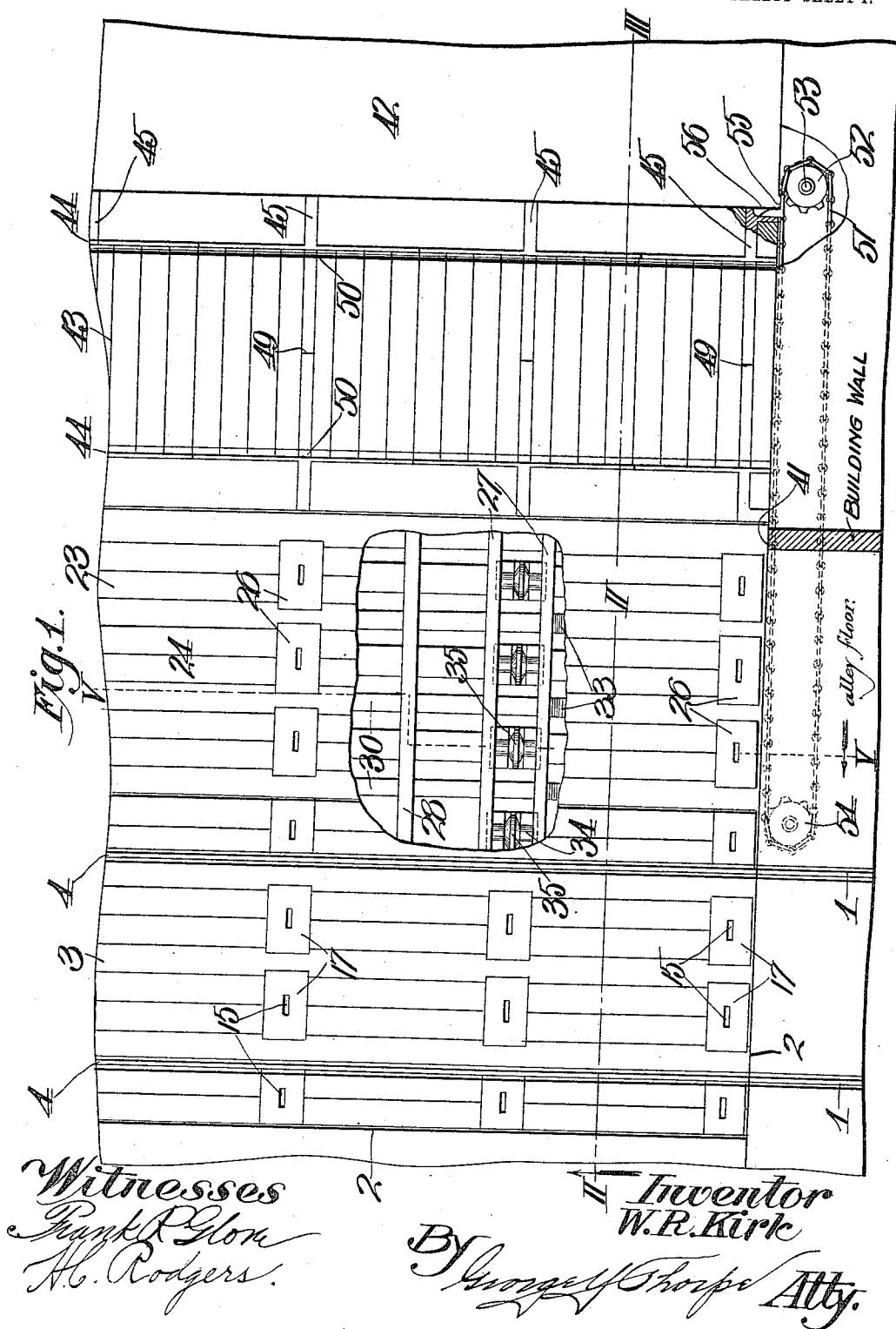
