No. 631,962. Patented Aug. 29, 1899.

J. P. LEIN.

TRANSPORT BED.

(Application filed Mar. 2, 1899.

(No Model.) 2 Sheets—Sheet 1.

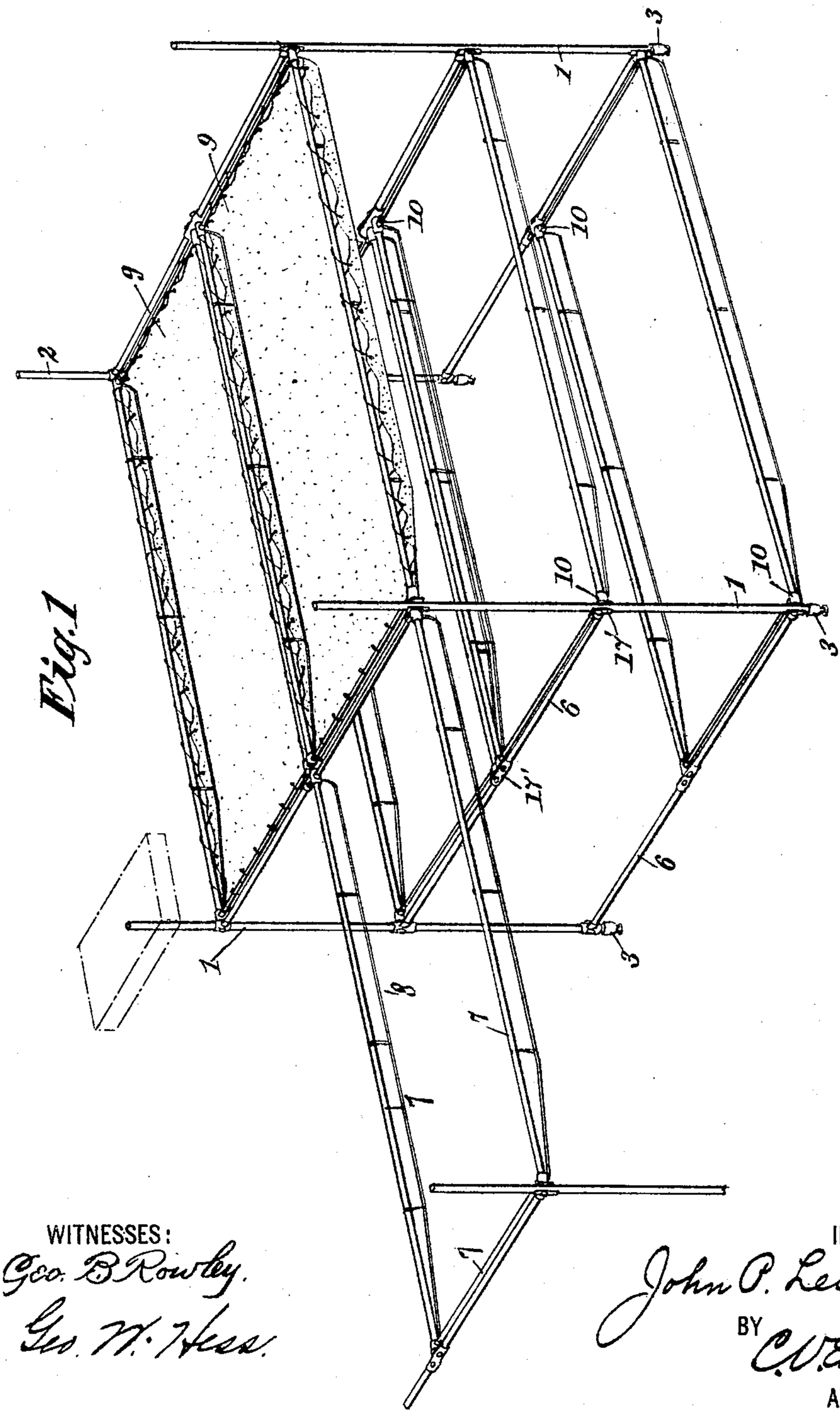

Fig. 1

WITNESSES:
Geo. B. Rowley.
Geo. W. Hess.

