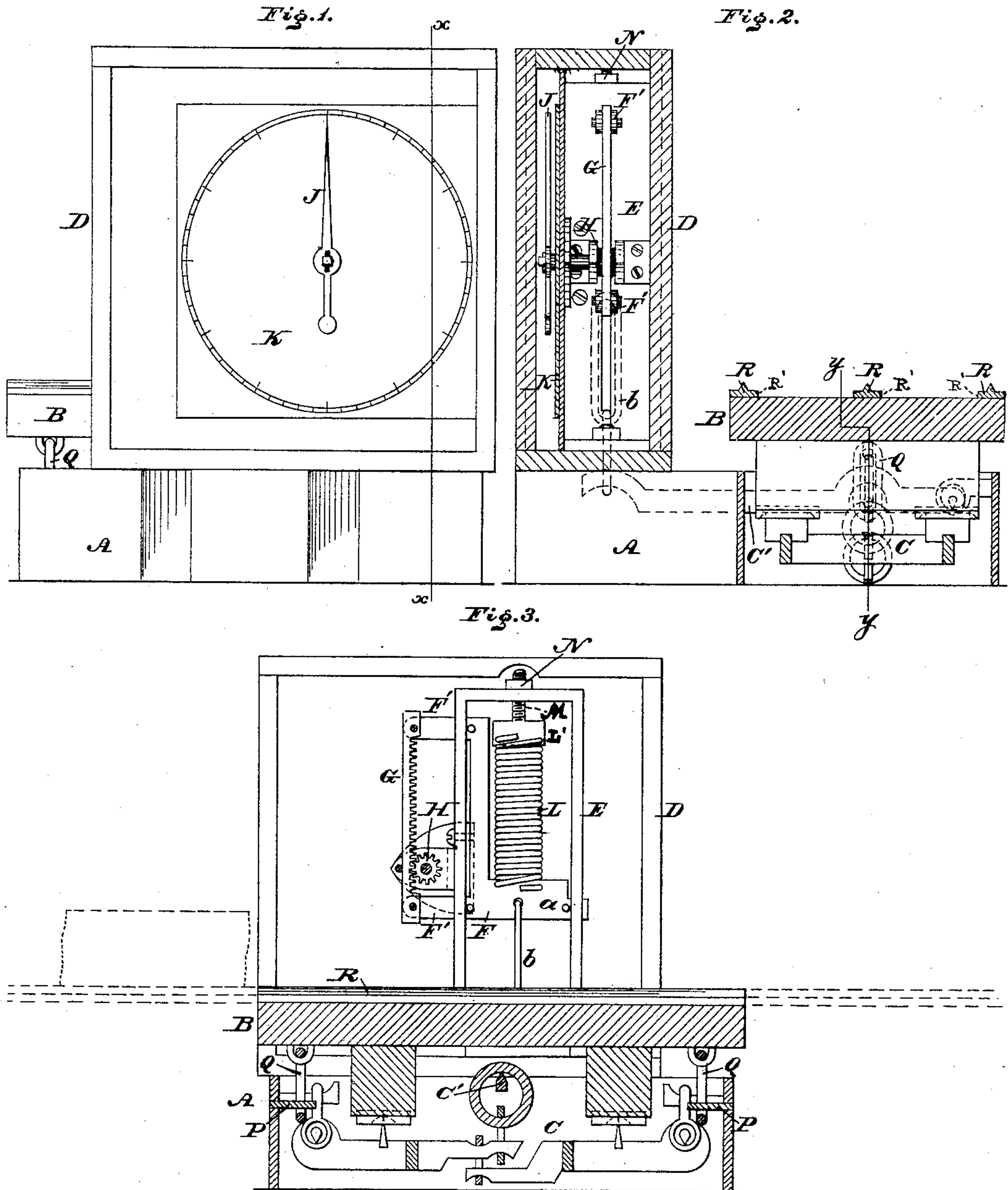


(No Model.)

J. FITE.  
SCALES.

No. 260,471.

Patented July 4, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## SCALES.

SPECIFICATION forming part of Letters Patent No. 260,471, dated July 4, 1882.

Application filed September 2, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH FITE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Scales, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a face view of the scale embodying my invention. Fig. 2 is a vertical section thereof in line *xx*, Fig. 1. Fig. 3 is a vertical section thereof in line *yy*, Fig. 2, a portion of the casing being removed.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a scale provided with a platform and a supporting and guiding frame, in combination with an angular sliding piece formed of a limb and two projecting arms, a rack-bar connected to said arms, a spring connected at one end to said limb and at the other end to the top of said supporting-frame, a bolt and nut for regulating the tension of said spring, and the pinion which operates the index, for the purpose hereinafter set forth.

