(No Model.)

G. A. BEACH.

CARRIAGE SPEAKING TUBE.

No. 386,054. Patented July 10, 1888.

Fig. 1.

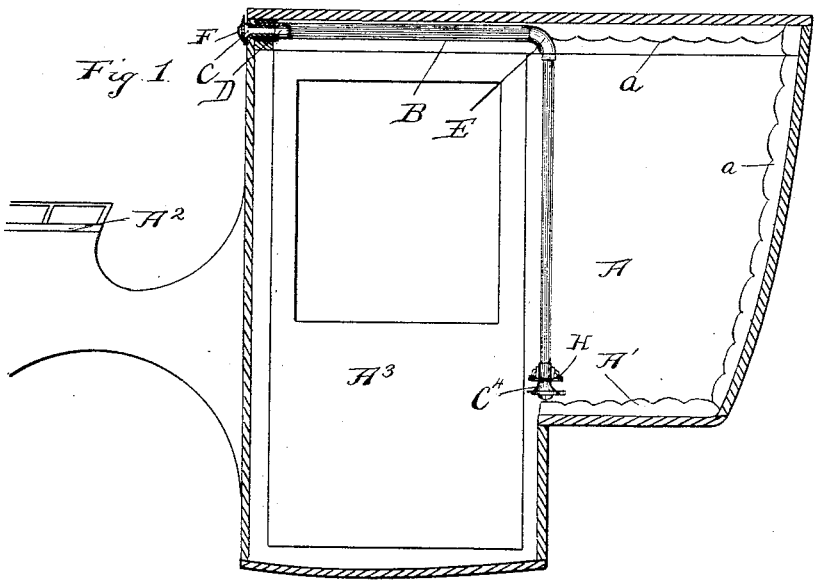


Fig. 2.

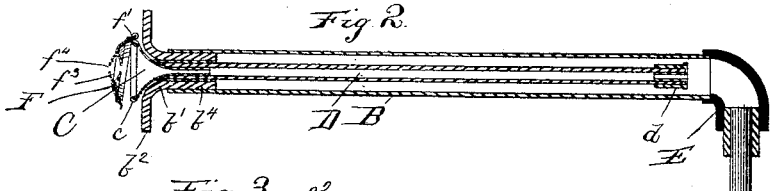


Fig. 3.

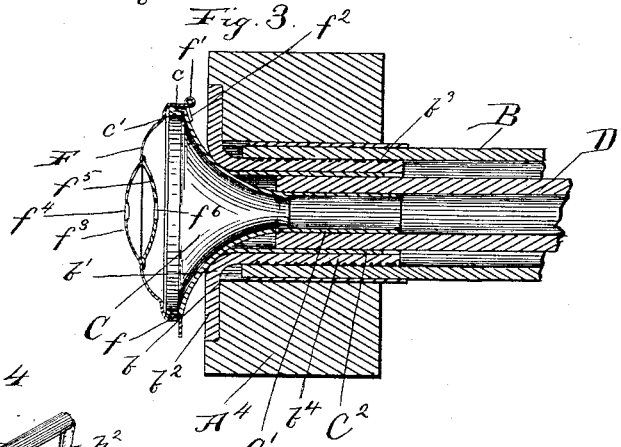
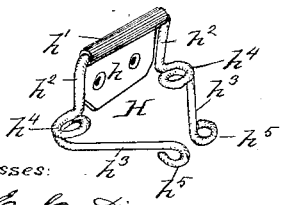
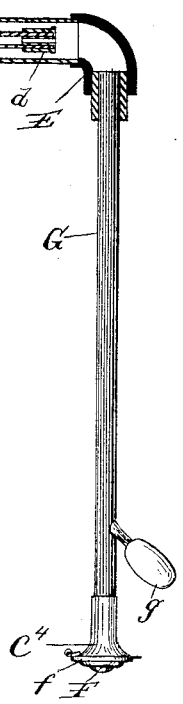


Fig. 4





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UNITED STATES PATENT OFFICE.

GEORGE A. BEACH, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND JAMES F. SOMES, OF SAME PLACE.

CARRIAGE SPEAKING-TUBE.

SPECIFICATION forming part of Letters Patent No. 386,054, dated July 10, 1888.

Original application filed March 15, 1887, Serial No. 230,935. Divided and this application filed November 26, 1887. Serial No. 256,208. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. BEACH, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Carriage Speaking-Tubes, of which the following is a specification.

