

No. 606,965.

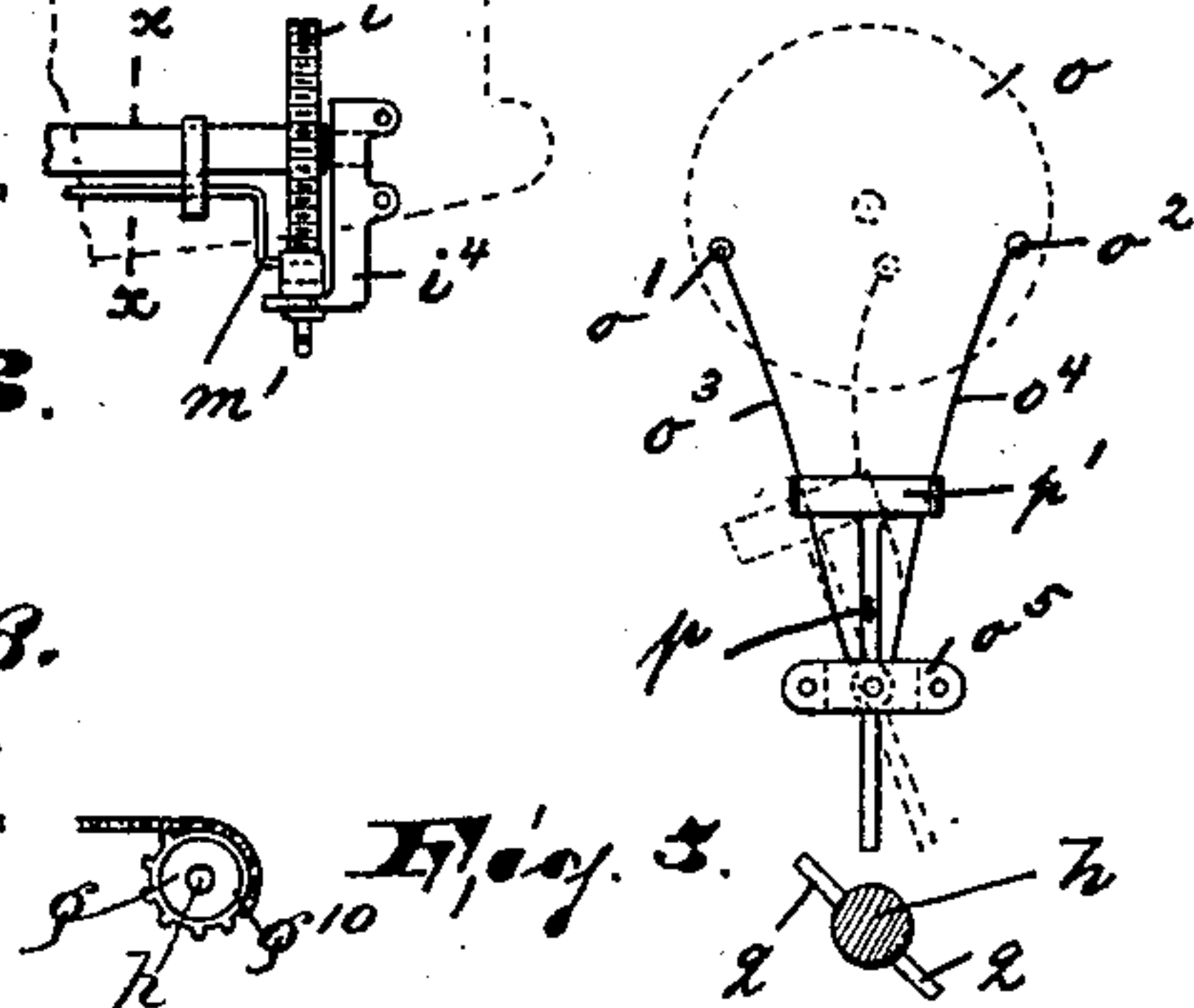
