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Patented Sept. 25, 1900.

E. L. REQUARD & E. S. MERRYMAN.
COMBINED WHEEL FENDER AND EMERGENCY BRAKE.

(Application filed July 14, 1900.)

(No Model.)

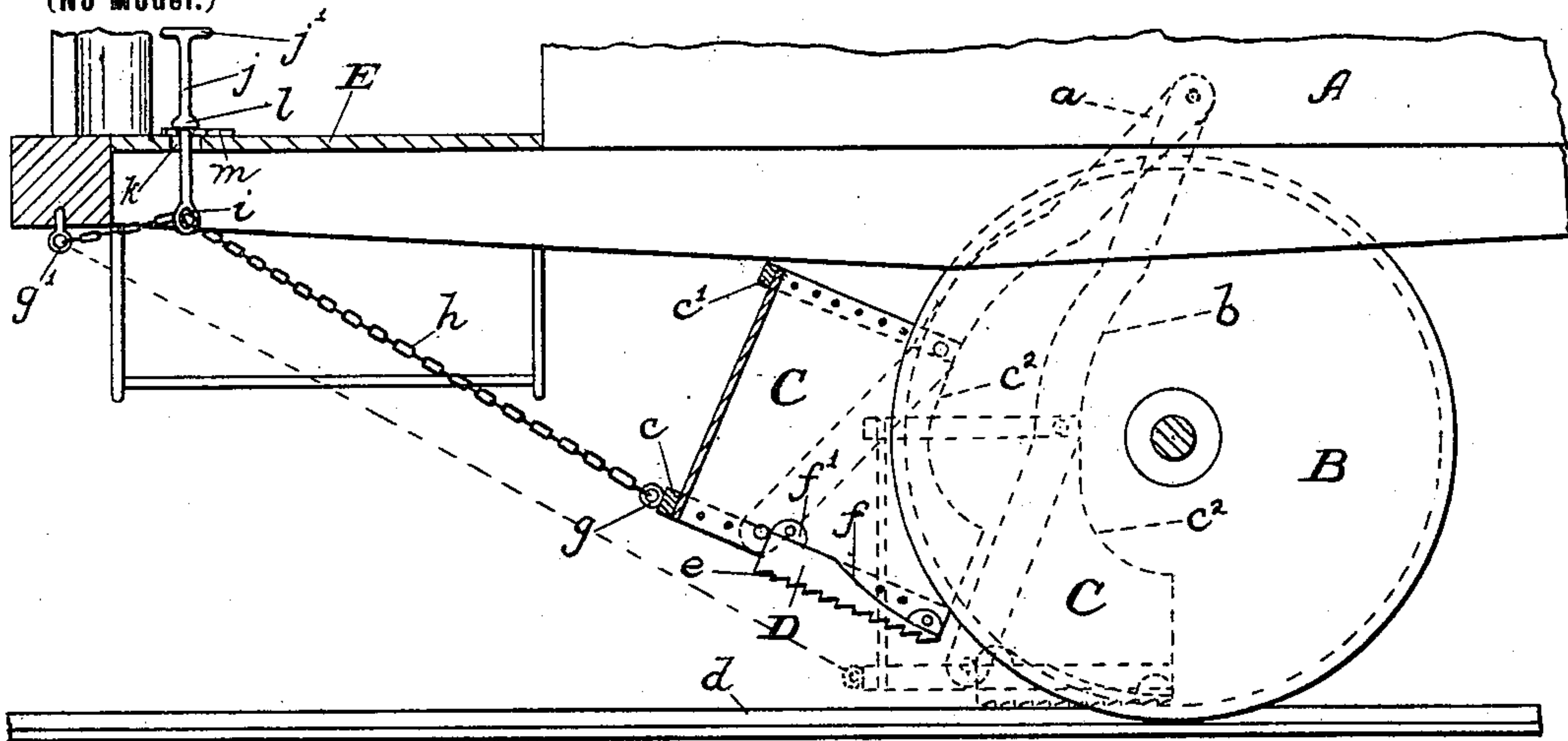


Fig. 1.

