

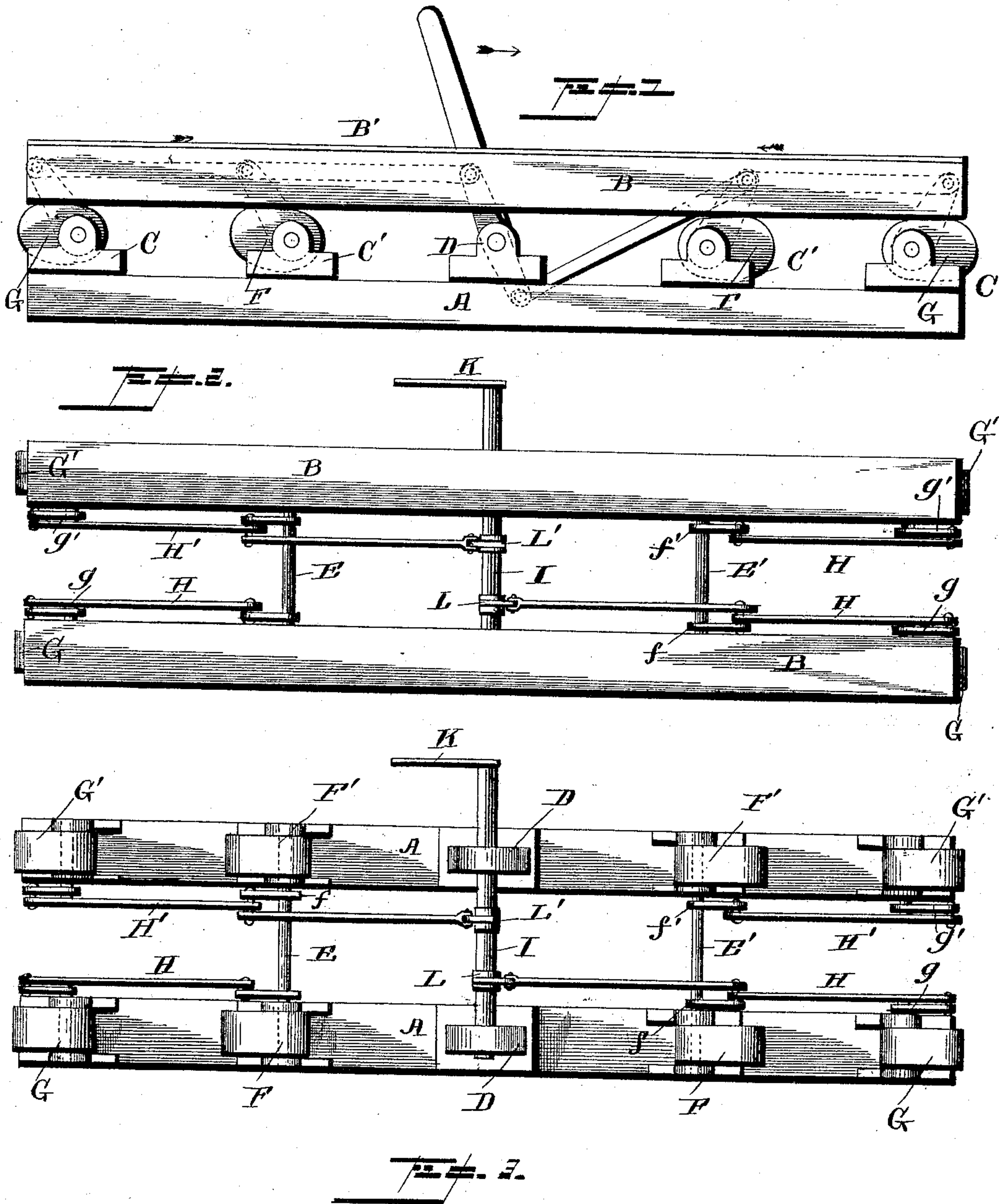
(No Model.)

T. GAGNON.

DROP JACK FOR RAILWAY OR PLATFORM SCALES.

No. 526,621.

Patented Sept. 25, 1894.



Witnesses:  
W. J. Thomsen.  
C. K. Davies.

Inventor:  
Thomas Gagnon  
By J. R. Nottingham  
Atty.



# UNITED STATES PATENT OFFICE.

THOMAS GAGNON, OF ST. JOHNSBURY, VERMONT, ASSIGNOR TO THE E. & T. FAIRBANKS & COMPANY, OF SAME PLACE.

## DROP-JACK FOR RAILWAY OR PLATFORM SCALES.

SPECIFICATION forming part of Letters Patent No. 526,621, dated September 25, 1894.

Application filed April 8, 1893. Serial No. 469,592. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS GAGNON, a subject of the Queen of Great Britain, residing at St. Johnsbury, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Drop-Jacks for Railway or Platform Scales; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in that class of devices employed in connection with platform scales, known generally as "drop jacks," which are used to elevate the platform and raise its pivots or supports from their bearings on the scale-beam operating mechanism when not in use.

