

May 2, 1967

D. M. WEITZNER

3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Filed June 1, 1965

5 Sheets-Sheet 1

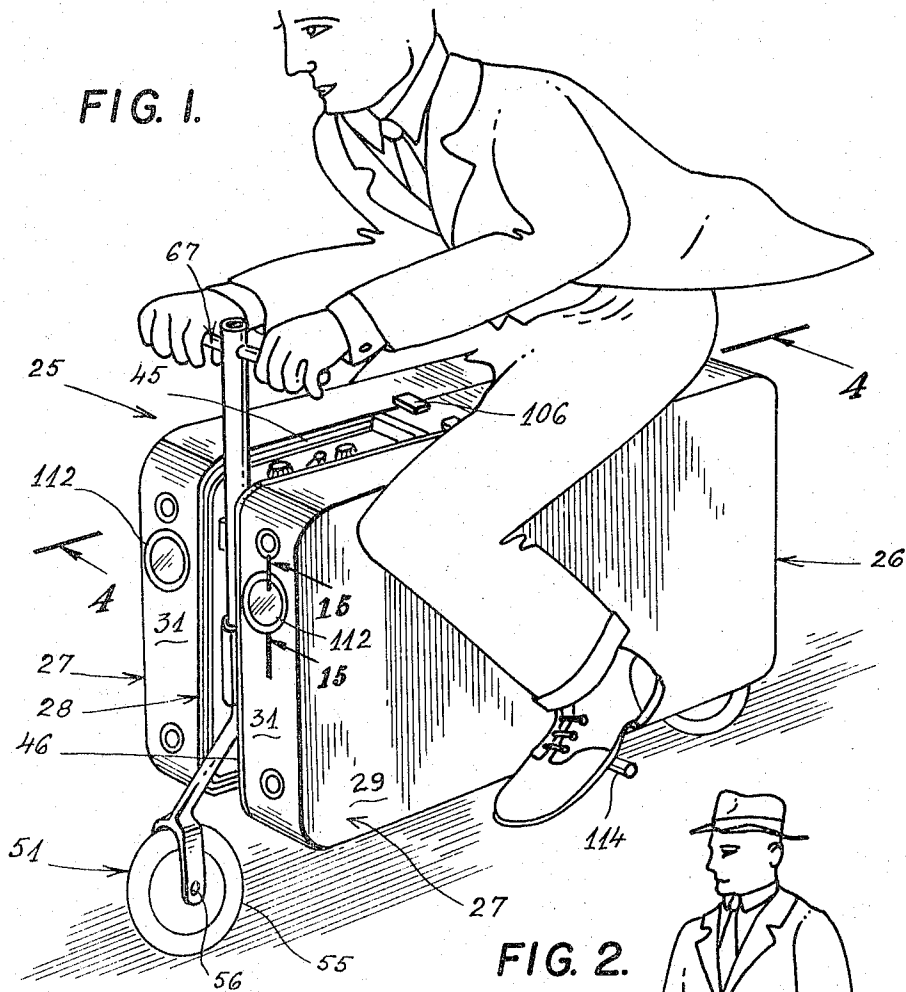


FIG. 2.

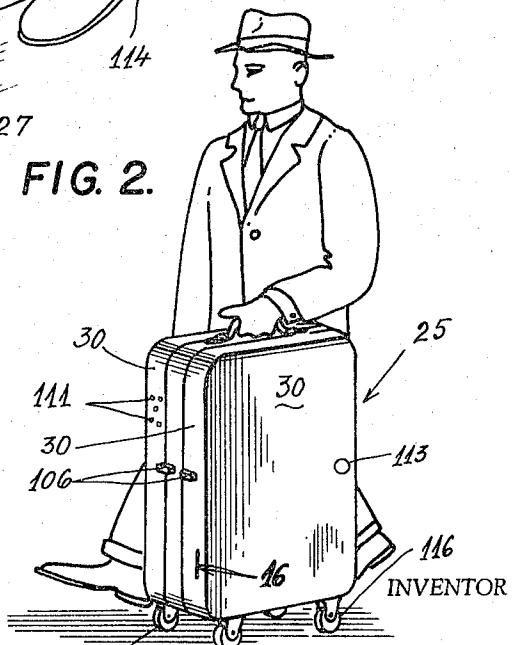
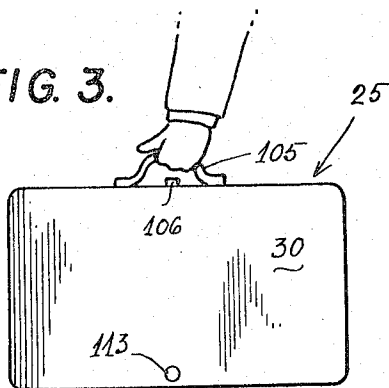


FIG. 3.



