

(No Model.)

2 Sheets—Sheet 1.

C. GLENCROSS.
DOOR HANGING DEVICE FOR CABS.

No. 439,143.

Patented Oct. 28, 1890.

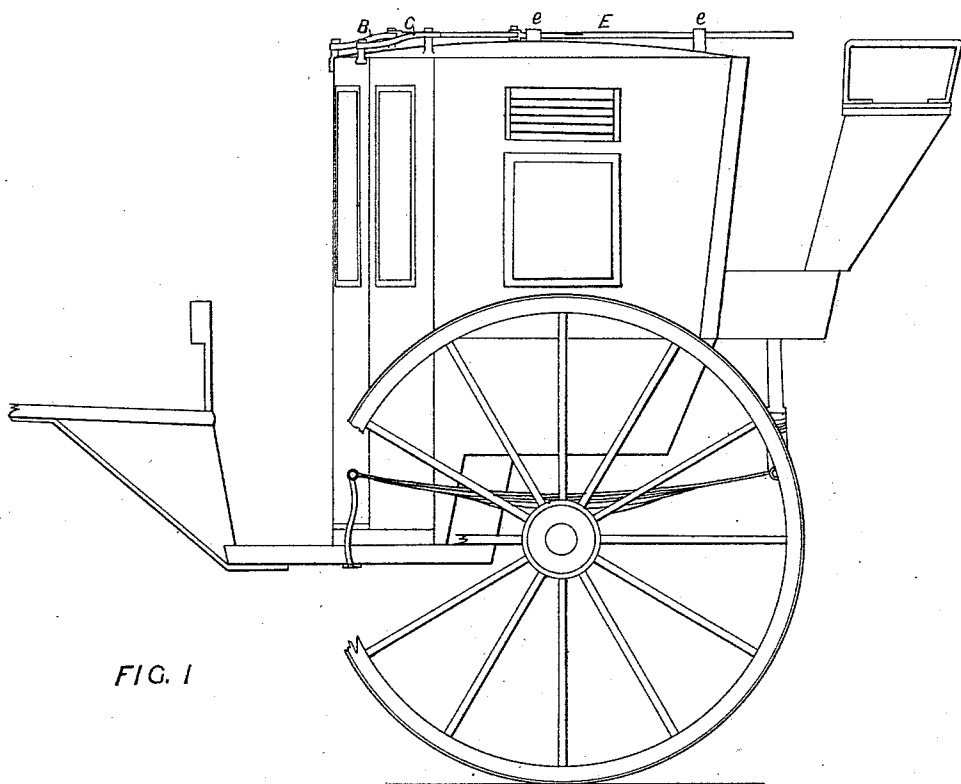


FIG. 1

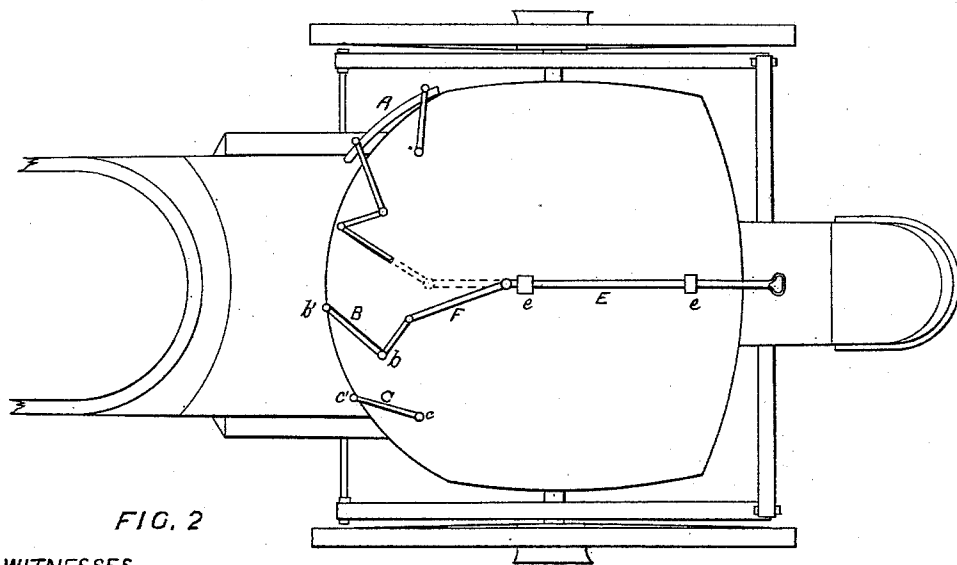


FIG. 2

WITNESSES,

Charles H. Keppel
H. J. Spence

INVENTOR,

Charles Glencross

(No Model.)

