

No. 688,287.

Patented Dec. 10, 1901.

J. C. BLEVNEY.

WATER GAGE FOR HORSELESS CARRIAGES.

(Application filed Dec. 17, 1900.)

(No Model.)

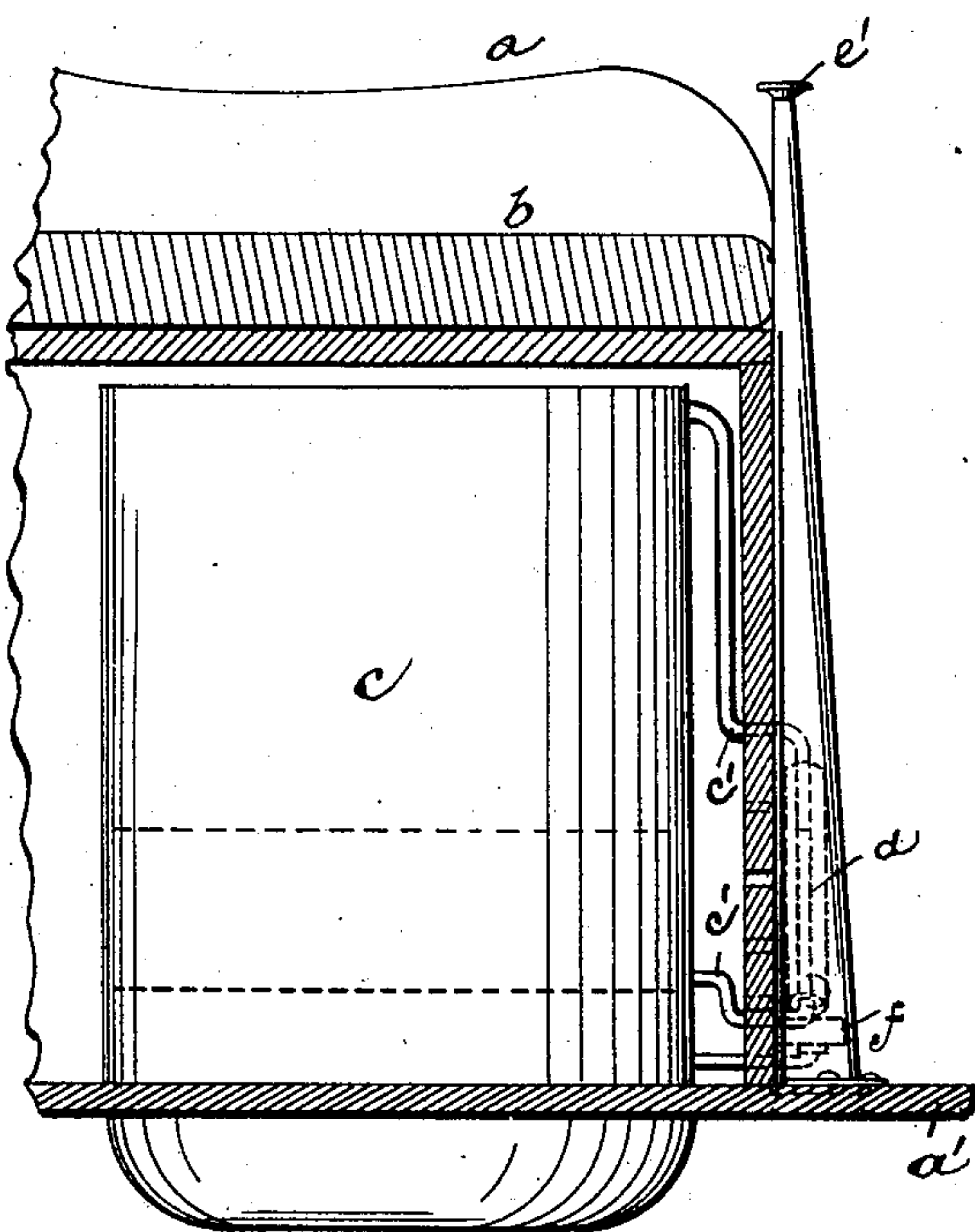


Fig. 2.

