

### THE PRINCESS CHRISTIAN HOSPITAL TRAIN FOR SOUTH AFRICA.

BY H. J. SHEPSTONE.

The military hospital train, which was recently built by the Birmingham Carriage and Wagon Company, Limited, of Birmingham, England, was in many ways a remarkable piece of engineering, and interesting not only on account of the fact that it is the first really efficient hospital train ever built in England, but because of its superior finish and the quick time in which it was built.

Hitherto it has been the practice of the British government to utilize ordinary carriages when the necessity has arisen for conveying large bodies of wounded men from place to place. This has been done by clearing the carriages of all internal fittings and fixing an iron frame across the compartment on which stretchers could comfortably be placed. Admirable as this scheme undoubtedly is in cases of emergency, it is, nevertheless, a poor makeshift compared with the admirably-equipped hospital trains which are to be found in both the German and Russian armies. And it is probably owing to the fact that the South African lines are of such narrow gage, viz., 3 feet 6 inches, that the Red Cross Society decided to build a specially-constructed hospital train for service in South Africa. The society was prepared to purchase and adapt coaches from makers who were constructing carriages for the South African railways, but not being able to obtain them quickly enough, the committee determined to have a train specially built and equipped for hospital work.

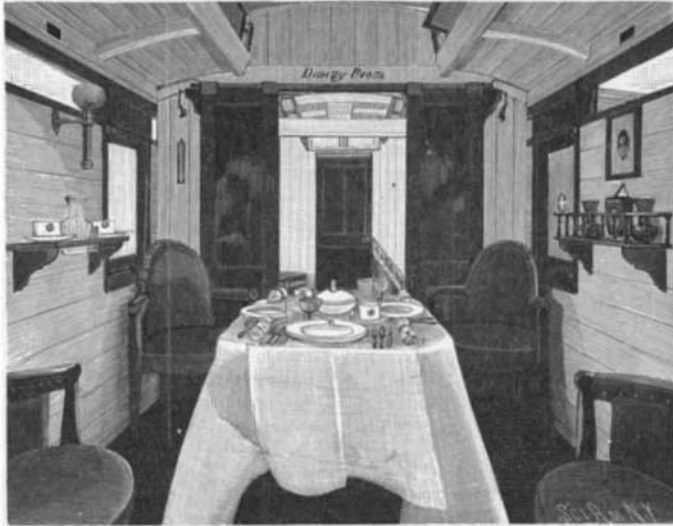
The train itself consists of seven coaches or carriages each 36 feet in length. They run on ordinary bogies and are fitted throughout with the vacuum brake. They compare very favorably with the ordinary English carriage in dimensions, being 8 feet wide and 8 feet high, inside measurement, though it may be added that the latter are designed for a gage of 4 feet 8½ inches, compared with the 3-foot 6-inch gage in South Africa. In the matter of ventilation, the hot climate of South Africa has been taken into consideration, and broad, wide steps have been fitted to the train, so that access to the carriages is made easy when no platform is available. The doors of the carriages, too, have been built specially wide.

The first two coaches are each sub-divided into three compartments. The first compartment in the former coach has been ingeniously fitted with cupboards for storing linen, bandages, and the necessary paraphernalia essential to a fully-equipped traveling hospital. At the extreme end of the compartment is a large chest for soiled linen, which is lined with zinc and well ventilated. The second compartment contains beds for two wounded or invalided officers, and is nicely furnished. These beds, however, are so designed that they act the double purpose of seats by day and beds by night. The third compartment is similarly fitted for two lady nurses.

The second coach is probably the most interesting, the three compartments into which it is divided comprising a doctor's room, dining-room, and surgery. The last is equipped with shelves and racks for holding bottles and glasses, and so arranged that there is no fear of there being broken through the movement of the train. Along one side of this compartment runs a wide bench for dispensing purposes, while sufficient space is left for an operating table.

The next four coaches are known as the wards, and are all fitted alike. Each coach contains twenty-two beds, eighteen for invalids and four for the orderlies. The arrangement of these beds is both ingenious and unique. They are ranged on either side of the coaches in three tiers, leaving a passageway, 2 feet 6 inches in width, down the center of the coach. The beds themselves consist of a light iron frame, on which a hair mattress is

placed. These frames rest on iron brackets securely fixed to the sides of the compartments at the requisite height. When it is desired to place a patient on a bed, the frame with its mattress is taken down, carried to the ambulance, and the invalid laid upon it. The bed



THE DINING-ROOM.

is then lifted back into the carriage and raised to the required level by an ingenious arrangement of pulleys fixed to the roof. One man can easily raise the bed with its precious burden by the aid of the pulleys, leaving the other bearer free to guide it to its proper position.

The first compartment of the last coach is an extremely up-to-date kitchen with a 4-foot 6-inch cooking range. Adjoining this is the compartment for the

quired. The interior of the coaches is most beautifully finished in white enamel, which gives it a cheerful appearance and the impression of plenty of room. The train is built on the corridor principle, and one can walk right through its whole length, passing from ward to ward, for a distance of over two hundred feet.

