

Aug. 19, 1924.

1,505,830

L. W. WATERS  
FLEXIBLE CAN CONVEYER

Filed Feb. 9, 1923

2 Sheets-Sheet 1

Fig. 1.

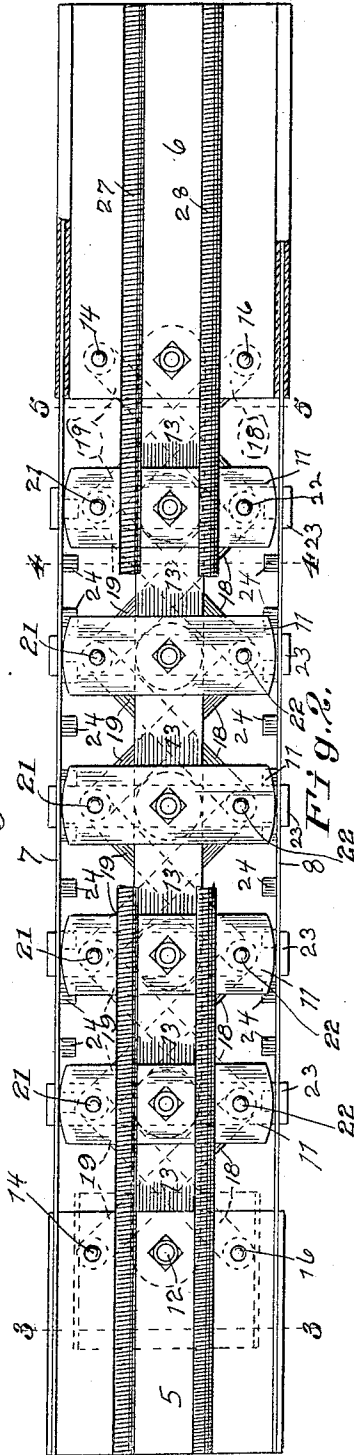


Fig. 2.

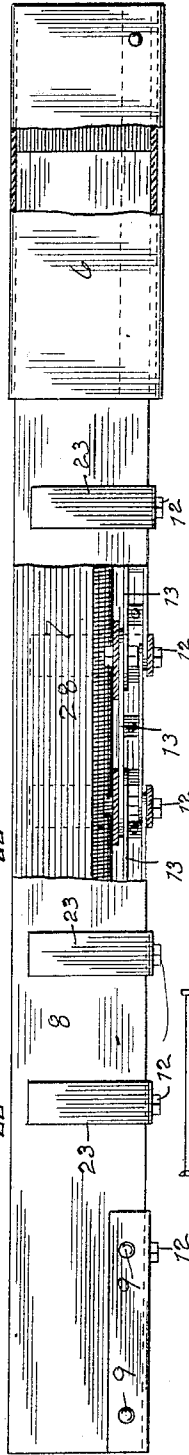


Fig. 3.

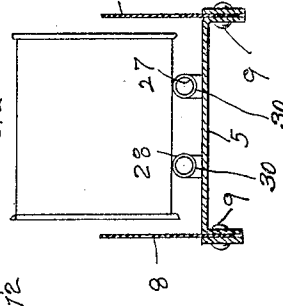


Fig. 4.

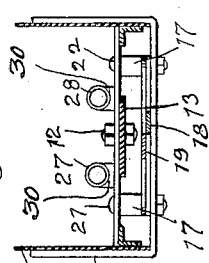


Fig. 5.

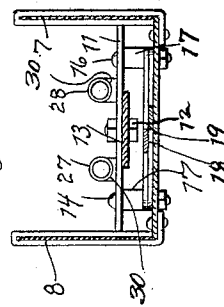
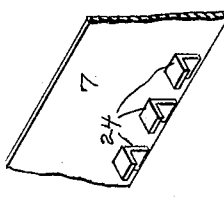


Fig. 6.



Inventor,  
Lawrence W. Waters  
By Victor J. Brans  
attorney.

Aug. 19, 1924.

