No. 699,024. Patented Apr. 29, 1902.

C. L. E. SCHENK.

BRAKE FOR UP-HAULS FOR MINES

(Application filed Feb. 10, 1902.)

(No Model.)

FIG. 1.

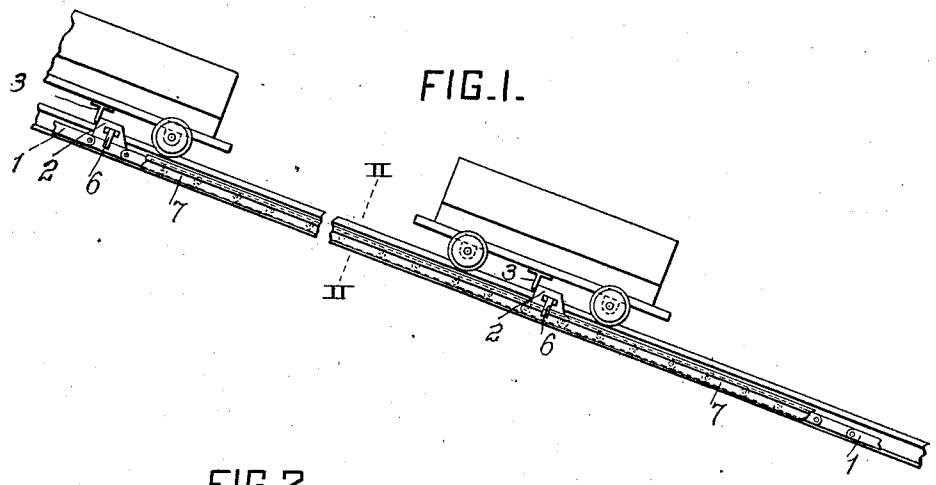


FIG. 2.

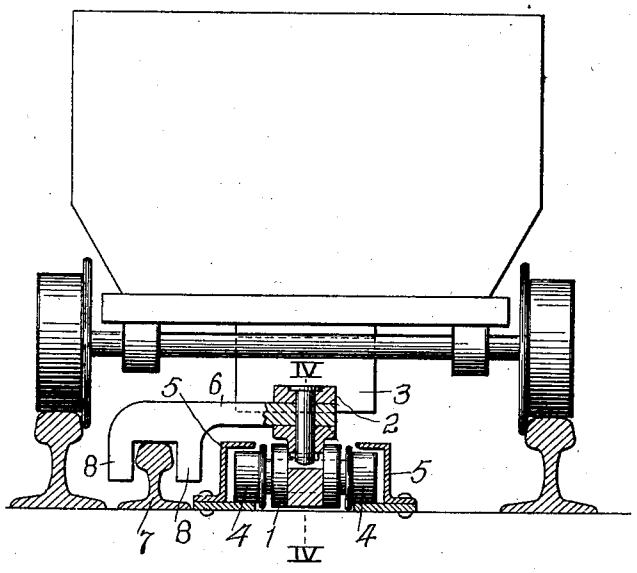


FIG. 3.

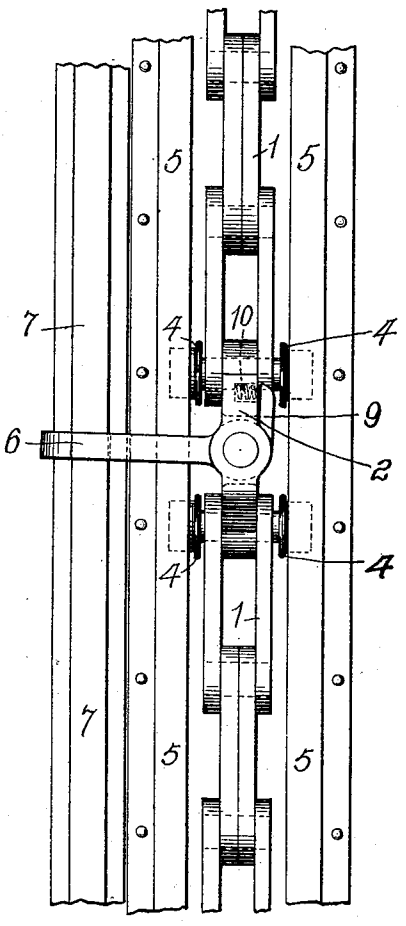
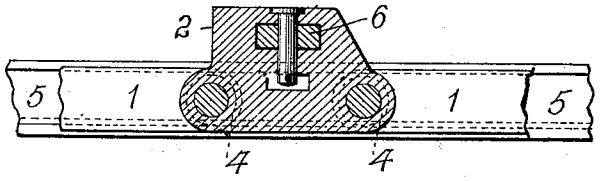


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CARL L. E. SCHENK, OF WALKERS MILLS, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO TATE, JONES & COMPANY, INCORPORATED, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BRAKE FOR UPHAULS FOR MINES.

