

T. G. McLAUGHLIN.

Car Brake.

No. 11,527.

Patented Aug. 15, 1854.

Fig. 1.

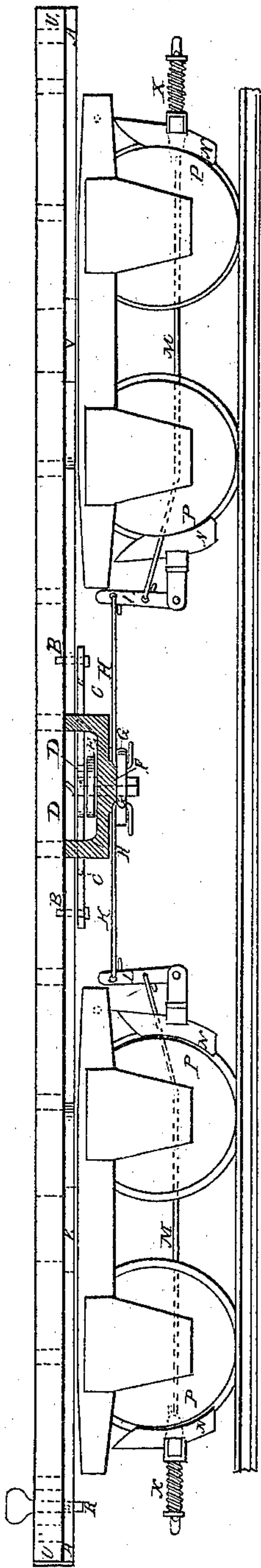


Fig. 2.

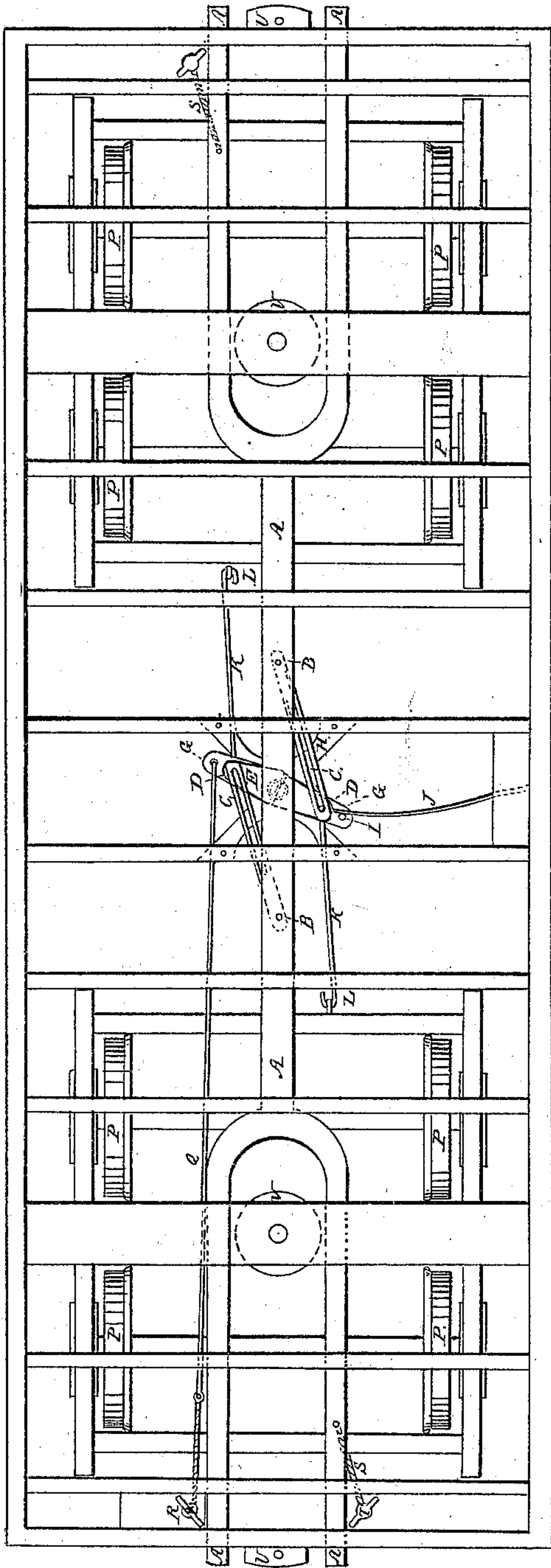


Fig. 3.