INVENTOR
DOROTHEA M. WEITZNER
BY

Jolachek & Faulstich
ATTORNEYS.

May 2, 1967

D. M. WEITZNER

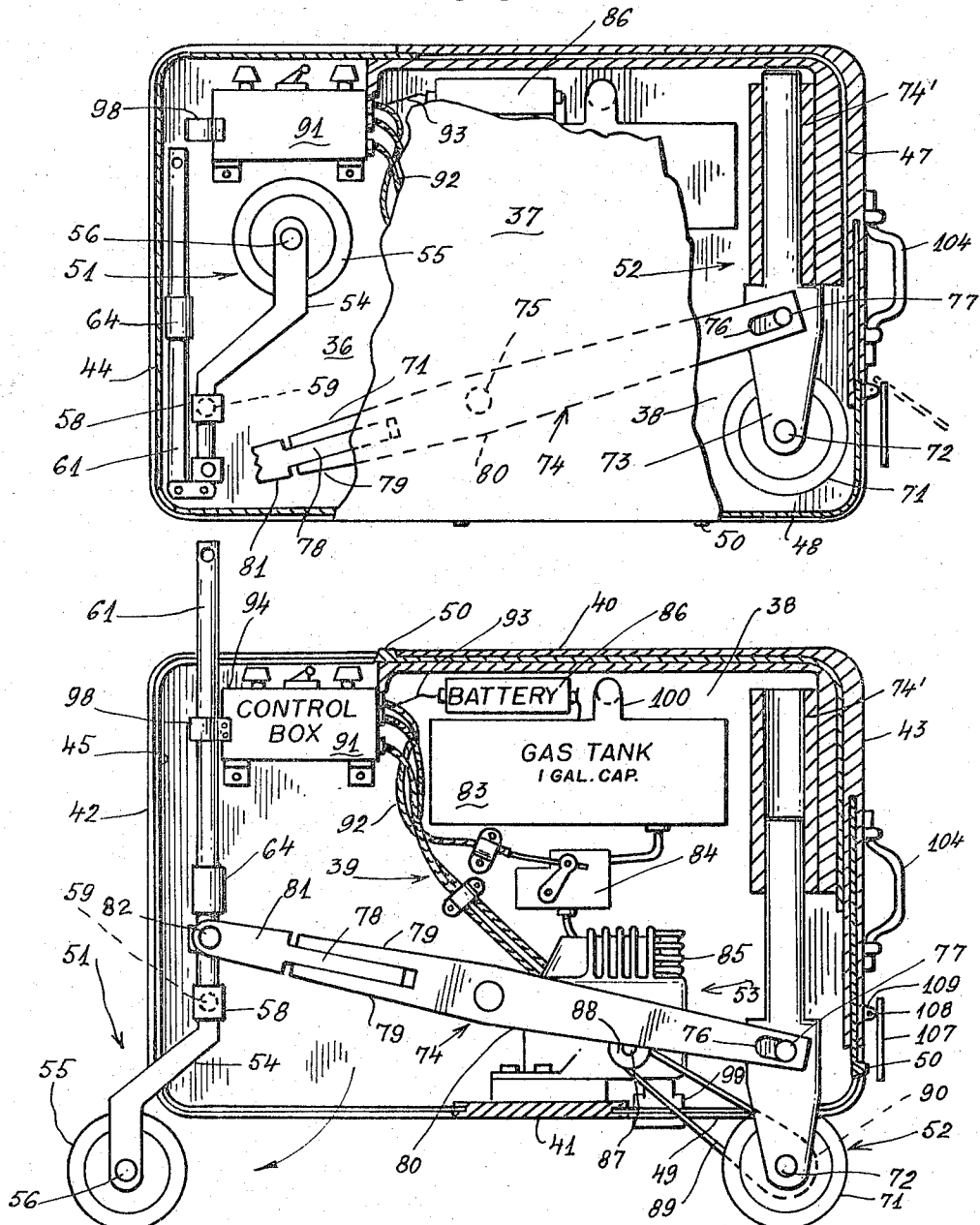
3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Filed June 1, 1965

5 Sheets-Sheet 2

FIG. 5.



INVENTOR

FIG. 4.

Dorothea M. Weitzner

BY

Golachek & Saulsbury
ATTORNEYS.

