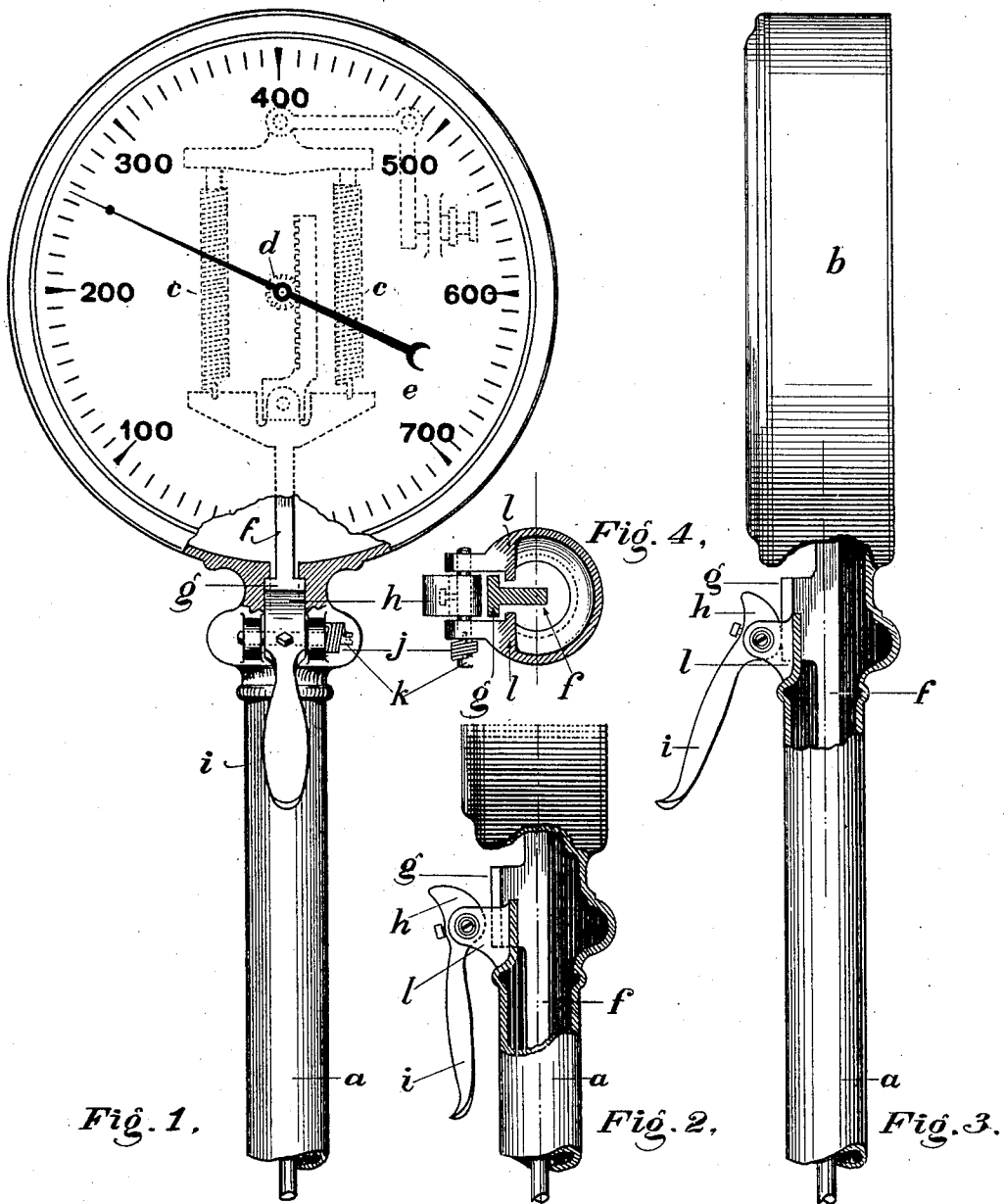


No. 828,248.

PATENTED AUG. 7, 1906.

