# J. PETTENGILL, Jr.

## Car Brake.

No. { 1,837, / 32,841. }

Patented July 16, 1861.

Fig. 1

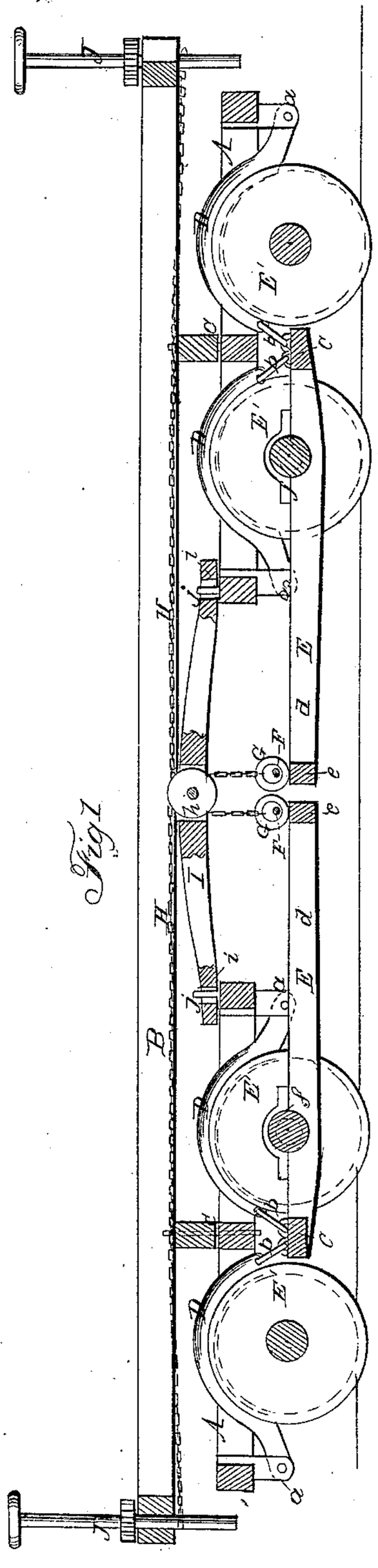
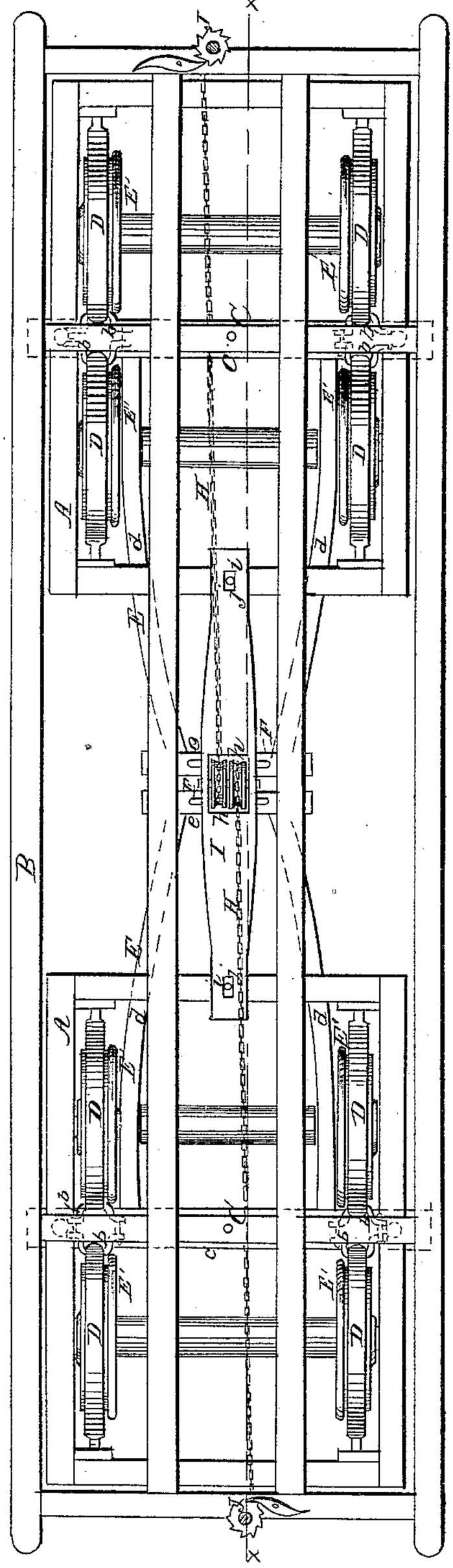


Fig. 2



Witnesses
J. W. Coombs
R. S. Spencer

Inventor
John Pettingill Jr
Per Munn & Co Attys

# UNITED STATES PATENT OFFICE.

JOHN PETTENGILL, JR., OF JACKSON, NEW HAMPSHIRE.