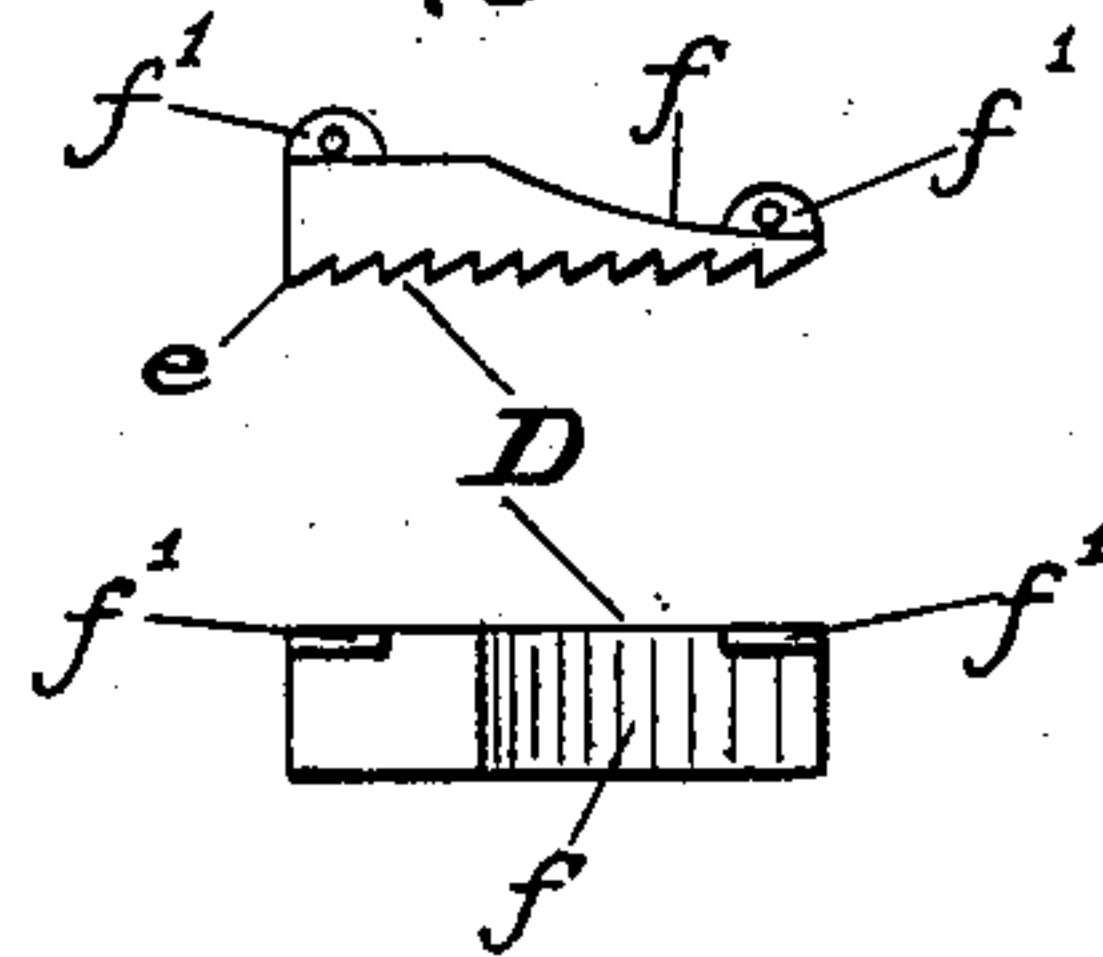
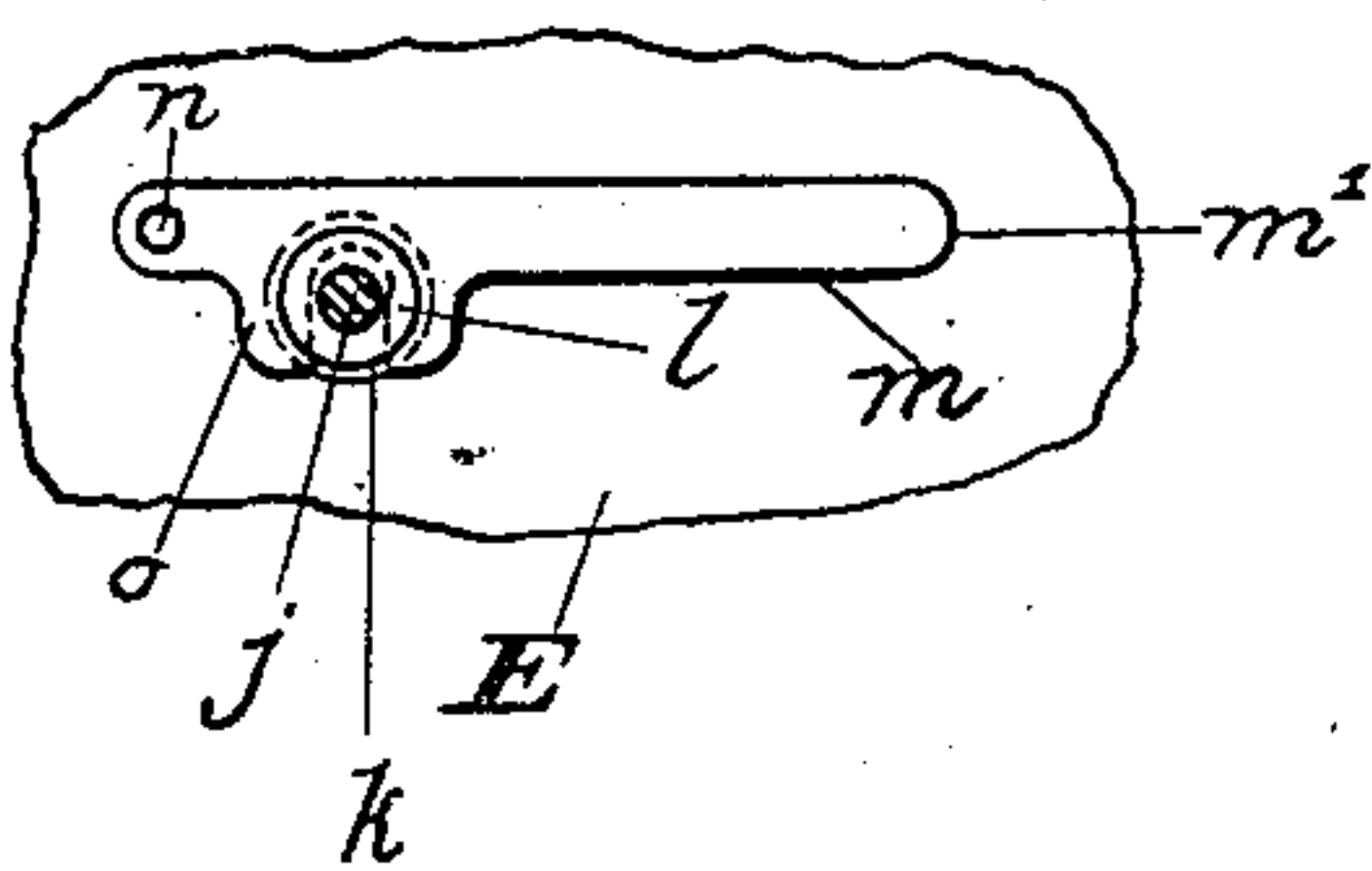
