

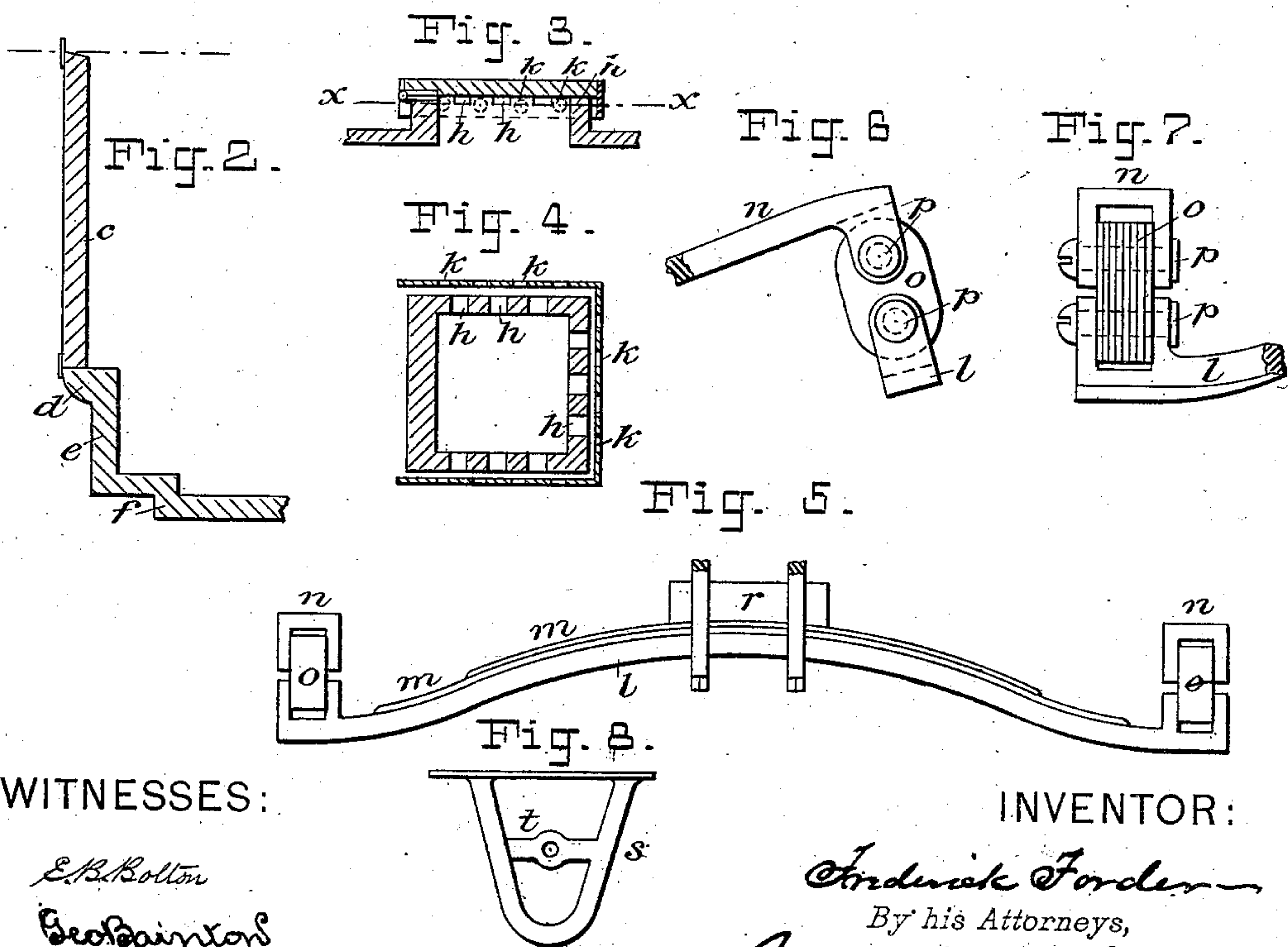
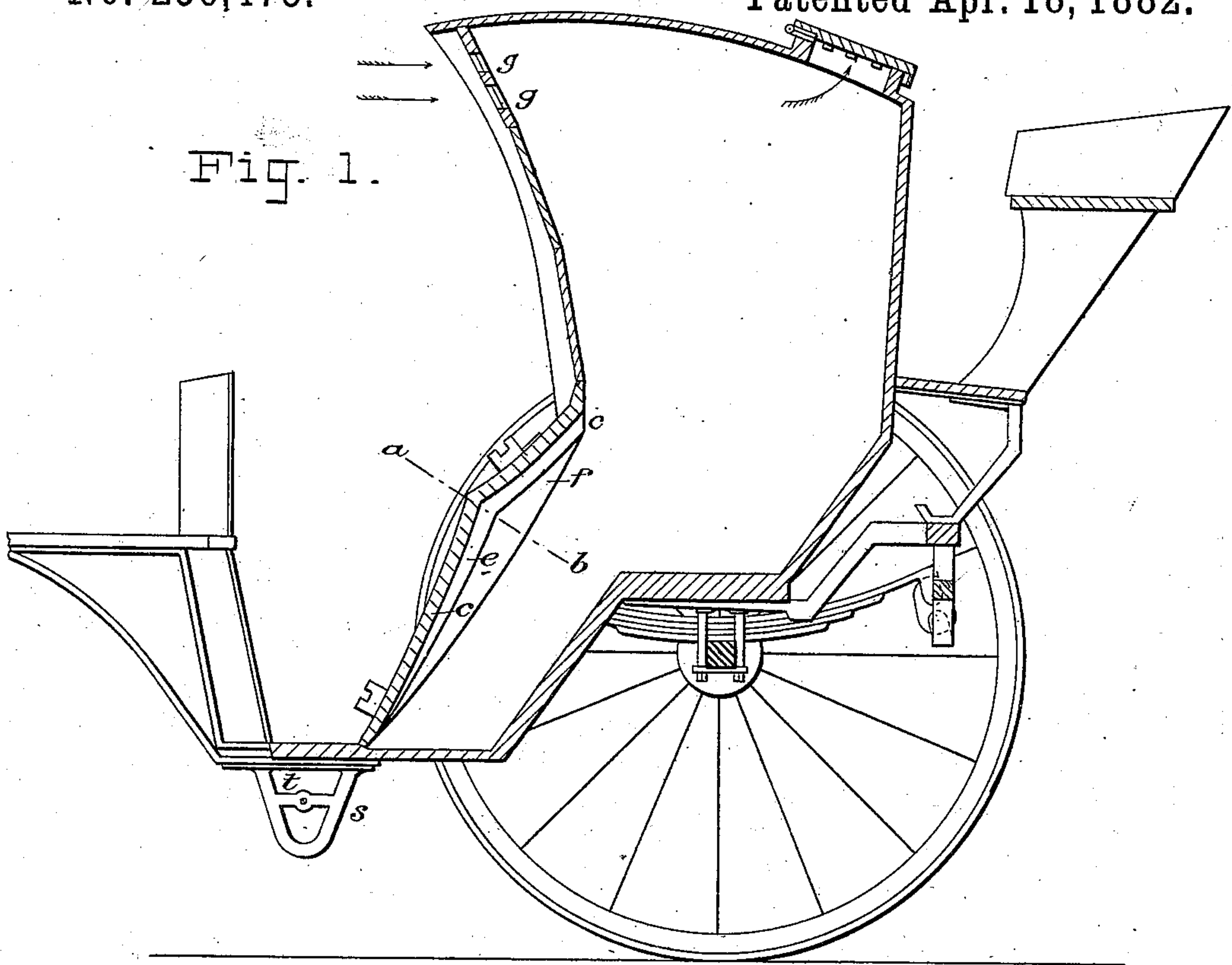
(No Model.)

