A. LILJA.

COMBINED SACK HOLDER AND WEIGHER.

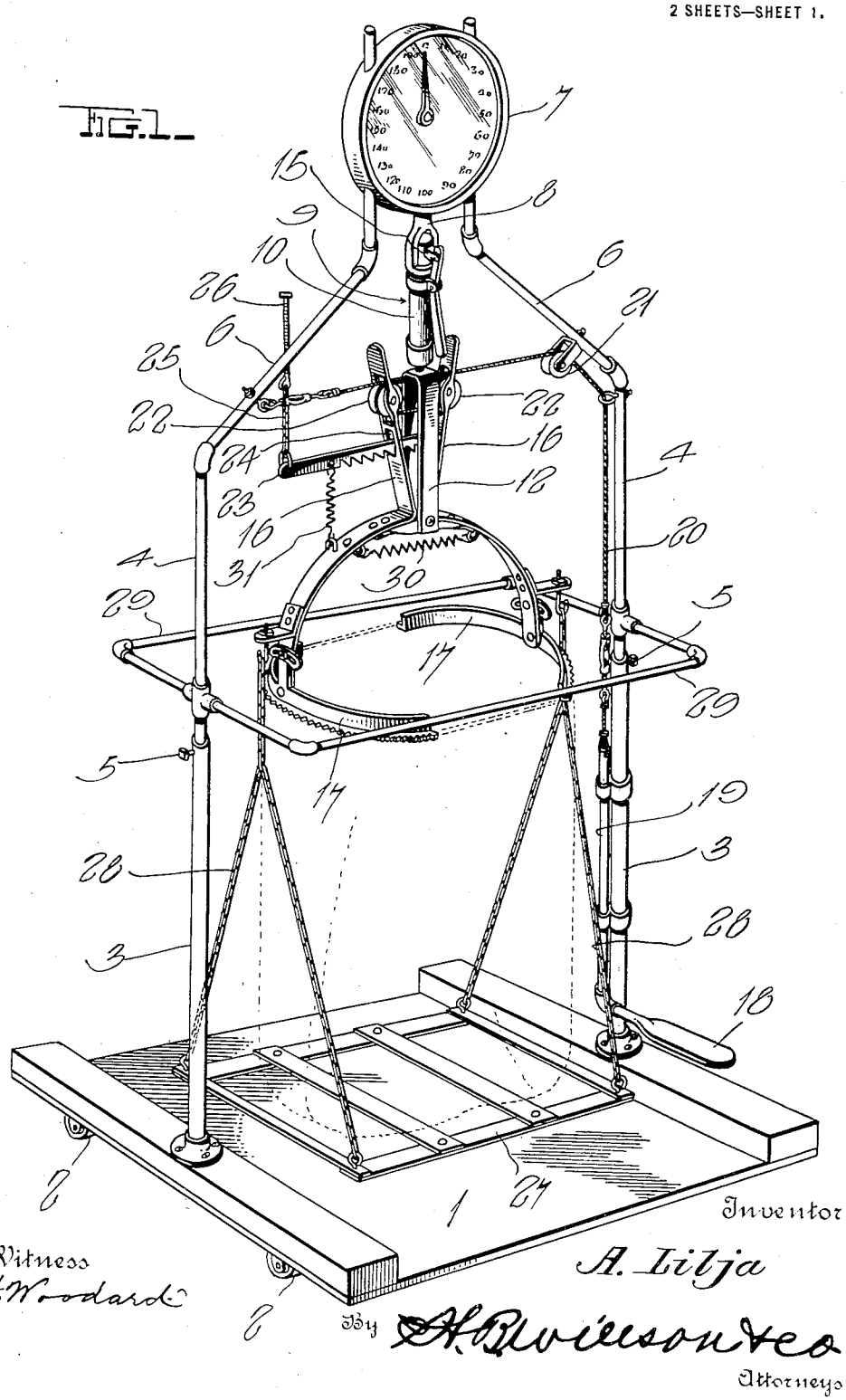
APPLICATION FILED SEPT. 25, 1916.

1,230,734.

Patented June 19, 1917.

2 SHEETS—SHEET 1.

FIG. 1.



