two turntable control sleeves rotatably mounted on said end portions of said bar, one of said turnable sleeves adapted to transmit the directional turns

to caster wheel means of said platform means, whereas the other of said turnable sleeves is adapted to increase or decrease power within said power means thus increasing or decreasing acceleration of said caster wheel means of said platform means.

9. A luggage scooter comprising a case bounded by a top wall, a front wall, a rear wall, side walls and a bottom end having an opening therein, a handle bar means pivotally secured to said top wall, said case having a front opening and a rear opening, wheel means secured to said bottom end, a platform means connected to one side of said bottom end, steerable caster wheel means secured to said platform means, a cover including front, side and top panels, hinge means connecting said cover with said front wall and enclosing said front opening thus providing storage means for various articles, lock means mounted on said top panel of said cover and said top wall of said case, said lock means capable of securing said cover and said case matingly together, carrying handle attached to one of said walls of said case, a power means including a battery secured within said opening of said bottom end, a gas tank means disposed at lower end of said rear wall of said case, a frame means, central portion of which is horizontally disposed for shielding said storage means from said power means, the other portion of said frame means being perpendicularly disposed from said central portion of said frame means and providing mounting means for said gas tank, shield means for said gas tank and spacing it from said storage means, a panel tiltably secured to the lower portion of said rear wall, said platform means adapted to be positioned in a parallel relationship with said top wall of said case thus closing said bottom end of said casing, and said panel capable of being pivoted to a parallel position with said front wall of said case and said front panel of said cover, when said cover is in a closed position, thus closing said rear end opening of said case and covering said perpendicularly disposed frame means.

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KENNETH H. BETTS, *Primary Examiner.*