No. 673,151. Patented Apr. 30, 1901.

D. ARÁMBURU.

CABLE CONVEYER.

(Application filed June 28, 1900.)

(No Model.)

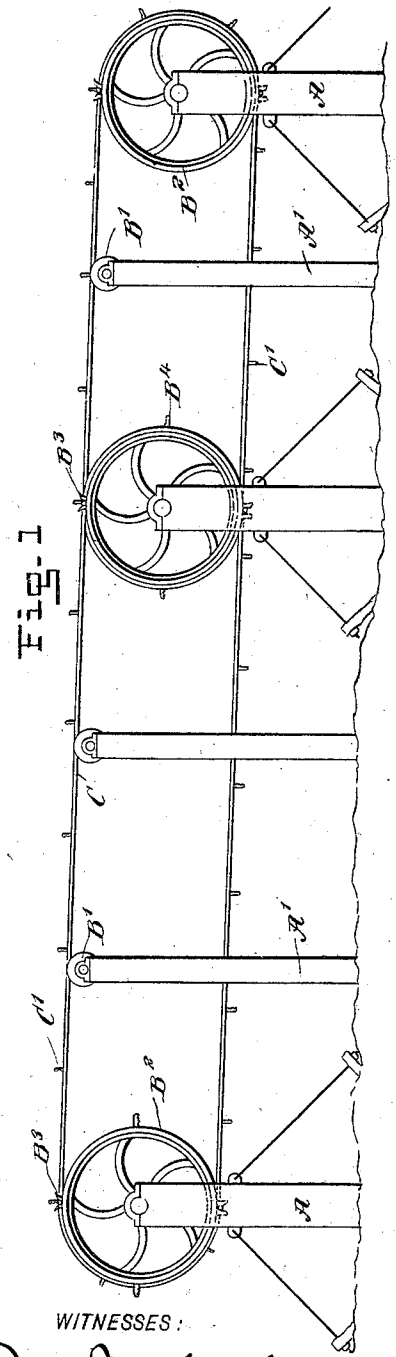


Fig. 1.

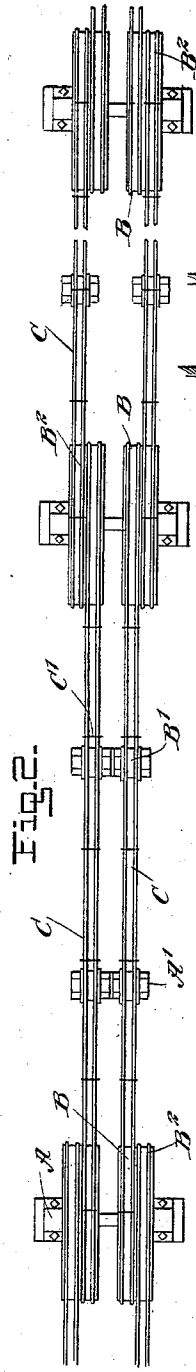


Fig. 2.

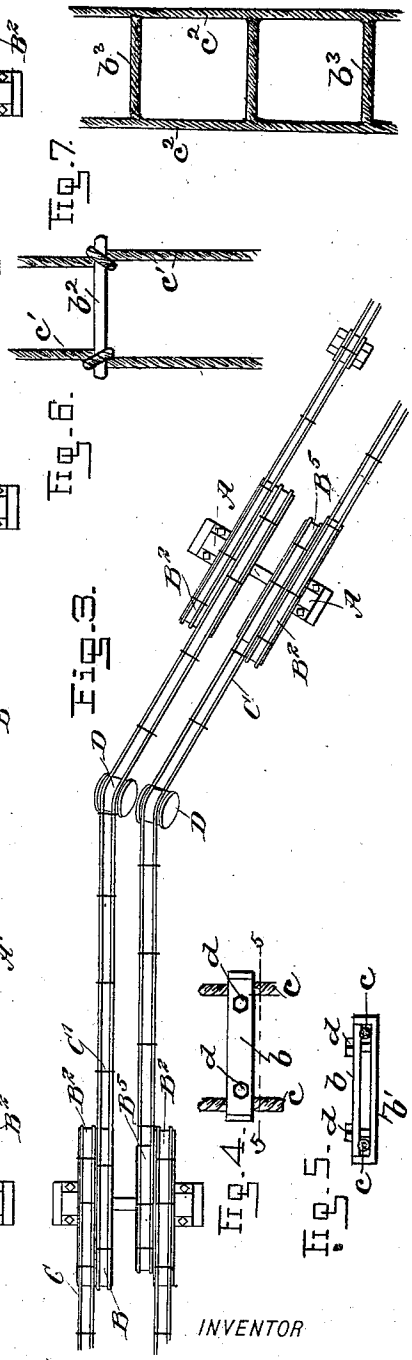


Fig. 3.

Fig. 6.

Fig. 7.

Fig. 4.

Fig. 5.

WITNESSES:

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CABLE CONVEYER.

SPECIFICATION forming part of Letters Patent No. 673,151, dated April 30, 1901.

Application filed June 28, 1900. Serial No. 21,867. (No model.)