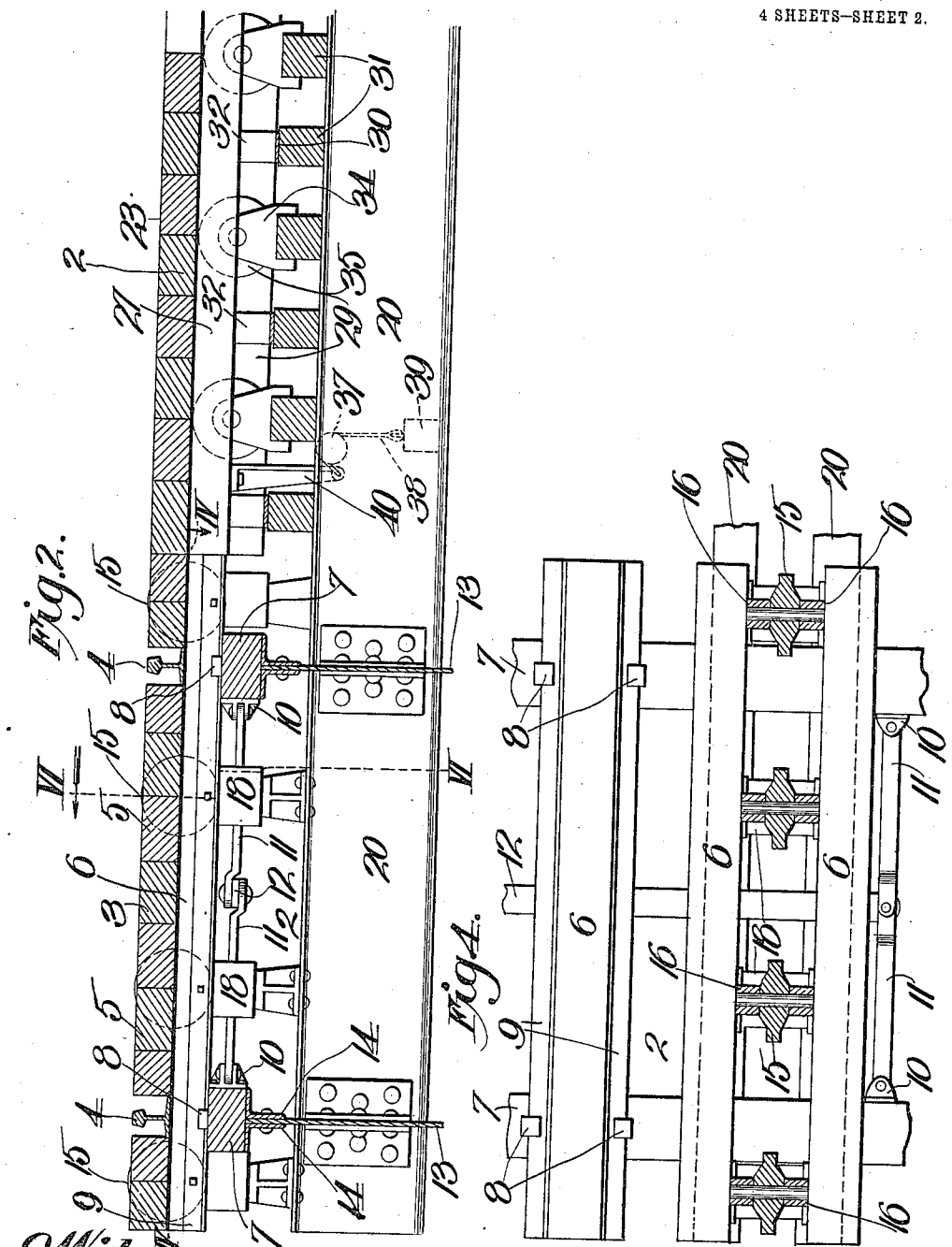