F. FORDER.

CAB.

No. 256,473.

Patented Apr. 18, 1882.



WITNESSES:

E. B. Bolton
Geo. Bainton

INVENTOR:

Frederick Forder
By his Attorneys,
Purke, Frank & Co.

UNITED STATES PATENT OFFICE.

FREDERICK FORDER, OF LONDON, ENGLAND.

CAB.

SPECIFICATION forming part of Letters Patent No. 256,473, dated April 18, 1882.

Application filed February 25, 1882. (No model.) Patented in England November 1, 1873.

To all whom it may concern:

Be it known that I, FREDERICK FORDER, of London and Wolverhampton, England, have invented certain new and useful Improvements in the Construction of Cabs or Vehicles for Traveling on Roads, of which the following is a specification.

This invention forms the subject of Letters Patent granted to me in Great Britain, dated 1st November, 1873, No. 3,563.

The invention is designed for the purpose of producing a vehicle similar in construction to that class of cab known as the "Hansom," the peculiarity of which will fit it specially for running over the rough pavements of cities and towns, or roads adjacent thereto, and also afford to the persons occupying such cab greater comfort, accommodation, and safety than is afforded by hansoms of the ordinary construction.

The above purpose is effected by employing raised pillars in conjunction with doors of special shape to give increased knee-room, by making provision for the proper ventilation of the cab when the windows and doors are closed, by the combination of a rigid back stay or semi-yielding back stay and leather robbins for connection to side springs, and by the employment of runners under the forward end of the cab.

