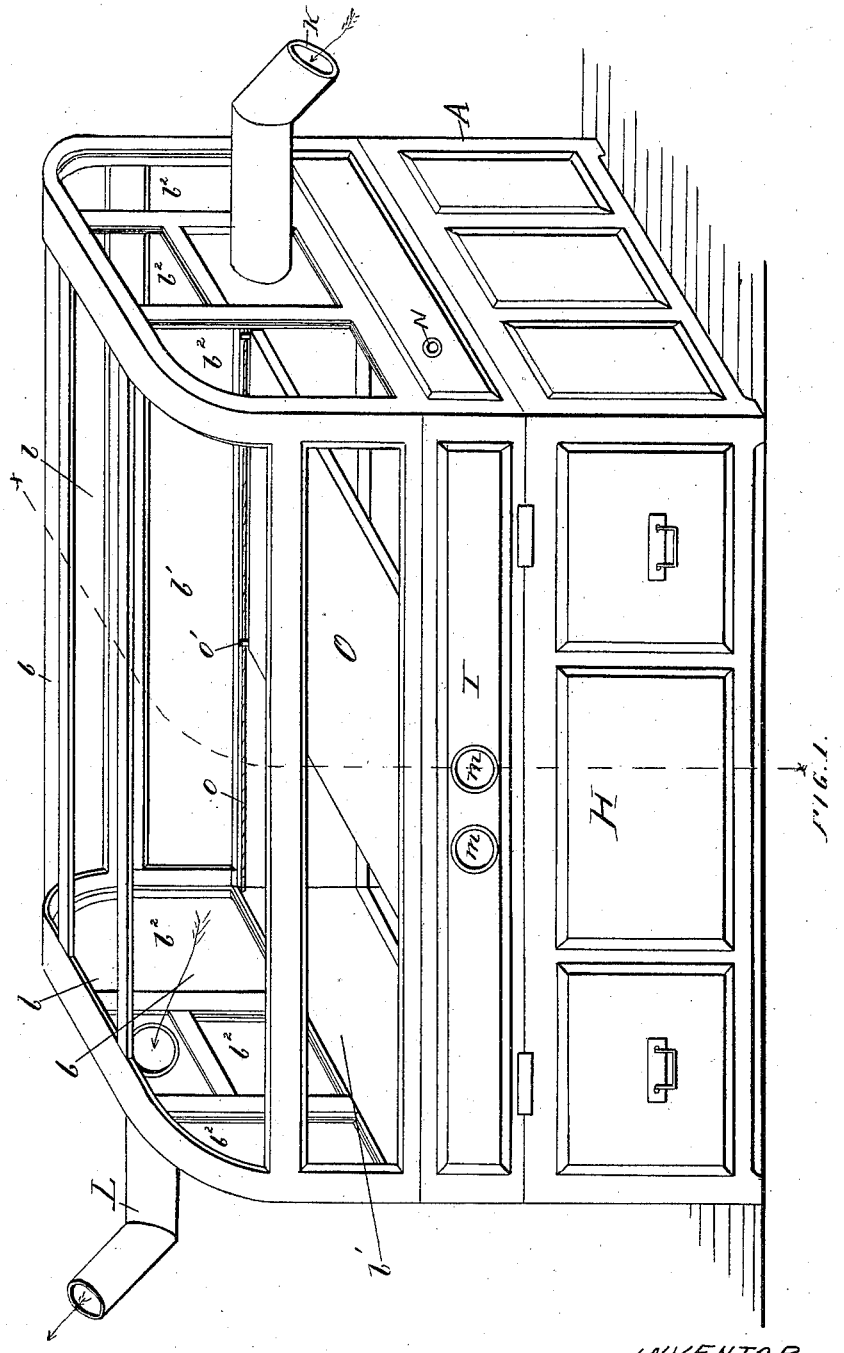
(No Model.) 3 Sheets—Sheet 1.

P. FAHRNEY.

VENTILATED BED.

No. 306,390. Patented Oct. 14, 1884.



WITNESSES
W. C. Coales
A. M. Best

INVENTOR
PETER FAHRNEY
BY Coburn & Thacher
ATTORNEY'S

(No Model.) 3 Sheets—Sheet 2.

