(No Model.)

J. PESAÑA Y PIÑOL.

PILOT CAR.

No. 308,325. Patented Nov. 18, 1884.

Fig. 1

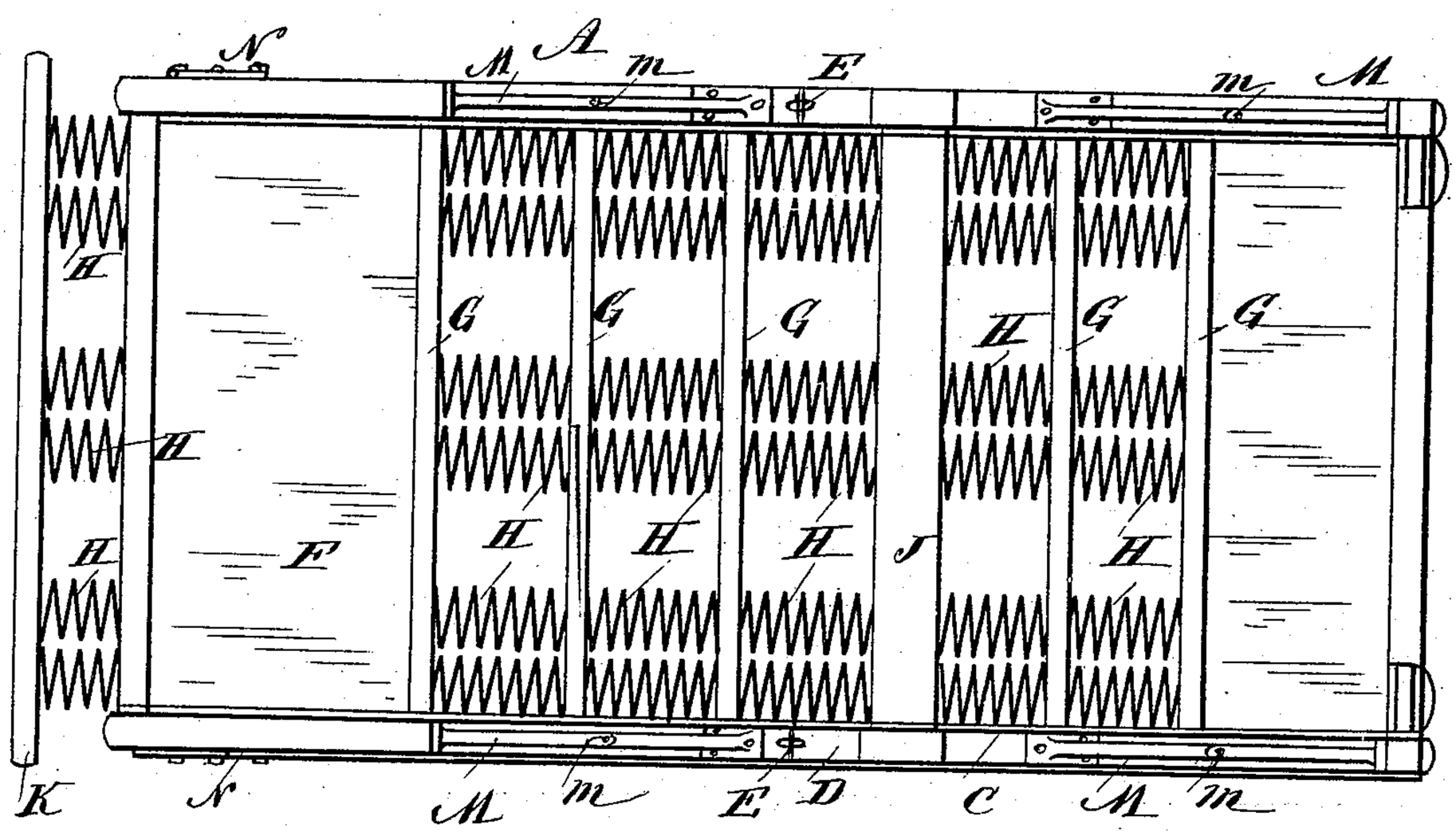