The invention is designed to be employed for weighing loaded vehicles, and especially for weighing the cars of railway trains, where it is desirable to hold the platform in an elevated position when the scales are not in use, to prevent the wear and tear due to trains passing over the platform.

The objects of the invention are to provide a device or system of devices of simple construction, yet sufficiently durable to support and withstand the shocks of heavy, moving trains, and which may be quickly and readily manipulated to elevate or drop the platform. These objects are attained by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of the bed-frame, and platform of a railway scale, showing one set of the elevating devices. Fig. 2, is a top plan view of the frame, with the platform removed, showing both sets of devices and mechanism for operating the same, and Fig. 3, a detached top plan view of the elevating devices and their operating mechanism.

Referring to the drawings:—the letter A indicates the bed-frame of the scale, which may be constructed of heavy wooden timbers, or of iron or other suitable material.

B indicates two parallel longitudinal beams which support the platform B', and to which the platform is secured in the usual manner.

At each side of the bed frame are situated,

preferably at equi-distant points, bearing blocks C and C' which are fastened in any suitable manner to the side pieces of the bed-frame, so as to form a firm support for the mechanism of the drop-jack. Between the bearing-blocks C', are situated the bearing blocks D which are also firmly fastened to the side pieces of the bed-frame.

The letters E and E' indicate two transverse shafts which have their journals in the bearing-blocks C'. To said shafts are keyed, splined or otherwise secured cams F and lever arms  $f, f'$ , the purpose of which will presently appear.

In the bearing blocks C, are journaled the cams G and G' having lever-arms  $g, g'$ , said arms  $g, g'$  being pivotally connected respectively with the arms  $f, f'$  by means of links H, H'.

In the intermediate bearing blocks D, is journaled a shaft I, which projects beyond its bearing, at one side, and has secured to the projecting end an operating-lever K. The said shaft is provided with lever-arms L, L', which extend respectively above and below the axial line of the shaft. The lever arm L is pivotally connected with the lever arm  $f$ , on the shaft E', and its connecting-link H, and the lever-arm L' is pivotally connected with the lever arm  $f'$ , in the shaft E, and its connecting-link H'.

All of the cams rest directly under the side-beams of the platform, and their arms extend upwardly into the space between said beams. It will be observed that the arms and cams, at opposite sides of the intermediate lever-shaft I, are set in opposite directions, the purpose of which will be hereinafter explained.

The operation of the invention is as follows:—When in the position shown in Fig. 1, the platform is down on its pivots on the scale mechanism. To elevate the platform, the operating lever is pushed in the direction indicated by the arrow, and the cams are caused to assume a vertical position and elevate the platform. It will be observed that as the operating-lever is being pushed or forced in the direction indicated, the ends of the cams, at opposite sides of the shaft I, are caused to move in opposite directions, or to—



ward each other, which action raises the platform with a preferably steady vertical movement, uniform at each end.

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

1. In a drop-jack for platform scales, the combination, with the bed-frame, of an intermediate journaled operating-shaft carrying two lever-arms extending obliquely from a vertical line drawn through said shaft and in opposite directions, a series of cams and levers journaled at each side of said intermediate shaft in bearing-blocks secured to the bed-frame the free ends of said cams and levers of one series extending in opposite directions to the other series whereby each series of cams when turned will rise gradually toward each other, raising the platform in a truly vertical plane, and links connecting the levers of each series of cams together and with the respective arms of the operating-shaft, substantially as specified.

2. In a drop-jack for platform scales, the combination, with the bed-frame and the platform, of a series of cam-levers at each end of said bed-frame, an intermediate operating-shaft, journaled in bearing blocks mounted on the bed-frame, the lever arms extending obliquely from a vertical line drawn through said shaft, in opposite directions, and the links connecting said lever arms with the cam-lever arms, the cams resting directly under the side beams of the platform, so as to bear upwardly against the same when said cam-levers are turned to elevate said platform, substantially as specified.

3. In a drop-jack for scales, the combination with the supporting bed, and platform,

of a series of cams journaled on the supporting bed directly beneath the platform side beams, and in contact therewith, a central shaft carrying lever arms extending in opposite directions from said central shaft and operating connections between the lever arms and the cams; substantially as described.

4. In a drop-jack for scales, the combination with the supporting bed and platform of a central shaft carrying lever arms extending one above and one below the shaft, a link or rod attached to each of said arms, one extending in a horizontal plane to one side of said shaft, and the other in an oblique plane from below, its upper end being in the horizontal plane of the first link or rod, transverse shafts, cams on said shafts, lever arms  $f f'$  also on said shafts one of which on either side of the operating shaft is pivotally connected with the links or rods, and additional cams as  $G$  having lever arms  $g, g'$ , with additional links connecting said lever arms  $f f' g g'$  respectively; substantially as described.

5. In a drop-jack for scales, the combination with the supporting bed and platform the central operating shaft the oppositely extending lever arms thereon the additional shafts  $E E'$  the cam levers thereon, the cams also on said shafts adapted when raised to bear against the platform, and links pivoted at one end to the lever arms and at the other end to the free end of the cam levers; substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

THOMAS GAGNON.

Witnesses:

A. WORCESTER,  
O. W. DREUTT.