Sept. 10, 1929. P. H. KNOLL 1,727,547

ATTACHMENT FOR RAILWAY MAIL AND EXPRESS CARS

Original Filed Jan. 16, 1925 2 Sheets-Sheet 1

FIG. 1

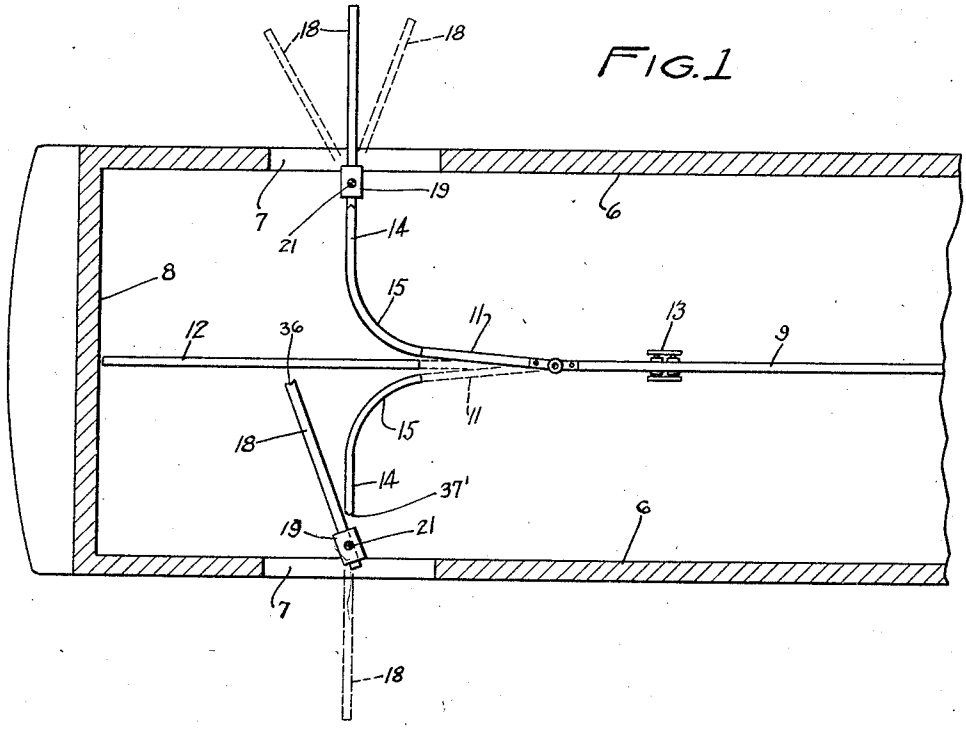
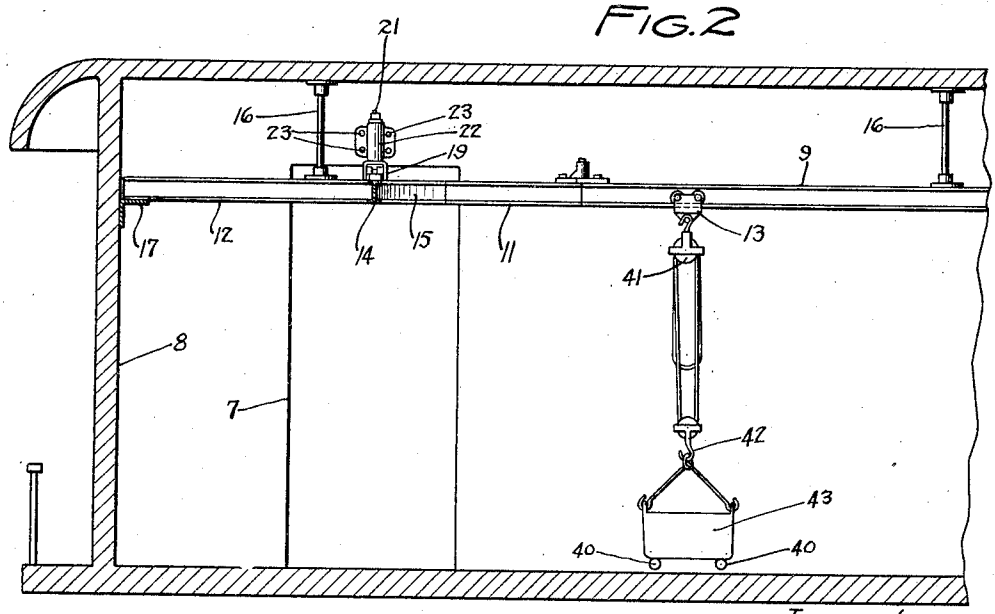


