(No Model.)

J. BENNOR.

INVALID CHAIR, &c.

No. 417,900. Patented Dec. 24, 1889.

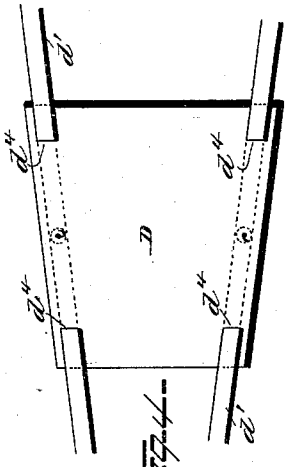


Fig. 1.

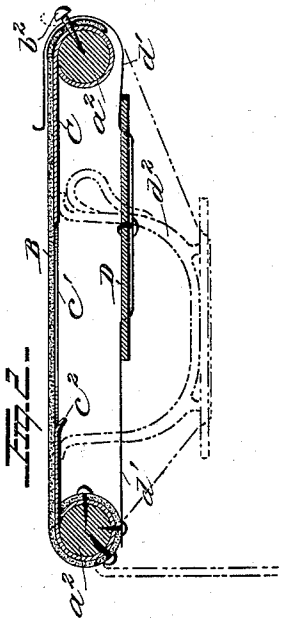


Fig. 2.

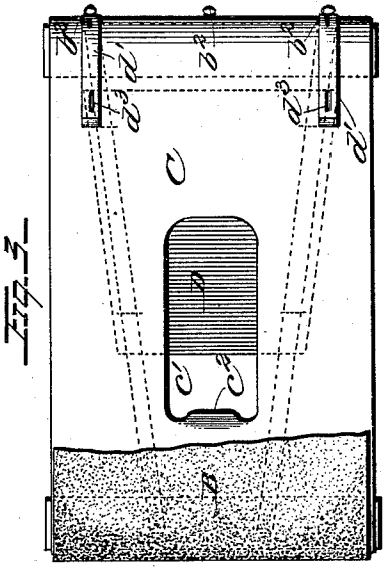


Fig. 3.

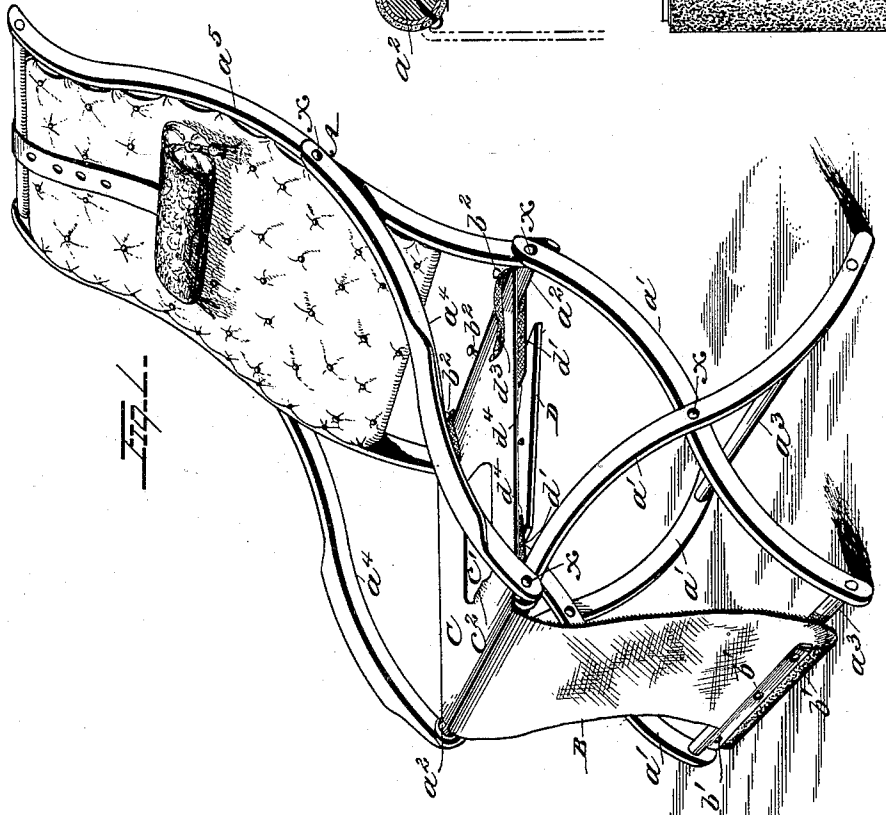


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH BENNOR, OF PHILADELPHIA, PENNSYLVANIA.

