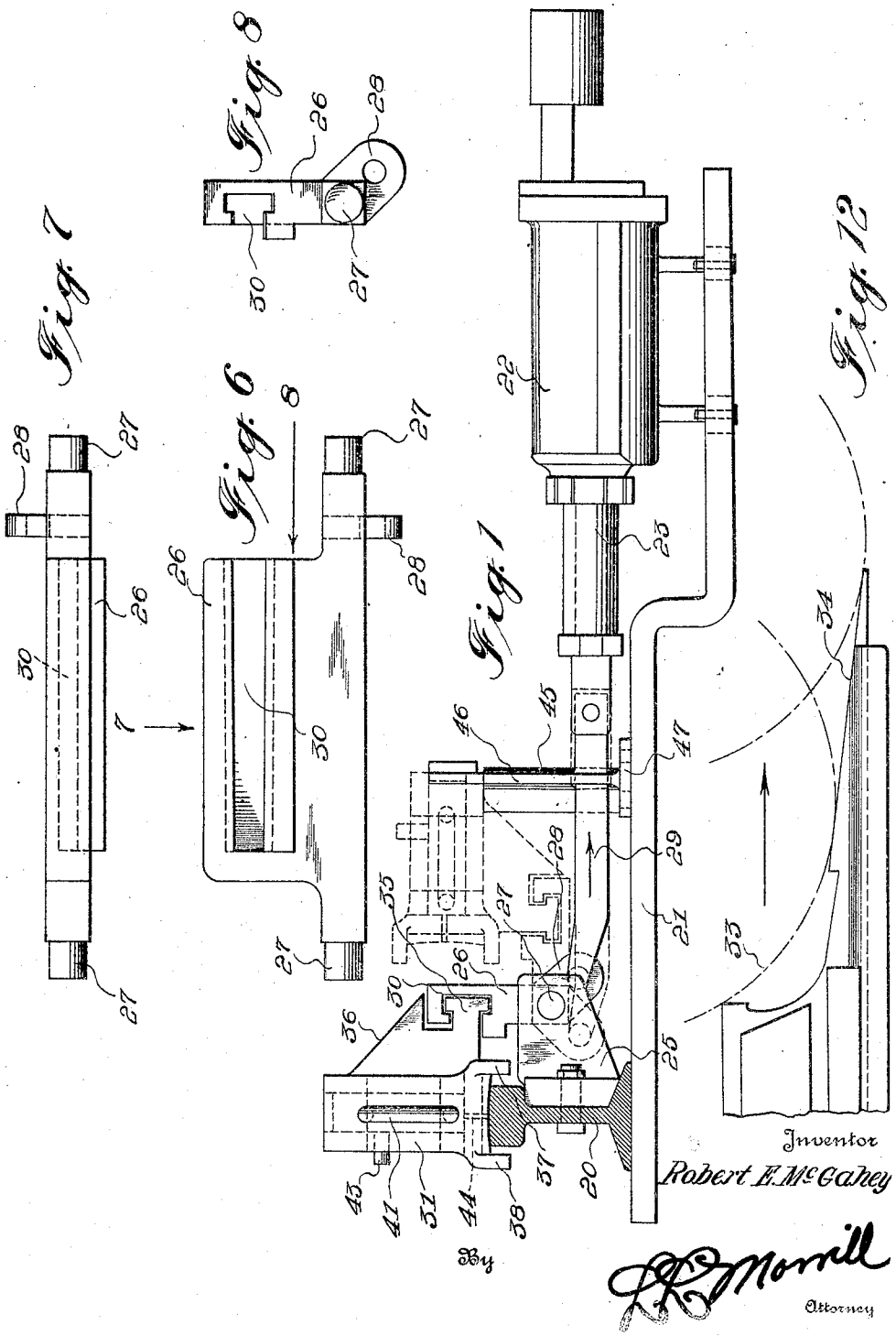
April 13, 1926. 1,580,836

R. E. McGAHEY

RAILWAY TRACK SKATE

Filed August 28, 1925 3 Sheets-Sheet 1

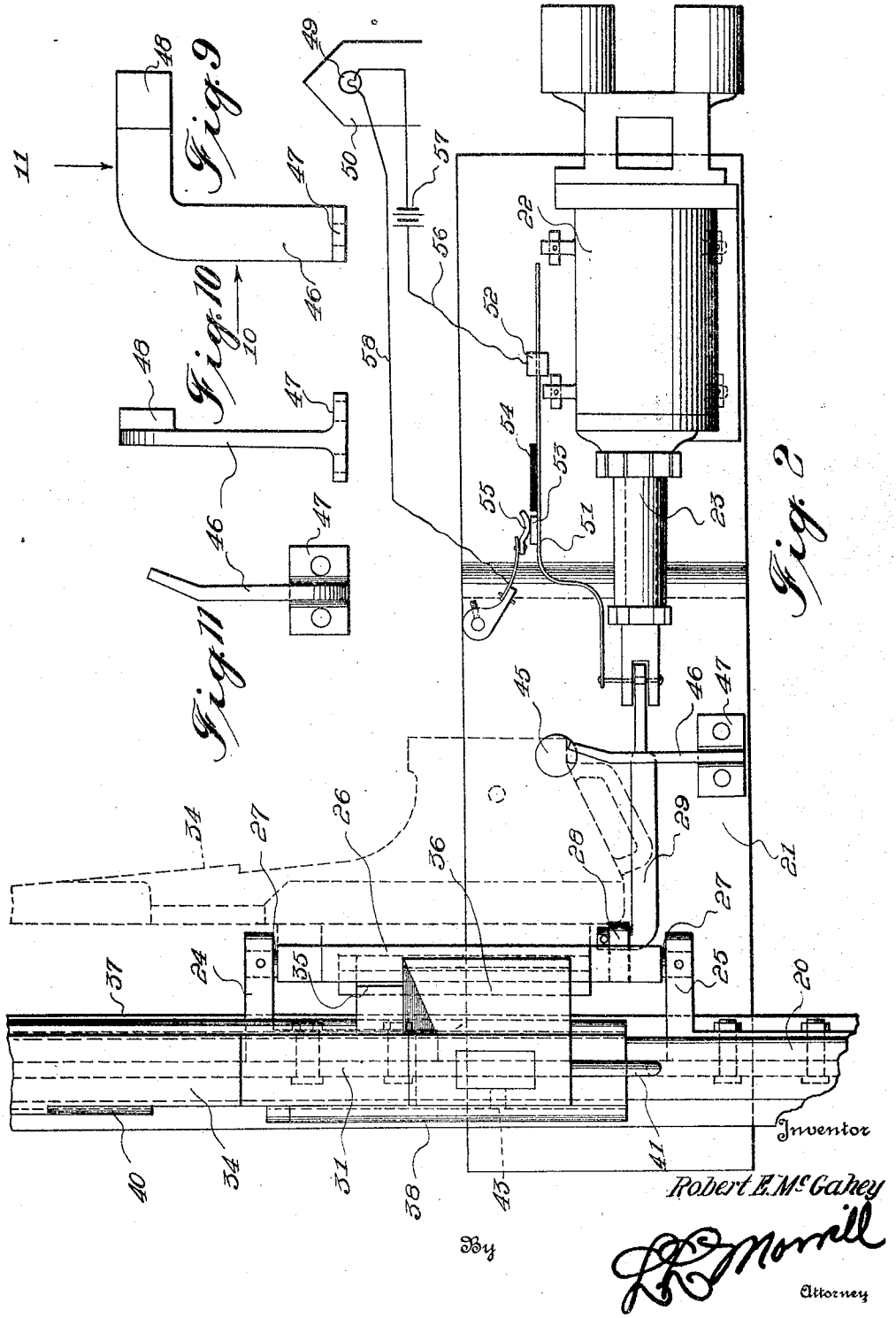


April 13, 1926. 1,580,836

R. E. McGAHEY

RAILWAY TRACK SKATE

Filed August 28, 1925 3 Sheets-Sheet 2



