

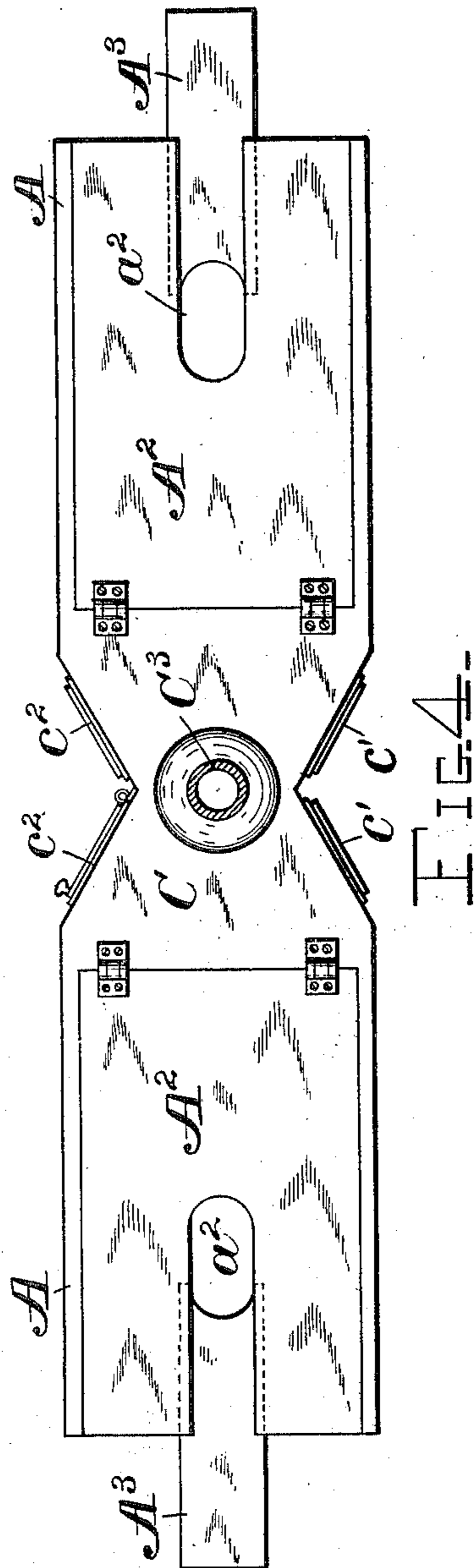
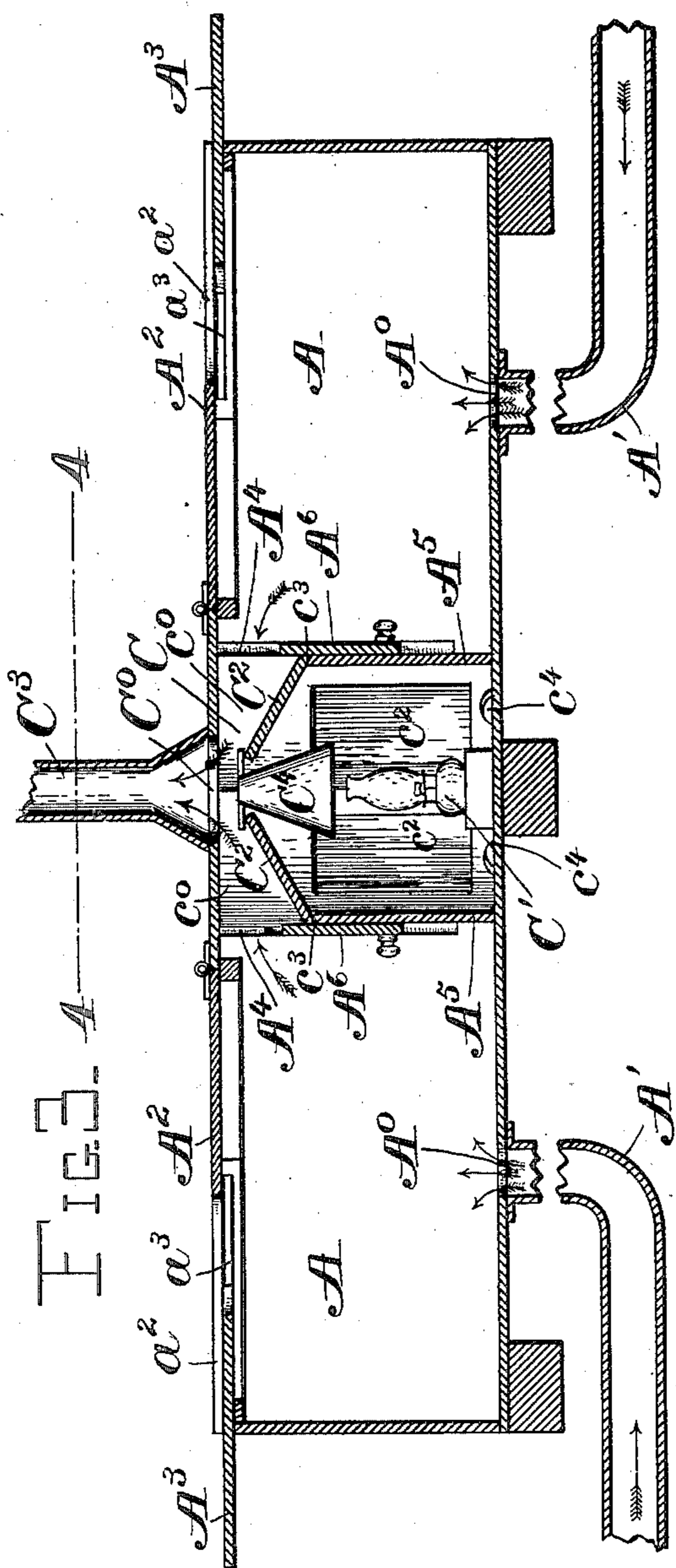
J. H. SEMMES.