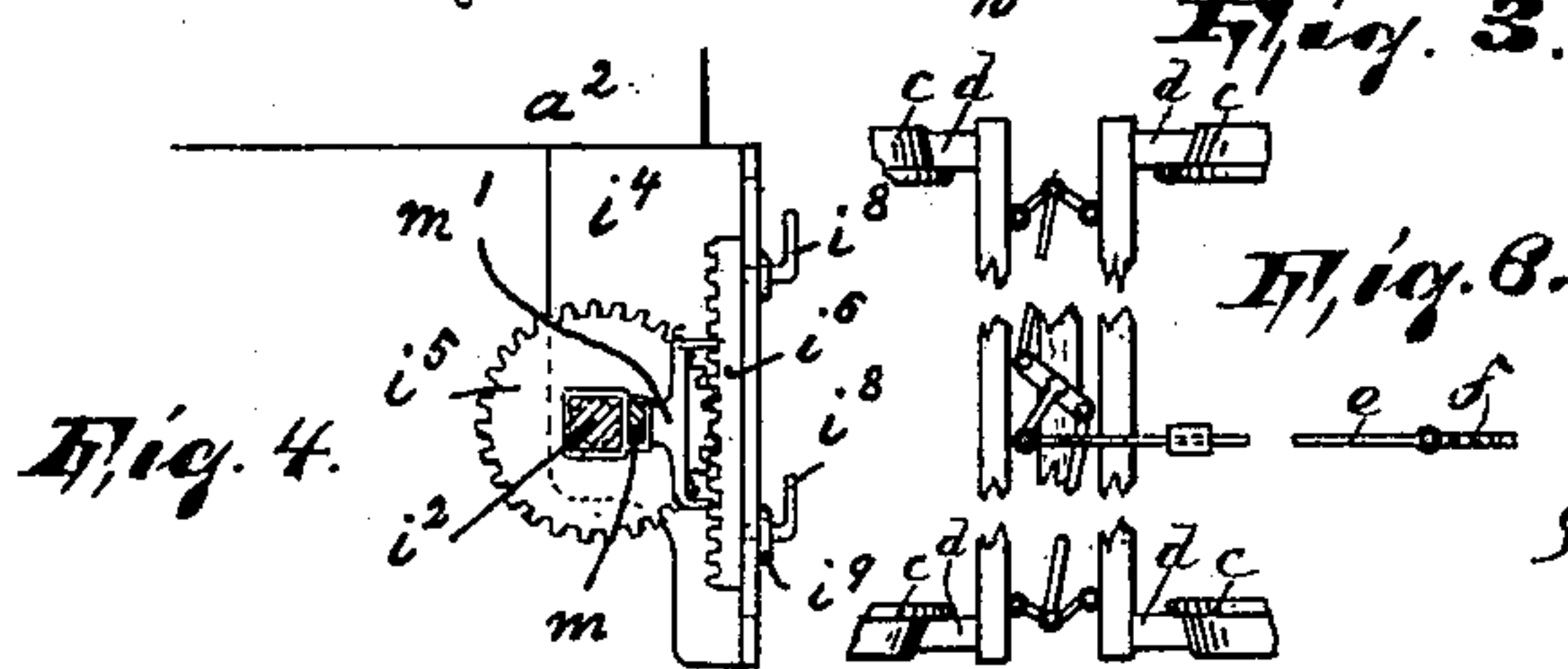
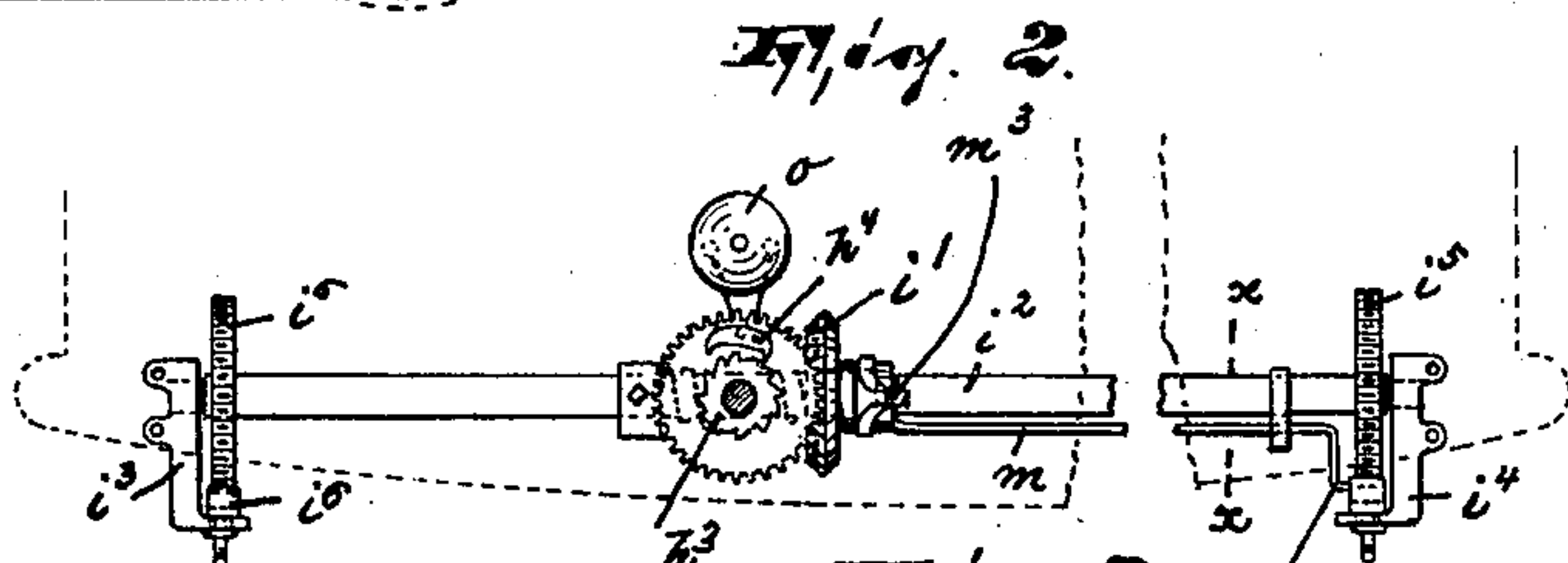
