Sept. 17, 1929. J. E. JENNINGS 1,728,611

AERIAL TRAMWAY

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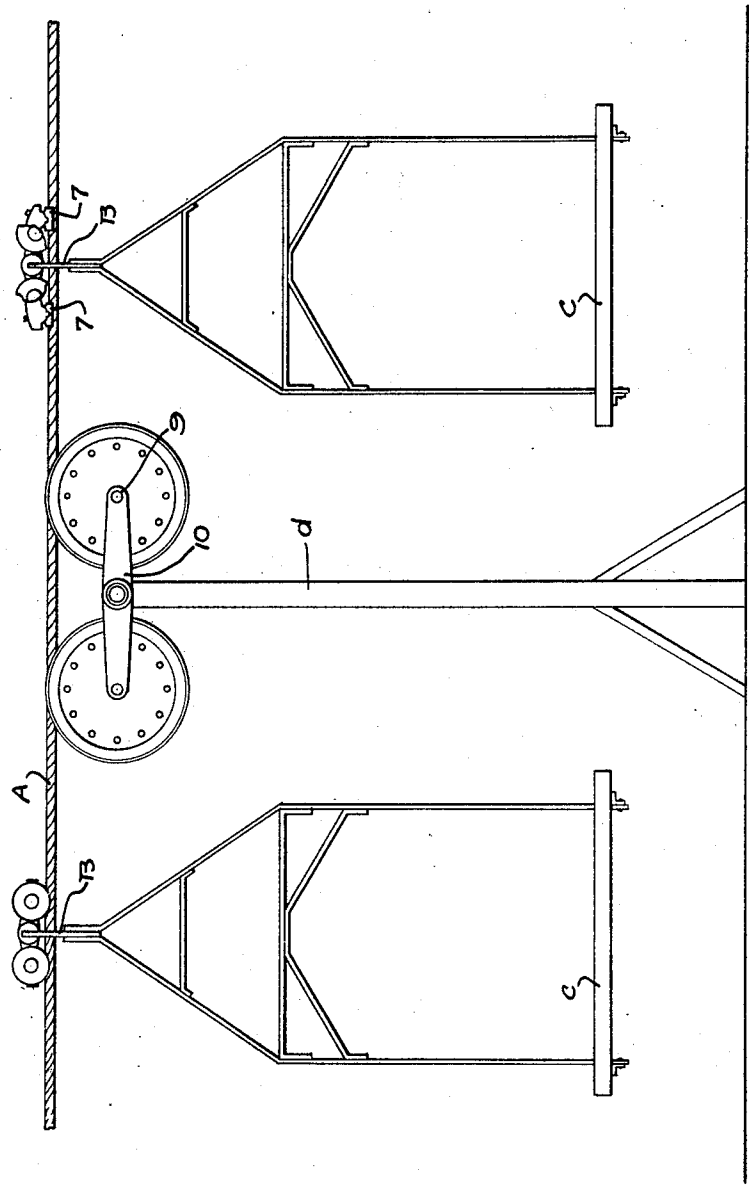


Fig. 1

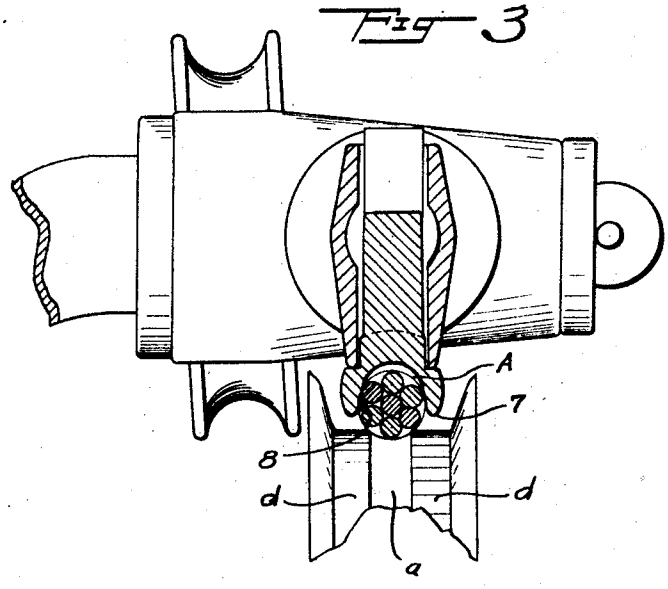
INVENTOR:
John Edward Jennings,
BY
His ATTORNEY.

