

tude assembled on the melancholy occasion to the same effect. Having then again and for the last time commended him in prayer to the mercy of God through Christ Jesus, I descended and retired to the most distant spot within my reach, that I might not actually witness the last act of offended justice. My position, however, had scarcely been taken, when calling me by name, he said, "I wish to speak to you once more before I die." When he found me standing again near him on the fatal spot where he was to pay the forfeit of his life, he said, "I feel at this moment a most unexpected and extraordinary degree of support; may I consider it as a token for good?" My reply was, "No, *certainly not*. You have but a moment to live; think of nothing, think of nobody, but the Lord Jesus Christ. Implore salvation from him with your last breath." Another minute had not elapsed when all the scenes of earth had finally closed upon his view.

Can this event ever be contemplated by myself or any other minister of the Gospel, under whose notice it may come, without prompting the ejaculation, O what a serious, what an important, what an *awfully responsible* work it is to be counsellor for eternity?

Some perhaps will be disappointed if I do not give an opinion respecting the spiritual condition of R. H. at the time of his death. But the facts which have been stated are submitted to the reader's consideration, to afford an opportunity for an inference that shall regard the living, and not the dead. I must therefore request permission to close the narrative by repeating the admonition of Paul, *Take heed lest there be in any of you an evil heart of UNBELIEF in departing from the living God.*

Yours, truly, J—, J—.

#### SCIENTIFIC.

##### THE CHLORIDES OF SODA AND LIME.

[We extract the following valuable information from an excellent work on the principles of Domestic Economy. The information here conveyed is of so useful and so very general a character, that we would recommend, not only its perusal, but its adoption, by every family within the range of the readers of the Wesleyan. The articles in question may be readily procured at the chemists. We have no hesitation in using the motto which is attached to the work in question, viz.:—*"We are born at Home—we live at Home—and we shall, most likely, die at Home; so that the comfort and economy of Home, are of more deep, heartfelt, and personal interest to us, than the public affairs of all the nations in the world."*]

MURIATIC ACID has long been known to possess, besides its bleaching properties, a peculiar action upon putrid animal matter, and has therefore been used in hospitals as a disinfecting agent. Common salt, commonly termed in the chemical nomenclature, muriate of Soda, has also been employed from time immemorial to preserve from corruption meat used for human food. Both of these agents act from the same principle, as we shall explain further on; always keeping in view, as necessary to the explanations we have to give, the double power possessed by this principle of discharging colour and destroying putridity. At the beginning of the present century, the bleaching principle of muriatic acid, obtained in a gaseous form, was termed muriatic acid gas, which passing through tissues of cotton or flax kept wet to prevent injury to the texture, expunged all colour and left the linen perfectly white. The same process was followed in bleaching cotton stockings, and from its dangerous effect upon the lungs of those who by accident inhaled this gas in a pure state, was termed "the devil's operation."

The effect of muriatic acid, though known as a bleaching principle, and as a disinfecting agent to a certain extent, still did not satisfy scientific men as to its specific character. Muriatic acid, though seeming to possess the properties of other acids, in its combination with alkalies—or, to speak more accurately with the oxides of sodium, potassium, calcium, and with ammonia, still differed from them not only in taste but in the circumstance of its containing a considerable quantity of hydrogen. This at length led to the discovery of its being only a compound, and its active principle a substance termed chlorine: which in its gaseous or normal state possesses the property of wholly destroying putridity and of discharging colour. Thus, muriatic acid is a combination of chlorine with hydrogen.

Pure chlorine is destructive of animal life, for no lungs can breathe it. When mixed, however, with a thousand parts of atmospheric air, not only can it be inhaled with impunity by human lungs, but it has been known to cicatrize tuberculous ulcers, thus curing consumption in its primitive stages. Indeed, experiments have long been carrying on in Paris to ascertain how far, by means of M. Labarraque's invention, chlorine may be rendered successful in eradicating that scourge, which with ruthless fury strikes in preference at the young and lovely, filling our cities, our towns, and even our country places with mourning and lamentation.

The disinfecting properties of muriatic acid gas or pure chlorine were still but imperfectly known, when about half a century ago the cathedral church of Dijon in Burgundy, required to be newly paved. On the old flag-stones being raised, and the earth underneath moved, the putrid miasma proceeding from the bodies buried in the church—a most baneful practice, especially in crowded cities—produced a pestilential disease among those who attended public worship, which extended through the city, and spread desolation among its inhabitants. The church was shut up, and no one passed the edifice without dread. An old gentleman of the city, whose name we do not recollect, at length resolved to put an end to this deplorable state of things, by removing its cause. He accordingly mixed in a vase certain portions of the black oxide of manganese, common salt, or hydrochlorate of soda—from which the muriatic acid of commerce is manufactured—and sulphuric acid, by which pure chlorine was evolved and ascended in a dense vapour from the vessel. Holding the latter, he entered the church, the doors were closed upon him, he preambulated the building with his vase, and in an incredibly short space of time, the cathedral was wholly disinfected. With the removal of the cause, the putrid fever rapidly disappeared in Dijon. The operator, however, suffered severely from breathing the chlorine not sufficiently diluted with atmospheric air.

This fact excited much attention, and led to the general use of chlorine as a disinfecting agent in hospitals, but without much success, on account of the irritation it caused in the respiratory organs of the patients, until M. Labarraque's discovery brought it to a form in which the weakest and most irritable lungs may inhale it with impunity.

Meanwhile, its properties as a bleaching agent were applied in manufactories, and even in the common process of washing and removing stains from linen. A preparation of chlorine, known in France by the name of "Eau de Javelle," and in England by that of "bleaching liquid," has long been used in both countries for the latter purpose, though not very extensively in England, for want of its properties being sufficiently known; and it is a remarkable fact that the washerwomen who employ it habitually, are scarcely ever afflicted with putrid diseases.

About thirty years since, a village upon the banks of the Seine, about ten leagues from Paris, and built in the midst of a swamp, was so unhealthy that a pu-