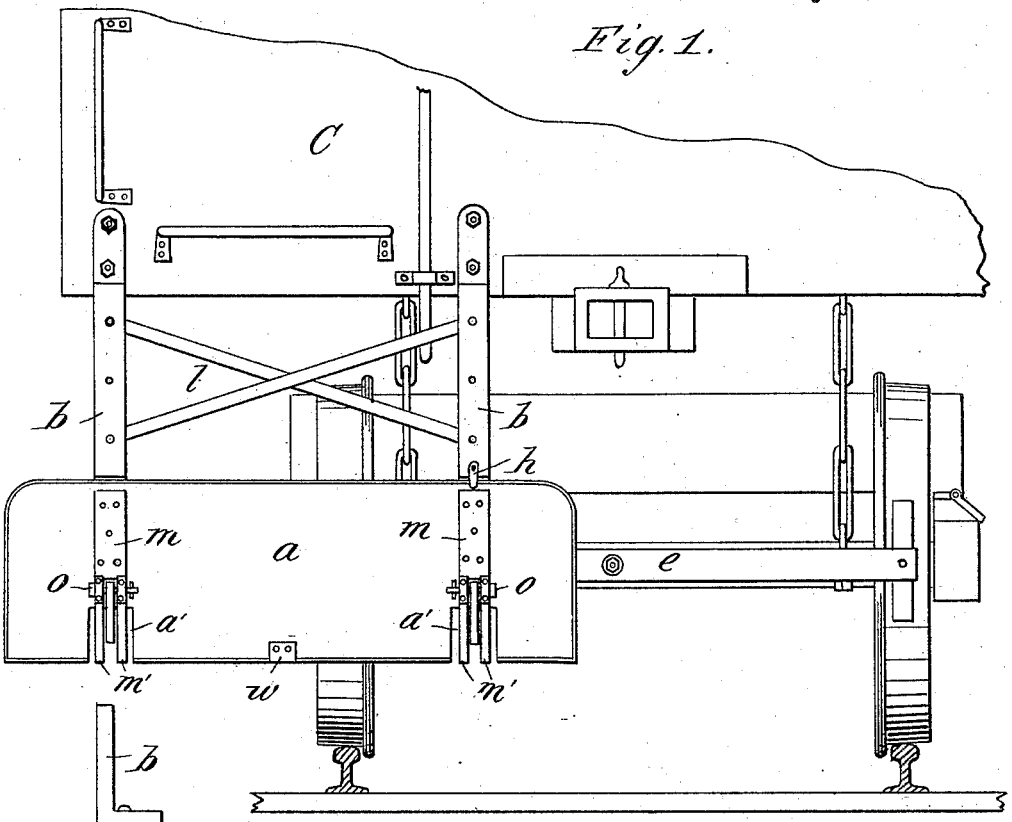
(No Model.)

C. C. BAKER & O. YATES.

CAR STEP.

No. 301,326. Patented July 1, 1884.

Fig. 1.



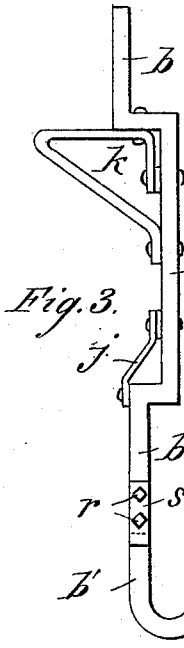


Fig. 3.

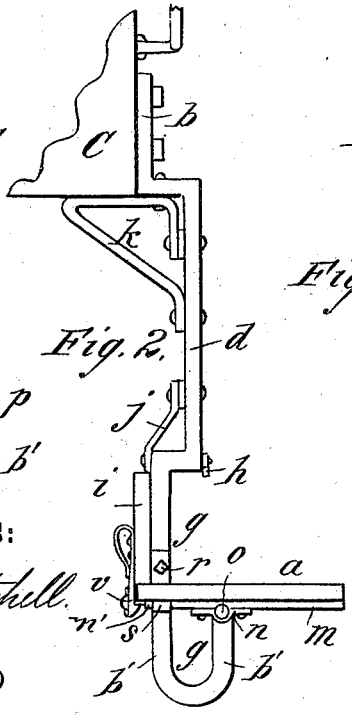


Fig. 2.

