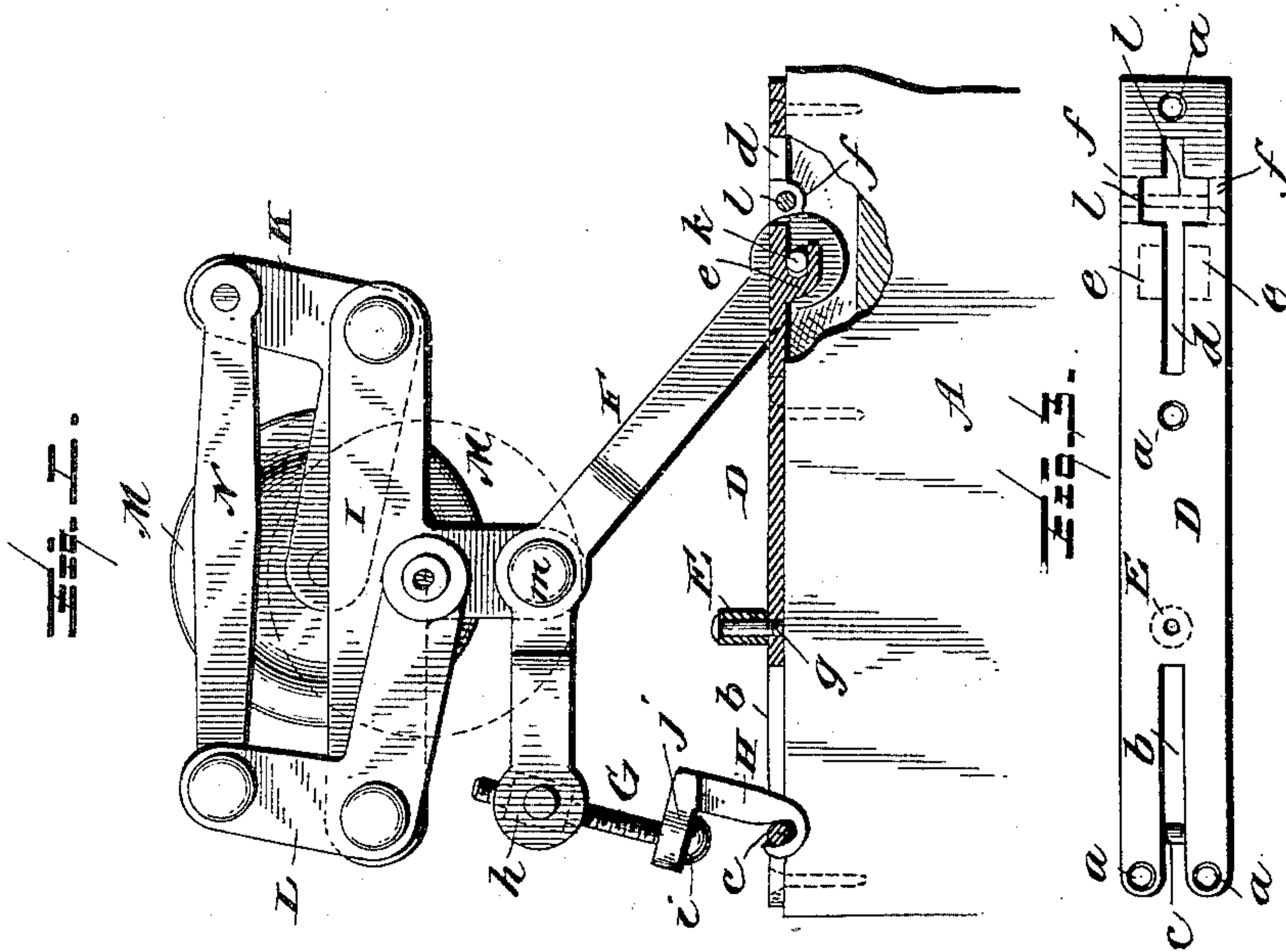
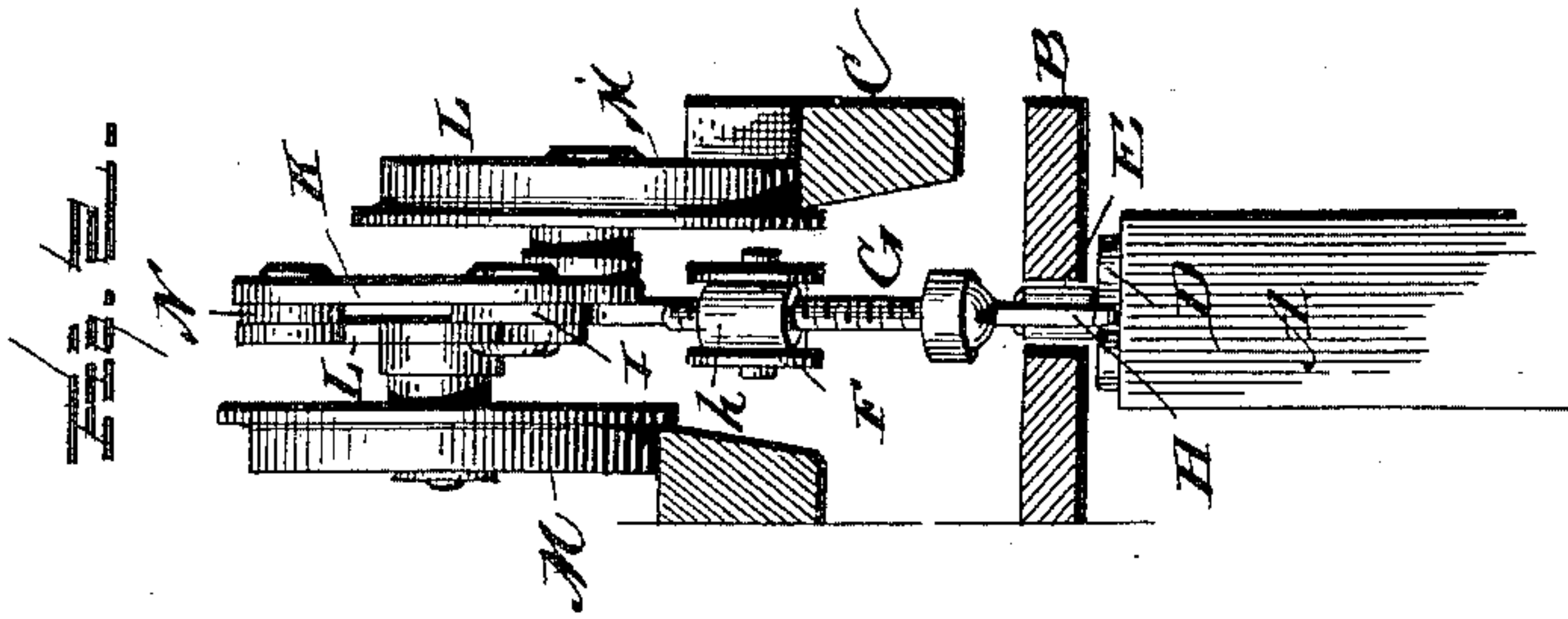


