intensity of the atmospheric electric potential "is much more considerable in elevated and isolated places, than in narrow and confined situations; it is nearly absent in houses, in narrow courts, and alleys, and in enclosed places. In crowded cities it is most intense in the squares and upon the bridges."

We can do little more than guess at the relationship which probably subsists, *ceteris paribus*, between the degree or intensity of the electric condition of the atmosphere, and that with which the functions of organic life are performed. It is indeed highly probable that, in proportion as the atmosphere loses its electricity, as in the ill-ventilated streets of large towns, it becomes less fitted for effecting the complete respiration of the tissues, and, in consequence of this, for sustaining the health in a vigorous condition.

Who can tell how important a due change of electricity in the atmosphere may be to the correct performance of the function of respiration? Who knows the exact position, if any, which the animal tissues hold as conducting media in the circulation between the positive electricity of the atmosphere and the negative electricity of the earth? and how far the health of the body may be affected by the removal of electricity from the atmosphere—the supposed circulation of electricity between the atmosphere and the earth, through the tissues of the body, being either diminished or broken?

As to the carbonic acid evolved into the atmosphere of large towns, I will make one or two remarks. The quantity must be very large; if we take the respiration of the inhabitants alone, we shall be convinced of this. Physiologists tell us that from forty to fifty ounces are excreted from the lungs and skin of an adult within twenty-four hours; if we take twenty ounces as the mean quantity excreted by one person, then calculation shows us that, for instance, the 200,000 inhabitants of Leeds are exhaling no less than 130 tons of carbonic acid gas into the atmosphere. The amount generated by the combustion of fuel must be enormous, and indeed must far exceed that excreted by the inhabitants.

It is not suspected that any accumulation of this noxious gas, likely to affect injuriously the health of residents in towns, takes place; chiefly because of the property of diffusion of gaseous bodies, which the atmosphere possesses in a marked degree, and because of atmospheric currents.

Such statements as these are sufficient to create in us great faith in the protective power of nature, over the health of densely populated towns; but we cannot implicitly trust nature unaided, where—as in crowded towns and cities—great and many are the departures from the practice, which we conceive nature herself dictates for her own guidance; and sanitary physicians, who regard the health of the people as that of one individual, know as well as ordinary physicians that nature will not bear more than a certain strain upon her resources, and that the less she is called upon to counteract the morbid agencies brought to bear upon her, the more secure will be the general health of the people from sudden and unexpected invasions.

SYMPTOMS OF POISONING AFTER EATING SCARLET-RUNNER BEANS.

By GEORGE WELLER, M.R.C.S., etc., Surgeon to the Merchant-Seamen's Asylum, Snaresbrook.

ON the morning of May 10th, at 9.30, I was summoned to the above Asylum in great haste to see a child who was said to be seriously ill from eating scarlet-runner beans. When I arrived, I found a boy, aged 11, suffering to all appearance from symptoms of some irritant poison. He told me that at 7.30 A.M. he ate six of the beans, and would not confess to eating more. At 8 A.M. he partook of his breakfast, which consisted of one-third of a pint of milk and water and eight ounces of stale bread. At 8.30 he was violently sick, and continued to be so for an hour. When I arrived, at 9.30, he was being supported by the nurse, in the water-closet, in a state of collapse from repeated retching, together with excessive diarrhoea. His face was ghastly pale; the pulse imperceptible at the wrist. The matter vomited consisted of undigested food mixed with portions of the beans. The pupils were normal; the surface of the body was cold and clammy. On placing him in the recumbent posture, and giving small and repeated doses of hot brandy and water, he somewhat rallied, but felt much inclined for sleep. I ordered him to have a warm bath, and cataplasms to the calves of the legs, soles of the feet, and over the precordial region, and to drink freely of barley-water; he soon recovered, and was able to leave the ward the next day.