May 2, 1967

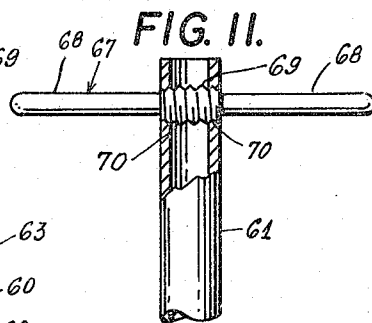
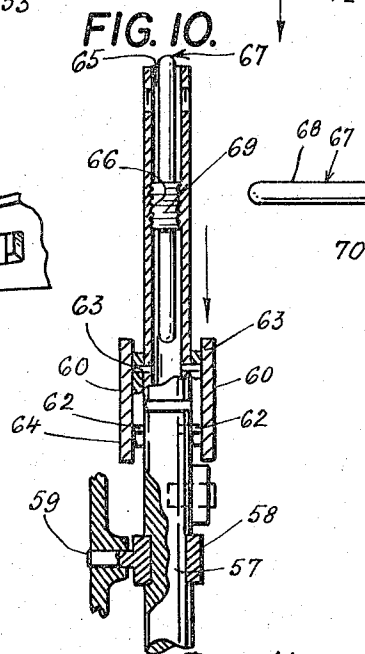
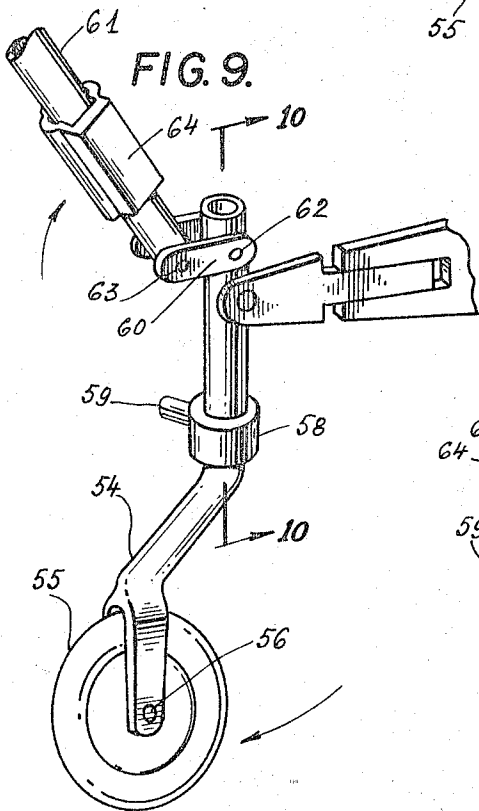
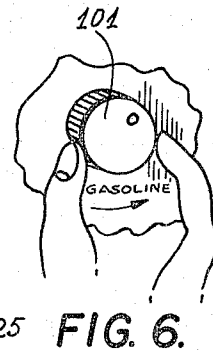
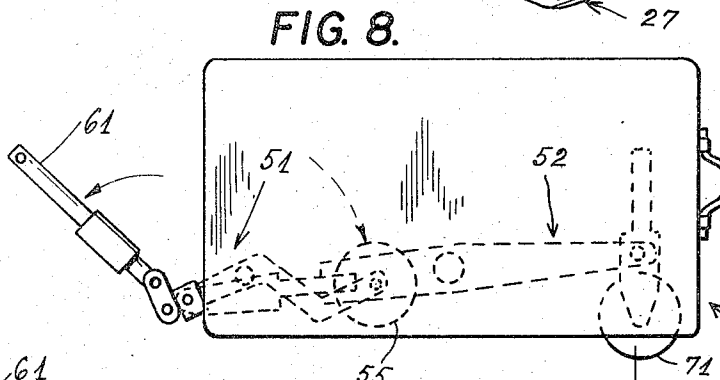
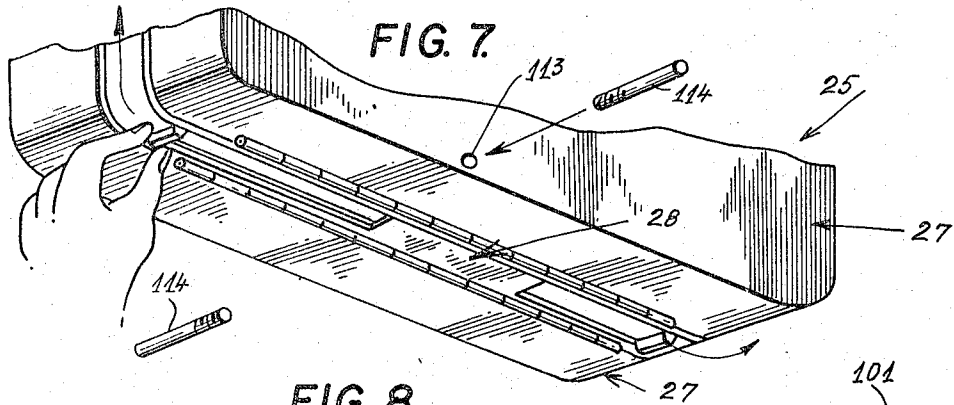
D. M. WEITZNER

3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Filed June 1, 1965

5 Sheets-Sheet 3



INVENTOR

Dorothea M. Weitzner

BY

Jolachek & Faulstich
ATTORNEYS.

