

Dec. 28, 1943.

A. J. S. RIDEOUT
HANDCART STEP OR CURB JACK

2,337,683

Filed May 30, 1942

2 Sheets-Sheet 1

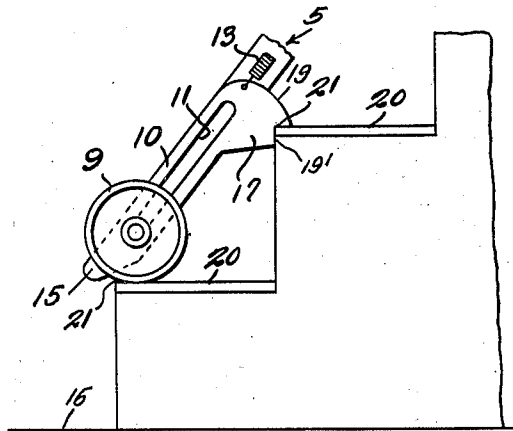


Fig. 3

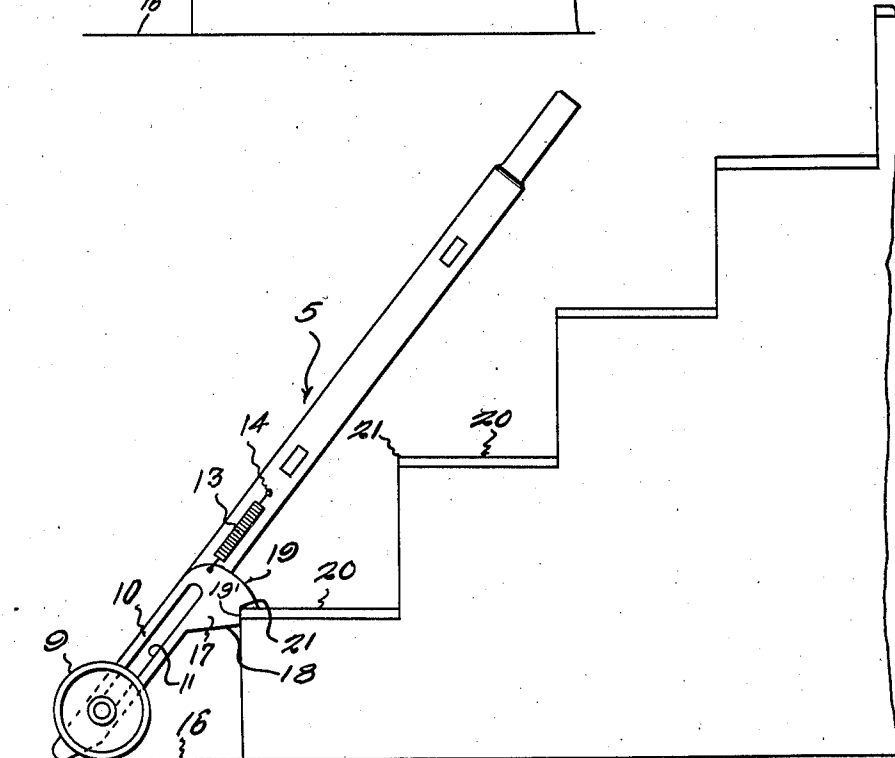


Fig. 1

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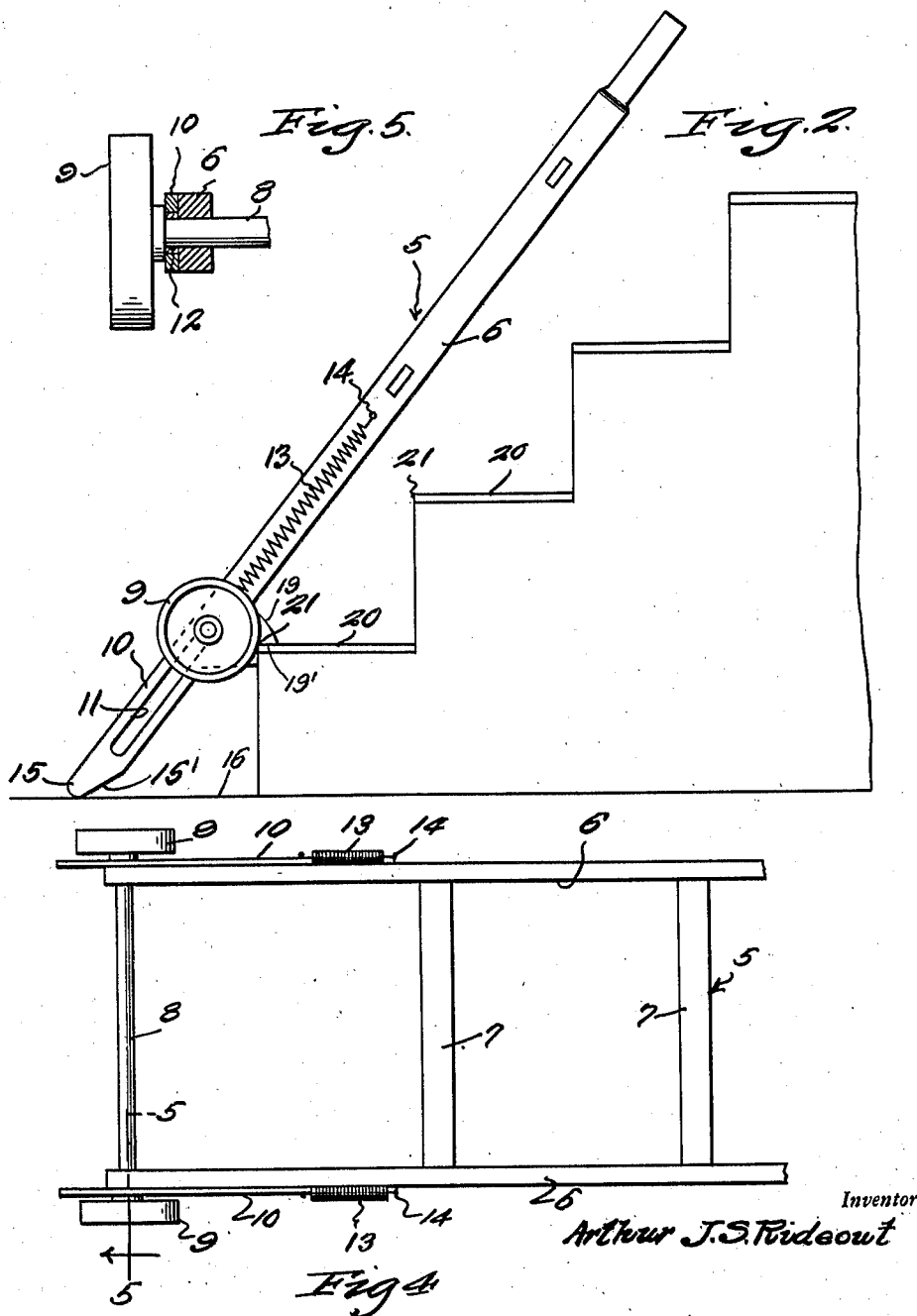
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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HANDCART STEP OR CURB JACK

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Application May 30, 1942, Serial No. 445,241

3 Claims. (Cl. 280—53)

The invention relates to improvements in handcarts, and more particularly to means to be incorporated in a handcart to enable the handcart to be pulled up over a curb or over a stair step by one man when loaded, so as to eliminate the necessity for extra assistance in getting the loaded handcart up over a curb or up a flight of stairs, and the primary object of the invention is to provide a simple and efficient arrangement of the character indicated.

Other important objects and advantages of the invention will be apparent from a reading of the following description taken in connection with the appended drawings, wherein for purposes of illustration a preferred embodiment of the invention is shown.

In the drawings:

Figure 1 is a general side elevational view of a stairway showing the device of the invention applied thereto in the initial approach position.

Figure 2 is a similar view showing the device in intermediate position.