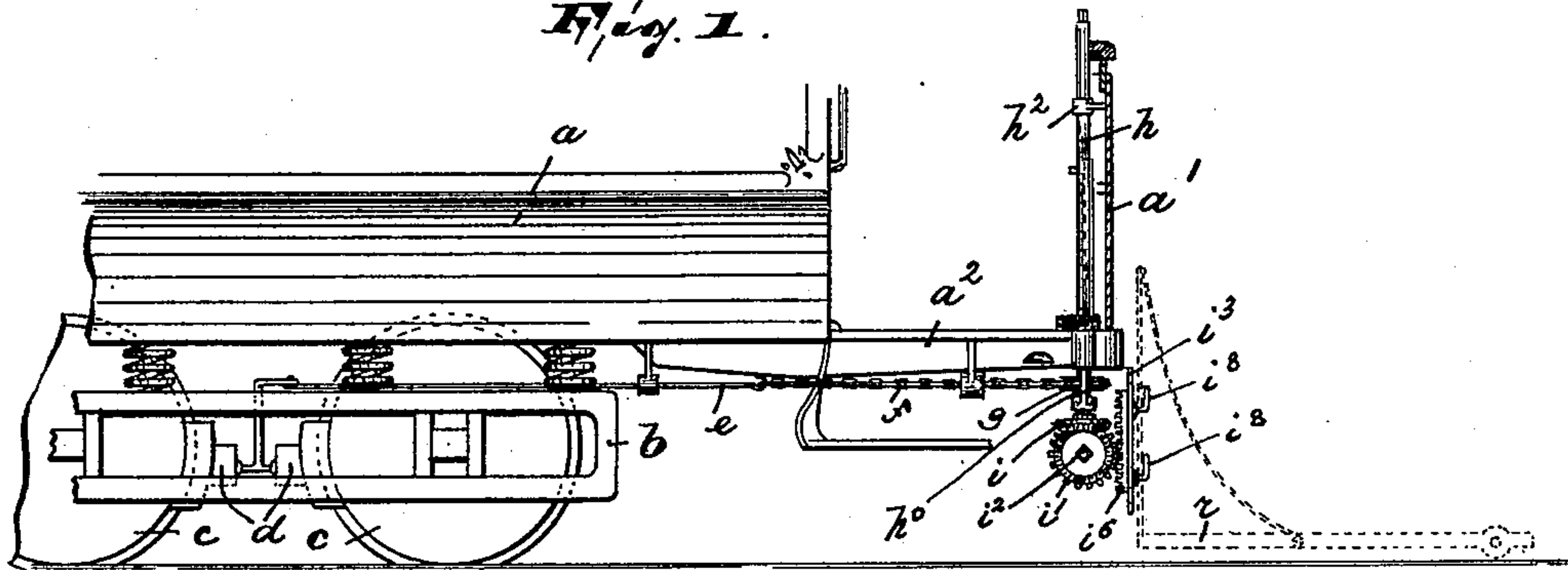