The train is known as the Princess Christian Hospital Train, and is so named for the following reason: The train has been constructed to the order of the British Central Red Cross Committee, who purchased it from their funds. The largest amount was contributed by the inhabitants of Windsor, who expressed the desire that the train should be named after Her Royal Highness, and as the balance which was needed was supplied by her, the request was naturally acceded to. It may interest many to know that the cost of this unique hospital on wheels was only £7,000, or about \$35,000.

The whole seven coaches were ready for shipment within ten weeks after the contract was signed. The contractors in the present instance, the Military Equipment Company, Limited, of Pall Mall, London, are undoubtedly to be congratulated on the able manner in which they performed their work. Their agreement with the Red Cross Society was to supply a train of seven coaches in twelve weeks. The Birmingham Railway Carriage and Wagon Company, Limited, who undertook to build and fit up the train, entered heartily into the affair, while of course the skill and knowledge of the medical department was readily forthcoming the moment it was needed to best settle any little detail as to the interior fittings of the coaches, etc. We may also add that before the train left for its mission of mercy in South Africa it was inspected by Her Royal Highness, Princess Christian, who expressed

herself highly pleased with the able manner in which the whole arrangement had been carried out. The coaches are built in sections, and are now on their way to South Africa packed in 157 cases, having a total weight of 167 tons. Each package is numbered and marked to facilitate the work of reconstruction, and it is estimated that the train will be ready for use three days after arrival.

#### The Adulteration of Food Products.

For a considerable time the Senate Committee on Manufactures has had under way an investigation into

the extent to which food preparations are made the subject of adulteration, and their report has been submitted to the Senate. The evidence seems to show that our peppers, cinnamon, cloves and spices, generally, including ginger and mustard are adulterated, the amount depending upon the man ordering the article; in some cases it reaches sixty per cent. Of course, in the case of butter, cheese, and flour, the practice of fraud can be more easily detected than in the falsification of spice. The committee has taken the ground that the sale of deleterious and unhealthy food products should be prohibited and where the adulteration is harmless and the goods cheapened, they should be marked for what they are. One method of dealing with the difficulty contemplates putting important food products under the internal revenue law, as has been done with flour, filled cheese and butter. It is said that the poor flour bill has absolutely prevented the sale of adulterated flour and has increased, according to Bradstreet's, the sale of American flour 25 per cent in other countries. Another plan contemplates the establishment of a board which shall fix the standards for food, drink and drugs. Of course, the same rule should apply to foreigners who manufacture goods to be sold in this country.

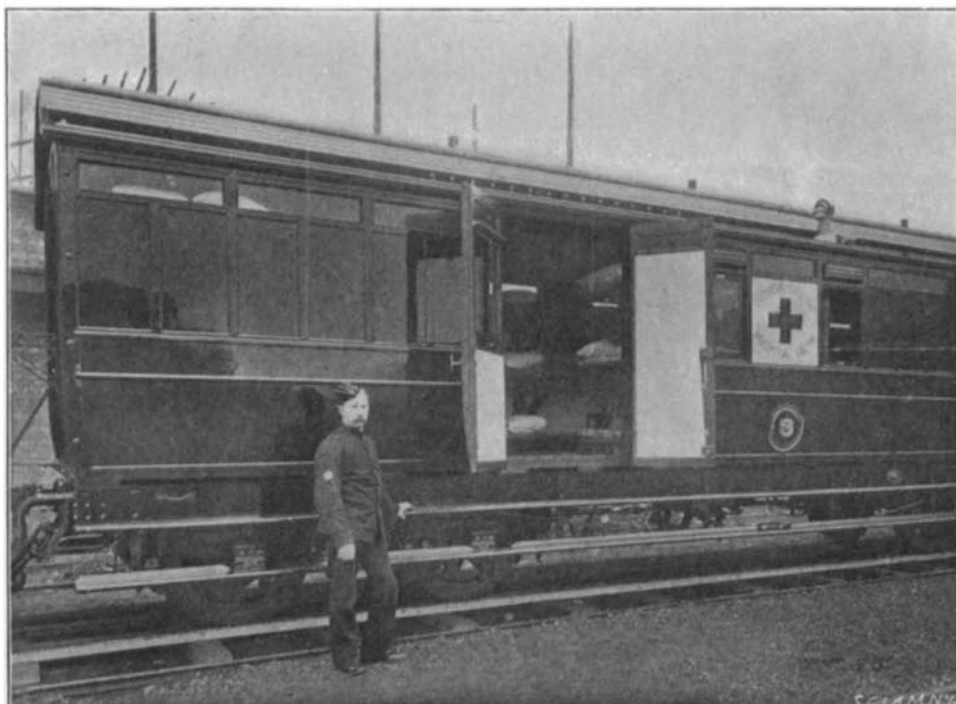
MARCONI thinks that the present limit of 86 miles for wireless telegraphy will shortly be raised to 150 miles.



NURSES' COMPARTMENT.



THE KITCHEN.



BRITISH RED CROSS HOSPITAL TRAIN FOR USE IN SOUTH AFRICA.