

UNITED STATES PATENT OFFICE.

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WEIGHING-SCALE.

SPECIFICATION forming part of Letters Patent No. 779,872, dated January 10, 1905.

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To all whom it may concern:

Be it known that I, WILLIS H. SARGENT, a citizen of the United States, residing at St. Johnsbury, in the county of Caledonia, State of Vermont, have invented certain new and useful Improvements in Weighing-Scales, of which the following is a description, reference being had to the accompanying drawings and to the figures of reference marked thereon.

The present invention relates to that class of scales known as "abattoir-scales" used in large cold-storage and slaughter houses, markets, &c., where the load is supported from a trolley which runs on a suspended track, a section of which track is cut out and attached to the scale, which is above it, the weight being communicated to the beam. Heretofore such scales have been made by hanging the track to primary or main levers of the second order and over these a secondary lever of the first order extending to the beam, the whole being secured to the ceiling or other overhead support. This arrangement is oftentimes objectionable, because the track must of necessity be considerably below the ceiling, which is of disadvantage when the ceiling is low.

In brief, the object of the present invention is to provide a construction of scale in which the distance of the track from the ceiling may be considerably lessened. This object is accomplished by using main levers of the first order, thereby reversing the motion and allowing the lever which extends to the beam to be below the scale instead of above it and in providing certain details of mechanical construction whereby the results aimed at are accomplished in a simple and efficient manner.

The invention therefore consists in the matters hereinafter described, and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a scale embodying the invention. Fig. 2 is a cross-section on lines *a b* of Figs. 1 and 4. Fig. 3 is a cross-section on lines *c d*, Figs. 1 and 4. Fig. 4 is a plan view of a scale embodying the invention. Fig. 5 is a detail view showing

the manner of attaching the scale-hanger to the track, and Fig. 6 is a detail showing the attachment of the main levers to the ceiling-hooks.

In the drawings the ceiling is represented at 25, supported from the uprights 24. Four plates 8 having hooks are secured to the ceiling, these hooks supporting the loops 9, having knife-edge supports for the knife-edge pivots of the main levers 1 and 1', each of which carries at one end the adjustable weight 22, which counterbalances the lever to which it is applied. The adjacent ends of the levers 1 and 1'—that is, the tip ends carrying the pivots—are supported in the center in the common shackle 18, from which is hung the eyebolt 27, to the lower end of which is attached one end of the lever 2, hung in the bracket 26, depending from the ceiling. Motion is communicated from this lever 2 through lever 3 to the weigh-beam 6, suitably supported within convenient reach of the operator.

Suspended from each of the main levers 1 1' is a hanger 15, one being attached to each end of the cut-out section of track 12. This section 12 is a continuation of the main track 13, which is suspended from the ceiling by the hangers 16. The manner of attaching the scale-hangers 15 to the scale-track 12 is shown in Fig. 5. The loop 9' fits loosely in a slot 17 and is held in place by a staple 10, which also passes through a bar 11, which serves to tie the ends of the scale together.

In operation the load on the trolley 14 causes the levers 1 and 1' to pull up in the center of the scale, on the shackle 18, and then through levers 2 and 3 the motion is communicated to the beam 6.

To prevent the scale-track 12 from swaying out of alinement with the main track 13, check-rods 20 of the usual pattern are provided. Whenever the levers or the hangers cross the track, they are curved upward to permit the trolley 14 to pass under them, as shown in Figs. 1 and 2.

Various minor modifications and changes may be made without departing from the spirit of my invention.

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

1. In an overhead suspension-track scale,
5 the combination with the weighing-track section, hangers therefor, main levers of the first order supporting said hangers, hangers depending from the ceiling, by which the main levers are supported, a shackle supporting the
10 tip ends of the main levers, a secondary lever pivotally connected to said shackle, and suitably supported and arranged below the main levers, a weigh-beam and connections between the said secondary lever and said weigh-beam;
15 substantially as described.

2. In an apparatus of the character described, the combination with the track-section, main levers supported from the ceiling, hangers secured to the track-section, each
20 hanger having a loop and pivot connection with the respective main levers; a shackle depending from the tip ends of the main levers, a secondary lever pivotally connected to said shackle and suitably supported and arranged
25 below the main levers, a weigh-beam, and connections between said weigh-beam and the secondary lever; substantially as described.

3. In an apparatus of the character de-

scribed, the combination with the track-section, main levers supported from the ceiling, 30 hangers secured to the track-section, each hanger having a loop-and-pivot connection with the respective main levers, a shackle depending from the tip ends of the main levers, a secondary lever pivotally connected to said 35 shackle and suitably supported and arranged below the main levers, a weigh-beam and connections between said weigh-beam and the secondary lever, and a tie-bar connecting the hangers. 40

4. In an apparatus of the character described, the combination with the track-section, main levers, hangers secured to the track-section, each hanger being provided with the slots 17, the loops 9, fitting loosely in said slots 45 and pivotally attached to the main levers, staples 10 holding the loops in place, and tie-bars 11 secured to said staples; substantially as described.

In testimony whereof I affix my signature in 50 presence of two witnesses.

WILLIS H. SARGENT.

Witnesses:

FRANK O. FRENCH,
IDA L. BECK.