

**No. 708,131.**

**Patented Sept. 2, 1902.**

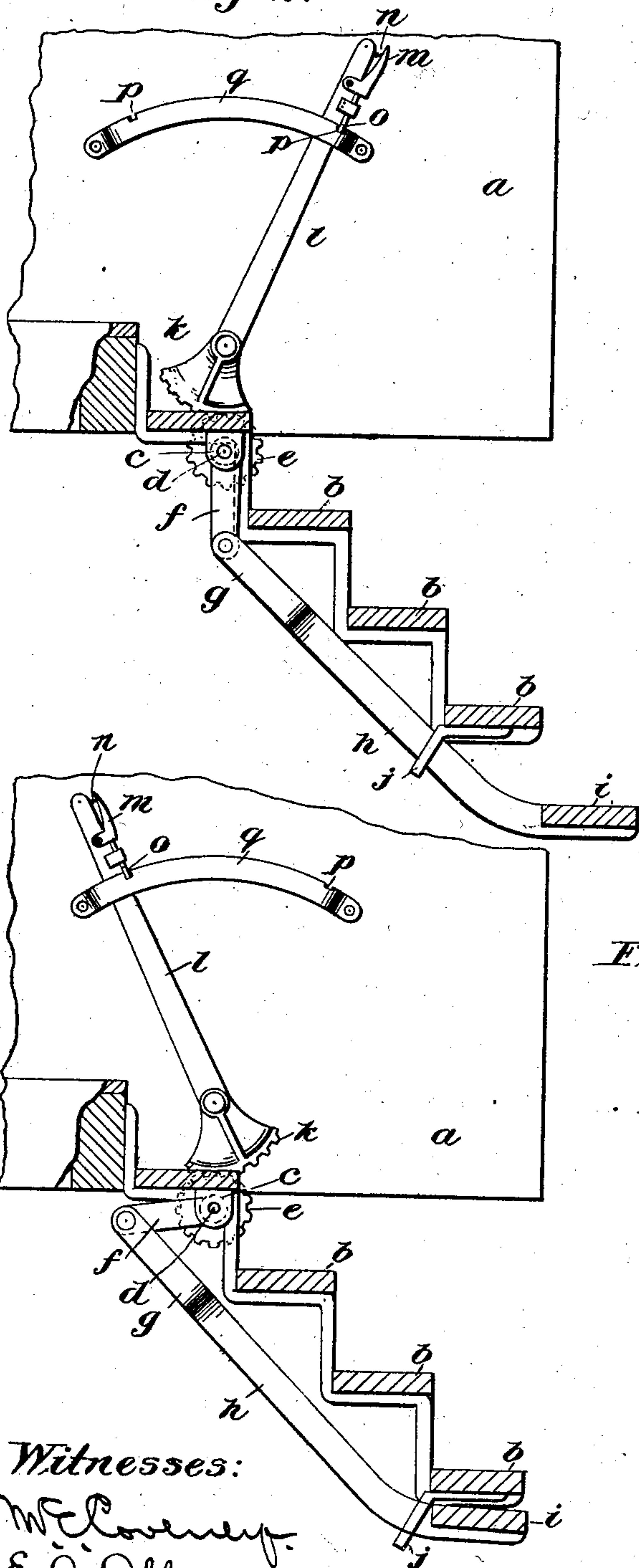
**J. H. FASSETT & J. E. WARREN.**

**ATTACHMENT FOR CAR STEPS.**

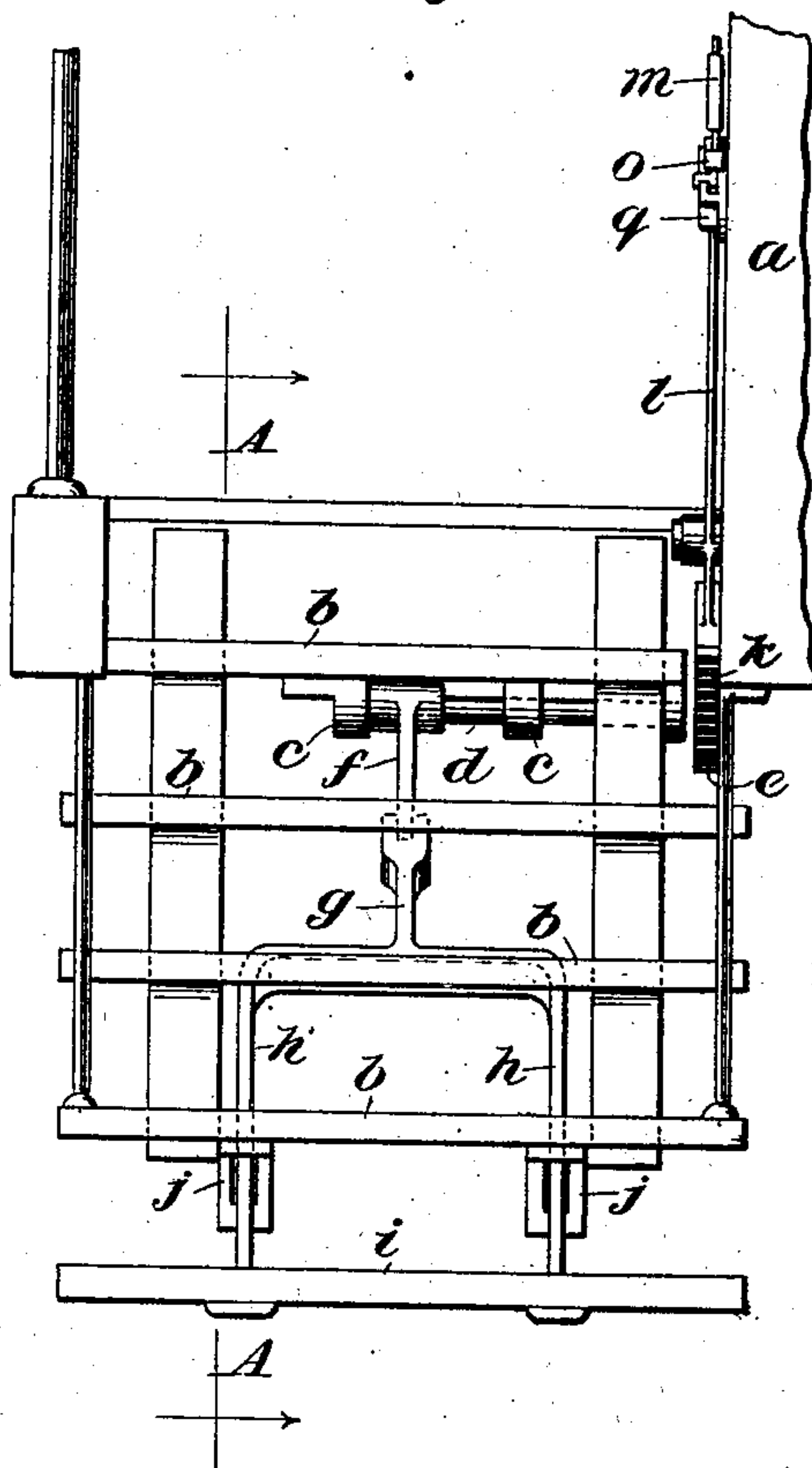
(Application filed Jan. 25, 1902.)

