under this treatment do not desquamate so much as under most others. In cases where it is desired to irrigate a wound in order to reduce heat and irritation, lanolin may still be applied, as it is not readily washed away. If a small wound is immediately dressed with this ointment basis, hæmorrhage is stopped.

ELECTRICITY.

The Electrolytic Decomposition of Organic Tissues.

Through the kindness of our old friend, George H. Rohé, M.D., Baltimore, we have received a proof copy of his Annual Address as President of the American Dermatological Association. We regret that space will not admit our insertion of the address as a whole, but we present some parts more particularly devoted to its practical aspects:

Pure water is said not to be an electrolyte, inasmuch as it is a non-conductor, and all electrolytes are conductors. Yet water, slightly acidulated with sulphuric acid, is used as the electrolyte in voltameters, and most of the laws of electrolytic decomposition have been deduced from observations upon this medium. There is no question that water, holding either acid or a salt in solution, is decomposable by an electric current of sufficient potential difference. Whether the electrolytic action in this case is the result simply of the higher conductivity of the water, or whether the acid or salt perform some other part in the process, is not known. It seems probable that the additions to the water promote electrolysis by increasing the conductivity. There is reason to believe, however, that even absolutely pure water is not entirely resistant to the electrolytic current.

According to one of the laws of electrolysis above quoted, there is no actual transference of ions through the electrolyte. But there must be some molecular change going on between the ions, otherwise no conduction of current could occur. Visible decomposition, however, occurs only at the electrodes. It is not yet satisfactorily established whether the molecules of compounds are all in a state of stable combination, or whether Clausius's theory of free molecules in a compound may be invoked in explanation. If the latter is the case, we may represent to ourselves the molecules being brought into line by the current and advancing toward the electrodes in opposite directions, the electro-positive elements, or ions, going with the current, or "down hill," as Dr. Dodge has cleverly suggested, while the electro-negative elements travel against the current, or "up hill."

It seems to have been clearly established by numerous experiments that galvanic conduction through liquids is always electrolytic; in other words, there can be no conduction of an electric current through a liquid without that molecular rearrangement in the field through which the current passes, and that molecular disintegration at the surface of the electrodes which we know as electrolysis.

If this is true, and there is no reason to doubt that it is, many of the current notions of the physiological action of the galvanic current upon organic tissues require modification. We shall be obliged to assume that every time we use the constant galvanic current for therapeutic purposes—whether to relieve pain in a nerve, to stimulate nutrition in muscle or other tissue, or to perform what we are now accustomed to call an electrolytic operation—we are performing electrolysis in all cases, for the human body may be regarded as a large and exceedingly composite electrolyte. Upon this hypothesis distinct and very marked advances may be expected in our applications of the galvanic current in the treatment of disease. The various processes supposed to go on in the body under the influence of an electric current, and termed by different authors electrical absorption, electrical osmosis, and electro-catalysis, will properly be ranged under the single conception of electrolysis. It must be evident at first thought how much such a conception will simplify and render explicit a subject, upon which there is at present much loose thinking and vague writing.

With this preliminary discussion of the physical facts and principles of electrolysis, we are prepared to enter upon the study of this process as applicable for the decomposition, destruction, or modification of normal and pathological organic tissues.

Organic tissue is an electrolytic conductor—*i.e.*, a current can pass through it only by electrolytic decomposition of its compounds, in accordance with the law that "the electricity does not flow *through* but *with* the atoms of matter which travel along and convey their charge."* This does not mean necessarily that the atoms travel throughout the entire distance from one electrode to the other,

*Lodge, "Nature," 1887.