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Patented Sept. 3, 1901.

J. G. BEZANSON.

TRACTION SYSTEM FOR USE WITH CABLE ROADS IN HANDLING COAL.

(Application filed May 4, 1901.)

(No Model.)

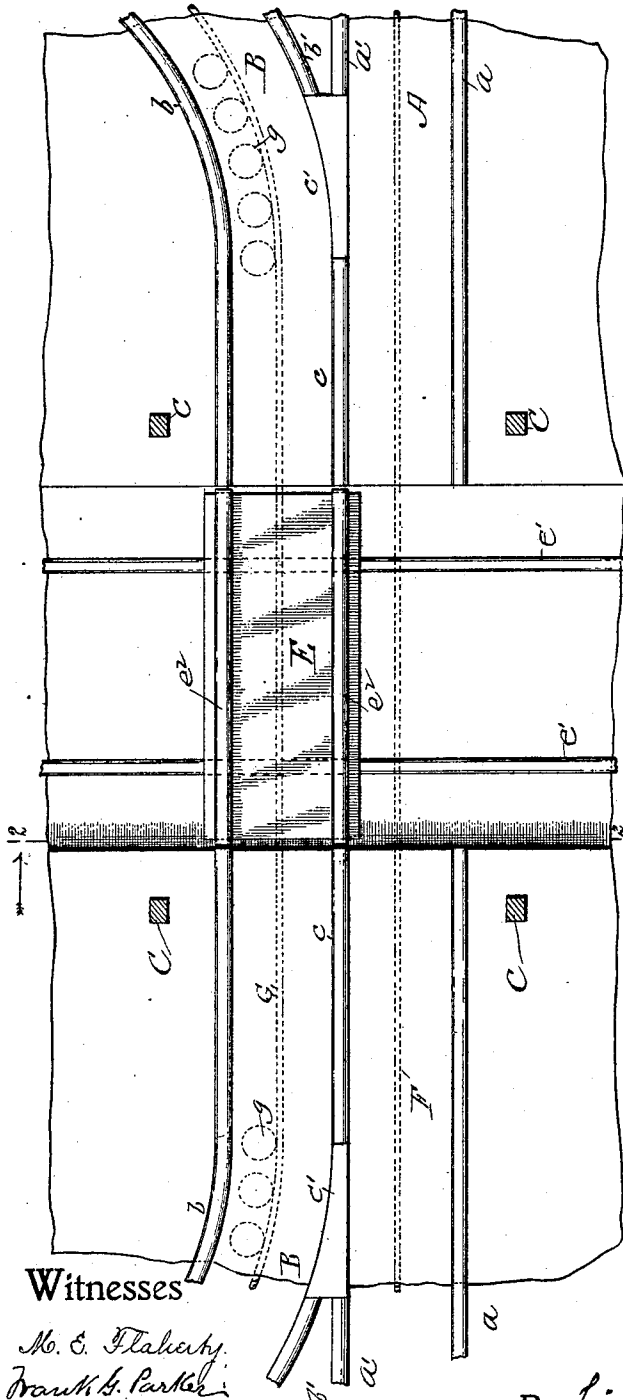


Fig. 1.

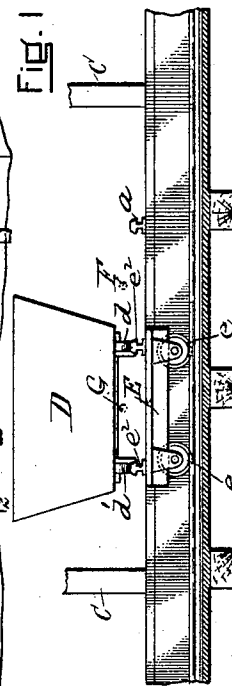


Fig. 2.

Witnesses

*Mo. E. Flaherty*  
*Frank B. Parker*

Inventor

*John G. Bezanson*

By *his* Attorney

*Wm. D. G. Brown*

# UNITED STATES PATENT OFFICE.

JOHN G. BEZANSON, OF SOMERVILLE, MASSACHUSETTS.

TRACTION SYSTEM FOR USE WITH CABLE-ROADS IN HANDLING COAL.

SPECIFICATION forming part of Letters Patent No. 681,906, dated September 3, 1901.

Application filed May 4, 1901. Serial No. 58,687. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. BEZANSON, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Traction Systems for Use More Especially with Cable-Roads in the Handling of Coal and the Like, of which the following is a specification.