FIG. 2



Inventor
PAUL H. KNOLL

By Paul, Paul & Moore

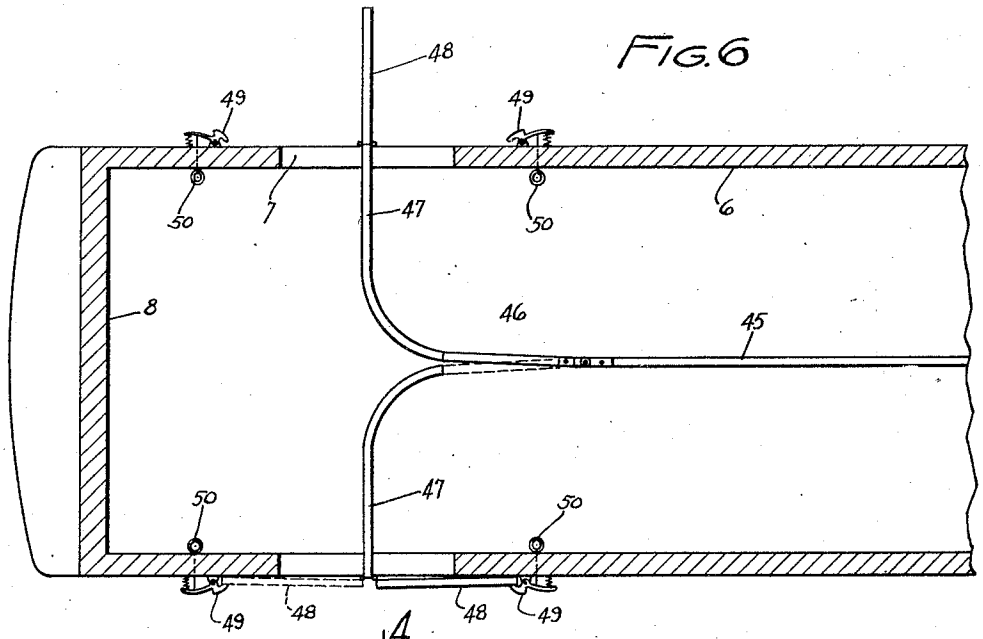
ATTORNEYS

Sept. 10, 1929. P. H. KNOLL 1,727,547

ATTACHMENT FOR RAILWAY MAIL AND EXPRESS CARS

Original Filed Jan. 16, 1925 2 Sheets-Sheet 2

FIG. 6



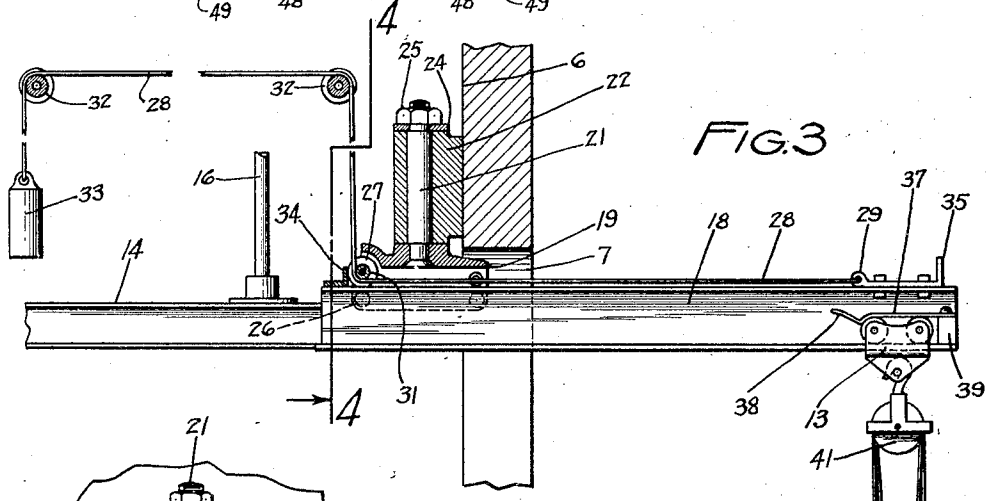


FIG. 3

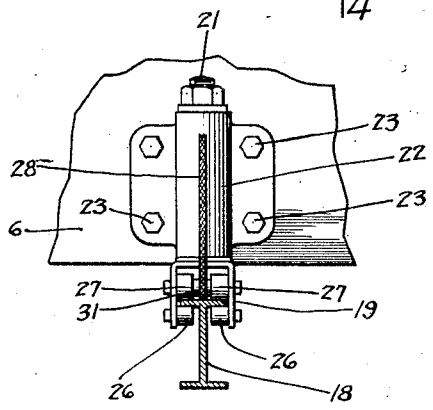


FIG. 4

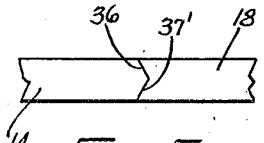
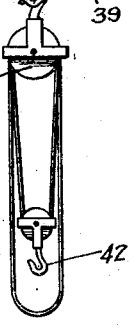


FIG. 5



Inventor
PAUL H. KNOLL
By Paul, Paul & Moore
ATTORNEYS

Patented Sept. 10, 1929. 1,727,547

UNITED STATES PATENT OFFICE.

PAUL H. KNOLL, OF INDEPENDENCE, MISSOURI.

ATTACHMENT FOR RAILWAY MAIL AND EXPRESS CARS.

Original application filed January 16, 1925, Serial No. 2,937, now Patent No. 1,703,153, dated February 26, 1929. Divided and this application filed November 21, 1923. Serial No. 320,869.

This invention relates to an improved overhead track system particularly adapted for use as an attachment for a railway mail or express car whereby the usual mail sacks, parcel post and express packages being transported from one station to another along the railroad, may readily and quickly be loaded and unloaded from the car in a minimum amount of time.

This case is divisional of my copending application Serial Number 2,937, filed January 16th, 1925, Patent Number 1,703,153, Feb. 26, 1929, for Attachments for railway mail and express cars.

In the operation of trains, particularly those carrying express and local mail, considerable time is often consumed at the various stations along the road in receiving and distributing mail and express packages, usually caused by the necessity of the clerks having to handle each sack or package to be received or distributed at a station after the train has come to a full stop. The clerks, in performing such duties at the different stations, often consume considerable more time than is required for passengers to board and leave the