DISINFECTING AND FUMIGATING APPARATUS

(Application filed June 28, 1900.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

John N. Volk
John Chalmers Wilson

Inventor

John H. Semmes
by Helms & Ledy
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN HERBERT SEMMES, OF MERIDIAN, MISSISSIPPI.

DISINFECTING AND FUMIGATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 668,055, dated February 12, 1901.

Application filed June 28, 1900. Serial No. 21,960. (No model.)

To all whom it may concern:

Be it known that I, JOHN HERBERT SEMMES, a citizen of the United States, residing at Meridian, in the county of Lauderdale and State of Mississippi, have invented certain new and useful Improvements in Disinfecting and Fumigating Apparatus; 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.

My invention relates to improvements in apparatus for fumigating and disinfecting purposes; and it consists in the novel device hereinafter described and claimed.

My present invention is particularly adapted for use in connection with the apparatus shown and described in my patent dated August 25, 1896, No. 566,628.

My present invention will be understood by reference to the accompanying drawings, wherein the same parts are indicated by the same letters of reference throughout the several views.

Figure 1 is a central vertical longitudinal sectional view of one form of my disinfecting or fumigating cabinet, the parts being broken away. Fig. 2 is a section taken on the line 2 2 in Fig. 1 and looking down. Fig. 3 is a view similar to Fig. 1, showing a modified form of cabinet, the same being of a double form; and Fig. 4 is a section taken on the line 4 4 in Fig. 3 and looking down.

The present apparatus consists mainly of a box or cabinet A, closed on all sides except for an opening A⁰ in its bottom, to which is connected an inlet flue or pipe A' for the passage of fumes, vapors, or gases generated by means of any convenient apparatus—such, for instance, as that shown and described in my patent hereinbefore referred to. The top of the cabinet is provided with a hinged cover A², which is removable at will, and the said cover A² is provided with a slot a², leading from the outer end thereof. A slide A³, fitting in a slideway a³ on the under side of the cover A², is provided for partially or entirely closing the said slot a², as desired.

