

L. J. CATHELL.

Improvement in Hand Cars.

No. 123,322.

Patented Jan. 30, 1872.

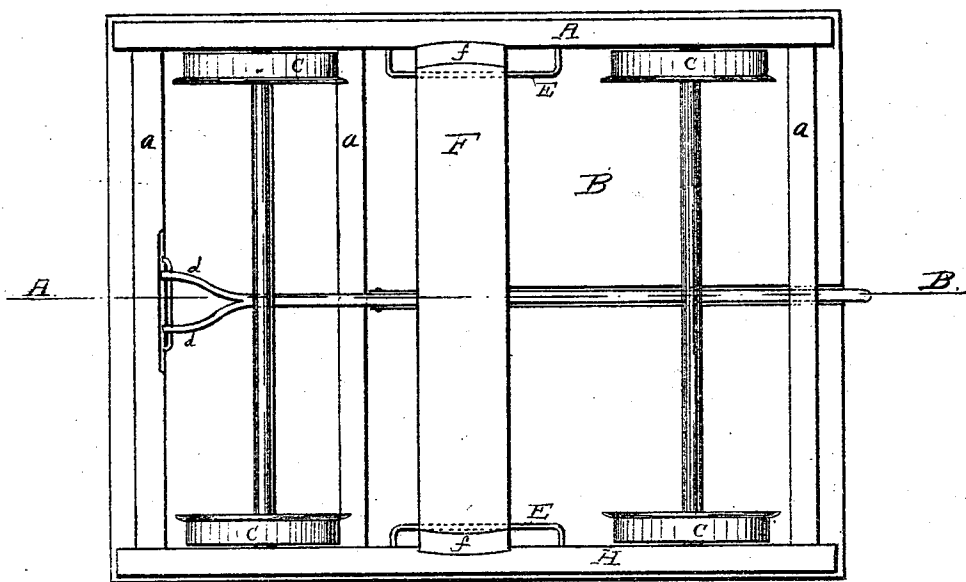
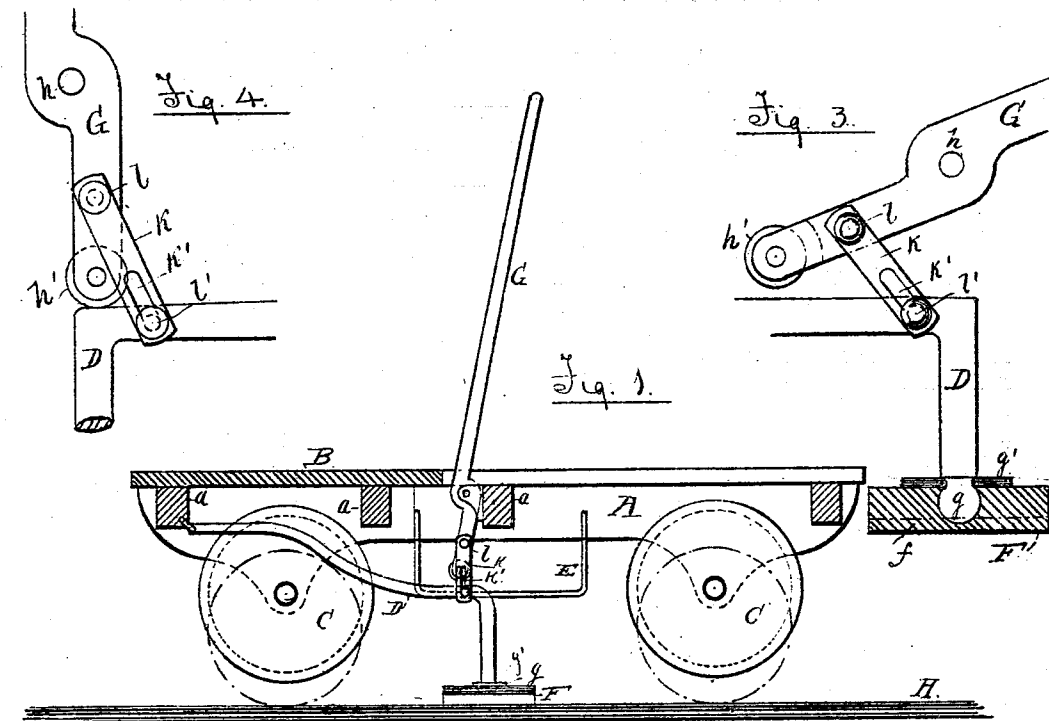


Fig. 2.

Witnesses:

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L. JAMES CATHELL, OF SALISBURY, MARYLAND.

