

A. V. SANFORD.
Adjustable Car Truck.

No. 105,984.

Patented Aug. 2, 1870.

Fig. 1.

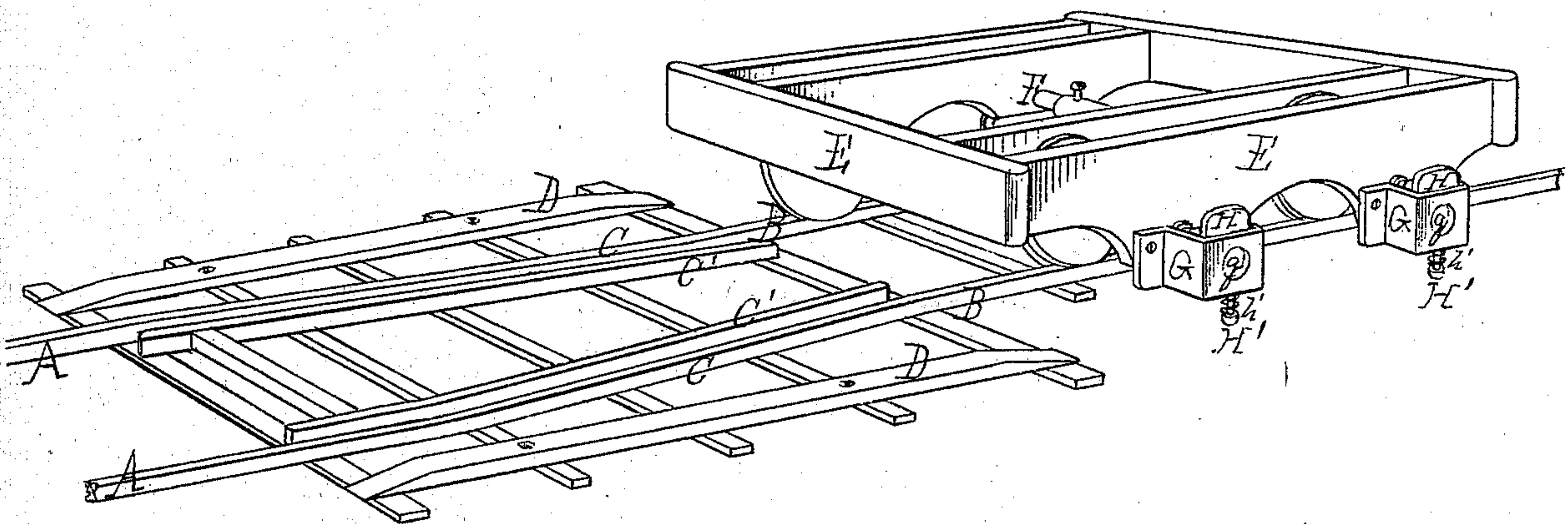


Fig. 2.

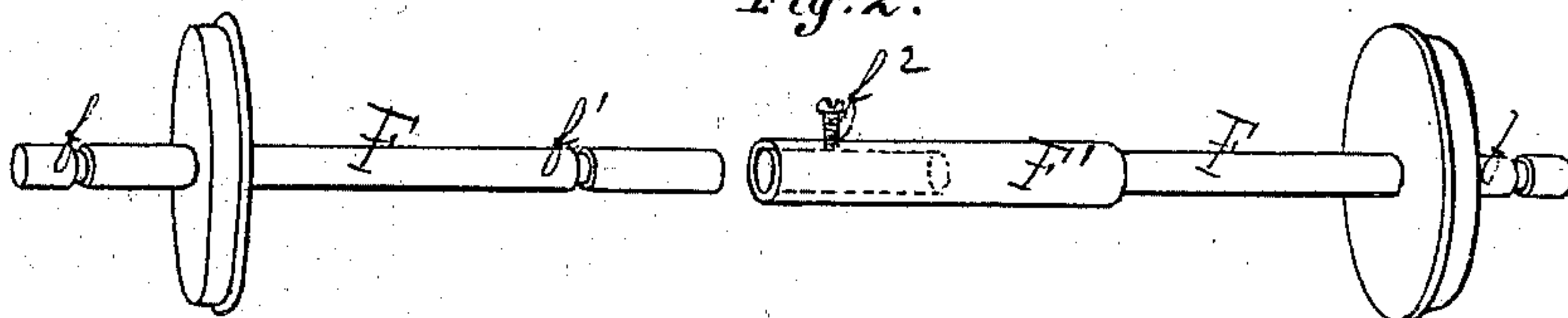
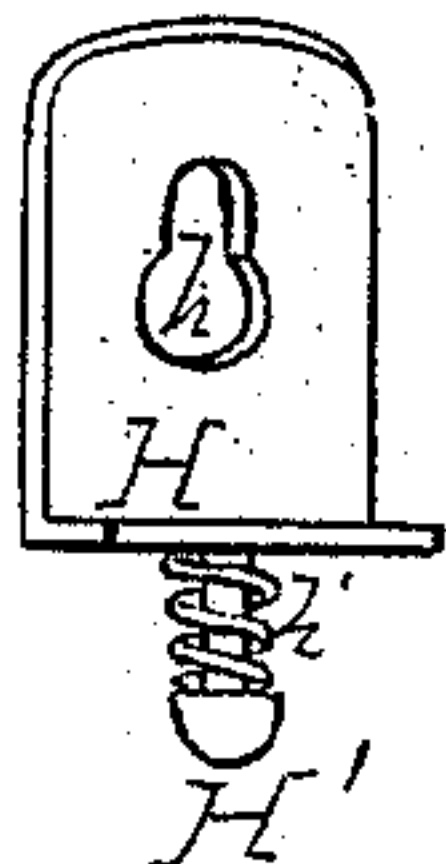


Fig. 3.