My invention relates to carriage speaking-tubes, and more particularly to improvements upon the carriage speaking-tube heretofore patented to me in Letters Patent of the United States, No. 363,979.

The object of my present invention is to provide a carriage speaking-tube extending from the seat of the carriage to the driver's seat thereof, which may be contracted or telescoped out of the way, leaving no projecting part liable to injury or to affect the neat appearance of the carriage, and wherein the mouth-pieces are provided with whistles and hinged caps.

To this end my invention consists, in connection with the carriage, the telescoping or contractible speaking-tube and its mouth-pieces, of a hinged cap or covering-disk furnished with a double-disk whistle, being integral with the hinged cap, so that no part of the whistle will project beyond the mouth-piece or its hinged cover.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a sectional view of a carriage, showing my invention in elevation. Fig. 2 is an enlarged longitudinal vertical section of the speaking-tube. Fig. 3 is an enlarged sectional view of the mouth-piece and whistle. Fig. 4 is a detail perspective view of the mouth-piece-holding clamp.

In said drawings, A represents a carriage-body; A′, the carriage-seat; A^2, the driver's seat, and A^3 represents the door of the carriage.

B is the stationary or non-sliding tube or part of the speaking-tube, extending from the front of the carriage-body, or the vicinity of the driver's seat, under the top or roof of the carriage. This tube B should be made of two or three ply rubber hose, and is, or may be, supported by the upholstering *a*, which thus serves to conceal the tube from view as well as to support it. The driver's end of the tube is secured and firmly supported by a metallic socket or thimble, *b*′, secured in a suitable hole, *b*, in the frame-work A^4 of the carriage-body. The socket has a flange, b^2, which is countersunk in the frame. The thimble *b*′ is shaped to receive the mouth-piece C and constitutes the socket in which the mouth-piece fits, and by which it is concealed from view and protected from injury. The socket-piece *b*′ is provided with screw-threads b^3 on its sleeve portion b^4, by which it may be secured in the frame A^4. These screw-threads also serve to firmly unite the stationary tube B to the sleeve of the thimble. A suitable cement, however, should be applied before the sleeve b^4 is inserted in the rubber-hose tube B.

The mouth-piece C is secured to a sliding or telescoping section or part, D, of the speaking-tube, which is preferably made of flexible hose, stiff enough, however, to be readily pushed back into the tube B after it has been drawn out. This tube D is of somewhat smaller diameter than the tube B, and is provided with a shoulder or button enlargement, *d*, at its inner end, so that the friction thereof on the tube B will serve to retain the sliding tube D in its retracted position.

The mouth-piece C is of a flaring conical or bell shape, and is furnished with a short nearly-cylindrical rim or shoulder, *c*, having an inturned flange or fold, *c*′, thus forming a smooth rounded edge for the mouth-piece, and also a seat or head for the flange *f* of the hinged cover F to fit or clasp over, and thus hold the hinged cover securely closed. The rim or shoulder *c* is in fact made somewhat flaring, as indicated clearly in Fig. 3, the outer edge of the shoulder being rounded by the fold *c*′, so that this rounded flaring shoulder has a kind of wedging action on the flange *f* of the hinged cover, and springs the same outward as the cover is being closed. The cover F is furnished with a hinge, *f*′, connected by a bracket or strap, f^2, to the mouth-piece C. The hinged cover F is furnished with a double-disk perforated whistle. One disk of the whistle consists of the cover-disk F itself, which is furnished with a raised center, f^3, having a whistle hole or perforation, f^4, therein. The inner disk, f^5, of the whistle is soldered upon the inside of the cover-disk

F, and is furnished with a whistle hole or perforation, f^6, opposite the hole f^4 in the disk F, but of smaller diameter.

The inner or small end of the mouth-piece C is furnished with a short metallic tube or sleeve, C′, soldered thereto, which is adapted to fit within the rubber hose or tube D; and also with an outer thimble or sleeve, C^2, of a larger diameter, which is adapted to fit over the hose-tube D. The two sleeves C′ and C^2 thus form between them an annular chamber the thickness of the hose D, for the purpose of receiving and securing the mouth-piece to the hose D. By simply pushing or inserting the end of the hose into this annular chamber, a little cement of any suitable kind being first applied, the mouth-piece may be very securely, as well as easily, attached to the hose.