1,045,798.

W. R. KIRK.
RAILWAY DROP SWITCH.
APPLICATION FILED FEB. 12, 1912.

Patented Nov. 26, 1912.
4 SHEETS—SHEET 1.





Witnesses

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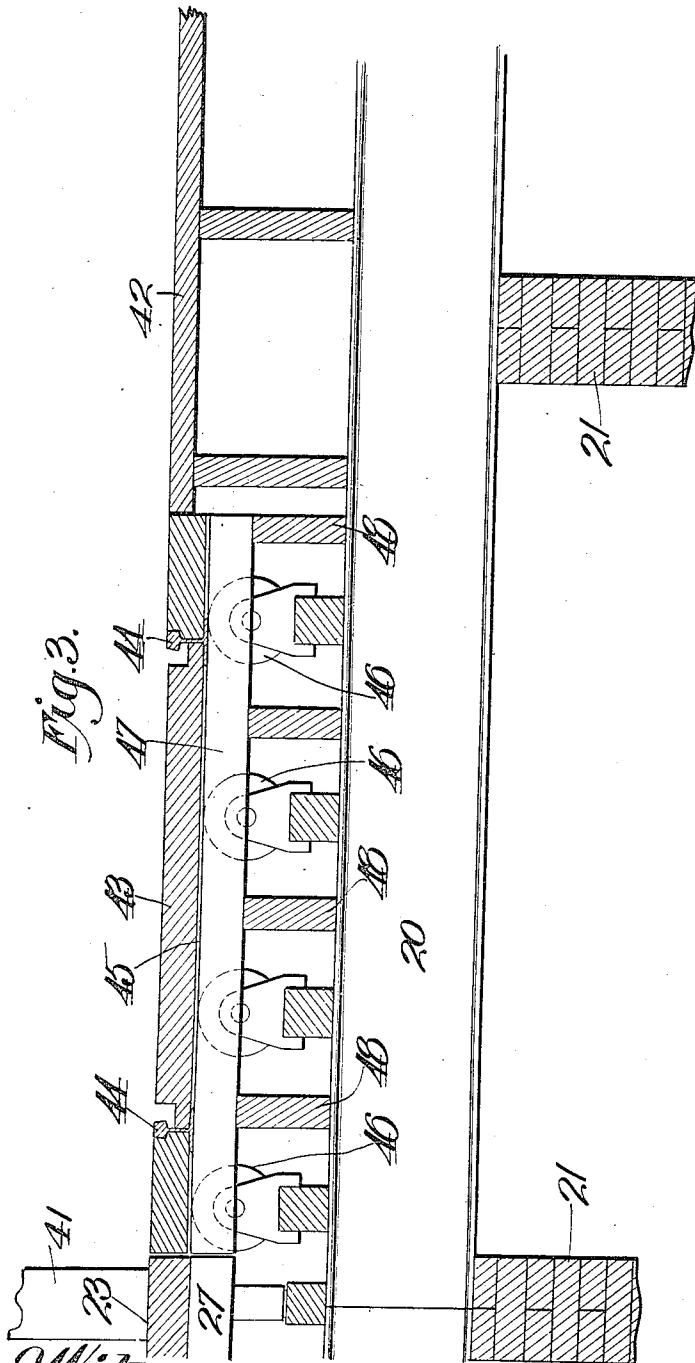
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1,045,798.

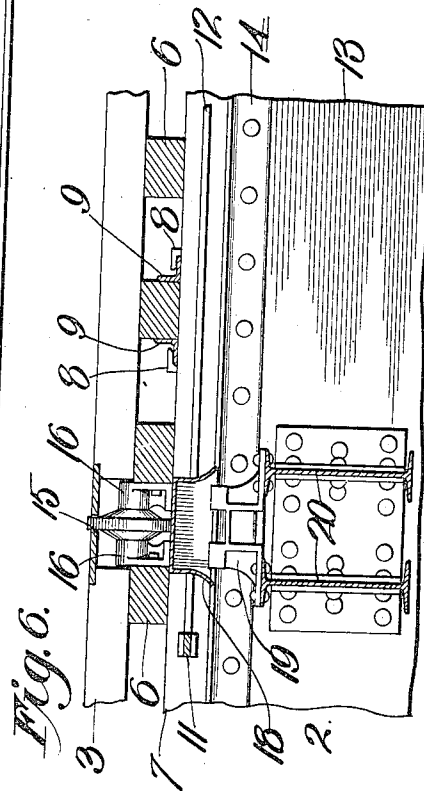
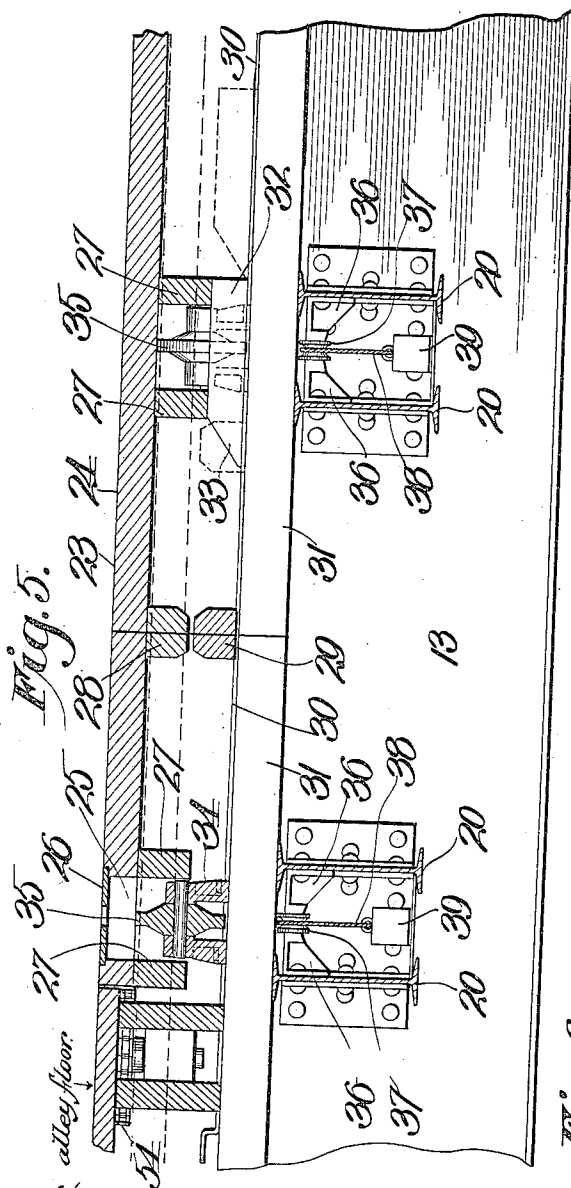
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UNITED STATES PATENT OFFICE.

