

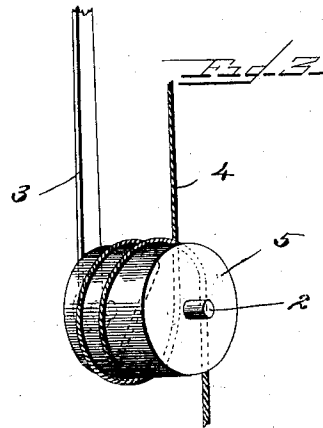
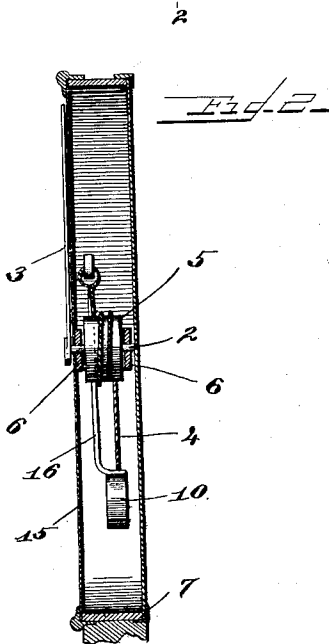
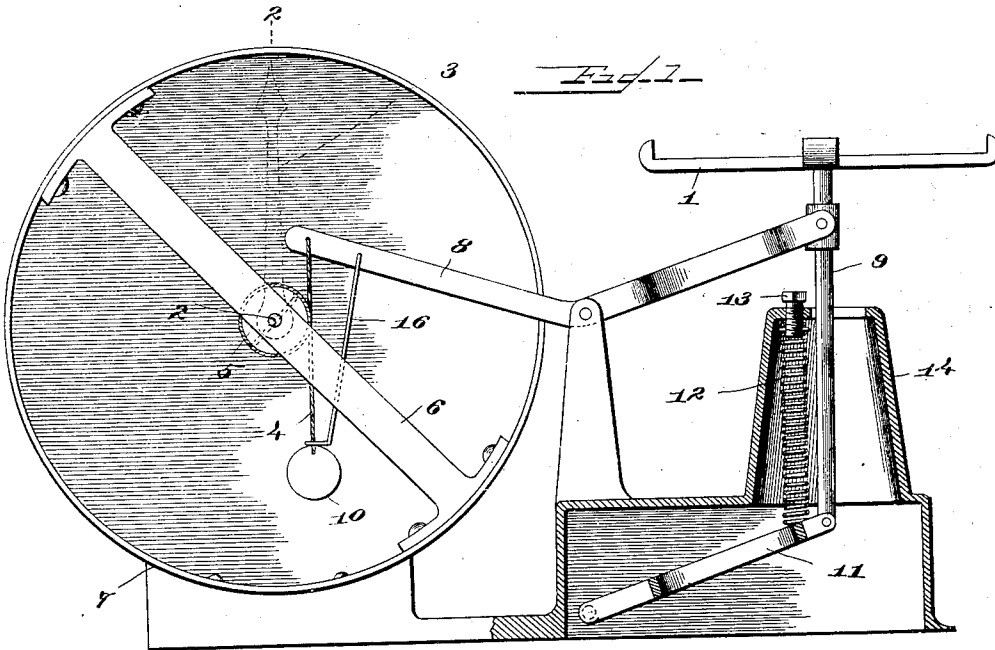
No. 650,994.

Patented June 5, 1900.

A. SPEAR.
WEIGHING SCALE.

(Application filed Oct. 28, 1899.)

(No Model.)



Witnesses—

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UNITED STATES PATENT OFFICE.

ARTHUR SPEAR, OF CHICAGO, ILLINOIS, ASSIGNOR TO ESSINGTON N. GILFILLAN, OF SAME PLACE.

WEIGHING-SCALE.

SPECIFICATION forming part of Letters Patent No. 650,994, dated June 5, 1900.

Application filed October 28, 1899. Serial No. 735,030. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR SPEAR, a citizen of the United States, residing at No. 56 Fifth avenue, in the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Weighing-Scales, of which the following is a full, clear, and exact specification.

My invention relates to that class of weighing-scales in which the motion of the scale-pan as heretofore constructed has been imparted to the arbor or shaft of the pointer or index by means of a rack and pinion; and my invention has for its primary objects to greatly simplify the construction of scales of this type and make the connection between the index and beam or other part connected with the scale-pan more positive and accurate in its operation.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a side elevation of my improved scale, partly in vertical section, and showing one of the end plates of the casing alone. Fig. 2 is a vertical transverse section taken on the line 2 2, Fig. 1, and Fig. 3 is an enlarged perspective view of the drum and cord hereinafter described.

In carrying out my invention I substitute for the rack and pinion aforesaid, which has heretofore been used for imparting the movement of the scale-pan 1 to the shaft or arbor 2 of the index or pointer 3, a cord 4 and drum 5, around which the cord is wound. The drum 5 is secured in any suitable way to the arbor or shaft 2 of the index 3, the shaft being journaled in cross-bars 6, secured to the casing 7, and the cord 5 is passed through the drum and then turned one or more times around it and has its upper end secured to a pivoted arm 8, which is connected to the stem 9 of the scale-pan and serves as a scale-beam, while the lower end of the cord 4 is attached to a weight 10.

The lower end of the stem 9 is attached to an arm 11, and the latter is supported by a spiral or other suitable spring or yielding support 12, adjustably secured by set-screw 13 to a part 14 of the frame. Thus it will be seen that when the beam 8 is oscillated the drum 5 will be accordingly rotated and the index 3 moved around the dial 15. In order to facilitate the weight 10 in pulling the cord downward when the plate 1 rises, I prefer to provide the beam 8 with an auxiliary spring-arm 16, through which the cord 4 passes and which bears upon the upper side of the weight, thus holding the weight steady and at the same time pulling downward on the cord when the beam 8 descends.

In describing and claiming my invention I have referred to the portion 1 as a "scale-pan;" but it will nevertheless be understood that this term "pan" is used merely for the sake of convenience in description and is intended to include any device or support for the matter to be weighed.

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

1. A weighing-scale having in combination a drum, an index operatively connected with said drum, a cord wound upon said drum, a scale-pan operatively connected with one end of said cord, a weight connected to the other end of said cord, an arm operatively connected with said scale-pan and through which said cord loosely runs, substantially as set forth.

2. A weighing-scale having in combination a drum, an index operatively connected with said drum, a cord passing through and wound upon said drum, a scale-pan operatively connected with one end of said cord, a weight connected to the other end of said cord, an arm operatively connected with said scale-pan and having an eye through which said cord loosely runs, said eye being located above said weight, substantially as set forth.

ARTHUR SPEAR.

Witnesses:

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