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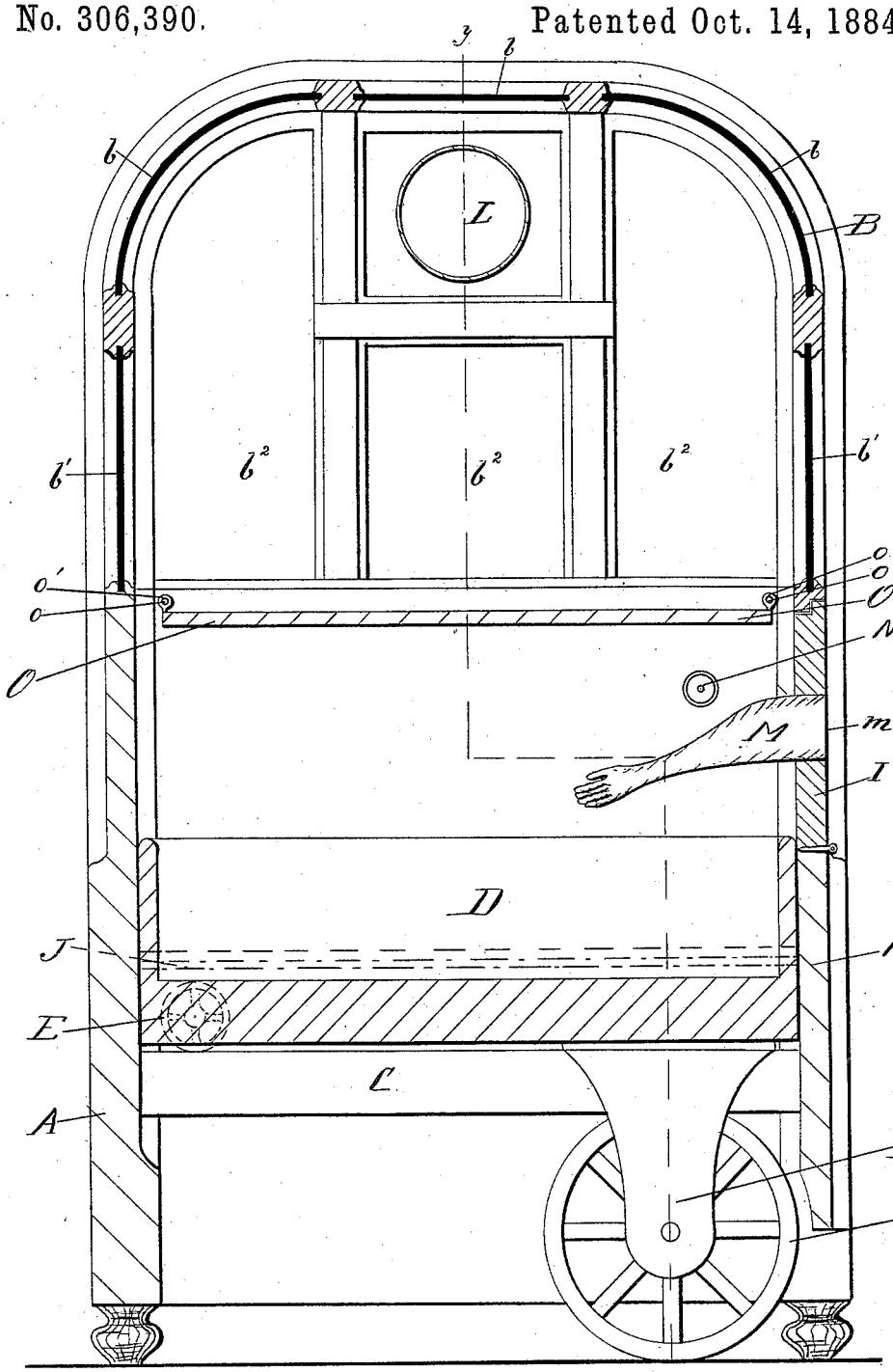

FIG. 2.

WITNESSES
W. C. Curtis
A. M. Best.

INVENTOR
PETER FAHRNEY
BY Coburn & Thacher
ATTORNEYS

(No Model.)

