

(No Model.)

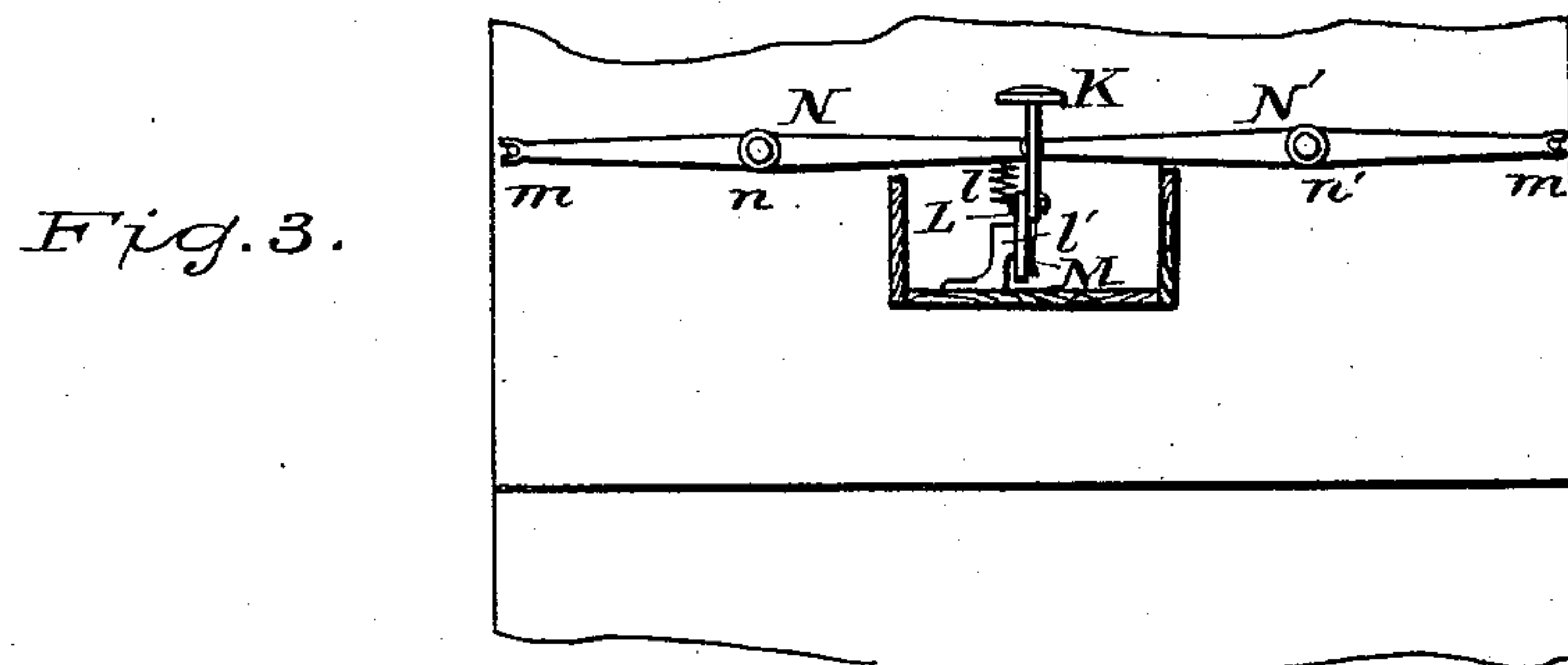
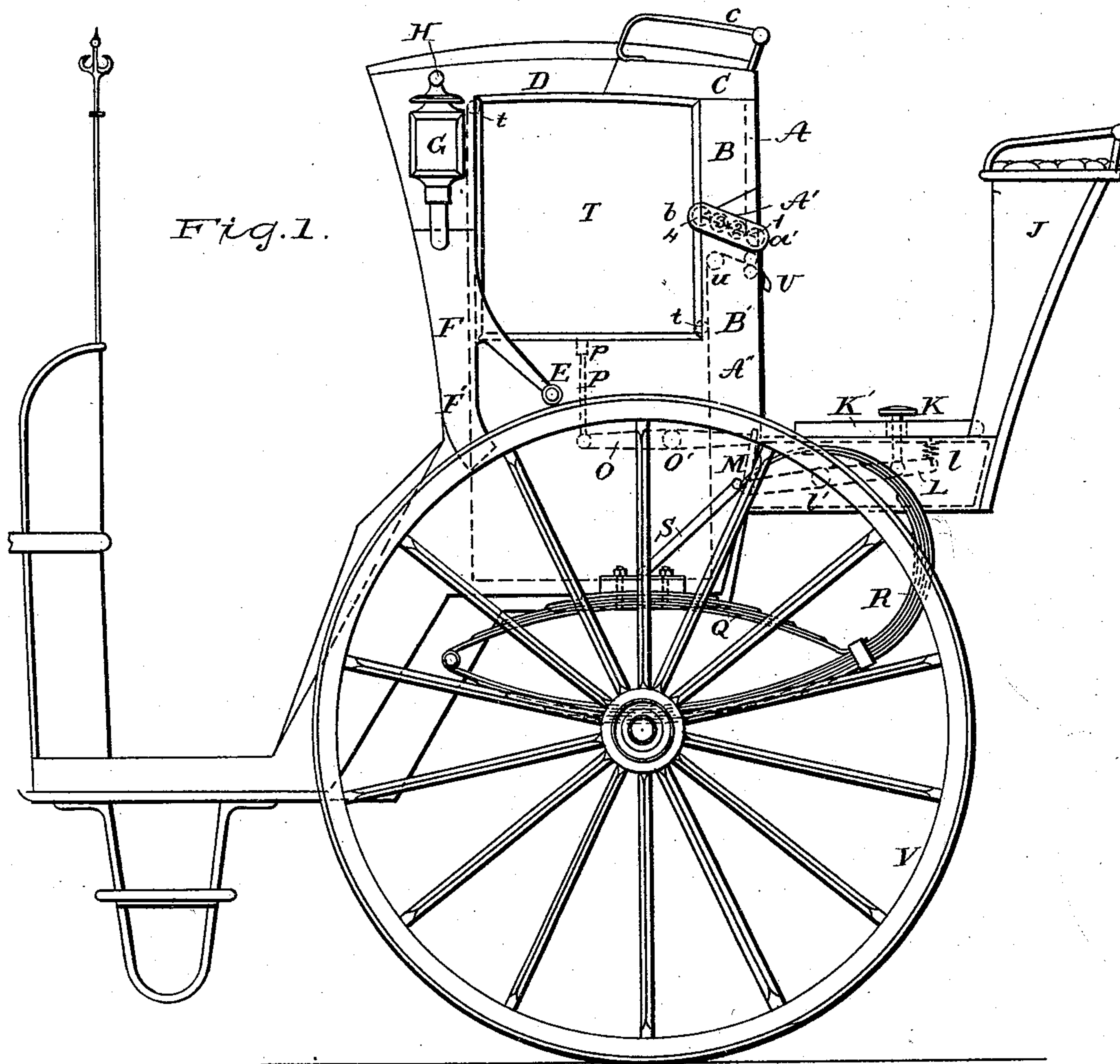
2 Sheets—Sheet 1.