The stationary tube B is provided with a metallic elbow, E, at its inner end, to which a stationary tube, G, is attached, which extends down from the top of the carriage at the side thereof to the carriage-seat A′. The section G is preferably made of rubber hose, and may be attached to the elbow E in any suitable manner. It is provided at its lower end with a mouth-piece, C^4, which is or may be in all respects similar to the mouth-piece C before described, and is provided with a similar hinged cover and whistle. The tube G is further furnished near its lower end with a collapsible rubber bulb, *g*, by which the whistle of the driver's mouth-piece may be operated when desired. The tube G extends down the side of the carriage, preferably in about the position indicated in the drawings, and is held in place by a wire spring-clamp, H, secured to the frame of the carriage by a hinge, *h*. The middle portion, *h*′, of the clamp is the pivot of the hinge. The clamp has two vertical arms, h^2 h^2, extending down from the pivot *h*′, and two horizontal arms, h^3 h^3, inclined toward each other. The arms h^3 h^3 stand in a horizontal plane, or about at right angles to the vertical arms h^2 h^2. The horizontal arms h^3 h^3 are connected to the vertical arms h^2 h^2 by spring-coils h^4 h^4, which are adapted to permit the clamp-arms h^3 h^3 to spring or open outward from each other in a horizontal plane, and also to spring up or down in a vertical plane. By reason of this double-spring movement of the clamp-arms h^3 h^3 the mouth-piece C^4 may be removed or disengaged from its holding-clamp readily, whether it be pulled directly outward or up or down. The ends of the clamp-arms h^3 h^3 are furnished with curved ends or coils h^5 h^5.

This application is filed as a division of my application Serial No. 230,935, filed March 15, 1887, and I do not herein claim the subject-matter claimed in said application Serial No. 230,935.

I claim—

1. The combination of a carriage-body, A, stationary tube B, having a thimble, *b*′, at its outer end, said tube B being secured at the top of the carriage under the upholstery and provided with an elbow, E, at its inner end, sliding tube D, provided with a mouth-piece, C, at its outer end, said carriage-body being provided with a socket to receive said mouth-piece, dependent tube C, secured to said elbow and provided with a mouth-piece, C^4, said mouth-piece being furnished with a hinged cap, F, provided with a double-disk whistle, one disk of said whistle being integral with said hinged cap, substantially as specified.

2. The combination of carriage-body A, stationary tube B, having thimble *b*′ at its outer end, said tube B being secured at the top of the carriage under the upholstery and provided with an elbow, E, at its inner end, sliding tube D, provided with a mouth-piece, C, at its outer end, said carriage-body being provided with a socket to receive said mouth-piece, dependent tube G, secured to said elbow and provided with a mouth-piece, C^4, said mouth-piece being furnished with a hinged cap, F, provided with a double-disk whistle, and one disk of said whistle being integral with said hinged cap-disk, said tube G being furnished with flexible rubber bulb *g*, substantially as specified.

3. In a carriage speaking tube, the combination, with a speaking-tube, of its mouth-piece or bell, a hinged perforated cap-disk having a flange fitting over the rim of said mouth-piece, and a second perforated disk inside said cap-disk and forming with said cap-disk a whistle, substantially as specified.

4. The combination, with a carriage and carriage speaking-tube, of a wire spring mouth-piece-holder clamp, H, having a pivot portion, *h*′, hinged to the carriage-frame, and arms h^2 h^2 and h^3 h^3 standing in planes about at right angles to each other and connected by spring-coils h^4 h^4, substantially as specified.

5. The combination, with a speaking tube, of a wire spring-clamp, H, having hinge *h h*′, arms h^2 h^2, clamp-arms h^3 h^3, connected at an angle to said arms h^2 h^2 by spring coils h^4 h^4, said clamp-arms h^3 h^3 having coiled or curved ends h^5 h^5, substantially as specified.

6. In a carriage speaking-tube, the combination, with a speaking-tube, of its mouth-piece or bell C, furnished with an inner sleeve, C′, and an outer sleeve, C^2, said sleeves C′ C^2 forming an annular chamber between them to fit and receive the end of the speaking-tube, substantially as specified.

7. In a carriage speaking-tube, the combination, with a speaking-tube, its mouth-piece or bell C, having a shoulder or rim, *c*, furnished with an inturned flange or rim, *c*′, and a hinged cover, F, having a flange, *f*, adapted to fit over said rim *c*, and provided with a central whistle-perforation, and a second perforated disk inside said cap disk and forming with said cap-disk a whistle, substantially as specified.

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