(No Model.)

T. McBRIDE & E. FISHER.

EXPANSIBLE WHEEL FOR ENDLESS CARRIERS, &c.

No. 412,527. Patented Oct. 8, 1889.

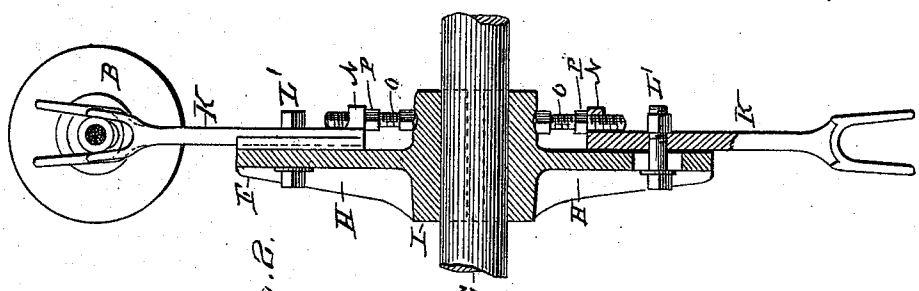


Fig. 2.

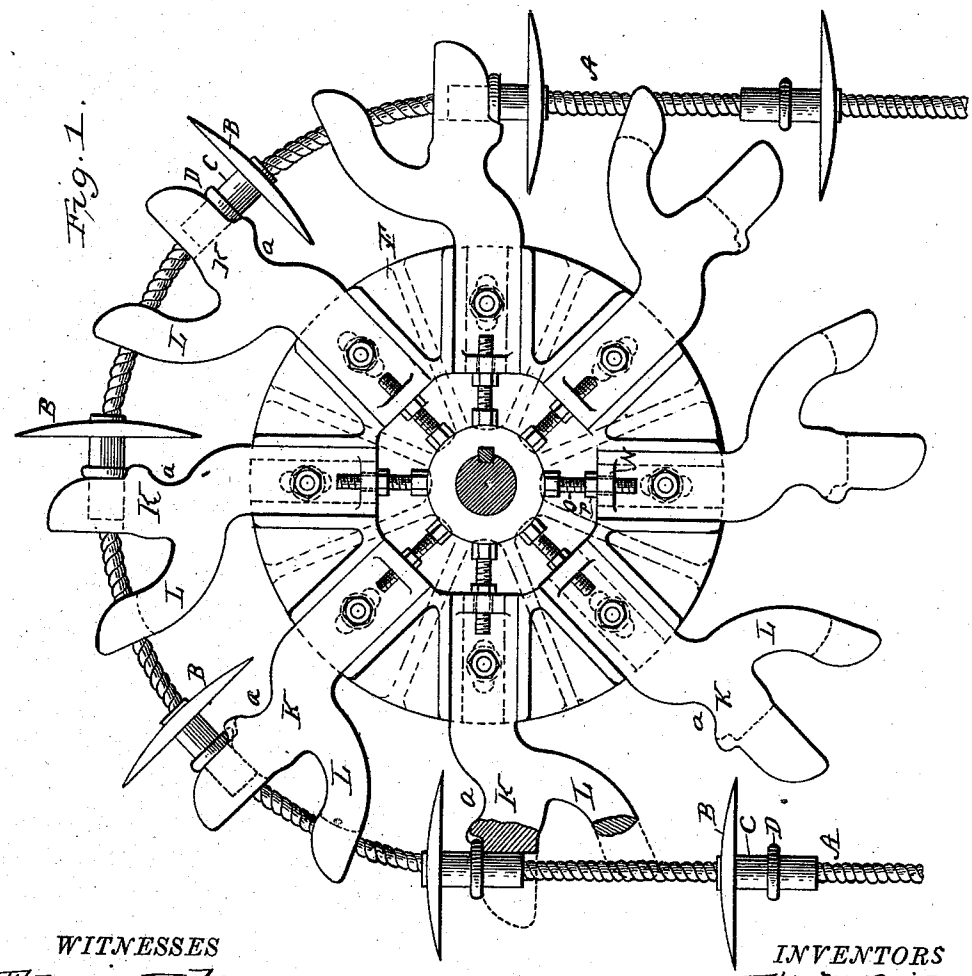


Fig. 1.

