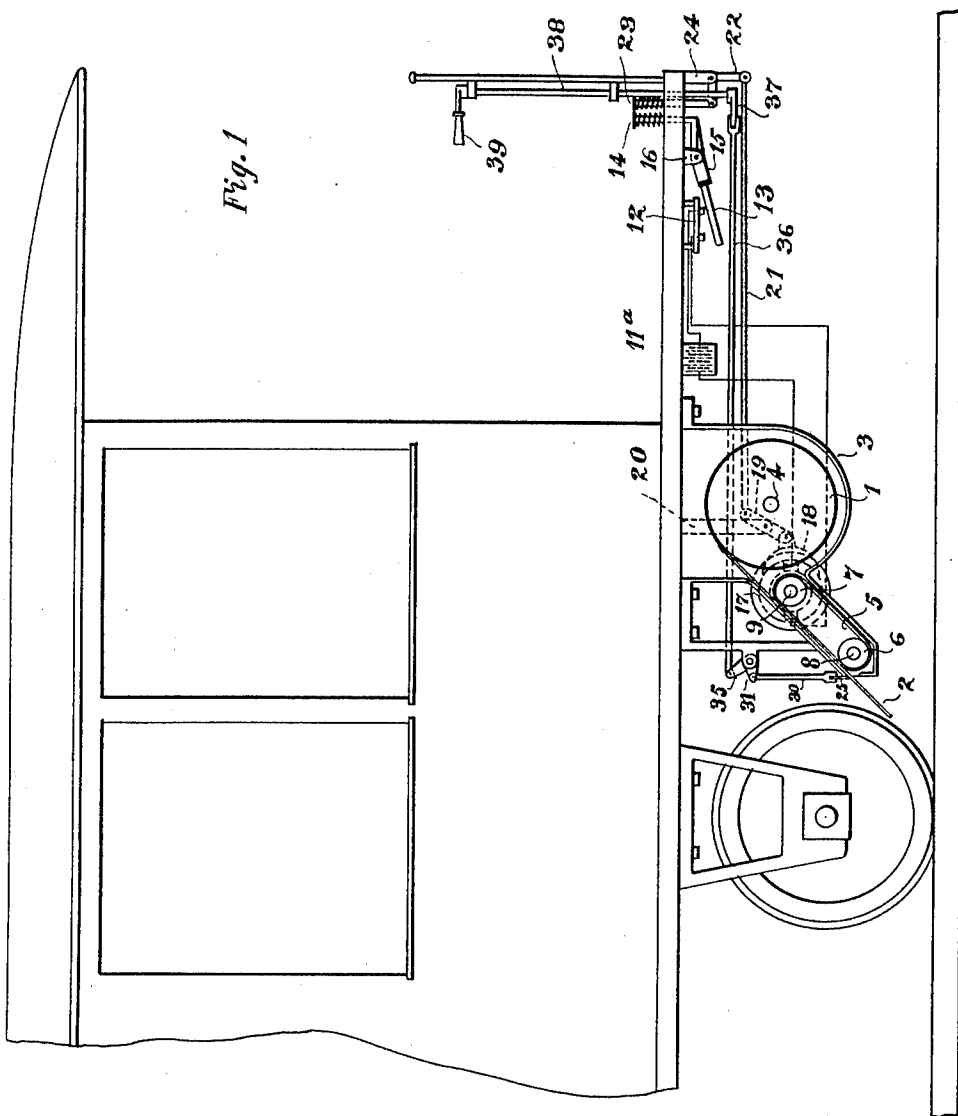


J. A. GRUBER.
SAFETY DEVICE TO KEEP WHEELS FROM SLIDING.
APPLICATION FILED MAR. 12, 1913.

1,061,369.

Patented May 13, 1913.

2 SHEETS—SHEET 1.



Witnesses

Victor E. Gullien
Catherine Doran.

Inventor

John A. Gruber

James A. Ramsey
Attorney

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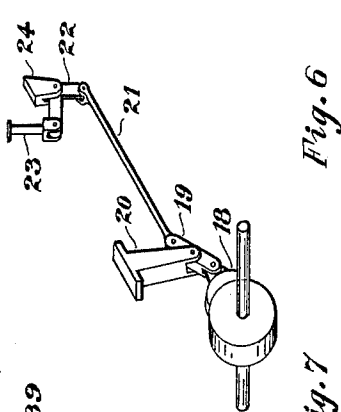