May 2, 1967

D. M. WEITZNER

3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Filed June 1, 1965

5 Sheets-Sheet 4

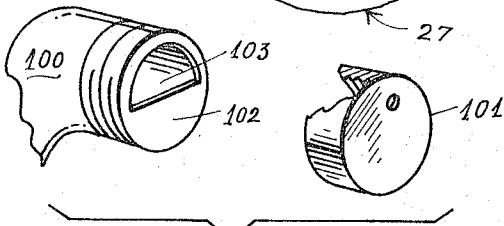
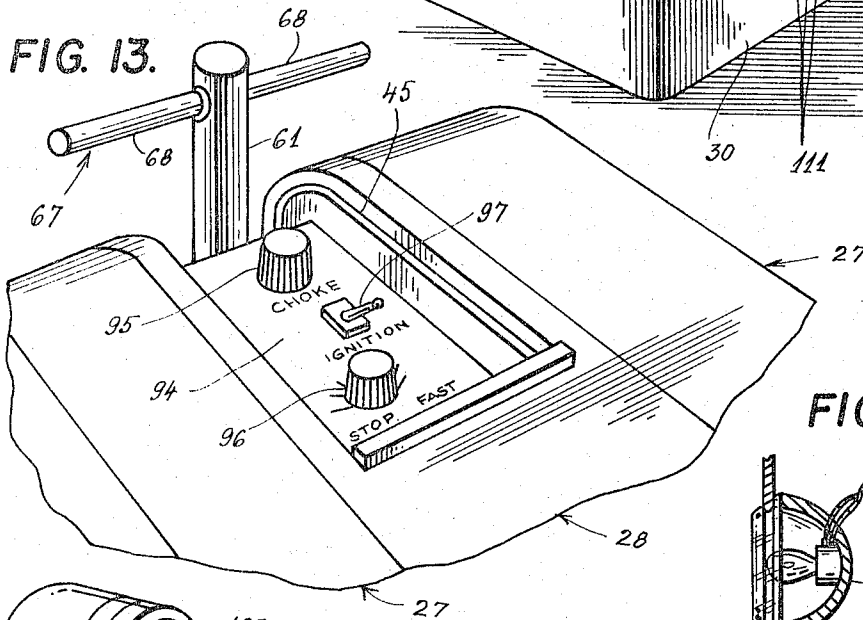
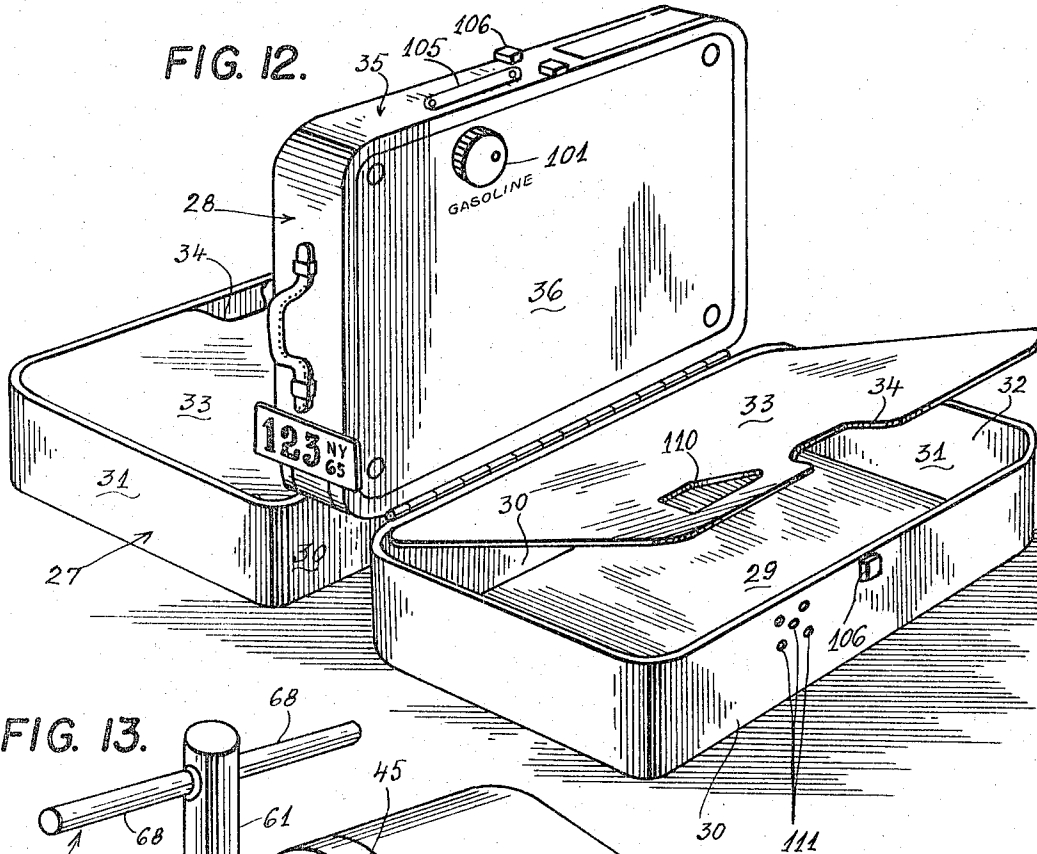
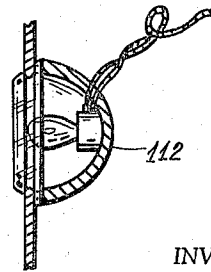


