F. A. CREED.

LADDER.

APPLICATION FILED APR. 24, 1913.

1,091,635. Patented Mar. 31, 1914.

Fig. 1.

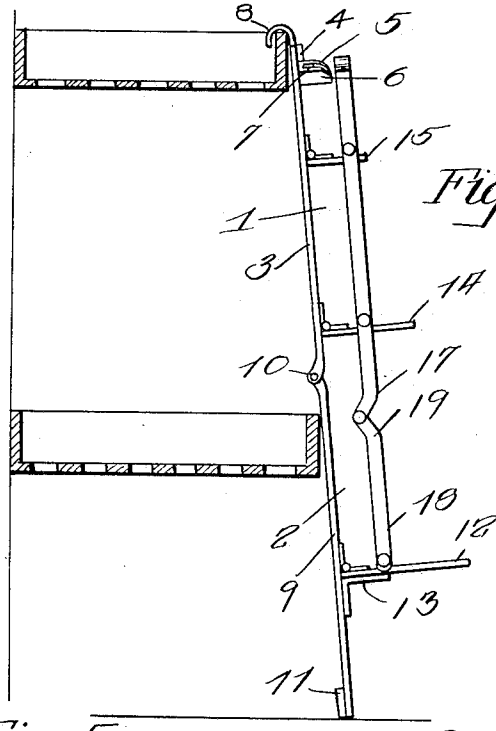


Fig. 2.

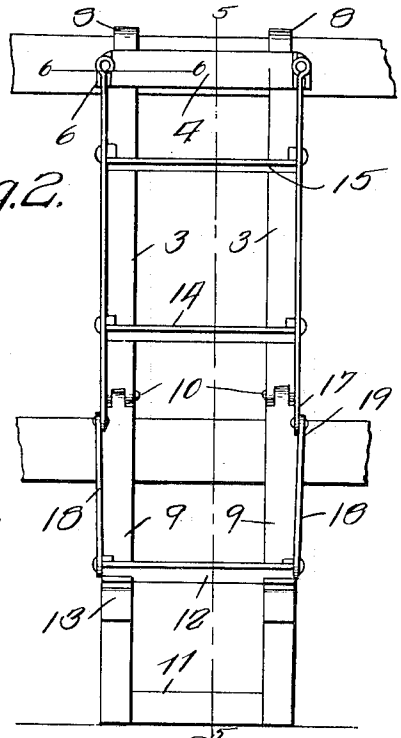


Fig. 5.

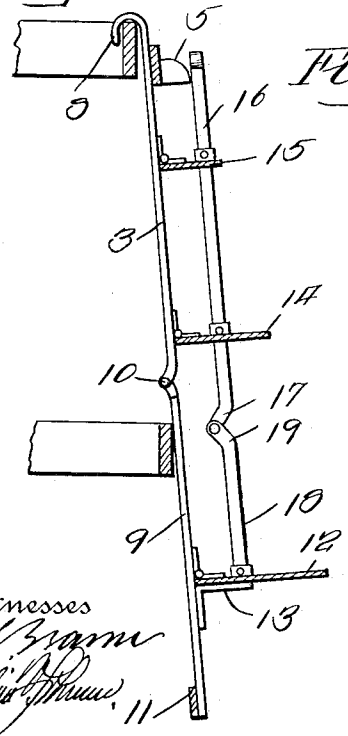


Fig. 3.

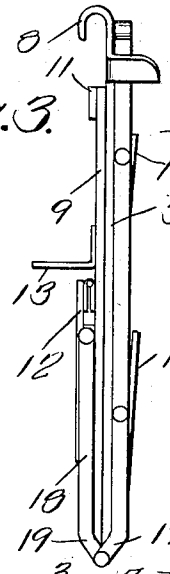


Fig. 4.

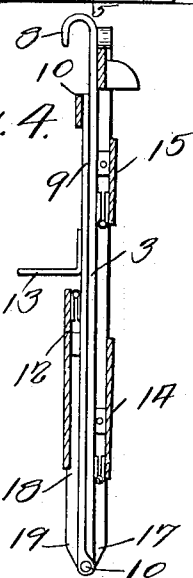
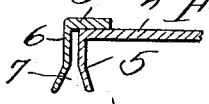


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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LADDER.