trains, and especially in rural districts where express and parcel post deliveries are heavy and the passenger transportation comparatively light. It is therefore desirable that means be provided whereby the receiving and distributing of such mail and express packages at the various stations along a railroad, may be performed in a much shorter period of time, which time will not, under ordinary conditions, exceed the amount of time required for passengers to board and leave the train.

The particular object of this invention, therefore, is to provide an improved overhead track system for railway mail and express cars, having a traveling carriage mounted thereon from which a suitable carrying means, such as a crate or basket may be supported. Into this carrying means, the mail and express packages are placed or packed by the clerk while the train is en route between stations, and as soon as the station is reached the entire delivery may be readily and quickly unloaded from the train onto the station platform or onto a truck. The overhead track is provided with extensions adapted selectively to be outwardly moved to a position over the station platform so that the load may conveniently be placed upon the station platform or truck. The station agent is also preferably provided with a similar carrying means into which he will place his shipment of mail and express before the train arrives so that it may readily be picked up by the railway mail clerk in a minimum amount of time.

Other objects of the invention will appear from the following description and the accompanying drawings and will be pointed out in the annexed claims.

In the drawings there has been disclosed a structure designed to carry out the various objects of the invention but it is to be understood that the invention is not confined to the exact features shown but various changes may be made within the scope of the claims which follow.