To all whom it may concern:

Be it known that I, DOMINGO ARÁMBURU, a citizen of the Republic of Mexico, and a resident of the city of Mexico, Mexico, have invented new and useful Improvements in Cable Conveyers, of which the following is a full, clear, and exact description.

My invention relates to conveyers for various classes of goods, and has for its object to provide a comparatively simple mechanism for transporting loads, which will be easily driven and will take up little space.

To this end my invention consists in certain constructions and arrangements of parts, as will be fully described hereinafter and particularly pointed out in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a portion of my improved conveyer. Fig. 2 is a plan thereof. Fig. 3 is a plan showing the arrangement of the conveyer at bends. Fig. 4 is a detail plan of a portion of the conveyer-cable. Fig. 5 is a vertical section taken on line 5 5 of Fig. 4, and Figs. 6 and 7 are plans of two other forms of the conveyer-cable.

As shown in Fig. 1, the conveyer is generally inclined lengthwise, so that when weighted by goods it may travel by gravity alone without the use of a motor, and the agency of the driving device will be required only when the goods are to be carried toward the upper end of the conveyer. Posts A′, erected at suitable intervals, are provided with rollers B′, which guide and support the upper run of the conveyer-cables C. It will be observed that there are two of these cables, arranged side by side, with a suitable space intervening between them, and each cable is double, being composed of two parallel members or strands connected at intervals by cross-bars C′. In the example shown in Figs. 1 to 3 these cross-bars project outward to form stops adapted to engage and hold the load. The cables C may be made of wire or other suitable material. The cables pass around double pulleys, each having an inner and an outer cable-receiving portion B and B^2, respectively. These pulleys are carried by posts A. Instead of having a continuous cable or set of cables from the point of feed to the place of delivery I provide a succession of such cables, and the distance between the two cables of each set varies in adjacent sets, as shown in Figs. 2 and 3, the cables C of one set engaging the inner pulley portions B, while the cables of the adjacent sets engage the outer pulley portions B^2. The pulleys may have only a frictional engagement with the cables, or the pulleys may be provided with devices, such as sockets B^3, for receiving the slats or cross-bars C′. The pulleys may also have projections B^4 to assist in conveying the load. At the ends of the conveyer double pulleys are not required. Similarly at bends the cables C will be guided by single pulleys D, disposed obliquely, as shown in Fig. 3. In this case the pulley portions B^5 for the inner cable of the set will be smaller than those for the outer cable to make the inner cable travel at a lower rate of speed.

To drive the cables when motive power is required and to check the speed in case the goods are allowed to travel by gravity, I provide any suitable motor and governor.

It will be observed that in the construction shown in Figs. 1 to 3 the adjacent ends of neighboring sets of cables overlap somewhat or run side by side for a short distance, which arrangement insures an easy and certain passage of the load from one set of cables to the other. This is of particular advantage when the load consists of a large number of relatively small parts, as boxes, requiring to be guided and held at points which are comparatively close together.

The double cables may be of any suitable construction. The details of three different forms are shown in Figs. 4 to 7. In Figs. 4 and 5 the two longitudinal members *c* are wire cables, and the cross bars or rungs consist of two members *b b′*, engaging the cables from above and below, the lower member *b′* being U-shaped, and the two members are connected by screw-bolts *d*. In Fig. 6 the wire cables *c′* are wound and tied at intervals around the cross-rods b^2. In Fig. 7 the wire cables c^2 are connected by cross members b^3, made of the same material.

The juxtaposition of the cables of neighboring conveyer-sections is of double advantage in that it first insures a certain feed or transfer from one conveyer-section to the other, as explained, and, second, as the cables of adjacent sections are differently spaced a broader support is afforded for the articles conveyed while such articles are on some of the sections, and thus I counteract any tendency to swaying that might exist if the supporting-base remained of the same width throughout the whole length of the conveyer. The necessity for making the pulley portions B^5 smaller on curves, Fig. 3, than the pulley portions for the companion cable will be obvious upon considering that the cable on the inside of the curve is necessarily shorter than the one on the outside and that the two pulleys receiving companion cables are on the same shaft, and therefore have the same angular speed. The difference in diameter, however, is in practice small enough to allow the upward projections of the cross-bars C′ to remain in engagement with the load to be conveyed.

It will be understood that when arranged upon an incline, as it generally will be, my improved conveyer can be driven by a motor in one direction and in the other direction by the mere weight of the material conveyed.

The sectional construction of the conveyer renders repairs comparatively easy.

I desire it to be understood that various modifications may be made in details without departing from the spirit of my invention as set forth in the appended claim.

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

A conveyer consisting of a series of sections arranged to receive the material successively, each section comprising two endless cables extending side by side and arranged to move with the load, the distance between companion cables being alternately greater and smaller in neighboring conveyer-sections, so that wide conveyer-sections alternate with narrow conveyer-sections, both ends of the cable-runs of a wider section being located side by side with and exteriorly of the ends of the cable-runs of the adjacent narrower sections so as to embrace said ends between them, and pulleys engaged by said cables.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DOMINGO ARÁMBURU.

Witnesses:

JULIAN SIERRA Y OUTIVEROS,

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