1,091,635. Specification of Letters Patent. **Patented Mar. 31, 1914.**

Application filed April 24, 1913. Serial No. 763,444.

To all whom it may concern:

Be it known that I, FRED A. CREED, a citizen of the United States, residing at San Francisco, in the county of San Francisco, State of California, have invented certain new and useful Improvements in Ladders; 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.

This invention is directed to improvements in ladders particularly adapted for use in connection with upper berths of cars or vessels.

The invention has for its object to so construct a device of this character that the same may be easily and quickly suspended from the upper berth so that a passenger may conveniently enter the same.

A still further object of the invention is to provide a ladder of this type which may be compactly folded when not in use, so that the same will occupy a minimum amount of space.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which:—

Figure 1 is a side elevation of the device in its unfolded position. Fig. 2 is a front view of the same. Fig. 3 is a side elevation of the device in its folded position. Fig. 4 is a longitudinal sectional view therethrough. Fig. 5 is a sectional view on line 5—5 of Fig. 2. Fig. 6 is a similar view on line 6—6 of Fig. 2.

The ladder comprises upper and lower sections 1 and 2, respectively, the upper section comprises side bars 3, the upper ends of which are connected by a transverse bar 4, the ends of which are provided with right angle extensions 5, which coact with the similar extension 6 formed upon the upper ends of the side bars 3 to form catches 7, the purpose of which will appear later. Secured to the transverse bar 4 are hooks 8, which are adapted to detachably engage the side rail of the usual upper berth.

The lower section consists of side bars 9 which have their upper ends hingedly connected to the bars 3 of the upper section, as indicated at 10, the lower ends of the bars 9 being connected by a strip 11, which holds the lower ends thereof in rigid spaced relation. Hingedly connected to the side bars 9 is a step 12, the movement of which is limited in one direction by brackets 13 which are secured to the side bars 9 so as to hold the step in a horizontal position. A step 14 is hingedly connected near the lower ends of the bars 3 of the upper section, said step being of less width than the step 12. Hingedly connected to the side bars 3 and above the step 14 is a step 15, the same being of less width than the steps 14 and 12. Pivotally connected to the ends of the steps 14 and 15 are bars 16 the lower ends of which are curved, as indicated at 17, and extend below the step 14, while the upper ends of said bars extend above the step 15. Pivoted to the ends of the step 12 are the lower ends of the bars 18, the upper curved ends 19 of which are pivotally connected to the curved lower ends of the bars 16.

To fold the ladder it is only necessary to swing the step 15 toward the bars 3, whereupon strain will be applied to the bars 16 and 18 thereby causing the steps 12 and 14 to fold against the bars 3 and 9, respectively, and simultaneous with the folding of the step 15, whereupon the sections 1 and 2 are folded back to back, and at which time the upper ends of the bars 16 engage the catches 7.

What is claimed is:—

1. A ladder of the class described, comprising upper and lower sections, said sections being hingedly connected, steps hinged to the sections, upper and lower bars connected to the steps and having their meeting ends pivotally connected, whereby when one step is folded the others will be simultaneously folded.

2. A ladder of the class described comprising hingedly connected sections, steps hingedly connected to the sections, bars pivotally connected to the ends of the steps having their meeting ends pivotally connected, means carried by one of the sections for engaging the upper ends of the bars when the sections are folded.

3. A ladder of the class described comprising upper and lower sections, said sections being hingedly connected, steps hingedly connected to the upper section, a step similarly connected to the lower section, bars pivotally connected to the ends of the steps carried by the upper section, bars having their lower ends pivotally connected

to the step carried by the lower section, said bars having their upper ends pivotally connected to the first named bars, whereby when the uppermost step of the upper section is folded the remaining steps will be simultaneously folded and the pivotal connection of the bars are alined with the hinged connection of the sections, means carried by the upper section to engage certain ends of the first named bars when the sections are folded back to back.

In testimony whereof I affix my signature in the presence of two witnesses.

FRED A. CREED.

Witnesses:
CHARLES R. HOLTON,
ALBERT POUND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."