WALLACE R. KIRK, OF KANSAS CITY, MISSOURI.

RAILWAY DROP-SWITCH.

Specification of Letters Patent.

Patented Nov. 26, 1912.

1,045,798.

Application filed February 12, 1912. Serial No. 677,222.

To all whom it may concern:

Be it known that I, WALLACE R. KIRK, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Railway Drop-Switches, of which the following is a specification.

This invention relates to drop switch railway sidings and is designed more especially as an improvement upon the invention of like nature on which Patent No. 852,565 was issued to me May 7, 1907, and my special object is to produce a construction embodying an alley line platform and a traffic platform, and a truck to shunt a car laterally from the alley line trackway toward one side of the alley or vice versa, the platforms having movement vertically and the truck being susceptible of travel laterally upon the said platforms to form a part temporarily, of the alley line trackway or to a position outward or at one side of the said platforms, to leave the same free to be adjusted upward or downward.

A further object is to produce a siding of the type outlined whereby it shall be possible for the traffic platform to be raised to the plane of the surface of the alley while a car is standing on the alley line platform or within the building line of the alley upon the truck, in order that teaming or trucking may be carried on in the former case through the alley at opposite sides of the car standing on the alley line platform and in the latter case through any part of the alley.

A further object is to produce a drop siding for alleys which, by variation in the width of the traffic platform of the siding, can be adapted for use in alleys of different widths.

With these and other objects in view as hereinafter appear, the invention consists in certain novel and peculiar features of construction and operation as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings, in which:

Figure 1, is a plan view of a part of a drop switch mechanism—partly broken away—as installed in an alley wherein an opening is provided within the building line into which a car may be shunted. Fig. 2, is an enlarged vertical section on the line II—II of Fig. 1.

Fig. 3, is a similar view on the line III—III of Fig. 1, Fig. 3, constituting an extension of Fig. 2. Fig. 4, is a horizontal section on the line IV—IV of Fig. 2. Fig. 5, is a vertical section on the line V—V of Fig. 1. Fig. 6, is a section on the line VI—VI of Fig. 2.

In the said drawings, 1 indicates the rails of a trackway extending centrally through an alley and at a suitable point within the same is a shallow pit or trench 2 of somewhat greater width than the trackway and length than an ordinary freight car of maximum size. 3 is a platform occupying the upper part of said trench or pit, provided with longitudinal rails 4, forming normally a section of the trackway 1. The surface of the platform 3 preferably occupies the same level as that of the alley, and the rails 1 and 4, for convenience of teaming or trucking through the alley, and the platform preferably consists of a plurality of longitudinally-extending timbers 5 mounted upon suitably spaced cross ties 6.

Underlying the cross ties 6 is a pair of longitudinal stringers 7, provided at suitable points along their length with pairs of headed spikes 8 or equivalent devices, for sliding engagement with the horizontal arms of parallel angle bars 9 secured to certain of the cross ties. Secured to the inner edges of the stringers 7 are bifurcated brackets 10, of which there will be a plurality of pairs, and pivoted at their outer ends thereto are links 11, pivotally connected at their inner ends to each other and to a longitudinal bar 12, the links constituting toggles adapted for alternate expansion and contraction, through the instrumentality of bar 12, any suitable means, not shown, being employed to move said bar endwise. In the expansion of the toggles the stringers are moved apart until they lie vertically below rails 4, and upon the upper edges of a pair of beams 13, preferably of the I-type, as shown in Figs. 2, 3 and 6, it being noted by reference to Figs. 2 and 6, that angle irons 14 are preferably employed to form the upper edges or heads of the beams.