(No Model.)

G. A. COLTON.
DOOR HANGER.

No. 442,422.

Patented Dec. 9, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE A. COLTON, OF CHICAGO, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 442,422, dated December 9, 1890.

Application filed August 14, 1890. Serial No. 361,957. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. COLTON, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Sliding-Door Hangers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in door-hangers of that class wherein provision is made for the perfect and easy running of the door upon uneven tracks and for preventing side motion or binding of the door.

I provide for the ready and easy application of the hanger to the door.

I provide a compact and complete hanger occupying but little room, means being afforded for adjustment when necessary, and the whole embodying strength, lightness, and cheapness with durability and efficiency in operation.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation showing one of my hangers affixed to a door with portions of the door broken away and a part of the top plate in section. Fig. 2 is an end view of the same. Fig. 3 is a top plan of the top plate removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a portion of a door, B the soffits, and C the tracks, the tracks in Fig. 2 being purposely shown out of level for the better illustration of the manner of operation of the hanger.

D designates a plate to be attached to the upper edge of the door. It is provided with suitable holes *a*, through which pass the screws or other securing means by which it is held in place, and at one end is provided with a slot *b*, extending lengthwise of the plate,

and across which slot extends a pin *c*, as seen in Figs. 1 and 3, for a purpose hereinafter explained. The plate near its other end is provided with a slot *d*, somewhat in the shape of a cross, and provided upon its under side with hooked lugs *e*, as seen best in Fig. 1, for a purpose hereinafter made apparent. Upon the under side of the plate opposite the transverse portion of this cross-shaped slot are the lugs or ears *f* to receive the means which hold the hanger in position on the plate. On this plate I provide a roller or rollers supported on a vertical pintle or pintles and arranged to run between the soffits, or may be extended up to run between the tracks. In the present instance I have shown one roller *E* upon a vertical pivot *g* and arranged to run between the soffits, as seen in Fig. 2.