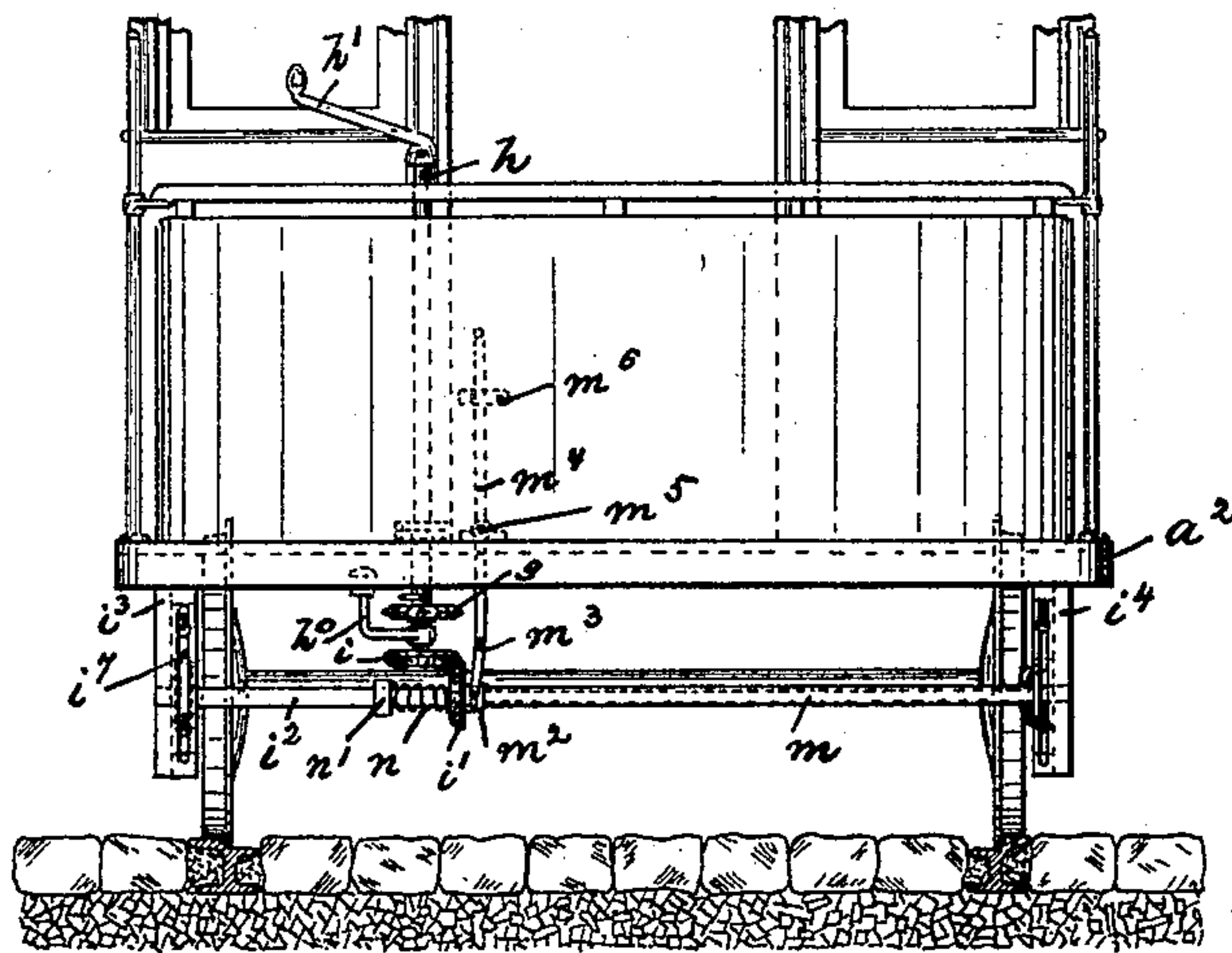
Patented July 5, 1898.

