

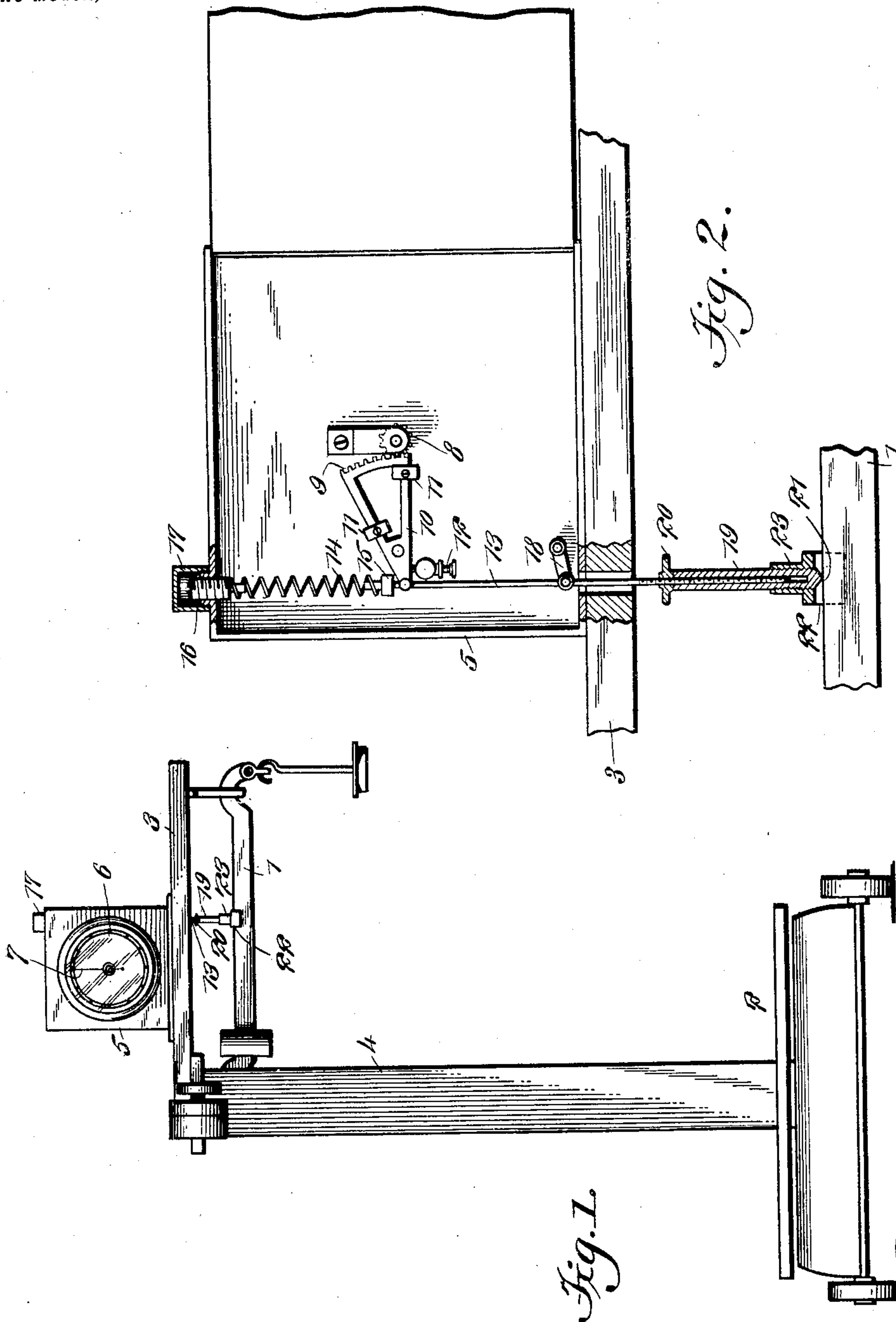
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Patented June 24, 1902.

W. D. EVANS & J. T. MARSHALL.
SCALE ATTACHMENT.

(Application filed Oct. 18, 1901.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM D. EVANS AND JOHN T. MARSHALL, OF EUPORA, MISSISSIPPI.

SCALE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 703,244, dated June 24, 1902.

Application filed October 18, 1901. Serial No. 79,097. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM D. EVANS and JOHN T. MARSHALL, citizens of the United States, and residents of Eupora, in the county of Webster and State of Mississippi, have invented a new and Improved Scale Attachment, of which the following is a full, clear, and exact description.

This invention relates to improvements in attachments for weighing-scales; and the object is to provide a device of simple construction designed to coact with a scale-beam to indicate on a dial the weight of an article on the scale and obviate the use of the usual weights.

We will describe a scale attachment embodying our invention, and then point out the novel features in the appended claims.

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

Figure 1 is an elevation of a platform-scale, showing our invention applied; and Fig. 2 is a broken sectional elevation of the same.

