

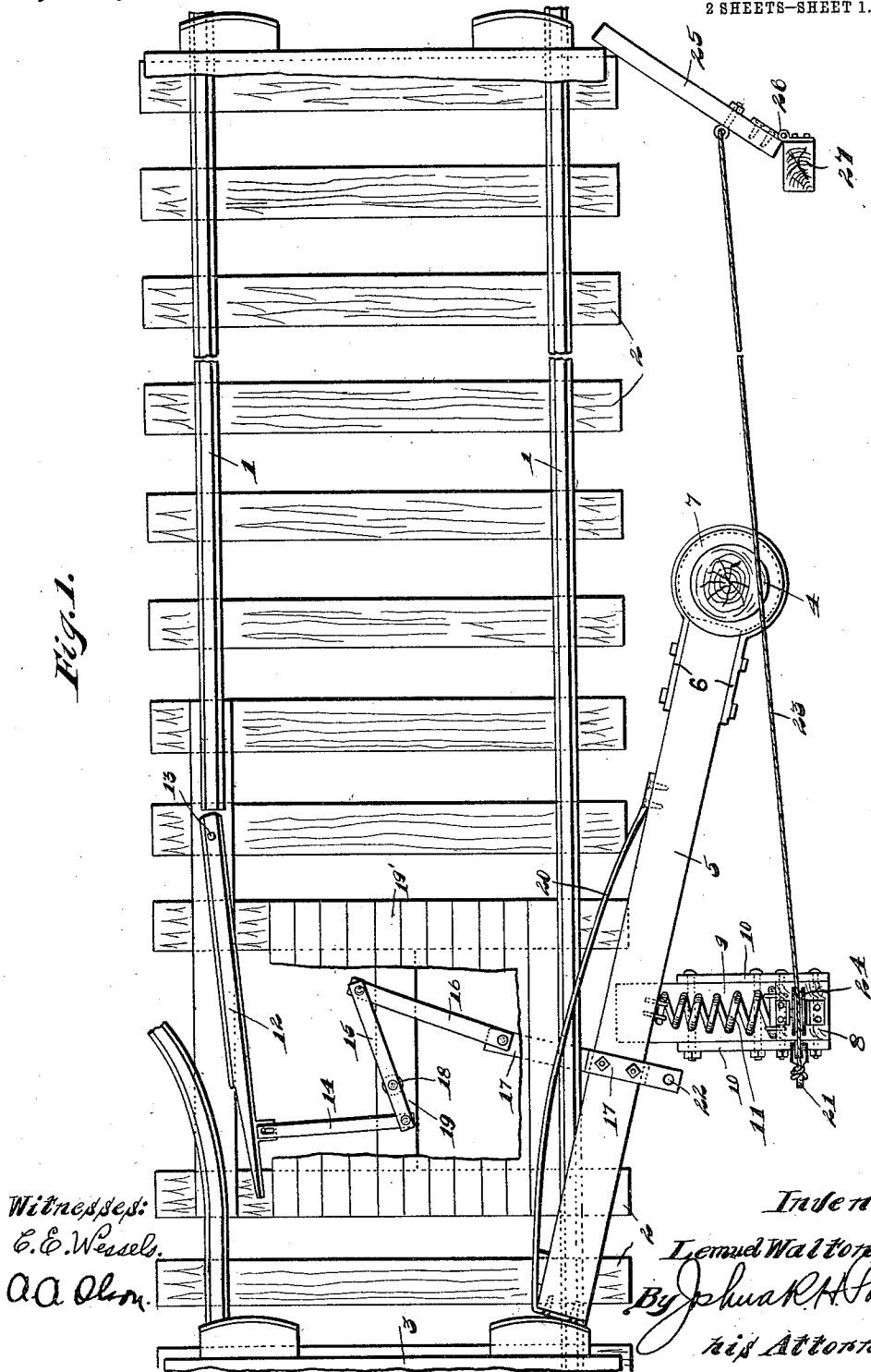
L. WALTON.
SAFETY DEVICE FOR INCLINED RAILWAYS.
APPLICATION FILED JULY 3, 1911.

1,009,118.

