

H. HARRINGTON.
 COUNTER ATTACHMENT FOR CONVEYERS OR ELEVATOR SYSTEMS.
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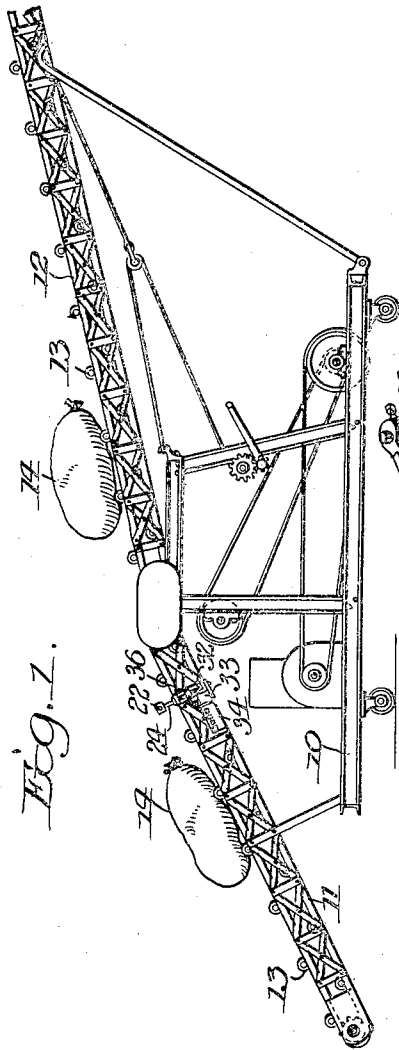
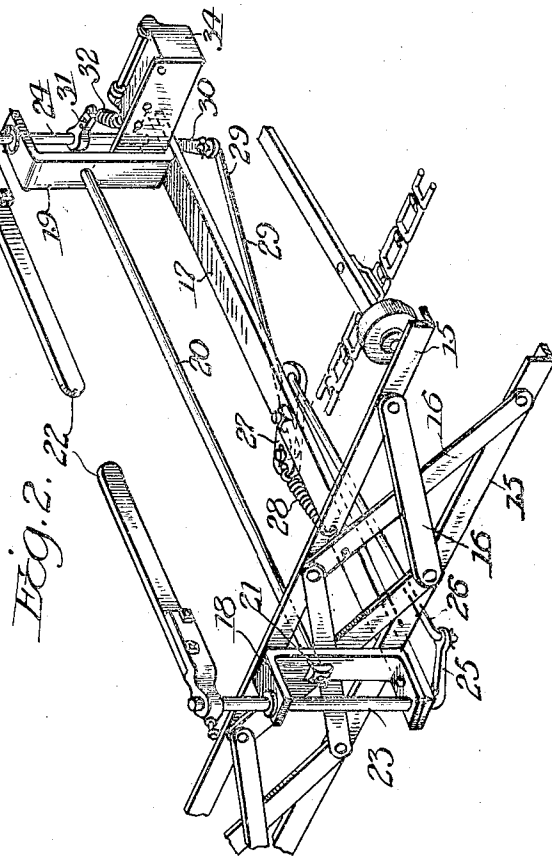
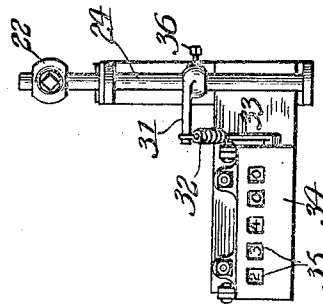


Fig. 3.



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UNITED STATES PATENT OFFICE.

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COUNTER ATTACHMENT FOR CONVEYERS OR ELEVATOR SYSTEMS.

1,333,975.

Specification of Letters Patent.

Patented Mar. 16, 1920.

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To all whom it may concern:

Be it known that I, HENRY HARRINGTON, a citizen of the United States, residing at Waukegan, in the county of Lake and State of Illinois, have invented a certain new and useful Improvement in Counter Attachments for Conveyers or Elevator Systems, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to counter attachments for conveyers or elevator systems, and has for its object the provision of a readily mountable and demountable counter attachment for systems of this kind.

A further object of my invention is to provide simple and expedient means whereby accurate counting may be had of articles which are being carried through a conveyer system, irrespective of the size of the articles which are being carried. My invention furthermore contemplates a simplification of structure for carrying out the above results.

I will describe one form which my invention may take more in detail by referring to the accompanying drawing, in which—

Figure 1 is a fragmentary side view of a conveyer system having my invention applied thereto;

Fig. 2 is a perspective view of the counter attachment, and

Fig. 3 is a side view looking toward the counter attachment from the right hand extremity of Fig. 2.

In Fig. 1, I show a conveyer or elevator having a framework 10 adjustably supporting two conveyer sections 11 and 12. These conveyer sections are provided with any suitable means such as the endless chain device 13 for conveying articles such as the bags 14 from one point to the other.

It is the object of my invention to provide means readily attachable to and detachable from the conveyer for counting the number of articles, such as the article 14, which are being moved by the conveyer.

The conveyer sections are preferably made of longitudinal stringers 15 united by cross pieces 16. My improved counter mechanism and framework consists of the bottom supporting plate 17 carrying the vertical supports 18, 19. These vertical supports are united by the bolt 20 having the nut 21.

