March 18, 1924. 1,486,922

A. F. ROSS

BRAKE

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Fig. 1.

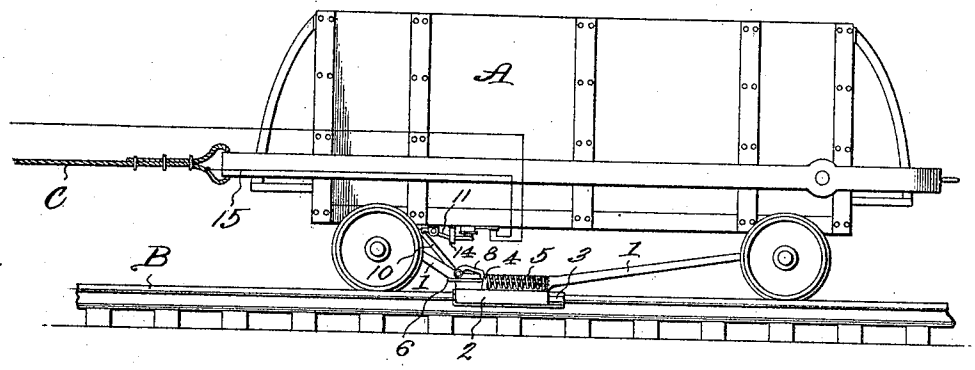
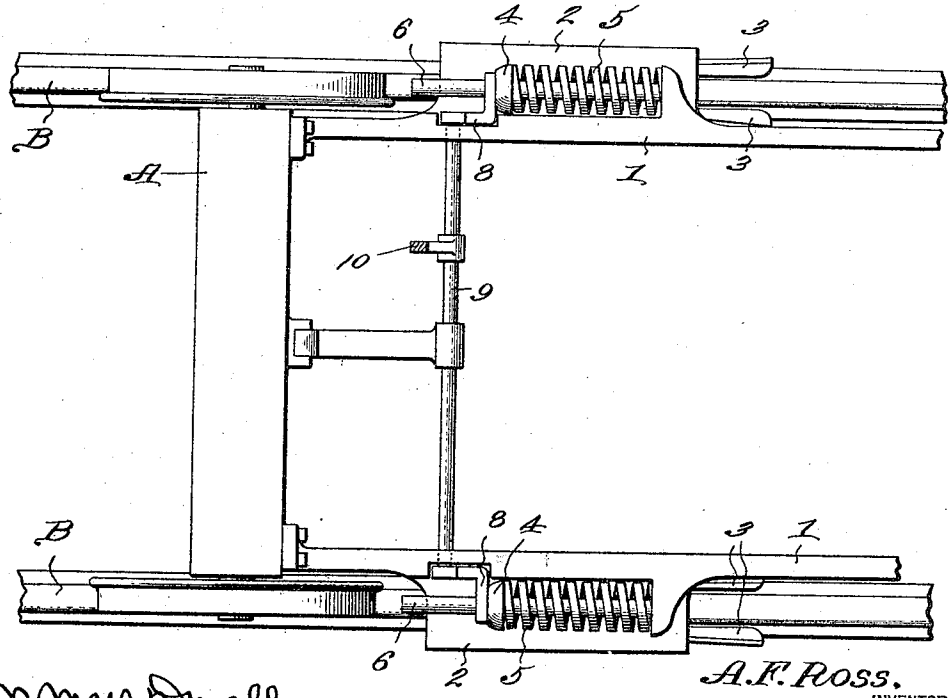


Fig. 2.



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Fig. 3.

