Scientific American

Care of Automobile Tires.

Some automobilists complain of continual ill luck with tires, while their friends, using the same makes, will have practically no trouble. The apparent discrepancy is not due to any difference in the quality of the tires, but to the amount of care which they receive. The average motor car driver or mechanic will too

often attend to every part of the vehicle but the tires. These he will neglect to keep thoroughly inflated, and perfectly clean, so that mud gets in between the tire and the rim and dries there. This rusts the rim and crowds the tire, while if not kept inflated the tire becomes rim worn and the rim is injured by striking stones and other obstructions. An official of one of the tire manufacturing companies is responsible for the statement that if several wellknown automobilists should purchase tires of the same make for identical vehicles. he could foretell

almost exactly how long each set would last, on account of his knowledge of the care which the respective cars would receive.—N. Y. Times.

A GERMAN AMBULANCE TRAIN

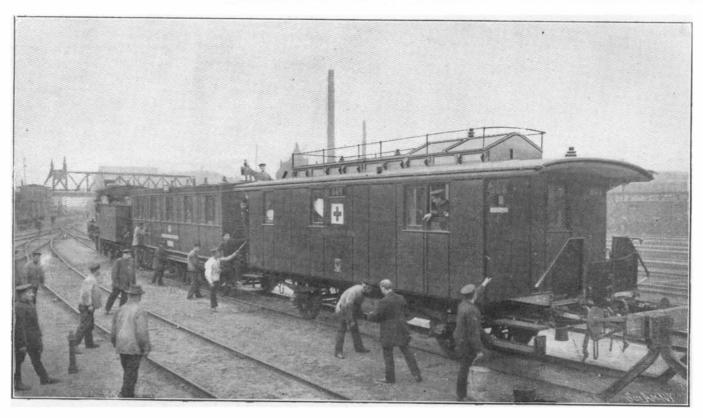
Although it is impossible altogether to prevent railway accidents, it seems at least that something can be done to relieve the sufferings of those who have been injured. Both in America and in Germany, ambulance trains are now in use, which are kept ever ready to be sent out for the purpose of affording speedy relief to the maimed.

The ambulance train of which we present illustrations may well be considered a typical example of what has been done abroad. The train, so far as its narrow limits permit, is as admirably equipped as any modern hospital; its operating-room is fitted up with an operating table, with all the necessary appliances of antiseptic surgery. The ward of this hospital on wheels has eight removable beds, which can be used as litters

tanks are filled, and the railroad surgeons—who live in the vicinity of the stations—are called by telephone.

Even the fast limited trains must give way to the surgeons, and are sidetracked in order that the ambulance may speed to the scene of the accident.

The admirable system which has been devised ren-



A GERMAN AMBULANCE TRAIN.

ders it possible for the surgeons to reach the injured within half an hour after they have been informed of the accident.

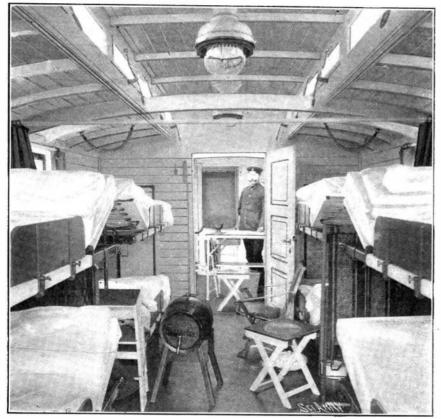
An interesting project for the purpose of facilitating and developing communication between England and the Continent of Europe is in contemplation. The scheme is to substitute a service of ferries, such as are used in Denmark, in lieu of the present steamboat service between Dover and Calais. The distance from the former to the latter port is 21 miles; and although the sea is at times very rough, owing to the meeting of the waters of the North Sea and the English Channel, it is not more so than the Danish waters where the ferries ply, notably between Malmö and Copenhagen, a distance of 16 miles. A commission, composed of English and French engineers, has been investigating the Danish systems and their ferries, and it is stated that one of the Danish boats is to be loaned for the purpose of experiment between Dover and

success in Denmark, so much so, that twenty ferry steamers are now in operation. The vessels are about 300 feet long—approximately the same size as the new turbine steamers now under construction for the Dover-Calais route—and are very similar in design to the ordinary screw steamer except so far as concerns the internal arrangements, where provision is made for

the accommodation of a complete train of railroad cars. There are two new boats in course of construction for the Danish ferry service, which are to have a speed of 18 knots per hour, so that they compare very favorably on this point with the orthodox steamships. If the experiment with the Danish ferry steamers proves successful between Dover and Calais, the ferry steamers for this route will in all probability be equipped with steam turbines.

So much is said nowadays on both sides of the Atlantic about the

decadence of British shipping, that the recent returns for 1901 issued by the British Board of Trade are interesting reading. According to this government return, British shipping trade with this country last year aggregated 14,426,108 tons, of which 12,626,874 tons were British bottoms and only 479,464 tons American. The whole foreign trade of the United States was represented by a tonnage of 49,680,318, of which 54.4 per cent was British and only 16.1 per cent United States. British shipping on the register was 9,608,420 tons, while the tonnage of this country registered for over-sea trade was 889,129, but there was, in addition, 4,635,089 tons employed upon the rivers, lakes and coasts. The British advantage was still greater if steam tonnage only be considered, 7,617,793 tons for Great Britain, against 2,920,953 tons for the United States. Moreover, the United Kingdom added 773,017 tons to the register, while the United States added only 483,489 tons. The American increase, however, has doubled during the past four years. Further-



INTERIOR OF HOSPITAL CAR.

if need be. Reclining-chairs complete the furniture of the ward.

Every German railroad line has a certain number of these ambulance trains, the road being divided into sections and a train assigned to each. Trains are always sidetracked at a station, ready to be sent out. As soon as news of an accident is received, the water Calais, to determine if a similar scheme is feasible at this point. The object of such a system would be to run the trains on and off the ferries at the landing stage onto the railroad tracks, thus dispensing with the necessity of embarking and disembarking, by which means great economy in time and trouble would be effected. This system of ferrying has proved a great



OPERATING TABLE

more, Great Britain built 207,452 tons for foreigners; the United States built only 14,567 tons.

The new power plant on the American side of the Saulte Ste. Marie is rapidly progressing. It will be much larger in every particular than the plant on the Canadian side.