When the toggles are contracted, the stringers 7 are caused to approach each other or move inward until they clear the inner margins of the heads of said I-beams to permit the platform to drop as hereinafter explained, until the cross ties rest upon said I-

beams, it being noted that as this descending bar 12, move downward because of the sliding interlocked connection of the stringers with the angle bars 9.

5 At suitable intervals, the drop platform described, is provided with a plurality of transversely-arranged rollers 15, journaled in brackets 16 secured between and to adjacent cross ties, and projecting slightly 10 above the surface of the said platform (see Figs. 2 and 6), through slotted plates 17 set in the platform with their upper faces flush with the surface thereof, and secured to and underlying said brackets are hoods 18 which 15 overlie and are adapted to descend and cover brackets 19, resting upon one or more transverse I-beams 20, extending through and rigidly secured to beams 13, the beams 20 extending laterally to or beyond the alley 20 line at one side for shunting cars to such side of the alley.

At one side of the sets of beams 13, the ends of the beams 20 will preferably rest upon piers 21 which, if occupying the cellar 25 22 of an adjacent building, will be of considerable height, as will be readily understood. Any suitable means, not shown, may be employed for raising or lowering the platform without shock or jar.

30 At one side of the platform 3, is a platform 23, which preferably fills the space between platform 3 and the adjacent building line of the alley. This platform 23, consists preferably of longitudinal timbers 24 provided with transverse series of openings 25, 35 bridged by slotted plates 26 extending in transverse alinement with plates 17 of platform 3, and secured to and extending transversely and forming a part of platform 23, are parallel timbers 27, arranged flush with 40 the opposite sides of openings 25, and preferably between adjacent sets of timbers 27, and secured to the underside of the platform are transverse timbers 28, which, when 45 the platform 23 is elevated, just clear the underlying parallel timbers 29 secured upon longitudinally extending bars 30, mounted slidably upon supporting stringers 31, in rigid and superposed relation to the transverse beams 20, as shown in Fig. 5, and for 50 normally supporting platform 23 in the same plane as the platform 3, the slide bars 30 are equipped with blocks 32, tapered downwardly to a point at 33.

55 Underlying the slotted plates 26, and journaled in brackets 34, secured to and upon stringers 31, are rollers 35, adapted, when the platform 23 is lowered, to project slightly upward through the slots of said 60 plates 26 and constitute a trackway, for a purpose which is hereinafter explained.

Any suitable means may be employed for moving the slide bars 30 endwise to withdraw the blocks 32 from under the timbers 65 27 which rest upon them and to incidentally

withdraw timbers 29 from below timbers 28. When this is accomplished, any suitable means, not shown, may be employed for lowering the platform 23 until the bars 27 and 28 rest upon the stringers 31 or rather upon the slide bars 30 upon said stringers. If 70 desired, the platform may be permitted to descend by gravity when the supporting blocks 32 are withdrawn as described, and in either event it is desirable to provide 75 means for approximately counterbalancing the platform so that but little power shall be needed to raise and lower it. In the drawings, Fig. 5, brackets 36 are secured to and between beams 20, and carried by said 80 brackets are sheaves 37 over which extend cables 38 equipped with counterbalance weights 39 at their lower ends and attached at their opposite ends to brackets 40, secured to and depending from bars 27, only 85 one of the brackets 40 appearing, (see Fig. 2).

Referring to Fig. 3, 41 represents an opening in the wall of the building at the alley line, and in said figure, platform 23 is shown as projecting slightly through said 90 opening. Within the building at a suitable distance from the opening 14, is the floor 42 of the building, and between said floor and the platform 23 is a truck 43, provided with longitudinal track rails 44, and transverse 95 track rails 45, normally resting upon a transverse series of rollers 46, which constitute a continuation of the series of rollers 35 underlying platform 23, and secured to said truck and underlying the longitudinal rails 100 44, are transverse bars 47 arranged closely together upon stringers 48, the bars 47 constituting a skeleton flooring upon which one may safely walk when the truck 43 has been moved outward into the alley, as hereinafter 105 explained.

