

W. Maguire.

Scale.

Nº 92,069.

Patented Jun. 29, 1869.

Fig. 1

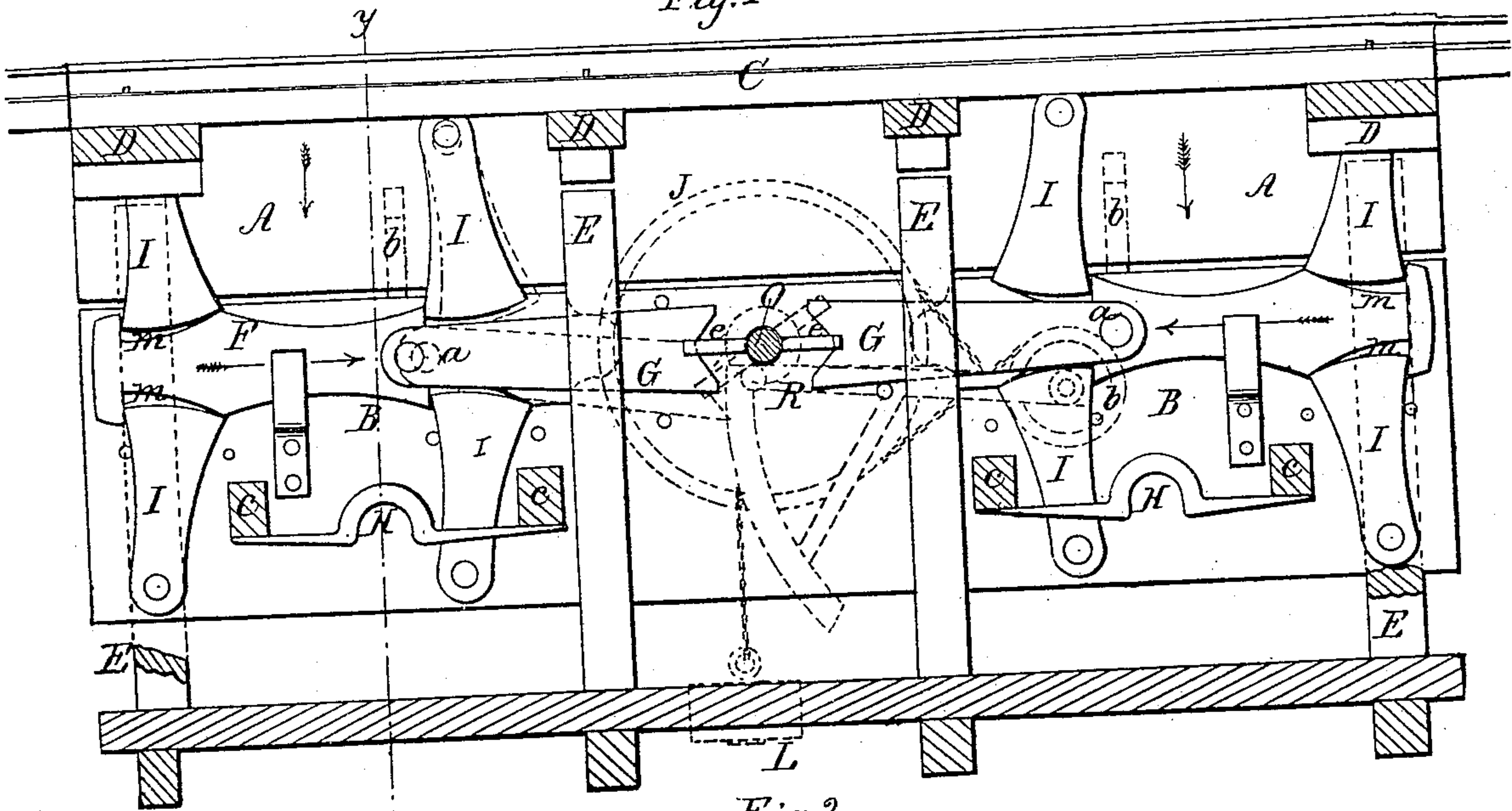
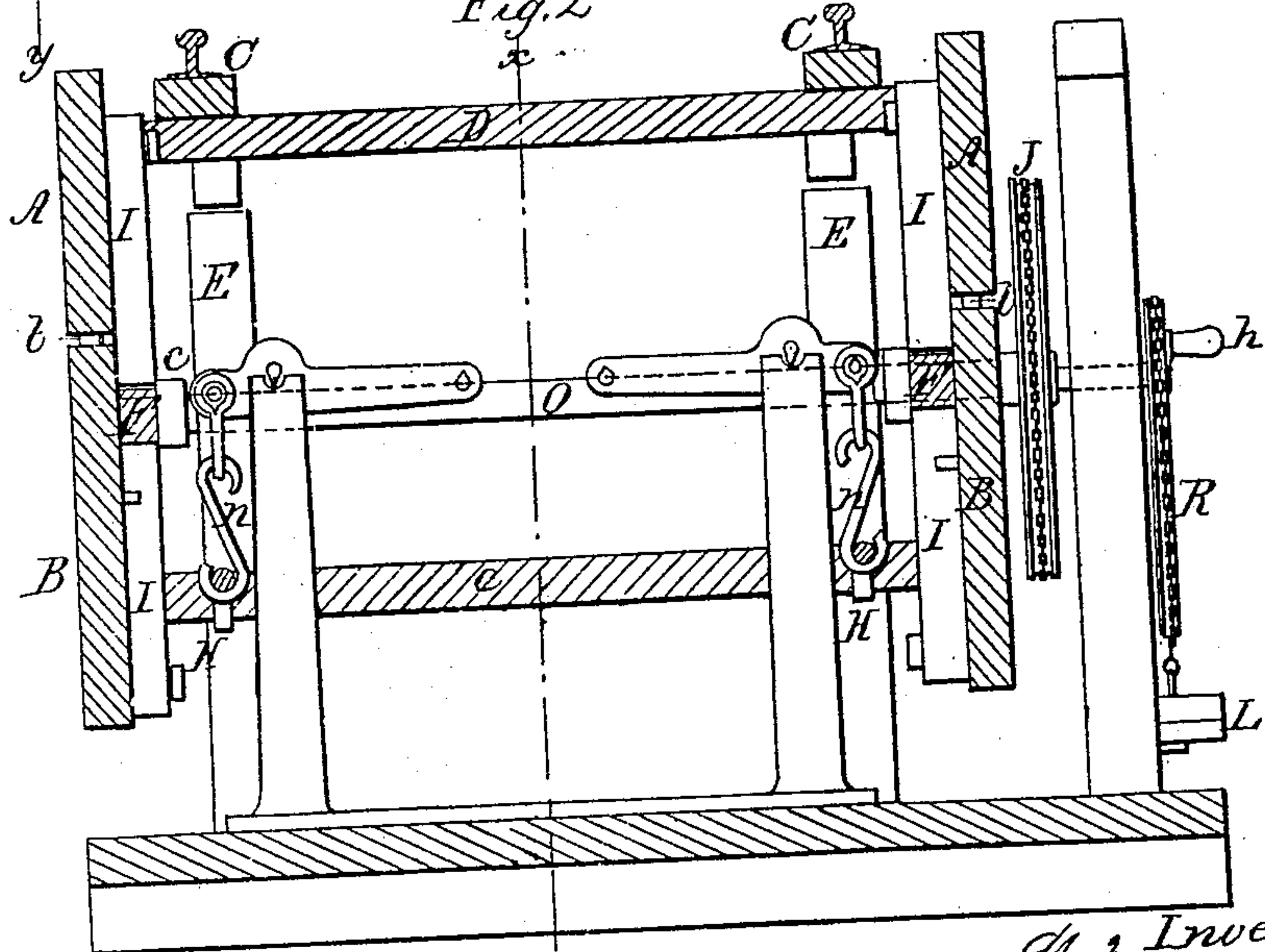