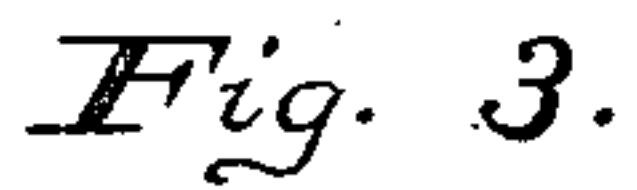
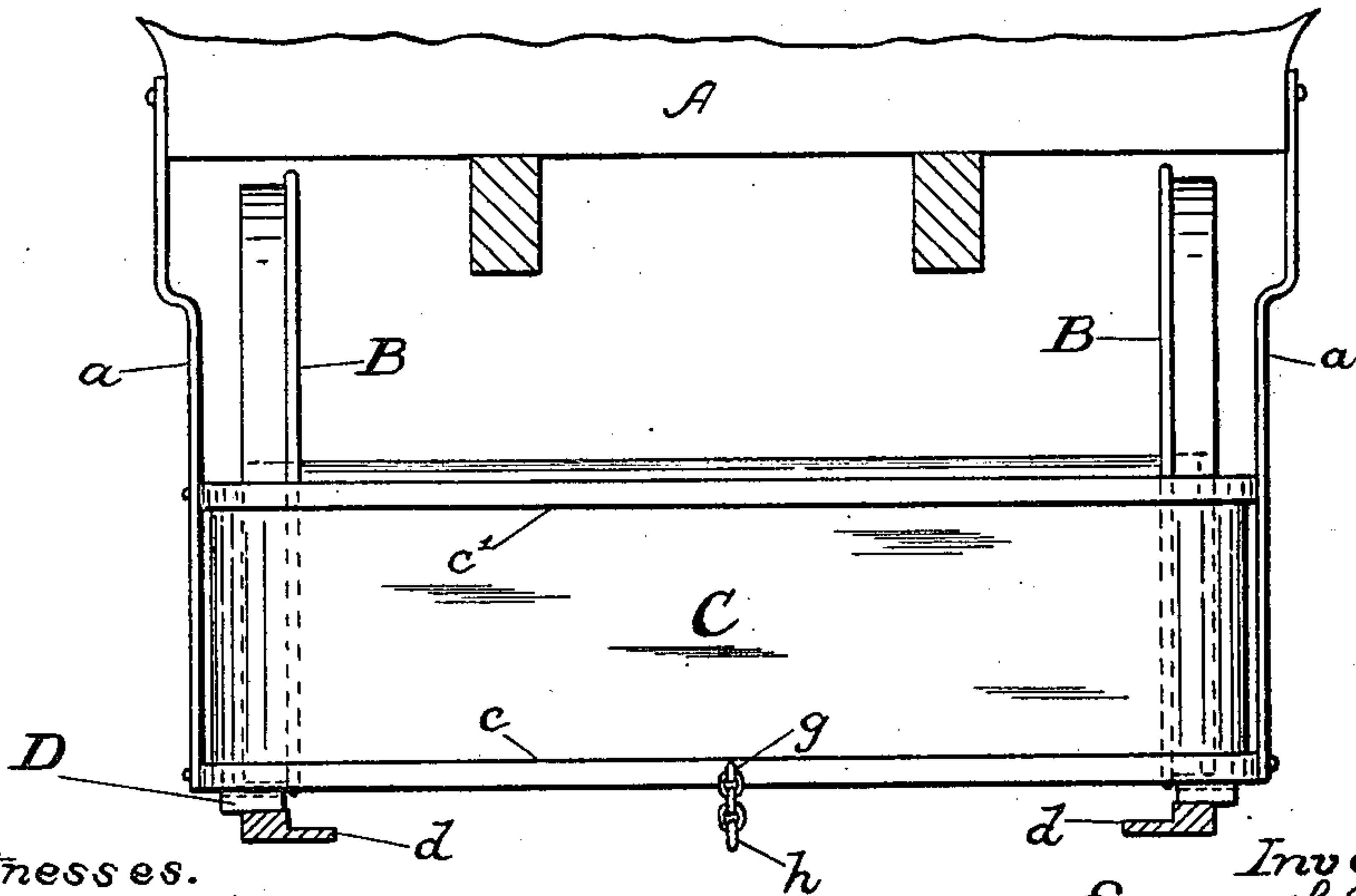