At one end of the cabinet A is provided a compartment B for receiving and holding the lamp B' or other heating device. This compartment B is preferably fitted with trans-

parencies at each side thereof, as seen at b, b', and b², and one of these transparencies, such as b², is in the form of a hinged door or window, which allows ready access to the interior of the compartment B for any purpose.

An opening or passage A⁴ through the upper portion of the partition A⁵, which separates the interior of the cabinet A from the compartment B, is provided and is fitted with a vertically-sliding closure A⁶, by means of which the size of the opening or passage A⁴ may be varied and regulated at will.

A deflector B², arranged transversely of one side of the compartment B, is fixed at one edge, as at b³, to the partition A⁵ and extends over into the upper portion of the compartment B with an upward inclination. The upper wall of the compartment B is provided with an opening B⁰, fitted with a contracted flue or stack B³, extending above the said opening, and said deflector B² extends approximately half-way across the said opening B⁰, thus forming a draft-passage b⁰ from the passage A⁴ to the said opening B⁰ and the draft-flue B³. Small draft-openings b⁴ are provided at the bottom of the walls of the compartment B for supplying air to support combustion within the said compartment, and a hood, preferably in the form of a truncated cone, as seen at B⁴, is mounted above the lamp or other heating device for conducting the heat upwardly therethrough.

The apparatus is intended principally for disinfecting and fumigating persons or articles of clothing subjected to contagious or infectious diseases, and the fumes, gases, or vapors used for accomplishing the disinfecting or fumigating are drawn into the cabinet A through the pipe or flue A'. This pipe A' is preferably provided with a valve or damper A^x, by means of which the passage therethrough may be regulated or closed, and for the sake of convenience the said valve or damper is provided with an operating rod or handle a^x. In use the flue or pipe A' would be buried under the earth, and the said rod a^x, extending a convenient distance above the surface of the earth, allows a convenient manipulation of the damper A^x. The cabinet may be partially or entirely above the level of the earth.

When the apparatus is in operation, the

person or article to be fumigated is placed in the cabinet A. In the case of a person the slot a^2 in the cover A^2 allows the person's head to be above the cover, and by means of a slide A^3 the said slot may be almost entirely closed. If desired, however, the person may be entirely inclosed within the cabinet A and the slot a^2 partially or entirely closed by means of the slide A^3 or the cover A^2 may be entirely removed and the operation thus carried out.

My apparatus is so constructed that the fumes or vapors are drawn through the passage A^4 into the upper portion of the compartment B, and thus escape through the opening B^0 and flue B^3 , the heat of the lamp or other heating device B' within said compartment creating the necessary draft upwardly through the flue B^3 . The rapidity with which the said gases or fumes are drawn from the cabinet A is regulated by means of the slide A^6 . It has been found in practice that by nearly closing the passage A^4 by means of the slide A^6 a strong draft is created through the said passage and that the vapors or fumes may be caused to pass rapidly through the said passage; but by opening the said passage wider the movements of the fumes or gases in the cabinet A may be retarded and given a "billowing" effect within the said cabinet, and this latter is particularly true where the cover of the cabinet is left partially or entirely open.

The apparatus shown in Figs. 3 and 4 is substantially the same in construction and operation to that shown in Figs. 1 and 2, the difference being that the cabinets A A in the said Figs. 3 and 4 are connected to a single common ventilating or draft compartment C. This ventilating or draft compartment C contains a lamp or other heating device C' and is fitted with glass windows or doors c' and c^2 and provided with lower draft-openings c^4 . Within the upper portion of the said compartment C are fitted inclined deflectors $C^2 C^2$, secured to the partitions $A^5 A^5$ of the cabinets A A in like manner as the inclined deflector B^2 . (Shown in Fig. 1.) Two passages are thus formed in the upper portion of the compartment C, leading from the openings $A^4 A^4$ in the partitions and walls of the cabinets A A to the central upper draft-opening C^0 in the top wall of the compartment C, which draft-opening is provided with a draft-flue C^3 . A heat-director C^4 in the form of a truncated cone is also mounted above the lamp or the heating device C' for assisting in directing the draft upwardly.

