April 20, 1926. 1,581,358

C. MAYER

VEHICULAR FIRE ESCAPE

Filed June 29, 1925

Fig. 1

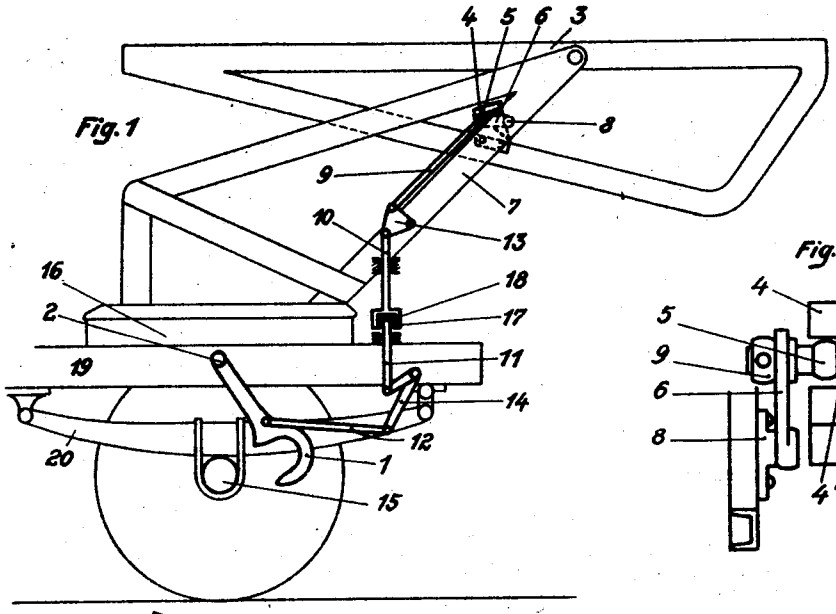


Fig. 3

Fig. 2

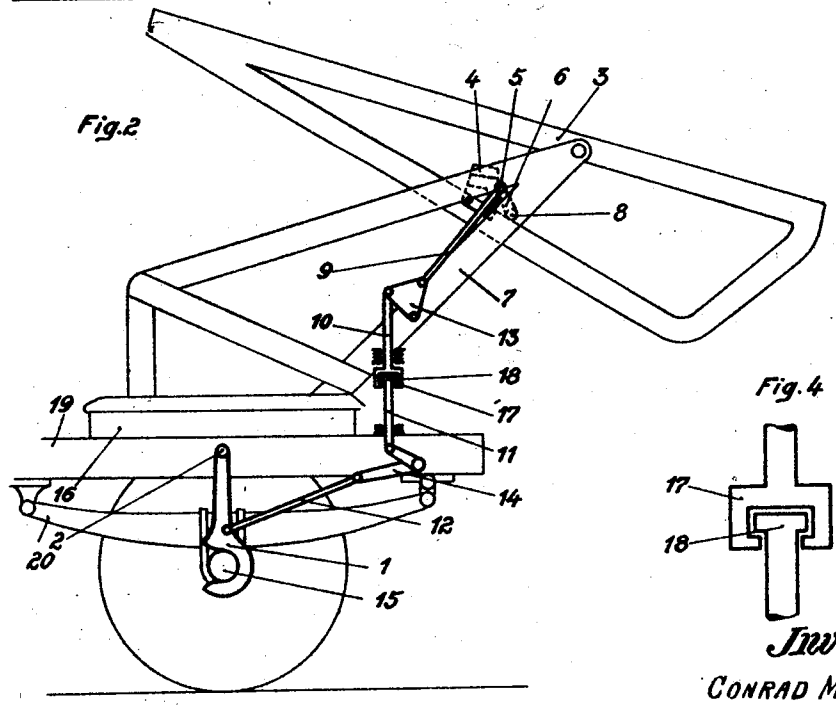


Fig. 4

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UNITED STATES PATENT OFFICE.

CONRAD MAYER, OF ULM, GERMANY, ASSIGNOR TO C. D. MAGIRUS, AKTIENGESELLSCHAFT, OF ULM A. D. DONAU, GERMANY, A CORPORATION OF GERMANY.

VEHICULAR FIRE ESCAPE.

Application filed June 29, 1925. Serial No. 40,191.

