J. F. Keeler.
Platform Scale.

No 11,729. Patented Sep 26 1854

Fig 4.

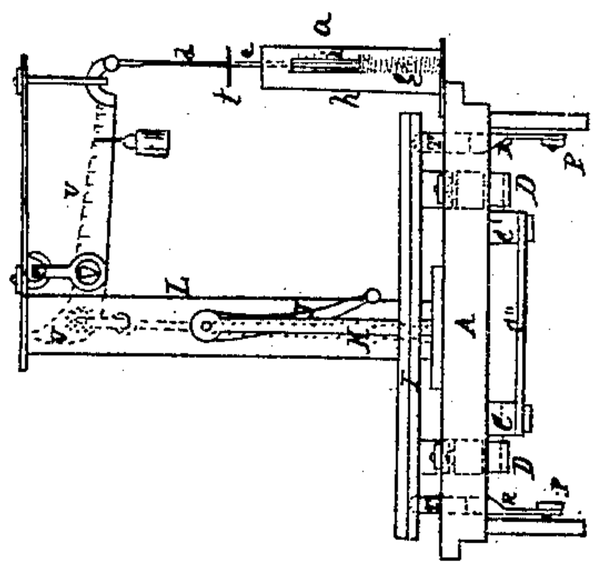


Fig 5.

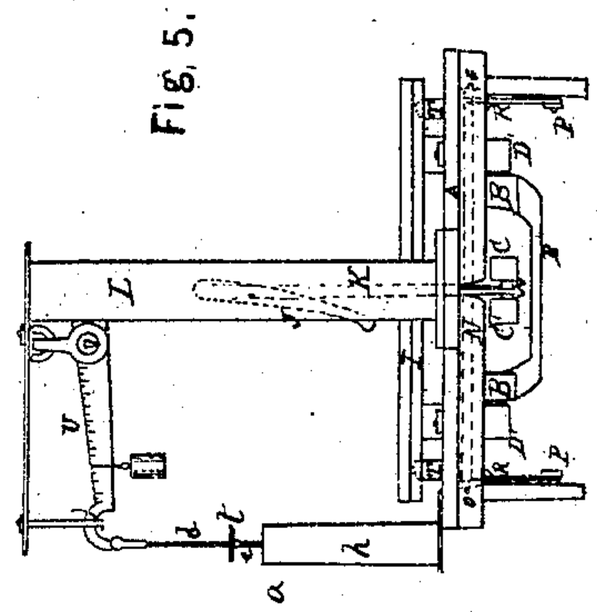


Fig 2.