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD L. REQUARD AND ELI SCOTT MERRYMAN, OF BALTIMORE,
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COMBINED WHEEL-FENDER AND EMERGENCY-BRAKE.

SPECIFICATION forming part of Letters Patent No. 658,530, dated September 25, 1900.

Application filed July 14, 1900. Serial No. 23,661. (No model.)

To all whom it may concern:

Be it known that we, EDWARD L. REQUARD and ELI SCOTT MERRYMAN, citizens of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in a Combined Wheel-Fender and Emergency-Brake, of which the following is a specification.

Our invention is a combined wheel-fender and emergency-brake for street-railway cars; and its object is to provide a device of this character which can be conveniently and quickly operated by the motorman to stop the car very quickly in case of emergency, and which will when shifted into operative position prevent the car from running over a person falling in front of the wheels.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the front portion of a street-railway car equipped with our combined wheel-fender and emergency-brake, which is shown in the normal elevated traveling position in full lines and in the lowered emergency position in dotted lines. Fig. 2 is a front elevation of the same with the front platform of the car removed, the combined wheel-fender and brake being shown in the lowered emergency position. Fig. 3 is a detail plan view of a portion of the front platform of the car, illustrating the means for holding the combined wheel-fender and emergency-brake in elevated traveling position. Fig. 4 is a detail side view and a top view of one of the emergency-brake shoes detached.

Pivoted to and depending from each side of the truck or car-body A, just above and on the outside of the front wheels B, is a hanger-arm *a*, mounted to swing in a vertical plane. The said two arms carry the emergency-brake shoes and wheel-fender hereinafter described and are provided between their ends with forwardly-curved portions *b*, so that they will keep clear of the axle-box when in the lowered emergency position. Rigidly secured to the lower free ends of said two arms *a* is a transverse bar *c*, extending across the track and its ends curved to take outside of the two front wheels, and some distance above

said transverse bar *c* is a similar bar *c'*, also rigidly secured to said arms. Riveted to said two transverse bars throughout their length is a vertical, preferably sheet metal, sheathing C, which forms the wheel-fender of our improved device. Said fender is of a height approximately equal to the radius of the car-wheels B, and when in the lowered emergency position extends down nearly to the track-rails *d*, as shown in dotted lines in Fig. 1 and full lines in Fig. 2, thus effectually preventing a person from being run over by the wheels. The rear upper ends of the fender-sheathing are cut out, as shown at *c'*, to keep clear of the axle-box when the device is lowered.

