

to a platform outside the ship, which platform should be arranged in such a way as to be capable of being hauled up against the ship's side when the weather required it, but when possible should be utilised to give the patients on each deck an airing outside and away from the ship. They would likewise be useful in embarking invalids, especially cases in cots. Each deck, or at least such part of it as was set apart for the sick below, should be separate and distinct from the one above and below it—that is, the middle deck should not communicate in any way with the main or with the lower decks.

To ensure complete and thorough ventilation of the middle and lower decks a series of shafts should be arranged, extending some from the lower deck and some from the middle deck, on to and about 2 to 4 feet above the level of the upper deck. These shafts should extend along the length of the wards fore and aft; should be each about 18 in. to 2 ft. from side to side, and about 6 ft. fore and aft, but not touching one another—for instance, No. 1 (aft) should terminate overhead on the lower deck, No. 2 (working forward) should terminate overhead in the middle deck, and so on, each alternate shaft ventilating the lower, and the next the middle deck.

The main deck would be thoroughly ventilated by similar shafts, one on either side of these, and close alongside them, but narrower, say about 9 inches from side to side, extending the whole length overhead of the ward below and projecting about a foot above the upper deck.

Each deck or ward should be approached from the upper deck by a separate "companion," Main and middle deck wards should have their own w.c. and lavatories. The space devoted to these purposes should extend across the deck immediately outside the ward and have the "companion" in it.

These w.c.'s should be against the ship side, and built with air-tight bulkheads and doors. Ventilation should be by free currents of air entering from the ship's side, and passing out through a pipe in the roof of each and thence into the nearest mast, which masts should be of metal and hollow.

Wards should extend across the ship, so as to have a through draught and through light.

Beds or cots, swinging by short slings, but capable of being fixed by means of iron stays, metal staunchions head and foot supporting the whole.

Operation wards should be on the upper deck, and immediately adjoining a lift well, which should pass direct into the surgical ward. This lift should be of sufficient area to contain a

mattress of the same size as those in use in the ward and also an attendant. In other words, the lift should be about 7 ft. by 4 ft.

Special research room should be in the immediate neighbourhood of the operation ward, but separated from it by a space; for instance, operation ward on one side of the upper deck, and special research ward on the other, and, opposite, with the lift well between them.

In the short time allowed for the reading of papers only a very superficial description of this subject is possible. I should, therefore, wish to emphasize the points which I consider of supreme importance.

1. That the ship should be of metal, cased on the outside with wood, thus combining the cleanliness of metal with the coolness and non-conductibility of wood, and that there should be no possibility of communication between the bilge and the wards.

2. That the wards should be absolutely without communication one with the other, and that each should have direct and independent air communication with the upper deck.

3. That the portion of the main and middle decks appropriated to the water-closet should extend across the deck, so that a thorough current of air could be secured.

4. That the water-closet when in use should be absolutely cut off from this space.

5. That the platforms fitted outside the main and middle decks be of such a size as to accommodate a stretcher or lounge, and the parts leading on to them be in such a position as to give easy passage to a stretcher or carrying chair.

It is most essential that in these ships lighting should be by electricity, as the power required for producing this would be utilised for various other purposes, as is done in our larger passenger steamers.

The following discussion took place at the conclusion of the paper.

Fleet Surgeon Vasey said that most of the arrangements invented for the removal of wounded on board ships appeared to him to have the defect that they were only useful for certain injuries. Those in the form of a chair could not be used for cases, say, of fractured pelvis; Fleet Surgeon Kirker's sleigh did not appear to have this defect.

Inspector-General Turnbull referred to the difficulty of providing an efficient equipment of surgical dressings, appliances and splints in peace time for the requirements of a naval action which might occur with brief or no warning; in his experience this was on a too limited scale, and the equipment was far from being up to date, though much had been done to remedy this

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