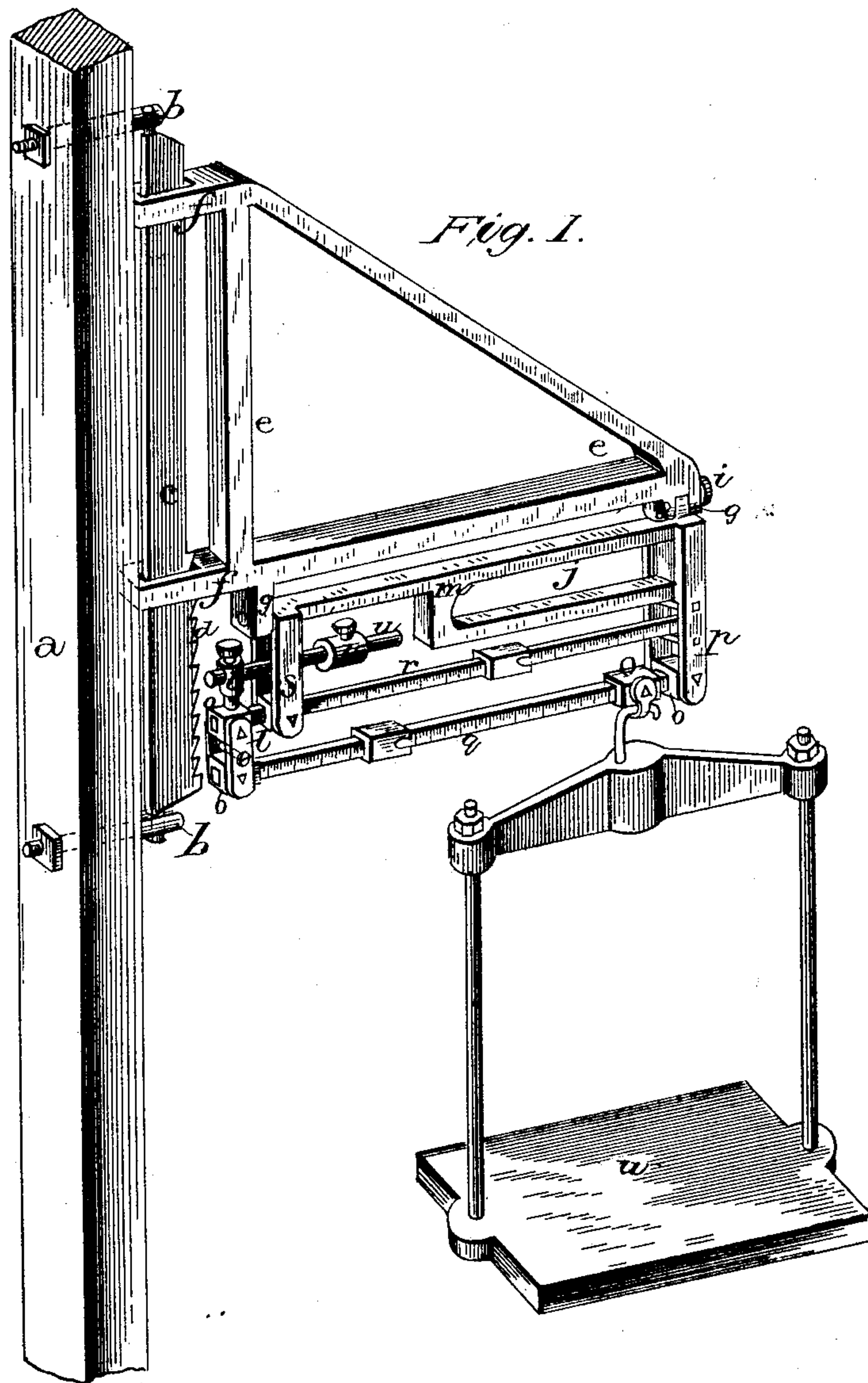


L. G. WOOLLEY.
Weighing-Scales.

No. 222,341.

Patented Dec. 2, 1879.