Patented Nov. 21, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



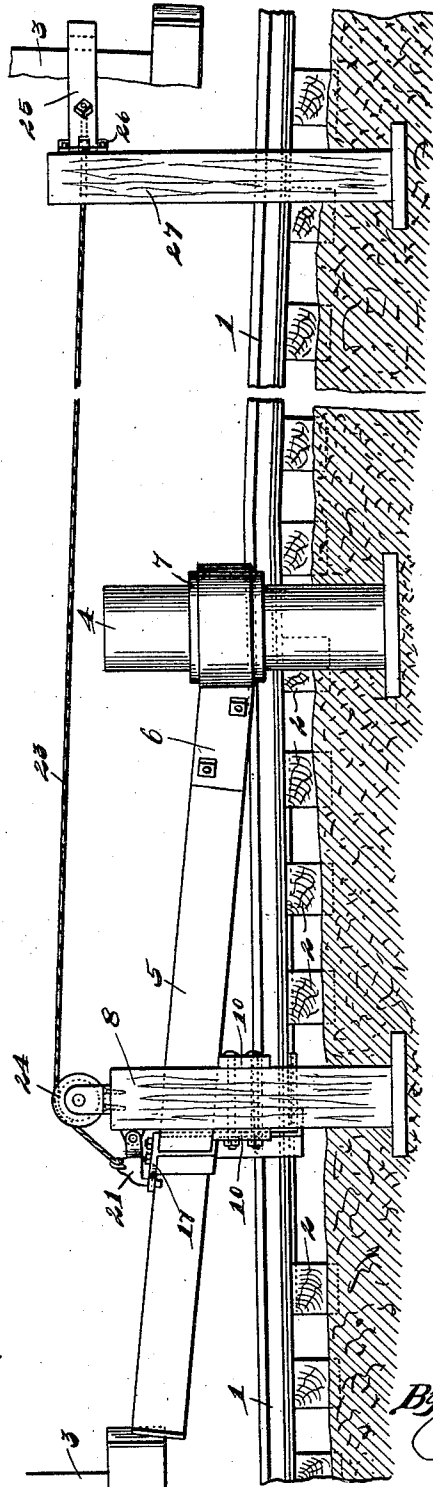
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2 SHEETS—SHEET 2.

Fig. 2.



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SAFETY DEVICE FOR INCLINED RAILWAYS.

1,009,118.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed July 3, 1911. Serial No. 636,606.

To all whom it may concern:

Be it known that I, LEMUEL WALTON, a citizen of the United States, residing at Plains, county of Luzerne, and State of Pennsylvania, have invented certain new and useful Improvements in Safety Devices for Inclined Railways, of which the following is a specification.

My invention relates to safety devices for inclined railways and more specifically to that class thereof especially designed for use in mines.

The object of my invention is the production of a device of the character mentioned which will be of improved construction and efficient in operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in the combinations and arrangements of parts hereinafter described and claimed.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a top plan view of a section of a railway to which is applied a safety device embodying the invention, and Fig. 2 is a side elevation thereof.

Referring now to the drawings I have illustrated therein a section of an ordinary railway the same comprising as shown, the tracks 1 which are mounted as usual upon the ties 2. The end portion of a railway car 3 mounted upon rails 1 is also illustrated.

Arranged adjacent the railway at one side thereof is a stationary upright post 4, the base thereof being rigidly secured in any suitable manner. Pivotally secured to the post 4 is an arm 5, the pivotal connection between said post and arm being effected through the medium of a strap 6 secured to one end of said arm and which loosely embraces an annularly grooved bearing member 7 arranged upon said post. Said arm 5 is thus mounted for free swinging in a horizontal plane, the free end thereof being adapted to be moved to traverse the path of a car 3 traveling upon the railway, said arm 5 being so arranged as is understood that movement of the car up the incline will be permitted, downward or retrograde movement of the car upon the track being adapted to be prevented thereby.

Arranged outward of the arm 5 adjacent the medial portion thereof is an upright sta-

tionary post 8, the base of said post being secured in the ground in any suitable manner. Projecting from the post 8 is a horizontally disposed plate 9 which is rigidly secured to said post by means of plates 10 and serves as a support for the arm 5. Interposed between the post 8 and the adjacent side of the arm 5 is a compression spring 11 which is adapted normally to yieldingly maintain the arm 5 in traversing position.

Interposed in the rail 1 remote from the arm 5 is a switch tongue 12 having one end pivotally secured at 13. Said tongue 12 is so arranged that when in open position the same will be adapted to effect the derailing of a car traveling down the track which has passed the arm 5 without having been brought to a stop. The free end of the tongue 12 is operatively connected with the free end of the arm 5 through the medium of a series of pivotally connected links 14, 15 and 16, the outer extremity of the link 16 being pivotally connected with an arm 17 which is secured to the arm 5; the intermediate link 15 being fulcrumed at 18 to a transverse bar 19 extending between adjacent ties 2. Said links are preferably protected as shown by a board covering 19'. With this arrangement it is apparent that simultaneous operation or movement of the tongue 12 and arm 5 will be effected. And further, the construction is such that when the arm 5 is in traversing position, said tongue will be in open position and consequently when said arm is in non-traversing or inoperative position, said tongue will be in closing position. With this arrangement then a double acting safety apparatus is provided. The arm 5 will normally act to prevent retrograde movement of the car. Should said arm fail to act or should the same break, the tongue 12 will serve to effect derailing of the car and thus bring the same to a stop. In order to absorb the impact of the contact of a car with the arm 5 when the car is moving up the incline, a leaf-spring 20 is preferably secured to the inner side of said arm as shown in Fig. 1.

