

antidote and eliminative to the peculiar blood poison which is the cause of the disease. It is a stable salt, parting with its acid only when brought in contact with the fluids of the body. In one case, where a large quantity had been used for several days, the odor of carbolic acid was plainly perceptible in the urine. The remedy may be used in every form and stage of the disease, in doses of from one to ten grains, repeated every one, two, three or four hours, according to the necessities of the case. The proportion of acid in the salt is about one-fourth, which will determine the dose.

I have given as high as one hundred and twenty grains in twenty-four hours, to a child seven years old. It may be combined with quinia sulph., tinct. ferri mur., ammonia carb., or given in brandy, whiskey, wine, syrup, or any aromatic water.

A very good way to dispense it to children is to mix it with sugar and let them eat it. For adults I sometimes use the "cachet de pain." My rule is to begin the administration of the remedy as soon as the disease is recognized, and to continue it in increasing doses until its effect upon the disease is manifest, then gradually to diminish the dose and increase the intervals between the doses.

In addition to the use of the sulpho-carbolate, I always use tonics and stimulants freely, and nourishment, in a concentrated form, such as beef extract, cream, etc.

The local treatment is directed to the removal of the false membrane and the reduction of the local inflammation. This result is obtained, first, by hastening the natural progress of exfoliation: second, by the use of such remedies as will destroy the micrococci and dissolve the pseudo-membrane.—*Medical and Surgical Reporter.*

THE TELEPHONE.

In the wonderful progress of science the time has come when, by the aid of a telegraph wire stretched upon poles in the usual way, individuals may converse with each other in audible tones although separated by hundreds of miles of space. A man in Boston may sit at his desk in State Street, and converse with his partner or friend in Wall Street, New York, with as much ease and facility as if they were sitting side by side. This is indeed a stupendous achievement, and affords evidence that the hidden powers of nature are competent, when understood, to bring all the nations of the earth into instantaneous verbal communication with each other.

The telephone is the invention of Prof. A. Graham Bell of this city, and has resulted from a course of inductive reasoning, growing out of a careful study of the philosophy of sound, as related to wave motions in air, and in metals

when induced by electrical excitation. The instrument is exceedingly simple and inexpensive, and easily understood. It consists in attaching to the terminals of the ordinary telegraph wires between any two points powerful compound magnets, with coils of wire connected. In front of the poles, surrounded by these coils of wire, is placed a diaphragm of iron. A mouth-piece to converge the sound upon this diaphragm substantially completes the arrangement. When the human voice causes the diaphragm to vibrate, closing and breaking the circuit with each vibration, electrical undulations are induced in the coils precisely analogous to the undulations of the air produced by that voice. These coils are connected with the line wire, which may be of any length, provided the insulation be good. The undulations induced in these coils travel through the line wire, and passing through the coils of an instrument of precisely similar construction at the distant station, are again resolved into air undulations by the diaphragm of this instrument.

In order to attach this device to any lines of telegraph, it is only necessary to remove connection with the batteries, close the circuit, and the work is done. The wire serves the purpose of a speaking-tube, and when cities and towns are connected the results are the same as if the most perfect tubes were in use for the purposes of communication. How far this result can be made to reach is as yet undetermined, but experiments show that the communication is perfect through wires two hundred miles in extent. There is no reason to doubt that if the sounds are clearly transmitted between this city and Portland, and Conway, N. H., as they have been, a thousand or more miles will offer no obstacles. It is indeed probable that Europe will soon be within speaking distance of us, and that the Londoner may be able to inform his New York friends by word of mouth what he has upon his breakfast table as he sits down to the meal.

The most interesting experiments with the telephone were made on Monday evening, February 12th, between this city and Salem, distant eighteen miles. The wires were brought into the hall of the Essex Institute at Salem, and a large audience were present to witness the proceedings. Professor Bell briefly explained the construction of the instrument, and then sketched his studies of the system of transmitting sounds. An intermittent current was first sent from Boston by Mr. T. A. Watson, Professor Bell's associate. This caused a noise from the telephone very similar to that of a horn. The Morse telegraph alphabet was then sent by musical sounds, and could be heard throughout the hall. A telephonic organ was then put into operation in Boston. "Should Auld Acquaintance be Forgot" and "Yankee Doodle" were readily heard through the hall and heartily recognized. At this point Professor Bell asked