

Jan. 7, 1958

J. F. ROBERTS
LUGGAGE CARRIERS

2,819,005

Filed Oct. 5, 1953

2 Sheets-Sheet 1

Fig 1

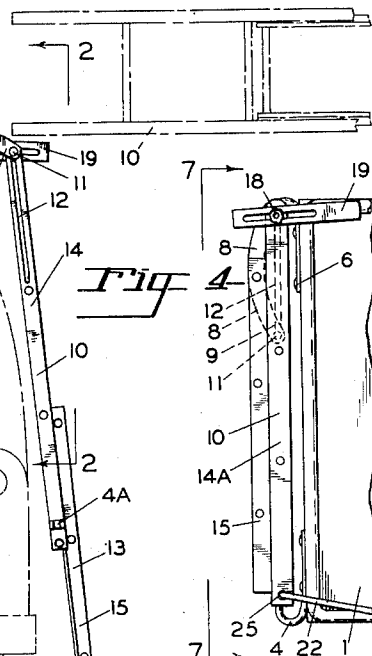
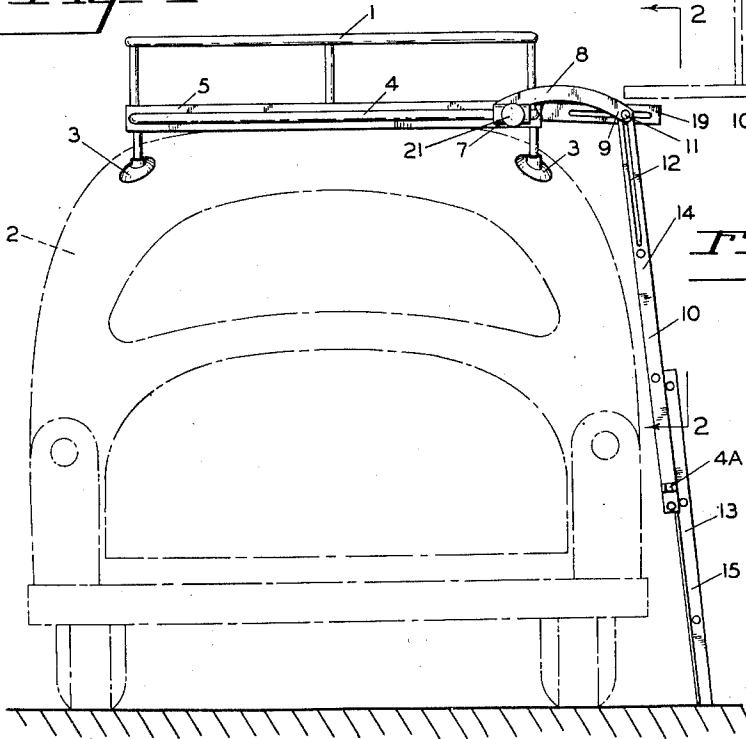


Fig 4

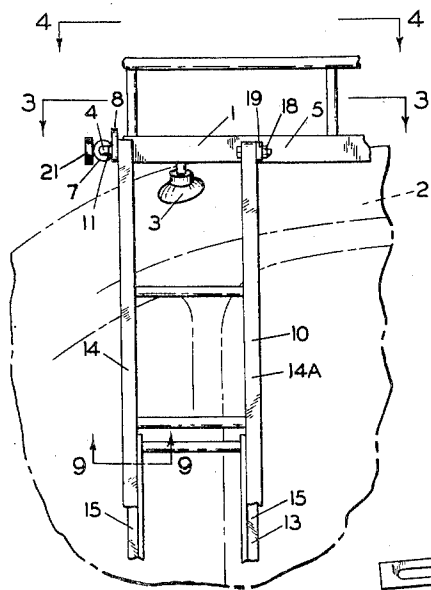


Fig 2

Fig 6

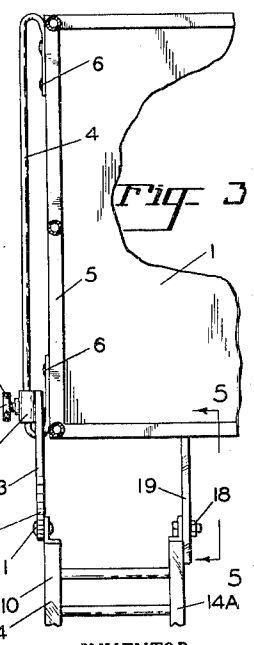
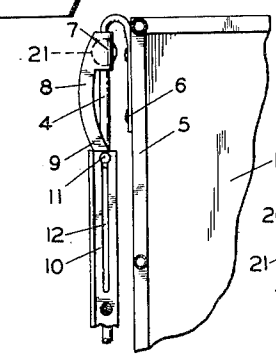