When it is not desired to use the device, the same may be held in inoperative position through the medium of a hook 21 which is pivoted to the post 8, said hook being adapted to engage an eye 22 formed upon the member 17, said hook, when in engagement with said eye, serving to hold the arm 5 in non-traversing position and hence the

tongue 12 in closed position. Connected with the hook 21 is a cord 23 which passes upwardly over a pulley 24 mounted upon the upper end of the post 8, said cord 23 being
 5 also connected with the free end of an oscillatory arm 25 which is hinged at 26 to a post 27 arranged along the railway track some distance from the posts 8 and 4 as clearly illustrated. The arm 25 is so ar-
 10 ranged that the outer end thereof normally traverses the path of a car 3 traveling upon the track and so that a car in passing down the track will contact said arm and rock the same to effect drawing of the cord 23 and
 15 hence upward rocking of the hook 21 to release the member 5. The member 5 will only be held in inoperative position by the hook 21 when a car is moving down the track so as to permit of passage thereof.
 20 With the construction last described it will be seen that in the passage of a car down the track with the member 5 in inoperative or non-traversing position, the arm 25 will be engaged by the car so moving to effect
 25 the release of the member 5 and hence so as to prevent a second car passing down the track to collide with the first.

A device of the construction as set forth is durable and economical. The same is
 30 positive and reliable in operation and is not susceptible to readily becoming inoperative.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of
 35 variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and
 40 modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

45 1. The combination with a railway of means for stopping a car on said railway; means for derailing a car passing said stopping means; and means for simultaneously throwing said stopping and derailing means
 50 into operative or inoperative positions, substantially as described.

2. The combination with a railway of means for stopping a car on said railway; means for derailing a car passing said stop-
 55 ping means; operative connection between said stopping means and derailing means whereby operation of said stopping means causes simultaneous operation of said derailing means; and means for operating said
 60 stopping means, substantially as described.

3. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post for horizontal swing-
 65 ing, the free end of said arm being adapted to be swung to traverse the path of a car

traveling upon said track; car derailing means interposed in said track adjacent said arm; an operative connection between said means and said arm whereby simultaneous movement thereof is effected; and means for
 70 yieldingly maintaining said arm and said derailing means normally in operative position, substantially as described.

4. The combination with a railway of a post arranged adjacent the track; an arm
 75 pivoted to said post for horizontal swinging, the free end of said arm being adapted to be swung to traverse the path of a car traveling upon said track; a switch tongue interposed in one of the rails of said track ad-
 80 jacent said arm; an operative connection between said arm and said tongue; and means for yieldingly holding said arm in traversing position and said tongue in open position, substantially as described.
 85

5. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post for horizontal swinging, the free end of said arm being adapted to be
 90 swung to traverse the path of a car traveling upon said track; a switch tongue interposed in one of the rails of said track adjacent said arm; an operative connection between said arm and said tongue whereby simultane-
 95 ous movement thereof is effected; and resilient means for yieldingly holding said arm in traversing position and said tongue in open position, substantially as described.

6. The combination with a railway of a stationary post arranged adjacent the track; 100
 an arm having one end pivoted to said post for horizontal swinging, the free end of said arm being adapted to be swung to traverse the path of a car traveling upon said track; a stationary horizontally disposed plate for
 105 supporting said free end of said arm in position for engagement with the end of the car-body; a switch tongue interposed in one of the rails of the track adjacent said arm; an operative connection between said arm 110
 and said tongue whereby simultaneous operation thereof is effected; and resilient means for normally maintaining said switch in open position and said arm in traversing position, substantially as described.
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7. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post for horizontal swinging, the free end of said arm being adapted to be swung to traverse the path of a car trav-
 120 eling upon said track; a second post arranged adjacent said arm medially thereof; a supporting member projecting from said second post for movably supporting said free end of said arm in position for engage-
 125 ment with the end of the car-body; a switch tongue interposed in one of the rails of the track adjacent said arm; an operative connection between said arm and said tongue whereby simultaneous operation thereof is 130

effected; and a compression spring interposed between said second mentioned post and the adjacent side of said arm for normally maintaining said arm in traversing position and said switch tongue in open position, substantially as described.

8. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post so that its free end may be swung to traverse the path of a car traveling upon said track; means for movably supporting said free end of said arm in position for engagement with the end of the car-body; means for yieldingly holding said arm in traversing position; means for holding said arm in non-traversing position; and means traversing the path of a car traveling upon said track and adapted to be operated by contact with a car so traveling, for releasing said last-mentioned means, substantially as described.

9. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post so that its free end may be swung to traverse the path of a car traveling upon said track; means for movably supporting said free end of said arm in position for engagement with the end of the car-body; means for yieldingly holding said arm end in traversing position; means for holding said arm in non-traversing position;

tion; and means for releasing said last-mentioned means, said releasing means comprising an arm traversing the path of a car traveling upon said track and adapted to be operated by contact with a car so traveling, substantially as described.

10. The combination with a railway of a post arranged adjacent the track; an arm pivoted to said post so that its free end may be swung to traverse the path of a car traveling upon said track; means for movably supporting said free end of said arm in position for engagement with the end of the car-body; means for yieldingly holding said arm end in traversing position; means for holding said arm in non-traversing position; and means for releasing said last-mentioned means, said releasing means comprising an oscillatory arm arranged along said track spaced from said first-mentioned post, and normally traversing the path of a car traveling upon said track and adapted to be operated by contact with a car so traveling, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEMUEL WALTON.

Witnesses:

JAMES N. CONNIFF,
MARY BALDWIN.