

Dec. 24, 1929.

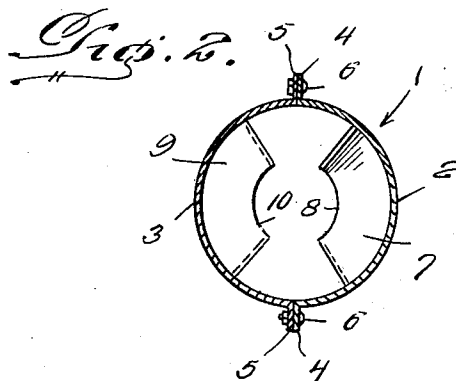
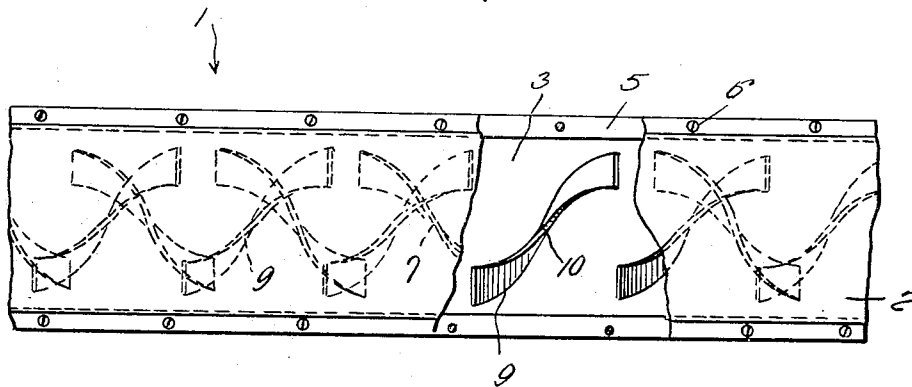
E. P. HARRINGTON

1,741,019

ROTARY CONVEYER

Filed April 20, 1928

Fig. 1.



Inventor
Earl P. Harrington,

By *Clarence A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

EARL P. HARRINGTON, OF YOUNGSTOWN, OHIO

ROTARY CONVEYER

Application filed April 20, 1928. Serial No. 271,526.

The present invention relates to improvements in conveyers and has reference more particularly to a rotary conveyer wherein the same includes a hollow member having impeller blades arranged in a predetermined manner within the hollow member whereby to feed the material placed in the conveyer forwardly toward the discharge end of said conveyer by the combined crowding action at one point of the revolution of the rotary hollow member together with the gravitating action as the material slides downwardly and forwardly on the blade.

A further object of the invention is to provide a rotary conveyer of the above mentioned character which will at all times be positive and efficient in its operation, and which is furthermore simple in construction, inexpensive, strong and durable and further well adapted to the purpose for which it is designed.

Other objects and advantages of the invention will become apparent from the following description when taken in connection with the accompanying drawing.

In the accompanying drawing wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a fragmentary side elevation of the rotary conveyer embodying my invention, a portion of one of the semi-cylindrical sections of the casing being broken away to show one of the impeller blades, and

Figure 2 is a cross sectional view through the conveyer.

In the drawings wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates generally the hollow casing of the conveyer which may be of any desired length, the same including the complementary semi-cylindrical sections 2 and 3, respectively, which are formed at their free edges with laterally disposed flanges 4 and 5, respectively. Suitable bolts 6 extend through the adjacent flanges for securing the semi-cylindrical sections together whereby a substantially circular casing in cross section is formed.

It is to be understood however that I do

not wish to limit myself to the particular cross sectional shape of the casing.

A series of arcuate shaped impeller blades 7 are arranged diagonally on the inner face of the semi-cylindrical section 2, said blades being disposed in parallel spaced relation with respect to each other and the blades may be secured to the section 2 in any appropriate manner. As shown more clearly in Figure 2 the inner edge of these blades 7 are cut out as at 8 and the ends of each blade terminate inwardly of the respective edges of the section 2.

As is clearly illustrated in Figure 1 each of the blades 7 is twisted at its center. The pitch of the impeller blades will be uniform from all points of contact with the casing on a radial line from the axis, and the radial line will be at right angles with the axis at all times.

A similar series of blades 9 are arranged on the inner face of the complementary semi-cylindrical section 3, but these blades 9 are arranged in the opposite directions to the diagonally disposed blades 7 whereby to form what may be termed as a spiral conveyer structure within the casing. The inner edge of each blade 9 is also cut out as shown at 10 in Figure 2, and the adjacent pairs of blades cooperate in such a manner so that when the casing 1 is rotated in any appropriate manner, the material that is to be conveyed therethrough will be constantly moved forwardly toward the discharge end of the casing by the combined crowding action at one point of the revolution, together with the gravitating action as the material slides downwardly and forwardly on the blades. The blades are to be spaced in such a manner so that where one action stops the other begins.

It will thus be seen from the foregoing description that I have provided a rotary conveyer which will at all times be positive and efficient in its operation, and due to its simplicity, the parts can be readily and easily assembled or disassembled.

While I have shown the preferred embodiment of my invention, it is to be understood that minor changes in the size, shape and

arrangement of parts may be resorted to without departing from the spirit of the invention, or the scope of the appended claim.

Having thus described the invention, what I claim as new and desire by Letters Patent is:—

In a conveyer, an elongated sectional casing including a pair of semi-cylindrical sections secured together at their adjacent edges, a series of impeller blades arranged on the inner face of one section in spaced relation with respect to each other, and an additional series of impeller blades arranged on the inner face of the other sections directly opposite the respective blades of the first mentioned section, each of said blades being of arcuate shape and twisted at its central portion, the ends of each blade terminating inwardly of the adjacent edges of the respective sections, said blades being disposed diagonally with the blades of one section arranged in the opposite direction to the blades carried by the other section, the inner edge of each blade being formed with a cut-out portion, all of said blades being adapted to cooperate with one another to form a spiral conveyer.

In testimony whereof I affix my signature.

EARL P. HARRINGTON.

30

35

40

45

50

55

60

65