G. W. ROBINSON.
SPRING DIAL SCALE.
APPLICATION FILED OCT. 2, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

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SPRING-DIAL SCALE.

No. 828,248.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed October 2, 1905. Serial No. 281,004.

To all whom it may concern:

Be it known that I, GEORGE W. ROBINSON, a citizen of the United States, residing at St. Johnsbury, in the county of Caledonia, State of Vermont, have invented certain new and useful Improvements in Spring-Dial Scales, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to an improvement in scales, and particularly to a relieving-gear for spring-dial scales, whereby the load may be applied gradually and at will to the springs, preventing undue strain and unnecessary vibration to the pointer in case the load is thrown onto the scale suddenly. It will be understood that it is applicable either to platform-scales or to those scales where a pan or other receptacle is attached directly to the scale-rod.

The invention consists in the matters hereinafter described, and referred to in the appended claims.

In the accompanying drawings, which illustrate the invention, Figure 1 represents a front elevation of a portion of a scale embodying the invention, this view being shown partly in section. Fig. 2 is a sectional side view of a portion of Fig. 1, showing the relieving-gear out of operation. Fig. 3 is a side view of Fig. 1, partly in section, showing the relieving-gear in operation; and Fig. 4 is a detail cross-sectional view.

In the drawings, *a* represents the pillar of an ordinary platform-scale, *b* the dial-case, *c c* the springs, *d* the pinion, and *e* the pointer, all of which are of ordinary construction.

f represents the rod which connects the scale with the springs. The rod *f* is broadened out, as shown at *g*, into T shape and projects through the wall of the pillar, which wall is formed with the outward-projecting lugs *l*. Supported in the outer ends of these lugs is a screw-pin *k*, around which is coiled a spring *j*, one end of which is attached to the pin *k* and the other end to one of the lugs *l*. By turning this pin tension is placed on the spring *j*, and when it is set to proper tension the cam *h*, having the handle *i*, is fixed in proper position by means of the screw-bolt

m. The lugs *l* adjacent the T portion *g* of the rod are formed with shoulders.

Normally the parts take the position shown in Fig. 3, in which the tension of the spring forces the cam against the T part of the rod *f*, swinging said rod out of vertical position and causing the inner side of the T portion to press tightly against the shoulders on the lugs, thus preventing any movement of the rod and consequent strain on the springs if a load is thrown suddenly upon the platform or into the scale-pan.

To allow the operation of the pointer, however, the operator catches hold of the handle *i* and moves the cam out of engagement with the T portion of the rod, when the latter will swing into operative position and become free of the cam on one side and the shoulders of the lugs on the other side, and thus allow free play to the springs.

Various minor modifications and changes may be made in the construction of the parts without departing from the spirit of my invention.

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

1. In spring-scales, a load-receiver, a weighing-spring, a connecting-rod between them, and a manually-operated cam normally engaging the rod and holding it from longitudinal movement, and means for releasing the cam to allow the weight of the load-receiver and its contents to be gradually imposed on the spring.

2. In spring-scales, a load-receiver, a weighing-spring, a connecting-rod between them, and a manually-releasable cam normally held in engagement with the rod to retard its movement and allow the weight of the load-receiver and its contents to be gradually imposed on the spring.

3. In spring-scales, a load-receiver, a weighing-spring, a connecting means between them, and a manually-adjustable spring-actuated cam engaging such connecting means and automatically holding the same from rapid movement under a suddenly-imposed load on the load-receiver.

4. In a relieving-gear for scales, the combination of the scale-rod having a projecting

portion, a pivoted cam normally spring-pressed against said projecting portion to hold the rod out of operative position, and a handle for releasing the same; substantially
5 as described.

5. In combination, the rod having the T-shaped portion, the pillar having the lugs, with shoulders behind the T-shaped portion, a pin secured to said lugs, and a cam carried

on said pin, and a spring on said pin for forcing the cam against the T portion of the rod; substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. ROBINSON.

Witnesses:

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