Preferably the longitudinal rails 44 and transverse rails 45 will be cast in sections, as shown in Fig. 1, with the inner ends of adjacent section 45 abutting together, as at 110 49, and with said sections provided at the inner sides of the rails 44, with grooves 50 to accommodate the flanges of the wheels of a car upon said rails 44. By this construction, the truck is made strong and rigid. 115

At the ends of the platform 23 and truck 43, are arranged sprocket chains 51, engaging sprocket wheels 52 secured on shafts 53, at the inner corners of the truck, and suitably-journaled sprocket wheels 54 near the 120 outer corners of platform 23, and secured to said chains are arms 55, which project into socketed arms 56 at the inner ends of the rails 45 at the extremities of the truck. The shafts 53 are adapted to be driven by any 125 suitable power, not shown.

Assuming that a train is about to enter the valley, and includes a car destined to be projected into the building, platforms 3 and 23 are lowered. The shafts 53 are then op- 130

erated to cause the chains to impart outward movement to the truck 43, the transverse track rails 45 of the same traveling upon the rollers 46, and the rollers 35 and 15 projecting slightly above the depressed platforms, this outward movement continuing until the rails 44 are alined with the main track rails 1 of the alley. The train is then run into the alley until the desired car rests upon the rails 44. The car is then uncoupled and the operation of shafts 53 is reversed to return the truck 43 to its original position. The platform 3 is then reëlevated and platform 23 may be also reëlevated if desired. The engine of the train is then backed to establish connection between the cars at the opposite ends of platform 3, and may then be backed out of the alley or proceed forward through the same, leaving one car standing within the building line on the truck 43, where it can be unloaded or reloaded at the convenience of the person in charge of the building and leave the alley unobstructed for the passage of trains or for teaming or trucking purposes, it being understood in this connection that the operations described do not affect the alley at the opposite side of the track therein, so that teaming or trucking need not be interrupted, if the alley is wide enough, while the car is being shunted within the building line or when it is returned to the alley line preliminary to being coupled onto a train and moved to the point desired, it being understood that the described manipulations are repeated to restore the car from within the building line to the alley line.

From the foregoing it will be apparent that a siding of the character described can be employed in the alley without regard to the width of the same if a space sufficient for the reception of the car within the building is provided, and that if the alley is sufficiently wide, teaming may be carried on through the alley over the traffic platform when raised. If the alley is too narrow for teaming but wide enough to accommodate hand trucks, trucking may be carried on over the reëlevated platform 23. One of the broad points of distinction between this type of siding and the patented one hereinbefore referred to, lies in the fact that the width of the traffic platform of the present construction may be variable whereas in the construction of the patent, the width of the different platforms must be uniform. For this reason in the patented construction the alley must be of standard width or else the car-receiving opening beyond the building

line, must be wider than necessary to accommodate a car.

It will be apparent that as the vertical movements of the platforms 3 and 23 just equals the height of the track rails, it is unnecessary to provide a trench of any material depth, at least in the alley, and that the cost of construction is comparatively small.

I claim:

1. A drop-switch railway siding, comprising an alley line platform having a longitudinal track and capable of depression, a traffic platform disposed at one side of the alley line platform and also capable of depression, and a truck provided with a longitudinal track and disposed normally at the opposite side of the traffic platform from the alley line platform and adapted for side-wise movement over the traffic platform when depressed and upon the alley line platform if the same is depressed and for return movement when said traffic platform is depressed.

2. A drop-switch railway siding, comprising an alley-line platform having a longitudinal track and capable of depression, a traffic platform disposed at one side of the alley-line platform and also capable of depression, transversely extending series of rollers projecting up through the said platforms when depressed, a truck provided with a longitudinal surface track and underlying transverse track rails, means to move the truck laterally to cause its last-named track rails to travel on said rollers when said platforms are depressed, and means to check such movement when the surface rails of the truck attain the position which the rails of the alley-line platform occupied prior to the depression of said platform.

3. A drop-switch railway siding consisting of an alley-line platform, movable stringers under the same, fixed supports under the stringers to support the platform in a depressed position when the stringers are moved, a laterally movable truck to be moved upon the said platform when depressed, and a vertically movable traffic platform adapted to occupy the same horizontal plane as the truck or to be depressed to the plane of the depressed platform.

In testimony whereof I affix my signature, in the presence of two witnesses.

WALLACE R. KIRK.

Witnesses:

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G. Y. THORPE.