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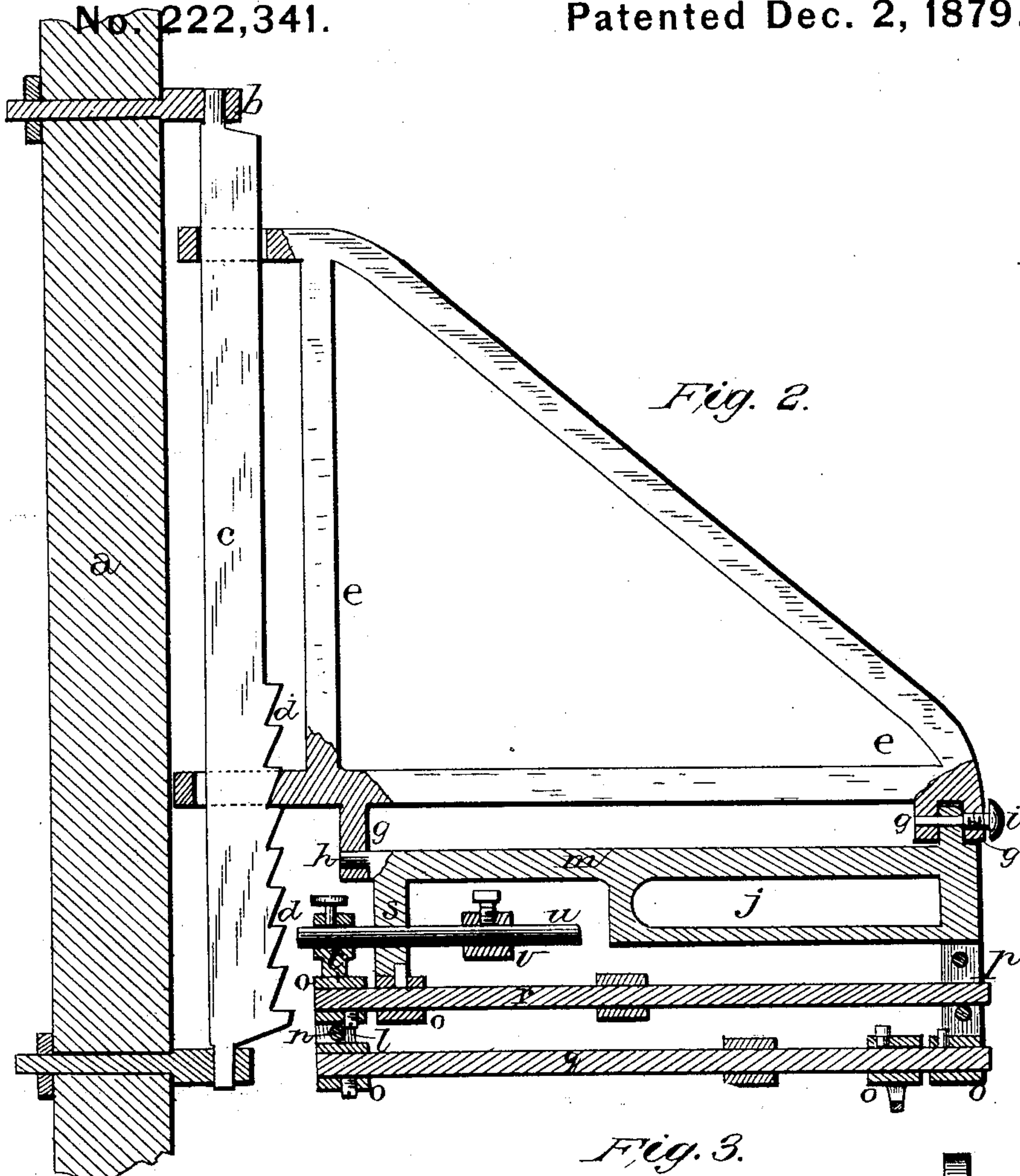


Fig. 3.