J. C. ROBINSON.

HANSOM CAB.

No. 370,352.

Patented Sept. 20, 1887.



Witnesses
H. A. Lamb.
Joseph Becker

Inventor
JAMES CLIFTON ROBINSON
By his Attorney
W. L. Ewing.

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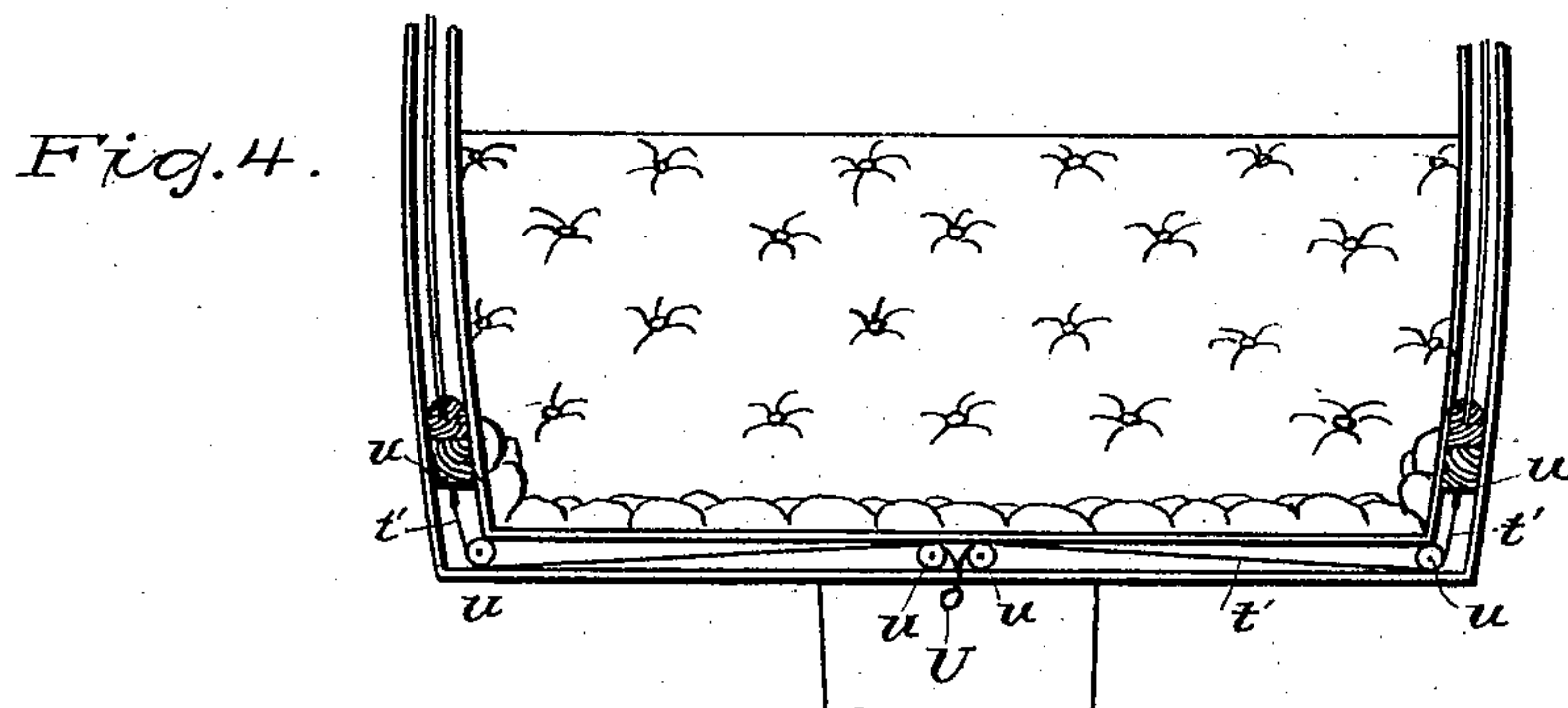
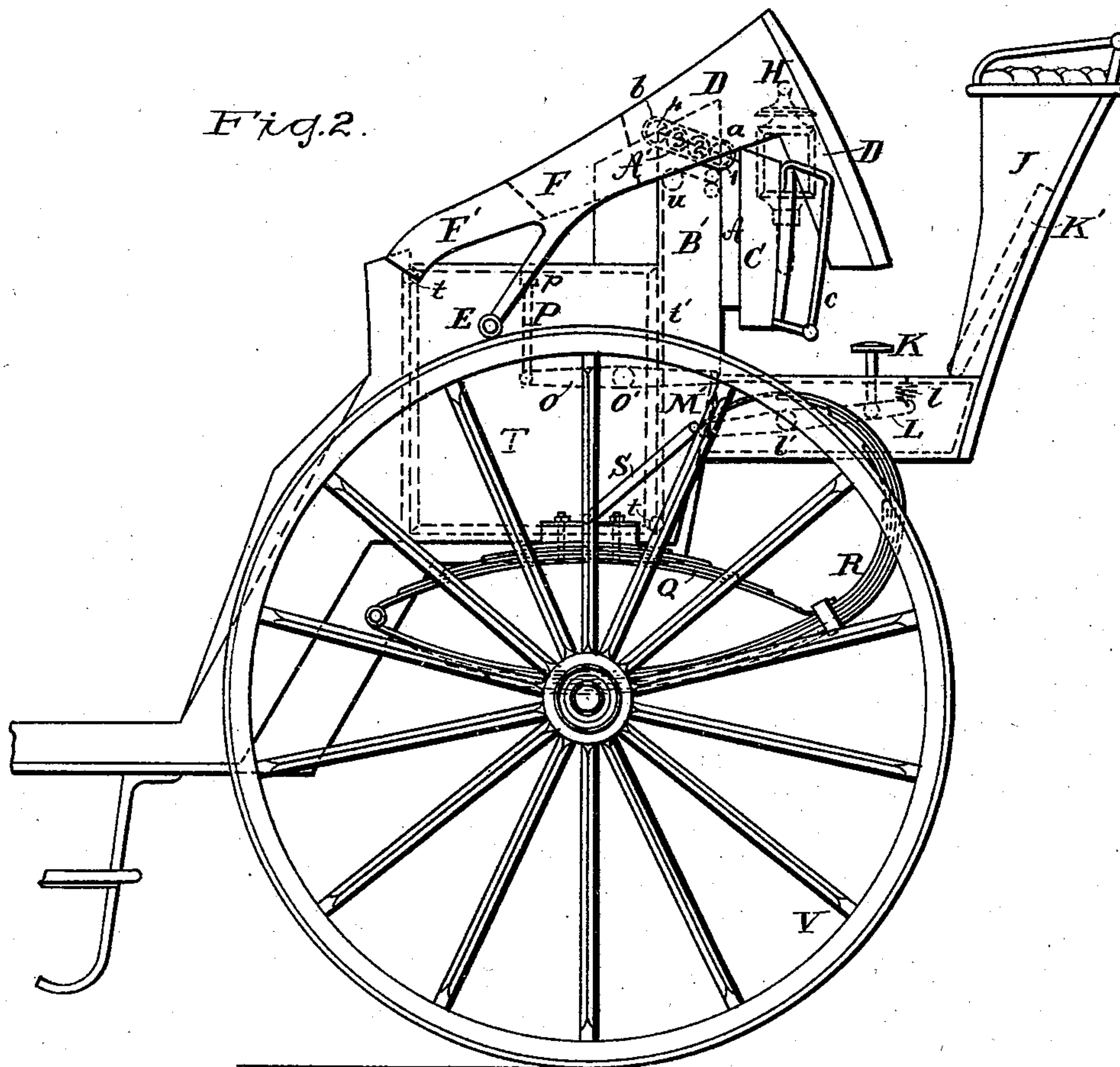
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UNITED STATES PATENT OFFICE.