Fig 3

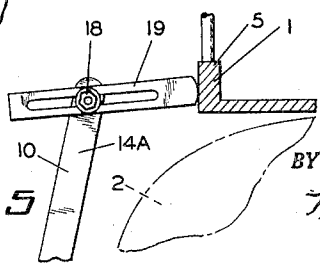


Fig 5

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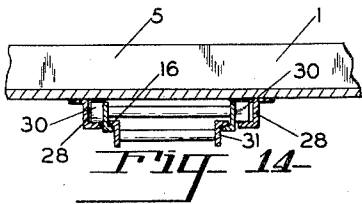
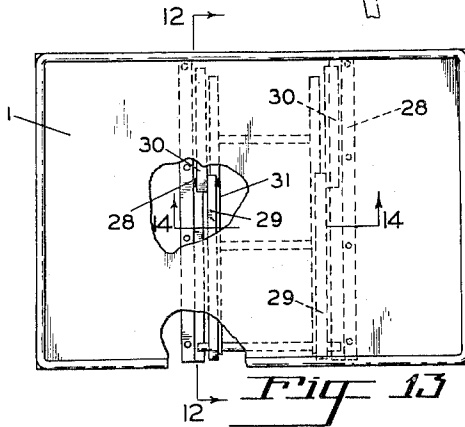
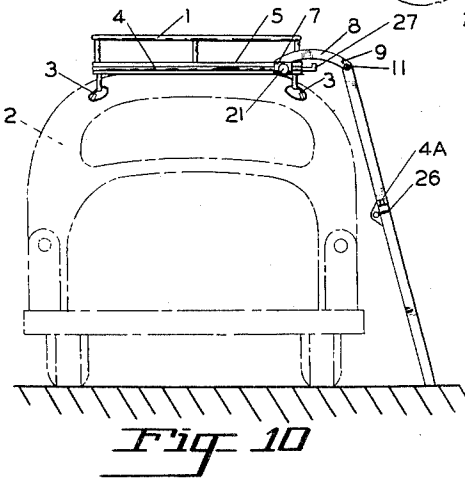
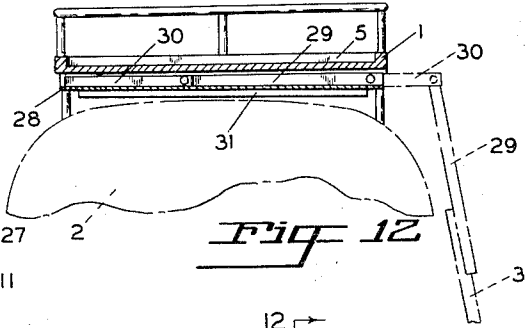
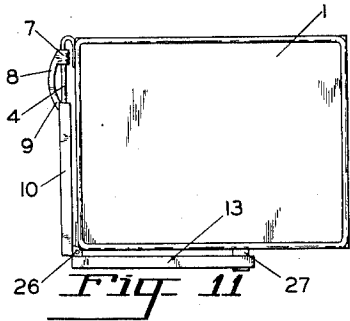
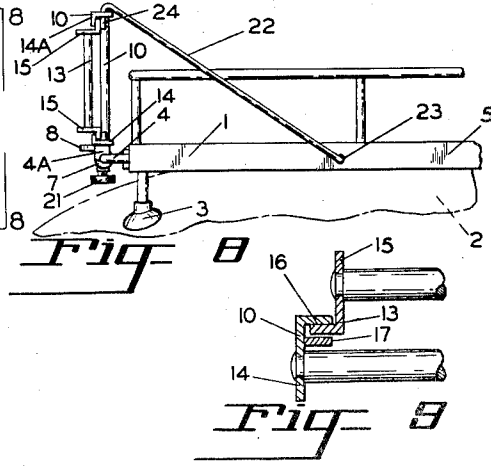
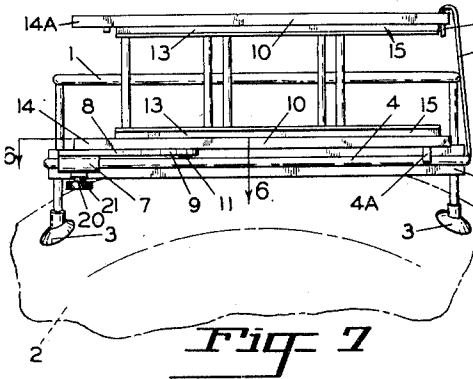
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LUGGAGE CARRIERS

