

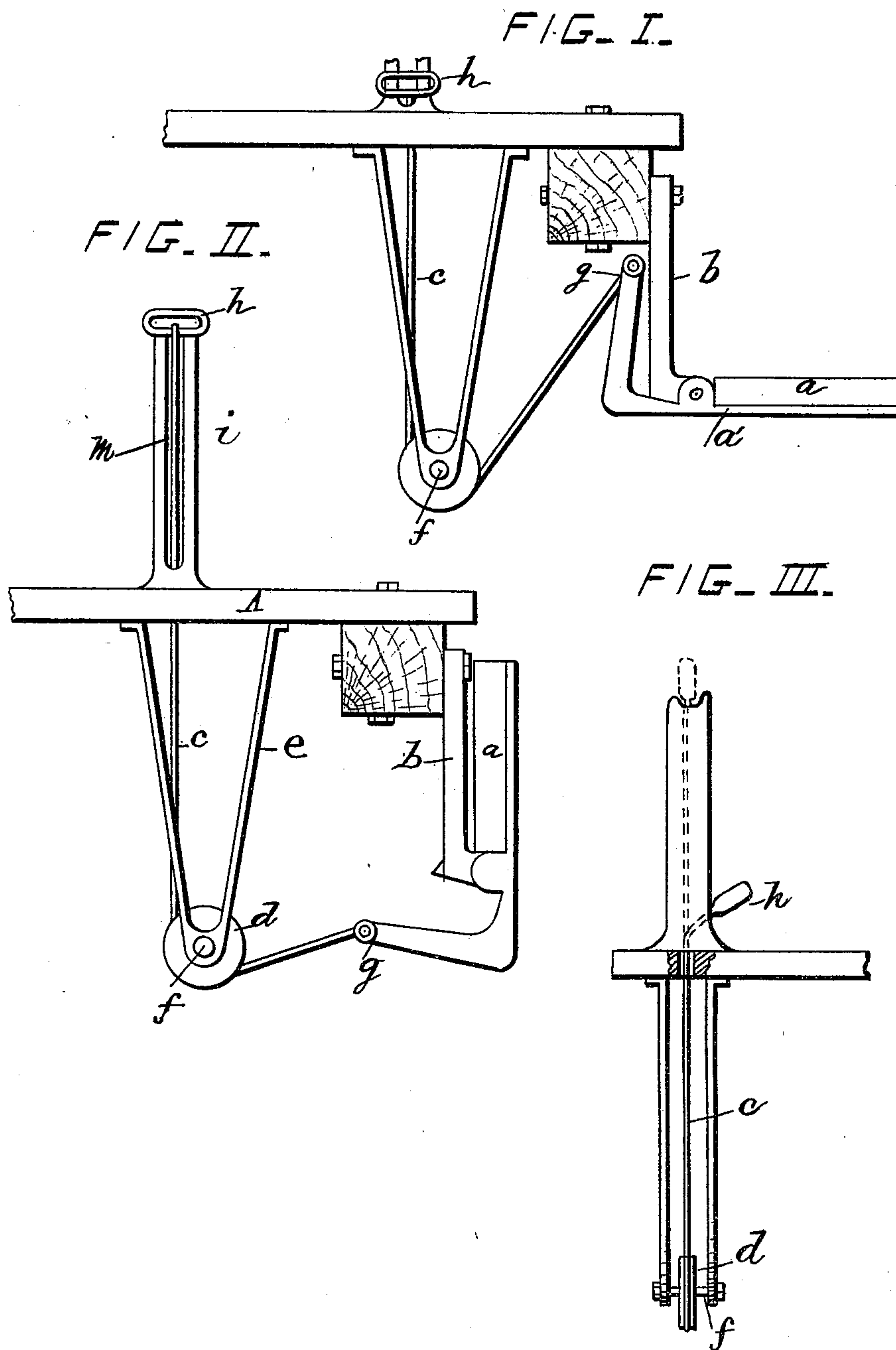
No. 625,935.