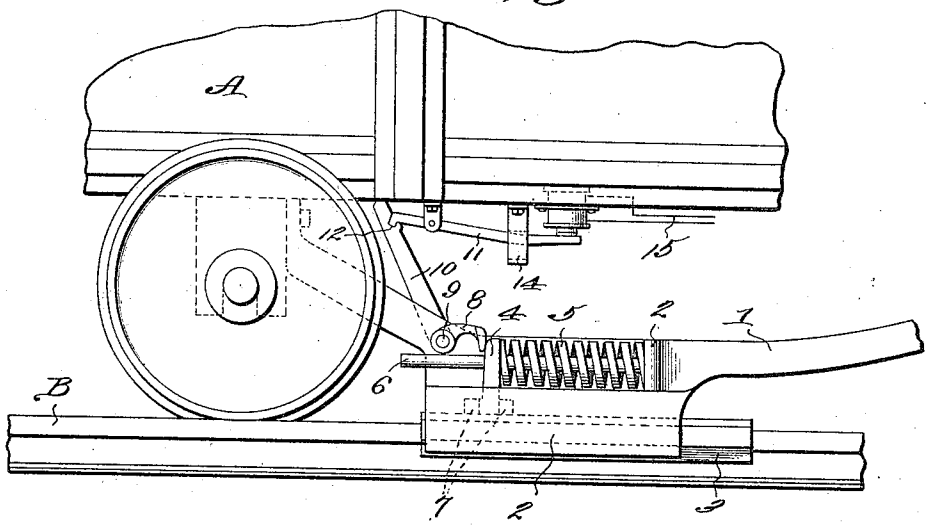
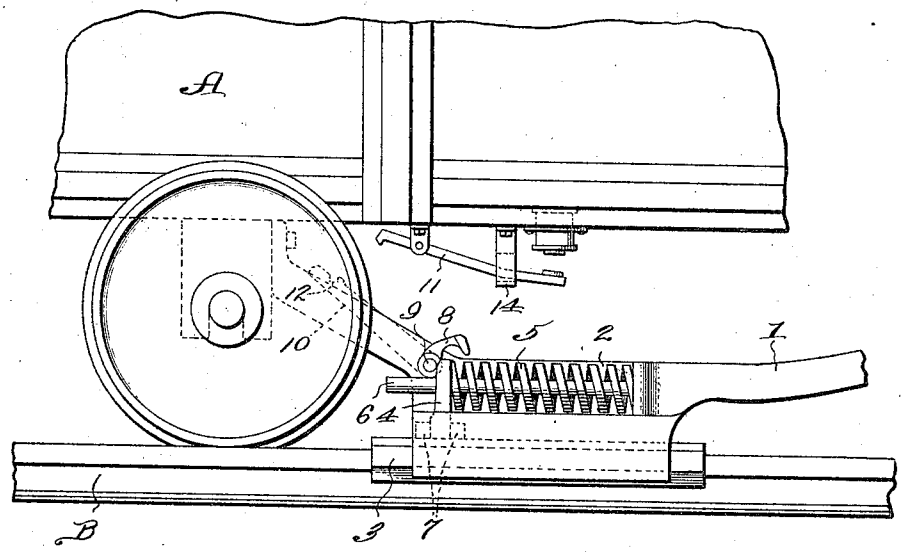


Fig. 4.



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1,486,922

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Filed Sept. 6, 1922 3 Sheets-Sheet 3

Fig. 5.

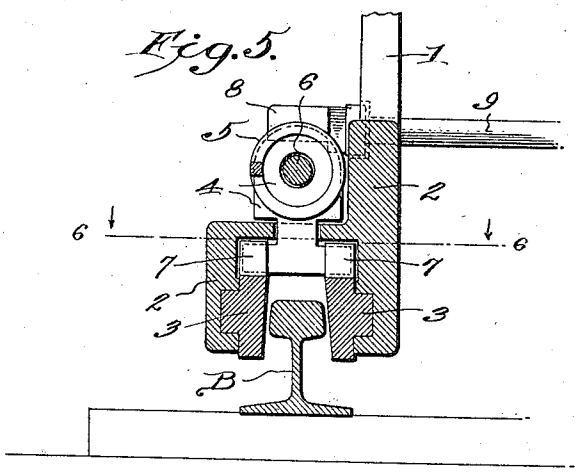
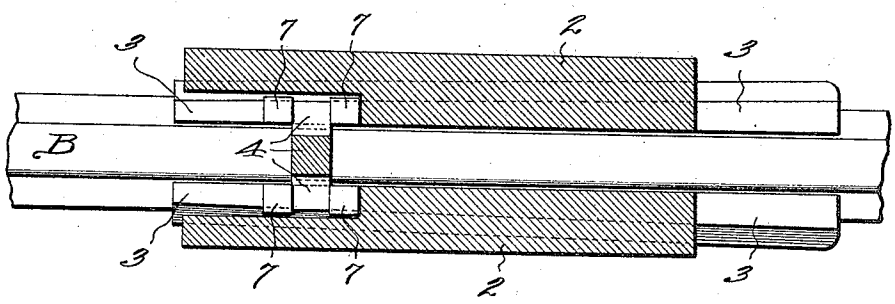


Fig. 6.



W. Marl. Duvall.

WITNESSES

A. F. ROSS,

INVENTOR

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ATTORNEY

Patented Mar. 18, 1924. 1,486,922

UNITED STATES PATENT OFFICE.