1,505,830

L. W. WATERS  
FLEXIBLE CAN CONVEYER

Filed Feb. 9, 1923

2 Sheets-Sheet 2

*Fig. 7.*

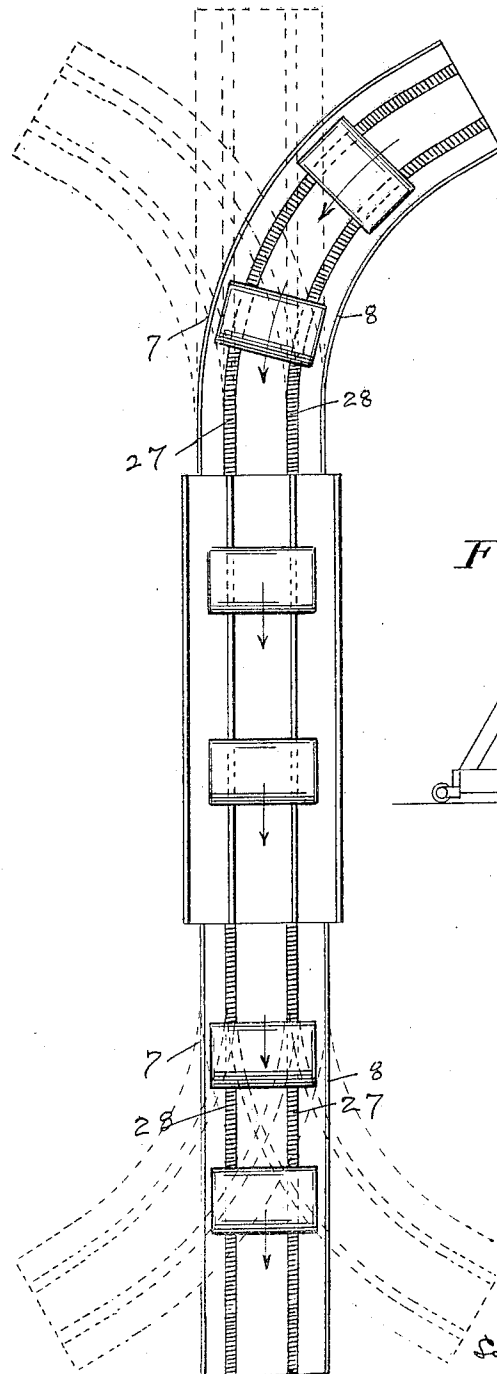
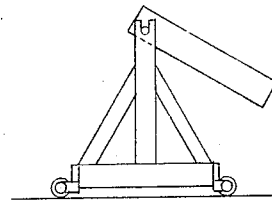


*Fig. 8.*



*Inventor.*

*Lawrence W. Waters*

*By Victor J. Evans*  
*attorney*

Patented Aug. 19, 1924.

1,505,830

# UNITED STATES PATENT OFFICE.

LAWRENCE W. WATERS, OF KINGSBURG, CALIFORNIA.

FLEXIBLE CAN CONVEYER.

Application filed February 9, 1923. Serial No. 618,079.

*To all whom it may concern:*

Be it known that I, LAWRENCE W. WATERS, a citizen of the United States, residing at Kingsburg, in the county of Fresno and State of California, have invented new and useful Improvements in Flexible Can Conveyers, of which the following is a specification.

This invention relates to improvements in flexible can conveyers and has particular reference to that type of conveyer commonly employed in canneries and the like wherein the cans are adapted to roll down the conveyer to a suitable discharge point.

The principal object of this invention is to provide a conveyer which may be flexed in order to accommodate for various conditions existing where the conveyer is to be employed.

Another object is to produce a device of this character which is simple in construction, cheap to manufacture and therefore well within the purchase price of the average user.

A still further object is to provide a device of this character which is rigid in construction and therefore will stand the hard usage incident to work of this character.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a top plan view of my device,

Figure 2 is a side elevation of Figure 1, partly broken away,

Figure 3 is a cross section of my device, showing a can rolling therein taken on the line 3—3 of Figure 1,

Figure 4 is a cross section taken on the line 4—4 of Figure 1,

Figure 5 is a cross section taken on the line 5—5 of Figure 1,

Figure 6 is a detail perspective fragmentary view of one of the side plates,

Figure 7 is a top plan view of a conveying system employing my device, and

Figure 8 is a side elevation of a truck for supporting my device.

Applicant is aware of the fact that conveyers have been employed, the object of which was to convey cans from one place to another, but as these conveyers were of a rigid construction, it has been found im-

possible to employ them in many places where room is limited as they are built only upon certain arcs, and therefore cannot be flexed to accommodate themselves to the various conditions.

I have sought to overcome this difficulty by providing a conveyer which may be bent to any desired degree, thereby allowing the same to be accommodated to local conditions.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numerals 5 and 6 refer to end members and the numerals 7 and 8 to flexible side plates. These side plates are rigidly secured to the end piece 5 as by rivets 9 (see Figs. 2 and 3).