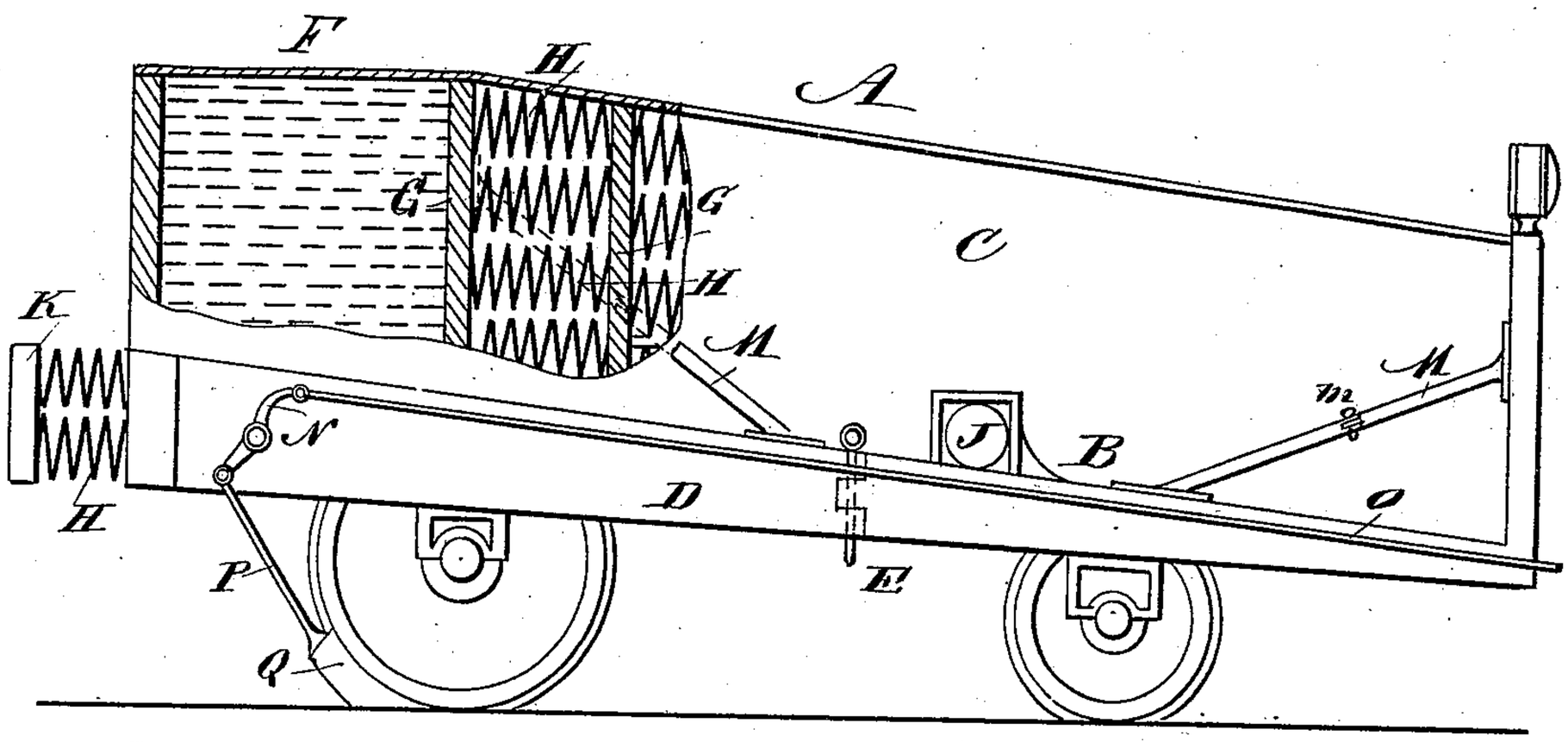


Fig. 2.



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JOSE PESAÑA Y PIÑOL, OF MADRID, SPAIN.

PILOT-CAR.