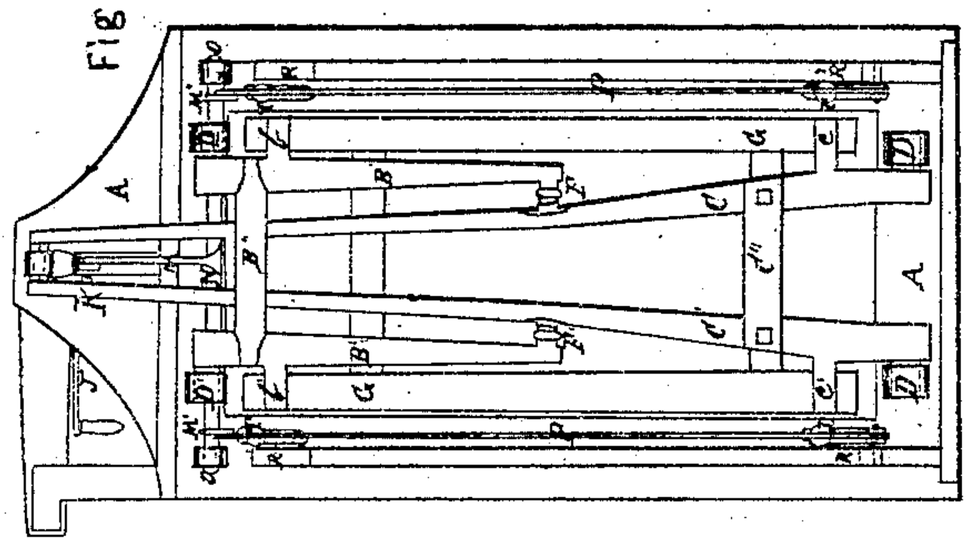


Fig 1

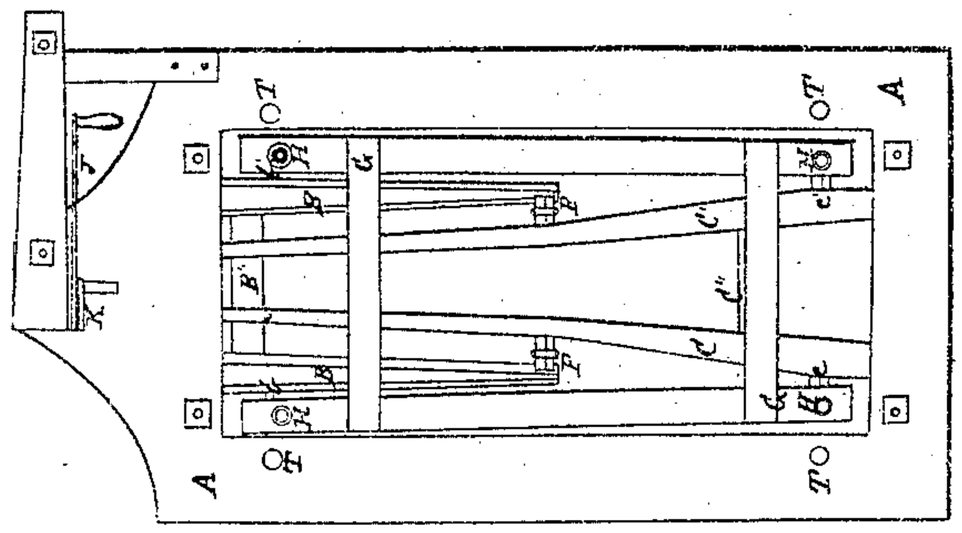
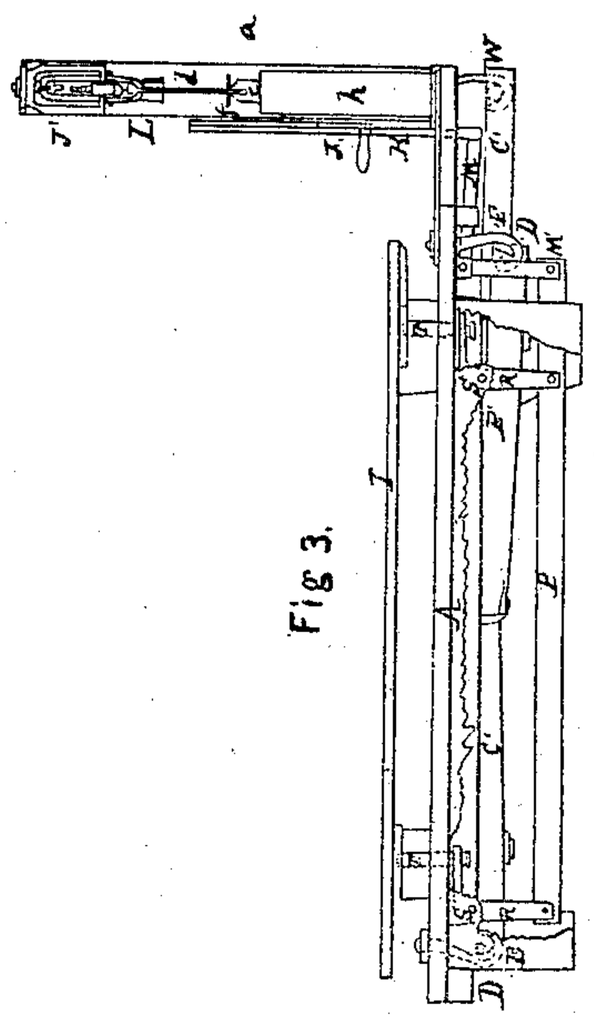


Fig 3.



UNITED STATES PATENT OFFICE.

J. F. KEELER, OF CLEVELAND, OHIO.

PLATFORM-SCALE.

Specification forming part of Letters Patent No. 11,729, dated September 26, 1854; Reissued July 14, 1868, No. 3,032.

To all whom it may concern:

Be it known that I, J. F. KEELER, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in the Construction of Scales; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1, in the drawings is a plan view of my improved platform scales, Fig. 2, a view of the scales inverted, Fig. 3 a side elevation, Fig. 4 an end view, and Fig. 5 a view of the end opposite to that shown in Fig. 4.

Similar letters in the several figures, represent the same parts.

