(No Model.) 2 Sheets—Sheet 1.

H. S. HASKINS & J. SPROGELL.

OVERHEAD RAILWAY.

No. 301,119. Patented July 1, 1884.

Fig. 1

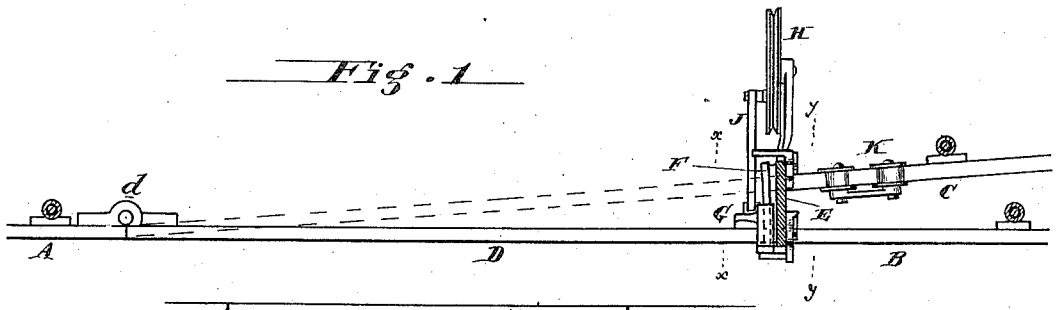


Fig. 2

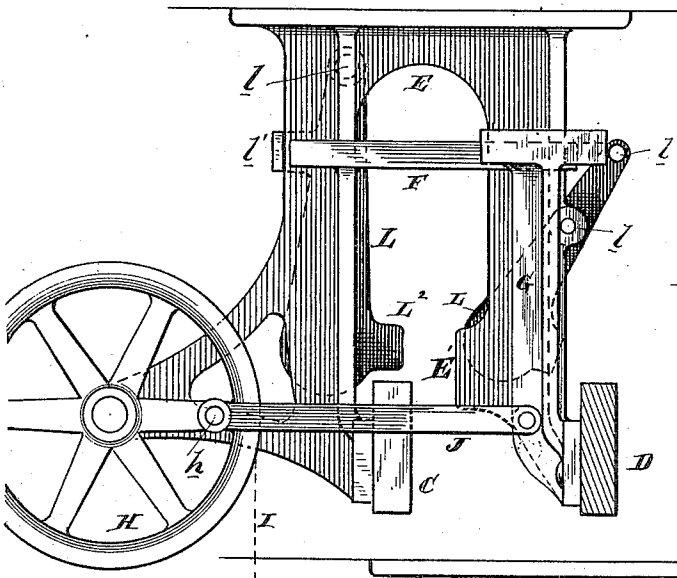
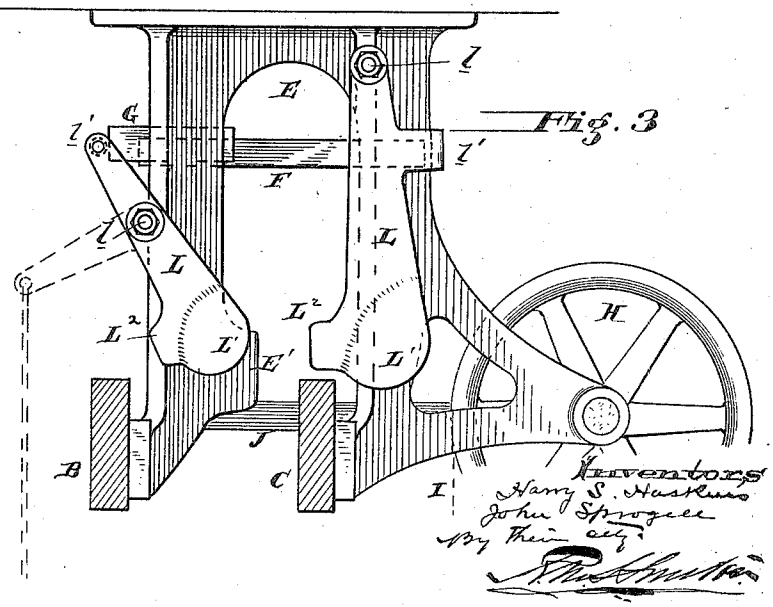