ALLIE FRANK ROSS, OF CORINTH, MISSISSIPPI.

BRAKE.

Application filed September 6, 1922. Serial No. 586,468.

To all whom it may concern:

Be it known that I, ALLIE FRANK ROSS, a citizen of the United States, residing at Corinth, in the county of Alcorn and State of Mississippi, have invented new and useful Improvements in Brakes, of which the following is a specification.

This invention relates to a brake which is mainly designed for mine cars, the general objects of the invention being to provide means for preventing the car from running back if the cable should break or the winding means should fail to function.

Another object of the invention is to provide magnetic means for holding the brake in inoperative position and also to provide latch means for holding the brake in inoperative position with means for breaking the circuit to the magnetic means if the hoisting cable should break.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side view showing the invention in use.

Figure 2 is a plan view with the body of the car removed.

Figure 3 is an enlarged elevation showing part of a car with the invention in inactive position thereon.

Figure 4 is a similar view with the brake applied.

Figure 5 is an enlarged plan view of the parts at one side of the car.

Figure 6 is a sectional view on line 6—6 of Figure 5.

In these views A indicates a car, B the track and C the cable for pulling the car up the incline. In carrying out my invention I secure beams 1 to parts of the car, each beam carrying a casting 2 which embraces a rail of the track and slidably mounted in each casting is a pair of brake shoes 3. These shoes are so formed and arranged that they will clamp the rail between them when moved forwardly by the yoke 4 and the springs 5 which are carried by the casting, The yoke slides on a rod 6 carried by the casting and has a part thereof located between two ears 7 on the shoe of each pair. The shoes are normally held in expanded position with the spring 5 contracted by means of the lever 8, each lever being connected with a shaft 9. A weighted lever 10 is connected with the shaft 9 and this shaft 10 is so arranged that it tends to drop under the action of gravity, thus rotating the shaft 9 and moving the lever 8 above the yokes, thus permitting the springs to move the yokes to apply the brake shoes to the rails. The lever 10 is held in its upper position by a latch bar 11 pivoted to a part of the car and having its latch end engaging a recess 12 formed in the upper end of the lever 10. An electro-magnet is located on a part of the car and this magnet acts upon the latch bar 11 to hold the same with its end in engagement with the recess 12. When the electro-magnet is deenergized, however, the latch bar 11 will assume a position, due to gravity, where its bent end will be free of the recess 12. A small latch 14 is provided for holding the latch bar 11 in active position to hold the lever 10 raised when the electro-magnet is not being used. One of the conductors 15 of the electro-magnet passes through the center of the cable from which it is insulated to the point of supply. The other conductor can be connected with the cable if desired.

From the above it will be seen that if the cable should break the current to the electro-magnet 13 would be cut off, thus permitting the latch 11 to free itself from the lever 10, thus causing the lever 10 to drop and move the levers 8 out of engagement with the yokes. The springs would thus force the yokes forwardly and apply the brakes and thus stop the car. The brake shoes are tapered so as to clamp the rails when the car is going backward and they will loosen when the car is going forward. This will prevent the breaking of the cable if the brake is accidentally applied without the cable breaking.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the

several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A brake of the class described comprising a casting connected with the car, a pair of brake shoes carried by the casting and of tapered formation, spring means for normally holding the shoes in clamping engagement with the rail, weighted means for holding the spring means contracted and electro-magnetic means for holding such weighted means in raised position.

2. In combiation with a car and a track, a casting carried by the car and embracing one rail of the track, a pair of brake shoes carried by the casting, a spring carried by the casting, a yoke engaged by the spring and engaging the brake shoes, a lever engaging the yoke for holding the spring contracted, a weighted member connected with the lever for raising the same, a latch member for holding the weighted member in raised position and magnetic means for holding the latch lever in operative position, the conductor of such magnetic means passing through the cable.

3. In combination with a car and a track, a casting carried by the car and embracing one rail of the track, a pair of brake shoes carried by the casting, a spring carried by the casting, a yoke engaged by the spring and engaging the brake shoes, a lever engaging the yoke for holding the spring contracted, a weighted member connected with the lever for raising the same, a latch member for holding the weighted member in raised position, magnetic means for holding the latch lever in operative position, the conductor of such magnetic means passing through the cable and a small latch lever for holding the main latch lever in raised position.

In testimony whereof I affix my signature.

ALLIE FRANK ROSS.