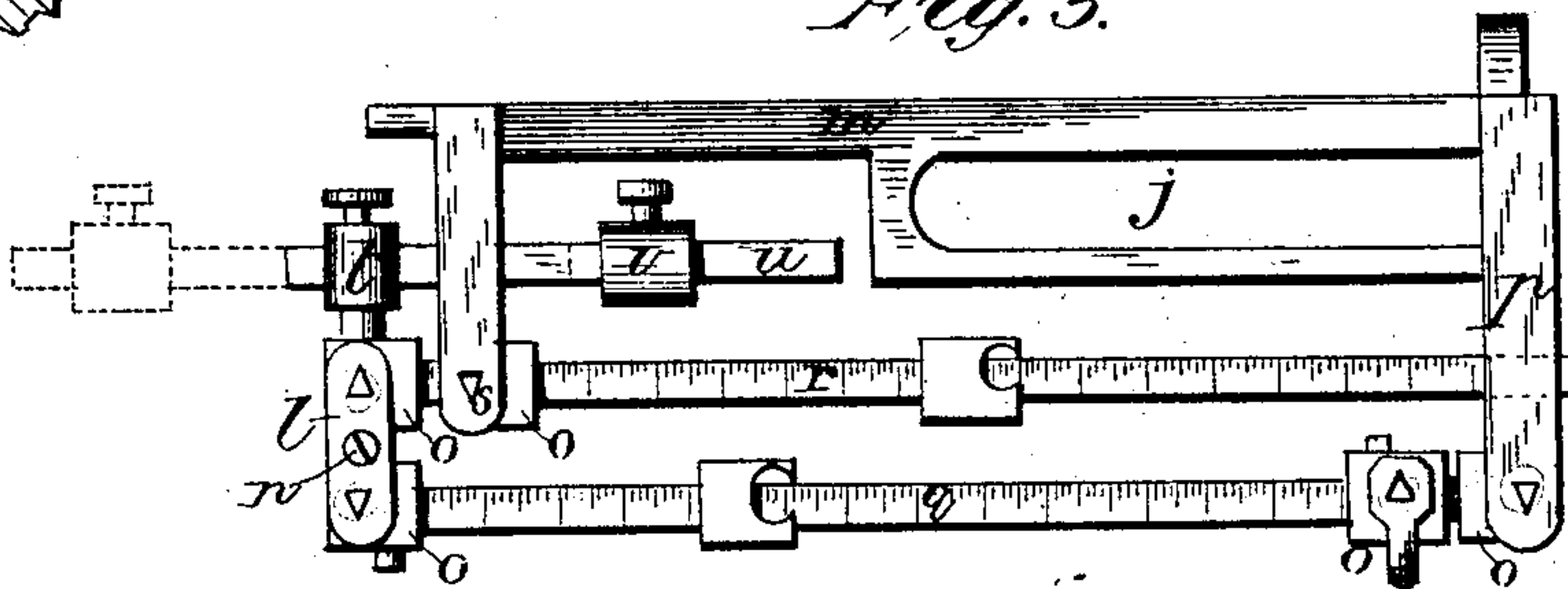
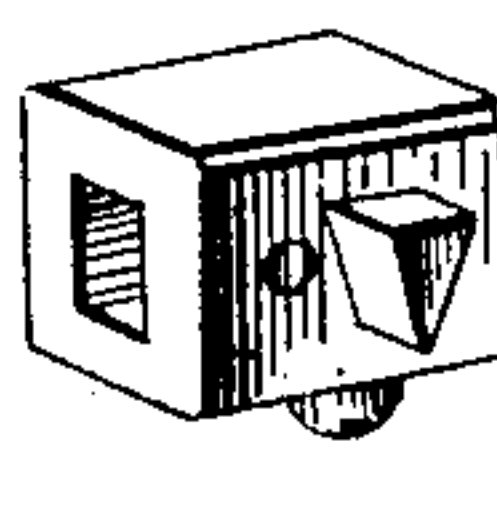