INVENTOR
John P. Lein
BY C. W. Edwards.
ATTORNEY

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Fig. 2.

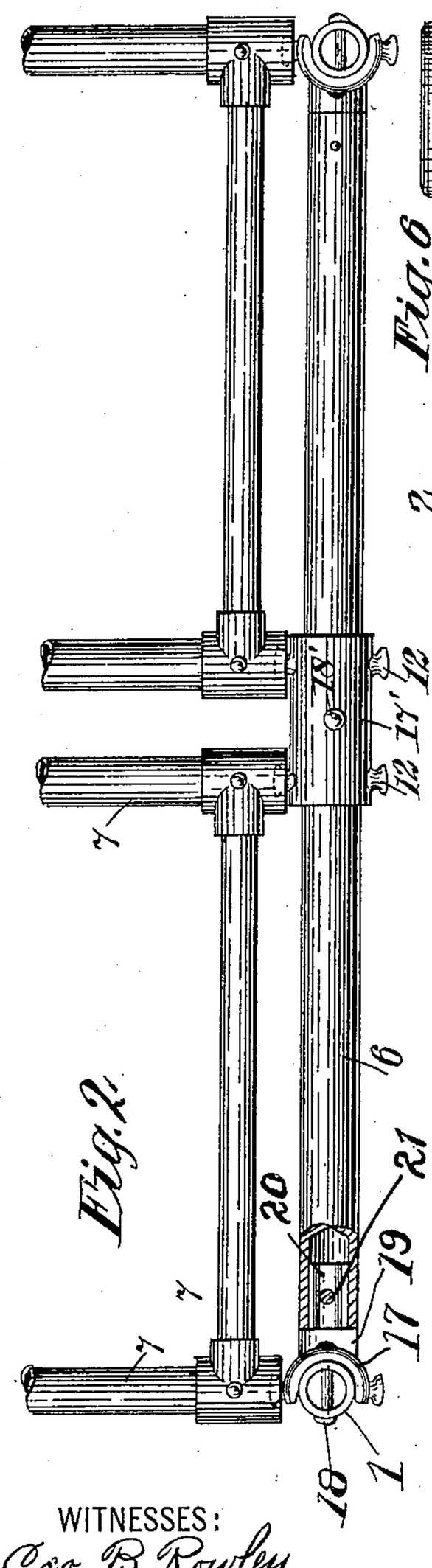

Fig. 3.