Figure 3 is a similar view showing the device in final position similar to the approach position.

Figure 4 is a fragmentary top plan view of the improved handcart.

Figure 5 is an enlarged fragmentary transverse vertical sectional view taken through Figure 4 along the line 5—5 and looking toward the left in the direction of the arrow.

Referring in detail to the drawings, the numeral 5 generally designates the improved handcart which has a general conventional form including side rails 6 with suitable cross members 7 and an axle 8 at the lower ends of the rails equipped with ground-engaging wheels 9 outside of the rails 6. In accordance with the present invention exactly similar jack plates 10 are mounted to slide along the outer surfaces of the side rails 6 between the side rails and the wheels 9 as indicated in Figure 5 of the drawings, with a longitudinal slot 11 formed in the plates, with the edges of the slot 11 bearing upon a roller bushing 12 circumposed on the axle 8. Contractile helical springs 13 are stretched between anchors 14 on the outer side of the rail 6 at a point of sufficient elevation above the upper portions of the plates 10 so that the plates 10 are normally lightly suspended with the toe portions 15 thereof engaging the ground surface 16 just in advance of the wheels 9 in the ordinary uptilted position of the handcart, as illustrated in Figures 1 and 3 of the drawings. The lower edge of the toe portion 15 is beveled as indicated by the

numeral 15' so as to slightly offset the effective part of the toe portion 15.

The upper part and the lower edge of the plates 10 are expanded and enlarged to provide the stops 17 which are characterized by a relatively long straight lower edge 18 projecting at an obtuse angle from the lower edge of the main portion of the plate 10, the upper part of the stop and the upper part of the plate being symmetrically rounded as indicated by the numeral 19, with a notch 19' formed in the lower corner.

In using the device of the invention the handcart 5, conventionally loaded, is brought in an uptilted position to the steps 20 so that the stops 17, and more particularly the notches 19' thereof engage the corner 21 of the first step, as indicated in Figure 1 of the drawings. The cart is then drawn upwardly, leaving the toe portions 15 and the stops 17 still engaged with the floor 16 and the first step corner 21, respectively, so that the wheels 9 engage the first step corner 21 alongside of the stops 17, as illustrated in Figure 2 of the drawings. This involves a downward displacement of the plates 10 with consequent stretching of the springs 13, as clearly shown in Figure 2 of the drawings. The wheels 9 are then pulled up over the first step corner onto the step to the position indicated in Figure 3 of the drawings. As the wheels 9 are drawn over said corner, and under slight downward tilting of the side rails 6, the stops 17 are pulled up over said corner and the plates 10 are snapped upwardly, by the springs 13, into normal retracted position, in which the notches 19' may be engaged by downward tilting of the rails 6 with the edges of the second step 20, as shown in Figure 3. The operations described may be repeated, until the stairway has been climbed, quickly and without difficulty. It is obvious that the length of the slot 11 must be proportioned to permit the action described.

Although there is shown and described herein a preferred embodiment of the invention, it is to be understood that it is not desired to limit the application of the invention thereto except as may be required by the scope of the subjoined claims.

Having described the invention, what is claimed as new is:

1. A handcart comprising spaced longitudinal rails, means spacing and connecting said rails, an axle journaled on and between the lower ends of the rails, ground engaging wheels on the ends of said axle, jack plates lying along the sides of said rails at the lower ends thereof, said jack plates

terminating at their lower ends in toes for engaging the ground behind the wheels, said jack plates being formed with longitudinal slots slidably receiving said axle, stair step engaging stops formed on the upper part of said jack plates for engaging the face and corner of a step, and spring means yieldably resisting downward displacement of the jack plates and acting to retract the jack plates to initial position after displacement.

2. A handcart according to claim 1 wherein said jack plates are situated between the wheels and the outer sides of the said rail.

3. A handcart according to claim 1 wherein
5 said stops comprise depending plate-like portions having curved edges facilitating rolling the stops over the step corner in moving the handcart from one step to the next above step.

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