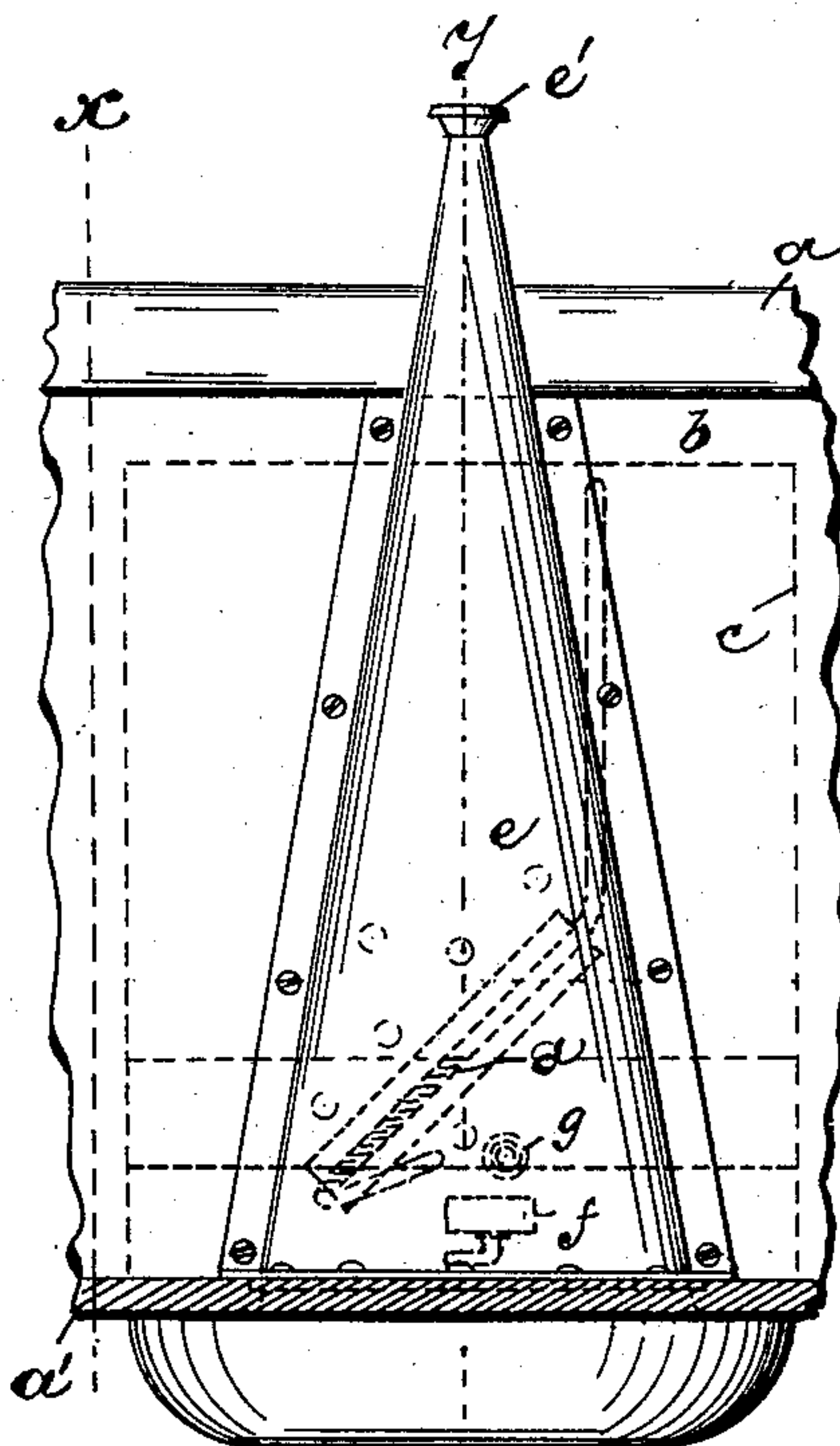


Fig. 1.

