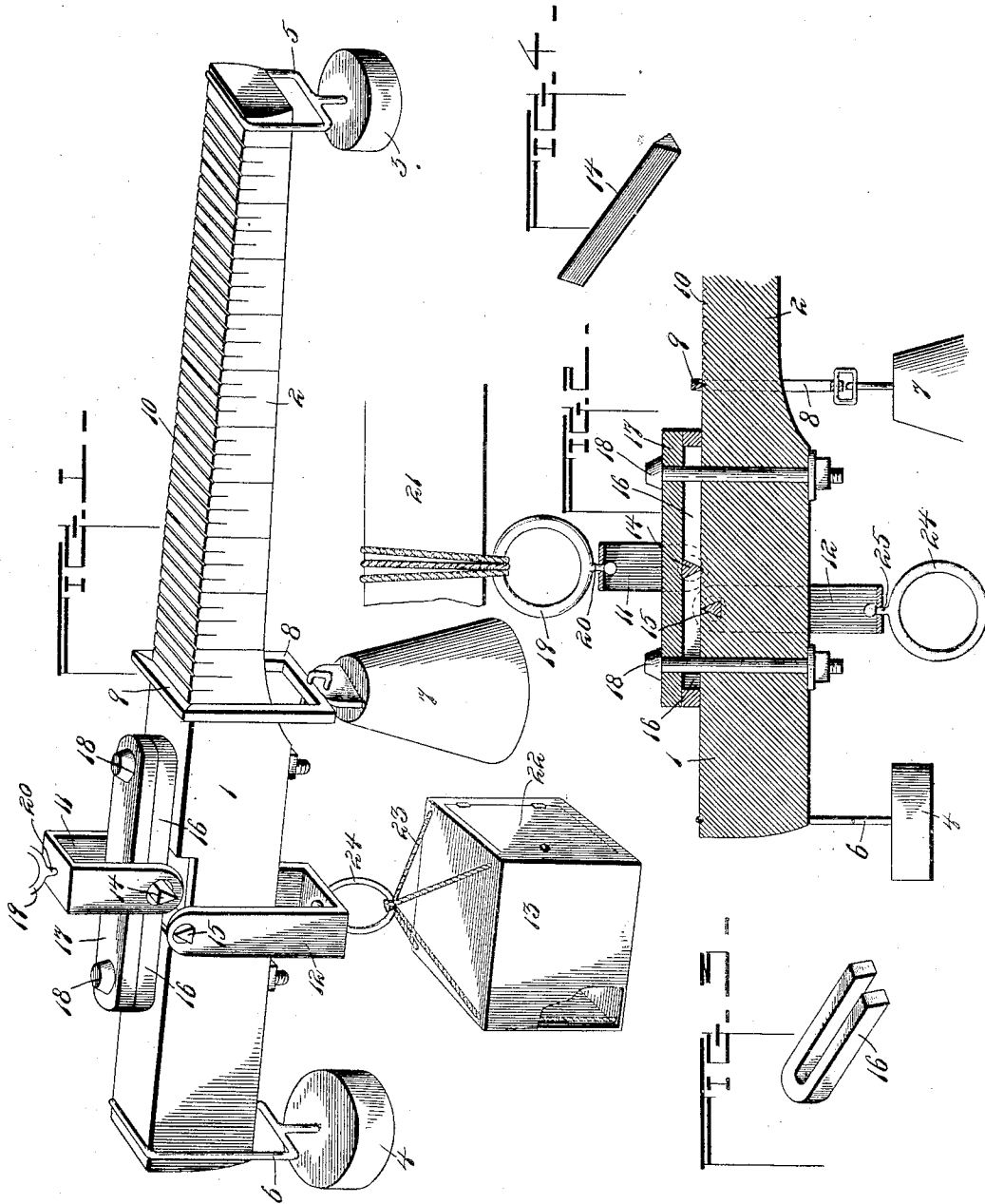


(No Model.)

J. C. DIXON.
SCALE.

No. 578,220.

Patented Mar. 2, 1897.



Inventor

Witnesses

Milton O'Connell, By his Attorneys,

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JOSIAH C. DIXON, OF FORT RITNER, INDIANA.

SCALE.

SPECIFICATION forming part of Letters Patent No. 578,220, dated March 2, 1897.

Application filed November 4, 1896. Serial No. 611,038. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH C. DIXON, a citizen of the United States, residing at Fort Ritner, in the county of Lawrence and State of Indiana, have invented a new and useful Scale, of which the following is a specification.

