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LUGGAGE ON WHEELS

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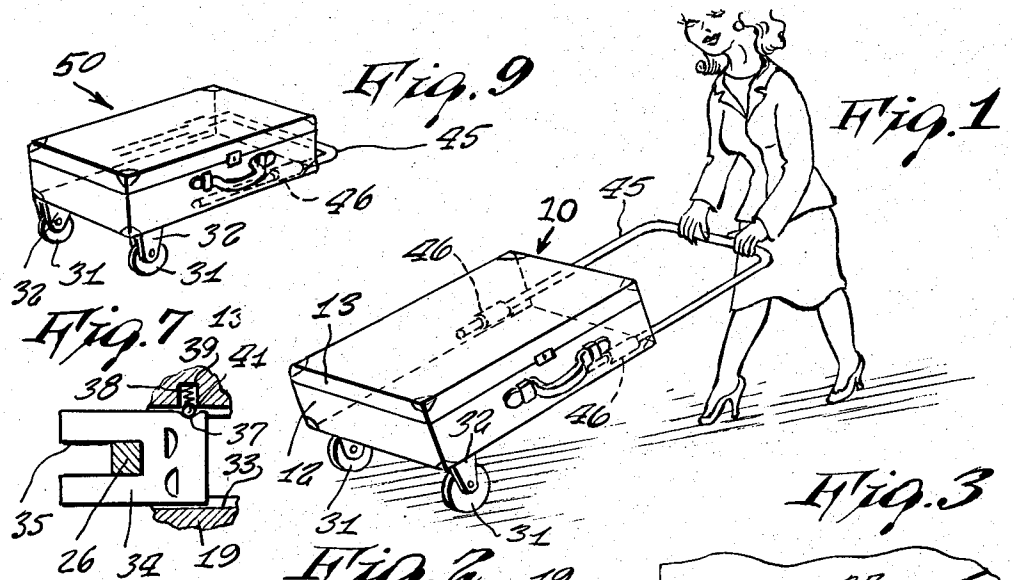

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LUGGAGE ON WHEELS

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3 Claims. (Cl. 280—37)

This invention relates to luggage and, more particularly, to self contained means for rolling the luggage along the ground.

Ordinarily, heavy luggage is difficult to handle for both men and women alike, especially when such must be carried for any substantial distance. It is therefore an object of the present invention to provide luggage of various types having built in wheels that may be selectively extended so as to enable the user to roll the luggage along the ground rather than to carry it and thus overcome the aforementioned difficulty.

Another object of the present invention is to provide means for rollably supporting luggage upon the ground which is completely hidden from view when not in use, does not add any substantial weight to the luggage, and which requires a minimum amount of space.

Still another object of the present invention is to provide luggage of the type described which can be manufactured at only a slight additional cost, and which can be used for business, pleasure, and travelling purposes.

All of the foregoing and still further objects and advantages of this invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view of a trunk embodying self contained wheels made in accordance with the present invention, in operative use;

Figure 2 is a fragmentary bottom perspective view of a wheel assembly forming a part of the structure shown in Figure 1 in an extended position;

Figure 3 is a view similar to Figure 2, showing the wheel assembly in a retracted position;

Figure 4 is a fragmentary perspective view of a wheel receiving compartment in one corner of the luggage made in accordance with the present invention;

Figure 5 is a fragmentary transverse cross sectional view taken along line 5—5 of Figure 2;

Figure 6 is a fragmentary cross sectional view taken along line 6—6 of Figure 3;

Figure 7 is a fragmentary cross sectional view taken along line 7—7 of Figure 5;

Figure 8 is a fragmentary cross sectional view taken along line 8—8 of Figure 6; and

Figure 9 is a view similar to Figure 1, showing a suitcase equipped with wheels made in accordance with the present invention.

Referring now to the drawing, and more particularly to Figures 1 to 8 thereof, a trunk 10 made in accordance with one embodiment of the present invention is shown to include a main compartment section 12 having a hingedly connected closure 13 defining a storage compartment therewithin. Additional partition walls 16 define a pair of small wheel receiving compartments 15 at each lateral side of one end of the base. The bottom wall of the trunk, which is common to both compartments 15, defines a pair of laterally spaced apart access openings 17 which open into the interior of each wheel storage compartment 15. Each one of these access openings 17

receives a rectangular frame 19, for purposes hereinafter described.