In coal-yards where towers are used for loading cars which move on tracks to different parts of the yard it is desirable that the tower be made as narrow as is consistent with its height and the work it is to do. In such yards there are usually two or more separate car-tracks leading to the tower, so that the coal-cars may be brought under the hopper or other filling device from different parts of the yard. This has heretofore required that the base of the tower be sufficiently wide to allow two tracks to pass under it unless the tracks were switched together, so that only one track should run under the tower. Such an arrangement is practicable, but is very expensive, for the reason that switches must be used, and they are exceedingly costly, and also for the reason that as these cars are usually moved by cable-power the bringing of the two cables together between the same line of rails in such a way that they will not interfere with each other, and yet each will be in proper position under its car to do its work properly, requires appliances which are also expensive. Moreover, as each of the cables must cross one of the rails such provision must be made for this that the cable will not interfere with a car running on that rail. The appliances for these purposes now in use give to the cables considerable extra wear, sufficient to shorten their lives to an appreciable extent.

My invention is intended to do away with these faults in the present system—that is, to narrow the space occupied by two tracks, so as to allow the tower to be built with a narrow base, which has heretofore been impossible unless switches were used, and at the same time to allow the cables to run in all respects independently, so that they will have no more wear at the tower-section of the road than at any other part of it.

My invention consists in merging in one rail the adjacent rails of two parallel tracks,

so that a single rail will serve the purpose of both tracks, thus enabling a tower to be built narrower than if a double-track system of ordinary construction were used, and yet doing away with switches and any complicated cable-running apparatus.

It will be evident that this invention may be used in any place where the road-bed is narrow, as well as under a loading-tower; but that is the place where I have found it especially convenient.

My invention also consists in the use of a sliding table with such a track system, so that a car may be transferred from one track to the other without switches and without giving to the sliding table any undue length of travel.

My invention will be understood by reference to the drawings, in which—

Figure 1 is a plan view of an arrangement of tracks embodying my invention at a tower-station; and Fig. 2, a section on line 2 2 of Fig. 1, showing also a car in place on the platform.

A indicates a straight track made up of two rails  $a\ a'$ , which leads to one portion of the yard, and B is a second track made up of rails  $b\ b'$ , leading to another portion of the yard.

C indicates the location of the four posts upon which a tower is supported over that portion of the track shown in the drawings, that tower usually comprising a hoisting apparatus and a hopper or other like means of filling cars, such apparatus being well known in the art, and hence requiring no further description, and its position being indicated here merely for the purpose of showing the practical application of my invention.

$c$  is a single rail into which, it will be noted, the rails  $a'\ b'$  merge at  $c$  at each end of the section-track shown in the drawings.

D is a car provided with wheels  $d\ d'$ , of ordinary construction, which wheels are made, as is well known, with a flange on the inner side. It will be noted that when such a car travels on the track A the wheel  $d'$ , traveling, for example, on the rail  $a'$ , will pass without interruption from the rail  $a'$  to the rail  $c$ , and in like manner should the car be upon the track B the wheel  $d$  will travel without interruption from the rail  $b'$  to the rail  $c$ . Thus this rail will serve the common purpose

of both tracks. As in this construction switches are dispensed with and it may be desired to transfer a car from one track to another this may be done by means of a sliding table E, mounted upon wheels e, traveling on cross-tracks e', the surface of the table being provided with rails e<sup>2</sup>, located in proper gage to register either with the rails d and c or b and c. The sliding platform may therefore receive a car from either track A or B, and being pushed over to register with the other track B or A the car may then be transferred to that track.

F G indicate the cables, by means of which cars are ordinarily hauled in large coal-yards, g being guide-rolls to guide the cable G about the curves in the track B. These cables, it will be seen, are entirely independent the one of the other and are not required to cross the track-rails and are thus kept absolutely independent, receiving no more wear than if the tracks themselves were independent. Either may be attached to a car by any well-known means.

By considering the position of the tower-posts with relation to the tracks it will be seen that with two tracks arranged in the ordinary manner under the tower they would take at least one-third more space than where my invention is used, and the base of the tower would require to be enlarged by that amount in order to provide room for the two tracks to pass below it. Thus there is a substantial reduction in the size of the tower due to the adoption of my invention, and not only is the expense of the switches done away with, but there is no danger of a misplaced switch. It is also evident that this system

may be extended by the addition of other tracks, which shall become merged in each other in a similar way, four rails lying under the tower serving by merging the purpose of three tracks and enabling cars to be hauled under the tower from three different parts of the yard, the tower itself being no wider at the base than is now necessary to receive two tracks.

What I claim as my invention is—

1. In a switchless double-track traction system especially adapted for cable-cars, two tracks each consisting of two independent rails during a greater portion of its length, the adjacent independent rails merging into a single continuous and unbroken rail whereby said double track is narrowed without the use of switches, in combination with two cables each located between the rails of one of said tracks whereby means are provided for moving a car upon either track including the rail common to both tracks, all as and for the purposes described.

2. In a traction system comprising two tracks each having an outside rail, an intermediate rail common to both tracks, in combination with a sliding platform provided with two rails adapted to register with said intermediate rail and with either of said outside rails, as and for the purposes described.

In testimony whereof I hereunto set my name this 29th day of April, 1901.

JOHN G. BEZANSON.

Witnesses:

GEORGE O. G. COALE,  
M. E. FLAHERTY.