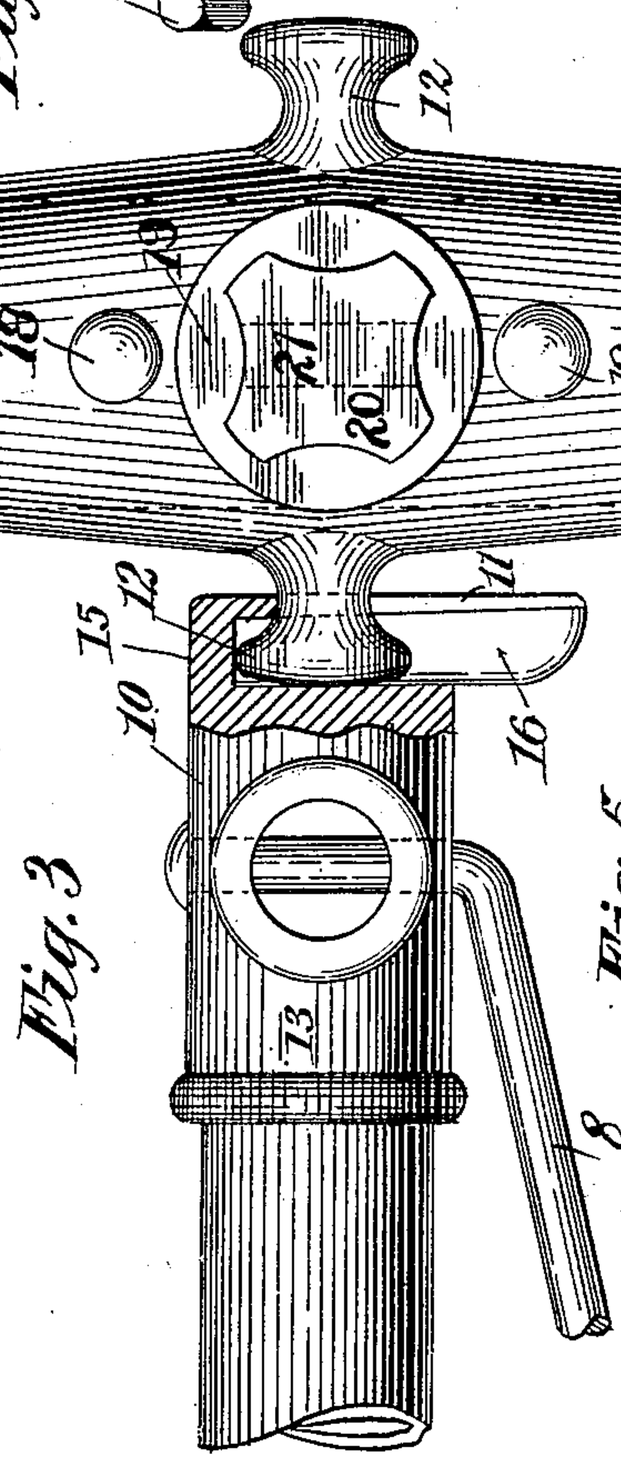

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

WITNESSES:
Geo. B. Rowley.
Geo. W. Hess.

INVENTOR
John P. Lein
BY C. V. Edwards
ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN P. LEIN, OF NEW YORK, N. Y.

TRANSPORT-BED.

SPECIFICATION forming part of Letters Patent No. 631,962, dated August 29, 1899.

Application filed March 2, 1899. Serial No. 707,433. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. LEIN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Transport-Beds, of which the following is a full, clear, and exact specification.

This invention relates to beds designed for use in transports and other places where it is desirable to aggregate a large number of beds or berths.

The object of the invention is to provide means whereby the transport, room, or other place may be quickly and conveniently fitted up with a large number of beds or berths.

In the fitting out of transports it is desirable that the berths may be constructed with the least possible disarrangement of the construction of the transport. For instance, in fitting out a transport-ship where it is desired to utilize every available bit of space for sleeping purposes it often happens that a pipe or other object occupies a part of the space intended for the berths. In such cases where the berths are fitted to the ship in the manner heretofore customary it has been necessary to make special alterations in the berths to fit them around such objects. It is also desirable that the entire berth structure shall be capable of being removed in order to allow the berths to be taken out and the space used for the storage of freight when necessary or to make the supporting structure so light that it will not interfere with the disposal of freight. According to my invention I propose to provide a structure from which the individual berths may be removed at will in order to allow the floors or berths to be cleaned or to allow the space to be used for the storage of freight, or, if preferred, to allow the entire berth structure to be conveniently removed. I further propose to provide a structure which can be quickly and conveniently fitted to any transport without the necessity of devising special plans for the alteration of the transport or the berth structure.

A further feature of the invention is that no surface or cracks are exposed upon or in which vermin or filth can accumulate.

The invention also possesses other features of advantage, which will more clearly hereinafter appear and which will be pointed out in the claims.