H. GROOTENBOER.

CAR FENDER SUPPORTING MEANS.

(Application filed Apr. 25, 1898.)

(No Model.)



WITNESSES:

Wm. D. Bell.
Louise Snyder.

- INVENTOR :

Thuibert Grotenboer

BY

Gartner & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HUIBERT GROOTENBOER, OF PATERSON, NEW JERSEY.

CAR-FENDER-SUPPORTING MEANS.

SPECIFICATION forming part of Letters Patent No. 606,965, dated July 5, 1898.

Application filed April 25, 1898. Serial No. 678,720. (No model.)

To all whom it may concern:

Be it known that I, HUIBERT GROOTENBOER, a citizen of the United States, residing in Paterson, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Car-Fender-Supporting Means; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a street or railway car with means for supporting a fender in such a manner that the latter is lowered while the brake is operated or applied.

A further object is to provide said fender-supporting means with a mechanism for automatically sounding an alarm or striking a gong while said fender is being raised or lowered, and, finally, to provide means for locking the fender-supports in their elevated position.

The invention consists in the improved fender-supporting means, their raising and lowering mechanism, in the automatically-operated alarm, in the means for locking the fender-supports in their elevated position, and in the combination and arrangement of parts, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a front elevation of a portion of the car provided with my improvements, the fender being removed; Fig. 2, a side elevation of Fig. 1, with certain portions broken away to better illustrate the nature of my said invention; Fig. 3, an enlarged detail top plan view of the fender-supporting means and its operating and locking mechanism; Fig. 4, a detail sectional view on the line *x x* of Fig. 3, in addition showing a portion of the car-platform; Fig. 5, an enlarged detail view of the gong-hammer supporting and operating mechanism,

and Fig. 6 a detail top plan view of the brake mechanism with certain portions broken away and others removed.

In said drawings, *a* represents the car; *b*, its truck; *c c*, the wheels for the latter, and *d d* the brakes for said wheels. Said brakes are connected by and operated through a series of toggle-levers in the usual and well-known manner, which levers are in turn connected with and operated by the horizontally-arranged rod *e*. To the outer end of said rod is secured one end of the chain *f*, partly encircling the sprocket-wheel *g* and secured to the latter with its other end, as at *g*¹⁰, in any desired manner. A cross-beam, a portion of which is shown in the drawings as situated between the brake-beams, pivotally supports the central one of the toggle-levers, said cross-beam being secured at its ends to a portion of the truck-frame. Said sprocket-wheel is mounted on the vertical shaft or axle *h*, having the usual crank-handle *h*¹ and revolubly mounted in brackets *h*² *h*⁰, projecting from the dashboard *a*¹ and the platform *a*² of the car, respectively.