I consider the above case an interesting one. I have referred to two or three works on botany, and have failed in finding any remarks as to

the poisonous action (if any) of the scarlet-runner beans. Balfour, in his *Manual*, remarks that the roots of many species of *Phaseolus* are poisonous, naming the scarlet-runner root as one, but makes no mention of the bean. If the symptoms in the above case be not due to the poisonous nature of the latter, might not such alarming results follow a severe form of dyspepsia consequent on eating the beans?

THERAPEUTICAL MEMORANDA.

PERCHLORIDE OF IRON IN RHEUMATISM.

By THOMAS B. BOTT, M.D., Bury, Lancashire.

THE cases related some time ago by Dr. Russell Reynolds, and also those in the last issue of the JOURNAL by Mr. Buck, in which the tincture of the muriate of iron had proved very effectual in the treatment of acute rheumatism, remind me of a case in which it seemed to be the only medicine which did any good. Elizabeth H., aged 22, employed in a cotton-mill, had previously suffered from slight attacks of rheumatism. I first saw her on December 29th, 1868. She was sitting up in bed, breathing with some difficulty, and could not rest in a recumbent posture. She was suffering from acute rheumatism affecting the joints, complicated with valvular disease of the heart, pneumonia of the left lower lobe, and general bronchitis. The pulse was about 140, and the respiration about 40, during the first fourteen days of treatment. She appeared to be sinking, so that her friends thought it impossible for her to recover. On January 14th, 1869, I prescribed ten minims of tincture of perchloride of iron, with acetate of ammonia and chloric ether, to be taken every three or four hours. For the first time, she expressed herself relieved. The medicine was continued to the end of the month. She was then able to go about again. Since then I have prescribed the tincture of the sesquichloride of iron very extensively, not only in rheumatism, but also in inflammations generally, particularly where there is debility. I generally combine it with acetate of ammonia, which causes it to act better on the skin.

THE LOCAL TREATMENT OF ECZEMA RUBRUM VEL MADIDANS.

By JOHN KENT SPENDER, M.D. Lond., Bath.

THE two main points which require attention are—(a) to apply something which cures as well as soothes; (b) never to put over that application any impervious covering.

Eczema Rubrum is very common on the skin of the leg and of the ankle, and is often connected with varicose veins. The irritation which it causes may be alleviated by dusting the part with dry astringent powders, and by painting on the pharmacopoeial preparations of glycerine; but it is seldom that a cure is effected in either case. Ointments of every kind are hurtful. After many trials of various remedies, I found, some years ago, that the common black wash (lotio hydrargyri of the *Ph. B.*) is a very effective application. I mix with it a tenth or twelfth part of glycerine by measure, and then shake it well. A small quantity of this mixture being poured into a wide shallow vessel (as a saucer), strips of linen rag are soaked in it; and, after being lightly squeezed, are placed evenly and smoothly round the affected part of the limb, a portion of the black oxide of mercury adhering to the linen. Each strip should overlap the one above by nearly a quarter of an inch, so as to present an uniform surface covered by the dressing. A thin calico bandage will secure everything in its place, and keep it so. Between the dressing and the bandage there should not, on any account, intervene any impervious covering, such as oiled silk or a sheet of gutta percha. Such may appear to have the immediate advantage of preserving the moisture of the linen; but the disadvantage is decided and obvious—that the secretion of the diseased skin is prevented from evaporating, and it rapidly decomposes. Hence, not only is the eczema not cured, but fresh tracts of skin are liable to inoculation. A large area of the limb may become red, hot, and spongy, thin serum streaming out at every pore; and probably the limb is enlarged by oedema of the subcutaneous structures. Renew the dressings twice a day, and no harm follows their becoming dry, provided that they are completely saturated with warm water before removal. They are then easily taken off without hurting the patient or damaging the healing skin. Since 1860 I have treated a number of cases by the method now related, and I have been successful in all but three or four. And the defiant behaviour of these few suggested the application of a strong nitrate of silver solution before putting on the linen steeped in black wash; and this plan answered completely.