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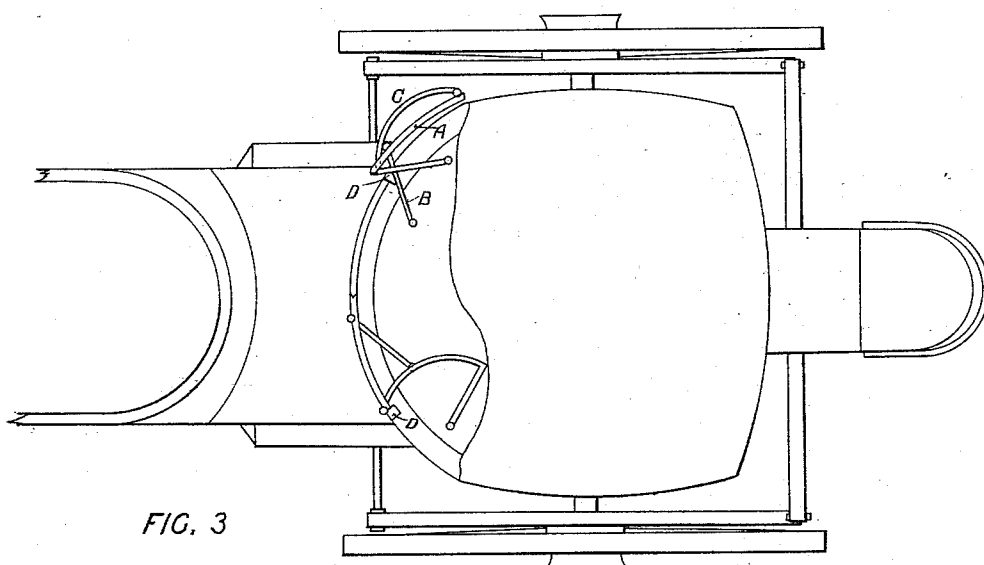


FIG. 3

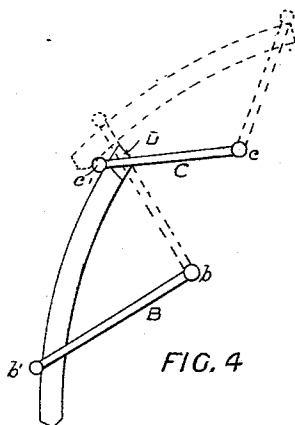


FIG. 4

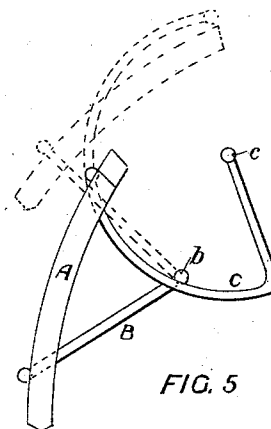


FIG. 5

WITNESSES,

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UNITED STATES PATENT OFFICE.

CHARLES GLENCROSS, OF SYDNEY, NEW SOUTH WALES.

DOOR-HANGING DEVICE FOR CABS.

SPECIFICATION forming part of Letters Patent No. 439,143, dated October 28, 1890.

Application filed May 13, 1890. Serial No. 351,613. (No model.) Patented in New South Wales January 19, 1888, No. 446; in Victoria January 21, 1889, No. 6,479; and in England July 30, 1889, No. 12,097.

To all whom it may concern:

Be it known that I, CHARLES GLENCROSS, coach-builder, a subject of the Queen of Great Britain, residing in the city of Sydney, in the Colony of New South Wales, have invented a new and useful Method of Hanging the Doors of Brougham Hansom-Cabs and Similar Vehicles, (for which I have obtained a patent in New South Wales, No. 446, bearing date January 19, 1888; in Victoria, No. 6,479, bearing date January 21, 1889, and in Great Britain, No. 12,097, bearing date July 30, 1889,) of which the following is a specification.