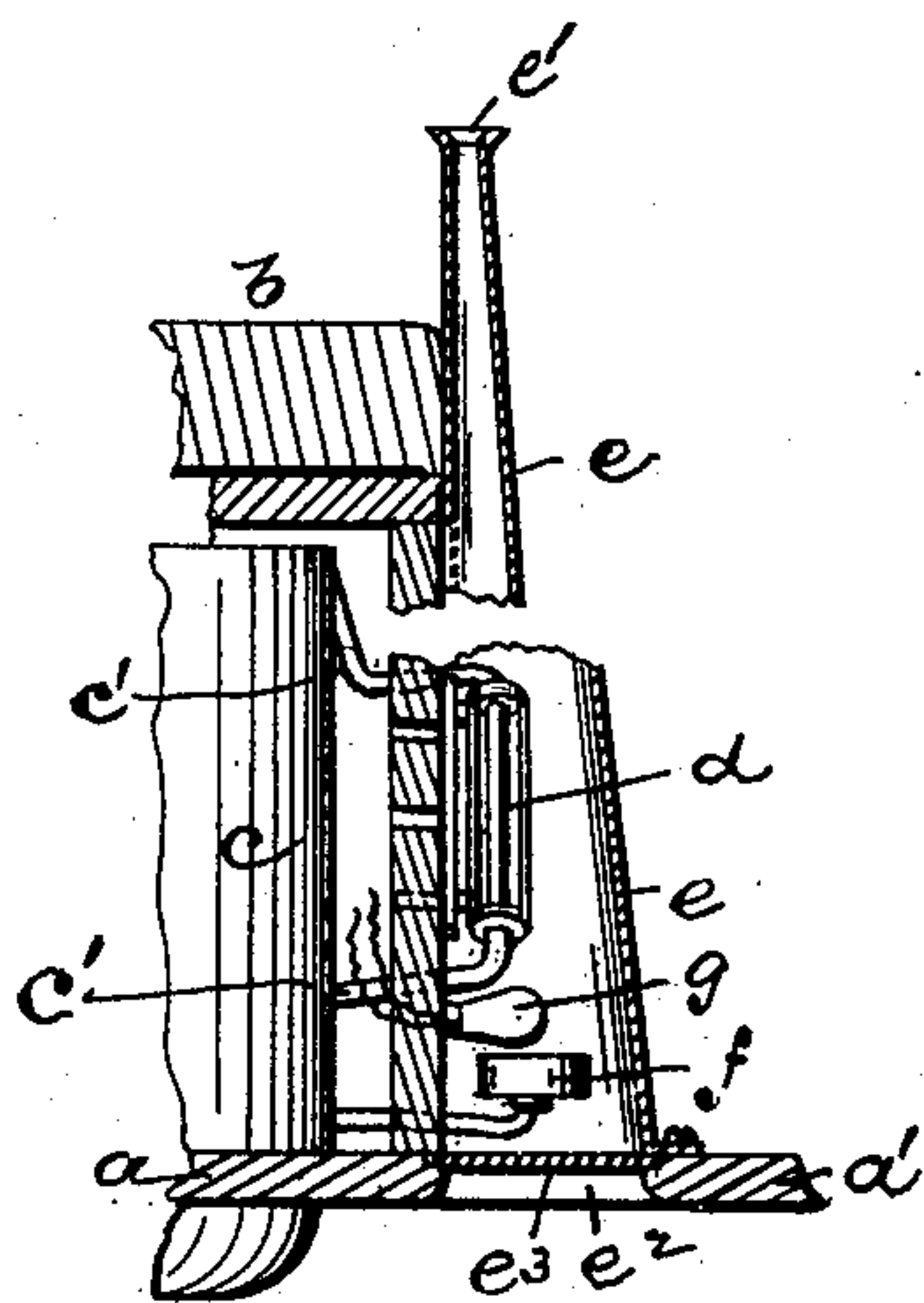


Fig. 3.