## CAR-BRAKE.

Specification of Letters Patent No. 32,841, dated July 16, 1861.

*To all whom it may concern:*

Be it known that I, JOHN PETTENGILL, JR., of Jackson, in the county of Carroll and State of New Hampshire, have invented a new and Improved Brake for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side sectional view of the running gear of a car with my invention applied to it; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improved car brake of that class in which shoes are pressed down upon the upper parts of the treads of the wheels.

The object of the within described invention is to obtain a ready and powerful means for operating or applying the brake, and one which will admit of the trucks readily turning to conform to the curvatures of the road, neither the car bed nor the brake being allowed to interfere in the least therewith.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, A, represent the two trucks of a railroad car connected to the car bed B, by bolts C, as usual. The trucks may be of the usual construction and therefore do not require a minute description.

D, represents the shoes which act upon the wheels when the brake is in operation. These shoes are of semi-circular form and they are connected at their outer ends to the ends of the trucks by joints *a*, as shown clearly in Fig. 1. The shoes D, are directly over the wheels E′, of the trucks A, and the inner ends of the shoes of each truck are connected by links *b*, to the outer ends of lever frames E, which may be described as being formed each of a cross bar *c*, two longitudinal bars *d*, *d*, and an outer cross bar *e*, the latter being considerably shorter than the inner cross bar *c*, see Fig. 2. The shoes D, are connected to the inner cross bars *c*, of the lever frames, and the latter are hung or have their bearings *f*, on the inner axles *g*, of the trucks.

The outer cross bar *e*, of each lever frame E, has a guide rod F, attached to it, and on each guide rod there is placed a ring G, to which chains H, H, are attached one to each. These chains extend upward and over pulleys *h*, *h*, which are placed side by side in a bar I, which has an oblong slot *i*, near each end and through these slots upright pins *j*, *j*, on the inner ends of the trucks pass. The chains H, H, are attached to vertical shafts J, J, at the ends of the car bed B. The shafts J, J, may be arranged precisely in the same way as those in ordinary use.

The operation is as follows: When the chains H, H, are slack the inner ends of the lever frames E, E, will be depressed by their own gravity and the shoes D, consequently elevated and raised above the wheels E′; this will be fully understood by referring to Fig. 1. When it is necessary to apply the brakes, or in other words, press the shoes D, on the wheels the brakemen turn the shafts J, J, which wind up the chains H, H, and thereby elevate the inner ends of the lever frames E, which cause the shoes to press on the treads of the wheels with sufficient friction to stop the cars. By having the ends of the bar I, provided with oblong slots *i*, the pins *j*, are allowed to work therein and the trucks A, may turn on the bolts C, to conform to the curvatures of the road without at all affecting bar I, and the latter cannot at all interfere with the free movement of the trucks. When the trucks A, A, turn, the guide rods F, slip in the rings G, G, and the chains H, H, are consequently not allowed to interfere with the movement of the frames E, E, as the trucks A, A, turn. Thus it will be seen that no part of the brake mechanism nor the car bed can at all interfere with the proper movement of the trucks A. This is an important feature of the invention as it insures the durablity of the brake and running gear generally.

I do not claim broadly the employment or use of shoes arranged to bear or press on the tops of the car wheels E′, for such an arrangement has been previously used. But

I do claim as new and desire to secure by Letters Patent,

1. In combination with the lever frames E, E, and shoes D, D, the bar I, provided with oblong slots *i*, *i*, at its ends through which pins *j*, *j*, on the trucks pass and also provided with pulleys *h*, *h*, for the chains H,

H, to pass over whereby the bar I, is not allowed to interfere with the movement of the car trucks.

2. Connecting the chains H, H, to the inner ends of the lever frames E, E, by means of the rings G, G, which are fitted on the guide rods F, F, at the inner ends of the lever frames, substantially as shown to admit of the moving of the frames E, with the trucks without affecting the chains H, H, as set forth.

JOHN PETTENGILL, Jr.

Witnesses.
J. B. Hickey,
Angernie Pitman.