

Model

J. Johnson.

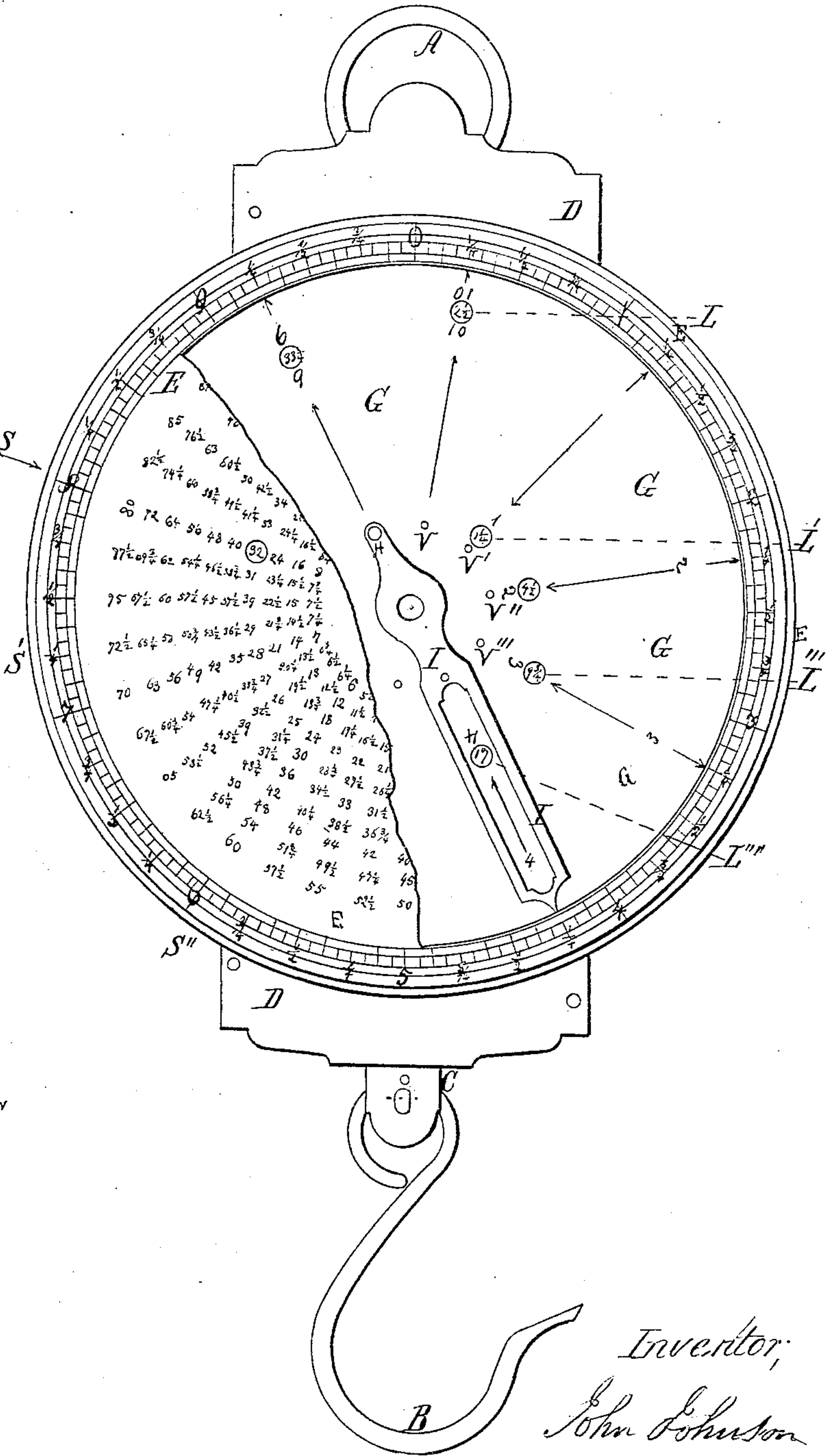
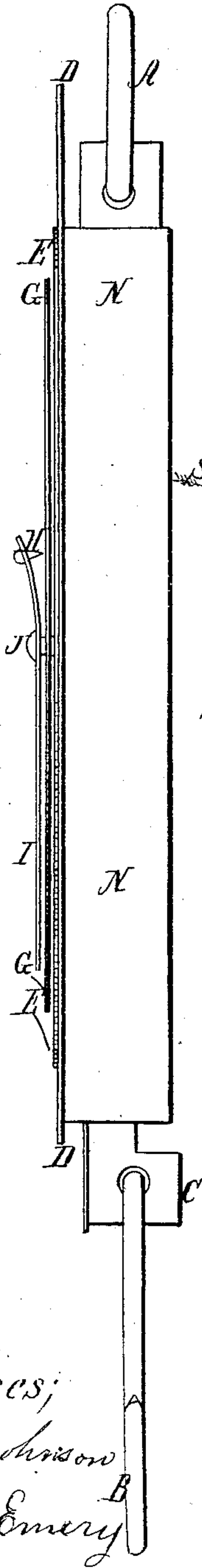
Scale Calculator.