This invention relates to an improved method of hanging the doors of brougham hansom-cabs, and other vehicles of similar construction.

The object of the invention is to dispense with the use of hinges and slides for the doors and to substitute for these contrivances a device which is more easy of manipulation and at the same time less cumbersome and inconvenient than either of them, and in which the operation of opening and closing the doors is effected within a restricted space.

My invention consists, essentially, in hanging the doors by means of links on a principle similar to that applied in uniting the bars of linked parallel rulers; but to make the invention better understood I will now proceed to more particularly describe the same with reference to the five figures on the accompanying sheets of drawings, in all of which like letters of reference indicate similar or corresponding parts.

Figure 1 is a side elevation of a brougham hansom-cab with perpendicular "flush" doors hung according to the method herein described. Fig. 2 is a plan or cant view of the same. The mechanism illustrated in this figure shows the general arrangement of the hanging-links at the top of the doors and an L-piece fitted to one of the links of each pair, by operating which, with the aid of cords or rods, the driver is enabled to open or close the said door from his perch. Fig. 3 is also a plan or cant view, a portion of the roof of the vehicle being shown broken away to illustrate the arrangement and construction of the pair of hanging-links at the foot. Fig. 4 is a working sketch of the arrangement of the hang-

ing-links at the top of the doors. Fig. 5 is a similar sketch showing the arrangement of the hanging-links at the foot of the doors.

Both doors of the vehicle have exactly corresponding parts, and by suitably arranging the operating mechanism the doors may be manipulated separately or together.

Referring to Fig. 5 of the drawings, the full lines show the relative positions of the right-hand door and of the pair of hanging-links at the foot of it when closed, and the dotted lines show the relative positions of the same when open.

A is the door, and B and C are the hanging-links. These links work from the respective centers *b* and *c*. The inner link B is a straight bar, and the outer link C is bent in the form of a figure somewhat resembling the letter V in form, one of the arms being curved inward, so as to coincide with the segment of a circle having its center in the pivot at the extremity of the straight arm and having a radius equal in length to that arm. The outer extremity of each link is attached to the door by means of a pivot-lug, the positions whereof are respectively indicated by the letters *b'* and *c'*.

Since it is intended that when open the doors should swing out over the front quarters of the vehicle and into a position in which they cannot impede passage into or out of the vehicle, it is necessary to make the link C shorter than the link B, for by this construction the door is made to traverse a path governed by the relative lengths of the bars B and C and ultimately to fall into a position approximately parallel with the curve of the face of the vehicle.

The standing pillars D, as well as serving the purpose of jambs for the doors when closed, act also as hinge-tops for them when open, in which position (see Fig. 5) the straight arm of the link C strikes against the pillar D and can proceed no farther. The reason that the link C is made with a curved arm is to allow its outer end to pass the pillar D, which it could not if made straight. On top of the cab both hanging-links are made straight. An L-piece is fitted to the link H, and to the L-piece controlling cords or rods are connected to enable the driver to manipulate the doors and to open and close them at will.

E is an operating-stock moving in guides *e* and mechanically connected with the operating bars or joints F, which are secured to the L-piece before referred to. The standing pillars and the door-stiles are beveled, as shown, in order to facilitate entrance of the doors into the door-space.

I would have it understood that I do not confine myself to the use of the special method of arrangement or form of links hereinbefore described, as the essential feature of novelty in the invention is to hang the doors so that the outer edges thereof will have less throw or swing than the inner edges, whereby the same are made to move in a curve approximately parallel with the contour of the vehicle-face.

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

1. Hanging the doors of brougham hansom-cabs by means of a pair of links at the top and a pair of links at the bottom of the doors, the outer link of each pair having a shorter radial length than the inner one, for the purposes set forth.

2. The form of the links C at the foot of the doors and the combination of the same with links of corresponding radial length at the top of the doors and with a pair of links, one at the top and the other at the foot of the doors, of greater radial length, substantially as and for the purposes set forth.

CHARLES GLENCROSS.

Witnesses:

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Both Patent Agents, Sydney, N. S. W.