F is the suspension-bar formed with an inclined portion and a substantially horizontal portion, the free end of which is bifurcated, and between the bifurcations of which is arranged a nut or threaded piece *h*, as seen best in Fig. 2, and through which is threaded the adjusting-screw *G*, provided with a head *i*, which screw is passed through the horizontal arm *j* of the hook *H*, as seen best in Fig. 1. The lower end of the inclined portion of the rider-bar is provided with a pin *k*. In practice the plate *D* is secured in position upon the top edge of the door, and the rider-bar affixed in position by first inserting the hook *H* in the slot *b*, and engaging the same with the pin *c*, as seen in Fig. 1, and then inserting the pin *k* on the lower end of the inclined portion of the rider-bar into the transverse portion of the cross-shaped slot, and then forcing the same into the hooks of the lugs *e*, as seen in Fig. 1. Then the screw *l* or pin or other suitable means is passed through the lugs or ears *f*, as seen in Figs. 1 and 3, and the parts are held from displacement.

I is the hanger bed-plate. In the present instance it is shown as a substantially T-shaped bar or plate, the lower end of the vertical portion of which is pivotally connected with the rider-bar, as at *m*, and to the opposite ends of the horizontal portion are pivotally secured the bell-crank arms *K* and *L*, in this instance shown as having their horizontal portions extending in opposite directions to—

ward each other and upon opposite sides of the bed-plate. The free ends of the horizontal portions of these bell-crank arms each carry a roller M, and the ends of the vertical portions are pivotally connected by the connecting rod or bar N, as seen best in Fig. 1.

By this construction the hanger will automatically adjust itself to any unevenness in the tracks without affecting the position of the door. The rollers and their supporting-arms occupy but little space, requiring but a shallow well for them to run in, the same being arranged within the diameters of the rollers or wheels vertically, and by extending the supporting-arms in opposite directions toward each other, as shown, the rollers or wheels will run more easily, their axles being in substantially the same plane, and less strain will be forced thereon, thus lessening the liability of breakage or twisting out of their normal plane.

Various modifications in detail may be resorted to without departing from the spirit of the invention. For instance, the hooked arms may be arranged upon the upper face of the plate, thus dispensing with the cross-shaped slot.

What I claim as new is—

1. In a door-hanger, a supporting-plate, combined with connected crank-arms pivotally connected therewith and extending toward each other, and wheels journaled on said crank-arms, substantially as specified.

2. In a door-hanger, a supporting-plate pivotally connected with the suspension-bar, combined with wheels carried by supports pivotally connected with the said plate and with each other, as set forth.

3. The combination, with the suspension-bar and the plate pivotally connected therewith, of the bell-crank arms pivotally connected to said plate and extended toward each other, and the wheels carried by the said crank-arms, substantially as specified.

4. The combination, with the suspension-bar and the supporting-plate carried thereby, of the bell-crank arms pivotally connected to said plate and extended toward each other, the wheels on the crank-arms, and the rod pivotally connecting said arms, as set forth.

5. The combination, with the suspension-bar and the supporting-plate pivotally connected thereto, of the bell-crank arms pivotally connected at their angles to the ends of the plate and extended toward each other, the wheels on the horizontal portions of the arms, and the rod pivotally connecting the free ends of the vertical portions of said arms, as set forth.

6. The combination, with the plate D, having slot and transverse pin extended across the slot, of the rider-bar having an adjusting device carrying a hook to engage the said pin, and means for detachably engaging the other end of the plate with the rider-bar, substantially as specified.

7. The combination, with the plate D, having slot at one end with a transverse pin extended across the slot, and at the other end formed with a slot and hooked arms, of the rider-bar provided at one end with pin to engage the slot and hooked arms and at the other provided with a hook to engage the cross-pin, substantially as specified.

8. The combination, with the plate D, provided with a substantially cross-shaped slot with hooked arms beneath the slot, of the rider-bar provided with transverse pin, and means for detachably holding the pin in engagement with the hooked arms, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. COLTON.

Witnesses:

H. C. SNOW,

CHAS. A. WOODRUFF.