Patented May 30, 1899.

T. MILLEN.
CAR STEP LIFTER.

(Application filed Aug. 30, 1898.)

(No Model.)



WITNESSES

E. H. Perry
A. Smith

INVENTOR

Thomas Millen

BY

George H. Huntington

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS MILLEN, OF NEW YORK, N. Y.

CAR-STEP LIFTER.

SPECIFICATION forming part of Letters Patent No. 625,935, dated May 30, 1899.

Application filed August 30, 1898. Serial No. 689,879. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MILLEN, of the city, county, and State of New York, have invented a new and useful Improvement in Car-Step Lifters, of which the following is a specification.

This invention relates to car-step lifters, a device which is situated at the front or rear platform of a street-car and is arranged so as to fold the lower step on that side of the car which is not in use, as will be hereinafter explained.

In the accompanying drawings, which form a part of this specification, my invention is fully illustrated, with similar letters of reference to indicate corresponding parts, as follows—

Figure 1 represents a view looking toward the end of the car, showing the lifting device in side elevation and an end view of the step *a*, the step being down in position for use. Fig. 2 is a similar view showing the step-rest folded against the step-hanger *b*, as it will appear when folded and not in use. Fig. 3 represents a side view of the lifting device, showing the manner in which the lifting-chain *c* passes through the revolving drum *d*.

It has been the custom heretofore and before the creation of my present invention and prior ones upon the same subject to fold the step up by hand and fasten it with a hook at each end after the car has finished its trip and the step on the opposite side is to be used. It must be understood that it is necessary, for obvious reasons, to have the step on the inside of the car (that side which passes the opposite-going car) folded up and out of the way, so as to give more space between two passing cars. It is also necessary at times when passing trucks or wagons in crowded thoroughfares to close the outside step until the vehicle or obstacle which may be in close proximity is passed, when the step is again lowered.

The construction of my present device is to place a hanger, as *e*, under the platform A of the car, the hanger being provided with a drum or sheave which is trunnioned to the hanger, as shown at *f*. Over this drum passes a wire rope or chain, as *c*, one end of which is secured to the projecting vertical arm of

the step-frame *a*, the latter being trunnioned to the lower portion of the step-hanger *b*. The opposite end of the chain *c* is secured to the handle *h*. The end of the chain which is secured to the handle *h* passes through a vertical pipe-like rest *i*, which is secured to the front portion of the platform A. On one side of the rest *i* a vertical slot, as *m*, is provided, which permits the handle to be lowered to the bottom of the slot when the step is released for use. Thus when the step is down and ready to be used the opposite handle *h*, within the rest *i*, will be like that shown in Figs. 1 and 3, and when the step is lowered and not in use the position of the handle will be like that shown in Fig. 2 and also by the dotted lines in Fig. 3.

The particular feature to be provided for in the construction of this device to make it thoroughly effective in its operation is to have the lower periphery of the drum *d* sufficiently below the plane of the upper end of the arm *g* to insure the throwing of the step close against the hanger *b*, as illustrated in Fig. 2.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a car-step lifter device the step-frame *a'* linked as described to the hanger *b* and provided with the vertical arm *g* in combination with a chain or rope passing beneath a drum or pulley as *d* situated under the car and having its lower periphery below the plane of the arm *g*, when the step is folded as shown in Fig. 2, substantially as described.

2. In a car-step lifting device the step-frame *a'* linked as described to the hanger *b* and provided with the vertical arm *g*; a suitable chain or rope secured to the arm *g* and passing beneath a drum or pulley as *d* in combination with a rest as *i* provided with the vertical slot *m*, arranged substantially as described.

In testimony that I claim the foregoing invention I have hereunto set my hand this 22d day of August, 1898.

THOMAS MILLEN.

Witnesses:

E. W. PERRY,
H. W. SMITH.