April 1, 1924. 1,488,651

J. SCHUMACHER, SR

TROLLEY SYSTEM

Filed March 27, 1922

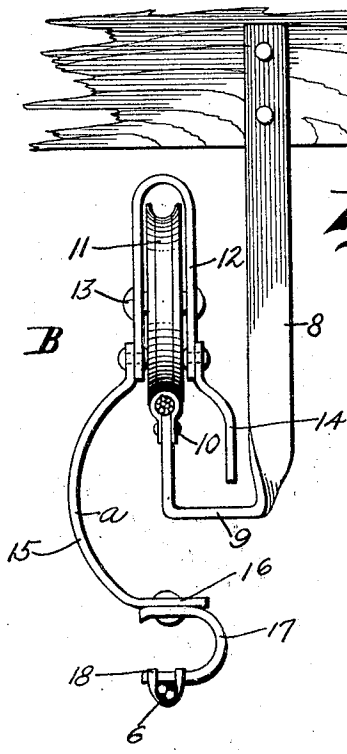


Fig. 3

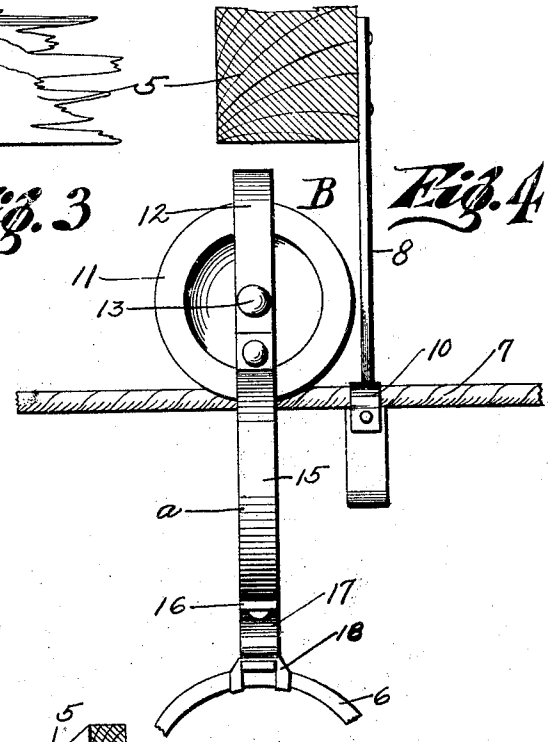


Fig. 4

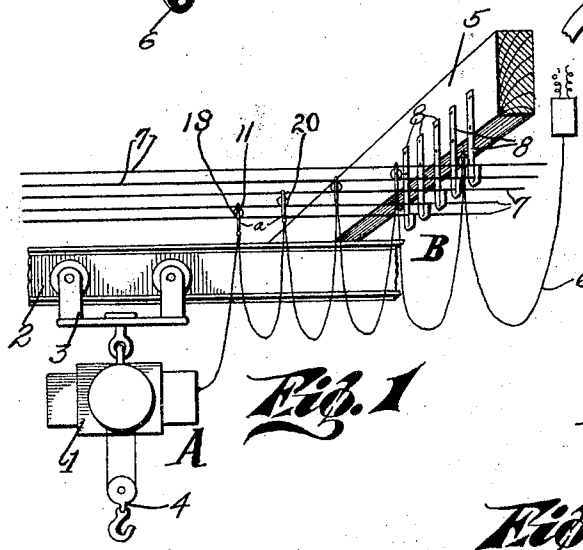


Fig. 1

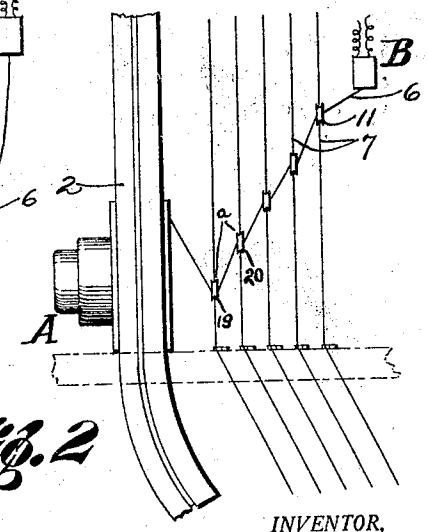


Fig. 2

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UNITED STATES PATENT OFFICE.

JOHN SCHUMACHER, SR., OF LOS ANGELES, CALIFORNIA.

TROLLEY SYSTEM.

Application filed March 27, 1922. Serial No. 547,230.

To all whom it may concern:

Be it known that I, JOHN SCHUMACHER, Sr., a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Trolley Systems, of which the following is a specification.

This invention relates to conveyer systems, and particularly to means of carrying cable members which conduct electricity to the motor associated with the conveyer. It is oftentimes necessary in the use of what may be termed overhead conveyers, to either provide a trolley system or some form of cable for conducting electricity to the motor connected with the conveyer. Overhead conveyers are used in factories for lifting objects to be conducted from place to place in the factory, and it so happens that if a cable is used the distance that the conveyer can move is restricted, owing to the cable kinking or reaching to the floor, thus endangering the operator of the conveyer or other persons thereabout.

In the present invention I provide a length of cable which has independent points of support and which cable connects with the motor of an overhead conveyer and with a source of current supply. The cable may be of any length and the means for carrying the cable automatically adjusts itself relative to the position of the overhead conveyer. The cable being conveniently carried does not move or kink, and is so supported that it will not reach the floor to endanger the operator of the conveyer. It is an object of the present invention to provide a system for cables for overhead conveyers which will automatically adjust itself to the position of the conveyer and which will not kink, which is simple to install, inexpensive of construction and extremely useful for the purpose intended.