FIG. 15.



INVENTOR

Dorothea M. Weitzner

BY

Polachek & Saulsbury
ATTORNEYS.

May 2, 1967

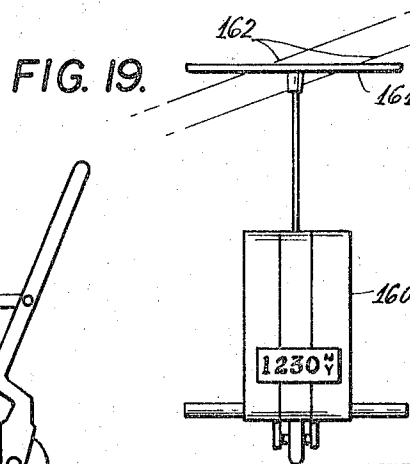
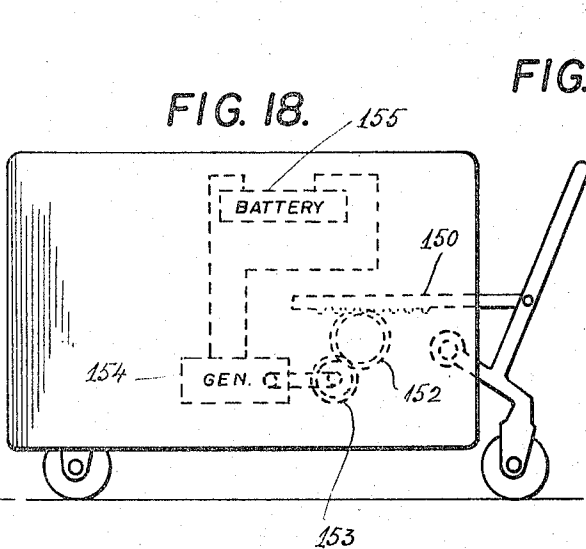
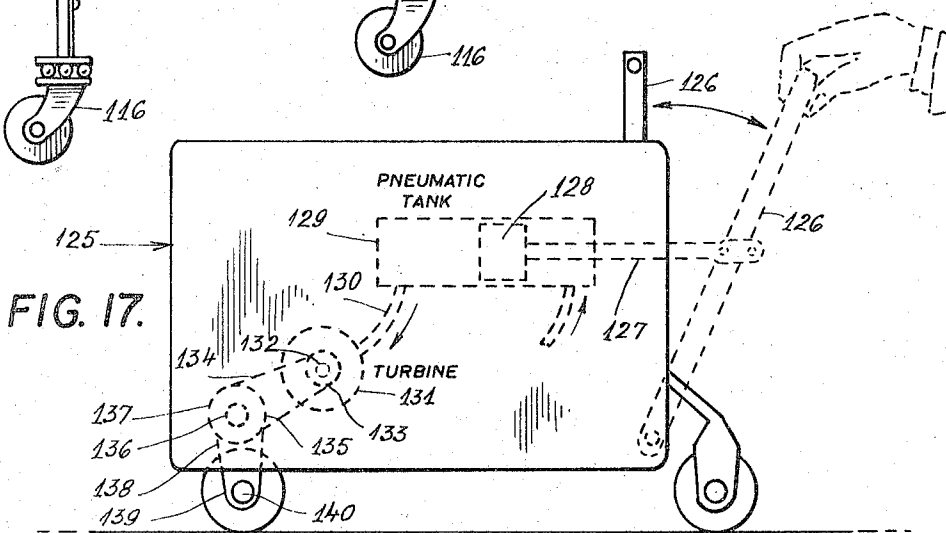
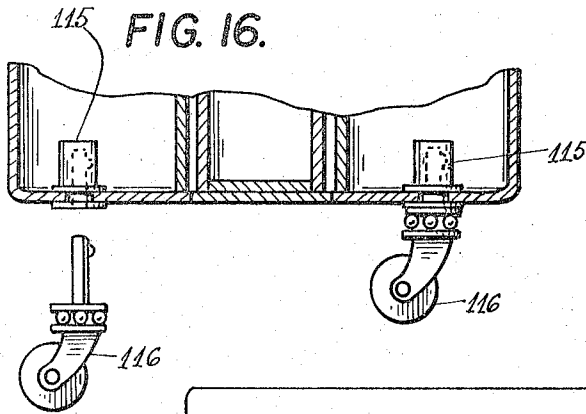
D. M. WEITZNER