SPECIFICATION forming part of Letters Patent No. 699,024, dated April 29, 1902.

Application filed February 10, 1902. Serial No. 93,439. (No model.)

To all whom it may concern:

Be it known that I, CARL L. E. SCHENK, a citizen of the United States, residing at Walkers Mills, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Brakes for Uphauls for Mines, of which improvements the following is a specification.

The invention described herein relates to certain improvements in brake mechanism for the uphaul-chain of mining-cars, &c., and has for its object a construction whereby a return movement of the chain and cars is prevented in case of the breakage of the uphaul-chain.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view in elevation of a portion of the up-track of a mine, showing cars in position on the track and engaged by the chain, the latter having my improved brake applied thereto. Fig. 2 is a transverse section on an enlarged scale, the plane of section being indicated by the line II II, Fig. 1. Fig. 3 is a plan view of a portion of the track and the uphaul-chain having my improved brake, and Fig. 4 is a transverse section on a plane indicated by the line IV IV, Fig. 2.

In the practice of my invention the uphaul-chain 1 is constructed in the usual or any suitable manner and is provided, as is customary, at certain intervals with a projection or abutment 2, extending up beyond the lower edge of a flange plate or projection 3 on the bottom of the car, so that during the movement of the chain this abutment will bear against the flange-plate and push the car up along the inclined track. In order to support this abutment vertically and insure its engagement with the flange-plate, supporting-rollers 4 are mounted on pins passing through the block or abutment and projecting into guideways 5, secured to the cross-ties of the track. In order to prevent a return or downward movement of the chain and cars in case of the rupture of the former, I provide suitable brake-arms connected to the chain at intervals and preferably at the points where the abutments 2 are secured, said brake-arms being so constructed as to engage a stationary portion of the track in case of a return movement of the chain or cars, but moving freely along such track or stationary portion of the track while the car is moving upward. A convenient construction to this end consists in arms 6, pivotally mounted on the blocks or abutments and extending laterally over a third rail 7, arranged along between the chain-guide and one of the rails. These arms are provided at their outer ends with fingers 8, projecting downwardly on opposite sides of this rail and adapted when the arms are shifted to an angle other than a right angle to the rail to grip the latter tightly. During the upward movement of the chain and cars the arms are held in a position at right angles to the chain, so that neither of the fingers will take a grip on the rail, by any suitable means—such, for example, as that clearly shown in Fig. 3 and consisting of fingers 9, secured to the pivotal ends of the arms and bearing against the sides of the blocks. While the chain or car is passing upward these fingers will hold the gripping-fingers in such position that they will slide freely along the third rail; but as soon as there is any rearward movement of the chain the arm will assume a position at an angle to the rail less than a right angle and cause the fingers to grip the rail, and thus prevent any further rearward movement.

In order that the fingers of the arm may always be in gripping position, it is preferred to apply springs 10 to the arms—as, for example, by interposing such springs between the fingers 9 and the abutments—so that the outer ends of the arms will be thrown forward at an angle to the rail. While in this position the rubbing of the fingers along the rail will tend to compress the springs and move the arms to unlocking position; but as soon as the chain makes any rearward movement the fingers will be caused to grip the third rail firmly, and that with only a very slight rearward movement of the chain.

I claim herein as my invention—

1. An uphaul for cars having in combination a chain, a rail parallel with the line of

movement of the chain, an arm having one end connected to the chain and means on the opposite end of the arm operative on a rearward movement of the chain to grip the rail, substantially as set forth.

2. An uphaul for cars having in combination a chain, a rail parallel with the line of movement of the chain, and an arm pivotally mounted on the chain and provided at its outer end with fingers projecting down on opposite sides of the rail, substantially as set forth.

3. An uphaul for cars having in combination a chain, a rail parallel with the line of movement of the chain, an arm pivotally mounted on the chain and provided at its outer end with fingers projecting down on opposite sides of the rail, and means for holding the fingers from engagement with the rail during the forward movement of the chain, substantially as set forth.

4. An uphaul for cars having in combination a chain, a rail parallel with the line of movement of the chain, an arm pivotally mounted on the chain and provided at its outer end with fingers projecting down on opposite sides of the rail and a spring for pushing the outer end of the arm in the direction of movement of the chain, substantially as set forth.

In testimony whereof I have hereunto set my hand.

CARL L. E. SCHENK.

Witnesses:
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F. E. GAITHER.