

perfectly protect the superficial vessels from undue compression, even though swelling should follow. But the contrary effect is generally produced. Before the dressing is completed, the patient remarks that his limb feels pleasantly cool, and never that the dressing is too tight in the vicinity of the fracture. The result of this application of the starch is a rapid reduction of the swelling; thus rendering it the best local application that can be made.

We have recently seen the starch apparatus applied in this manner in Bellevue Hospital, to recent fractures of the leg, thigh, and arm, without the slightest inconvenience, but with immediate relief to swelling, and those painful startings and other symptoms attendant upon the exposure of the limb for several days without dressing. In fractures of the thigh, the patient is able to leave his bed as soon as the dressings are dry, generally about the third or fourth day after this application. Of course no weight is to be borne upon it. In fractures of the arm, where non-union is so common, the starch apparatus may be applied at once, and all dangers of such results be obviated. To country practitioners this dressing offers great advantages. The limb is at once firmly and securely put in a permanent dressing, without the slightest chance of displacement or other complication. The method of applying the immovable dressings is well illustrated in Erichsen's Surgery.—*American Medical Times*.

ON WATERPROOF BANDAGES.

By DR. A. MITSCHERLICH.

The author points out how desirable it is to be able to expose with impunity plaster of Paris and other firm bandages, which are so highly useful in conservative surgery, to the prolonged action of warm water. In this way, limbs might be kept for days or weeks, the bandages having been fenestrated, in local tepid baths, a practice in high favour at some of the German Hospitals as a means of preventing pyæmia. Such bandages, too, would be of great utility in treating fractures in children, in whom the ordinary ones soon become softened and useless, owing to the action of urine. The prolonged tepid bath soon tells upon the ordinary plaster of Paris bandage, destroying its power of resistance, especially when largely fenestrated. The various additions which have been made to obviate the inconvenience, such as oil, dextrine, alum, or water-glass, have not met with much success. The necessary resistance may, however, be obtained in cases in which a very rigid bandage is not required, in the following manner. The plaster of Paris bandage is to be applied in the ordinary way, and then thoroughly dried, for which twenty-four hours or more are sometimes required. A solution of from one to two ounces of shellac in one pound of alcohol is then applied by means of a pencil of charpie over the entire surface, as long as this continues to imbibe any of it. After some hours, when the alcohol has evaporated, more must be soaked in, if possible, and finally the whole is covered with a concentrated solution of the shellac in pure alcohol. The bandage on drying exhibits a shining golden-yellow surface, and may be exposed to warm water for any time without this softening or penetrating it. One disadvantage is that the bandage so prepared requires forty-eight hours to dry before it can be put into the water; but then wounds do not usually commence suppurating before this. When greater solidity is required, as well as the possibility of at once placing the bandaged limb in warm water, the best Portland cement should be substituted for plaster of Paris. In order to secure the setting of this, however, as rapidly as plaster of Paris, it should be mixed, not with water, but with water-glass, (silicate of soda dissolved with water), which is a clear fluid, having a specific gravity of 1.370. This may be diluted with an equal quantity of water, and used to wet the unbleached calico bandage, into which the powdered cement has been thoroughly rubbed. Over this is spread a layer of thin paste made by mixing the cement with some undiluted water-glass. If not made thin, this will harden too soon. The bandage thus