3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Filed June 1, 1965

5 Sheets-Sheet 5



INVENTOR

Dorothea M. Weitzner

BY

Polachek & Saulsbury
ATTORNEYS.

1

3,316,993

MOTORIZED TRAVELING CASE SCOOTER TO CONVEY PASSENGER

Dorothea M. Weitzner, 8 E. 62nd St., New York, N.Y. 10021

Filed June 1, 1965, Ser. No. 460,027

8 Claims. (Cl. 180—33)

This invention relates generally to collapsible motor scooters. More specifically it relates to a collapsible motor scooter that fits into a suitcase.

It is generally well known among extensive travelers that a suitcase can become burdensome when necessary to be carried over relatively long distances, such as between railroad trains and automotive taxis at large, railroad terminals or between hotels and railroad stations and the like. Accordingly in the recent instance a suitcase has been developed which has rotatable casters on one end to permit the suitcase to be pushed over relatively long distances without burdening the person. However, such improvement, while proving beneficial is still not an ideal solution to the problem of transporting the suitcase in view that a person pulling the same is subject to becoming tired when thus traveling over a relatively long distance. Such situations are common among salesmen who must transport a sample case with them throughout the day while making calls. Such situations are also common among the tradesmen who must transport their working tools while making house calls and the like. Thus an ideal solution to date has been wanting.

Accordingly, it is a principal object of the present invention to provide a case for containing various articles and which has self-contained means to be selectively carried by a person's hand, mounted upon rotatable casters and towed by a person walking alongside, or converted into a motorized scooter upon which the person may sit and ride.

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

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

Still another object is to provide a case wherein there are compartments for carrying various articles, the compartments being fully and easily accessible throughout without interference of any motorized scooter mechanism and wherein the motorized scooter mechanism is readily accessible for servicing without interfering with the article receiving compartments.

Yet a further object is to provide a combination traveling case scooter wherein the wheels are simultaneously retractable into or out of the case upon a simple movement of a steering post.

Other objects are to provide a combination traveling case 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 shown set up in position as a motorized scooter,

FIG. 2 is a side view of the present invention shown set up as a case being carried in a person's hand,

FIG. 3 is a perspective view of the invention shown set up as a case mounted on casters and being towed,

FIG. 4 is a cross sectional view taken on line 4—4 of FIG. 1,

2

FIG. 5 is a view similar to FIG. 4 showing the scooter mechanism retracted into the case,

FIGS. 6, 7, 8, 9, 10 and 11 show subsequent steps in the conversion of the device from a case to a motorized scooter wherein:

FIG. 6 is a fragmentary perspective view showing adjustment of a gas tank cap,

FIG. 7 is a fragmentary bottom perspective view showing opening up of the case to permit protrusion of the wheels and other associate mechanism therefrom,

FIG. 8 is a side view showing the wheels partly withdrawn from the case,

FIG. 9 is a perspective view of the steering post in partly extended position,

FIG. 10 is a cross sectional view taken on line 10—10 of FIG. 9 showing the steering post in fully extended position,

FIG. 11 is a fragmentary front view of the upper portion of the steering post shown partly in cross section and illustrated in fully assembled position for scooter operation,

FIG. 12 is a perspective view of the case in opened position,

FIG. 13 is a perspective view of the dashboard and steering post as viewed from the operator's position,

FIG. 14 is an exploded view of the gas tank cap and gas tank inlet pipe associated therewith,

FIG. 15 is a cross sectional view taken on line 15—15 of FIG. 1 and illustrating a head lamp,

FIG. 16 is a cross sectional view taken on line 16—16 of FIG. 3 showing the caster supports,

FIG. 17 is a side view showing diagrammatically modified pneumatic means to produce motive power for the scooter,

FIG. 18 is a similar view showing a hand operated gear mechanism to generate charging power to the battery, and

FIG. 19 is a rear end view of the scooter shown receiving operating power from overhead wires presumably supported from posts on the ground.

Referring now to the drawing in detail the numeral 25 represents a traveling case scooter according to the present invention wherein there is a case or suitcase 26. The case is of generally rectangular configuration comprised of a pair of spaced apart end sections 27 and an intermediate section 28.

