

No. 713,499.

Patented Nov. 11, 1902.

J. RUNNOE.
CAR BRAKE.

(Application filed June 10, 1902.)

(No Model.)

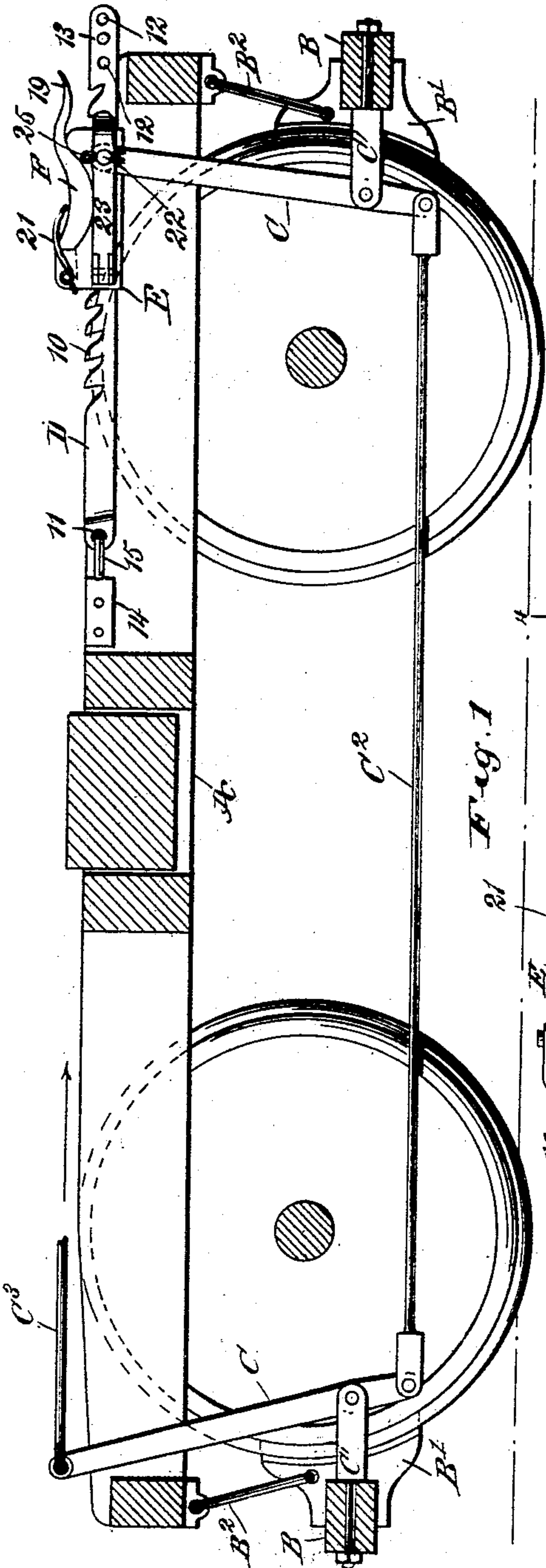


Fig. 1

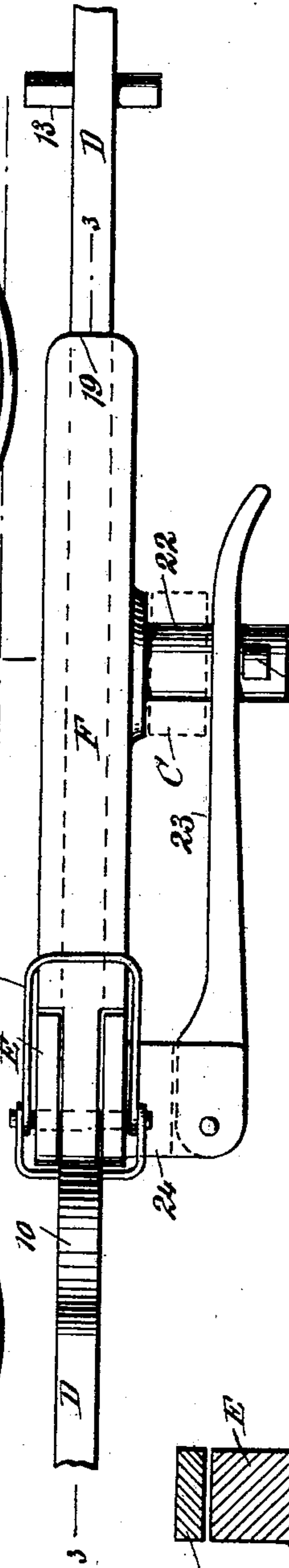