Fig. 6

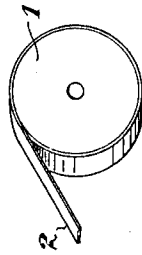


Fig. 4

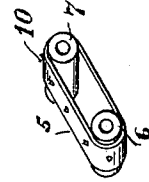


Fig. 5

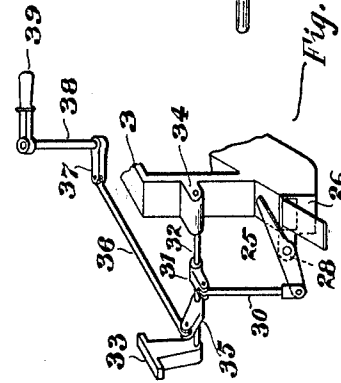


Fig. 7

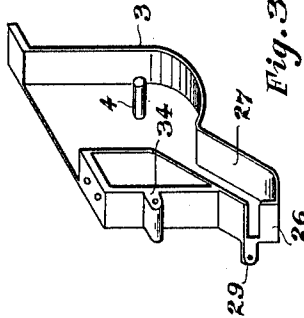


Fig. 3

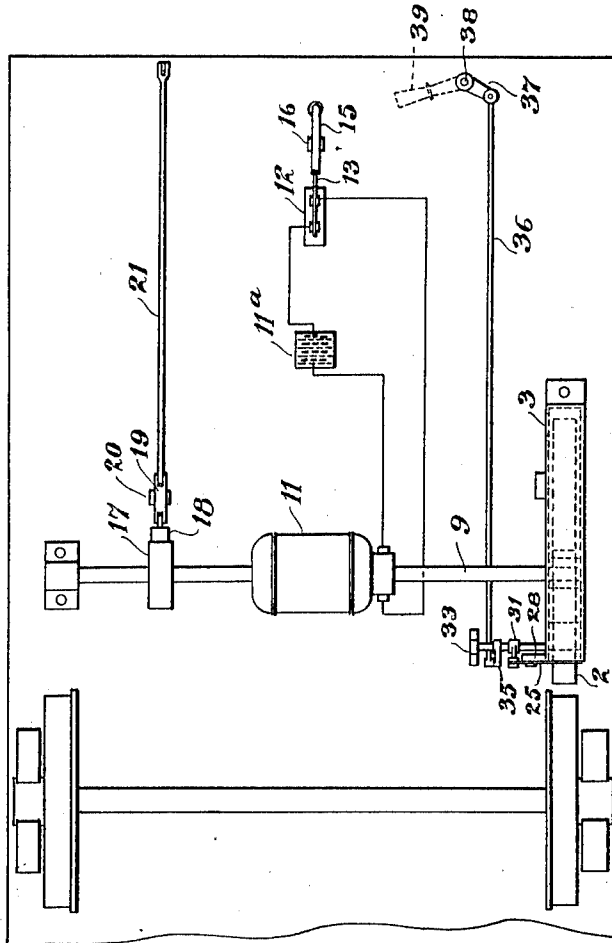


Fig. 2

Witnesses
Victor E. Sullivan
Catherine Doran.

Inventor
John A. Gruber

By James A. Ramsey
Attorney

UNITED STATES PATENT OFFICE.

JOHN A. GRUBER, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO W. H. HAMBAUGH,
OF CINCINNATI, OHIO.

SAFETY DEVICE TO KEEP WHEELS FROM SLIDING.

1,061,369.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed March 12, 1913. Serial No. 753,814.

To all whom it may concern:

Be it known that I, JOHN A. GRUBER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Safety Devices to Keep Wheels from Sliding, of which the following is a specification.

My invention relates to vehicle wheel safety devices and its object is to prevent the sliding of the wheels while being brought to a stop.

A further object of my invention is to provide an apparatus of the character specified which shall in a ready, thoroughly efficient and practical manner bind together vehicle wheels with the traction surface until such time as the power is released from the wheels.

My invention is applicable to many forms of vehicles which have a stop device.

In describing my invention I illustrate the device applied to a street car.

In operating a car on wet tracks or tracks covered with ice, mud, leaves and the like, and which is commonly termed slick rails the operator experiences great difficulty in bringing his car to a stop or controlling the speed of same. The hand brake of the car on many occasions does not meet with the requirement necessary. It may positively lock the wheels but cannot prevent the car from sliding on the rails due to the rails being covered by ice, mud, leaves and the like, and which in turn is the cause for many of the car accidents. My invention eliminates this faulty, sliding action of the car due to slick rails by very simple and efficient means. This mechanism is suitably located on the car preferably on the under side of the car floor between the dash board and the first wheel of the truck.

In the accompanying drawings which serve to illustrate the construction, application and use of my invention: Figure 1 is a side view of the apparatus applied to one end of the car and showing the cover of the casing removed. Fig. 2 is a plan view of the apparatus. Fig. 3 is a perspective view of the casing. Fig. 4 is a perspective view of the roll of fabric. Fig. 5 is a perspective view of the feed belt. Fig. 6 is a perspective view of the brake device. Fig. 7 is a perspective view of the splitter device.