3 Sheets—Sheet 3.

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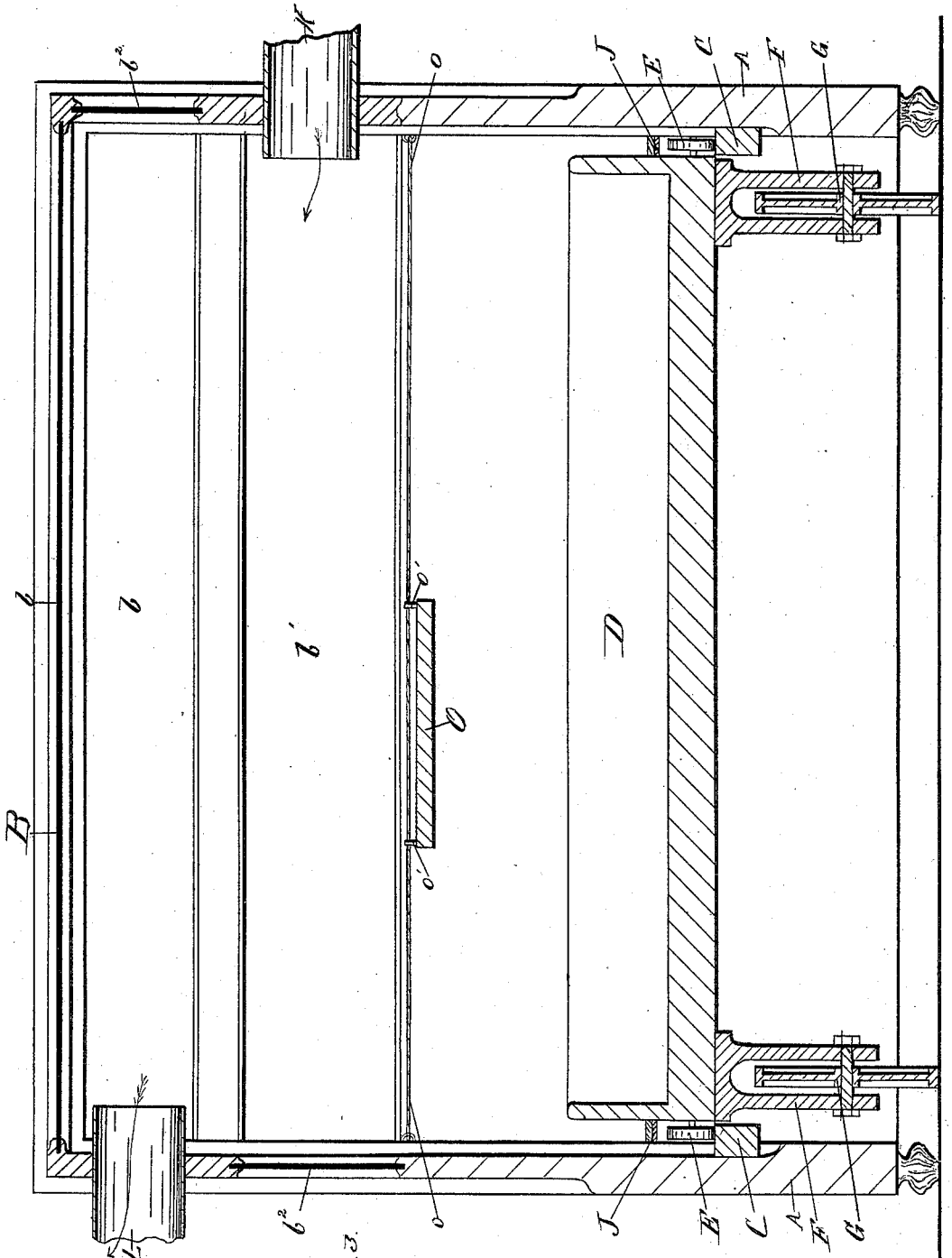

FIG. 3.

WITNESSES

W. C. Corlies

A. M. Best

INVENTOR

PETER FAHRNEY

BY Coburn & Thacher

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER FAHRNEY, OF CHICAGO, ILLINOIS.

VENTILATED BED.

SPECIFICATION forming part of Letters Patent No. 306,390, dated October 14, 1884.

Application filed June 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, PETER FAHRNEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ventilated Beds, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a bed embodying my invention; Fig. 2, a transverse section of the same, taken on the line *x x*, Fig. 1; and Fig. 3, a longitudinal section of the same, taken on the line *y y*, Fig. 2.