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2 SHEETS—SHEET 2.

FIG. 2.

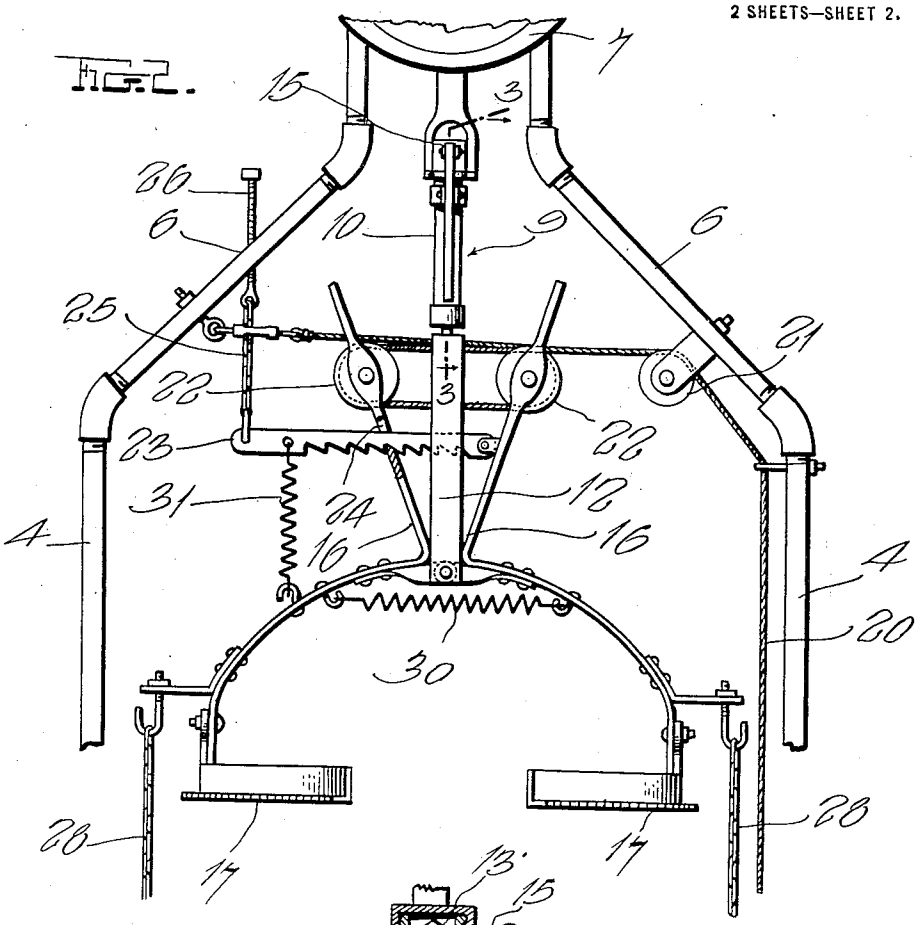
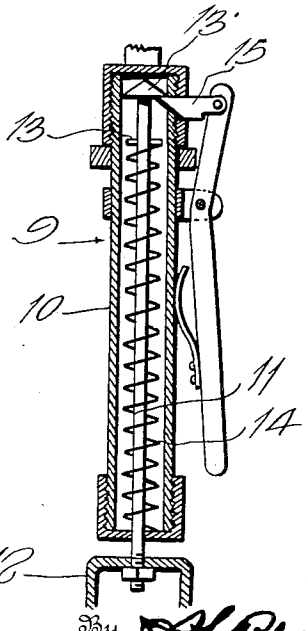


FIG. 3.



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UNITED STATES PATENT OFFICE.

ANDREW LILJA, OF STREATOR, ILLINOIS.

COMBINED SACK HOLDER AND WEIGHER.

1,230,734. Specification of Letters Patent. Patented June 19, 1917.

Application filed September 25, 1916. Serial No. 122,117.

To all whom it may concern:

Be it known that I, ANDREW LILJA, a citizen of the United States, residing at Streator, in the county of La Salle and State of Illinois, have invented certain new and useful Improvements in Combined Sack Holders and Weighers; and I do 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 appertains to make and use the same.