In the accompanying drawings forming a part of this specification,

Figure 1 is a sectional plan view of a portion of a railway mail and express car showing the improved overhead track system installed therein;

Figure 2 is a vertical longitudinal section of Figure 1;

Figure 3 is an enlarged detail transverse sectional view of Figure 1 showing one of the branch extensions of the track adapted to be extended over the station platform;

Figure 4 is a cross sectional view on the line 4—4 of Figure 3 showing the preferred means for slidably supporting the branch extension;

Figure 5 is an enlarged detail view showing the abutting ends of one of the branches and its complementary extension; and

Figure 6 is a view similar to Figure 1 showing a modified construction.

In the selected embodiment of the invention here shown, there is illustrated a portion of a railway mail and express car comprising the opposed side walls 6 having the usual doors 7 arranged therein and the end wall 8.

The overhead track shown in Figure 1 preferably comprises a main track section 9 having a switch 11, of ordinary construction, preferably provided at each end thereof as shown in Figure 1. In this figure, there is but one end of the car shown and therefore but one such switch is shown. A track section 12 is arranged at the end of the car and is in longitudinal alignment with the main track section 9 so that the carriage 13 may be moved over the switch 11 to the track section 12 to the end of the car when desired. Branches 14 are preferably provided on each side of the main track and are arranged substantially in alignment with the door openings 7. Each branch 14 has a curved end portion 15 terminating adjacent the track section 12 so that the switch 11 may be swung or moved into alignment therewith as shown in Figure 1 so that the carriage 13 may be guided from the track section 9 onto the selected branch 14, depending upon which side of the car the mail or express packages are to be discharged or received. The track sections 9' and 12 and the branches 14 may be supported by suitable suspension rods 16 as shown in Figures 2 and 3, the ends of the sections 12 preferably being supported by such means as angle brackets 17.

An important feature of this invention resides in the novel construction of the branches 14, as particularly shown in Figure 3. Each branch is provided with an extension 18 which is preferably slidably mounted in a forked bracket 19 having a pivot stud 21 secured thereto which is pivotally mounted in a flanged bracket 22 preferably secured to the inside face of the wall 6 of the car at a point above the door opening 7. The brackets 22 may be secured to the wall of the car by such means as the bolts 23. A washer 24 and nuts 25 are mounted on the upper end of each stud 21 to retain such studs in their bearings in the brackets 22. As the branch extensions 18 and their supporting means are similar in construction but one will be described, like parts being referred to by like numerals.

Referring to Figures 3 and 4, it will be seen that a plurality of anti-friction rollers 26 and 27 are preferably provided in the bracket 19 adapted to provide a runway for the branch extension 18, which is preferably I-shaped in cross-section so that the upper horizontal flanges thereof may be received between the rollers, as particularly shown in Figure 4. A suitable cable 28 has one end secured to a bracket 29 which is mounted adjacent the outer end of the extension 18. This cable passes over a relatively smaller roller 31 mounted between the rollers 27 in the bracket 19 and from the roller 31 it passes upwardly over a pair of sheaves 32 which may be mounted at any convenient point in the car. A weight 33 is preferably suspended from the opposite end of the cable so that when the branch extension 18 is swung out of alignment with the branch 14, as shown by the dotted lines in the upper portion of Figure 1, the weight will cause the extension to automatically be drawn into the car from the full line position shown at the upper portion of Figure 1 to the full line position shown at the lower portion of the same figure. If desired, a suitable spring may be employed to return the extension 18 to the interior of the car instead of the weight 33 as shown. Stops 34 and 35 are preferably provided at each end of the extension 18 to limit the travel thereof. When the extension is outwardly moved to its operative position shown in Figure 3, the stop lug 34 will engage the rollers 27 and when the extension is inwardly moved into the car, the stop 35 will engage the end of the bracket 19 to retain the extension in its inoperative position as shown in the lower portion of Figure 1. The inner end of the extension 18 is preferably V-shaped in form as shown at 36 in Figure 5, and the end of the branch 14 is provided with correspondingly shaped inclined faces 37' to provide a seat to receive the end of the branch extension 18. By thus shaping the end of the branch 14 and the extension 18 the latter will be maintained in true alignment with the branch 14 when in operative position as shown in Figure 3, and it will also permit the extension to be swung to either side of its aligned position as shown by the dotted lines in Figure 1.