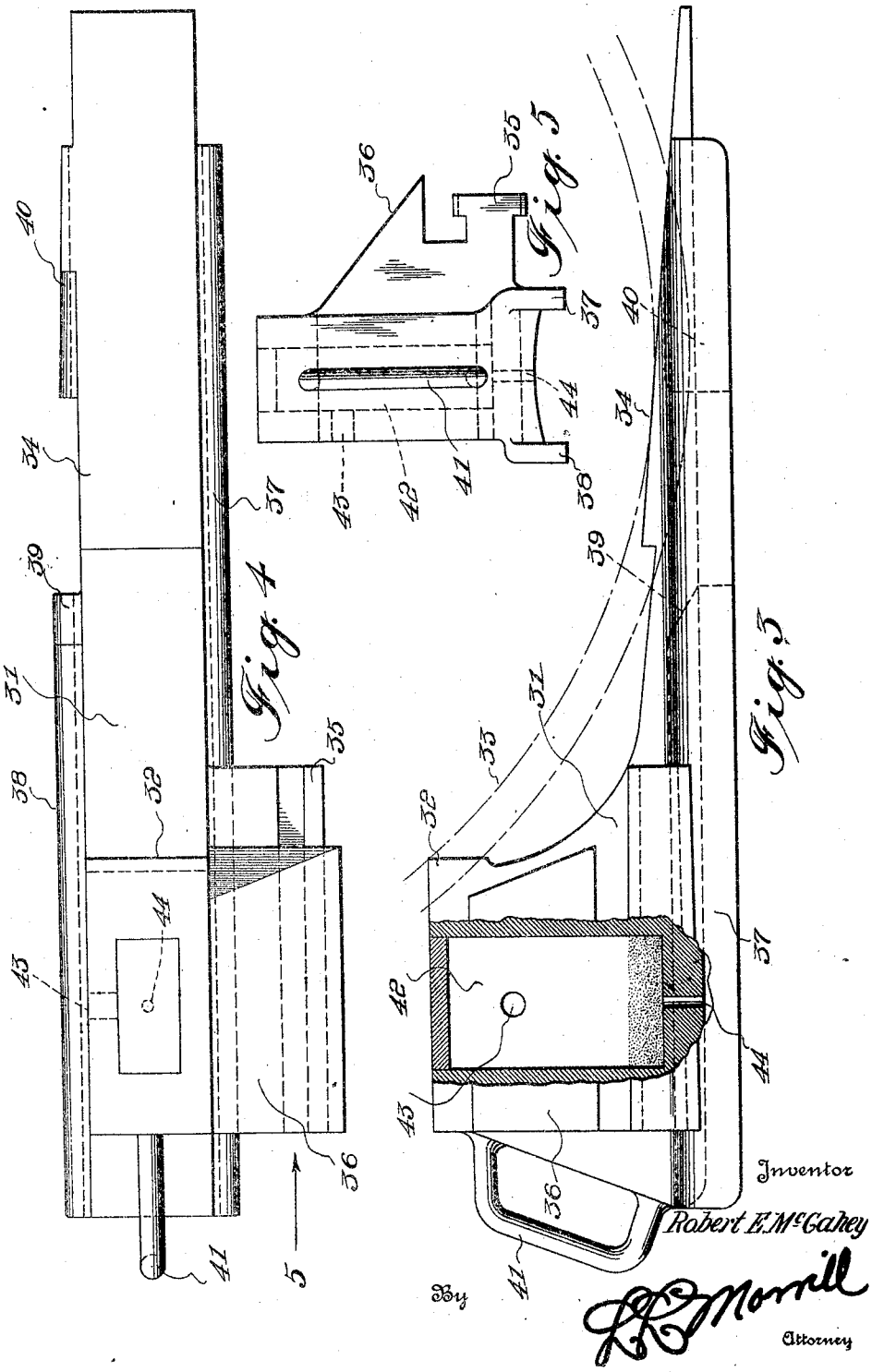
April 13, 1926.

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R. E. McGAHEY

RAILWAY TRACK SKATE

Filed August 28, 1925 3 Sheets-Sheet 3



Patented Apr. 13, 1926. 1,580,836

UNITED STATES PATENT OFFICE.

ROBERT E. McGAHEY, OF ALEXANDRIA, VIRGINIA.

RAILWAY-TRACK SKATE.

Application filed August 28, 1925. Serial No. 53,142.

To all whom it may concern:

Be it known that I, ROBERT E. McGAHEY, a citizen of the United States, residing at Alexandria, in the State of Virginia, have invented certain new and useful Improvements in Railway-Track Skates, of which the following is a specification.