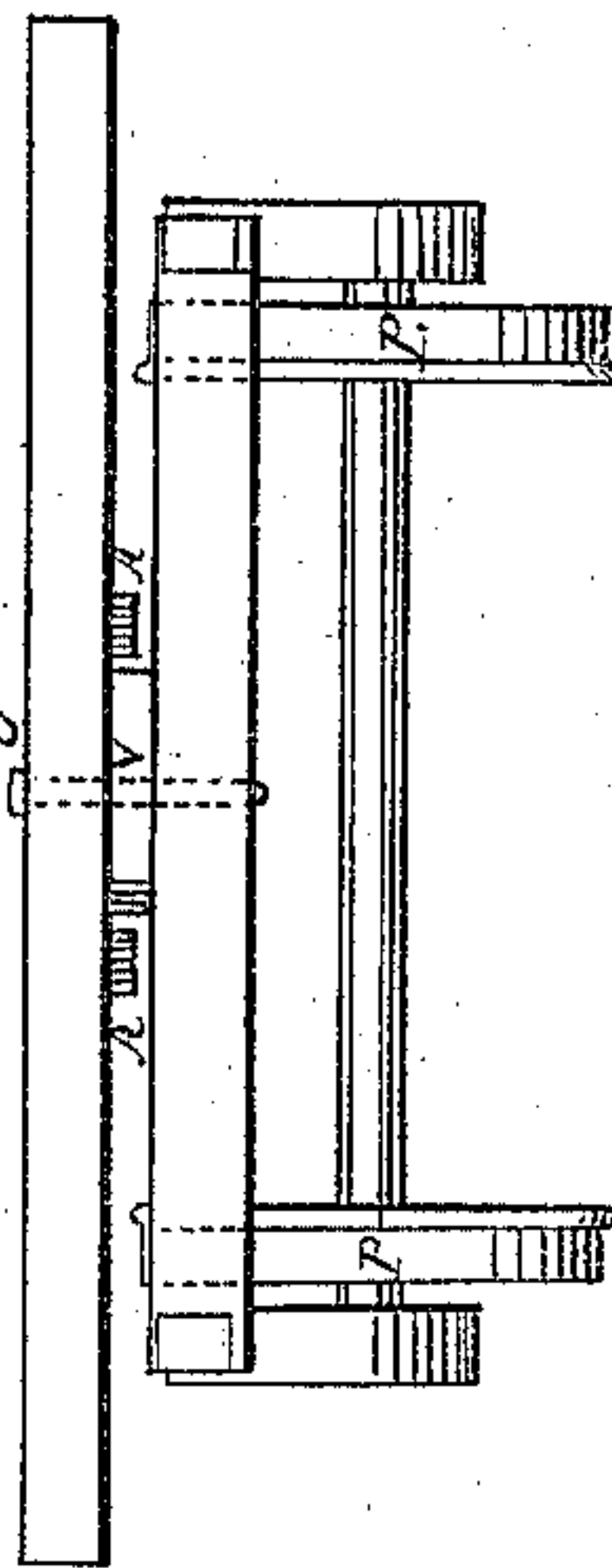
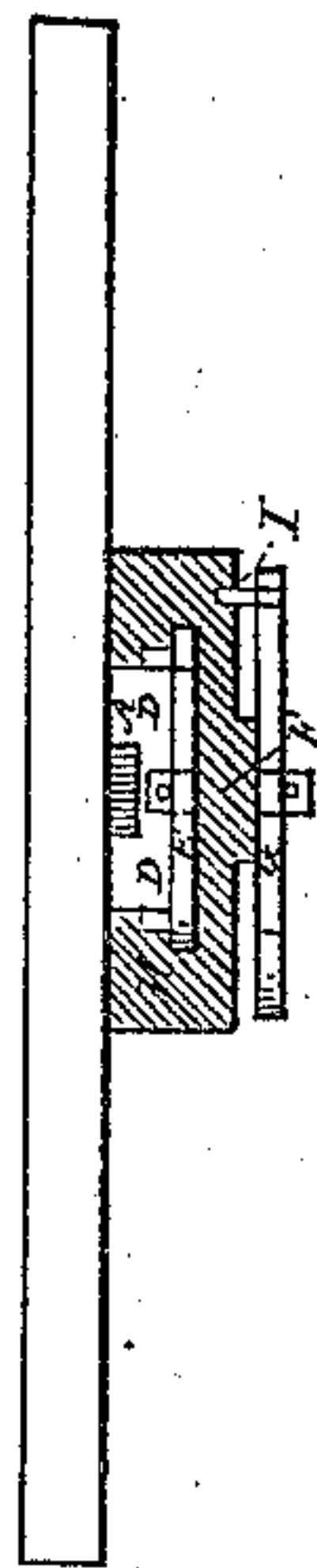


Fig. 4.





# UNITED STATES PATENT OFFICE.

THOS. G. McLAUGHLIN, OF PHILADELPHIA COUNTY, PENNSYLVANIA.

## RAILROAD-CAR BRAKE.

Specification of Letters Patent No. 11,527, dated August 15, 1854.