Referring to the drawings, 1 designates a beam on the platform-scale 2, this beam being arranged under the arm 3, extending from the post 4 in the usual manner. Arranged on the arm 3 is a casing 5, having a dial 6 at its front, provided with a scale, indicating weights and over which is movable a pointer 7. The shaft of the pointer extends through the front wall of the casing, and attached to its inner end is a pinion 8, engaged by a segment-rack 9 on a lever 10, pivoted in the casing. For the purpose of proper adjustment and balancing we provide the lever 10 with movable weights 11, which may be secured as adjusted by means of screws, and the lever is prevented from movement too far in one direction or in its resetting direction by means of a stop-screw 12. The lever 10 at its end is pivotally connected to the upper end of a trip-rod 13, and a spring 14 is arranged between a collar 15 on the trip-rod and a screw 16 engaging in a tapped hole in the top wall of the casing. By means of this screw the tension of the spring 14 may be properly adjusted, and to prevent the entrance of dust or to prevent tampering with the screw 16 we provide it with a cover 17. The trip-rod 13 passes through an open-

ing in the bottom of the casing and through an opening in the arm 3, and to prevent swinging motion of said trip-rod it has a link connection 18 with the casing. As herein shown, the link 18 is arranged within the casing near its bottom wall. Adjustable on the rod 13 below the arm 3 is a sleeve 19. This sleeve 19 is provided with an interior screw-thread for engaging with the screw-thread on the rod. Therefore, as this sleeve is designed to engage at its lower end with the scale-beam, it may be adjusted as required, and it is held as adjusted by means of a jam-nut 20 on the rod. To reduce the bearing-surface of the sleeve 19 to a minimum, we have formed it with a bearing-point 21 for engaging on the upper edge of the scale-beam. To prevent lateral movement of the sleeve relatively to the beam, we provide it with downwardly-extending flanges 22 for engaging against opposite sides of the scale-beam. As herein shown, these flanges 22 are connected to a sleeve 23, having an interior screw-thread for engaging a thread on the sleeve 19.

In operation when an article to be weighed is placed upon the platform-scale the scale-beam will be raised in the usual manner. The upward movement of the scale-beam will force the trip-rod upward against the resistance of the spring 14, and during this movement of the trip-rod the rack 9 will rotate the pinion 8, and consequently move the pointer 7 over the dial to the point on the scale indicating the weight. During the upward movement of the scale-beam the shifting of the point of contact between the trip-rod and beam is hardly appreciable and does not interfere with practically accurate weighing.

While we have shown our attachment connected with a platform-scale, it is to be understood that it may be applied to any other form of scale in which a beam is employed.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A scale attachment, comprising a dial, a pointer movable over the dial, a pinion on the shaft of the pointer, a segment-rack engaging with the pinion, a lever carrying said rack, a balance-weight adjustable on the lever, a trip-rod to which the lever is pivotally connected, a spring arranged between the upper end of

said trip-rod and a fixed device, and a sleeve adjustable on said rod for engaging with a scale-beam, substantially as specified.

2. A scale attachment, comprising a casing, 5 a dial on said casing, a pointer movable over the dial, a pinion on the shaft of said pointer, a rack engaging with the pinion, a lever carrying the rack, a balance-weight adjustable on the lever, a spring-pressed trip-rod having 10 connection with the lever, and a swinging link connection between said rod and the casing, substantially as specified.

3. A scale attachment, comprising a casing, a dial on said casing, a pointer movable over 15 the dial, a pinion on the shaft of said pointer and within the casing, a segment-rack engaging with said pinion, a lever carrying the rack, an adjustable stop for the lever, a trip-rod having connection with said lever and extend- 20 ing through an opening in the casing and adapted to engage at its lower end with a scale-beam, a screw adjustable in the upper wall of the casing, and a spring arranged between the upper end of the trip-rod and said screw, sub- 25 stantially as specified.

4. In a scale attachment, a casing, a dial on said casing, a pointer movable over the dial, a pinion on the shaft of said pointer and with-

in the casing, a segment-rack engaging with the pinion, a trip-rod pivoted to the lever and 30 passing through an opening in the bottom wall of the casing, the lower end of the trip-rod being designed for engagement with a scale-beam, a screw adjustable in the top wall of the casing, a spring arranged between said 35 screw and the upper end of the trip-rod, a cover for the screw, and a link connection between the trip-rod and the casing, substantially as specified.

5. In a scale attachment, a dial, a pointer 40 movable on the dial, a trip-rod, a sleeve adjustable on said trip-rod and having a pointed end for engaging with the upper edge of a scale-beam, flanges extending downward from said sleeve for engaging at opposite 45 sides of the scale-beam, and devices operated by movements of the trip-rod for moving the pointer, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of 50 two subscribing witnesses.

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Witnesses:

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