Witnesses.

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ADDISON V. SANFORD, UNION CENTRE, NEW YORK.

Letters Patent No. 105,984, dated August 2, 1870.

IMPROVEMENT IN ADJUSTABLE RAILWAY TRUCKS.

The Schedule referred to in these Letters Patent and making part of the same

I, ADDISON V. SANFORD, of Union Centre, in the county of Broome and State of New York, have invented certain Improvements in Adjustable Car-Trucks, of which the following is a specification.

It is frequently necessary to ship freight over connecting lines of railroad having tracks of different widths or gauges, and, in so doing, it is desirable to avoid reshipping at each change of gauge, thereby effecting a great saving of time, expense of handling, &c.

My invention has for its object the provision of means whereby cars can be made to run upon tracks of varying gauges, and, to this end,

It consists in—

First, a novel construction of the truck, to allow the wheels to be set to fit either a narrow or a broad gauge, and to automatically lock them in their position against accidental displacement; and,

Second, in combining with the intermediate section of rails, which connects the tracks of different widths, a longitudinal stringer or rib, provided with inclined ends for operating the locking devices.

Figure 1 is a perspective view of a truck and track embodying my invention;

Figure 2 is a detached view of the axle; and

Figure 3 is a detached view of the key-plate.

In the drawing—

A A represent a broad-gauge, and

B B a narrow-gauge track.

C C are rails forming an intermediate connecting section.

C' C' are guard-rails placed between rails C C, at such distance from them as will readily admit the flange of a car-wheel. The purpose of these guard-rails will be fully explained hereafter.

D D are ribs, stringers, or guides, placed a short distance outside of rails C C, and parallel to rails A or B.

E E represent the body or the car-truck, of any usual or desired construction, and provided with boxes for the reception of axle F.

These axles are divided at or near their centers, and the two members of each are connected by means of sleeve F', which is rigidly attached to one member, while the other member has a free longitudinal movement within said sleeve, thus forming an extensible axle. The axles are of uniform diameter throughout their entire length, and can, therefore, move freely endwise in the boxes upon which the body of the truck is supported.

f are grooves in the outer ends of the axles, as shown in fig. 2, where the sleeve is also fully shown.

G is a strap or bracket, made substantially in the form shown in fig. 1, and provided with a perforation, g, a little larger than the axle F. These brackets are bolted or otherwise secured to the body of the truck at the outer ends of the axles, in such position that the perforations g shall be on a line coincident with axle F, when the latter are in their proper position in the trucks.

H is a key-plate, provided with an elongated slot, h.

The lower end of this slot is of sufficient size to allow axle F to pass freely through it, while the upper end corresponds in size to the diameter of the axle in the bottom of the groove f; and the thickness of plate H, at this end of the slot, is a little less than the width of said groove, so that the plate will readily fit into and occupy the groove, when required.

The key-plate H is placed on the inner face of the bracket G, being confined in a suitable groove, or its equivalent, in such manner that it (the key-plate) can slide up and down when actuated by the stem H' and spring h'.

The operation of my invention is as follows:

When running upon the narrowest gauge for which the truck is adapted, the wheels will be brought as near together as possible, in fact, I prefer that the inner ends of the divided axle should touch each other within the sleeve F', the key-plate H being dropped down into the position shown in fig. 1, with the outer ends of the axles abutting against it, in which position there can, of course, be no longitudinal movement of the axles, and the wheels will, of course, tread the track perfectly.

When we approach a change of gauge, the stem H' will strike the incline on the stringer D, and raise the key-plate H, so as to bring the larger end of slot h on a line with the axle, just before the wheels reach rails C C.

When, however, the wheels do reach these rails, the inner side of their flanges will impinge upon guard-rails C' C', and, as the truck moves forward, the wheels will be spread apart, and when they have reached the broad gauge, the stem H' will pass off from the stringer D and the key-plate H, descending into the groove f, will confine the wheels in proper position for this width or track.

Of course, in moving from a broad to a narrow track, the necessary adjustment will be made in a similar manner, the wheels being forced together by rails C C.

By increasing the number of grooves, f, the truck may be adapted to traverse more than two different gauges, and, when additional security is desired, the sleeve F' may be provided with a set-screw, as at f², fig. 2, which may be made to engage with a groove, f¹, upon the inner end of one-half of the axle.

Having now described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The adjustable axle F, in combination with the key-plate H and bracket G, substantially as set forth.

2. The combination of the frame E, axle F, key-plate H, bracket G, longitudinal stringer D, and intervening track C C', substantially as set forth.

ADDISON V. SANFORD.

Witnesses:

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