(No Model.)

3 Sheets—Sheet 1.

J. H. DOERR.

SLEEPING CAR.

No. 298,951. Patented May 20, 1884.

FIG. 1

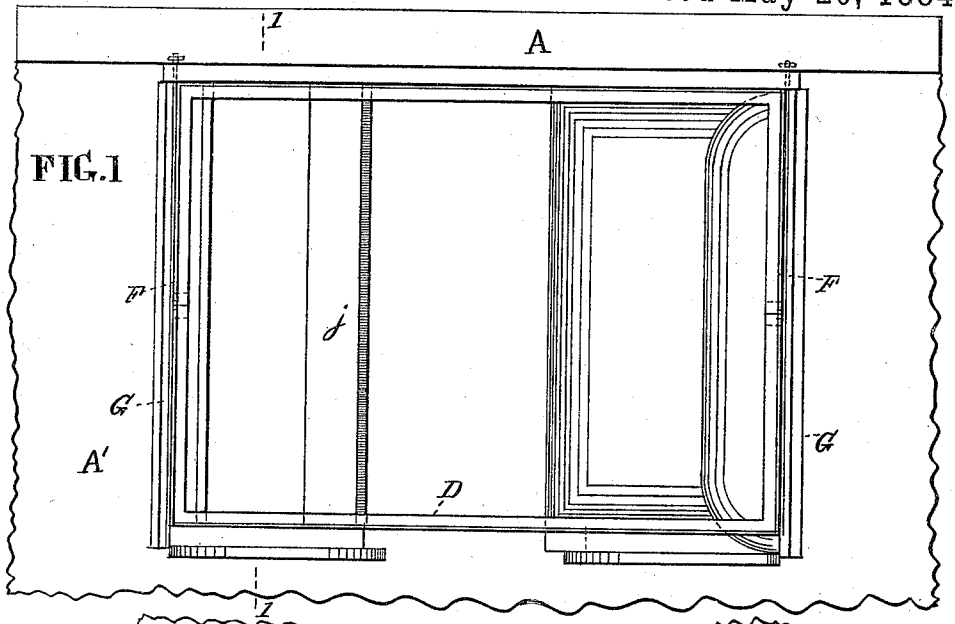
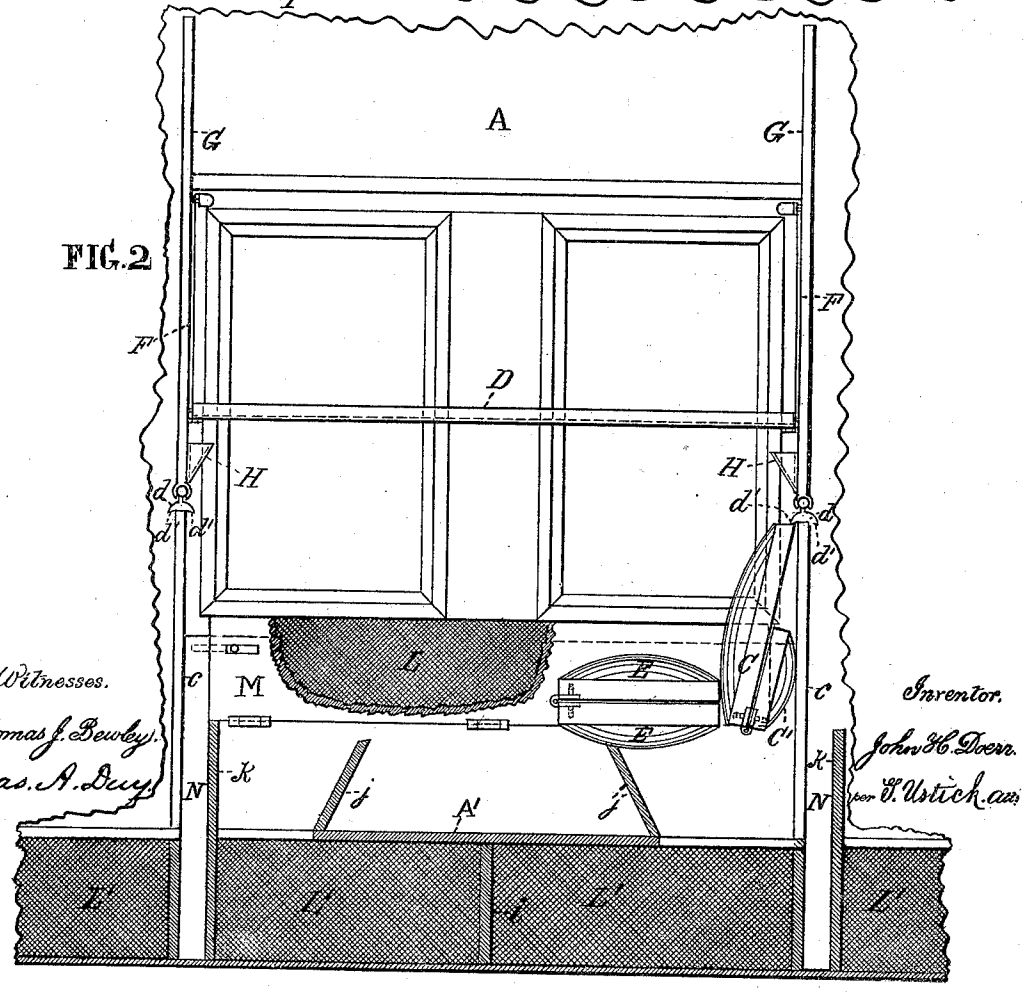


