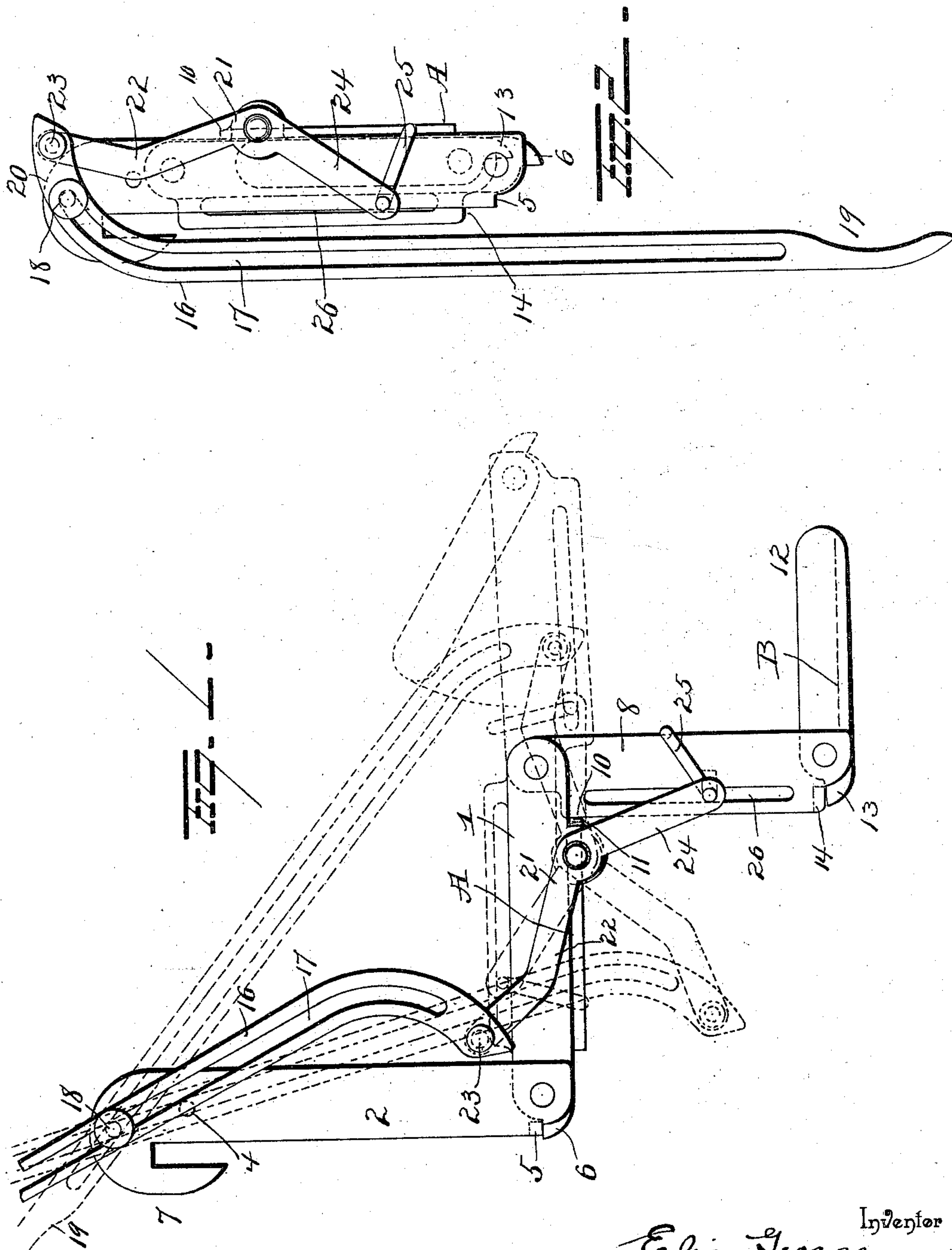


(No Model.)

E. GEORGE.  
WAGON OR CARRIAGE STEP.

No. 598,506.

Patented Feb. 8, 1898.



Witnesses

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# UNITED STATES PATENT OFFICE.

ELIAS GEORGE, OF CHERRY RIDGE, LOUISIANA.

## WAGON OR CARRIAGE STEP.

SPECIFICATION forming part of Letters Patent No. 598,506, dated February 8, 1898.

Application filed July 16, 1897. Serial No. 644,821. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS GEORGE, of Cherry Ridge, in the parish of Union and State of Louisiana, have invented certain new and useful Improvements in Wagon or Carriage Steps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in wagon or carriage steps, and more particularly to such as are adapted to be folded, the object of the invention being to provide folding steps with simple devices which can be easily and quickly operated to move the steps from or into folded position.

A further object is to provide folding steps and means for operating the same which shall be simple in construction, easy to manipulate, and effectual in all respects in the performance of their functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating my improvements. Fig. 2 is a view showing the steps closed.