A A represent the castiron frame of the scales, to which are hung the levers B B′, and C C′, Figs. 1 and 2, by means of the hook or hangers as seen at D D D′ D′, Figs. 2 and 3. The arms or bearings of the levers, with which the levers are supported by the hangers, are of the usual form of scale joints or bearings as seen at E E′ Fig. 3. The small end of the levers B B′, are hung to the long levers by a link as seen at F F′ Figs. 1 and 2. The levers B B′ are united by the connection B″ and the levers C C′ are united by the connection C″. From the sides of these levers extend the four arms *b b′* and *c c′*, which are V shaped, and upon which rests the frame G; in this frame are inserted four points or pivots H H, H H, Figs. 1 and 4. Upon these points the platform I rests when weighing is being done. This secures a more perfect and uniform action of the scales, by preventing the swerving or jostling of the levers, while the platform is raised or lowered.

The platform is raised from and lowered to the frame G, by a device on the underside of the frame, in connection with the lever J, and connecting rod K. The lever J, moves upon a pin or fulcrum secured to the standard L, Figs. 3, 4, and 5. To the short end of this lever J, is attached the rod K by a pin joint, and the other end of the rod is attached to the lever M, Figs 2 and 3, which lever is connected to the shaft N. This shaft is hung in bearings, at the ends as seen at O O Fig. 2; near to the bearings are secured two more levers M′ M″, which in connection with the lever M form a right angled lever as seen in Fig. 3; at the end of the levers M′ M′ is attached by a pin joint the connecting rods P P, and to the connecting rods is attached the right angled levers R R and R′ R′ by a pin joint. These levers move upon a pin secured to the sides of the frame as seen at S Fig. 3.

In the upper arms of the levers is a slot in which is fitted the neck of the pins T, which form a shoulder above the lever, and a head below, so that they move up and down with the levers. By this combination and arrangement the platform is raised and lowered by the lever J, as may be required. When the lever is in the position seen in Figs. 4 and 5, the platform is raised from off the frame G, and rests upon the pins T, in which position the articles are placed upon the platform, to be weighed, thereby preventing the levers and bearings from sustaining injury, by jarring or straining, when loading or unloading, the scales. By turning the lever J to J′, the platform descends with its load and rests on the pivots H ready to be weighed.

The connection of the scale beam U, to the levers C C, is in the usual manner, as seen at V and W, Figs. 3, 4, and 5.

For the purpose of facilitating the operation of weighing, I have combined with the platform scales, a spring balance, as seen at *a*, Figs. 3, 4, and 5. At the end of the beam U, is attached, by a pivot joint, the rod *d*, which hooks into the spring rod *e*, under the table *f*.

The spring *g*, which is connected to the spring rod *e* is inclosed in the case *h*. *i* is the indicator and scale of weight. The rod *d*, may be detached from the spring rod *e*, and the platform scales used without it. The spring balance in combination, with the platform scale, may be used in weighing freight etc. where celerity, rather than extreme accuracy is desirable; in such cases, if the poise is not used, it is placed at zero, and the weights upon the table *f*, showing the hundreds of pounds in whole numbers, and the fractions on the index *i*.

It will be perceived that this improvement is simply a combination of the common platform scale with the spring balance (of whatever form) which is all that I claim to have invented, and not the broad ground or idea of combining two or more kinds of indices or scales of whatever construction. This ground I distinctly disclaim and con-

fine myself exclusively to a combination of the two specified species of scales mentioned.

By this combination and arrangement of the platform scale with the spring balance may readily be weighed any number of boxes, barrels, or other articles by simply placing them, one at a time, onto and off from the scale without moving a weight or a poise, whenever the difference in weight between the articles to be weighed does not exceed the capacity of the spring balance.

The frame G in connection with the platform I, forms a kind of a double platform, and as the platform I is raised and lowered, to and from the frame G, the levers are not swayed about, but are retained in place by the frame G, which is not the case with the scales now constructed, and in use. Another feature of improvement which distinguishes my platform scales, from all others, is the means described for raising the platform, independently of the levers. When the levers are raised and lowered, and not the platform, the result is that the bearings and sockets wear off unequally. But in my improvement the levers are not raised and lowered, but the platform, which is raised equally at all points without regard to the position of the weight upon it; which with the frame G distinguishes it from my former application, and from all others in use.

What I claim as my improvement and desire to secure by Letters Patent is—

1. The raising or lowering of the platform of platform scales, simultaneously at all points, without regard to the position of the weight upon the platform the weighing levers being retained in their proper places for weighing, and preserved from swaying about (while the raising and lowering is being done) by the intermediate platform or frame G, substantially as described.

2. The combination of the spring balance, with the platform scales, arranged substantially in the manner described and for the purposes set forth.

J. F. KEELER.

Witnesses:
E. R. BENTON,
W. H. BURRIDGE.

[FIRST PRINTED 1913.]