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Application October 5, 1953, Serial No. 384,059

1 Claim. (Cl. 228—48)

This invention relates to improvements in luggage carriers and is particularly adapted for making it possible for a person to load and unload the carrier with ease.

The primary object of the invention is to provide a folding ladder associated with the carrier. The ladder is so designed that when not in use it can be folded and stored adjacent the carrier, either on the end or side of the carrier or underneath.

These and other incidental objects will be apparent in low drawings, specification and claim.

Referring to the drawings:

Figure 1 is a rear view of a conventional motor vehicle, shown by broken lines, having my new and improved ladder associated with a standard carrier, and showing the ladder in down position ready for use.

Figure 2 is a fragmentary side view of the vehicle, in broken lines, and the carrier, taken on line 2—2 of Figure 1.

Figure 3 is a fragmentary end plan view of the carrier and ladder, taken on line 3—3 of Figure 2.

Figure 4 is a fragmentary plan view, taken on line 4—4 of Figure 2, but illustrating the latter in folded position.

Figure 5 is a fragmentary detail view, taken on line 5—5 of Figure 3, illustrating how one of the side rails of the ladder is spaced from the side of the carrier avoiding the vehicle.

Figure 6 is a fragmentary sectional plan view, taken on line 6—6 of Figure 7, illustrating how the ladder is connected to the carrier.

Figure 7 is a fragmentary rear view of the vehicle, in broken lines, and the carrier showing the ladder in folded position, taken on line 7—7 of Figure 4.

Figure 8 is a fragmentary side view of the carrier looking into the end of the folded ladder, and illustrating how the ladder is held in storage position.

Figure 9 is a fragmentary sectional view of the ladder, taken on line 9—9 of Figure 2, looking in the direction indicated.

Figure 10 is another preferred form of constructing the ladder.

Figure 11 illustrates how this type of ladder is folded in storage position on the carrier.

Figure 12 is an end sectional view of the carrier, showing how the ladder can be stored underneath the same, taken on line 12—12 of Figure 13.

Figure 13 is a plan view of the carrier, partially broken away for convenience of illustration.

Figure 14 is a fragmentary end sectional view of the folded ladder, taken on line 14—14 of Figure 13.

Referring more specifically to the drawings:

I illustrate a standard carrier 1 supported on the top of the vehicle 2 by the usual rubber feet 3. My invention consists of securing a round rail 4 to the frame 5 of the carrier by any suitable means, as for instance bolts 6. Slidably mounted on the rail 4 is a bearing 7, having an arm 8 forming part thereof and extending in line with the rail 4.

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Pivotally connected to the outer end 9 of this arm is a section of ladder 10 by way of the pivot pin 11, which operates within the slot 12. The purpose of the slot 12 is to facilitate the folding of the ladder, which will be described later on.

The ladder 10 has an extension ladder 13 for extending the length of the overall ladder in its use. The side rails of the ladders 10 and 13 are preferably constructed of angle iron, referring to Figure 9, making it possible to telescope the ladder 13 within the ladder 10. The side rails of the ladder 10 consist of angles 14 and 14A, while the side rails of the ladder 13 consist of the angles 15. The ladders 10 and 13 interconnect throughout their length as illustrated at 16. A guide member 17 is added to the side rails 14 and 14A to guide the angles 15 of the extension ladder 13 therealong, referring to Figure 9.

Adjustably secured by the bolt 18 to the upper end of the rail 14A of the ladder section 10, is a foot 19. This foot is adapted to space the ladder a sufficient distance from the carrier 1 to clear the side of the vehicle. The arm 8 is locked in its proper adjusted extended position to the rail 4 by the set bolt 20 by way of the hand knob 21 forming part thereof. The ladder automatically adjusts itself to the height of the carrier from the ground surface by the sliding of the section 13 within the section 10.