The emergency-brake shoes D, as shown in detail in Fig. 4, comprise blocks of steel or other suitable brake metal and are formed on their lower surfaces with teeth *e*, which bite into the top surface of the rail, and their upper faces are rearwardly and downwardly inclined, wedge-fashion, as shown at *f*, upon which the front wheels B mount to check and stop the forward movement of the car when the brake-shoes are in the lowered emergency position. The brake-shoes D have at their front and rear ends upwardly-projecting ears *f'*, riveted on the inside of the fender, and the brake-shoes are thus held in proper relation to the track-rails and car-wheels.

In order to raise our combined wheel-fender and emergency-brake and hold it in the elevated traveling position clear of the track-rails, we have provided an eye *g*, secured to the middle of the lower fender-bar *c*. To said eye *g* is secured one end of a chain *h*, whose other end is permanently secured to an eye *g'*, secured to the under side of the front end of the car-platform E. Between its ends said chain *h* is secured to a loop *i* on the lower end of a vertically-movable rod *j*, which extends through an opening *k* in the platform E and is provided at its upper end above the platform with a handle *j'*, which is larger than the opening through which said rod extends and which may be grasped to pull the rod upwardly. This upward movement of the rod *j* it is evident will draw upon the chain *h*, and thereby swing the combined wheel-fender and emergency-brake to the raised traveling po-

sition, (shown in full lines in Fig. 1,) and to hold it in such raised position we have provided the rod with a collar *l*, which is smaller than the opening *k* in the platform. A horizontal locking-lever *m*, pivoted at *n* on said platform, is provided with a notch or claw *o*, which takes around the rod *j* underneath the collar *l* and holds said rod raised, and the free end *m'* of said lever is adapted to be pushed by the motorman's foot in order to free the claw from the rod and permit the chain to slack and the combined wheel-fender and emergency-brake to drop by gravity into the lowered emergency position. The handle *j'* of the rod engages the top of the platform when the rod is lowered and prevents the same from dropping entirely through the opening *k* in the platform.

The ordinary traveling position of the combined wheel-fender and emergency-brake is illustrated in full lines in Fig. 1. When the motorman sees, for instance, a person fall upon the track in front of the moving car when it is not possible to stop the car by the ordinary brake in time to prevent an accident, he pushes with his foot the locking-lever *m* to disengage it from the rod *j*, whereupon the combined wheel-fender and emergency-brake will drop by gravity to the position illustrated in dotted lines in said Fig. 1, and the brake-shoes *D* will bite into the rails, while the front car-wheels *B* will mount upon the inclines *f* and quickly bring the car to a standstill. At the same time the fender will prevent the person from rolling against the axle or wheels.

It will be seen that we have provided an effective device for the purpose set forth which is of few and simple parts capable of being operated very quickly.

Having thus described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. A combined wheel-fender and emergency-brake, comprising vertically-swinging arms; two transverse bars rigidly secured to said arms one above the other; a sheathing rigidly secured to said bars and forming the wheel-fender; brake-shoes, *D*, provided on their lower surfaces with teeth and having their upper surfaces rearwardly and downwardly inclined, and also having upwardly-projecting ears, *f'*, secured to the inside of the wheel-fender; and means whereby to hold the said aforementioned parts in raised, traveling position, and to allow them to swing by gravity into lowered, emergency position, as set forth.

2. A combined wheel-fender and emergency-brake for cars, comprising swinging arms pivoted at their upper ends; a wheel-fender and brake-shoes carried by said pivoted arms; a chain secured to said wheel-fender to hold it elevated; a vertically-movable rod extending through the platform of the car and connected with the chain and provided at its upper end with a handle adapted to limit its downward movement and also provided with a collar below said handle; and a locking-lever pivoted on the said platform and provided with a notch or claw adapted to take around said rod underneath said collar whereby to hold said rod, the wheel-fender and brake-shoes in raised, traveling position, as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

EDWARD L. REQUARD.
ELI SCOTT MERRYMAN.

Witnesses:

CHAS. B. MANN,
CHARLES L. VIETSCH.