It also consists of the platform, the supporting-frame, the angular sliding piece provided with projecting arms and a limb, the rack-bar, and the index-operating pinion, in combination with the spring, connecting-piece for said spring, and a bolt, said rack-bar and spring being on opposite sides of the sliding piece and the spring occupying the space between the limb of said sliding piece and the top of said supporting and guiding frame, to which frame it is connected by the bolt and the connecting-piece, all substantially as hereinafter set forth.

Referring to the drawings, A represents the box, B the platform, and C the series of levers, of a scale, which, excepting as far as they relate to my invention, are of well-known form.

D represents a casing supported on one side of the box A or other suitable locality, and having within it an upright frame, E, which is secured to said casing D, and the sides of which guide a sliding piece, F, of angular form, to the lower horizontal limb, *a*, of which is attached, by means of a link, chain, or rod, *b*, the lever C' of the system of levers C within the box A.

Projecting laterally or horizontally from the upper and lower ends of the vertical limb of the piece F are arms F', to which is secured an upright rack-bar, G, whose teeth mesh with a pinion, H, the shaft whereof is suitably mounted on the frame E, passed through the wall of the casing D, and carries on its outer end an index or pointer, J, the graduated dial K whereof is secured to said wall.

L represents a coiled or other spring, whose lower end is connected to the limb *a* of the piece F, and whose upper end is connected to a piece, L', having an upwardly-projecting bolt, M, which is fitted to the top or cross-bar of the frame E, and carries a nut, N, which bears against said cross-bar and provides means for adjusting the tension of the spring L, it being seen that the spring occupies the space between the limb *a* and the top of the frame E.

The article to be weighed is placed on the platform B, and thereby depresses the lever C', whereby the sliding piece F is lowered. As the rack or rack-bar G is connected to said piece F, it is likewise lowered, and its action rotates the pinion H, so that the index J sweeps over the dial K and indicates thereon the weight of the article. When the article is removed from the platform the power of the spring L is exerted so as to raise the slide F. The rack-bar rises and rotates the pinion in the reverse order to that it previously moved, thus returning the index J to its starting-point. The lever C' is lifted and the system of levers C and the platform B are restored to their normal positions, so that the weighing may be repeated.

The inner face of the box A, which may be of metal, has secured to or formed with it lugs or pins P, and from the under side of the platform there depend loosely links Q, which are adapted to be hooked under said pins P. The platform is placed in position, and by the insertion of a proper instrument—say a nail or pin—in the space between the platform and top of the box, the links may be moved to swing under the pins P, thus connecting the platform to the box without interfering with the proper movements of the former; or the same result can be accomplished by tilting the platform so that the link at the lower end en-



gages with the respective pin. Then lower the platform to its operative position, and by properly manipulating the other link with a suitable instrument it will drop over its pin, and thus connect the parts.

It will be seen that the operation of coupling and uncoupling the platform and box is conveniently performed from the outside of the platform and box, and the links Q, when located on the pins P, serve to connect the platform and box without fixed fastenings.

In order to disconnect the platform from the box, either of the links is forced in from the holding-pin, thus separating the link and pin and permitting the displacement of the platform.

On the upper side of the platform are secured tracks R, which extend in the direction of the length of said platform. These tracks are pointed or V-shaped, the angle being above, and are continuations of lines of tracks laid on a stationary platform adapted for conveying ice from ships, cars, &c., to the wagons, store-houses, or other localities, the box A of the scale occupying a position in the length of said stationary platform. When the block of ice leaves the ship, &c., it is directed upon the tracks of the stationary platform and then moved forward by the conveyer or carrier, or other means. The block becomes grooved by its weight on the tracks, and so is guided forward accurately and in proper position, reaching the platform of the scale and moving on the tracks R. When it is fairly on the platform its weight is immediately indicated on the dial. The block continues its movement, leaves the scale, and is taken into the wagons or conducted to the store-house. The V-

shaped portion or body of each track R rises from the center of the base R' of the track, said base being wider than the bottom of said body, the upper face of the base R' being above the upper face of the platform, so that when the ice becomes grooved by its weight it sinks to the upper face of the base of the tracks, and is sustained thereon in its movements without being retarded by the face of the platform.

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

1. The platform B and the supporting and guiding frame E, in combination with the angular sliding piece F, formed of the two arms F' F' and the limb *a*, said arms and limb projecting in opposite directions, the rack-bar G, connected to said arms F', the spring L, connected to said limb *a* and the top of said frame E, the bolt M and nut N, and the index-operating pinion H, substantially as and for the purpose set forth.

2. The platform B, frame E, the sliding piece F, with arms F' F' and limb *a*, the rack-bar G, and the index-operating pinion H, in combination with the spring L and the piece L', with bolt M, said rack-bar and spring being on opposite sides of the sliding piece F, and the spring occupying the space between the limb *a* and top of the frame E, to which latter it is connected by said piece L' and bolt M, substantially as and for the purpose set forth.

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Witnesses:

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