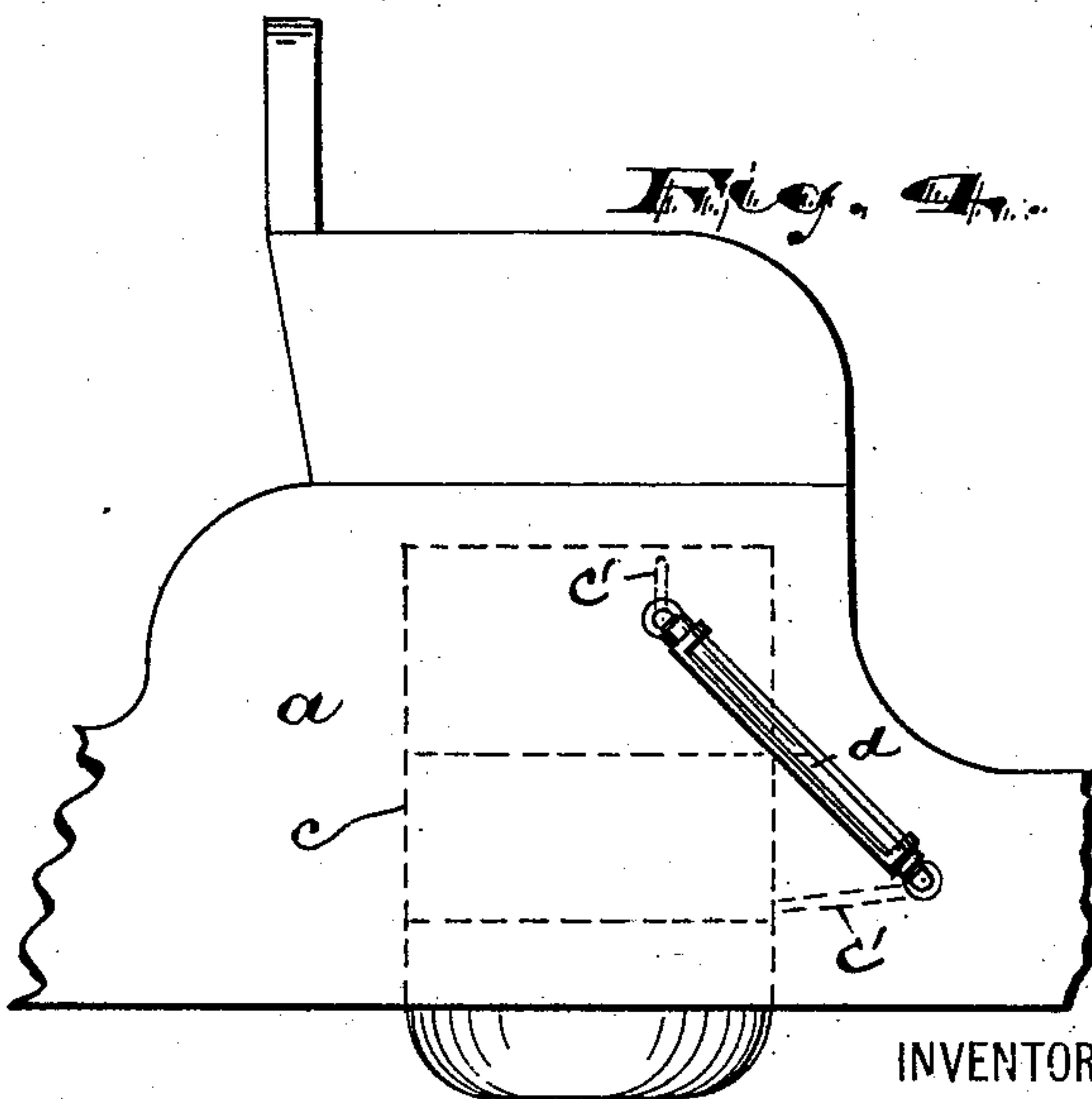


Fig. 4.

WITNESSES:

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WATER-GAGE FOR HORSELESS CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 688,287, dated December 10, 1901.

Application filed December 17, 1900. Serial No. 40,130. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BLEVNEY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Boiler Water Sight-Glasses for Horseless Carriages; 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 letters of reference marked thereon, which form a part of this specification.

This invention relates particularly to certain improvements in sight-glasses for use in connection with horseless carriages employing steam as the source of motive power, the objects of the invention being to enable the driver of the carriage to more quickly and conveniently observe the condition of the water in the boiler and maintain the said water at a proper level in the boiler without the inconvenience commonly experienced in connection with the sight-glasses now in common use.

In horseless carriages it is a common practice to establish the boiler beneath the driver's seat, and thus the sight-glasses adapted to indicate the level of the water in the boiler are stationed beneath the driver, so that it is necessary for him to lean forward and down or assume some inconvenient position to enable him to see the water in the glasses, in which abnormal position he is not able to control the steering and speed-controlling devices.

By my improvement I enable the driver sitting in his normal position or more nearly approximating a normal position on the seat at which he can conveniently operate the driving, steering, and speed-regulating devices to easily examine the sight-glass or water-indicator, thus enabling him to have a more perfect control of the vehicle, so that danger of collision or the burning out of the boiler because of its lack of water is reduced.

The invention consists in the improved sight-glass for horseless carriages and in the arrangements and combinations of parts of the same, all substantially as will be herein-

after set forth and finally embraced 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 view of a carriage-seat to which my improvements have been applied. Fig. 2 is a section of the same on line *x*. Fig. 3 is a section on line *y*; and Fig. 4 is a side elevation of a portion of a carriage, illustrating a variation in construction.