In the accompanying drawings I have shown two steps A B. The step A is provided with side bars 1, which project above the upper face of the step and extend at both ends beyond the ends of the step. To the inner ends of the side bars 1 uprights 2 are pivotally connected, and said uprights are connected together at or near their upper ends by means of a cross-bar 4. The uprights 2 constitute one of the risers of the steps and are provided at their lower ends with lugs or stops 5, which are engaged by similar lugs or stops 6 on the side bars of the step A, whereby to retain the latter in a normally horizontal position when in use. The upper ends of the uprights 2 of the upper riser are provided with hooks 7, whereby the steps can be readily attached to the wagon or carriage with which it is desired to use them.

To the outer ends of the side bars 1 of step A depending bars or uprights 8 are pivotally connected and constitute the lower riser of

the steps, said bars or uprights 8 being provided at their upper ends with shoulders 10, adapted to engage stops or shoulders 11 on the step A, whereby to prevent them from moving too far inwardly. The side bars 12 of the lower step B are pivotally connected to the lower ends of bars or uprights 8, and each side bar 12 is provided with a shoulder 13 to engage stops 14 on the uprights 8, whereby to retain the step B in a horizontal position when in use.

To the upright 2 of the upper riser a lever 16 is pivotally connected and provided with an elongated slot 17, through which a pin 18 passes, said lever being also provided at one end with a handle 19 and at the other end with a bent or hooked portion 20, into which latter the slot 17 extends. A lever 21 is pivotally connected between its ends to the step A, one arm, 22, of said lever being bent in the form of an obtuse angle and having a pin 23 pivotally connecting said lever with the bent end of the lever 16. The other arm, 24, of the lever 21 projects at an angle to the inner part of arm 22 and is provided at its free end with a lateral bent arm 25, adapted to enter and move in a guide or way 26 on one upright 8 of the lower riser. It will be observed that the general form of the lever 21 is S-shaped.

To close the steps, the operator will first press the hand-lever 16 downwardly and outwardly, which will result in raising the lower step and lower riser, causing the step to fall into the riser by gravity. The operator will continue to press down on the handle of the hand-lever 16, so as to cause the lower step and riser to fold over the step A. The operator will then pull the hand-lever inwardly, and thus cause the two steps and lower riser to be closed in the upper riser and bring the curved end of the operating-lever to the pivot-pin 18 and allow said operating-lever to drop down beside the wagon-bed on inside, so as to serve to hold the steps securely closed. When the steps are closed, the bent arm 25 will receive the upright 2 of the upper riser.

To open the steps, the operator will first raise the operating-lever to a horizontal position and then push it outwardly, resulting in unfolding the step A. The handle of the operating-lever will then be pushed outwardly



and result in throwing the steps open, the bent arm or pin at the lower end of the lever 21 being so shaped and set that it will throw step B outward and cause it to drop in place  
5 by its own weight.

My improvements are simple in construction, easy to operate, can be quickly applied to a vehicle, and are effectual in all respects in the performance of their functions.

10 Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein  
15 set forth.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a series of steps  
20 and risers to which said steps are pivotally connected, of a slotted operating-lever pivotally connected to the upper riser, a bent lever pivotally connected to one of the steps, a pivotal connection between one end of said  
25 bent lever and the operating-lever and a sliding connection between the other end of said bent lever and the lower riser, substantially as set forth.

2. The combination with a series of steps  
30 and risers to which said steps are pivotally connected, of an operating-lever having a pivotal and sliding connection with the upper riser, an S-shaped lever pivoted between its ends to one of said steps and pivotally  
35 connected at one end to said operating-lever and a sliding connection between the other end of said S-shaped lever and the lower riser, substantially as set forth.

3. The combination with a series of steps  
40 and risers to which said steps are pivotally

connected, of an operating-lever having a bent end and having an elongated slot extending into said bent end, a pivot-pin projecting from the upper riser and through said slot, a bent lever pivoted between its ends to one of  
45 said steps and pivotally connected at one end to the bent end of said operating-lever and a sliding connection between the other end of said bent lever and the lower riser, substantially as set forth.

4. The combination with a series of steps and risers to which said steps are pivotally connected, of an operating-lever having a sliding and pivotal connection with the upper  
50 riser, an S-shaped lever pivoted between its ends to one of the steps and pivotally connected at one end to said operating-lever, a guide or way on the lower riser, and a bent arm projecting from the other end of the bent  
55 lever and having a sliding connection with said guide or way, substantially as set forth.

5. The combination with a series of steps and risers to which said steps are pivotally connected, of hooks at the upper end of the  
60 upper riser, an operating-lever having a sliding and pivotal connection with the upper riser, a bent lever pivoted between its ends to one of the steps and pivotally connected at one end to the operating-lever and a sliding  
65 connection between the other end of said bent lever and the lower riser, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ELIAS GEORGE.

Witnesses:

M. B. GILL,  
J. W. TAYLOR.