To all whom it may concern:

Be it known that I, CONRAD MAYER, a subject of Germany, residing at Ulm a. d. Donau, Germany, have invented certain new and useful Improvements in Vehicular Fire Escapes, of which the following is a specification.

In vehicular fire escapes in which the car frame or chassis is supported on springs, the springs, or the spring suspension of the car frame, should be inoperative when the fire escape proper is in the position of use, for which purpose the axle is locked to the car frame for instance by means of a hook, whereas in the travelling position with the fire escape lowered the axle must be unlocked so that it can move freely under the action of the springs when the car is moving.

The object of the invention is to render the car springs operative or inoperative automatically by means of the elements which actuate the ladder or escape.

A construction according to the invention is diagrammatically illustrated in the accompanying drawing.

Figure 1 shows the locking device in the inoperative position with the escape in the lowered or travelling position, and

Figure 2 shows the locking device in the operative position at the moment when the raising of the escape begins.

Figures 3 and 4 are detail views.

A hook 1 which renders the springs inoperative is rotatably mounted on a pin 2 on the car frame 19 and when the escape is being raised is positively moved by a tappet or driver 4 provided on the raising frame 3 of the escape. This tappet or driver is in the form of a guide provided with a cam slot 4′ with which engages a pin 5 mounted on a lever 6 rotatable about a pivot 8 on the turning frame 7.

When the raising of the escape begins, the pin 5 will be driven upwards by the tappet 4 and will roll on the lower track of the slot 4′ thereof. This upward movement of the pin 5 through rods 9, 10, 11, 12 and bell-crank levers 13 and 14 actuates the hook 1 in such a manner that the latter is thereby brought into engagement with the car axle 15 or with a separate holder provided on the said car axle. The springs 20 of the vehicle will be thereby rendered inoperative. During the lowering of the escape, the reverse movement will take place, the pin 5 sliding along the upper track of the tappet 4 (Figure 3).

As the actuation of the device for rendering the springs 20 inoperative must take place before the escape is utilized, a positive connection between the tappet 4 and the hook 1 is required only in the travelling position of the escape, whereas during the turning of the escape on the turning rim 16, the connection may be broken. To that end, a coupling is inserted in the rods 9 to 12. The end of the rod 10 which is guided in the turning frame 7, is provided with a head 17 having a recess therein, whilst the end of the rod 11 which is guided in the car frame is formed with a T-shaped slide block 18 (Figure 4). As soon as the escape is brought on the turning rim 16 into the travelling position, the head 17 will be coupled to the block 18, and a positive connection will then be established between the tappet 4 and the hook 1, whereas during the turning of the frame 7 on the turning rim 16, this connection will be severed.

The tappet or driver 4 could be arranged at any desired point of the frame participating in the raising movement, or at any desired point of the escape.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a vehicular fire escape having a wheeled chassis and a ladder mounted thereon, means for rendering the car suspension in operative when the ladder is to be used, and operative when the ladder is lowered into the traveling position, said means comprising a locking device for rigidly connecting the chassis and axle of the vehicle, link mechanism for actuating said device, and a member connected with said ladder for engaging said mechanism to cause said locking device to be thrown automatically to locked position during the initial raising movement of said ladder.

2. In a vehicular fire escape having a wheeled chassis and a ladder mounted thereon, means for rendering the car suspension inoperative when the ladder is to be used, and operative when the ladder is lowered into the traveling position, said means comprising a locking device for rigidly connecting the chassis and axle of the vehicle, link mecha-

nism for actuating said device, and a member with said ladder and adapted to engage said mechanism, said member being provided with cam surfaces for causing said mechanism to actuate said locking device automatically to locked position during the initial raising movement of said ladder and to unlocked position during the final lowering movement thereof.

3. In a vehicular fire escape having a wheeled chassis, a turning frame rotatably mounted on said chassis, a ladder carried by said turning frame, a locking device rigidly connecting the chassis and the axle of the vehicle, link mechanism for actuating said device, a member connected with said ladder for engaging said mechanism to cause said locking device to be actuated, said mechanism including a detachable coupling constructed and arranged to be disconnected or connected, respectively, automatically by the turning of said turning frame out of, or into, the traveling position of said frame.

In testimony whereof I affix my signature.

CONRAD MAYER.