This invention relates to railway track skates and has for an object to provide a track skate, the movement of which from inoperative to operative, or operative to inoperative position may be controlled from a distant point, and with improved means for maintaining it against displacement in inoperative position.

A further object of the invention is to provide improved connection between the stationary parts and the skate proper providing for release of the skate from the stationary parts when the skate is engaged by a moving car.

A further object of the invention is to provide improved means resident with the skate itself for releasing the car from its position upon the skate when it has come to rest, such releasing means including an incline properly positioned and proportioned to employ the force of gravity to roll the car backward off from the skate.

A further object of the invention is to provide improved means for notifying the operator at a distant point when the skate is properly in operative position upon the rail.

With these and other objects in view, the invention comprises certain novel parts, elements, units, combinations, constructions, arrangements, interactions, mechanical movements and functions as disclosed in the drawings together with mechanical and functional equivalents thereof as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a view of the track skate installation in end elevation mounted upon a rail shown in transverse section.

Figure 2 is a top plan view of the installation similarly located.

Figure 3 is a view in side elevation of the skate member, parts being broken away to show the sand chamber.

Figure 4 is a view of the skate proper in top plan.

Figure 5 is a view of the skate in end elevation seen from the end indicated by arrow 5 at Figure 4.

Figure 6 is a view in side elevation of the hinged skate operating member.

Figure 7 is a view in top plan of the hinged member as indicated by arrow 7 of Figure 6.

Figure 8 is a view of the hinged member in end elevation as indicated by arrow 8 of Figure 6.

Figure 9 is a view in side elevation of the skate retaining arm.

Figure 10 is a view of the skate retaining arm in side elevation as indicated by arrow 10 of Figure 9.

Figure 11 is a view in top plan of the skate retaining arm as indicated by arrow 11 of Figure 9.

Figure 12 is a diagrammatic view showing the movement of the car when rolling down the incline of the skate for releasing the skate after bringing the car to rest.

Like characters of reference indicate corresponding parts throughout the several views.

The skate installation which forms the subject matter of this application is adapted to be associated with a railroad rail 20. It is connected with the rail by means of the base plate 21 which is rigidly secured to the rail and carries spaced away from the rail some form of power apparatus represented conventionally by the cylinder 22 with a piston 23 but it is to be understood that, while this is an approved type of operating means, it is by no means the only type which may be employed and the invention is in no way limited to this particular type of operating device.

Rigidly secured to the rail also are similar brackets 24 and 25 between which are pivoted the hinged block 26, preferably by means of trunnions 27 formed upon and preferably integral with said block 26. This block 26 is adapted to be oscillated upon its hinges represented by the trunnions 27 from the power means through the medium of an offset 28 which pivotally engages with the link 29 from the piston 23.

The block 26 is provided with a tapered dovetailed slot 30, the open end of which slot is in the direction in which the skate will move under the impetus of the car engaging thereon.

The skate proper comprises a body 31 having an abutment 32 against which the car wheel engages, such car wheel being represented at Figures 3 and 12 at 33. It will be noted that in the engagement of the car wheel 33 against this abutment 32, the wheel must roll up an incline 34 whereon it remains so long as the car is in motion and moving the skate along the track. This movement of the skate along the track under the impetus of the moving car releases the skate from the hinged block 26. The engagement between the two comprises a dove-tailed rib 35 upon the side of the skate with preferably an inclined overhang 36. The skate is also provided with flanges 37 and 38, the former of which extends the entire length of the skate and moves preferably upon the outer side of the rail, while the latter is cut short as indicated at 39 to accommodate the flange of the wheel upon the inner side of the rail. A short, thin, tapered, flange section 40 continues the flanges 38, being of such size and proportion and also so positioned as not to interfere with the movement of the car, the flange of the wheel sliding along the side of this narrow section.

It is well understood, of course, when a car strikes the skate when in operative position, it moves away from the positioning structure and must be manually returned to position. For this purpose, a handle 41 is provided forming no part of the essential operativeness of the skate but adding to its convenience in operation. Also, for the purpose of increasing the frictional resistance of the skate upon the rail and therefore bringing the car to a stop quicker, the skate is provided with a chamber 42 which may be filled with sand through the opening 43, an outlet 44 being provided to permit the sand to run from the chamber 42 on to the top of the rail 20.