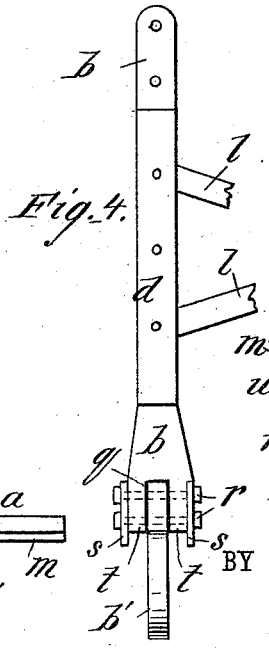


Fig. 4.

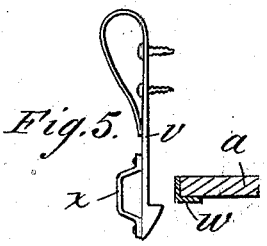


Fig. 5.

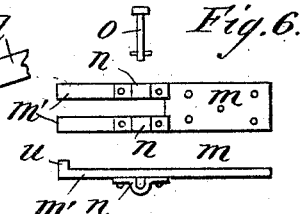


Fig. 6.

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UNITED STATES PATENT OFFICE.

CLARENCE CLARK BAKER AND ODAVILLE YATES, OF ALBUQUERQUE, TERRITORY OF NEW MEXICO, ASSIGNORS OF ONE-THIRD TO THOMAS D. MURPHY.

CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 301,326, dated July 1, 1884.

Application filed March 13, 1884. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE CLARK BAKER and ODAVILLE YATES, both of Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented a new and Improved Folding Freight-Car and Platform Step, of which the following is a full, clear, and exact description.

The object of our invention is to provide an improved folding step for railway freight-cars or station-platforms, which shall in use insure comparative safety to train-men while coupling, uncoupling, shunting, or otherwise handling the cars, and facilitate entrance to passenger-cars from the station-platform.

The invention consists in various details of construction and combinations of parts of the step and its hangers for substantially pivot-jointing them together, and for readily folding and unfolding the step and for securing an interlocking and mutual support of the parts from and with each other, all in a simple and durable construction, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end elevation of a railway freight-car in part, and with our improvement applied thereto, the step being folded. Fig. 2 is a side view of the hangers and step, the step being unfolded for use; and Figs. 3, 4, 5, and 6 are detail views, more fully to represent the construction.

The letter *a* indicates the folding car-step, which is supported by hangers *b* from the car-body *c*, to which the hangers are firmly bolted at the top to hold the step at convenient height above the road-bed to be mounted and dismounted by the brakeman when the cars are to be coupled or uncoupled and shunted about the yard or on the road, as required. We make the hangers *b* with an outward offset at *d* to clear the brake-beam *e*, and with an outwardly and upwardly bent piece, *b'*, at the bottom, forming a space, *g*, thereat, into which the step *a* may fold, to be locked by any suitable buttons, *h*, fixed to one or both of the hangers, as desired. A cross-bar, *i*, connects the hangers and braces them laterally, and above bar *i* an angle-brace, *j*, is secured at the lower end of offset *d*, at the top of which a strong angle-brace, *k*, is bolted, so as to project beneath the car-body *c* to prevent backward play or spring of the hanger by suddenly weighting the step, and cross-braces *l* may connect the hangers *b b*, if desired.