In the accompanying drawings, in which I have illustrated one of the forms which the invention may take in practice, Figure 1 is a perspective view of a system of berths constructed in accordance with my invention. Fig. 2 is a top view showing the ends of two individual berths. Fig. 3 is a detail side view, partly in section, showing the manner of supporting the individual berths upon the supporting structure. Fig. 4 is a detail sectional view of the foot of one of the vertical supports. Figs. 5 and 6 are respectively end and bottom detail views of the supporting-heads; and Fig. 7 is a side view, partly in section, showing the supporting-knobs in detail and their manner of attachment to the supports.

Referring more particularly to the drawings, 1 1 1, &c., represent a number of vertical supports placed at intervals in parallel lines along the deck of the transport to be fitted out, the respective lines being separated from each other a distance equal to the width of one or more berths and the individual supports in the respective lines being supported from each other a distance equal to the length of one berth. Under normal conditions it will be found sufficient to separate the lines from each other a distance equal to the width of two berths and to separate the individual supports in the respective lines from each other a distance equal to the length of one berth. These vertical supports may be held in position in any suitable manner; but in the fitting out of transport-ships I prefer to brace them between the decks and the rack which is ordinarily found below the deck for the purpose of storing life-preservers, substantially as is shown in the drawings. In this instance the supports are shown as having a screw-thread 2 cut on the lower end and adapted to engage an interior thread cut in the foot-piece 3, the latter being adapted to rest in a socket 4, attached to the floor in any suitable manner. The foot-piece should also be provided with the locking-screw 5.

The upper end of the vertical support may be braced against the upper deck or the life-preserver rack or any other suitable place.

In the drawings I have shown in dotted lines a portion of the upper deck against which the support 1 is braced. With the construction here shown the supporting-piece may be braced against the upper deck at the top and by turning the foot-piece 3 at the bottom the support will be rigidly braced between the decks and may be locked in position by turning the screw 5. It will be understood, however, that the screw-thread 2 is not essential in the carrying out of the invention, and in many instances it will be found desirable to dispense with the same and have smooth surfaces on the end of the support and the interior of the foot-piece, locking the parts by the screw 5.

Cross-supports 6 6 6, &c., are carried by the vertical supports 1 1 and are located one above the other, the number of cross-supports varying of course according to the number of tiers of berths desired. In the drawings three tiers are shown, and therefore three cross-pieces, one above the other, are necessary.

Each individual berth comprises a rigid frame 7, constructed and supporting the bedding in any suitable manner. In the drawings I have shown a frame comprising two side parts and two under parts joined to form a rectangular frame and having depending auxiliary parts 8 below said parts 7, and canvas or other suitable material 9 being stretched from the side parts 7 across the auxiliary parts 8 to form a bed-bottom. Each berth therefore comprises an independent and separable part from the rest of the structure, each berth being also a rigid berth—that is, a berth having a rigid frame, it being understood that the bottoms or other parts of the berth may be made of any material, yielding or otherwise.

Upon the corner of each frame is formed a head 10, having a slot 11 in the end thereof, and upon the vertical supports and cross-supports, at intervals equal to the width of the berths, are formed knobs 12 12′, &c., at the outer and inner sides of the berths and adapted to engage the heads 10 and fit into the slots 11 thereof. In the drawings I have illustrated a preferred form of head and preferred form of knob, the head having a part 13, adapted to engage the end or side rail of the frame 7, and a part 14, adapted to engage the side or end rail of the frame. A part 15 projects beyond the frame and has formed therein a chamber 16 and a slot 11, the chamber 16 being adapted to receive the enlarged part of the knob 12 and the slot 11 to receive the contracted part of the knob, the contraction being such that the head will readily fit upon the knob 12, the latter being received and held within the chamber 16, thereby preventing the head from being disengaged from the knob except by lifting it therefrom. In practice the part 14 may be made sufficiently large to allow the side part 7 to slip therein, it being unnecessary to thread either part either before or after the side bar is thus slipped in. A hole is drilled through the head of the pipe, and the end of the auxiliary rail 8 is inserted through the hole and riveted at the top, substantially as is shown in detail in Fig. 3. I have also shown in the drawings a preferred form of the supporting-knobs. In order to avoid as much as possible the threading of pipes and the consequent expense in the construction of the supporting structure, I prefer to cut the cross-supports 6 squarely at their ends, as shown in detail in Fig. 2. A semicircular plate 17 17′ is adapted to fit against the vertical support 1 and carries thereon the supporting-knobs 12. This plate is adapted to be clamped to the vertical pipe in any suitable manner. In the drawings it is shown as being held in place by two rivets 18 18. Upon the plate 17 is formed an extension 19, against which the ends of the pipe 6 are adapted to fit, and upon the extension-piece 19 is formed a projecting lock 20, adapted to fit into the interior of the pipe 6 and be held in engagement therewith by a pin 21. At the middle of the cross-pieces where the supporting-knobs are to be placed a plate 17′, adapted to fit the surface of the cross-support, may be clamped thereto by any suitable means—such, for instance, as a rivet 18′—and upon opposite sides of the plate 17′ may be formed the knobs 12.