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Fig 3



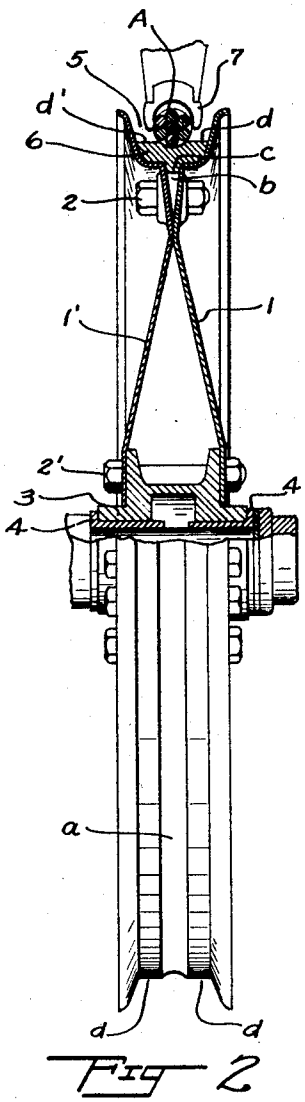


Fig 2

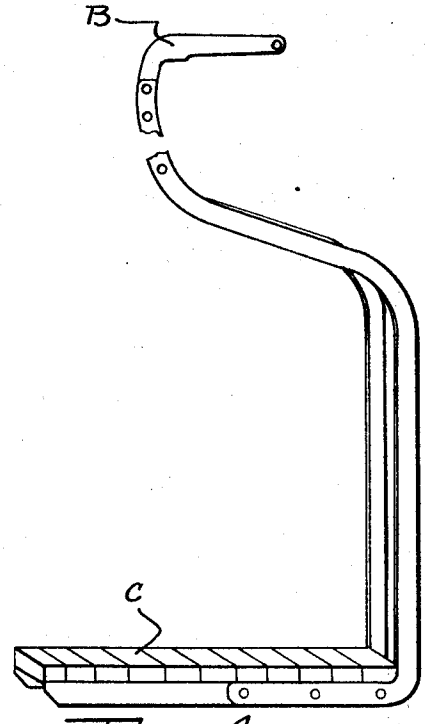


Fig 4

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Patented Sept. 17, 1929 1,728,611

UNITED STATES PATENT OFFICE

JOHN EDWARD JENNINGS, OF NEW YORK, N. Y.

AERIAL TRAMWAY

Application filed June 7, 1927. Serial No. 197,187.

This invention relates to aerial tramways intended for transporting materials in regions where other forms of transportation are either too expensive or impractical and has for its principal objects the provision of an improved sheave or idler wheel for supporting the cable in order to minimize the expense of upkeep thereof, as well as to facilitate the repair of the tread of such wheels.

In the accompanying drawings in which I have illustrated a preferred embodiment of my invention

Figure 1 is an elevation partially broken away of portions of an aerial tramway embodying my invention as a part thereof;

Fig. 2 is a central vertical section partially in elevation of a sheave or idler wheel employed in said tramway construction;

Fig. 3 is an enlarged detail elevation partially in section showing a fragment of said sheave and a section of the cable with the carrier arm attached thereto; and

Fig. 4 is an elevation of the carriage or plate member which is supported from said cable by clip members.

Referring to the drawings and the construction shown therein, the reference numerals 1, 1′ represent opposing converging metal discs which are bolted together by an outer series of bolts 2 and an inner series of bolts 2′, the latter serving to rigidly secure said discs to a hub member 3 which latter is provided with bushings 4. The outer ends of said discs are each flared outwardly so that when the discs are assembled as shown in Fig. 2, the same will form a rim and provide an annular recess 5 in which is positioned a replaceable tread member 6 which has a peripheral central groove *a*. As shown, the discs 1, 1′ are held in their proper spaced relation by said bolts to form a recess *b* of V-shaped cross section so as to admit of the projection thereinto of the depending rib *c* formed on the bottom of said tread member whereby the latter is accurately positioned in the recess 5 of the rim.

