J. H. USHER.

Railroad-Track Scale.

No. 163,423. Patented May 18, 1875.

Fig. 1

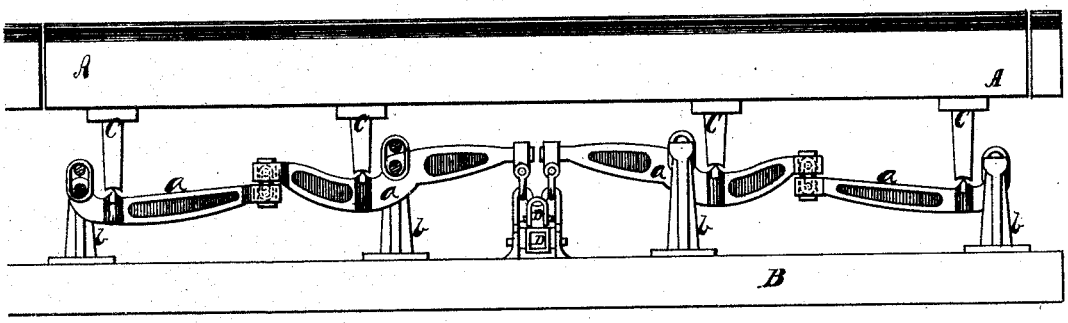


Fig. 2

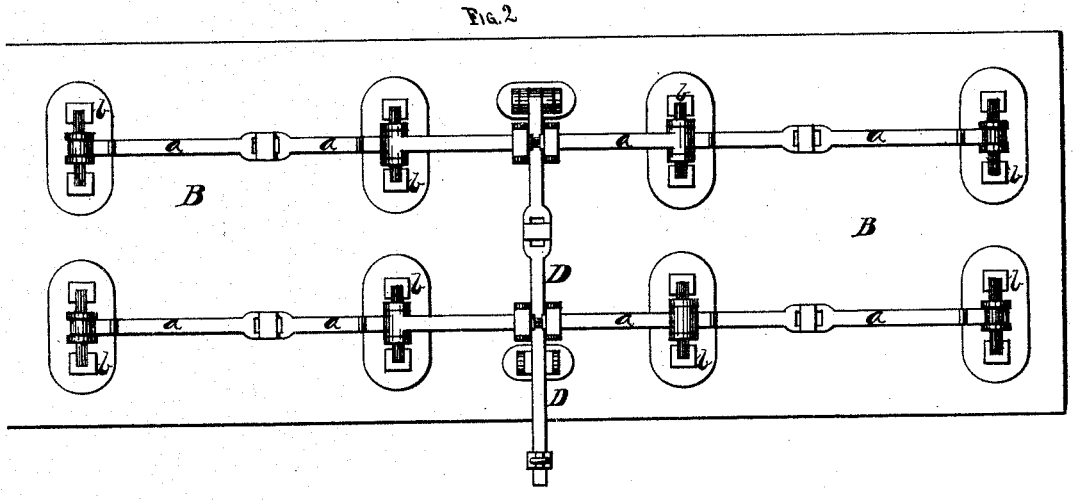
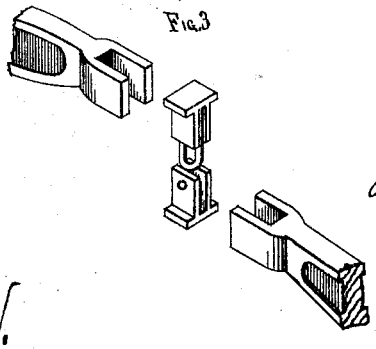


Fig. 3



Witnesses.
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T. H. Parsons.

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UNITED STATES PATENT OFFICE.

JOHN H. USHER, OF BUFFALO, NEW YORK.

IMPROVEMENT IN RAILROAD-TRACK SCALES.

Specification forming part of Letters Patent No. **163,423**, dated May 18, 1875; application filed November 21, 1874.

To all whom it may concern:

Be it known that I, JOHN HILLHOUSE USHER, of Buffalo, in the county of Erie and State of New York, have invented certain Improvements in Railroad-Track Scales, of which the following is a specification:

The invention consists in the employment of only two sets of longitudinal levers, and dispensing with transverse levers, all as hereinafter fully described.

The usual method of constructing railway-track scales is to employ a series of transverse levers, extending from under the sides of the platform to the center of the pit, and there connecting with a series of longitudinal levers running lengthwise through the center of the pit, and also connecting with an additional transverse lever, communicating with the weighing-beam, so that there are a large number of bearings, some being transverse and others longitudinal, making a complication of parts and causing wear and friction, and also rendering the scale less durable than it would be if the principal bearings were fewer and all on parallel lines, extending in the same direction, as in my scale, which I now proceed to describe.

In the drawings, Figure 1 is a side elevation; Fig. 2 a plan, showing the longitudinal arrangement or line of levers.

A A represent the stringers or main timbers of the platform B, which rest on the cross-beams C C, as is usual in nearly all track-scales. *a a* are the multiplying longitudinal levers, one set of levers arranged on each side of the pit, each set working in the posts or lever supports *b b*. D is the compound lever that connects the main levers *a a* with the weighing-beam. This lever D may be in the center, as shown, or at some other convenient point, according to the size or length of the scale.

The above description comprehends the entire scale. It is arranged in a shallow pit, and can be built of any capacity, length, or width required; in this latter respect it possesses a great advantage over other track-scales, as, whenever it becomes necessary to change the width of the platform or put down another track by the side of the first, or change from a narrow to a wider gage, it cannot be done in other scales without altering the whole series of transverse levers, while by my arrangement it only becomes necessary to lengthen the single compound lever D, communicating with the beam, which is accomplished at a very slight expense and without impairing its strength or exactness. Another advantage is, that the principal bearings are all on parallel lines, and consequently work harmoniously with each other in one direction, thus making the scale more durable, easier to set up, and more cheaply constructed.

I claim—

The series of longitudinal connecting and multiplying levers *a a a*, arranged under the platform-stringers A B, to operate independently, substantially as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN H. USHER.

Witnesses:

J. R. DRAKE,

T. H. PARSONS.