In practice the supporting structure is placed in position by placing the vertical uprights between the decks of the transport, attaching thereto the plates 17 at the proper intervals, then placing the cross-pipe 6 in position upon the lugs 20, and clamping the same thereto. The plates 17 are then placed in proper position upon the cross-braces 6, and the individual berths are placed in position by simply slipping the slotted heads upon the proper supporting-knobs. Any one or more of the berths may be lifted out of position without in any wise disarranging the rest of the structure. It is frequently necessary, particularly where the structure is used in transport-ships for troops, &c., to remove the occupant of one or more of the berths without removing him from his bed or without disturbing his fellow occupants. With the construction here shown any individual berth may be lifted out of position, leaving the occupant entirely undisturbed and the berth used as a stretcher to carry the occupant to any place.

It will be observed that there are no exposed surfaces, nooks, or cavities in which vermin or filth can accumulate. When the berths are removed, the only exposed surfaces are the supporting-knobs, and upon these obviously there is no opportunity given for the collection of vermin. Likewise the chamber 16 is always open through the slot 11, and matter cannot accumulate therein. If through any cause any vermin or other matter should get into the chamber 16, as soon as the berth is put into position the knob 12

will force the matter out through the slot 11. It will also be observed that a few or all of the berths may be removed almost instantly to allow the space occupied thereby to be used for the storage of freight or other purposes. If desired, the entire supporting structure may be removed without delay and put up again or in another place without material inconvenience.

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

1. In a bed-bottom, the combination of a rectangular frame, a corner-piece at each corner thereof comprising a slotted head adapted to receive and be supported upon a knob, auxiliary side rails located immediately below the said rails of the frame, and a fabric attached to the sides and ends of the frame, said fabric being stretched over said auxiliary rails to form the bottom and side walls of the bed-bottom, and the ends of said auxiliary side rails passing through the respective corner-pieces and the frame and being adapted to bind the same together, substantially as described.

2. In a bed-bottom, the combination with the side and end rails of a corner-piece having a socket adapted to receive the side rail and a socket adapted to receive the end rail, a projecting portion having a chamber therein, said portion also having a slot leading to said chamber, and an auxiliary side rail, said side rail passing through the said corner-piece and adapted to bind the same and one or more parts of the frame together, substantially as described.

3. The combination of a plurality of upright supports, cross-supports carried thereby, knobs having enlarged heads carried by said supports and cross-supports, a plurality of independent separate berths comprising frames having corner-pieces upon the corners thereof, provided with slotted heads adapted to engage said knobs, auxiliary side rails located parallel to the side rails of said frame, the ends of said auxiliary side rails passing through the respective corner-pieces and the said frame and being adapted to bind the same together, and means for expanding said uprights whereby the same may be braced between the upper and lower decks, substantially as described.

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

JOHN P. LEIN.

Witnesses:
C. V. EDWARDS,
GEO. W. HESS.