On the vertical shaft or axle *h* is mounted a ratchet-wheel *h*³, adapted to be controlled by the fulcrumed double-acting pawl *h*⁴ in the usual and well-known manner. At or near the lower end of said shaft or axle is secured a beveled gear-wheel *i*, normally meshing with a beveled gear *i*¹, keyed to and slidingly arranged on a shaft *i*², (preferably squared or polygonal-shaped,) revolubly mounted in brackets *i*³ *i*⁴, secured to and depending from the platform *a*².

Near each end of the shaft *i*² is secured a gear-wheel *i*⁵, meshing and in engagement with a vertical rack-bar *i*⁶, which latter is slidingly arranged on its respective bracket *i*³ (or *i*⁴.) For that purpose the front portion of each bracket is provided with an elongated slot *i*⁷, penetrated by two hooks *i*⁸ *i*⁸, secured to the rack-bar *i*⁶ in any desired manner and provided with collars or enlargements *i*⁹, bearing on the outer surface of the bracket.

On the shaft *i*² is slidingly arranged a rod *m*, having its outer end fork-shaped, as at *m*¹, (see Figs. 3 and 4,) and adapted to be thrown or moved into engagement with the teeth of

the rack-bar i^6 , when the latter is in its uppermost position, to thus lock the same for a purpose hereinafter stated.

The inner portion of the rod m bears against the grooved collar m^2 of the beveled gear i' . Said grooved collar is in engagement with the lower forked portion m^3 of a lever m^4 , penetrating the platform a^2 and fulcrumed, as at m^5 , to the latter or to a bracket supported by the same. The upper portion of said lever m^4 is normally held in position by a catch m^6 of ordinary and well-known construction.

A spiral spring n is arranged on the shaft i^2 and bears with one end against the beveled gear-wheel i' and with its other end against a collar n' on said shaft i^2 and is adapted to move the beveled gear i' out of engagement with the beveled gear i whenever the fulcrumed lever m^4 is released from its catch m^6 .

To the under side of the platform is secured a gong o , adapted to be sounded by hammers o' o^2 , which latter are arranged on spring rods or wires o^3 o^4 , secured with their free ends to or within a bridge or bracket o^5 . On the latter is fulcrumed a lever p , carrying at one end a loop or ring p' , surrounding the said spring rods or wires o^3 o^4 , while its other end is in the path of a pin or pins q , secured to and projecting horizontally from the vertical shaft or axle h .

It must be remarked that the hooks i^8 i^8 are adapted to support a fender r , (shown in dotted lines in Fig. 2,) which fender can be of any suitable design and construction.

Normally the beveled gear-wheel i' is in engagement with the beveled gear i , and whenever the vertical shaft or axle h is rotated for the purpose of putting on the brakes d d the said beveled gear i' is operated, thus rotating the shaft i^2 and the gear-wheels i^5 i^5 , secured thereon. As the latter are in engagement with the vertically-movable rack-bars i^6 i^6 , the same are lowered and accordingly the fender r brought close to the ground or pavement. Simultaneously while the shaft or axle h is rotated the pin or pins q strike the free end of the fulcrumed lever p and move said lever into the position illustrated in dotted lines in Fig. 5, (the loop p' moving the arm o^4 against its own spring action away from the edge of the gong o .) As soon as the pin q has cleared or released the said free end of the fulcrumed lever p the latter is returned to its normal position by the action of the spring-wire o^4 , which latter, simultaneously with its hammer o^2 , sounds the alarm, as will be manifest. When the brakes d d are again released, the fender-supporting rack-bars i^6 are raised or returned to their normal position.