The opposite ends of these side plates 7 and 8 are slidably secured to the end 6 as is best shown in Figures 1 and 2, thus providing for the increasing and decreasing lengths of the opposite sides as the device as a whole is bent to conform to any desired arc.

Equally spaced between these side plates are plates as indicated by the numeral 11. These plates are each provided with a pivoted bolt 12 centrally positioned therein and are spaced one from the other as by longitudinal spacers 13. It is to be understood that these spacers have their opposite ends mounted upon bolts 12. Positioned beneath and spaced from the structure thus far described, is positioned a series of cross links. As these links between each one of the spacers is exactly alike, but one set will be described.

By referring to Figures 1 and 5, it will be noted that bolts 14 and 16 pierce the end piece 6 and serve to mount tubular spacers 17 thereon. Pivoted to each one of these bolts is a link as shown at 18 and 19. These links have their opposite ends secured to bolts 21 and 22, which bolts pierce the cross piece 11 as best shown in Figure 4.

The tubular spacers 17 are likewise placed upon these bolts 21 and 22, as are also the ends of the next succeeding links.

A U-shaped frame 23 is also secured to the bolts 21 and 22. By referring to Figures 1 and 6, it will be noted that the side plates 7 and 8 are provided with angle iron pieces 24, the purpose of which is to contact the under side of the plates 11 thereby preventing withdrawal of the side pieces from their proper position as best shown in Figures 1 and 4.

At 27 and 28 I have shown coiled springs

which serve as tracks over which the cans are adapted to roll. These coiled springs are attached to each plate by connectors 30 as shown in Figures 4 and 5.

5 The operation of my device is as follows:—

Assuming that the parts are arranged as shown in Figure 1, it will be apparent that by grasping the end 6 that the same  
10 may be flexed as shown in full or dotted lines in Figure 7, and that providing a suitable roller support similar to that shown in Figure 8, that the same may be easily moved from place to place as conditions require.  
15 As the side toward the outside of the circle increases, the side plate, for instance, 7 will be withdrawn from its position in the end 6 so as to assume a greater length and at the same time the cross links 18 and 19 will  
20 function to cause each of the plates to move upon a given arc so that the bolts 12 will all lie within a given arc. As the side changes its position with respect to the plates 11 it will be found that the angle  
25 iron pieces 24 will slide beneath the plates and thereby prevent mis-alignment or withdrawal of the sides, and at the same time the tracks, due to the fact that they are made of springs will accommodate themselves to  
30 the changes set forth.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape,  
35 size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I  
40 claim:—

1. In a device of the character described, a substantially U-shaped end piece, flexible side pieces rigidly attached to said end piece, and extending in parallel alignment  
45 therefrom, plates spaced between said side pieces and spaced from said end piece and from each other, a second end piece adapted to telescope the free ends of said side pieces

and flexible means connecting said end pieces and said spaced plates. 50

2. In a device of the character described, a substantially U-shaped end piece, flexible side pieces rigidly secured to said end piece, a second end piece slidably attached to said flexible side pieces, plates interposed between said end pieces and spaced from each other, pivoted cross pieces interposed between each of said plates and additional pivoted cross pieces secured to each of said end pieces and the adjacent plates and flexible tracks secured to said end pieces and said plates. 55 60

3. In a device of the character described, a substantially U-shaped end piece, flexible side plates secured to said end piece, a plurality of plates spaced from said end piece, cross links pivoted to each of said plates and to the next adjacent plate, cross links pivoted to said end piece and the adjacent plate, U-shaped members positioned beneath said cross pieces and having their arms extending parallel with said side pieces and angle members secured to said side plates and adapted to pass beneath said plates, substantially as and for the purpose specified. 65 70 75

4. In a device of the character described, a substantially U-shaped end piece, flexible side plates secured to said end piece, a plurality of plates spaced from said end piece, cross links pivoted to each of said plates and to the next adjacent plate, cross links pivoted to said end piece and the adjacent plate, U-shaped members positioned beneath said cross pieces and having their arms extending parallel with said side pieces and angle members secured to said side pieces and adapted to pass beneath said plates, a second end piece slidably engaging the free ends of said side plates, flexible tracks mounted on and extending throughout the length of said device and longitudinal spacers pivoted to each adjacent plate and to said end pieces. 80 85 90

In testimony whereof I affix my signature.

LAWRENCE W. WATERS.