The invention relates to improvements in scales.

The objects of the present invention are to improve the construction of that class of scales employing a scale-beam and to provide a simple, inexpensive, and efficient one which will be strong and durable, adapted to be readily manufactured, and capable of convenient adjustment to arrange the knife-edge bearings in proper position.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a scale constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the rear portion of the scale. Fig. 3 is a detail perspective view of one of the adjustable U-shaped supports of the upper knife-edge bearing. Fig. 4 is a detail perspective view of one of the knife-edge bearings.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a scale-beam provided with graduations 2 and carrying front and rear weights 3 and 4, which are provided with pendants 5 and 6, consisting of stems and rectangular frames to receive the scale-beam. The scale-beam is designed to be constructed of wood and of such length and size to obtain the necessary strength, and the pendants 5 and 6, which embrace the ends of the scale-beam, engage suitable grooves of the upper face thereof.

A movable weight 7 is suspended from and operates in connection with the graduated portion of the scale-beam, and it is provided with a rectangular frame 8, which receives the scale-beam and which is provided with an oppositely-beveled upper portion 9 to engage grooves or notches 10, that correspond with the graduations 2.

The scale-beam is suspended by means of an upper loop 11, and the article to be weighed is connected with a lower depending loop 12 and is preferably arranged within a cage 13. The upper and lower loops 11 and 12, which are substantially rectangular, are provided, respectively, at the lower and upper terminals of their sides with circular openings receiving the knife-edge bearings 14 and 15, which are triangular in cross-section. The upper loop is narrower than the lower loop, in order to swing or work between the sides of the latter, and the sides of the beam are recessed to receive the lower ends of the sides of the upper loop. The knife-edge bearing 15, from which the lower cage-carrying loop is suspended, is stationary and is arranged in a transverse opening or recess of the scale-beam and projects laterally from the same a sufficient distance to be engaged by the sides of the lower loop.

The upper knife-edge bearing 14 is adjustable to position the loops 11 and 12 properly with relation to each other and to the scale-beam, and the upper knife-edge bearing is arranged between a pair of substantially U-shaped supports 16, having beveled edges and arranged flat on the upper face of the scale-beam. The beveled edges conform to the configuration of the inclined sides of the knife-edge bearing 14, and the supports 16 are clamped at the desired adjustment by means of a plate 17, which is secured to the scale-beam by a pair of bolts 18, which are arranged vertically and which pass through the scale-beam and the plate 17. The fastening devices 18 are arranged in the openings of the U-shaped support 16 and do not interfere with the adjustment thereof, and they are adapted to cause the plate 17 to clamp the supports 16 sufficiently to retain them at any desired adjustment.

The upper loop is connected with a ring 19, which is swiveled to the loop, being provided with a stem 20, passing through a perforation of the top of the loop 11 and having a head arranged on the inner side thereof. The ring 19 is adapted to be secured by means of a rope or any other suitable fastening device to a support 21.

The cage, which may be cubical, as shown, or any other shape, is provided with a door

22 and is suspended by suitable ropes 23 or the like from a ring 24, and the latter is provided with a stem 25 and is swiveled to the lower loop in the same manner as the upper ring 19.

The scale is operated in the usual manner, and it will be seen that it is exceedingly simple in construction, that it possesses great strength and durability, and that it may be readily manufactured. It will also be apparent that the knife-edge bearing may be readily adjusted to produce a proper operation of the scale.

What I claim is—

1. In a scale, the combination of a scale-beam, weights, a stationary knife-edge bearing mounted on the scale-beam, an adjustable knife-edge bearing arranged on the scale-beam, movable U-shaped supports located at opposite sides of the adjustable knife-edge bearing, fastening devices passing through and securing the supports at any desired adjustment, the upper and lower loops connected with the knife-edge bearings, and a receptacle suspended from the lower loop and

adapted to receive the object to be weighed, substantially as described.

2. In a device of the class described, the combination of a scale-beam, a stationary knife-edge bearing mounted thereon, a lower loop depending from the said bearing, a movable knife-edge bearing triangular in cross-section and arranged at the top of the scale-beam, the substantially U-shaped supports arranged on the scale-beam and having their inner ends beveled to conform to the configuration of the adjustable bearing, a plate arranged on the supports and engaging the same, and fastening devices passing through the plate and the scale-beam and arranged in the openings of the supports, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSIAH C. DIXON.

Witnesses:

GEORGE N. ALDRIDGE,
JOHN HARRIS.