

However, being here, in hope that the interest attached to the subject may redeem my faulty presentation of it, I ask your attention to the use of plaster splints and bandages in the treatment of fracture. Of all the materials which may be used to form dressings, soft when applied but rapidly becoming hard and unyielding, this is the best and the best is just good enough till we can improve upon it. Plaster of Paris or gypsum, used in surgical practice by the Arabs in the last century is perhaps not better than when first introduced, but the methods of its use have undergone a process of evolution and are now so perfect as to merit the close attention of each one of us. A clear distinction must be made between such splints, and bandages. By the first we mean supports moulded to a part only of the circumference of a limb or other portion of the body, while by the last we mean dressings which completely encircle the extremity requiring fixation. The two forms of course may approach each other till they meet and merge. As a class the splints are removable at will while the bandages are not so. This distinction is important since the risks belong almost entirely to the bandages, while the benefits can as a rule be obtained by one form or another of plastic splints. Believing that in regard to comfort and security from displacement they are, in the treatment of certain selected fractures better than any other means at our command, I have raised the question of their use in the hope that through you, and with your aid, it may be possible to reach and impress a number of our brethren who either do not use these appliances at all, or do not use them in ways most convenient for themselves and most helpful to their patients. It is to be expected that the discussion evoked will be of greater value than the paper read, since it will become the means of recording a wider experience and reflecting the ideas of others from different standpoints. Let me remind you that your indication of points upon which we differ may be productive of more good than a silent reception of whatever is advanced. With the object of economizing time I shall spare you historical details, shall speak perhaps somewhat dogmatically, and shall give you conclusions rather than the reasons which have led me to them. I shall seek less for originality than for practical utility, and whether speaking or listening shall not forget the saying of Paget, that each one of us has some-

thing which he may teach, and much more which he may learn. If upon some points I enter into detail, it will be because of a belief that in attention to these minor matters lies all the difference between danger and safety, between success and failure. I base what I have to say on what I learned as a student from my old and honored teacher Dr. F. H. Hamilton, of N.Y., on ten years constant use of gypsum dressings, on such study as I have been able to give to the literature of the subject, and on what I have from time to time seen in the hospitals of New York, Boston, and Philadelphia. I trust that some who hear me and who have had trans-Atlantic experience will give us the results of their more extended observation.

*Materials*—Only the finest and freshest dental plaster should be used. The common sort applied as a hard-finishing by plasterers is not fit for surgical purposes and its use invites failure. The office supply should be kept in tins the covers of which screw down air tight upon rubber rings. Cosmo-line tins, of five lbs. size, may be obtained at any drug store and answer the purpose perfectly. In preparing the mixture of plaster and water known as "cream" the solid should be added to the fluid and not the fluid to the solid. About an equal bulk of each makes the proper proportion. Common salt or the sulphates of soda or potassium or alum can be added to the water to hasten the setting of the plaster, while a weak solution of glue or gelatine, if used, would delay such crystallization. Cloth sufficiently porous to allow the plaster to set in its meshes and not simply on its surface is the other essential. The experiments of Drs. Marcy and Nelson proved that the lightest and strongest of plaster dressings were those made from cotton cloth such as is used for printing upon. This, free from fatty matters or starch finish, is only to be obtained from the bleacheries. It differs from cheese cloth as cotton batting differs from absorbent cotton. Cylinders made with it and plaster, crushed down only at a pressure of 110 lbs. while those of equal weight and thickness made from crinoline crushed at 60 lbs., and from cheese cloth at 10 lbs. Acting on this hint I have been in the habit of using cheese cloth for plaster bandages, first preparing it by boiling in an alkaline solution and then in clear water to remove the alkali. I am satisfied that the gain in strength is sufficient to pay for the trouble, but regret that I cannot as yet