Fig. 2



Witnesses
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WILLIAM MAGUIRE, OF BALTIMORE, MARYLAND, ASSIGNOR TO
HIMSELF AND FRANCIS B. LONEY, OF SAME PLACE.

Letters Patent No. 92,069, dated June 29, 1869.

IMPROVEMENT IN RAILROAD PLATFORM-SCALES.

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

To all whom it may concern:

Be it known that I, WILLIAM MAGUIRE, of Baltimore, in the county of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Railway-Scales; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists in so constructing and arranging the frame or platform of scales, used for weighing cars and similar articles, that while the car-truck or other vehicle is being run on to it, the platform or track shall rest upon solid or permanent supports, independent of the scales, and when ready, have the weight thrown upon the scale, so as to be weighed, as hereinafter more fully explained.

Figure 1 is a longitudinal vertical section, taken on the line *x-x* of fig. 2.

Figure 2 is a transverse vertical section, on the line *y-y* of fig. 1.

Experience has demonstrated that very great wear, and consequent injury, is produced in scales used for weighing cars and other vehicles, by the oscillations and movements of the parts, while the car or vehicle is being run upon the same, the wear and injury being greatest upon the knife-edge and other delicate parts of the joint.

To remedy this difficulty is the object of my invention; and to do this, I construct the frame of my improved scale in two parts, an upper part, A, and a lower part, B, the two being united by guide-pins *l*, or any suitable device, by which they shall be kept in the same vertical plane, so that whenever the upper part, A, is removed from its permanent supports, it shall rest upon the lower part, B, and be supported thereby, the lower part B being connected to the scale proper.

The part A consists simply of a frame of the required size, upon which is placed the rails C, if for railway uses, or a platform, if for other purposes.

Directly under the frame A is a similar frame, consisting of the side pieces B, connected by cross-bars C, under which latter, at the proper points, are secured bent iron bars H, as represented in fig. 1, these bars H being connected to the levers of the scale by chains or rods *n*, as shown in fig. 2.

A series of permanent supports, E, are arranged in such a position, that whenever the upper frame A is lowered, the cross-bars D, or other parts of the frame A, shall rest firmly thereon, and so remain until the operator chooses to remove it therefrom, as, of course,

must be done when the load is to be weighed, after having been properly placed on the track or platform.

In order to change the weight from the permanent supports E, and throw it upon the scale, I arrange along the sides of the frame B, on each side, a pair of sliding bars, F, as represented in fig. 1, each of these bars F having two or more sets of cam-shaped or inclined notches, *m*, formed in their upper and lower faces, as shown in the drawing.

To each of the frames, A and B, I then pivot strong metallic plates, I, the free ends of which rest in the notches *m* of bars F, and are made of a form corresponding thereto, the form and position of these parts being such, that when the bars F are left free to move in the direction of the arrows marked thereon, the plates I will have their free ends moved also, as indicated in dotted lines in fig. 1, and thereby let the upper frame A down, so it will rest on the supports E.

When it is desired to change from these supports E, and throw the weight upon the scale, it is only necessary to shove the bars F asunder.

This movement of the bars F will carry with them the free ends of the plates I, which, acting like the arms of a toggle or elbow-joint, are forced into a straight line, thereby raising the frame A, with its load, off from the supports E, and leaving it resting, through the medium of the plates I and rods F, on the lower frame B, which is connected to the scale.

These bars may be moved by any suitable means; but I prefer the plan represented in the drawings, as being simple and efficient.

This consists of a rock-shaft, O, extending transversely through or across the lower frame, between the bars F, as shown in fig. 1.

This shaft has, at each side of the frame, arms *e*, the ends of which engage in the notched ends of rods or plates G, the opposite ends of which are pivoted, as represented at *a*, to the bars F.

By turning the shaft O in one direction, the arms *e* will be thrown into the position indicated by the dotted line, fig. 1, thereby throwing the pivoted bars G out of line, as also indicated by dotted lines, and thus permitting the bars F to move toward each other, and letting the track or platform down on the supports E.

By turning the shaft O in the opposite direction, the arms *e*, with the rods G, will be brought into a straight line, thereby throwing the bars F apart, and, of course, raising the track or platform.

The rock-shaft O has a wheel, J, attached to one of its ends, around which a chain passes, this chain also passing around a pulley, *b*, shown in red in fig. 1, to the shaft of which latter there is secured a lever, R, the form of which is also shown in red in fig. 1.

To the upper or loose end of this lever R there is attached a weight, L, and a handle, *h*, the weight being

for the purpose of holding the lever in position when it is thrown over, as shown in fig. 1, and thus counteract the tendency of the weight above to throw it back, by turning the shaft O, and letting the track or platform down when not desired.

These devices may be supplanted by others, as is obvious; but I prefer these, as being very simple and efficient.

It will be observed that the parts F, I, and G, are all arranged to operate on the plan of the elbow joint, thus exerting great force, with but a small movement, and with the least possible amount of friction.

By this improvement in the construction of scales, they are rendered far more durable, and much less likely to get out of order.

Having thus described my invention,

What I claim, is—

1. Constructing the frame of railway and similar scales, in two parts, the lower part being supported by

the weighing-devices or mechanism, and the upper part supporting the platform or track, and so arranged as to rest on independent supports while the load is being run on or off, and so connected to the lower part, that the weight can be transferred from the independent supports to the lower part of the frame, and thereby to the weighing-mechanism, substantially as described.

2. The frames A and B, united by the bars F and plates I, arranged to operate as described, for the purpose set forth.

3. The combination of the rock-shaft O, bars G and F, and plates or bars I, when arranged to operate in connection with the frames A and B, substantially as set forth.

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Witnesses:

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P. P. MAST.