In pivot-jointing the step *a* to the ends of the lower portions, *b'*, of the hangers we slot the step, as at *a'*, and fix to its under side the forked strap-irons *m*, which have bearing pieces or plates *n* attached to receive the pivot-bolts *o*, which pass also through the eyes *p* at the free ends of the parts *b'* of the hangers, making a substantial hinge-connection of the step. The upper ends of the lower portions, *b'*, of the hangers enter slots formed in the main parts of the hangers, as at *q*, and a couple of strong bolts, *r*, pass through to connect the two parts of the hangers together, opposite stay-plates, *s*, being secured by the bolts, within which plates the outside edges of the forked ends *m'* of the straps *m* rise at either side of part *b'* when the step is lowered for use, the upper faces of said ends *m'* then coming against the shoulders *t* of the hangers, to aid the pivot-bolts in maintaining the steps rigidly in the horizontal position, and lips *u* on the strap-irons *m* hook behind the shoulders *t*, and serve to prevent spreading apart of the arms of parts *b'* of the hangers by weight upon the step, which latter, when in use, is locked horizontally by the spring-catch *v*, which is secured to the cross-bar *i* and engages by its head the under side of the step *a* or a wear-iron, *w*, placed thereon. The catch *v* has a suitable handle, *x*, by which to draw back the catch when it is desired to fold the step *a* against the hangers, as in Fig. 1.

It will be noticed that the entire construction is simple and well calculated to withstand the shocks of use, the parts, especially the hinge-connections of the steps and the joint of the two parts of the hangers and the catch device, acting mutually to lock and stay each other in every direction, or against forward, backward, or side strains. The step may readily be folded up and held by button the *h*, and when swung down it is locked automatically by the spring-catch *v*, and forms a strong support for the brakeman or switchman in

coupling or uncoupling the cars, which may be done much more safely and conveniently than when the train-man walks or runs along the ground with the cars, in which latter case his foot is liable to be caught in "frogs" and "guard-rails" of the track, and all stumbling over the ties or in holes of the road-bed thus is avoided, making the labor easier and far less dangerous to life, and the train-men are by the use of the step enabled more easily to mount the cars to operate the usual brake-wheels at their tops, which also promotes safety to life and limb.

Our improved folding step is applicable to all classes of flat or box cars, and may readily be applied or removed as required by the exigencies of traffic over the road, and the improvement has been described above with special reference to such use; but the step may be erected on the station-platforms in positions facing passenger-car platforms, so as to be used to facilitate the passage of passengers to and from the cars. The step in this case can either be set upon brackets or posts fixed to the station-platform, or so as to be movable along the platform, as may be desired.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In folding steps for railway-cars, the step-hangers *b*, having offsets at *d* and braces at *k*, said hangers having their parts *b'* rigidly fixed at their lower ends, so as to form shoulders *t*, with side stop-plates, *s*, in combination with the slotted step *a*, having forked strap-irons *m*, which pass up at either side of parts *b'* and within the plates *s*, and said irons *m* having stops *u* bearing behind the shoulders *t*, substantially as shown and described.

2. The step-hangers *b*, made with offsets *d*, and having fixed lower portions, *b'*, curved outward to form recesses or pockets *g* for the step to fold into, and also having stop-plates *s* and shoulders *t*, for engagement with the step strap-irons *m*, substantially as shown and described.

3. The combination, with the hanger portions *b'*, made in U form, and having the step pivot-jointed at *p* to the outer arm, of the stops *u* on the step, to engage back of the hanger to prevent spreading of the hanger by weight upon the step, substantially as shown and described.

4. The step strap-irons *m*, having forked ends *m'*, bearings *n* for the pivot-bolts *v*, and end stop, *u*, and adapted to operate in combination with the step and its hangers, substantially as shown and described.

5. The combination, with the step *a*, its forked strap-irons *m*, and the hangers *b b'*, all constructed to interlock, as specified, of the spring-catches *v*, substantially as shown and described.

6. The combination, with the step *a* and two hangers, *b b' b b'*, having offsets *d* and braces *k*, of the stay-bar *i* and braces *l l*, substantially as shown and described.

7. The hangers *b*, having offsets *d*, with angle-braces *k j* at the upper and lower ends of the offsets, substantially as shown and described.

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Witnesses:
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TOMAS W. MONTAYA.