When it is desired to keep the fender in its raised or elevated position—for instance, when the car is traveling on country roads, &c.—the fulcrumed lever m^4 is released from its catch m^6 . The spiral spring n , acting upon the beveled gear i' , moves or slides the latter out of engagement with the beveled

gear i and simultaneously operates the sliding rod m —that is to say, it throws the forked portion m' into engagement with the teeth of the rack-bar i^6 , and thus locks the latter in its elevated or raised position. It must be remarked that the brakes and gong can then be operated without lowering the fender.

I do not intend to limit myself to the precise construction as shown and described, as various alterations can be made without changing the scope of my invention; but

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

1. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a horizontal revoluble shaft supported by the platform and transversely arranged thereon, a gear-wheel at or near each end of said shaft, a vertical movable rack-bar in engagement with each gear-wheel, fender-supporting means carried by each rack-bar, and a gear connection between the brake-operating shaft and the horizontal shaft, substantially as and for the purposes described.

2. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a horizontal revoluble shaft supported by the platform and transversely arranged thereon, a gear-wheel at or near each end of said shaft, a vertical movable rack-bar in engagement with each gear-wheel, fender-supporting means carried by each rack-bar, a beveled gear-wheel on the brake-operating shaft or axle, a beveled gear-wheel slidingly arranged on the horizontal shaft and adapted to be moved into and out of engagement with the beveled gear on the vertical shaft, and means for shifting said gear-wheel on its supporting-shaft, substantially as and for the purposes described.

3. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a horizontal revoluble shaft supported by the platform and transversely arranged thereon, a gear-wheel at or near each end of said shaft, a vertical movable rack-bar in engagement with each gear-wheel, fender-supporting means carried by each rack-bar, a beveled gear securely mounted on the vertical shaft or axle, a beveled gear slidingly arranged on the horizontal shaft and adapted to be moved into and out of engagement with the beveled gear on the vertical shaft or axle, and means for locking the rack-bars in their uppermost position while the beveled gears are out of engagement, substantially as and for the purposes described.

4. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a horizontal revoluble shaft supported by the platform and transversely arranged thereon, a gear-wheel at or near each end of said shaft, a vertical movable rack-bar in engagement with each gear-wheel, fender-supporting means carried by each rack-bar, a beveled gear securely mounted on the vertical shaft or axle, a spring-controlled beveled

gear slidingly arranged on the horizontal shaft, a fulcrumed lever for moving said sliding beveled gear into engagement with the beveled gear on the vertical shaft, and means
5 operated from said sliding gear to lock the rack-bars in their uppermost position, substantially as and for the purposes described.

10 5. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a horizontal revoluble shaft supported by the platform and transversely arranged thereon, a gear-wheel at or near each end of said shaft, a vertical movable rack-bar in engagement with each gear-wheel, fender-sup-
15 porting means carried by each rack-bar, a gear connection between the horizontal and vertical shafts, and a gong operated from the vertical shaft, substantially as described.

20 6. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a gong carried by the car, a gong-sounding mechanism also carried by the car, and means for automatically operating said gong-sounding mechanism, when the vertical
25 shaft is being rotated, substantially as described.

30 7. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a pin or pins projecting therefrom, a fulcrumed lever carried by the car and hav-

ing one arm in the path of said pin or pins and having its other arm provided with a loop or ring, a gong-hammer-carrying spring wire or wires penetrating said loop or ring
35 and secured with their free ends at or near the fulcrum of the lever, and a gong carried by the car and in the path of the gong hammer or hammers, substantially as and for the purposes described.

40 8. In a car, the combination with the vertically-arranged brake-operating shaft or axle, of a bracket on each side of the platform and depending therefrom, a vertical movable rack-bar supported and guided by
45 each bracket, a horizontal shaft revolubly mounted in said brackets, a gear-wheel in engagement with each rack-bar and secured on the respective ends of the horizontal shaft, a gear connection between said horizontal
50 shaft and the vertically-arranged brake-operating shaft, and means carried by the rack-bars for supporting a fender, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of
55 April, 1898.

HUIBERT GROOTENBOER.

Witnesses:

WM. D. BELL,
ALFRED GARTNER.