FIG. 2



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(No Model.)

3 Sheets—Sheet 2.

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SLEEPING CAR.

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FIG. 3

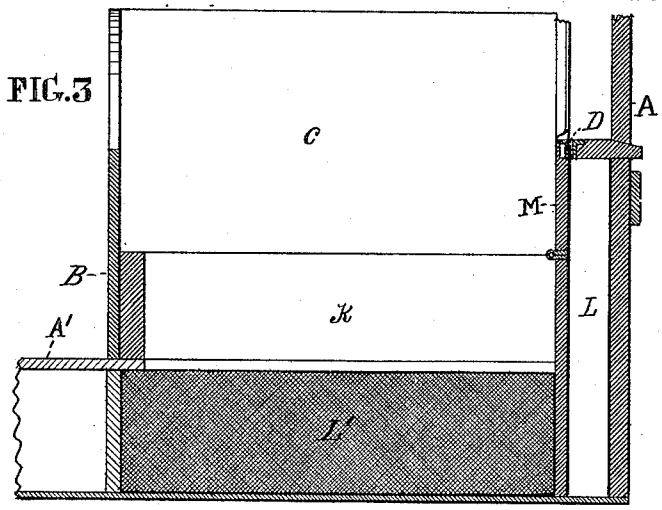


FIG. 4

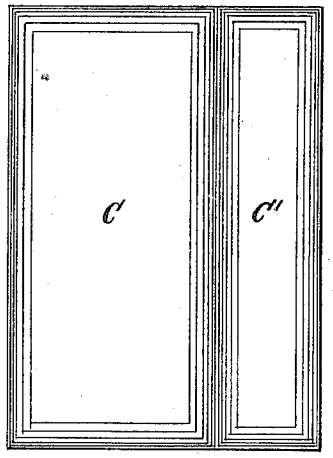


FIG. 9

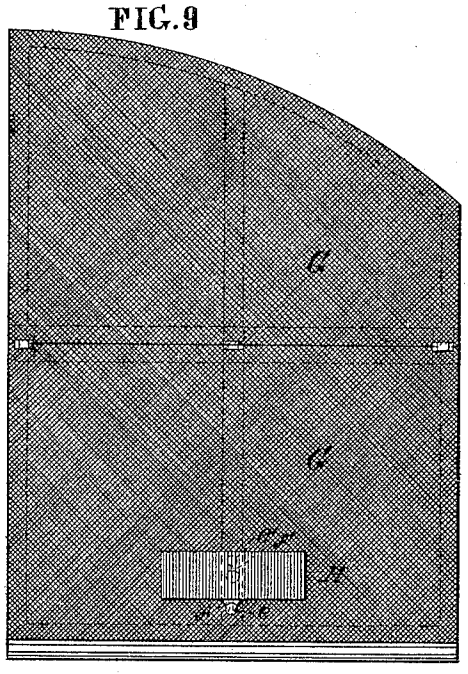


FIG. 10

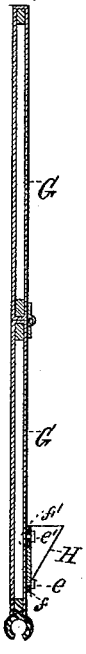


FIG. 5

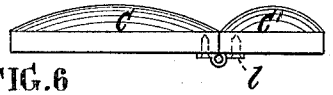


FIG. 6

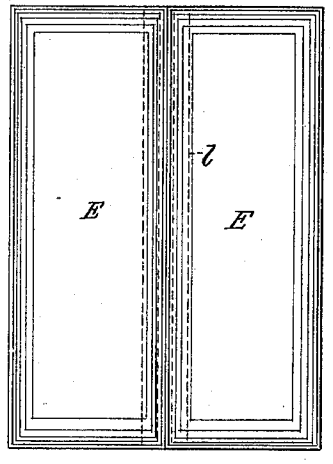


FIG. 7

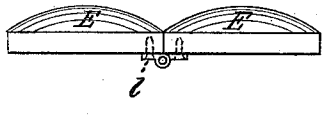
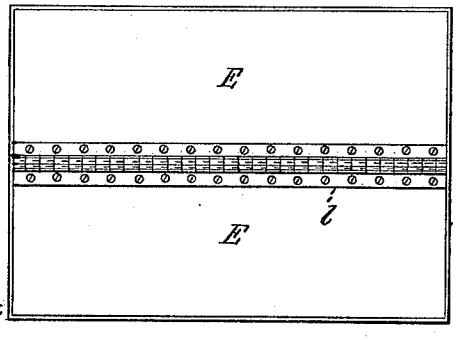


FIG. 8



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(No Model.)

3 Sheets—Sheet 3.

J. H. DOERR.

SLEEPING CAR.

No. 298,951. Patented May 20, 1884.

