(No Model.)

C. McMAHAN & A. M. SOUTHARD.

CONVEYER.

No. 513,952. Patented Jan. 30, 1894.

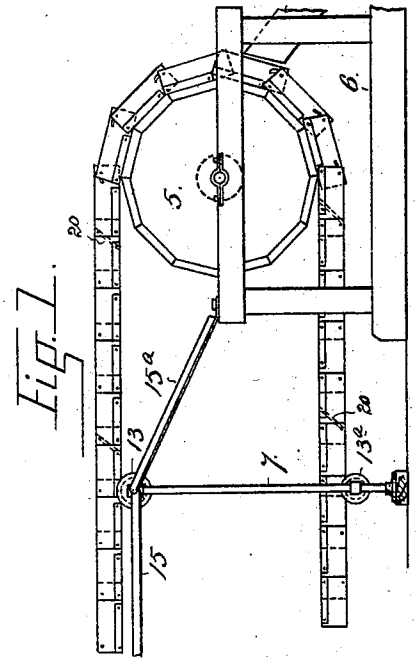


Fig. 1.

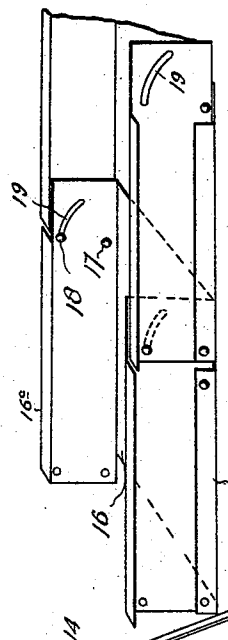


Fig. 3.

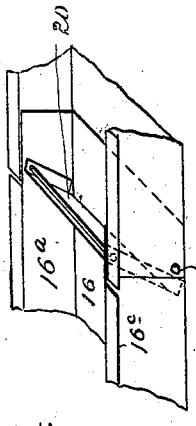


Fig. 4.

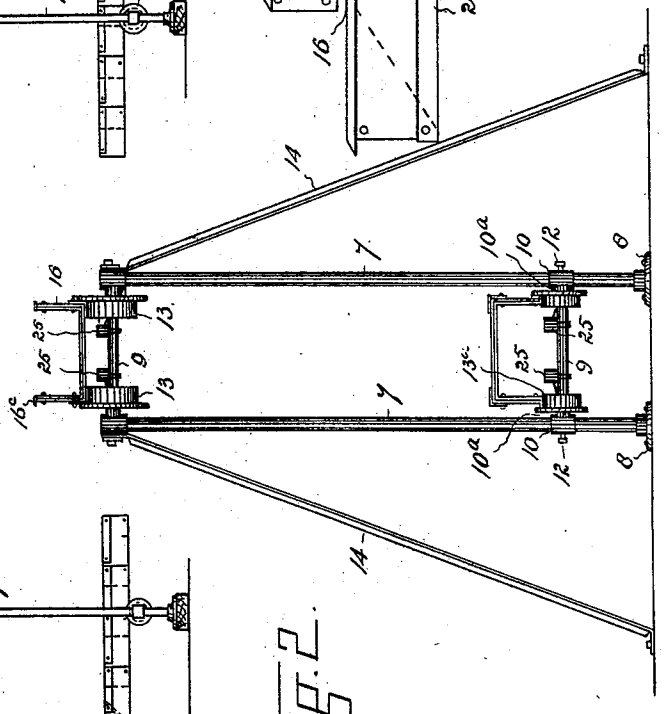
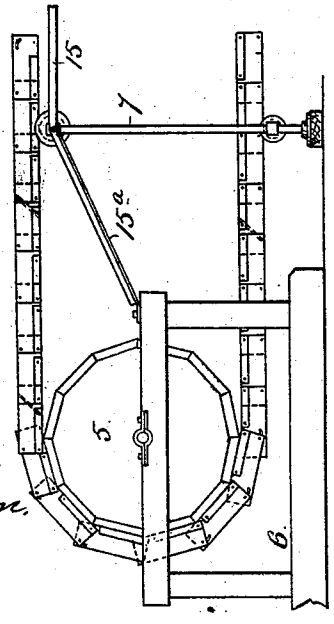


Fig. 2.



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CONVEYER.

SPECIFICATION forming part of Letters Patent No. 513,952, dated January 30, 1894.

Application filed March 18, 1893. Serial No. 466,736. (No model.)