With the above mentioned and other objects in view, the invention consists in the novel and useful provision, formation, construction and inter-relation of the various parts, members and features of the improved system, which is more fully disclosed in the accompanying drawing, described in the following statement and finally pointed out in claims.

In the drawing:

Figure 1 is a fragmentary perspective view of a conveyer and the overhead cable system associated therewith;

Figure 2 is a fragmentary top plan view of the showing in Figure 1; and

Figures 3 and 4 are fragmentary views of means for holding the cable and for guiding the cable in its movement responsive to movement of the overhead conveyer.

Corresponding parts in all the figures are designated by the same reference characters.

In particular A designates in its entirety and in one embodiment the overhead conveyer, and B the cable system. The overhead conveyer may include the usual carriage member 1 adapted to ride upon a track 2, said conveyer A being supported by means of a carriage 3 associated with the track 2. Some form of motor is connected with the carriage 1 to raise and lower a lifting hoist 4. It is customary in factories to fasten the track 2 to the beams 5 in a building, and to use some form of trolley system for conducting current to the motor element of the conveyer A. In the construction shown, however, a long cable or line 6 is provided, one end of which is connected to the motive element of the conveyer A, while the opposite end of said cable may connect with a source of electrical current. If one long cable were connected to the conveyer A, it is obvious that the cable would rest on the floor or ground, as the case may be, unless the conveyer were at the extreme limit of its movement, which is to say, the extreme limit of the stretch of the cable. To overcome this objection I provide a plurality of track-ways or cables 7 ranging in spaced parallel relation to each other, as shown in Figure 2, the said cables 7 being near the track-way 2. Suitable bracket members 8 are carried by the beams, as shown in Figure 1, with ends of said brackets supporting or carrying the cable 7. In particular the brackets 8 have a leg thereof fastened to the beam, while a second portion is spacedly returned and twisted as shown at 9, with an end thereof carrying a clamp 10 holding the cables 7. As shown in Figure 1 a plurality of the brackets are provided, one for each cable member 7. Obviously any number of brackets may be provided, depending upon the length of the cable 6. Sheave members or wheels 11 are adapted to ride on said cables 7, one sheave or wheel for each cable, and a suitable carriage member *a* is joined with each wheel.

In particular the carriage *a* includes a U-shaped strap member 12 with a pintle 13 passing through the legs of said U-shaped member and holding the wheel member 11 within the U-shaped member. The U-shaped member likewise carries a guard 14 attached to one leg thereof and a curved strap member 15 attached to the other leg; said curved member 15 being provided with a flattened extremity 16 to which is swivelly connected a member 17, which in turn is provided with a supporting strap 18 adapted to confine and hold reaches of the cable 6. Quite obviously a turn can easily be made by the system shown, and the wheels 11 would ride over the clamps 10, and the guard 14 would prevent the wheels from being displaced from the cable, or if the wheels should accidentally jump the cable, the guard plus the member 15 would hold the carriage *a* upon the cable 7 until the wheel is replaced thereon. It is to be noted that the member 15 is so bent and operates in conjunction with the member 17 that there is a balance between the wheel 11 riding on the cable 7 and the cable 6 supported by the strap or yoke 18.

Referring to Figures 1 and 2, as the conveyer A is moved along the track 2 the cable 6 will of course follow, and in following movement of the conveyer A will cause movement of each individual carriage *a* after a definite point has been reached in movement of the conveyer A; that is to say, the conveyer A will move a certain distance and the remaining carriages *a* will remain stationary or still upon the cable 7, until the particular reach of cable extending from the conveyer A to the first carriage member *a*, as shown at 19, is exceeded; when the second reach of cable between the carriage *a* shown at 19 and the second carriage *a* shown at 20, has moved its extreme limit, the third reach of cable will come into use, and so on.

It will thus be seen that this system will support long lengths of cable, and it is only necessary to increase the number of cables 7 which support the carriages *a* to provide for practically any distance desired to move the conveyer A. The conveyer A may be moved in any direction, and if it were moved to the right in the showing of Figure 1, the cable would follow the conveyer A and would cause the member 17 to turn with relation to the strap 15, the swivel connection between the parts 16 and 17 permitting this.

It is obvious that many changes and modifications and variations may be made in practicing the invention, in departure from the showing, all of which changes, however, may be made within a fair interpretation of the invention, as defined by the scope of the appended claims.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. Means of the character disclosed, including a series of spaced members, carriages movable on said members, and a cable having lengths thereof supported by said carriages, whereby the cable may be moved in more than one direction to utilize the full length of the same.

2. An overhead conveyer and power transmission system, including a supporting structure, a track-way joined to said supporting structure, a conveyer upon said track-way, and a plurality of spaced cables carried by the supports; wheel carriages on each of said cables, and a power transmission line having lengths thereof supported by said carriages, said power transmission line being connected with the motive element of said conveyer.

3. Means of the character disclosed, including a series of spaced members, carriages movable on said members, and a cable having lengths thereof supported by said carriages; said carriages including a wheel adapted to ride on said cables, and a bracket member joined to said wheel, there being a member swivelly connected to said bracket, said last named member supporting the cable.

4. A device of the character disclosed, including a conveyer, a cable for conducting power to the conveyer, carriages to which are joined lengths of said cable and a support for each carriage, whereby the carriages may pass each other and whereby the conveyer may move in more than one direction and utilize lengths of the cable.

5. A device of the character disclosed, including a cable, spaced trackways supporting independent reaches of the cable, whereby the cable reaches may be extended regardless of the direction of movement of the cable.

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

JOHN SCHUMACHER, SR.

Witnesses:
J. CALVIN BROWN,
J. SHUTT.