Fig. 2

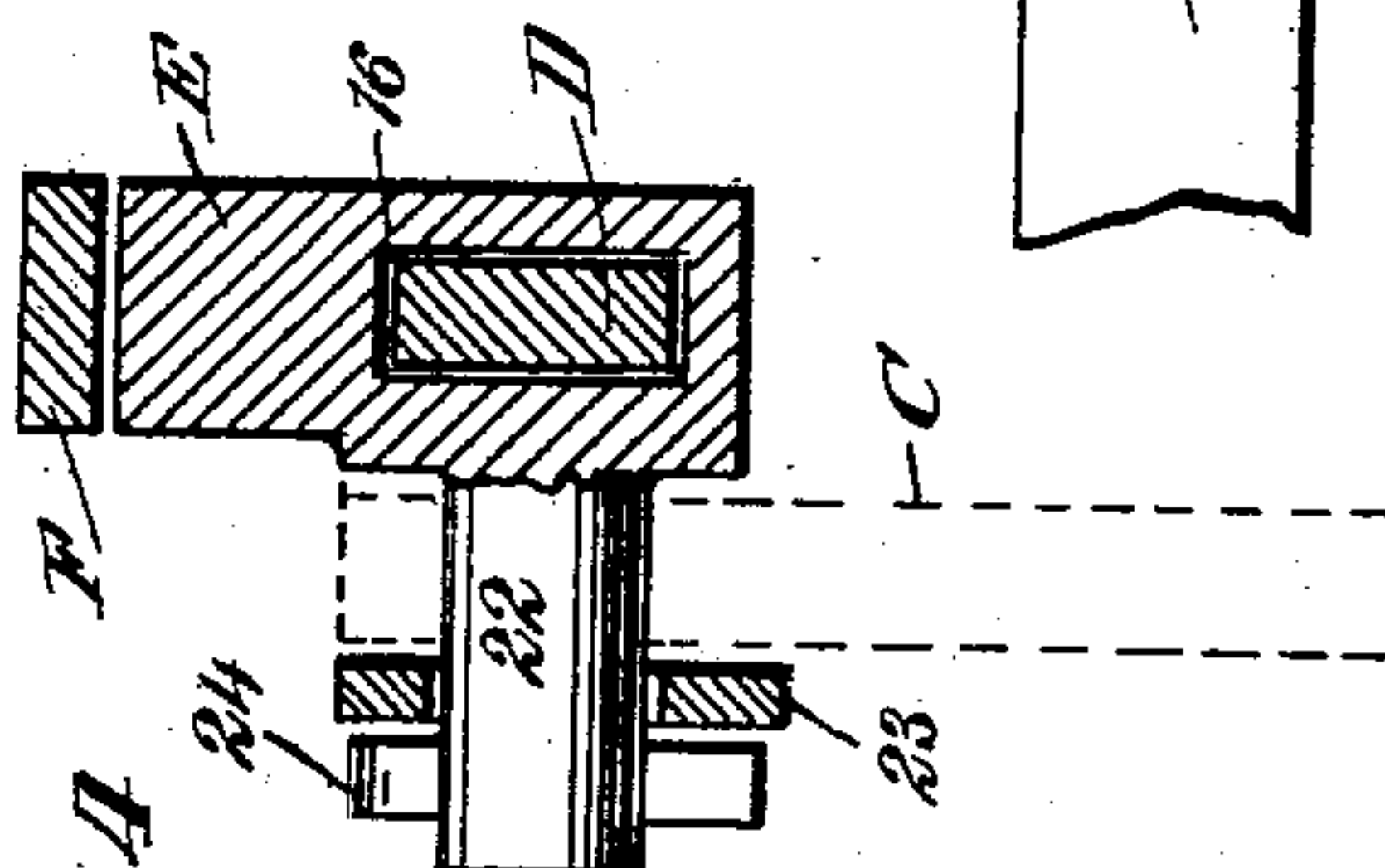


Fig. 3

WITNESSES:

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CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 713,499, dated November 11, 1902.