These improvements are illustrated by the accompanying drawings, in which Figure 1 is a longitudinal vertical section through the cab; Fig. 2, an enlarged section taken on line *a b* of Fig. 1, and showing the cab front only on one side of the center line. Fig. 3 is a longitudinal section through the roof-trap, showing its adaptation as a ventilator; Fig. 4, a section taken on line *x x* of Fig. 3; Fig. 5, a back elevation of back stay, showing connections to back ends of side springs; Fig. 6, an enlarged side elevation, showing the connection between the back stay and a side spring; Fig. 7, a back or end elevation of Fig. 6, and Fig. 8 an enlarged elevation of a runner.

Similar letters refer to similar parts throughout the several views.

c c represent a section of one of the doors of the cab, the obtuse-angled formation of which follows approximately the bent position of the occupier's legs.

d is a raised pillar (see Fig. 2) projecting forward from the front *e* of the body of the cab. There is a pillar, *d*, on each side, to which the doors are hung by the ordinary style of hinges. The pillars are made to project forward as much as may be necessary to give the proper knee-room, and thus the body of the cab may be made smaller and lighter without any loss of convenience, or may be made more convenient without increase in size or weight. The contour of the part *e* follows very much though not precisely the line of the doors, as will be seen by the interior line thereof, Fig. 1. The front part, *f*, of the side of the cab-body is a curved line, as shown by the interior contour thereof, Fig. 1.

g g are openings filled in preferably with perforated zinc, and they may be fitted with louvers or sliding panels for adjustment.

h h, &c., are apertures cut through the side of the roof-trap, and *k k*, &c., are holes drilled through a weather-rim projecting down from the hinged lid. The holes *k k*, &c., are opposite the blanks of the roof-trap sides, and not opposite the apertures *h h*, &c., in order to prevent water being splashed through into the cab when the same is being washed. Fresh air is admitted through the openings *g g*, which, circulating freely without draft through the interior of the cab in the direction as indicated by the arrows, passes off through the apertures *h h*, &c., and holes *k k*, &c., and thereby effects perfect ventilation to the interior when the doors and windows are closed.

l is a semi-yielding back stay, and *m m* spring-blades acting in conjunction therewith.

n n are the back ends of the side springs, and *o o* leather robbins forming the connection between the side springs and the back stay. The leather robbins are formed of layers or laminations, each of the whole area of the side elevation of a robbin riveted together, the two outside layers being held to the block formed of the other layers by means of ordinary wood-screws.

p p are bolts passing through the open ends of the side springs and of the back stay respectively, and also through the metal ferrules fixed in the robbins.

r is the block at the connection of the back stay with the framing under the boot of the

cab. When a semi-yielding stay is used, either with or without spring-blades *m m*, it must be sufficiently stiff, combined with the blades *m m*, or by itself, to prevent its springing enough to give any appreciable elongation which would twist the robbins out of their correct position to bear properly on the pins *p p*. By the employment of leather robbins in conjunction with a rigid or semi-yielding back stay the body of the cab when running over rough roads or turning sharp corners is caused to ride upon its spring-bearings much easier, steadier, and without that facility of oscillation which is inseparable from cabs of the ordinary construction. A runner, *s*, is carried on either side below the foot-board. Each runner has a bar, *t*, through the hole in the center of which a gridiron-step is bolted. The lower rounded portion of these steps not only prevents the shafts of the vehicle coming in contact with the ground in the event of the horse stumbling, but enables the vehicle at such times to slide a few paces over the rough pavement, thereby preventing that sudden arrest and consequent shock that inevitably takes place on such an occasion when the weight rests simply on steps of the ordinary construction.

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

1. The combination, in a cab of the hansom type, of a raised pillar, *d*, on each side of the doorway with obtuse angle-shaped doors *c*, substantially as and for the purpose described and shown.

2. In a cab of the hansom type, the ventilating arrangements consisting of the openings *g g* and ventilating roof-trap having the apertures *h h*, &c., substantially as described and shown.

3. The combination, in a cab of the hansom type, of a rigid or of a semi-yielding back stay, *l*, and in the latter case with or without spring-blades *m m*, with leather robbins *o o*, connecting the open ends of the back stay with the open back ends, *n n*, of the side springs, substantially as and for the purpose described and shown.

4. In a cab of the hansom type, a runner, *s*, fixed under the foot-board, on each side thereof, and provided with a cross-bar, *t*, to hold the step, substantially as and for the purpose described and shown.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FREDERICK FORDER.

Witnesses:

STEPHEN WATKINS,
JOHN THOM.