To all whom it may concern:

Be it known that we, CONSTANTINE McMAHAN and ABRAHAM M. SOUTHARD, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Elevated Tramways; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in elevated tramway systems and is specially designed for carrying ore from a mine or loading station to some suitable point below which is accessible for shipping purposes. Our improved tramway may, however, be employed to equal advantage in transporting other material from point to point.

The further object of this improvement is to provide a device of this class which shall be simple in construction, economical in cost, reliable, durable and efficient in use; and to this end the same consists of the features, arrangements and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation of our improved tramway. In this view, the ends or terminals of the line only, are illustrated, the intermediate portion being broken away. Fig. 2 is an end view looking in the direction indicated by either arrow-point in Fig. 1. Fig. 3 is a fragmentary perspective view of two of the hinged sections forming part of the continuous or endless carrier. Fig. 4 is a similar view illustrating a modified form of construction.

From these views it will be seen that the tramway consists in brief, of an endless carrier composed of hinged sections or open-ended boxes mounted on rotating drums located at the ends or line terminals and provided with suitable supports located at intervals between these points. Each drum 5 is journaled in a suitable stationary frame-work 6. Each intermediate support as shown in the drawings, consists of a pair of upright tubular bars 7 having their lower extremities attached to suitable base blocks 8, while they are connected above the base by two transverse bars 9, the extremities of which are screwed into sockets 10^a carried by sleeves 10, vertically adjustable on the uprights by means of set bolts or screws 12. The two bars 9 are suitably separated and form axles for two pairs of flanged wheels 13 and 13^a which support the endless carrier. These wheels bear against the sockets 10^a on the outside, while they are separated interiorly by the carrier which is adapted to fit nicely between the flanges of the wheels on each axle. The upper pair of wheels 13 is larger than the lower pair 13^a as the former support the loaded traveling carrier, while the latter supports the carrier after the load has been discharged. The uprights 7 are supported at the sides by the angle iron braces 14. These upright supports for the carrier are connected with each other by suitable metal bars 15, having their extremities secured to the support by the same bolts or screws which hold the upper extremities of the braces 14 in place. The upright supporting frame, nearest each terminal, is connected with the stationary frames 6 by suitable bars 15^a. Each carrier section is formed from an integral piece of sheet metal, and is composed of a bottom 16 and sides 16^a. The free edges of these sides are provided with exteriorly projecting flanges 16^c. These flanges strengthen the sections and provide a good bearing surface on the track wheels for the empty portion of the carrier. The adjacent extremities of these sections are so fastened, that the one slips within, and overlaps the other. These overlapping extremities are connected close to the bottom by pivots 17. They are further connected by pins 18 which pass through apertures formed in the outer section, and curved slots 19 formed in the inner section. This connection permits the carrier to conform to the shape of the drums and adapt itself to the requirements of passing the terminals.

This connection between the carrier section also has a tendency to make the loaded part of the carrier self-supporting, whereby the supports between the terminals may be located at a considerable distance apart. The carrier may be provided at suitable intervals with transverse partitions 20 to prevent the load from moving in the carrier, or traveling too fast on steep inclines. Each carrier section may be provided with reinforcing angle plates 20^a extending across the bottoms of the sections and turned up at the sides, to which they are riveted or otherwise suitably fastened. The axles for the track wheels are provided with oil cups 25, one cup being located in proximity to each wheel and provided with a suitable outlet, whereby the bearings are kept well lubricated. The material to be carried may be fed to the carrier or conveyer through the medium of any suitable feed mechanism. If the ore or other material is fed in a continuous stream to the conveyer, there will be a correspondingly uninterrupted discharge at the opposite or dumping extremity of the line.

It is believed our improved tramway system has many advantages over the wire rope systems heretofore used. It will be readily observed that its capacity is almost unlimited, while the construction is so simple that it may be erected at a comparatively small cost.

Having thus described our invention, what we claim is—

1. The endless carrier composed of sections open at the ends, and having sides of suitable height, the sides of the sections being pivoted together near the bottom and further connected above the lower pivot by a pin attached to one part, and passing through a slot formed in the other part, substantially as described.

2. In a tramway system the combination of an endless carrier composed of sections open at the ends and having sides of suitable height, the sides of the sections being pivoted together near the bottom and further connected above the lower pivots by pins attached to one part and passing through slots formed in the other part, and supporting means for the carrier consisting of the terminal drums suitably mounted and intermediate upright frames located at suitable intervals and connected with the terminal frames and with each other, said frames being provided with upper and lower axles carrying track wheels which form the direct support for the carrier, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

CONSTANTINE McMAHAN.
ABRAHAM M. SOUTHARD.

Witnesses:
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