*To all whom it may concern:*

Be it known that I, THOMAS G. McLAUGHLIN, of the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Mode of Operating Railroad-Car Brakes, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a side view of a double trucked car, with the brakes; and the parts for operating the same attached. Fig. 2, is a plan view of the same, the rubbers not shown. Fig. 3, is an end view, showing the relation of the forked end of the sliding rod with the king joint. Fig. 4 is a sectional view of the bottom of the car at center, showing the sliding rod, hanger, and levers.

Similar letters in the several figures refer to like parts.

The nature of this invention, consists in securing to the bottom of the car; in suitable guides a sliding rod, which is forked at each end, in such manner as not to interfere with the king joints, and bumpers. The forks which encircle the king joint plates, extend toward the center of the car a sufficient distance; to allow the sliding rod, to have a longitudinal movement, sufficient to cause the brakes of the car to which it is attached, to be brought into action by the movement of the sliding rod. Attached to the sliding rod, by means of pins, are two connecting rods, having slots in one of their ends. The length of the slots are equal to double the distance which the sliding rod moves. The ends of the connecting rods, in which the slots are formed; operate alternately, by the movement of the sliding rod in either direction, upon pins secured in the ends of a horizontal vibrating lever; secured on the same shaft, and standing parallel, with the ordinary hand brake lever, both being supported by a suitable hanger attached to the bottom of the car; at or near its center. The purpose for which the sliding rod, and slotted connecting-rods are designed, is to cause the automatical action of the brakes of each car in a train to take place; by the sliding rod of the forward car being moved a certain distance; in a contrary direction from that of the train, each car being provided with parts; similar to those described. In order that a uniform action may be produced; on the brakes of each car in the train, the sliding rod must

bear a certain relation in length; to the cars and bumpers. Therefore in adjusting the sliding rod, to a car having non-elastic bumpers, the length of the sliding rod; must equal the length of the car and bumpers. But, in case of elastic bumpers being used, the sliding rod must be as much shorter at each end, as the bumpers will recede; by the power of the engine in starting a train back.

To enable others skilled in the art, to make and use my invention, I will describe its construction, and operation.

A is the sliding rod, which is forked at each end in such manner; as not to interfere with the king joints V, and bumpers U, and may be moved in either direction; by the vertical shaft T, and connection S, from either end of the car. If the sliding rod A, is moved longitudinally from right to left, the connecting rod C, on the left of the center of the car, will take effect on the pin D, in the end of the lever E, and carry the end of that lever; in the same direction with the sliding rod A. The lever E having been moved, communicates by means of the shaft F, which passes through the hanger H, motion to the hand brake lever G, from which connections are made, to the vertical levers L, by the rods K. The levers L, being drawn toward the center of the car, by the motion of the lever G, brings the rubbers N, in contact with the wheels P, by means of the rods M, on which spiral springs X, are secured for the purpose of graduating the pressure of the rubbers against the wheels P. The sliding rod A having been moved from right to left as described, the connecting rod C, on the right of the center of the car, is moved the same distance; and in the same direction, as that on the left, and as the pin D, in the inoperative end of the lever E, is moved a corresponding distance, in a contrary direction, it will be perceived; that the slots, in each connecting rod C, cannot be less in length, than twice the distance which the sliding rod A moves. The slotted connecting rods C, causing by their alternate action, by the movement of the sliding rod A in either direction, a positive motion of the levers E and G in one direction. When it is necessary to operate the brakes by hand, in the absence of the means for operating them automatically, for which purpose alone the sliding rod A, and slotted connecting rods C, are designed, by operating the vertical shaft R, the levers E,



and G, may be moved, by means of the rod Q, by which operation the brakes are brought into action, without moving the sliding rod A, as the pins D, in the lever E, pass freely through the slots in the connecting rods C. The levers E, and G, having been moved, by the motion of the sliding rod A in either direction, the sliding rod A, on being released, is forced back to a central position, thereby freeing the brakes; by the action of the spring J, against the pin I, secured in one end of the lever G, the same result is produced, on the vertical shaft R being released, after operating the brakes by hand. I am aware, that many of the devices herein described, are well known and in common use, particularly that portion; which relates to the operation of the brakes by hand. I therefore do not claim them; but—

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A sliding rod, of the peculiar form herein described. That is to say: I claim forking the sliding rod, in such manner as not to interfere with the king joints, and bumpers, but to have a longitudinal motion separate from, and independent of both.

2. I also claim the slotted connecting rods attached to the sliding rod, for causing the automatical action of the brakes, without interfering with the ordinary hand brake, or the hand brake in its action, interfering with, or producing any movement of the sliding rod, substantially as specified.

THOMAS G. McLAUGHLIN.

Witnesses:

BENJA. F. REIMER,  
WM. TAYLOR.