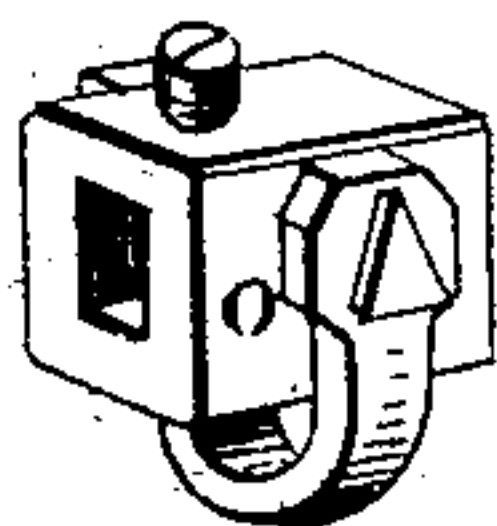
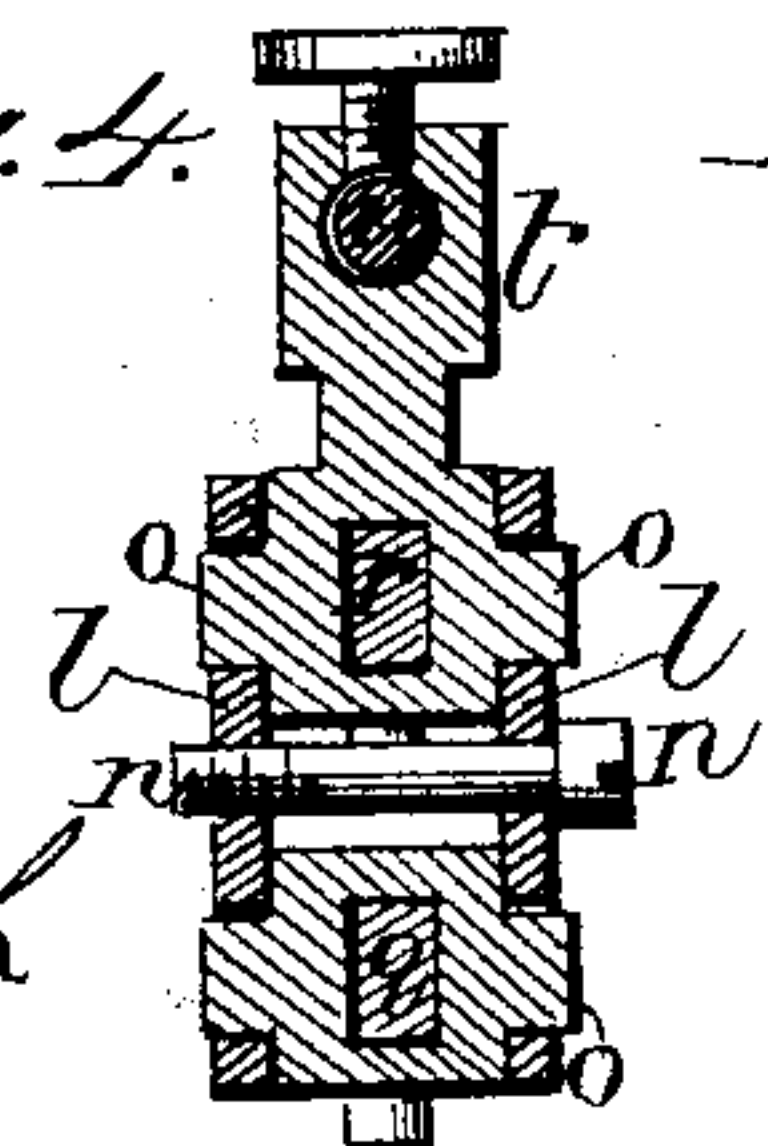