My invention relates to a bed-structure which is so constructed that the occupant may be entirely isolated, and at the same time may be seen and attended and supplied with pure air coming in from outside of the room in which the structure stands.

I will proceed to describe the construction and operation of a bed-structure in which I have embodied my invention in one way, and will then point out definitely in the claims the special improvements which I believe to be new and wish to protect by Letters Patent.

In the drawings, A represents a frame-work for inclosing the bed. This is made of such a size as to receive a bed of ordinary shape and dimensions. The upper part of this structure is preferably oval in cross-section, and is made in sash form, so as to receive panes of glass B, which cover the entire top and a part of the front and back, and also a part of each end, as shown in the drawings, in which there are three panes, *b*, for the top, and one pane, *b'*, for the side, and three or more panes, b^2, at each end. This glazed portion, as shown in the drawings, occupies less than half the height of the entire structure, and forms a sort of canopy which admits light to the interior, and permits those on the outside to see within. The lower portion of the structure is made so as to be closed on the back side and the two ends; but on the front side it is open below the glass portion, and is also open at the bottom. At each end of the structure in the inside is a rail, C, running entirely across the frame and at some little distance from the bottom.

The bed proper, D, may be of any kind desired, either an invalid-bed or of ordinary construction. At each end and near the back side a small wheel or roller, E, is attached to the bed-frame. At each corner, at the front of the bed, is a pendent bracket, F, in which is mounted a wheel, G, that runs on the floor of the room, these parts being of such dimensions as to support the front of the bed at a convenient height. The end rails, C, on the inside of the inclosing structure, are arranged so that they will be close under the rollers E of the inner corners of the bed-frame when the bed is trundled into the inclosing structure, so that in the operation of putting the bed in its place the rollers E will run on the rails C, while the wheels G run on the floor, and the bed will be supported in a substantially level position by the wheels resting on the floor at the front, and the rollers E resting on the rails C at the back, as illustrated by Fig. 2 of the drawings.

At the front of the bed proper and extending up to the top of the bed-frame there is a paneled side, H, finished to correspond with the inclosing structure, and of such length as to close against the edges of the ends of the structure. They may abut squarely against the ends, but preferably are constructed to form a miter-joint at the corners for the purpose of closing more securely a panel, I, of the same length, which is hinged to the top edge of this piece, and is of such width as to close the space between the panel side below and the front lower edge of the glass canopy above. The joints between this hinged panel and the parts against which it closes may also be plain or miter joints. Now, it is obvious that the bed proper may roll into the inclosing structure, and upon shutting up the hinged panel and fastening it in place the bed will be entirely inclosed and all air from the room outside shut out, except at the bottom. In order to prevent the entrance of air from the bottom, I attach rubber strips J to the ends of the inclosing structure, just above the rails, which will form a packing between the ends of the bed and the inclosing structure when the bed is pushed in, and prevent air from rising up from underneath the bed. The front of the bed makes a tight joint with the panel side attached thereto, and the back of the bed closes tightly against the back of the inclosing

structure, though, if desired, some devices in the nature of suitable packing may be employed to make the joint substantially air-tight. Obviously a patient may be placed upon the bed proper, the latter pushed into the case, and the hinged panel closed, and thus completely isolated from the room in which the structure stands. Of course there must be ventilations, and in order to accomplish this and still preserve the isolated condition of the occupant I provide an air-pipe, K, entering the structure at one end at the lower part of the canopy, and this pipe is connected with some opening outside of the room in which the structure stands, this opening being either to the open air or to some other room in the building, and the pipe being entirely closed to the room in which the bed stands. Through this pipe a supply of fresh air is conducted to the interior of the structure, and at the other end of the latter I provide an exit-pipe, L, located at the top of the structure, and carried thence out into the open air or some room or to the chimney-flue of the building, the only object being to provide for the escape of the air from the structure in which the patient is inclosed. A current of air may be maintained through the structure either by ordinary atmospheric pressure, the same as in the draft of an ordinary stove or in ordinary ventilating contrivances, or it may be produced by artificial means, such as a rotating fan or any other mechanism suitable for this purpose. By this arrangement a continuous current of pure air may be supplied to the patient within the inclosure, either cooled or warmed, as circumstances may require, and, wherever desired, this air may be medicated for such purposes as may be useful.