Each end section 27 includes a rectangular panel 29 bounded by side panels 30 and end panels 31 for enclosing a central compartment 32 for receiving goods to be transported therein (see FIG. 12). A door 33 is hingedly secured along one edge to one edge of one side panel to enclose the compartment opening. A recess 34 on the door 33 provides easy grasp means to open up the door and gain entrance to compartment 32 for placing articles therein or removing therefrom.

The intermediate section comprises a housing 35 having removable opposite side panels 36 and 37 secured by screws and providing a means to entry into a central compartment 38 within which motorized scooter mechanism 39 is contained.

The housing 35 includes a top wall 40, a bottom wall 41, a front wall 42 and rear wall 43 so designated when the device is in use as a motorized scooter. A sliding door 44 slidable within side grooves 45 along its side edges extends from bottom wall 41 around the front wall 42 and top wall 40 and covers a forward doorway 46. In an open position a leading portion of the door slides into vertical slots 47 at the rear of the housing.

Another sliding door 48 exposes a rear bottom doorway 49. The door 48 is slidable within side grooves 49 along the bottom wall 41 and rear wall 43. Both doors

44 and 48 have a handle 50 which may be grasped for manually sliding the doors.

The motorized scooter mechanism 39 comprises a front wheel assembly 51, a rear wheel assembly 52 and power unit 53. The front wheel assembly 51 comprises an angular frame 54 bifurcated at its one end to receive front wheel 55 therebetween mounted on a shaft 56. Frame 54 has a narrowed circular midportion 57 supported rotatably free in a collar 58 mounted pivotally free on a pin 59 supported on the housing 35. At its opposite end frame 54 is secured by means of a pair of parallel oppositely spaced links 60 to a steering post 61. Links 60 are provided with pins 62 at one end pivotable in the end of frame 54 and pins 63 at the opposite end pivotable in the end of the steering post. The links permit the steering post in a collapsed position to rest adjacent the frame as shown in FIG. 5. A sleeve 64 on the steering post is slidable over the links and portions of the post and frame to provide rigidity to the parts when the front wheel assembly is set up for scooter use as shown in FIGS. 1 and 10.

An opening 65 is in the end of the steering post partly threaded at 66 to secure a handle bar 67 stored therein when not in use. In use the handle bar is unscrewed therefrom and removed from the opening. The handle bar includes handle ends 68 between which is a diametrically enlarged threaded portion 69. The steering post has a transverse threaded opening 70 near its end into which the handle bar is threaded for scooter use as shown in FIG. 11.

The rear wheel assembly includes a wheel 71 mounted on shaft 72 carried on a bifurcated end of post 73 slidable in a sleeve 74 rigidly secured to housing 35. A longitudinally expandable fulcrum arm 74 pivotable about pin 75 secured to the housing bar has a slot 76 at one end in which a pin 77 secured to post 73 is held captive. A tongue 78 between rails 79 provides a means for longitudinal slidability of parts 80 and 81 which comprise the body of the fulcrum arm. The opposite end of the fulcrum arm is mounted pivotally free on a pin 82 secured in frame 54, the pin 82 being located between the collar 58 and links 60.

The power unit 53 includes a gas tank 83, carburetor 84, engine 85, generator and battery 86, motor power shaft 87 on which is a pulley 88 that transmits movement through a belt 89 to a pulley 90 on rear wheel shaft 72 providing power means to the rear wheel. A control box 91 is connected by flexible cables 92 and wires 93 to the carburetor and motor and to the battery respectively. A dashboard 94 on the top of the control box carries knobs 95 and 96 and switch 97 for controlling the operation of the engine. A clip 98 on the control box guides the upper part of the steering post.

A telescopic exhaust pipe 99 on the engine depends outwardly of doorway 49 when door 48 is in open position to allow exhaust gases out of the housing 35.

An inlet pipe 100 on the gas tank has a rotatable vented gas cap 101 mounted thereupon with the vent opening being selectively movable in alignment with wall 102 on the pipe 100 and opening 103 thereupon. When the vent is in alignment with the wall 102 gas leakage is prevented through the vent should the case be up ended. In operative use the vent is in alignment with opening 103.

A handle 104 on the rear wall of the housing provides a means for towing the case. A handle 105 on the top wall provides a means for carrying the case. Lock elements 106 secure the intermediate and end sections of the case together. A license 107 is pivotable on pin 108 carried in bracket 109 on the rear wall of the housing.

One of the doors 33 has an opening 110 to clear the gas cap and one of the end sections 27 has vents 111 to permit air access to the gas cap vent.

Each end section may have a head lamp 112 on the

front side thereof if the device is to be used for night time use, the lamps being powered by the battery.