The peripheral groove *a* of the tread member is adapted to receive a stranded cable A and the said groove is of such a depth that the upper faces *d*, *d*′ of said tread will at no time engage or strike the lower ends of a clip member 7 which latter is adapted to snugly embrace the cable and to be held against lateral movement by means of a lug or tooth 8 which is adapted to project between the strands of said cable in the well known manner. An arm B is secured in the manner customary in this art to said clip and the latter serves to carry a platform of carriage C which latter is arranged so that its load will exert a vertical pull or thrust on said cable as distinguished from a sidewise thrust and thereby any tendency for the clip to be jerked or forced off of said cable is avoided.

The said disc wheels, comprising the sheaves or idlers, are mounted on journals 9 which are carried by cross arms 10 of towers *d*.

As shown, the central channel or groove in the tread terminates on each side a considerable distance from the upper lateral edges of the tread thereby eliminating any possibility of the clip member 7 striking against the tread until such time as the wearing surface of the channel becomes so worn as to require replacement of the tread, in other words, the channel terminates at points on each side thereof intermediate the central vertical plane extending through the tread and the top lateral edges of said tread.

Among the advantages possessed by my improved sectional disc wheel, when employed in aerial tramways, may be mentioned the fact that they completely obviate the necessity of turning down the rims when the cable receiving groove, such as the groove *a*, has been worn so deep that there is a tendency for the bottom edges of the carrier clip, such as 7, to strike the rims of the tread, such as *d*, *d*′ adjacent the groove. In the type of sheave now commonly used, it is found that after two or three or such turnings the entire sheave has to be thrown out and replaced and obviously if the wheel, such as my improved wheel, can be provided wherein the tread can be readily removed and replaced either after one or two turnings, or even without turning the same down at all, when the groove gets too deep,

due to the wear of the cable thereon to prevent contact between the bottom of the clip and the rims of the tread, the expense of discarding the entire wheel is avoided. Furthermore, in the present sheaves, which are formed of annealed cast steel, the manufacturing operations are slow and correspondingly expensive. In my construction, on the other hand, the thin discs can be formed of stampings and the hub can be formed of cast iron and provided with a Monel metal or bronze or like bushing and only the tread is formed of annealed or hardened steel. Another advantage of my removable tread sheave is the fact that the treads can be made so thin that they can be discarded as soon as the central groove thereof has become seriously worn instead of turning down the rims adjacent said grooves in order to permit of continued use, as thereby it is possible, at relatively small expense, to maintain the diameter of one sheave identical with that of another which is mounted adjacent thereto on the same support, such for example as in the manner that the two sheaves shown in Fig. 1 are mounted.

While I prefer to produce the discs of the sheaves employed in my sectional disc wheel by a stamping operation, nevertheless, they can be cast, if desired, likewise, it is obvious that various changes in the contour and detail of construction of the sheaves within the scope of the appended claims can be made without departing from the spirit of my invention

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. A sheave for aerial tramways, comprising a sectional, disc wheel having a hub member and two opposing sheet metal discs secured at their inner ends to said hub member and at their outer ends directly to each other and having a removable tread secured between said discs adjacent the outer rims thereof, the latter having a central peripheral groove adapted to receive a cable, said groove terminating at points distant from the lateral top edges of said tread.

2. A sheave for aerial tramways formed of two discs, a hub bolted thereto, said discs each flaring outwardly at their outer peripheries to form a tread receiving rim and a removable tread of wear resisting material mounted on said rim, said tread having a central peripheral groove adapted to receive a cable, said groove terminating at points distant from the lateral top edges of said tread.

3. In a sheave for aerial tramways, the combination comprising a plurality of opposing pressed discs, a hub member interposed therebetween and secured thereto, a bushing mounted in said hub member, a rim formed by the periphery of said discs and a removable centrally channelled tread fitted in said rim, said tread being adapted to receive a cable of a tramway and having relatively flat rims extending from the upper lateral edges thereof to points immediately adjacent the central channel portion thereof.

Signed at New York, in the county and State of New York, this 4th day of June 1927.

JOHN EDWARD JENNINGS.