In said drawings, *a* indicates a portion of a horseless carriage having a seat *b*, beneath which is stationed on the flooring or frame *a'* of the carriage a boiler *c*, of any suitable type or construction and having water pipes, ducts, or connections *c' c'* to and from the opposite ends of the sight-glass *d*, by which the water of the boiler can flow into and from said sight-glass. Instead of arranging said sight-glass vertically erect, as heretofore, I have inclined said sight-glass to permit a view of the sides thereof from the seat by a downward glance, and thus permit a view of the high-water mark without a material change of the body from an easy or normal sitting position, as above indicated.

The inclined glass may be stationed on the outside of the vehicle-body, as in Fig. 4; but I prefer to attach it to the front of the vertical fore part of the seat, as in Figs. 1, 2, and 3, about midway of the sides of the carriage, so as not to obstruct the opposite ends of the said seat *b*. I also prefer to inclose said sight-glass in a flaring vertical casing *e*, which extends from a point below the glass upward to a point above the seat, the small upper end having an eyehole *e'*, through which the driver may examine the glass below. The said casing or inclosure *e* wholly incloses the glass, so that a chamber is formed around the glass which, being contiguous to the boiler, permits a warming of the air therein, so that in cold weather the sight-glass will be protected from frost. The air in said chamber is more effectually kept warm by means of the pane in the light-opening, hereinafter referred to.

I prefer to form in the flooring of the carriage or beneath the glass a light-opening *e²*, through which the light-rays may enter to

render the water-mark more distinctly apparent, and this said opening is preferably provided with a transparent pane *e*³ to prevent the inpassage of dust, &c., to the chamber within the case. The case is removable from the seat to permit an easy access to the parts therein for cleaning, adjustment, &c. For night service I prefer to employ an electric or other lamp *g* and station the same beneath the lower side of the inclined glass, and within the chamber or inclosure of the case *e* within range of the eye I may arrange a pressure-indicator *f*. The sight-glass thus arranged and protected may be easily seen without removing the blankets or wraps from the lower extremities of the rider, and the robes and wraps will not interfere with said glass to obstruct the sight, and there will be no danger of injury to the glass by ponderous articles placed on the carriage at the front of the seat, all as will be apparent.

Having thus described the invention, what I claim as new is—

1. In a horseless carriage, the combination with the body of the carriage having a seat for the driver and a boiler therein for generating motive force, of a sight-glass in communication with the boiler and arranged below the level of the seat and inclined to the said seat, and an inclosing casing arranged around said glass and forming a chamber or air-space therearound separated from the open atmosphere, the said chamber being constructed at the top and bottom to permit the passage of the light-rays, substantially as set forth.

2. In a horseless carriage, the combination with the body of the carriage having a boiler therein and having a seat for the carriage driver, of a sight-glass attached to the outside of said body and at an inclination to the level of the top of the vehicle-seat, said sight-glass being in open communication with the boiler and adapted to present the water-level mark therein to the view of the driver when looking vertically downward from his said seat, substantially as set forth.

3. The combination with a carriage-body *b*, inclosing a boiler and having a seat for the

driver, of a sight-glass attached to the outside of said carriage-body below the level of the top thereof and in open communication with the said boiler, and a casing constructed at the top to permit the sight-glass to be seen and being attached to said carriage-body to form therewith a chamber for the sight-glass, said casing serving to hold therein for awhile the heat from the boiler passing through the lower parts of the seat, whereby the water of said sight-glass may be more perfectly protected from frost while the vehicle is in motion or standing, substantially as set forth.

4. The combination with the seat *b*, of a horseless carriage, of a boiler having a sight-glass for indicating the level of the water within said boiler, the said glass *b*, being inclined as shown and protected by a vertically-disposed casing open at the top and bottom to the passage of light and to permit the water-level in the inclined glass to be seen, substantially as set forth.

5. The combination in a horseless carriage, with the driver's seat, and a boiler, of a sight-glass in open communication with said boiler and a casing forming an air-chamber around said sight-glass having a sight or eye hole at the top and a light-opening whereby the water-mark may be observed from said sight or eye hole, substantially as set forth.

6. The combination in a horseless carriage having a boiler and seat for the driver, of an inclined sight-glass arranged at the front of said seat and in open communication with the boiler, a flaring case attached to said seat and inclosing said sight-glass, said case having an opening at the top and a light-opening at the bottom by which light-rays may be directed from said light-opening, through the glass to the eye at said top opening, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of December, 1900.

JOHN C. BLEVNEY.

Witnesses:

CHARLES H. PELL,
C. B. PITNEY.