Fig. 4.

Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

LEONIDAS G. WOOLLEY, OF MENDON, MICHIGAN.

IMPROVEMENT IN WEIGHING-SCALES.

Specification forming part of Letters Patent No. **222,341**, dated December 2, 1879; application filed July 1, 1879.

To all whom it may concern:

Be it known that I, LEONIDAS G. WOOLLEY, of Mendon, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Weighing-Scales; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in weighing-scales; and it consists in attaching the scales to an adjustable swinging frame, whereby the scales can be raised vertically to accommodate it to a bag-holder, or to the height of the person using the scales, and then swung back out of the way when no longer needed for immediate use.

It still further consists in the peculiar construction of the pivots in which the beams are secured, all of which will be more fully described hereinafter.

Figure 1 is a perspective of my scale complete. Fig. 2 is a side elevation of the same, partly in section. Fig. 3 is a side elevation of the scales when ready to be used as a steelyard, and Fig. 4 is a vertical cross-section of the same. Figs. 5 and 6 are detail views.

a represents one of the vertical beams inside of the barn, or a post which may be set in the ground outside of the barn at any convenient point. The two bearings *b*, in which the supporting-frame swings, may either consist of bolts which pass entirely through the beam, as here shown, or of simple eyes which are screwed or driven into the post. The pivotal bar *c*, which may be of any desired length, is held vertically between the two bearings in such a manner that it can be turned freely from side to side, and has upon its outer edge, near its lower end, a series of notches, *d*, by means of which the supporting-frame *e* can be adjusted up and down. This frame is made, preferably, triangular, as shown, and has the two perforated projections *f* extending from its two inner corners, so as to pass over the pivotal bar, the upper one of which serves simply as a guide, while the lower one serves to catch in the notches, and thus support it at any desired elevation. By means of this supporting-

frame the scales can be adjusted up and down to any desired height, so as to allow a bag-holder to be attached to the scales, and to accommodate the scales to the height of the person using them, and by having the frame pivoted the scales can be swung back out of the way when no longer needed.

Projecting from the lower edge of this vertically-adjustable frame are the ears *g*, between which the scales are held by means of the pivot *h* and screw *i*. The frame of the scales is made in one solid piece, of the form shown, and has an opening, *j*, made through its upper and outer corner, so as to enable the scales to be held in the hand and used as a steelyard when detached from its supporting-frame. This construction is of the greatest utility, for it enables a person to use the scales in the house for weighing light articles of all kinds, and where it would be very inconvenient to be carrying them to the barn.

The scale-beams, as here shown, are only two in number, but there may be as many of them as desired, and they are connected together in such a manner as to form a compound lever by means of the two plates, *l*, which are secured together by means of a screw or other equivalent device, *n*. Instead of making the bearings of these beams in the usual manner, they are made in entirely different pieces and secured to the beams by means of set-screws. On the two opposite sides of each of these separate bearings *o* are made the knife-edged pivots which catch in the frame *m* or the plates *l*. The beams are finished, and then their ends are put in the bearings and fastened securely in position by means of the set-screws after they have been adjusted to the proper measurement. By means of this construction a great deal of time, labor, and trouble is saved in adjusting the beams to the proper weight, and the beams can be made from a straight piece without regard to its shape.

The lower beam, *q*, has one end pivoted in the arm *p* of the frame, while the other end is pivoted in the lower ends of the plates *l*. The upper beam, *r*, has its end pivoted in the upper end of the plates *l*, and has a second pivot in the arm *s* of the frame. These beams are so adjusted in regard to each other that the upper one can be made to weigh any number

of times more than the lower one, and by thus connecting them together all removable weights are done away with, and only sliding ones, which can never be lost, are used.

Projecting from the top of the bearing at the inner end of the upper bar is a second bearing, *t*, in which the short adjusting-bar *u* is held by means of a set-screw. This bar is provided with a sliding weight, *v*, which can be adjusted back and forth for the purpose of making the platform *w*, the bag-holder, or whatever other device may be attached to the beam exactly balance the scales.

In order to use the scales as a steelyard, the bar *u* may be drawn outward and the weight *v* used on the end outside of the frame, as shown in Fig. 3.

Having thus described my invention, I claim—

1. In combination with the scales, a vertical post, *c*, that turns freely in its bearings *b*, and a frame, *e*, that is adjustable up and down on the post, whereby the scales can be raised and lowered, and swung around out of the way when not in use, substantially as shown.

2. In a scale, the beams provided with independent bearings, which are fastened to the beams after the beams have been adjusted to the proper weight, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of June, 1879.

LEONIDAS G. WOOLLEY.

Witnesses:

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F. A. LEHMANN.