Referring to Figures 4, 7 and 8, the ladder is illustrated in folded position, being held thereto by the brace 22, which is pivotally connected to the carrier at 23 on its one end and has a hook 24 on its opposite end. This hook is adapted to enter a hole 25 of the upper section 10 of the ladder. The lower end of this hook also is adapted to prevent the ladder section 13 from sliding endwise out of the section 10.

When the ladder is in folded position the bearing 7 slides to the opposite end of the rail 4, as best illustrated in Figures 4, 6 and 7. The hand knob is then tightened setting the bolt 20 against the rail, after which the brace 22 is applied to the ladder as above described. The opposite end of the ladder is supported on the rail 4 by the bifurcated foot 4A. The purpose of the slot 12 in the upper section 10 of the ladder where it is connected to the arm 8, is to permit the ladder to be pushed over to the center of the carrier when being folded.

I will now describe the erection of my new and improved ladder associated with luggage carriers. The hand knob 21 is released and the brace 22 is released from the ladder. The operator then pulls the ladder towards him to the position shown in Figure 1 by the broken line position. He then rotates the ladder to the right 90 degrees until the foot 19 rests against the side of the carrier 1, then he tightens the hand knob 21 and set bolt 20, locking the bearing 7 and the bracket arm 8 in holding position. The extension ladder 13 is then lowered to the ground surface. He is now ready to use the ladder.

After the operator completes using the ladder, he telescopes the section 13 into the section 10, revolves the same about the rail 4 to the broken line position in Figure 1, pushes the whole assembly towards the carrier until it reaches the position shown in Figures 4, 7 and 8. He then hooks the brace 22 into the hole 25 of the ladder, then tightens the hand knob 21 setting the bolt 20 against the rail 4, locking the bearing 7 in a fixed position.

In Figures 10 and 11, I illustrate a modified form of ladder wherein the ladder sections 10 and 13 are hinged together at 26. Therefore when the ladder is brought to the position shown in broken lines in Figure 1 and shoved forward, instead of telescoping the ladder the section 10 will rest its foot 4A on the rail 4, while the section 13 will be hinged against the side of the carrier at 26,

having its lower end resting on the bracket 27 along the side of the carrier.

In Figures 12, 13 and 14 I also illustrate another modified structure, wherein rails 28 are secured transversely of the carrier 1 and are adapted to support the ladder in folded position. The upper section 29 of the ladder is pivotally connected to the supporting slides 30. These slides are adapted to operate within the rails 28. The lower section 31 of the ladder is slidably mounted within the upper section 29 of the ladder, as illustrated in Figure 9.

In operation the ladder is pulled out and brought down as illustrated in Figure 12, the slides 30 extending beyond the edge of the carrier sufficient to clear the ladder from the side of the vehicle. I am not attempting to illustrate or describe the details of Figures 12, 13 and 14, but only entering them into this application as a disclosure of a modified way of carrying out the principal objects of my invention.

What is claimed is:

In combination with a luggage rack adapted for mounting on the top of a vehicle and having a horizontal rod mounted thereon to extend transversely of the vehicle with said rack having a transverse dimension less than that of the vehicle, an extensible access ladder for said rack, said ladder having side rails and rungs extending therebetween, a bearing mounted on said rod for axial sliding and pivotal movement thereon, an arm having one end rigidly secured to said bearing and extending generally parallel to said rod, said ladder having an elongated lon-

gitudinal slot in the upper end portion of one of said side rails, a pivot mounted in the end of said arm opposite said bearing and having its axis perpendicular to the axis of said rod, said pivot engaging through said slot for sliding and pivotal movement therein, said bearing, said arm, and said pivot engaged in said arm and the slot in said ladder providing means whereby said ladder may be pivoted from a position parallel to said rod with the rungs vertically to a position with said side rails substantially upright the rungs extending perpendicularly to said rod, said ladder when in said first named position being slidable by moving said bearing transversely on said rod to position said ladder parallel to the transverse axis of said rod and coextensive therewith, and clamping means for fixing said bearing in a select position of adjustment on said rod and hence securing said ladder in a desired position of adjustment with respect to said rod.

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