It will be readily seen from an inspection of Fig. 2 that the bottom plates 17 rest directly against the bottom of the longitudinal strip 15 and that the bolt 20 coincides preferably with the crotch formed by the cross pieces 16, 16. In this manner the entire framework is readily supported by the conveyer framework itself. The mechanism may be very readily attached or detached by merely removing the nut 21 and swinging the arms 22, 22 outwardly, whereupon the entire mechanism falls away from its mounting place. Similarly it may be readily mounted in position. Of course, it is not absolutely necessary that the bolt 20 fit directly into the crotch formed by the cross pieces, but it is a very desirable way of holding the structure in position. Side pieces 18 and 19 support rotatable shafts 23 and 24 respectively, which shafts at their upper extremities carry the gates or arms 22. The shaft 23 has a crank 25 which is connected by means of the link 26 with a rocking lever 27. A spring 28 normally holds the cross piece 27 in the position shown in the drawing. This cross piece is further connected by means of a link 29 with the crank 30 forming an extension of the crank 24. Thus the arms 22, together with their shafts 23, 24, the cross piece 27 and the links 26 and 29 move in unison, the retractile spring 28 controlling their return to the neutral position which is the one shown in Fig. 2. The shaft 24 has an actuating arm 31, which actuating arm is connected by means of the spring 32 with the control lever 33 of the counting train 34. This counting train is provided with five wheels, certain numerals on the face thereof showing through the openings 35.

The counter mechanism may be of any desired kind or character actuable by a suitable lever such as the lever 33. The actuating arm 31 is adjustably mounted upon the shaft 24 through the agency of the set screw 36.

Now, whenever the arms 22 are actuated by the movement of the article 14, a registration is made upon the counter 34. The object of the spring 32 is to permit actuation of the counter even though the arms 22 are not moved throughout their entire angular movement for the reason that sometimes small articles are used and the arms 22 are moved but slightly from their neutral posi-

tion by the passage thereby of each article. Each passage of an article, however, must register upon the counter. Consequently, when the articles are large the registration is effected with the initial movement of the arm or arms 22, whereupon the further movement of these arms 22 merely causes an extension of the spring 32 without causing an additional registration. The device is thus arranged to count articles irrespective of their size. However, in some cases an adjustment may be needed and for this reason the operating arm 31 is adjustably mounted, as already explained. The arrangement is also such that the article which passes the counter may be in the path of one of the arms or gates 22, but as both arms move in unison the registration is effected regardless of whether the article to be counted engages both arms or gates.

By reason of the ready mountability and demountability of the device it will be apparent that it is easily reversible in position so that articles may be counted regardless of the direction of movement of said articles.

From what has been thus described it is thought the spirit of my invention will be readily apparent.

What I claim is:

1. A counter mechanism adapted to be attached to a conveyer comprising the following instrumentalities to wit, a pair of vertical supports adapted to be placed against the sides of a conveyer, shafts rotatable in said supports, arms on the upper ends of the shafts, cranks on the lower ends of the shafts, links operatively connecting the cranks, a counter and an arm on one of the shafts for operating the counter, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

2. A self-contained counter mechanism of the character described adapted for attachment to and detachment from a conveyer or elevator structure, said counter mechanism consisting of a framework, means for attaching and detaching said framework in position upon a conveyer structure, a shaft rotatable in said framework, an arm on the shaft, a counter carried by said framework and connected to the arm, and means carried by said shaft and actuable by passing articles for causing the actuation of said counter, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

3. A self-contained counter mechanism of the character described adapted for attachment to and detachment from a conveyer or elevator structure, said counter mechanism consisting of a framework, means for at-

taching and detaching said framework in position upon a conveyer structure, a shaft rotatable in said framework, a counter carried by said framework, means carried by said shaft and actuable by passing articles for causing the actuation of said counter, and a spring interposed between said shaft and said counter, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

4. A self-contained counter mechanism of the character described adapted for attachment to and detachment from a conveyer or elevator structure, said counter mechanism consisting of a framework having a bottom plate and side supports, means for attaching and detaching said framework in position upon a conveyer structure, a counter carried by said framework, shafts carried by said supports and arms on said shafts engaged by passing articles for causing the actuation of said counter, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

5. A self contained counter mechanism of the character described adapted for attachment to and detachment from a conveyer or elevator structure, said counter mechanism consisting of a framework, means for attaching and detaching said framework in position upon a conveyer structure, a counter carried by said framework, means carried by said supports and arms on said shafts engaged by passing articles for causing the actuation of said counter, and a spring interposed between said shafts and said counter, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

6. A self-contained counter mechanism of the character described consisting of a framework having a bottom plate and side supports, means for attaching and detaching said framework in position upon a conveyer structure, a counter carried by said framework, shafts carried by said supports and actuable by passing articles, an arm on one of said shafts for causing the actuation of said counter, a pair of pivotally mounted arms on said shafts operable in unison, and a retractile spring for said last named arms, the parts being so constructed that the counter will be actuated by an article traveling along the conveyer regardless of its position transversely of the conveyer.

7. A counter mechanism for conveyers comprising a framework adapted for attachment to a conveyer, a counter mounted upon said framework, a pair of oppositely disposed swinging arms carried by the said

framework and lying in the path of the
articles to be counted, and mechanism where-
by the movement of said arms is registered
upon the counter, said arms projecting to-
ward each other from opposite sides of the
framework and at right angles to the travel
of the conveyer, the parts being so con-
structed that the counter will be actuated

by an article traveling along the conveyer
regardless of its position transversely of the
conveyer. 10

In witness whereof, I hereunto subscribe
my name this 8th day of February, A. D.
1918.

HENRY HARRINGTON.