Application filed June 10, 1902. Serial No. 110,968. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH RUNNOE, a citizen of the United States, and a resident of Crested Butte, in the county of Gunnison and State of Colorado, have invented a new and Improved Car-Brake, of which the following is a full, clear, and exact description.

My invention relates to an improvement in car-brakes, and particularly to an improvement in slack-adjusters for such brakes. The purpose of the invention is to so construct a slack-adjuster that it may be quickly and conveniently set to take up the required slack, which operation may be performed by operating the take-up block of the mechanism by means of the foot of the operator, thus leaving the hands of the operator free, and, further, to so construct the device that it may be readily set to admit of a greater or less amount of slack being given to the brake-shoes and which may be readily uncoupled when the wearing-surfaces of the brake-shoes are to be replaced.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal vertical section through a car-truck and its brake mechanism and a side elevation of the slack-adjuster applied. Fig. 2 is a plan view of the improved slack-adjuster, drawn upon a larger scale. Fig. 3 is a longitudinal vertical section through the slack-adjuster, taken practically on the line 3 3 of Fig. 2; and Fig. 4 is a transverse section taken substantially on the line 4 4 of Fig. 2.

A represents a car-truck; B, the brake-beams; B', the brake-shoes; B², the suspending-links for the brake-beams; C, the brake-levers, having pivotal connection C' near their lower ends with the brake-beams; C², the connecting-rod for the brake-levers, and C³ the operating-rod for the brakes, which operating-rod may be controlled pneumatically or by hand.

In the construction of the slack-adjusting device a body-bar D is provided, of suitable

length, having a series of ratchet-teeth 10, formed in its upper edge between its ends, and at the inner end of the body-bar an eye 11 is produced, while at the opposite end of the body-bar a series of horizontally-arranged apertures 12 is provided, any one of which is adapted to receive a pin 13 to limit the outward movement of a take-up block E, to be hereinafter described, and which slides upon the body-bar D.

The body-bar D is secured to a sill of the car-truck A, as is shown in Fig. 1, by an attaching-bar 14, secured to the sill and having a hook extension 15 at its forward end to enter the eye 11 at the rear end of the body-bar D, while the outer end portion of the said body-bar is supported by the outer brake-lever C of the brake mechanism of the truck in a manner to be hereinafter described.

The take-up block E, as is shown in Fig. 3, is provided with a longitudinal chamber 16, extending through its ends, and in the upper portion of the block E between its ends a concaved recess 17 is produced, which extends into the chamber 16, exposing the upper central portion of said chamber, and consequently sundry of the ratchet-teeth 10 of the body-bar D. It may here be stated that the ratchet-teeth 10 have a rearward inclination and are more or less curved at their outer or forward surfaces, though they are flat at their inner or rear surfaces, as is best shown in Fig. 3.

A lock-lever F is pivoted at the rear upper end portion of the take-up block E, as is shown in Figs. 2 and 3, and the said lever is preferably provided at the recessed portion 17 of the take-up block with downwardly-extending segmental side ears 18, which when the lock-lever F is closed fit against the walls of the recess 17, as is shown in Fig. 3, and the handle portion 19 of this lever at its bottom portion is made to fit snugly to the upper forward portion of the take-up block when the lock-lever is closed. The said handle 19 extends forwardly beyond the take-up block a predetermined distance and is usually given an upward curve at its forward or free end.