FIG. 13 FIG. 14

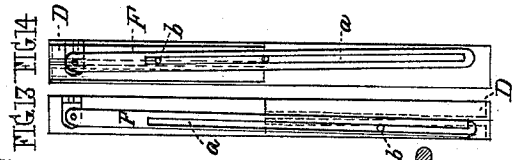


FIG. 12

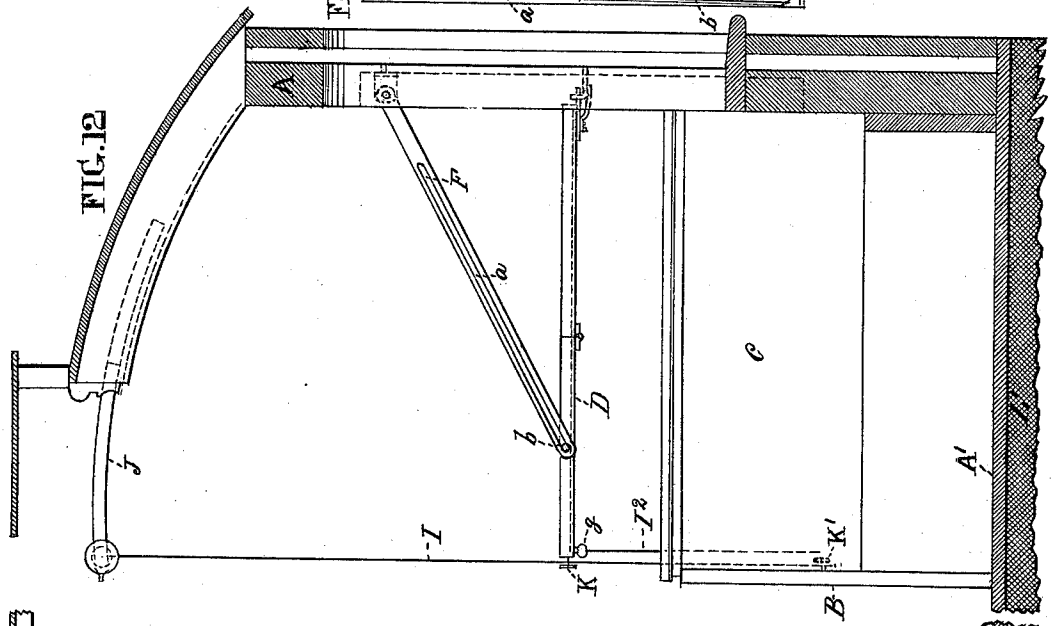
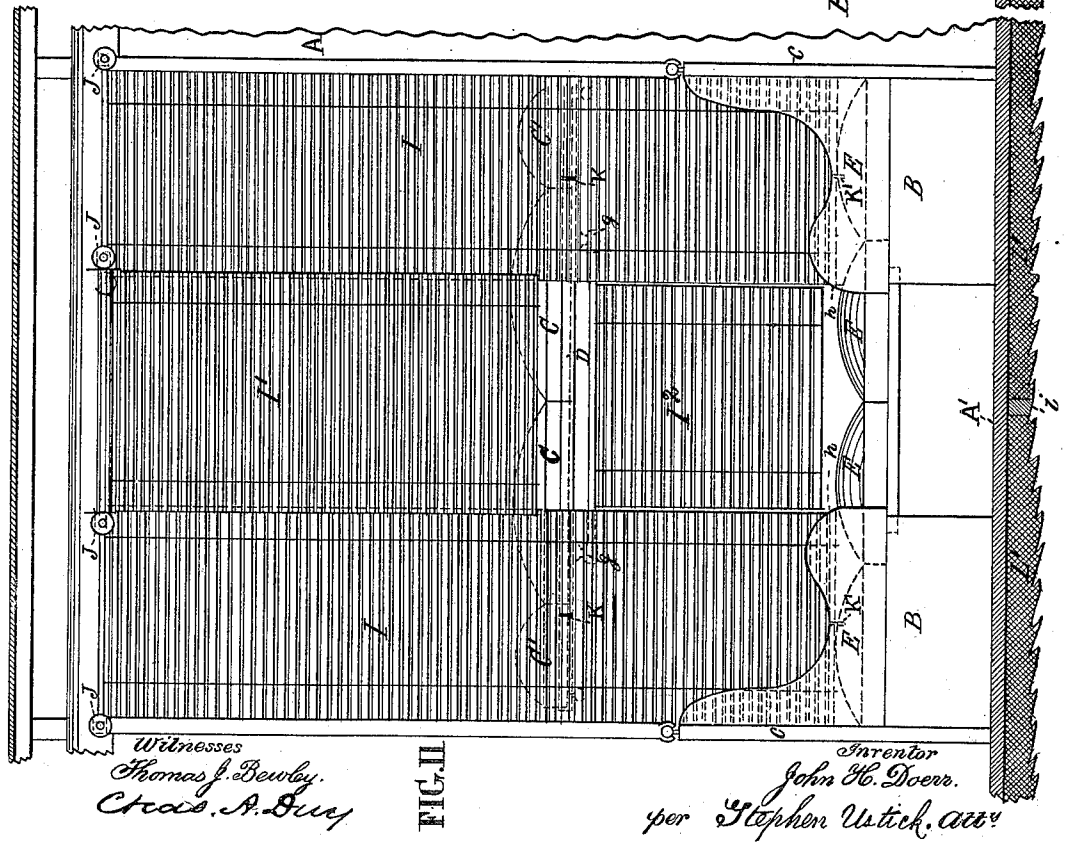


FIG. II



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per Stephen Ustick, Atty

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UNITED STATES PATENT OFFICE.

JOHN H. DOERR, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-FIFTH TO WILLIAM H. WIGMORE, OF SAME PLACE.

SLEEPING-CAR.

SPECIFICATION forming part of Letters Patent No. 298,951, dated May 20, 1884.

Application filed August 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. DOERR, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Sleeping-Cars, of which the following is a specification.

The nature of my invention consists of certain improvements in the berths, and things in combination therewith, of sleeping-cars, which are fully described in the body of the specification, and set forth in the claims appended thereto.

