

carbolic acid, after having been carefully washed in hot water, and cotton carriers are in each instance heated to a red heat before being used. The external canal and fundus of the affected ear are first carefully dried out with ordinary absorbent or borated cotton on sterilized holders, and the fundus is then mopped absolutely clean with a 1 to 40 carbolized solution using cotton tufts. This is in turn gently dried out, and a powder consisting of iodoform 1 part, boric acid 6 parts, is then insufflated. By this method the duration of treatment has been shortened to two or three applications in many cases, and an average of about eight treatments is sufficient to cure most cases, even when of some years' duration. Thorough treatment of the always diseased naso-pharynx is carried out with great care in all cases of purulent otitis.—*Polyclinic.*

#### The Therapeutic Value of Blood-letting.

An editorial in the *New York Medical Journal*, June 25th 1887, thus summarizes present medical opinion on this subject:—

Blood-letting should not fall into utter disuse. Weighty accusations have been brought against it, but let us allow only what is confirmed by modern scientific research—namely, its powerlessness in inflammations and in fevers, its dangers in chronic affections, and the obscure rôle it plays in neuroses and in eclampsia; while physiology, in spite of its gaps, teaches the therapist that the blood is always being renewed, that the stability of the circulation is not hindered by a moderate blood-letting, and that, although a powerful modifier of the circulatory equilibrium, this great agent had no other dangers than those that arise from its overabundant employment, its excessive repetition, and its inopportune use. Physiology teaches us also that the philosophy of this therapeutical measure, around which too much majesty and solemnity have gathered, is found not in systems, but in the modest aphorism: "Use, do not abuse!"

#### THERAPEUTIC.

##### Electro-Therapeutics.

In order to fully understand and appreciate the reasons on which some of the statements made in connection with electric science are based, it will be necessary to discuss the *polar theory*. In the language of this theory the electric force is sup-

posed to be made up and transmitted by molecules, the respective halves of which are positively and negatively electrified. Thus if we make a row of 7 or 8 o's, and darken the right halves of each, letting the dark half of the molecule represent the negatively, and the light half the positively electrified portions of the same, we see how the respective halves or *poles* are in connection with their opposite electricities, the same as in the case of the sealing wax and disk, the unlike were attracted and the like repelled; now if the ends of the above series of molecules were swung round until the negative end touched the positive end, we would have a circle or *circuit*, and this is exactly the condition of things supposed to exist in a battery when the two poles are connected. The two electricities are equally developed and constantly tend to neutralize each other. The way in which this is prevented and the necessity of having a fluid which is decomposable and acts chemically on one of the plates in the battery, as well as the probable action of the platinum or copper plate, is explained in this way. If a plate of zinc be placed in some hydrochloric acid the parts of the metal in contact with the fluid become positively electrified while the distant parts of the metal are negatively electrified, at the same time, the chlorine and hydrogen atoms, in the layer of molecules of  $HCl$  in contact with the metal, become respectively negatively and positively electrified; so long as we have but one metal, not in contact with any other, in the liquid nothing ensues but this state of electrical tension. If now we connect a platinum plate with the zinc, the platinum plate will become charged with electricity by induction, and the molecules will be arranged in it just the same as if we added another 5 or 6 o's with light and dark halves, to our row above mentioned, the light or positive halves of the platinum being towards the dark or negative halves of the zinc, this leaves the negative portions of the platinum in contact with the liquid when it is immersed in it; now as the negative chlorine atoms of the  $HCl$  molecule were in contact with the positive portions of the zinc, the positive hydrogen atoms will be nearest the negative platinum. This arrangement will be propagated through all the molecules in the liquid between the two plates until finally the positive hydrogen comes in contact with the negative platinum. Electrical action will now ensue. This will rise so high as to