Fig. 3



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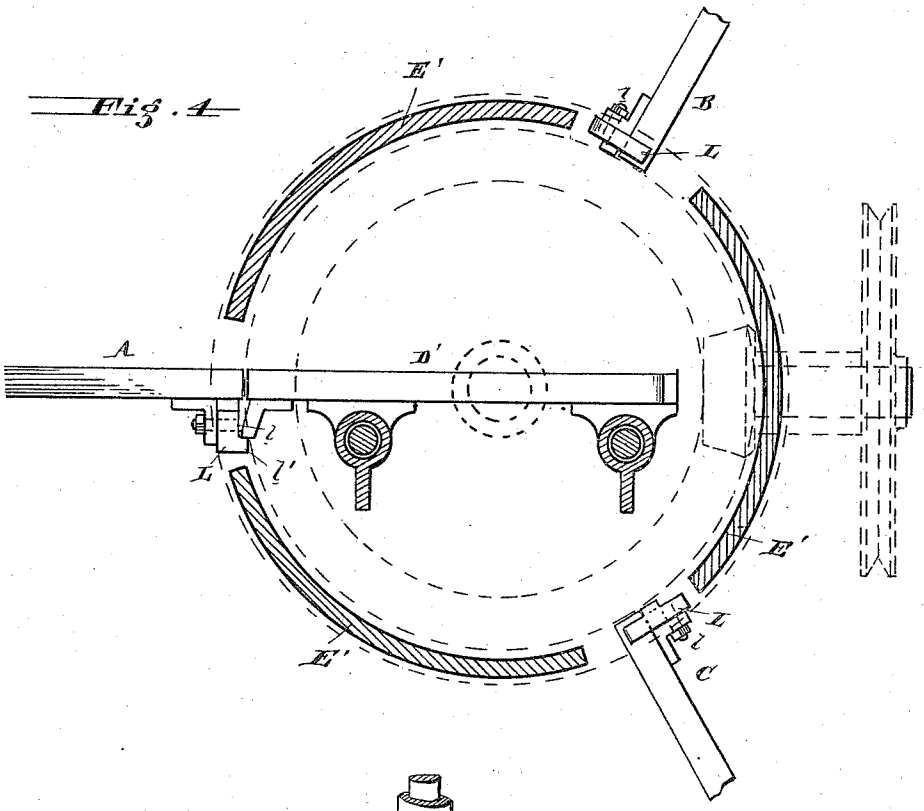
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Fig. 4



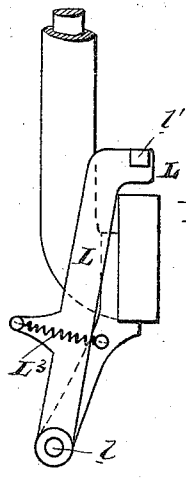


Fig. 5

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UNITED STATES PATENT OFFICE.

HARRY S. HASKINS AND JOHN SPROGELL, OF PHILADELPHIA, PA., ASSIGNORS TO EDWIN HARRINGTON, SON & CO., OF SAME PLACE.

OVERHEAD RAILWAY.

SPECIFICATION forming part of Letters Patent No. 301,119, dated July 1, 1884.

Application filed February 15, 1884. (No model.)

To all whom it may concern:

Be it known that we, HARRY S. HASKINS and JOHN SPROGELL, both of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Overhead Railways, of which the following is a specification.

Our invention has reference to overhead railways for trolleys or traveling carriages, to which the hoisting apparatus is hung; but more specifically to an improvement upon Letters Patent granted to Edwin Harrington, dated February 20, 1883, and numbered 272,431; and it consists in combining three or more tracks or rails and a switch-rail which may be shifted to come into line with either of said rails or tracks with stops, preferably automatic, to prevent the possibility of a carriage adapted to travel upon said rail from running off the same when the switch-rail is in line with another of said rails or tracks, and in details of construction, all of which are fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

The object of this invention is to provide overhead railways having switches, such as set forth in the patent referred to above, or a turn-table, such as shown in the patent to Harrington, dated February 20, 1883, and numbered 272,432, with stops to arrest the movement of a traveling hoist carrying carriage or trolley when it reaches the end of any rail-section, should the switch be open to prevent its being precipitated to the ground with its load. These stops may be worked either by hand or automatically by the movement of the switch, the latter being preferable.

In the accompanying drawings, Figure 1 is a plan view of the overhead railway provided with a switch embodying our improvements. Fig. 2 is a cross-section of same on line *x x*, looking in one direction. Fig. 3 is a cross-section on line *y y*, looking in the opposite direction. Fig. 4 is a skeleton plan view of a similar device, in which the switch is operated like a turn-table; and Fig. 5 shows a modified form of stop-pawl.