In the accompanying drawings, which make a part of this specification, Figure 1 is a plan of a section of a car having seats, with the cushions of one of the seats removed. Fig. 2 is a front elevation thereof, partly in section, in the longitudinal direction of the car, with the skeleton frame D in its horizontal position for the reception of the bedding and in connection with the partitions, and having the double-seat cushions and double-back cushions in connection with one of the seat-frames, a portion of the door being broken away to show the space L between the door and the outer wall of the car. Fig. 3, Sheet No. 2, is a transverse section through one of the seats at the line 1 1 of Fig. 1, with the seat and back cushions removed. Fig. 4 is a face view of the double hinged back-cushions C and C′ of one of the seats. Fig. 5 is an end elevation of the same. Fig. 6 is a face view of the double-seat hinged cushions E E opened flat. Fig. 7 is an end view of the same. Fig. 8 is a reverse flat view of the same, showing the hinge *l*, which extends the whole length of the cushions. Fig. 9 is a face view of one of the partitions G. Fig. 10 is an end view of the same. Fig. 11, Sheet 3, is a front elevation of a section of the car, showing the curtains I I I′ hung to the brackets J, and the curtain I² hung to the skeleton frame D. Fig. 12 is an elevation of the same, showing a curtain, I, hung to the brackets, and the curtain I² hung to the skeleton frame D, and the devices combined with the frame and with the wall A for holding the frame in its horizontal position. Figs. 13 and 14 are end views of the skeleton frame folded up in different positions in connection with the slotted braces F.

Like letters of reference in all the figures indicate the same parts.

A represents the side wall of a section of a sleeping-car, and A′ the floor of the section.

B B are the seat-frames.

C is the back-cushion of one of the seats, and C′ a narrow cushion hinged to it and folded in the rear thereof out of the way when used with the seat, as shown in Fig. 1, the double cushions being opened flat for forming the bed-bottom of the upper berth, as seen in Fig. 11, and detached in Figs. 4 and 5.

E E are double cushions hinged together and folded with their flat sides meeting each other on one of the frames B, the cushions being removed from the other frame. The cushions are alike, so as to be reversed when necessary when used as a seat, and when they are opened flat the cushions of both seats are used together for forming the bed-bottom of the lower berth. The cushions are of such width that when both pairs are brought together they fill up the berth from side to side, forming a complete bed-bottom. These double cushions have a single hinge, *l*, running from end to end of the cushions, whereby great strength is given to the joint.

The skeleton frame D is made in two pieces hinged together, as seen in Figs. 12, 13, and 14, for the purpose of being folded together for convenience in handling and storing it away when not in use. It is held in its horizontal position for holding the bedding, as seen clearly in Fig. 12, by means of its hooked connection with the wall A and the slotted braces F F at opposite sides, one of which only is seen. These braces have longitudinal slots *a*, in which the headed pins *b b*, which are connected with the part 1, are permitted to slide when said part is folded with the other part, so that they may be brought to either end of the braces F, as shown in Figs. 13 and 14, as may be required, to be swung into a recess of the wall A, either at the upper or lower part of the window, when not in use.

G G are hinged partitions, which extend from the upper edges of the seat-backs to the roof. The upper edge of each back is provided with a bracket, *d*, to which the lower edge of the respective partition is connected, the back being provided with a flange, *d'*, which projects over the upper edge of the back-cushion C, to hold the latter securely in its position. The frames of the partitions G G are covered with textile fabric, coated with dissolved gum-shellac or equivalent material, whereby lightness and flexibility are secured and sufficient strength given to the partitions with the least amount of material. The partitions are provided with detachable pockets H, connected by means of headed pins *e* and *e'* and vertical slots *f* and *f'*, (seen in Fig. 9,) the lower slot passing over the neck of the pin, and the upper slot having an enlargement at its lower edge, which is slipped over the head of the respective pin before the pocket is brought down to its place, so that when in place it will be securely held. The pockets are expeditiously detached from the partitions by raising them upward until the enlargements of the slots *f'* come opposite to the heads of the pins *e'*.

I I are side curtains of the upper and lower berths; I', a middle curtain of the upper berth, and I^2 the middle curtain of the lower berth. The curtain I' is on a balance-roller connected with brackets J, and a balance-roller of the curtain I^2 is connected with the skeleton frame D, its pivots turning in the heads of the screws *g g*, which are tapped into the frame. The side curtains, I I, lap over the middle curtains, I' and I^2, to intercept the view of the berths from the outside. They are prevented flapping by means of the turn-buckles K K, connected with the skeleton frame D, and the buckles K' K', connected with the arms *h h* of the seat-frames B B, so as to be out of the way of passengers going through the car, and thereby admitting of their taking hold of the arms to guide them at night. The curtains are made of bamboo, rattan, or wood splints, connected with tapes, for the purpose of ventilation conjointly with their use for intercepting the view of the berths.