This invention relates to certain new and useful improvements in combined sack holders and weighers.

The primary object of the invention is to provide a means whereby the contents of a sack will be weighed while the sack is being filled in combination with a means for holding the mouth of the sack open.

Another object of the invention is to provide a device of this character including a means for quickly releasing the sack from the arms of the device.

Another object of the invention is to generally improve upon devices of this character by the provision of a device which will be simple, strong, durable and inexpensive in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With these and numerous other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of the application, and in which similar reference characters designate like parts throughout the several views:—

Figure 1 represents a perspective view of a device constructed in accordance with this invention;

Fig. 2 is a front elevation of the upper portion of the device, showing more particularly the construction of the bag holding arms, the means for moving them and locking them in their relatively expanded positions, and means for releasing them; and

Fig. 3 is a detail sectional view taken on the plane of the line 3—3 of Fig. 2.

Referring more particularly to the drawings, the reference numeral 1 designates a base, which is preferably provided on its lower side with casters 2, whereby the same may be easily moved from place to place wherever desired. Rising from the base 1 and secured in any convenient manner to the ends of the same is a pair of tubular upright standards 3, into which fit and slide tubular upper sections 4. The upper ends of the standards 3 are provided with thumb screws 5 to lock the sections 4 in place after they have been adjusted vertically with respect to the standards 3. The sections 4 are bent inwardly as at 6, and have secured at their upper ends in any convenient manner a spring balance scale 7. This structure forms a suitable support for the bag holding device now to be described.

The scale 7 is provided with the usual bar 8 upon which the article to be weighed is suspended, and in the present instance is shown as having a link member 9 connected to the same. This link member 9 is extensible and is composed preferably of an upper tubular section 10 into which extends a stem 11 carrying an inverted U-shaped member 12. Surrounding the stem 11 and confined between the lower ends of the section 10 and stop 13 at the upper end of the stem 11 is a coil spring 14, which, when nothing is being weighed, holds the stem 11 and member 12 in their uppermost positions. When articles are placed upon the scale to be weighed, the stem 11 and member 12 are held in their uppermost positions by means of a spring pressed latch 15 which, as clearly shown in Fig. 3 of the drawings, engages the underside of a stop 13′. The upper side of the stop 13′ is beveled for engagement with the lower side of the active face of the latch 15, whereby the stem 11 may be automatically locked in place when the same is moved upwardly under the tension of the spring 14.

Pivoted intermediate of their ends to the lower end of the inverted U-shaped member 12 is a pair of arms 16. As clearly shown in the drawings, the arms 16 are bent at their pivots so that both the upper and lower ends of the same extend outwardly and angularly with respect to one another. The lower ends of the arms are connected to curved cross bars 17, the connection of said bars 17 with the arms 16 being a pivotal one so that said bars may be adjusted angularly with respect to the arms, the purpose of which will be hereinafter described. If desired, the outer sides of the bars 17 may be provided with teeth, or roughened

or shaped in any convenient manner so as to provide for an effective engagement with the mouth of a bag.

The arms 16 being pivotally connected to the member 12, it is obvious that the lower ends of the same may be expanded relatively to each other into tight gripping engagement with the mouth of a bag, and to effect this movement or positioning, the upper end of the arms are provided with a means for drawing them together. This means is here shown as comprising a foot treadle 18 which is carried at the lower end of a bar 19 which is slidably mounted in one of the standards 3. The upper end of the bar 19 is connected to a cable 20 which is carried over a pulley 21 mounted in any suitable manner on one of the sections 4, and is then carried around a pair of pulleys 22 mounted at the upper ends of the arms 16, and then connected adjustably to the other section 4 of the supporting frame. By this structure it is obvious that whenever the treadle 18 is pressed upon, the cable 20 will be moved so as to draw the upper ends of the arms 16 together, and thereby relatively expand the lower ends of the same. To lock the arms in their relatively expanded positions the following means is preferably to be employed. This means comprises a locking bar 23 carried by the upper end of one of the arms 16, said bar being provided on its lower side with a plurality of ratchet teeth for engagement with the lower end of a notch 24 arranged in the upper end of the other arm 16 through which said bar extends. The other end of the bar 23 is connected to the lower end of a flexible member 25, the upper end of which is adjustably connected by means of a screw 26 to the inwardly extending portion 6 of one of the sections 4.

