(No Model.)

# J. S. GEORGE.

## SPRING SCALE.

No. 273,720. Patented Mar. 13, 1883.

Fig. 1

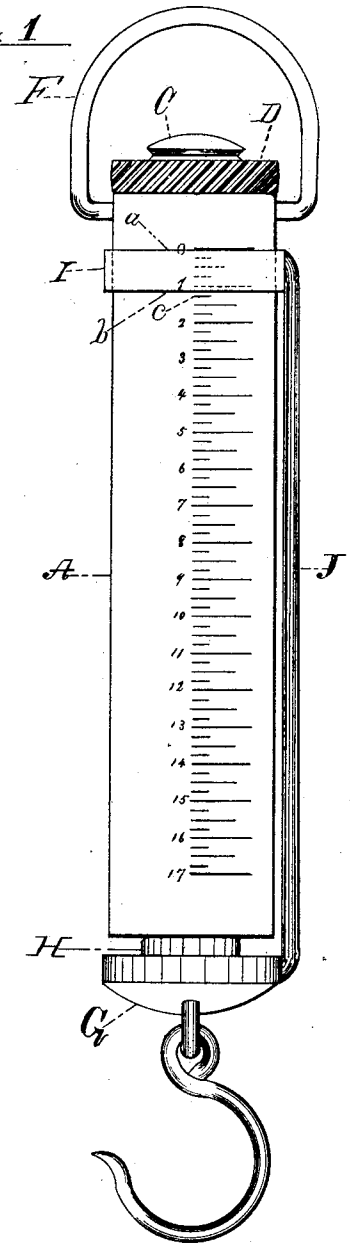
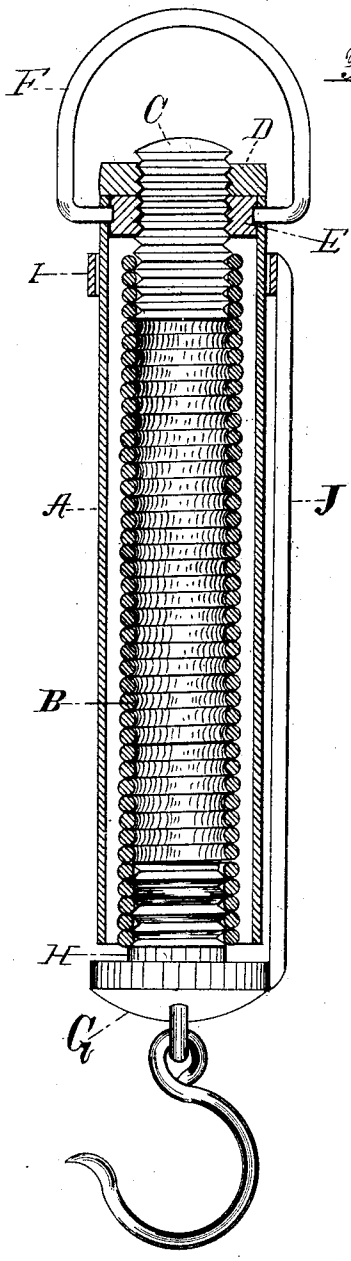



Fig. 2.

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# UNITED STATES PATENT OFFICE.

JOHN S. GEORGE, OF BRIDGEPORT, CONNECTICUT.

## SPRING-SCALE.

SPECIFICATION forming part of Letters Patent No. 273,720, dated March 13, 1883.

Application filed April 19, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. GEORGE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Spring-Scales; and I hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it belongs to make and use the same.

My invention relates to a spring-scale, and has for its object a ready means of adjustment to compensate wear and strain of spring, and having a pointer or indicator so constructed in relation to the graduations on the scale that smaller fractions of a pound may be indicated without increasing the number of graduations.

To more clearly understand my invention, reference is had to the drawings accompanying this specification.

Figure 1 is a view of the scale complete. Fig. 2 is a sectional view.

A is the shell; B, the spring; C, the adjusting-screw; D, the lock-nut; E, threaded nut attached to shell A; F, thumb-ring; G, weight-support, having threaded stud H; I, the indicator-ring; J, rod connecting indicator-ring I with weight-support G.

Its construction and operation are as follows: The shell A is constructed of tubing, and having at its upper end (see Fig. 2) the stationary threaded nut E. In place of this nut, the shell A can be headed sufficiently thick to provide a thread strong enough to support the weight required. The adjusting-screw C is screwed into the nut E and held in any position required by the jam-nut D. The coils of the spring B engage with the threads of the screw C, and it hangs pendent therefrom. The interior of the shell A is sufficiently large in diameter to insure a free movement of the spring without friction. The lower end of the spring B is attached to the stud H of the weight-support G in the same manner as at its upper end, as described. The indicator I is a narrow ring encircling the shell A, and sufficiently large to move freely up and down the same without friction, and is secured to the weight-support G by the rod J, thereby securing a simultaneous movement of the indicator and weight-support. The indicator-ring I (see Fig. 1) is made wider than the pound-graduations on the shell A. The upper edge, *a*, of the ring, as represented, stands at zero, and the lower edge, *b*, is situated half-way between the pound-mark 1 and the quarter-pound mark *c*. A downward movement of the ring I until the lower edge, *b*, coincides with the mark *c* will indicate two ounces. The top edge, *a*, of the indicator-ring will indicate pounds, half-pounds, and quarters. The lower edge, *b*, will, when coinciding with any mark on the scale, indicate two ounces, which must be added to the weight indicated by the upper edge, *a*, after it has passed by the first quarter-mark immediately below zero. To compensate for the stretch of the spring which will occur from long use, the spring B is attached, as represented, (see Fig. 2,) to the adjusting-screw C, said screw passing through the threaded nut E, said nut being held stationary in the shell A. To adjust the scale, the nut D is loosened and the weight-support turned to the right or left, as required. The spring B, engaging firmly with the screw C and stud H, enables the screw C to be forced up or down, as may be required, in the nut E, until the indicator is set properly with the zero-mark on the scale. The nut D is then screwed firmly down.

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

In a spring-scale, the combination of the shell A, indicator-ring I, arranged to indicate even weights on its upper edge, *a*, and fractions of the same on its lower edge, *b*, with the rod J, weight-support G, spring B, adjusting-screw C, and nuts D and E, substantially as described, and for the purpose set forth.

JOHN S. GEORGE.

Witnesses:
HERMAN GAUSS,
RUDOLPH KOST.