In order to reach into the interior of the inclosure without opening the latter, I provide a rubber gauntlet, M, as long as an ordinary arm, attached to the inside of the hinged panel, through which openings *m* are made into the gauntlet. An attendant upon the outside can thrust the hand and arm into this gauntlet and thereby reach into the interior of the inclosure for any purpose whatever. The gauntlets being elastic, the hands may move about in the interior. These gauntlets may be placed about the structure on all sides, if desired. In one end of the structure, just above the bed, I insert a small diaphragm, N, of some suitable material, by aid of which communication by speech may be had more readily between the occupant of the bed within and the attendant without than would be the case if the structure was left entirely closed up. An arrangement may also be made for passing articles into the interior of the inclosure without opening the hinged panel.

In the drawings I have shown one way of introducing food or other articles into the inclosure for the occupant. In this mode I provide a tray or board, O, which is adapted to be supported on wires or cords *o* along the sides of the interior of the inclosure, as shown in Fig. 1 of the drawings. This tray may have hooks *o'*, or any suitable device, by which it is sustained from the cords, and instead of the latter suitable rails may be supplied on which the tray may be set directly. The tray is introduced by letting down the hinged panel, which (if preferred) may be arranged at the foot of the bed, and the tray introduced there instead of at the side of the bed. Of course, where the occupant is not suffering from a contagious disease there is no objection to opening the inclosed structure for the introduction of this tray or any other article.

I do not limit myself to glass for the panels on the upper canopy portion of the structure, as it may be desirable in some instances to have an opaque material. Glass is preferred, however, and it may be tinted or ground or otherwise prepared for special purposes.

I do not limit myself to the particular construction of the bed proper herein shown and described, for it is obvious that various changes may be made in the mode of supporting the bed and the means for readily removing it from and placing it within the inclosure, and of course with such changes modifications will be made in the improvements herein shown and described for closing up the opening through which the bed is introduced.

In other particulars I do not wish to be understood as limiting myself to the particular structure herein shown and described, for its form, construction, and arrangement may be varied in many ways to adapt it to special purposes—such as the treatment of particular diseases—while at the same time the main principle of my invention is retained.

It is obvious that by my invention I provide a glass compartment within the apartment or room in which the bed is placed, so that the occupant of the bed is completely isolated from the room outside of the inclosing-case. Noise, dust, or insects are thus excluded from the occupant of the bed, and by means of ventilating devices fresh pure air is provided continuously and supplied to the patient in such condition as may be desirable, being artificial, cool, warm, or medicated, as may be required. The value of this structure in the treatment of invalids will be readily recognized, especially in the treatment of patients suffering from contagious diseases, for such patients being completely isolated by the inclosing structure, it is not necessary to remove them from the building or room which others occupy. It is also obvious that the use of this structure may be desirable for healthy occupants. The isolation and perfect ventilation add greatly to the comfort of the person while at rest.

Having thus described my invention, what I claim as new, and wish to protect by Letters Patent, is—

1. In combination with a movable bed, an independent compartment considerably higher

than the top of the bed and otherwise of interior dimensions corresponding to the bed, constructed at the top of transparent and air-tight material, and provided with an opening large enough to admit and remove the bed, but otherwise closed air-tight, substantially as and for the purpose described.

2. The removable bed D,-the independent close compartment A, considerably higher than the top of the bed and otherwise of dimensions corresponding to the bed, having panes of glass in its upper part and an aperture at one side large enough to admit and remove the bed, means for closing said aperture, the air-inlet pipe K, and the air-outlet pipe L, both opening into the compartment, all in combination, substantially as and for the purpose described.

3. The removable bed D, having on the front a close side board, H, extending from top to bottom thereof, and a hinged side board, I, arranged on the upper edge of the close side board, the independent compartment A, having on one side an opening of dimensions corresponding to those of the two side boards together, but otherwise close, and having within it the horizontal wires *o*, attached to its ends above the level of the bed, and the removable tray O, of suitable breadth to rest on the wires, all in combination, substantially as and for the purpose described.

4. The inclosing-compartment having in its wall the aperture *m*, in combination with the air-tight flexible gauntlet M, having its margin continuous with the margin of the aperture, substantially as and for the purpose described.

PETER FAHRNEY.

Witnesses:
W. C. CORLIES,
A. M. BEST.