REMARKS ON THE TRANSIT OF INVALIDS.

By RICHARD DAVY, F.R.C.S., Surgeon to the Westminster Hospital.

AN extended experience in the use of hammocks for invalid transit has confirmed their utility, and it is now my desire to place some additional facts on record with reference to a new stretcher and hammock-van.

Stretchers.—The diagram shows the form of stretcher in use at the Westminster Hospital for carrying patients from the wards to the open air. (Fig. 1.) The poles are placed on the shoulders, or borne at

Fig. 1.—Stretcher.

arm's length by the porters; the depth of the hammock necessitates shoulder carriage on going up or down stairs; the capacity of the hammock is much increased by the spreaders, and this arrangement gives also a feeling of security to the occupant; the shift from the stretcher to the hammock-van is readily performed by the mechanism here shown, for experience soon proved that, without it, there was a difficulty in freeing the poles. (Fig. 2.) The spreader (1) supports the weight of

Fig. 2.—Mechanism for Shifting Patient.

the invalid. The patient can readily be shifted by removing (2) and sliding the poles right and left. The pendants shown in Fig. 1 have, of course, been previously attached to the permanent hooks in the van or railway carriage.

Hammock-van.—The British public have practically evinced a far higher regard for the removal of valuable furniture than for the transit of delicate Christians. The method pursued in removing furniture in large vans by road, or rail, or sea is most convenient; and I have to introduce to public notice a hammock-van for the convenience of invalids. (Fig. 3.) This carriage may be drawn by one or two horses;

Fig. 3.—Hammock-Van.

permits of two hammocks being swung in it (the dotted line shows the position of a second); is furnished with strong springs, India-rubber tires, seats for attendants, lavatory and its accompaniments. I have found, in transmitting my patients from London to country places, great inconvenience on reaching the rural terminus, by reason of having to hunt up some suitable conveyance to complete the last stage of the journey. By employing the hammock-van, the patient is subjected to the least amount of inconvenience, being slung in the van at his own

door. The van is placed on a railway truck at the station, and, on reaching the railway terminus, the van is shunted off, and is ready to receive horses for the last stage; so that the invalid suffers no intrusion from the time of leaving one house until arriving at the door of the other; the poles and stretcher are packed away in the van; and thus all arrangements can be satisfactorily completed. I am sanguine enough to hope that sea-sickness may by this arrangement be lessened, and shall avail myself shortly of a practical test to this end.

I have recently been informed that Surgeon-Major Porter of Netley has repeated all my experiments with hammocks on railways, and that he has expressed himself satisfied with the results. My object will be attained if these suggestions lead to the better management of

invalid transit, and thereby economise the pain and distress of all sick persons that travel by land or by water.

Messrs. Seydel and Co. of Birmingham have heartily assisted me in my experiments, and are the sole makers of these hammocks and appliances.

THE PHOSPHORUS PILLS OF THE BRITISH PHARMACOPŒIA.

By J. ASHBURTON THOMPSON, M.D.

I REGRET that absence from England has hitherto prevented me from commenting upon a note on the phosphorus pills of the *British Pharmacopœia* by Dr. Owen Rees, published in the *BRITISH MEDICAL JOURNAL* of October 7th. In the meantime, Messrs. Young and Postans have stated that, during May 1874, Mr. Martindale related to the Pharmaceutical Society an experiment, by which he had ascertained that these pills are indigestible.

I wish to say that the fact is stated in my work, *Free Phosphorus in Medicine*, published two years ago. At page 40, a formula is referred to, which consists of phosphorus and white wax alone. It was published, along with some clinical reports of cases in which it had been used, in 1849. From these reports, I have inferred that such a formula is inactive. At page 80, the indigestibility of wax is referred to, and Mr. Martindale's experience described a little farther on; and then the conclusion is drawn from these *data* that wax is not an useful vehicle for the internal exhibition of phosphorus. In another part of the same work, many reasons are given for believing that a solution of phosphorus in fat or oil will be found the safest and most certain, as well as the most active, form in which this metalloid can be administered.

It was on account of the reputation for uncertainty of action conferred upon it by its use in combination with improper vehicles, that phosphorus had fallen into almost entire disuse for a very long period subsequent to its first employment as a medicine and previous to the last ten years. It is much to be regretted that by the introduction of the formula under consideration to a work of so much authority as the *British Pharmacopœia*, such an useful remedy should have been needlessly brought into the same danger again at a critical period of its history. When properly prepared, phosphorus is neither an inactive nor an uncertain drug.

Dr. Rees, in the same note, refers to certain cases of two kinds of disease in which he has found phosphorus useful; and, in another part of the same issue of the *JOURNAL*, I observe a brief record of the fact that two cases of yet two other kinds of disease have been successfully treated with phosphorus by a correspondent. I venture to say that more particular accounts would have been of interest to the profession. Very little indeed has as yet been precisely ascertained of the therapeutic powers and clinical uses of phosphorus. Nevertheless, it seems unlikely that information upon these points is wanting for lack of experience; for I have been informed from time to time by the various manufacturers that the sale of phosphorus compounds is not only very