Upon the base plate 21 is erected a support or strut 45 which maintains the skate in approximately horizontal position when in inoperative position as indicated at Figures 1 and 2. To prevent the displacement of the skate from the hinged block 26 when in this position, an arm 46 is rigidly secured to the base plate as by the foot 47, the upper end being bent as indicated more particularly at Figure 9 so that, when in position as indicated at Figures 1 and 2, the skate will engage against the extremity 48 before it can be removed from the block 26.

By this means, when the skate is off the rail and in inoperative position, it can not be removed purposely or accidentally from the installation and is, therefore, always found in proper position to be operated when occasion requires.

To enable the tower man or the person operating the device from a distant point to ascertain whether or not the skate is in proper position upon the rail, a light or other signaling device indicated at 49 is located in the tower indicated conventionally at 50. The piston 23 carries a conductor 51 sliding through the guide 52. It also carries a contact block 53 and an insulating block 54. A spring contact 55 is in position to engage either of the blocks 53 or 54 according to the position of the piston 23 which will control the position of the conductor 51. When the spring contact 55 is in engagement with the contact block 53, current will pass through the conductor 51 and guide 52, wire 56, battery 57 to light, returning through the wire 58 to the spring contact 55. While the skate is in inoperative position, the light 49 remains dark but, when the skate is moved to operative position, the light 49 is lighted which will indicate to the operator that the skate is in proper position upon the rail.

In operation, the skate will normally remain in inoperative position but, when for any purpose it is desirable or necessary to throw the skate in the path of movement of the car, the operator at the distant point controlling the movement of the car actuates the necessary mechanism for energizing the power apparatus which will move in the direction indicated by the arrow on the link 29 in Figure 1, tending to throw the hinged block 26 upwardly and therewith the skate 31 carried thereby. With the skate positioned upon the rail, it is free to leave the hinged block 26 when engaged by and moving with the car, the hinged block remaining as a part of the operating structure.

The car now moves forward pushing the skate in the usual well known manner until the frictional resistances have brought the car to rest, whereupon, by reason of the incline 34 of the skate, the car rolls backwardly from that attained position off of the end of the skate which may now be manually removed from its position upon the rail without the necessity of applying force to the car to move it backwardly to release it from the skate as is ordinarily the case. The automatic release of the car from its position upon the skate adds very greatly to the facility with which the device may be operated.

What I claim to be new is:

1. A track skate installation comprising in association with a rail, a member hinged permanently relative to the rail, means to oscillate the hinged member, an all rigid skate slidably connected with the hinged member properly proportioned to be moved with said hinged member to a position upon the top of

the rail and to an inoperative position beside the rail and a rigid abutment engaging the skate in inoperative position and locking said skate against displacement.

2. A track skate installation comprising, in combination with a rail, a member hinged permanently at one side of and oscillating in an arc transverse to the rail, means to oscillate the hinged member, an all rigid skate slidably associated with and adapted to be disconnected from said hinged member and an abutment rigid with the rail against which the skate lockingly engages at times.

3. A track skate installation comprising, in combination with a rail, a block hinged at one side of the rail and provided with a guide, means to actuate the block to swing it toward and away from the rail, an all rigid skate member having an interacting sliding connection with the guide and adapted to move with the hinged block and a rigid abutment against which the skate at times engages to prevent sliding movement.

4. A track skate installation comprising, in combination with a rail, a block hinged at one side of and adapted to oscillate toward and away from the rail and provided with a dove-tailed slot having at one end a shoulder and an all rigid skate member having a dove-tailed rib interengaging with the dove-tailed slot and against the shoulder and through such connection to move with the block to and from operative position upon the rail and to be released from said connection by the sliding movement of the skate away from the shoulder.

5. A track skate comprising a body having means for association with a rail, means for slidable connection with an operating member adjacent the rail, and an inclined car wheel seat upon the normal top of said skate positioned at such angle as to cause the car to roll backwardly off of said incline through the force of gravity.

6. A track skate comprising a body having means for sliding association with a rail, an abutment positioned to be engaged by a moving car wheel and to cause the skate to slide along the rail by the momentum of the car, said skate being provided with an incline upon which the car wheel rests during such movement, said incline being of such angle as to cause the car to roll backwardly off of said incline after coming to a rest.

In testimony whereof I affix my signature.

ROBERT E. McGAHEY.