IMPROVEMENT IN HAND-CARS.

Specification forming part of Letters Patent No. 123,322, dated January 30, 1872.

Specification describing certain Improvements in Hand-Cars for Railroads, invented by L. JAMES CATHELL, of Salisbury, county of Wicomico and State of Maryland.

The first part of my invention relates to a combination of devices, by means of which an operator on the top or platform of the hand-car can raise the same entirely above and off the track, and lock it in that position so that it may be turned and run off out of the way of an approaching train. The second part of my invention relates to the construction and pivoting of a gauge-foot upon a leg fastened to the frame of the car in such a manner that the foot will reach from one rail to the other and sustain the car when raised, and allow the same to turn in the same direction with such foot perpendicular to the rails preparatory to being run off, and also in such a manner that when the car is to be returned upon the track one of its ends will catch against one of the rails and stop the car exactly where it ought to be stopped preparatory to its being raised, turned, and lowered onto the rails again. The third part of my invention relates to the construction and operation of two rests, one under each side of the car, to afford an elastic bearing for the ends of the foot before mentioned. These rests keep the foot nearly level, and by being elastic any injurious jolting or friction is prevented.

Referring to the accompanying drawing, Figure 1 represents a vertical longitudinal section. The foot F, recessed at each end, as shown at *f f*, for the rails, sustains the weight of the car when it is raised by means of the lever G, and it is made to revolve horizontally on the lower end of the leg D, so that it may keep its position across the rails, while the car may be turned in any position desired. The upper end of the leg D is made into two branches, which are fastened to the end piece of the frame, as shown, and the lower end is connected with the foot by a universal joint, as shown at *g*; but the lateral action of the joint is limited by the slot in the plate *g*, while longitudinal motion of the foot is free. By this branched construction of the leg lateral play of the same is prevented. The metal rests E E furnish elastic bearings for the ends of the foot F when it is not in use.

The operation of the parts by the use of the lever G is quite simple. When the wheels are upon the rails that lever lies upon the floor B entirely out of the way; but when it is desired to raise the car to turn it across the track the upper end of the lever is raised, and when raising it the lower end, by means of the pulley in the end, rolls easily upon the leg D until it comes within the plates K K, when the car will be raised to its highest point, taken in line A B of Fig. 2 of a hand-car embracing my said improvements.

Fig. 2 represents a plan of the bottom of the same. Fig. 3 represents an enlarged view of the co-operative parts constituting the apparatus for raising the car, and Fig. 4 another view of the same.

A A the side pieces, and *a a* the cross-pieces constitute the frame, and B the floor of the car. G is a lever extending up through the floor, with a roller, *h'*, in its lower end, and it works upon the pin *h* as its fulcrum in jaws bolted to the frame, as shown, and it is connected with the legs D by the plates K K and the pins *l* and *l'*. The holes through the plates are made in the form of slots, as shown by K', to afford play-room for the pin *l'*. When the lever G stands in a horizontal position the car will rest upon the track, but when it is in a vertical position the car will be held above it, and it will be locked in that position, as before stated, and as shown in Fig. 4, because the lower end of the lever G must be brought into line with the plates K K by a force sufficient to raise the car a little way before it can be lowered down upon the track; and while this is being done the lever, the plates K K, and foot F will occupy the relative positions shown in Fig. 3. The pulley in the end of lever G facilitates its moving back and forth on the leg D above the rails, and then, by forcing the lever a little further in the same direction, until its lower end is in line with the lower end of the leg D, it will become locked, as before stated. Then the car may be easily turned in any direction desired upon the pivot in the foot F and removed from the track.

The operator may step off the platform and turn the car across the track, fasten down the lever by any simple device, and then remove the car.

When, however, the car is to be returned to the track, the forward wheels, after crossing the first rail, will be advanced to the second, when the lever G should be unfastened and raised, so that the foot will be lowered and the shoulder *f*, under the end thereof, catch against the side of the second rail and stop the car exactly at the proper point, so that the car may be raised, turned in line, and then lowered upon the rails without further adjustment.

Claims.

What I claim as my invention is—

1. The foot-gauge F, jointed to the leg D, as described, and provided with the recesses *f f*, constructed substantially in the manner and for the purpose described.

2. The rests E E, in combination with the foot F and side pieces A A, constructed and operated substantially as and for the purpose described.

3. The leg D, having the branches *d d* and bent into the form shown, and provided with the ball *g* on its lower end, in combination with the foot F, constructed and arranged substantially in the manner and for the purpose described.

L. JAS. CATHELL.

Witnesses:

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