A threaded opening 113 on each panel 29 receives a removable threaded rod 114 which serves as a foot rest.

A plurality of receptacles 115 mounted in the front of the case receives removable casters 116 when the case is to be towed.

In operative use the doors 44 and 48 are opened. The gas cap is rotated to allow air through the vent into the gas tank. The steering post is swung outwardly of the case and the frame 54 is rotated about pin 59 causing the front and rear wheels to move out of the case. The sleeve 64 secures the steering post rigidly on the end of frame 54 and the handle bar is inserted into the transverse opening in the steering post. The person may sit on the top of the case where he can operate the controls on the dashboard and steer.

In a modified construction, case 125 includes a steering post 126 which is pivotable about its lower end. A piston rod 127 connected to the steering post is connected to piston head 128 inside cylinder 129 from which pumped air moves through a pipe 130 to a turbine 131 which has a drive shaft 132 on which a pulley 133 transmits movement through a belt 134 to a pulley 135 on shaft 136. A gear 137 on shaft 136 transmits power through chain 138 to a gear 139 on the wheel shaft 140.

In another modified form a gear rack 150 secured to pivotable steering post 151, causes motion through gears 152 and 153 to be transmitted to a generator 154 which provides electrical restoration power to a battery 155.

In a further modified form the case 160 has an antennae 161 connected to the power unit. Electric wires 162 secured to posts along the ground provide a means of supplying power to the vehicle.

While various changes may be made in the 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.

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

1. In a traveling scooter case the combination of a case, handle carrying means on said case for carrying said case, caster wheel means on said case for towing said case, motorized scooter means in said case to provide riding means on said case, a pair of spaced-apart end sections, and an intermediate section, said end sections providing storage means for various articles and said intermediate section between said end sections providing housing means for said motorized scooter means.

2. In a traveling scooter case, the combination as set forth in claim 1, wherein each said end section comprises a rectangular panel bounded by a top wall, a bottom wall, a front wall and a rear wall, said walls enclosing a central compartment for receiving said various articles, and a hingedly movable door over said compartment providing a closure for said compartment.

3. In a traveling scooter case the combination as set forth in claim 2, wherein said intermediate section comprises a housing having opposite spaced apart removable panels, a top wall, a bottom wall, a front and rear wall enclosing a central compartment, said compartment housing in stored condition, a front wheel assembly, a rear wheel assembly and power unit.

4. In a traveling scooter case the combination as set forth in claim 3, wherein said intermediate section includes a front doorway and a rear doorway, said front doorway extending around a forward portion of said bottom wall, said front wall and a portion of said top wall, and said rear doorway extending around a rear portion of said bottom wall and a lower portion of said rear wall, both said doorways being selectively enclosed by sliding doors with side edges sliding in side grooves of said housing.

5. In a traveling scooter case the combination as set

5

forth in claim 4, wherein said front wheel assembly comprises an angular frame bifurcated at one end to receive a wheel therebetween which is rotatably mounted on a shaft supported on said frame, the opposite end of said frame connected by a pin to one end of a pair of opposite spaced apart links, the opposite ends of said links being connected by a pin to one end of a steering post, a slidable sleeve on said steering post slidable over said links and portions of said steering post and said frame, a narrowed diameter midportion on said frame, said midportion being supported rotatably free in a collar having a pin supported pivotally free in said housing, and handle bar means on said front wheel assembly.

6. In a traveling scooter case the combination as set forth in claim 5, wherein said handle bar means comprises a longitudinal opening in the end of said steering post, a portion of said opening being threaded, a handle bar stored within said opening, said handle bar having opposite handle ends with an enlarged diameter threaded intermediate portion for securement within said threaded portion of said steering post opening.

7. In a traveling scooter case the combination as set forth in claim 6, wherein said steering post has a transverse threaded opening near its end for receiving said handle bar.

6

8. In a traveling scooter case the combination as set forth in claim 7, wherein said rear wheel assembly comprises a post slidable within a stationary sleeve, said post being bifurcated at one end and receiving a rear wheel therebetween mounted on a shaft supported on said post, a fulcrum arm centrally supported on a pin carried on said housing, said arm comprising a pair of members slidably longitudinally relative to one another, one end of said arm being connected to a pin on said post and the other end of said arm being connected on a pin on said frame of said front wheel assembly, said pin on said front wheel assembly frame being between said collar and said end of said frame having said links secured thereto.

References Cited by the Examiner

UNITED STATES PATENTS

2,091,651	8/1937	Platt et al.	190—51
2,964,329	12/1960	Beck	280—35 X
3,079,172	2/1963	Burwell	280—278

FOREIGN PATENTS

974,523	9/1950	France.
706,835	4/1954	Great Britain.

25 KENNETH H. BETTS, Primary Examiner.