A safety latch 37 is preferably provided on the extension 18 adapted to engage the carriage 13 when the latter is in the position shown in Figure 3. The purpose of this latch is to warn the clerk that the extension is in extended or operative position and that it must be returned to the interior of the car before the car is started. The latch 37 must be manually raised out of engagement with the carriage 13 by the clerk before the carriage can be returned to the interior of the car. A hand grip 38 is provided on the latch 37 whereby it may be conveniently actuated. A stop lug 39 is also preferably provided adjacent the outer end of the extension to limit the outward movement of the carriage. If desired, means may be provided whereby the latch 37 may be actuated from the interior of the car, thereby eliminating the necessity of the clerk having to step out on the station platform to release the carriage.

A chain block 41, of ordinary construction, is preferably suspended from the carriage 13 and has a lifting hook 42 arranged at the lower end thereof to which the load may be connected. In Figure 2, there is shown a form of crate or basket 43 having a bail by means of which it may be detachably connected to the lifting hook 42 of the chain block. This basket may be of any suitable construction and is preferably collapsible so that it

may be stored in a relatively small space when not in use.

In Figure 6, there is shown a modified construction comprising a main track section 45 having a switch 46 adapted to be selectively moved into registration or alignment with the opposed branches 47 so that the carriage 13 (not shown in this figure) may be moved to either side of the car as desired. In the construction here shown, each branch 47 is provided with an extension 48 which is pivotally mounted on its respective branch so that it may be folded against the side of the car as shown in the lower portion of Figure 6. Spring catches 49 are provided on each side of the car adapted to engage the ends of the extensions when folded against the side of the car as shown, thereby to retain them in their folded inoperative position. The spring catches 49 are preferably provided with hand grips 50 whereby they may be operated from the interior of the car to release the extension 48. Spring hinges are preferably provided for securing the extensions 48 to their respective branches 47 and these hinges are of such construction that they will permit the extensions to be swung in either direction as shown in the lower portion of Figure 6, but will normally tend to retain the extensions in true alignment with the branches 47.

In the operation of this novel overhead track system, in conjunction with a railway mail or express car, the clerk will pack the mail or express packages in bags or in the basket 43, shown in Figure 2. He will then connect the basket to the hook 42 of the chain block so as to have the entire load ready for unloading when the station is reached. As soon as the train comes to a stop, the selected branch extension 18 will be outwardly moved from the position shown in the lower portion of Figure 1 to that shown in the upper portion of this figure and as shown in Figure 3, after which the carriage 13 carrying the loaded basket 43 may be moved from the main track section 9 through the switch 11 and over the branch 14 and extension 18, to a position over the station platform where the basket 43 may be discharged. Should there be any mail or express packages to be loaded onto the train, then the station agent will prepare them in a similar basket so that the mail clerk may readily pick up the station basket with the chain block after which the carriage will be returned to the interior of the car and the extension swung to its inoperative position. By this novel arrangement, the mail and express packages to be distributed and received from the various stations along the railroad, may be loaded and unloaded in a comparatively short period of time; such time not exceeding the amount of time usually required for passengers to leave and board the train.

By means of the safety latch 37 the clerk will be warned that the branch extension is in extended position, outwardly projecting through the door of the car, such warning being effected by means of the hook 37 preventing the carriage 13 from being returned to the interior of the car until the latch 37 has been raised.

It will also be seen that by means of the pivotal mounting of the branch extensions 18 that should the clerk accidentally neglect to return the extension to its inoperative position after the train has been started, that should the extension come in contact with an obstruction along the roadway, that no serious damage would result thereto as it would automatically be swung out of alignment with the branch 14 after which the weight 33 will automatically return it to the interior of the car. This is also true of the construction shown in Figure 6, wherein should the pivotally mounted extension 48, when extended, strike an obstruction along the roadway it would be swung against the side of the car and would automatically be locked in such position by the spring catch 49.