INVALID-CHAIR, &c.

SPECIFICATION forming part of Letters Patent No. 417,900, dated December 24, 1889.

Application filed June 21, 1889. Serial No. 315,133. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BENNOR, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Invalid-Chairs, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a perspective view of a chair embodying my invention, the sheet having been unbuttoned and thrown over in order to expose to view the lower supplemental seat, and the vessel-supporter being shown in its up or normal position. Fig. 2 is a vertical longitudinal section through the seat-frame, the full lines showing the normal position of the parts and the dotted lines showing their relative positions when the vessel is in use. Fig. 3 is a plan of Fig. 2, a portion of the seat proper being removed. Fig. 4 is a plan of the supporting-plate, showing the connection thereto of its suspending-straps.

This invention is especially, though not exclusively, designed for use in connection with chairs for invalids, &c. Its object is to provide a simple and efficient means whereby a chamber or like vessel may be applied to and removed from the chair at will, the construction being such that the usual appearance and function of the chair are unaffected before the application of the vessel, and that when said vessel is applied a commode is provided which possesses certain potential advantages, which will hereinafter appear.

The invention, as generally stated, consists in the combination, with a supporting-frame—such as a chair, folding or rigid—of a movable seat or cover and a lower flexible supplemental seat, which is provided with a suitable opening therein, below which a chamber or pan is adapted to be removably supported, the movable seat being so arranged that it may cover and conceal said supplemental seat, or may be removed therefrom, so as to uncover and expose the same, as required.

The invention consists, also, in details of construction, which will be hereinafter pointed out.

Referring to the annexed drawings, A represents the frame of an ordinary folding chair, a' being its crossed legs connected by the rounds or stretchers a^2 a^3; a^4, the arms, and a^5 the back, the whole being pivoted at the points x in such manner that the frame may be collapsed and folded into a comparatively small compass for convenience of packing and transportation.

B indicates the seat, which is usually of carpet, tacked or otherwise permanently secured at its ends to the upper rounds. In the present instance its front end is permanently secured to the adjacent upper round only, its other end being provided with a series of eyes b', with which are adapted to engage headed studs, buttons, or hooks b^2 on the rear upper round a^2, so that the back end of the seat may be readily detached and thrown over the front round, thus practically removing the seat, as illustrated in Fig. 1.

C represents a supplemental seat, which is fixed below the seat B to the upper rounds. This supplemental seat is provided with a hole c' therein of proper shape and size for the purpose intended. On the front edge of this hole is formed a drooping lip or extension c^2, whose office will be hereinafter explained.

Seat C is preferably formed of rubber cloth or other flexible material that is impervious to water and unaffected by the action of urine.

D is a plate, which is suspended below the supplemental seat by means of bands or straps d', and is designed to support a chamber or pan d^2 for the use of an occupant of the chair when the seat B is removed. One end of each of these straps (there being two straps in the present instance) is secured to the front upper round, and the other end is provided with eyes or button-holes d^3 therein, which are adapted to be connected with the studs or buttons b^2 on the rear upper round, as seen. The plate is tacked or otherwise secured to the straps about midway between its ends, near which ends are slits d^4, through which the straps pass. As these straps are by preference elastic, it will be evident that their elasticity will be unaffected by this mode of connection.

Normally the plate D is drawn up near to the seat C, being held in place by securing the lower eyes in each of the straps to the adjacent stud b^2, as shown, and the seat B, when

its free end is connected with the studs, as above described, covers and conceals the supplemental seat. In this condition the chair presents an ordinary appearance, and as an ordinary chair it may be used. Its other uses are not apparent, and thus a defect in this class of furniture is remedied.