N^o 57,332.

Patented Aug. 21, 1866.

Fig. 2.

Fig. 1.



Witnesses;
Frank C. Johnson
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UNITED STATES PATENT OFFICE.

JOHN JOHNSON, OF SACO, MAINE.

IMPROVEMENT IN AUTOMATIC CALCULATORS FOR SCALES.

Specification forming part of Letters Patent No. 57,332, dated August 21, 1866.

To all whom it may concern:

Be it known that I, JOHN JOHNSON, of Saco, in the county of York and State of Maine, have invented an Improvement in Automatic Scale-Calculators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters and figures marked thereon.

My improvement in automatic scale-calculators is so constructed that the value of the article weighed upon it is seen upon a fixed circular disk, through openings in a revolving disk, upon which is marked the price or rate per pound, the openings through the revolving or front disk being in a spiral direction and consisting of a long slot or of small circles cut through the disk. This disk is not only capable of revolving upon its center, but it is adjustable in any required position with reference to the fixed disk, as hereinafter more fully described.

Figure I is a front view of the instrument. Fig. II is a side view of the same. The calculator is represented in these figures attached to a spiral-spring balance of the ordinary construction, and my improvement relates to parts that are exterior to the springs and the case that contains them.

The case N, which contains the spiral springs, is provided with a suspension-ring, A, at the top, and a hook, B, at the bottom, which is attached to the vertical slide C, and sustains the article that is to be weighed.

To the central shaft, J, an index, I, is firmly affixed, so that it revolves with the shaft and takes its position at any part of the fixed circular disk E, which is graduated in pounds and ounces, as represented at its outer edge in Fig. I. The index points to the number of pounds that the article weighs that is placed upon the scale. This rear disk, E, is fixed by riveting it to the face-plate D of the spiral balance. Upon its face, arranged in concentric circles, are the figures which indicate the value of the article which is weighed, these figures or sums being equal to the product of the weight of the article by its price per pound.

On the line S, in the direction of the arrow, are the figures 80, 72, 64, 56, &c., the distance

of each figure from the center J being the same as the successive holes made in the front or revolving disk, G, and corresponding to the products of 8×10 , 8×9 , 8×8 , 8×7 , &c.

The front disk, G, fits loosely upon the shaft J, so that it can be placed in any position by allowing the projecting pin H, upon the rear end of the index I, to drop into the small holes V V, which are on the line of the apertures in the front card. A slot or opening is made in the index I, as represented in Fig. I, through which is seen the figure 4, marked upon the front disk, and showing, through the aperture L''', the Figure 17, marked upon the rear disk or plate.

As an example of the mode of using the instrument, take the position of the parts as shown in Fig. I. When there is no weight upon the hook B the index I points directly upward to 0 on the fixed plate. If the price of the article to be weighed is four cents per pound, I turn the front disk until the figure 4 is seen through the slot in the index, and drop the rear pin, H, into one of the holes V. If the quantity wanted is four and a fourth pounds the article is poured into the scale-pan (which is suspended from the hook B) until the index points at $4\frac{1}{4}$ upon the back disk; at the same instant the figure 17 appears at the aperture L''' : $4 \times 4\frac{1}{4} = 17$. If the quantity required had been eight pounds the figure 32 would have appeared on the radial line S at the same aperture in the disk.

It is obvious that the fixed plate, the revolving plate, and the index, when detached from the scale, may be used as a calculator or ready reckoner, the index being turned by the hand to the figures required.

What I claim, and desire to secure by Letters Patent, is—

The fixed plate E, the revolving disk G, and the index I, in combination with the spiral-spring balance or other weighing apparatus, for the purpose of indicating the total value of any article that is weighed upon the scale.

JOHN JOHNSON.

In presence of—

FRANK C. JOHNSON,
GEORGE A. EMERY.