In the embodiment of my invention as illustrated and which shows a preferred con-

struction and giving attention to Figs. 1, 2, 3, 4 and 5—1 represents a roll of tape or fabric having its end 2 in a ready position for operation, and 3 a casing supported to the floor of the car and having a stationary shaft 4 which supports the roll 1. 5 is a feed belt operating on pulleys 6 and 7, pulley 6 being loosely mounted on its shaft 8 while pulley 7 is securely fastened to drive shaft 9. Conveniently spaced on the outer face of the feed belt are gripping teeth which aid in feeding the fabric to the wheel when in operation. Any suitable motive power may be used in driving the drive shaft 9 such as an electric motor deriving its electrical energy from a battery or from the line wires, a compressed air motor or any other suitable mechanical device. As illustrated an electrical motor 11 is directly connected to the drive shaft 9 deriving its energy from a battery 11^a. Suitably located in the electric circuit and within easy reach of the foot of the operator is an electrical switch 12. Switch bar 13 is operated by a spring foot treadle 14, pivoted at point 15 and supported by the bracket 16 to the floor of the car. When the electrical switch is closed the power is applied to the drive shaft 9 by the motor 11 and in turn the pulley 7 drives the feed belt 5 which grips the end of the tape 2, feeding the same to the wheels of the vehicle until the power is shut off.

Proceeding with the description and giving attention to Figs. 1, 2 and 6—17 is a brake pulley securely fastened to the shaft 9, and 18 a brake shoe mounted on one end of the lever 19. 20 is a bracket supporting the lever 19, 21 a connecting rod and 22 a link connecting the rod 21 and the spring operating foot treadle. 24 is a bracket supporting the link 22. It will be understood that by applying pressure through the brake mechanism the momentum of the motor and the rotation of the feed mechanism will be arrested and an undue waste of fabric prevented.

Giving attention to Figs. 1, 2, 3, 4 and 7—25 is a movable cutter operating in conjunction with a stationary cutter 26, inserted in the end of the feed belt chamber 27. The movable cutter 25 is pivoted at point 28 to a lug 29 of the casing 3. 30 is a rod connecting the movable cutter 25 with a link 31 and fastened to the shaft 32. Shaft 32

is supported at one end by the bracket 33 and at the other end by the lug 34 of the casing 3. Located on the shaft 32 and fastened to the same is a link 35. 36 is a rod
5 connecting link 35 and link 37 which is fastened to the operating shaft 38. 39 is a handle fastened to the operating shaft 38.

When the car has been brought to a stop or after the speed of the car is under the
10 control of the operator the continued use of the tape or fabric becomes unnecessary and costly. The above described cutting mechanism will arrest this undue waste of fabric and also prevent a loss in the valued
15 time of the trip schedule which at the present time is very desirable in the system of rapid transit.

I claim:

1. A safety device comprising a roll of
20 fabric, a feed belt, a pulley securely mounted on the drive shaft and driving feed belt, a casing supporting the roll of fabric and the feeding mechanism, and power means suitably connected with the feeding mechanism.
25

2. A safety device comprising a roll of fabric, a feed belt, a pulley securely mounted on the drive shaft and driving feed belt, a casing supporting the roll of fabric and
30 the feeding mechanism, a motor connected to the drive shaft, a source of electrical energy, a foot operating switch, and conductors connecting the motor and the foot operating switch from the source of electric
35 energy.

3. A safety device comprising a roll of fabric, a feed belt, a pulley securely mounted on the drive shaft and driving feed belt, a casing supporting the roll of fabric and
40 the feeding mechanism, a motor connected to the drive shaft, a source of electrical energy and a foot operating switch disposed within the motor circuit and controlling the speed of the motor.

4. A safety device comprising a roll of
45 fabric, a feed belt, a pulley securely mounted on the drive shaft and driving feed belt, a casing supporting the roll of fabric and the feeding mechanism, a motor connected
50 to the drive shaft, a source of electrical en-

ergy driving the motor, a foot operating switch disposed within the motor circuit and controlling the speed of the motor, and means for controlling the speed of the feed mechanism.

55

5. A safety device comprising a roll of fabric, a feeding mechanism for advancing the fabric to the vehicle wheel, a casing supporting the roll of fabric and the feeding mechanism, a motor, a drive shaft connect-
60 ing the feeding mechanism and the motor, means for driving the motor, a brake pulley located on the drive shaft, a brake shoe, a foot operated treadle and suitable means connecting the brake shoe and the foot op-
65 erated treadle.

6. A safety device comprising a roll of fabric, a feeding mechanism for advancing the fabric to the vehicle wheel, a casing supporting the roll of fabric and the feeding
70 mechanism, a motor, a drive shaft connecting the feeding mechanism and the motor, means for driving the motor, means for controlling the speed of the feed mechanism and means for slitting the fabric.
75

7. A safety device comprising a roll of fabric, a feeding mechanism for advancing the fabric to the vehicle wheel, a casing supporting the roll of fabric and the feed-
80 ing mechanism, means for driving the feeding mechanism, means for controlling the speed of the feeding mechanism, and a cutter disposed across the fabric to effect its slitting.

8. A safety device, comprising a roll of
85 fabric, a feeding mechanism for advancing the fabric to the vehicle wheel, a casing supporting the roll of fabric and the feeding mechanism, means for driving the feeding mechanism, means for controlling the speed
90 of the feeding mechanism, a cutter pivotally mounted on casing and disposed across the fabric, a control lever and suitable means connecting the cutter and the control lever.

JOHN A. GRUBER.

Witnesses:

JAMES N. RAMSEY,
CATHERINE DORAN,
WILLIAM H. HAMBAUGH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."