JAMES CLIFTON ROBINSON, OF LONDON, ENGLAND.

HANSOM-CAB.

SPECIFICATION forming part of Letters Patent No. 370,352, dated September 20, 1887.

Application filed July 14, 1887. Serial No. 244,317. (No model.)

To all whom it may concern:

Be it known that I, JAMES CLIFTON ROBINSON, of London, England, have invented an Improvement in Hansom-Cabs, of which the following is a specification.

My invention relates to hansom-cabs capable of being converted into closed or open cabs at pleasure, and has for its object to simplify the construction and render them capable of being operated with facility and expedition, the parts being so arranged and combined that there is but little tendency to rattling, and so that the driver can operate all the parts without descending from his seat.

The nature of my invention will be understood from the following description and the accompanying drawings, of which—

Figure 1 is a side elevation of the cab when closed. Fig. 2 is a side elevation of the cab when open. Fig. 3 shows in detail the levers at back of cab for releasing the windows. Fig. 4 is a sectional plan showing the arrangement for closing the windows.

The hood-roof or upper portion, which folds back, is made in two parts, D and C, separated and entirely disconnected from each other by a transverse division, the part D consisting of the front portion of the hood or roof and the front posts and the part of the top of the window-frames, and the other part, C, consisting of the hinder part of the hood or roof and the other portions of the top of the window-frames and the upper part A of the back, which is hinged at *a* to the lower part A' of the back at the lower side, and is also hinged to the hinder part of the hood or roof at the upper side. The upper parts B of the pillars, forming the backward sides of the window-frames, are hinged at *b* to the lower parts B' of the pillars, and are connected by cords, chains, or gearing, as shown, to the folding portion A of the back, so that as the said folding portion of the back and the back part, C, of the hood or roof are turned down the upper parts B of the posts are also turned down to lie in front of the lower portions B' of the said pillars, and that when the said folding portion of the back is raised with the back part, C, of the hood or roof, the said upper parts B of the pillars are brought into line with the lower parts B'.

I have shown in Figs. 1 and 2 an arrange-

ment consisting of a set of toothed wheels A', the wheel 1 being fixed to the center, on which the back part, A, turns, and the wheel 4 being fixed to the hinge part or center of the part B, on which it turns in being folded down to lie in front of or folded up to be in line with the part B'. The wheels 2 and 3 are merely for transmitting motion from the wheel 1 to the wheel 4, and it will be understood that the wheel 1 may gear directly with the wheel 4 if they be made large enough in diameter, or that, if they be made smaller, there may be a greater number than two transmitting-wheels, provided that they be arranged to give the necessary direction of motion to the part B. The side panels or windows, T, are arranged so that they can fall down behind or between the fixed side panels.