Although it is not absolutely necessary, yet it is preferred to suspend a platform 27 from the lower end of the arms 16 by means of suitable elements 28, here shown in the form of chains which may be lengthened or shortened as desired according to the size of the sack intended to be filled and weighed. To prevent the mouth of the sack from being touched by the implement used in lifting the article desired to be placed in the same, horizontal bars 29 are arranged on opposite sides of the standards 3 and secured thereto in any convenient manner.

The stem 11 and U-shaped member 12 being in their uppermost positions with respect to the section 10, and the lower ends of the arms 16 being in their relatively contracted positions under the tension of a spring 30 carried by the same, and it is desired to suspend a sack from the arms, the mouth of the same is positioned so as to engage the transverse bars 17, and the foot treadle 18 is pressed downwardly. This causes the upper ends of the arms 16 to be moved toward each other, and thereby expands the lower end of the same into firm contact or engagement with the sack. The locking bar 23 under the tension of a spring 31 connecting the same with the lower end of the adjacent arms 16, slides through the slot 24 and engages the lower end of the latter to lock the arms in their relatively adjusted positions. The lower end of the sack is desired to be supported by the platform 27, the suspending member 28 being lengthened or shortened to allow this. As the bag is being filled, the shovel or other implement used in handling the material with which it is filled, is rested upon the horizontal bar 29 to prevent the same from coming into contact with the bag. Hence there is no interference with the correct weighing. If it is desired to fill the bag from one side only, the horizontal bars 17 are adjusted with respect to the arms 16 so that one side of the bag is supported higher than the other. The purpose of this will be readily understood.

After the sack is filled with the desired amount of material, the latch 15 is actuated so as to release the stem 11, the latter thereupon moving downwardly under the weight of the bag and allowing all the structure supported by the same to move downwardly. The free end of the locking bar 23 being connected to the section 4 will remain substantially stationary, and will consequently become disengaged with the lower end of the slot 24. This causes an automatic release of the mouth of the bag, as the spring 30 under tension between the lower ends of the arms 16 will contract the same relatively to each other. When the bag is then removed from the platform 27, the spring 14 will again move the stem 11 into its uppermost position, the beveled active face of the latch 15 passing around and under the stop 13′ carried by the stem and locking the same in place.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the device will be readily understood. It may be seen that the objects of the invention have been effectively carried out, as a device has been provided which will firmly hold the sack in place while the same is being filled and weighed. The locking is quick and automatic, as well as the release of the sack.

As numerous changes in form, proportion, and in the minor details of construction may be resorted to without departing from the spirit of this invention, I do not wish to be limited to the construction herein shown and described other than that set forth in the appended claims.

I claim as my invention:—

1. A device of the class described com-

prising a support, an extensible link member suspended from said support, a pair of bag holding arms pivoted to the lower end of said member, means for expanding the lower ends of said arms relatively to each other after the insertion of the mouth of a bag thereon, and a locking bar for locking said arms after the lower ends of the same have been adjusted to their relatively expanded positions, said bar being positioned so as to release said arms when said link member is extended.

2. A device of the class described, comprising a support, a two-part extensible link member suspended from said support, a coiled spring operatively engaged with the two parts of said member to return them to their contracted positions when extended, means for locking the two parts of said member in their contracted positions, a pair of bag-holding arms pivoted intermediate of their ends to the lower end of the lower part of said member, means engaging the upper ends of said arms for expanding the lower ends thereof relatively to each other, a coiled spring operatively connected with the lower ends of said arms to move the same toward each other, and a locking bar for locking said arms after the lower ends of the same have been adjusted to their relatively expanded positions, said bar being pivoted at one of its ends to one of said arms and engaging the other arm, and being held immovable at its other end so as to become disengaged from the last mentioned arm when said link member is allowed to be extended.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ANDREW LILJA.

Witnesses:
FRANK J. HARRISON,
R. M. BEEK.