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UNITED STATES PATENT OFFICE.

THOMAS McBRIDE, OF PHILADELPHIA, PENNSYLVANIA, AND EBENEZER FISHER, OF KINCARDINE, ONTARIO, CANADA.

EXPANSIBLE WHEEL FOR ENDLESS CARRIERS, &c.

SPECIFICATION forming part of Letters Patent No. 412,527, dated October 8, 1889.

Original application filed March 5, 1888, Serial No. 266,166. Divided and this application filed July 23, 1888. Renewed August 29, 1889. Serial No. 322,302. (No model.)

To all whom it may concern:

Be it known that we, THOMAS MCBRIDE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, and EBENEZER FISHER, a subject of the Queen of Great Britain, and a resident of Kincardine, in the county of Ontario and Dominion of Canada, have invented a new and useful Improvement in Expansible Wheels for Endless Carriers or Conveyers, of which the following, taken in connection with the accompanying drawings, is a specification.

Our invention relates to improvements in expansible wheels used for conveyers and appertains more particularly to that class known as "endless belt or chain conveyers."

The present application is a division of an application filed by us March 5, 1888, Serial No. 266,166.

The object of our invention is to provide a drive-wheel having adjustable arms for engaging the hubs of the conveying-disks, whereby the endless cable or rope which carries the conveying-disks can be tightened or loosened as occasion may require, and also to provide supplemental arms to sustain the rope at points between the carrying-disks, so as to keep the rope in circular form at all times while it is passing around said wheel, and thus prevent the same from being bent or broken in its numerous and continuous passages around said wheel.

Referring to the drawings, Figure 1 is a side view of the driving-wheel and a portion of the endless conveying-cable. Fig. 2 is a sectional view.

A indicates an endless rope or cable made of wire or other suitable material, on which are mounted the conveying-disks B, said disks being firmly secured to the sleeves C in any suitable manner. The sleeves C are provided with a ring or annular projection D near their central portions, with which the bifurcated arms of the driving-wheel engage and by which the endless rope is caused to travel.

The endless rope, together with the disks and sleeves, is particularly described in the application above referred to, and need not be further described in this application.

F indicates the driving-wheel, which is mounted on the shaft G and driven from any suitable source of power. The driving-wheel F is composed of an annular disk H and a central hub I to receive the shaft G, the outer portion of the disk H being provided with grooves or seats to receive the inner ends of the arms K. The arms K are held in position on the annular disk H by means of screw-bolts L', which pass through the inner ends of the arms and through slots formed in the disk H. The extreme inner ends of the arms K are provided with an extension N, through which the screw-bolts O are passed, the heads of the bolts being designed to rest on the hub I, the nuts P on the bolts O serving to adjust the arms farther from or toward the axis of the driving-wheel. The outer ends of the arms K are bifurcated, so as to engage with the projections or ribs D on the sleeves C, so as to move the cable with its load. The front edges of the outer ends of the arms K are bent or curved, as shown at *a*, so as to allow the carrying-disks B to pass around the wheel and accommodate them to the curvature of the cable without coming in contact with the arms K. The arms K are provided with projecting branches L, which are also bifurcated to engage the cable A between the disks B, the office or function of which is to cause the cable to assume a circular form in passing around the wheel, and thus prevent the rope or cable from wearing or being broken by frequent bendings at the ends of the sleeves. It will be noticed that the arms K are both removable and adjustable, so that in case one or more of them should become worn out or broken new ones can be readily inserted in their place; and the object of making them adjustable is to increase the diameter of the wheel to compensate for the elongation of the cable, whether it occurs from use or from expansion caused by thermal changes; and in case the cable should contract by sudden change of temperature the arms can be readily adjusted, so as to insure the perfect working of the cable. It will of course be understood that the endless cable, with the disks, passes through a suitable

conveying trough or tube, into which the material to be conveyed is deposited, and that, owing to its peculiar construction, the material can be readily conveyed at an angle or in a vertical or horizontal direction.

Having thus described our invention, what we claim is—

A wheel for endless conveyers having adjustable bifurcated arms, said arms being provided with bifurcated extensions to support the cable between the carrying-disks as it passes around said wheel, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

THOMAS McBRIDE.
EBENEZER FISHER.

Witnesses:
L. W. SINSABAUGH,
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