Instead of the hinged cover A^2 upon the cabinets A a removable cover of oil-cloth or some other similar flexible material or fabric may be used, if desired. Slides of different widths partially or entirely closing the slot a^2 in the cover may be used.

As shown in Fig. 1, I provide a damper, such as b^5 , in the stack B^3 for the purpose of closing the same, if desired. The purpose of

closing this stack would be to cause the fumes which enter the box A to pass out of the box at the top or through any opening or openings therein, and so diffuse themselves about the room or inclosure within which the box A is located. With the damper b^5 closed the lamp or other draft-creating device B' would of course be omitted. In this manner a hospital-ward or pest-house might be disinfected or fumigated and also any persons or clothing therein.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a fumigating and disinfecting apparatus, the combination with a closed box or cabinet having a vapor-inlet in its bottom, and having a removable cover; of a compartment arranged in juxtaposition to the said cabinet a partition provided with a passage communicating with the upper portion of said cabinet and said compartment, a heating device in the said compartment, a deflector fixed in the upper portion of said compartment beneath the said passage, means for regulating the size of the opening through said passage, and a draft-flue mounted above the said compartment, substantially as described.

2. In a fumigating and disinfecting apparatus, the combination with a closed box or cabinet having a vapor-inlet in its bottom, a cover hinged upon the said cabinet and provided with an opening leading to one edge thereof; and a slide mounted in the said cover closing the said opening; of a compartment arranged in juxtaposition to the said cabinet a partition provided with a passage communicating with the upper portion of said cabinet and said compartment, a heating device in the said compartment, a deflector fixed in the upper portion of said compartment beneath the said passage, means for regulating the size of the opening through said passage, and a contracted draft-flue mounted above said compartment, substantially as described.

3. In a fumigating and disinfecting apparatus, the combination with a closed box or cabinet having a vapor-inlet in its bottom, and having a removable cover, and a vapor-flue connected with the said inlet-opening; of a compartment arranged in juxtaposition to the said cabinet a partition provided with a passage communicating with the upper portion of said cabinet and said compartment, a heating device in the said compartment, a deflector fixed in the upper portion of said compartment beneath the said passage, means for regulating the size of the opening through said passage, and a draft-flue mounted above the said compartment, substantially as described.

4. In a fumigating and disinfecting apparatus, the combination with a closed box or cabinet having a vapor-inlet in its bottom, and having a removable cover; a vapor-flue connected with the said inlet-opening; and a damper or valve in the said flue of a compart-

ment arranged in juxtaposition to the said cabinet a partition provided with a passage communicating with the upper portion of said cabinet and said compartment, a heating device in the said compartment, a deflector fixed in the upper portion of said compartment beneath the said passage, means for regulating the size of the opening through said passage, and a draft-flue mounted above the said compartment, substantially as described.

5. In an apparatus for fumigating and disinfecting purposes, the combination with the closed cabinet A having inlet-opening A⁰ and flue A' connected therewith, and a removable cover for the said cabinet; of a compartment B separated from the cabinet A by the partition-wall A⁵, said partition-wall having an

opening A⁴ at its upper edge, a slideway on the said partition, a slide A⁶ arranged to vary the size of said opening; the inclined deflector B² mounted within the compartment B and fixed at its lower edge to the said partition A⁵, said compartment B having an opening B⁰ in its top; a contracted draft-flue B³ mounted over said opening; a door in one side of the said compartment and a heating device B mounted within said compartment, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN HERBERT SEMMES.

Witnesses:

W. H. HALL,

A. J. WIMBERLY.