The windows, when raised into position, may be automatically pressed outward (which may be effected by springs) to rest and be supported upon the sill of the framing, as in some railway-carriage windows; and to enable the driver to move them from this position, so that they may fall behind or between the panels, there may be provided wedges or cam-pieces *p*, which can be moved up through the sill to raise the windows and press the lower part thereof from off the sill and over the space between the panels, into which space they drop. These wedges or cam-pieces *p* may be operated from the driver's foot-board by means of one central foot plate, rod, or lever, K, (hereinafter termed the "pedal K,") projecting therefrom and connected by a lever, L, centered at *l'* to a rod, M, to which the levers N N', Fig. 3, are connected, these levers being centered at *n n'*, and their outer ends, *m*, bearing on the rear ends of levers O, centered at O', and carrying at their other ends the rods P, to which the cam-pieces *p* are hinged, the said cam-pieces, as they are raised, being deflected on their centers by the part of the opening through which they pass, so that when the windows are lifted by the cam-pieces they are moved inward by the same into position for dropping into the space between the panels.

The parts of the hood or roof may be secured together by any suitable hooks or fastenings, and fastenings may also be provided to secure the folding part of the back to the upper folding parts of the back pillars, B. Stud bolts engage

with holes in the lower ends of the parts C to hold the parts firmly laterally.

Handles may be provided by which the parts of the roof can be operated. When the cab is to be converted into an open cab, the windows are lowered by the driver pressing on the pedal K, and the hooks or fastenings aforesaid (if such be used) are undone and the hinder part, C, of the roof and the upper part A of the back are folded back, the upper parts of the pillars being automatically lowered by the cords or wheels aforesaid, and the front part, D, of the roof is also folded back.

Fig. 2 shows the parts "open."

When the cab is to be converted into a "closed" cab, as shown in Fig. 1, the front part, D, of the roof is brought forward into position, and afterward the back portion, C, of the roof and the upper part A of the back are brought forward, the upper parts of the back pillars being raised automatically therewith by the cords or wheels described. The parts are fastened together, if fastenings be employed, and then the windows are raised and rest upon the sills, and the cab is then a closed vehicle.

The front part of the hood or roof and the front pillars or portions of the window-frames (which are formed in one therewith and fold backward and forward with it) may be hinged by bars E F, centered to the body of the cab, and connected to the lower parts of the front pillars or portions of the window-frame at F, which may be provided with plates F', which, when the parts are in their closed position, overlap the sides of the cab and support the parts laterally.

In order to adjust the balance of the cab when open, the driver's foot-board K' may be hinged, so that it can be folded back beneath the seat, as shown in dotted lines in Fig. 2. The windows are raised by means of the cords t', Fig. 4, passing over the pulleys u and connected at one end to each of the windows and at the other end together, and to one cord common to both, or the said cords may be separate and be operated independently, if desired. A stud may be provided over which the loop of the cord is passed when the windows are up.

The springs are preferably a combination of ordinary springs, Q, and C-springs R, as

shown in Figs. 1 and 2. The side windows are shown with anti-friction wheels t to run in the grooves and give an easy action.

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. The combination, in a convertible hansom-cab, of vertically-movable side panels or windows, means, substantially as specified, for raising and lowering the same from the driver's seat, a rearwardly-folding back, rearwardly-folding front pillars, and a divided hood or roof composed of front and rear parts, which are disconnected from each other and are attached, respectively, to said front pillars and to the upper part of said folding back, substantially as described and illustrated.

2. In a convertible hansom-cab, a divided hood or roof composed of front and rear parts which are disconnected from each other, in combination with a folding back, the upper part of which is hinged to the rear part of the hood or roof and to the lower part of the back, substantially as described and illustrated.

3. In a convertible hansom-cab, the combination, with vertically-movable side panels or windows, of cam-pieces acting upon the same, a pedal for actuating said cam-pieces, and mechanical connections between said pedals and cam-pieces, substantially as described and illustrated.

4. In a convertible hansom-cab, the combination, with vertically-movable side panels or windows, of cords and pulleys for raising the same from the driver's seat, substantially as described and illustrated.

5. In a convertible cab, the combination of transversely-divided back pillars, a transversely-divided back, hinges uniting the parts of each, and mechanical connections, substantially as specified, between said hinges, the combination being such that when one is moved the other is automatically operated, substantially as described and illustrated.

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

JAMES CLIFTON ROBINSON.

Witnesses:

SAM. P. WILDING,
RICHARD A. HOFFMANN.