A, B, and C represent three rails or tracks, and, as shown in Fig. 1, track A may be connected with either track B or C by means of a switch-rail, D, hinged to rail A at *d*. The ends of tracks B and C are secured to a bracket, E, provided with a guide, F. The free end of the switch-rail D is secured to an arm, G, which hangs from and slides upon the said guide F. The switch is operated by a chain, I, passing over a chain-wheel, H, provided with a crank-pin, *h*, to which is pivoted a connecting-rod, J, the other end of which is hinged to the arm G or switch-rail D. By turning wheel H, the switch-rail D may be shifted to come into line with either the rails B or C. K is the trolley or carriage for carrying the hoisting apparatus, and is adapted to run upon said tracks. When the switch D is in line with either of said track B or C, the other has its end unobstructed, and if a trolley or carriage, K, were running down said track it might run off the end of same. To prevent this we provide stops L, which may be made in any suitable manner, it being preferable that they work automatically with the movement of the switch-rail D. These stops L are made like ordinary pivoted dogs, being pivoted at *l*, and so weighted—say at L′—that they will hang normally, so as to thrust the stops or projections L^2 over the rails and in the line or path of the moving trolley or carriage. These dogs may be pulled out of the way by a lever-arm and cord, (shown by dotted lines in Fig. 3,) or preferably by projections *l′*, which are struck by the switch-rail D, or its arm G, in approaching either rail B or C. In the construction shown, the dog of the rail C has its projection *l′* above the fulcrum or pivot *l*, while the dog of the rail B has its projections below the pivot, the object of which is to cause the dogs to be thrown back in the same direction by opposite movements of the switch-rail; but this is not necessary, as the dogs L may be oscillated in opposite directions, if desired. In case of a turn-table switch, the construction is substantially the same, only in this case, as the switch is not hinged to any rail, the ends of each of the rails A, B, and C must be provided with a stop, L. In place of weighting the dogs to make them fall into

place, springs L^3 may be used, as shown in Fig. 5. If the rail ends be separated considerably and the switch be midway between said rails, a trolley upon said rail A or switch might run off. To prevent this we provide the bracket E with one or more obstructions or extensions, E′, before which the end of the switch-rail D passes in turning or being shifted, and said extensions would arrest the moving trolley and prevent damage.

This invention is applicable to all kinds of overhead railways, and the stops may be made in various ways, either automatically or not, as desired, without departing from our invention, as we do not limit ourselves to the details of construction.

We are aware that in loading and unloading cars in mines it has been proposed to use automatic locking and unlocking devices to prevent the cars running down the incline into the elevator-pit, and the elevator, when in line with the railway, automatically removes the said car-stop; but these devices have no relation to overhead railways such as set forth and shown in this application, nor do such devices involve the use of a pivoted or hinged switch-rail, as herein set forth.

In this application we do not claim any specific construction of the turn-table illustrated in Fig. 4, as that forms subject-matter of another pending application of ours, bearing filing date of February 11, 1884, Serial No. 120,304.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an overhead railway, three or more rail-sections and a hinged or pivoted switch, to connect either of said rail-sections in line, in combination with stops arranged upon the terminals of one or more of said sections, to prevent the trolley or carriage running off when said switch is open, substantially as and for the purpose specified.

2. In an overhead railway, three or more rail-sections and a hinged or pivoted switch, to connect either of said rail-sections in line, in combination with automatic stops arranged upon the terminals of one or more of said sections, to prevent the trolley or carriage running off when said switch is open, the act of moving said switch automatically throwing said stops in or out of position, substantially as and for the purpose specified.

3. The combination of a pivoted switch-rail with two or more rail sections or lines, stops arranged upon the terminals of said rail-sections, and means to actuate said stops to free or obstruct the said rail-sections, substantially as and for the purpose specified.

4. The combination of a pivoted switch-rail with two or more rail sections or lines, and stops arranged upon the terminals of said rail-sections, the switch-rail in its movement automatically throwing one stop into position and the other out of position, whereby it blocks one line and opens another, substantially as and for the purpose specified.

5. In a overhead railway, a pivoted switch-rail and branch track or rail, in combination with a stop arranged upon the end of said track, and so arranged that when said switch-rail is brought in line with said branch track it shall cause said stop to be moved out of the way, substantially as and for the purpose specified.

6. In an overhead railway having one or more branch tracks and pivoted switch devices, the terminals of said branch tracks next to the switch being provided with movable stops or dogs, which are designed to obstruct the ends of said branch tracks, to prevent the trolley or carriage running off when the switch is opened, substantially as and for the purpose specified.

7. The combination of rails A, B, and C with pivoted switch-rail D, means to move said switch-rail, and pivoted dogs or stops L L, substantially as and for the purpose specified.

8. The combination of rails A, B, and C with switch-rail D, having arm G, means to move said switch-rail, and pivoted dogs or stops L L, pivoted at *l*, and having projections *l′*, substantially as and for the purpose specified.

9. The combination of rails B and C with switch D and obstructions E′, arranged between the said rails B and C, substantially as and for the purpose specified.

10. The combination of rails B and C with switch D, obstructions E′, arranged between the said rails B and C, and stops or dogs L, substantially as and for the purpose specified.

In testimony of which invention we hereunto set our hands.

HARRY S. HASKINS.
JOHN SPROGELL.

Witnesses:
R. M. HUNTER,
FRANCIS S. BROWN.