SPECIFICATION forming part of Letters Patent No. 308,325, dated November 18, 1884.

Application filed May 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSE PESAÑA Y PIÑOL, of Madrid, Spain, have invented a new and Improved Pilot-Car, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved pilot-car adapted to be coupled to the front end of a locomotive for the purpose of breaking the concussion in case the locomotive collides with other cars, locomotives, or other objects or runs off the rails.

The invention consists in a car provided with a series of transverse partitions between which buffer-springs are held. The car is also provided with a water-tank and with a bar or block of lead held transversely on the car. The side bars and the braces of the car are provided with central hinges, thus permitting the car to collapse, so that the springs, the water-tank, and the block or bar of lead can take up the force of the concussion.

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

Figure 1 is a plan view of my improved pilot-car. Fig. 2 is a longitudinal elevation of the same, parts being broken out and others shown in section.

A car, A, has its floor or platform B inclined from the rear to the front, and the rear wheels have a greater diameter than the front wheels for the purpose of obtaining this inclination. A box, C, formed on the floor, has its top inclined parallel with the floor. The inclination of the car tends to throw the line of force to the front lower end of the car, thereby assisting in propelling the cars and materially increasing the impetus of the same. The side bars, D, of the floor-frame are provided with a central hinge extending from top to bottom of the said bars. In the rear part of the box C a water-tank, F, is formed, and that part of the box in front of the tank is divided by a series of transverse partitions, G, into compartments containing very powerful and heavy spiral or rubber springs H, which are held between the partitions parallel with the longitudinal axis of the car. A heavy bar, J, of lead, is held transversely on the bottom of the car, and against the same the ends of some of the springs H rest. A cross-bar, K, is held a short distance from the rear end of the car floor or platform parallel with same, and between the bar K and the end of the platform a series of buffer-springs, H, are held. The front of the box C and the front of the tank are braced by means of braces M, having central joints, *m*. A lever, N, is pivoted to each side bar, D, of the floor, and to the top of the lever N a rod, O, is pivoted, which is suitably guided, and projects from the front end of the car, and to the lower end of each lever N a rod, P, is pivoted, on the lower end of which a brake-shoe, Q, is held, which brake-shoes are behind the rear wheels. When the pilot-car runs against another car or against any other object, the centers of the side bars, D, swing outward, and thus offer no resistance, and the braces M bend, and also offer no resistance. The springs H are compressed, and they, with the water in the tank F and the leaden bar or block J, take up or counteract the force of the concussion—that is, the force of the concussion is expended in compressing the springs, flattening the bar J, &c. The engine and the cars are thus protected from injury, as the shock they receive is comparatively light, the destruction of the pilot-car requiring all the energy, which acting suddenly destroys locomotives, cars, &c., in case a collision takes place and the locomotive is not provided with a pilot or buffer car.

To prevent the pilot-car from being moved in the inverse direction from that in which it is moved by its engine, and to hold the pilot-car in place, I have provided the brake. If an object strikes the front of the pilot-car or the pilot-car strikes an object, the rods O are moved toward the rear in the direction of their length, and thereby the shoes Q are forced down on the rails and against the rear wheels of the car.

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

1. A car having a hinge in the middle of each side bar, substantially as herein shown and described.

2. A car provided with springs and with a transverse block of lead, substantially as herein shown and described.

3. The combination, with a car, of a block of lead held transversely on the same, substantially as herein shown and described.

4. A car provided with side bars having central hinges and braces having central hinges, substantially as herein shown and described.

5. The combination, with a car, of the lever N, hinged to one side bar of the same in rear of the wheels, the rod O, pivoted to the upper end of the lever N, and projecting from the front end of the car, the rod P, pivoted to the lower end of the lever N, and a brake-block, Q, secured on the lower end of the rod P, which brake-block is held behind a rear wheel of the car, substantially as herein shown and described, whereby when the front of the car contacts with another body the rod O will be forced back by the blow to apply the brake and prevent the backward movement of the car.

JOSE PESAÑA Y PIÑOL.

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