A rigid bracket 20 is secured, such as by rivets, to the end wall of the trunk, one within each of the storage compartments 15. Each such bracket 20 includes a pair of spaced apart parallel arms 21 which slidably support a retractable shaft member. This shaft member has one section 25 of circular cross section, and another portion 26 of rectangular or non-circular cross section, the upper one of the arms 21 slidably receiving the round section 25, and the lower one of the arms 21 slidably receiving the non-circular portion of the shaft. It will thus be recognized that the wheels 32 rollably supported upon brackets 31 integral with each of the shafts are maintained in parallel planes which are parallel to the longitudinal axis of the luggage, so that the wheels are constantly maintained in proper position at all times.

A compression spring 28 encircling the round shaft portion 25 acts between the upper arm 21 and a stop washer plate 29, on each wheel assembly, to normally urge the wheels 32 toward an extended position. A closure plate 34, having finger recesses 36, and slidably supported within longitudinal grooves 33 in the rectangular plate or frame 19 is operative to selectively maintain the wheels in the storage or inoperative position illustrated in Figures 3 and 6. However, this plate is retractable to permit the wheel 32 to move outwardly under the action of the spring 28 to an extended position, following which it is returned to the closed position so that the central cut out 35 thereof will receive the non-circular portion 26 of the shaft in the manner shown in Figures 4 and 5. When the wheel 32 is so extended into an operative position, the cut out defining portions of the plate 34 overlie the bracket 31, thus restricting inward movement of the wheel and associated shaft portion. As is more clearly shown in Figure 7 of the drawing, a ball detent 37 under the action of a compression spring 38 disposed within a recess 39 in the bottom wall of the trunk is constantly urged into engagement with the side of the plate 34. When the plate is in the normal closed position, the detent 37 is received within an indent 41 of the plate 34 so as to releasably secure the plate in this position, so as to prevent accidental movement thereof which might cause inadvertent movement of the wheel units in either direction.

The sides of a U-shaped handle 45 are slidably received within elongated sleeves 46 secured to the opposite end of the trunk, so as to enable the handle to be extended when the trunk is being wheeled along the ground upon the extended wheel assemblies 21. When not in use, however, the handle is moved to the opposite extremity where it is substantially flush with the sides of the luggage.

With reference now to Figure 9 of the drawing, a smaller suitcase 50 is shown to be equipped with similar wheel and handle units, to illustrate the fact that this invention is equally applicable to all types of luggage, large and small, and for all types of purposes.

It will be further understood, when it is desired to utilize my invention in a trunk or a large suitcase, the sliding U-shaped handle 45 will be completely omitted, so that said trunk or large suitcase can be hand-grasped by the conventional front handle that is normally provided in such trunk or large suitacase.

While this invention has been described with particular reference to the construction shown in the drawing, it is to be understood that such is not to be construed as imparting limitations upon the invention, which is best defined by the claims appended hereto.

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

1. A travelling case comprising, in combination, a plu-

rality of perpendicularly intersecting sidewalls defining a substantially prismatic interior storage area, partition means within one end of said storage area defining a pair of longitudinally spaced apart compartments, one of said sidewalls common to said compartments defining access openings communicating with the interior of each of said compartments, a complete wheel assembly retractably supported within each one of said compartments, releasable means selectively securing each said assembly in an extended position outwardly of each said compartment through said associated access opening, each said wheel assembly comprising a bracket secured to another one of said side walls within each said compartment, a wheel, and a shaft rollably supporting each said wheel slidably supported upon said bracket, said shaft including a non-circular portion and said bracket including an arm defining an opening slidably supporting said non-circular shaft portion and preventing relative rotation therebetween.

2. A travelling case as set forth in claim 1, wherein said releasable means comprises a closure plate slidably supported upon said common side wall having portions releasably overlying and maintaining said wheel assembly in said extended position.

3. A travelling case as set forth in claim 2, wherein said travelling case comprises a suitcase, and a handle slidably supported upon said suitcase at an end opposite from said one end.

References Cited in the file of this patent

UNITED STATES PATENTS

854,602	Peterson	May 21, 1907
1,028,178	Batchelor	June 4, 1912
1,997,327	Warshaw	Apr. 9, 1935
2,562,686	Altemus	July 31, 1951

FOREIGN PATENTS

59,346	France	Jan. 6, 1954