L is a box or space in the side wall, A, for holding bed-clothing. (Seen in Figs. 2 and 3.) It is provided with the hinged door M, which has a rabbet in its upper edge, which laps over the edge of the frame D when arranged as seen in Fig. 3, to hold the cushion securely in position. The space beneath the floor between the seat-backs I utilize for holding the bedding, the space being separated in the middle by means of the partition *i*, to form compartments L' L', the floor being removed under the seats, as shown in Fig. 2, to form a passage at each seat to the respective compartment L', and the upright boards *j j* being connected with grooves in the ends of the seat-frames B B and the wall A, so as to admit of being slid upward and removed to make a free passage to said compartments for stowing the bedding therein or removing it therefrom. These boards in the drawings are arranged in an inclined position, to give additional room in front, but may be arranged vertically, if desired. The compartments L L' L' are lined with textile fabric coated with dissolved gum-shellac or its equivalent, to preserve cleanliness and to prevent the infection of bugs.

There are pockets N N (seen in Fig. 2) at the backs of the seats, for holding the partitions G G when not in use. They are formed by means of the partitions *k*, which extend through the floor and rest on lower ceiling.

The textile fabric, in combination with the partition-frames G G, is represented on the outside of the frames; but it may be arranged between two frames, the latter being confined together to hold the fabric securely by means of rivets or other suitable means.

The partition *i* not only serves to divide the space beneath the floor to form two compartments to facilitate the stowing away of the bedding by operating through the opening under each side after the removal of the cushions and the detachable boards *j j*, but it serves to strengthen the floor between the seats and give firmness thereto.

The object of having the middle curtains provided with balance-rollers is that they may be easily managed by the occupants of the berth, and thereby avoid the necessity of interfering with the side curtains, which, by remaining in their steady positions, secure privacy to the berths.

I claim as my invention—

1. The skeleton frame D, made in two pieces hinged together, in combination with the slotted braces F F, for the convenience in handling and connecting the frame with the wall of the car, either at the upper or lower part of the window, substantially as described.

2. The combination of textile fabric coated with dissolved gum-shellac with the frames of partitions G, the fabric being confined on each side of a frame between two frames, substantially as and for the purpose set forth.

3. The combination of the double hinged detachable back-cushions C and C' of the two seats of the section, with the skeleton frame D, to form the bed-bottom of the upper berth, substantially as described.

4. The combination of the middle curtains, I' I^2, with the side curtains, I I, which overlap them for the purpose of intercepting the view of the upper and lower berths, substantially as described.

5. In a sleeping-car having middle curtains, I' I^2, and overlapping side curtains, I I, made of bamboo, rattan, or wood splints, the combination of turn-buckles, substantially as described, with the curtains, to prevent the flapping of the latter.

6. In combination with the chamber L, a lining of textile fabric coated with dissolved

gum-shellac, to preserve cleanliness and prevent the infection of bugs, substantially as described.

7. The combination of the door M with the skeleton frame D, for holding the latter in place when folded up, said door being connected with the wall A at the lower part of the window, in the manner and for the purpose set forth.

8. In combination with the floor and lower ceiling between two seats, the partition *i*, whereby to divide the space into two compartments, L′ L′, to be reached, respectively, from the openings under the seats, substantially as described.

9. The detachable boards *j j*, in combination with the seat-frames B B and wall A, for the purpose (by removing the boards) of making a free communication to the chambers L′ L′ for stowing the bedding therein or removing it therefrom, substantially as set forth.

10. The combination of textile fabric coated with dissolved gum-shellac with the compartments or chambers L′ L′, to preserve their cleanliness and protect them from the infection of bugs, substantially as described.

11. The pockets H, having slots *f* and *f′*, in combination with the partitions G, having headed pins *e* and *e′*, the lower slots, *f*, being open at their lower ends, and the upper slots, *f′*, having an enlargement at their lower ends, whereby the pockets can be instantly connected with the partitions when required for use, and also quickly removed therefrom when desired, substantially as described.

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