Preferably a single tooth 20 is secured to the under surface of the lock-lever F, extending transversely thereof. This tooth is flat at both the front and rear surfaces and has

a downward and an outward inclination, so that when the lock-lever is closed upon the take-up block E, as is shown in Fig. 3, the forward surface of the tooth 20, which is in the nature of a fixed pawl, engages with the flat face of a ratchet-tooth 10 on the body-bar D, and the take-up block E cannot be moved in an outward direction until the lock-lever F is raised; but the take-up block is free to move over the teeth 10 in an inward or rearward direction, and such movement is usually brought about by pushing or kicking the forward or outer end of the take-up block with the foot. Therefore in the operation of the device the hands of the operator are not required except when it is necessary to move the take-up block E outwardly, at which time, as stated, the lock-lever F must be raised to carry the locking-tooth 20 of said lever from engagement with the ratchet-teeth of the body-bar. Normally the lock-lever F is held in its locking position by a spring 21, of suitable character, which is attached to the upper rear portion of the take-up block and has bearing in a downward and forward direction upon the upper surface of the lock-lever F, which surface is usually more or less concaved, as is illustrated in Figs. 1 and 3.

A trunnion 22 extends from the inner side of the take-up block E, preferably near its forward end, and the upper end of the outer float-lever C of the brake is pivotally mounted on the said trunnion. This float-lever is prevented from accidentally leaving the trunnion 22 through the medium of a latch-arm 23, hinged to an extension 24 from the inner side of the take-up block E near its rear end, and the said latch-arm 23 is provided with an aperture near its free end to receive the trunnion 22, and the latch-arm is held on the trunnion by means of a cotter-pin 25 or a like device, so that whenever the brake-shoe is to be supplied with a new wearing-surface the brake mechanism may be readily disconnected from the slack-adjuster.

The pin 13, heretofore referred to, limits the outward movement of the take-up block E, and consequently the extent to which the wearing-surfaces of the brake-shoes may be normally held from the tread of the wheels.

When it is desired to have but little space between the brake-shoes and the tread of the wheels, the take-up block E is pushed inward as far as desired and is so held by the lock-lever F. Whenever it is desired to have more slack at the brake-shoes, the operator need simply lift the lock-lever F and draw the take-up block E outward.

This device is very simple and durable in its construction. It is effective in operation, can be quickly and conveniently applied to

any car-truck, and may be used in connection with any brake mechanism, and, as stated, when slack is to be taken up the operation may be performed by the feet of the operator, leaving the hands of the operator free to cling to a near-by object.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A slack-adjuster for car-brakes, consisting of a toothed body-bar, means for attaching the body-bar at one end to a car-truck, a take-up block mounted to slide upon the body-bar, a locking member mounted on the take-up block and provided with a tooth for engagement with the teeth of the body-bar, an extension from the take-up block whereby to pivotally connect said block with a brake-lever on a brake mechanism, and a locking device pivotally carried by the said take-up block, substantially as described.

2. A slack-adjuster for car-brakes consisting of a toothed body-bar adapted for attachment to a car-truck, a take-up block mounted to slide upon the body-bar and having a recess exposing sundry of the teeth on the bar, a spring-controlled lock-lever pivoted upon the take-up block and provided with an inclined tooth to enter the spaces between the teeth of the body-bar, an extension from the side of the take-up block, a latch device pivoted upon the take-up block and apertured to receive the said extension, and a key for the latch device, substantially as described.

3. A slack-adjuster for car-brakes, consisting of a body-bar, means for attaching the body-bar to a car-truck, said body-bar being provided with apertures at its outer end and a pin passed through one of the apertures, and a series of ratchet-teeth between its ends upon its upper edge, which ratchet-teeth have a rearward inclination, a take-up block mounted to slide loosely on the body-bar and having a recess therein exposing sundry of the teeth of the body-bar, a lock-lever pivoted to the take-up block and fitted to the recessed portion of said block, a downwardly and forwardly inclined tooth carried by the said lever and arranged to enter the spaces between the teeth of the body-bar, a trunnion extending from one side of the take-up block, and a latch hinged to the take-up block and provided with an opening adapted to receive the trunnion, as and for the purpose specified.

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

JOSEPH RUNNOE.

Witnesses:

GEO. W. THOMPSON,
W. H. WILLSON.