(No Model.)

*Fig. 2.*



*Fig. 1.*



*Fig. 3.*

*Witnesses:*

W. E. Covey.  
E. A. Allen.

*Inventors:*

James H. Fassett, and  
John E. Warren  
by their attorney  
James Barnum

# UNITED STATES PATENT OFFICE.

JAMES H. FASSETT, OF NASHUA, AND JOHN E. WARREN, OF GREENFIELD,  
NEW HAMPSHIRE, ASSIGNORS OF ONE-HALF TO WILLIAM H. CHEEVER,  
OF NASHUA, NEW HAMPSHIRE.

## ATTACHMENT FOR CAR-STEPS.

SPECIFICATION forming part of Letters Patent No. 708,131, dated September 2, 1902.

Application filed January 25, 1902. Serial No. 91,172. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES H. FASSETT, of Nashua, and JOHN E. WARREN, of Greenfield, in the county of Hillsboro and State of New Hampshire, citizens of the United States, have invented a new and useful Improvement in Attachments for Car-Steps, of which the following is a specification, reference being had to accompanying drawings.

Our invention relates to an improvement in steps for cars and similar vehicles, and has for its object to provide an extra step, which may be retracted at will by the trainman.

Heretofore, so far as known to us, it has been the common usage for trainmen to carry a cricket or portable step by which the passenger was assisted to the first step of the car.

It is the object of our invention to do away with this contrivance and to provide a step and mechanism by which it may be let down and folded up when desired.

In the drawings illustrating the principle of our invention and the best mode in which we have contemplated applying that principle, Figure 1 is a front elevation showing the retractable step lowered. Fig. 2 is a sectional view on line A A of Fig. 1, and Fig. 3 is a sectional view showing the step retracted.

*a* is the body of the car, to which are secured the steps *b* in any suitable manner.

Journalled in the bearings *c* is the shaft *d*, fast on the outer end of which is the pinion *e*, and fast upon the inner end of which is the crank-arm *f*. Pivotally secured to the crank-arm *f* is a yoke *g*, integral with which are the arms *h*, secured to which is the step *i*. The arms *h* are slidably supported in guides *j*. Meshing with the pinion *e* is a segmental rack *k*, cast upon the lower end of lever *l*, upon the upper end of which is supported a latch *m*, the spring *n* of which tends to force the bolt *o* into the notches *p* in the strap *q* to hold the step *i* in its adjusted position.

The operation will now be readily understood. When the train is in motion, the step

*i* is kept retracted, as shown in Fig. 3. When the train stops at a station, the trainman throws the lever *l* outwardly into the position shown in Fig. 2 and through the rack *k* and pinion *e* rotates the shaft *d* and crank-arm *f*, thus moving the arms *h* in the guides *j* and lowering the step *i*. The passenger is thereby enabled to reach the fixed steps *b* easily and without undue effort. When the train is ready to proceed, the trainman throws the lever *l* into the position shown in Fig. 3, thereby retracting the step *i*, as shown. The bolt *o* of the latch *m* under the influence of the spring *n* is forced into the innermost notch *p* in the strap *q*, and thus serves to hold the step *i* in its retracted position.

What we claim is—

The combination of a car-body; a flight of fixed steps secured thereto; a shaft journalled on said flight of steps; a crank-arm fast on the inner end of said shaft; a yoke pivotally secured to said crank-arm; guide-supports for said yoke; a step secured to said yoke; a pinion fast on the outer end of said shaft; a lever pivotally secured to said car-body and formed on its lower end with a segmental rack in mesh with said pinion, whereby motion is communicated to said shaft to raise and lower said yoke with its attached step; a strap secured to said car-body and formed with notches; a spring-controlled latch device mounted on the upper end of said lever for engaging in the notches in said strap, whereby said yoke is held in the desired position.

In testimony whereof we hereunto set our hands, in the presence of two witnesses, this 17th day of January, A. D. 1902, at Peterboro, in the county of Hillsboro and State of New Hampshire.

JAMES H. FASSETT.  
JOHN E. WARREN.

Witnesses:

EZRA M. SMITH,  
CHAS. W. HOLT.