When it is necessary to use the chamber, the seat B is unhooked and thrown over, so as to uncover the supplemental seat C, as aforementioned. The straps are then unbuttoned, so as to lower the plate D, and in this position the plate is sustained by engaging the studs with the upper holes or eyes in the straps. The chamber or pan is then pushed in upon the plate from the rear, the tendency of the elastic straps being to force the upper edge of the vessel up against the under side of seat C. As the latter is flexible, when the person sits thereupon this tendency is increased, and in this way is formed a tight joint through which effluvia cannot escape. The forward lip c^2 guards against the direct discharge of the urine under certain conditions upon the upper edge of the vessel and its possible passage between the latter and the seat.

An important feature of my device is that the vessel may be removed without disturbing the patient, who may, if it be necessary or desirable, still occupy the seat without any of those objections which are incident to the commodes and chamber-closets of previous constructions.

As the seat C is of rubber cloth, it may be thoroughly cleansed when required, and, moreover, it is unaffected by the action of urine, &c.; and as all the other parts of the frame and supports from their arrangement and construction are free from the mephitic vapors an odorless and safe commode is provided.

Before folding the chair the ends of the straps d' are disconnected from the studs or hooks b^2, and the plate thereupon hangs loosely from the forward edge of the chair, thus permitting the parts to be readily collapsed. When the plate is so suspended, the bottom of the supplemental seat may be readily washed, if desired.

Although the invention has herein been shown and described as embodied in a folding chair, I do not confine myself to its use in this connection. This is the preferred form, owing to its convenience for packing and transportation; but it will be obvious that my invention may be applied to a rigid chair, to a bed, or other suitable article of furniture. Nor do I restrict myself to the described specific arrangement and construction of the several parts of the device, inasmuch as they may be variously modified without departing from the spirit of my invention. Thus, for example, the seat proper may be wholly detachable, or its free end may be connected with the frame by means of buckle-straps, instead of by the studs and eyes described. The supporting-plate may be suspended from like straps, by which it may be raised or lowered at will in order to draw the vessel up against the supplemental seat, instead of by the elastic bands hereinbefore specified, and in other respects the elements may be immaterially altered.

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

1. The combination, with a supporting-frame, of a flexible or yielding seat provided with an opening therein, a vessel-supporter below said opening, and adjusting-straps connected with the frame and supporter, substantially as described.

2. The combination, with a chair-frame, of a flexible or yielding supplemental seat provided with an opening therein, a vessel-supporter below said opening, adjusting-straps connected with the frame and supporter, and a detachable flexible seat or covering, substantially as described.

3. The combination, with a supporting-frame, of a seat provided with an opening therein, said seat being composed of rubber cloth or other flexible water-proof material, and a vessel-supporter suspended below the opening, substantially as described.

4. The combination, with a supporting-frame, of a flexible seat provided with an opening therein, and an integral drooping lip at the forward edge of said opening, and the vessel-supporter adjustably suspended below the opening, substantially as described.

5. The combination, with a supporting-frame, of a flexible seat attached thereto at its forward edge and detachably secured to the frame at its opposite edge, the lower flexible water-proof supplemental seat provided with an opening therein, the vessel-supporter below said opening, and the suspending-straps attached to the forward edge of the frame and detachably connected with the opposite edge of the frame, substantially as described.

6. The combination, with a supporting-frame, of the flexible seat provided with an opening therein, the vessel-supporting plate, and the elastic suspending-straps, each of said straps passing through slits near the ends of the plate and secured to the latter at a single point, substantially as described.

7. The combination, with a supporting-frame, of a flexible seat provided with an opening therein, and a vessel-supporter suspended below said opening, substantially as described.

In testimony whereof I have hereunto affixed my signature this 15th day of June, A. D. 1889.

JOSEPH BENNOR.

Witnesses:
JOHN NOLAN,
JOSHUA PUSEY.