The basket 43 is preferably provided with suitable swivel castors 40 so that it may be conveniently moved about from place to place on the floor of the car for loading and unloading, should it be found inconvenient to load or unload it when suspended from the overhead track. Also by thus mounting the basket on castors or wheels, the overhead track sections 9 and 12, and the transverse branches 14 may, if desired, be dispensed with, in which case the basket will be wheeled about on the floor of the car until loaded. When the basket has been loaded or filled it is moved to a position on the car floor adjacent one of the door openings 7 and preferably beneath one of the extensions 18. The selected extension is then projected through the door opening 7 to the full line position in the upper portion of Figure 1, after which the hook 42 of the chain block 41 will be connected to the bail of the basket and the latter conveyed, by the carriage 13, to a position over the station platform, as hereinbefore described. Thus it will be seen that only the extension 18 may be employed, if desired. When only the extensions 18 are employed the carriage 13 will be arranged to travel thereon only, suitable stops preferably being provided at each end of the extension to prevent the carriage from becoming demounted therefrom. When used as above described the extension 18 may be returned to the interior of the car simultaneously with the carriage.

The carriage 13 may also be dispensed with, if desired, in which case the chain block will be secured to the outer end of the extension and after the basket has been loaded and connected to the hook 42 the extension

may be extended or projected through the door opening 7 thereby carrying the basket to a position over the station platform. When thus arranged the chain block and basket will be returned to the interior of the car when the extension is moved to its inoperative position within the car.

I claim as my invention:

1. The combination with a railway car having a side door opening, of an overhead track mounted in said car, said track having a branch terminating opposite the door opening and a pivoted track extension swingable to abut and form a continuation of said branch and to project through the door opening, said track extension being pivoted above the door opening.

2. The combination with a railway car having a side door opening, of an overhead track mounted therein and provided with a branch leading to a point opposite said opening, and a pivoted track extension adapted to be swung and projected through said door opening and abut and form a continuation of said branch when so projected, said extension being mounted to yield and move toward the side of the car upon striking an obstruction.

3. The combination with a railway car having a side door opening, of an overhead track, a branch forming a continuation of said track and terminating opposite said opening, a pivoted track extension adapted to be aligned with said branch, said extension projecting through said opening when aligned with the branch, and means for withdrawing said extension within the car when moved out of alignment with said branch track.

4. The combination with a railway car having a side door opening, of an overhead track mounted therein, a branch therefor terminating near said opening, a vertically pivoted extension forming a continuation of said branch track and adapted to be moved into alignment therewith, said extension being mounted to swing out of alignment with said branch track upon striking an obstruction, and means for returning said extension to its normal retracted position when out of alignment with said branch track.

5. In a device of the class described, a main track, a branch track, a switch for the tracks, an extension for the branch track, pivoted and adapted to be translated on its pivot for connection with the branch track respectively to form a continuation thereof, and for assuming a storage position at an angle thereto.

6. The combination with a railway car having a side door opening, of an elevated track section pivotally slidably mounted to be moved through said opening and having extensible means for normally holding it in a retracted position within the car.

7. The combination with a railway car having a side door opening, of an elevated track section adapted to be projected endwise through said door opening, and said section being mounted to oscillate horizontally to permit it to pass an obstruction if the user neglects to withdraw the section within the car when the unloading and loading operation is completed.

8. The combination with a railway car having a side door opening, of a track section mounted to move lengthwise through said opening and supported on a vertical pivot to oscillate horizontally, and a carrier supported by said section and movable thereon back and forth through said door opening.

9. A car having a door opening, a main tram rail leading to the opening, a slide-carriage pivoted above the opening for rotation in a horizontal plane, an extension tram rail horizontally translatable in said carriage and adapted for forked abutting aligned engagement with the main rail when projected through the opening, and yieldable restricting means for holding the extension in abutting aligned position with the main rail, and adapted to automatically translate and withdraw said extension inwardly when the same is rotated sufficiently to destroy the abutting relation with the main rail.

In witness whereof, I have hereunto set my hand this 15th day of November, 1928.

PAUL H. KNOLL.