

GS210

CREMATION

THE TREATMENT OF THE BODY AFTER DEATH

BY

SIR HENRY THOMPSON, F.R.C.S., M.B. LOND.

SURGEON EXTRAORDINARY TO H.M. THE KING OF THE BELGIANS
PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS
CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL
ETC.

THIRD EDITION

TOGETHER WITH A PAPER ENTITLED

'CREMATION OR BURIAL'

By SIR T. SPENCER WELLS, BART.

LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS

AND THE

CHARGE OF SIR JAMES STEPHEN

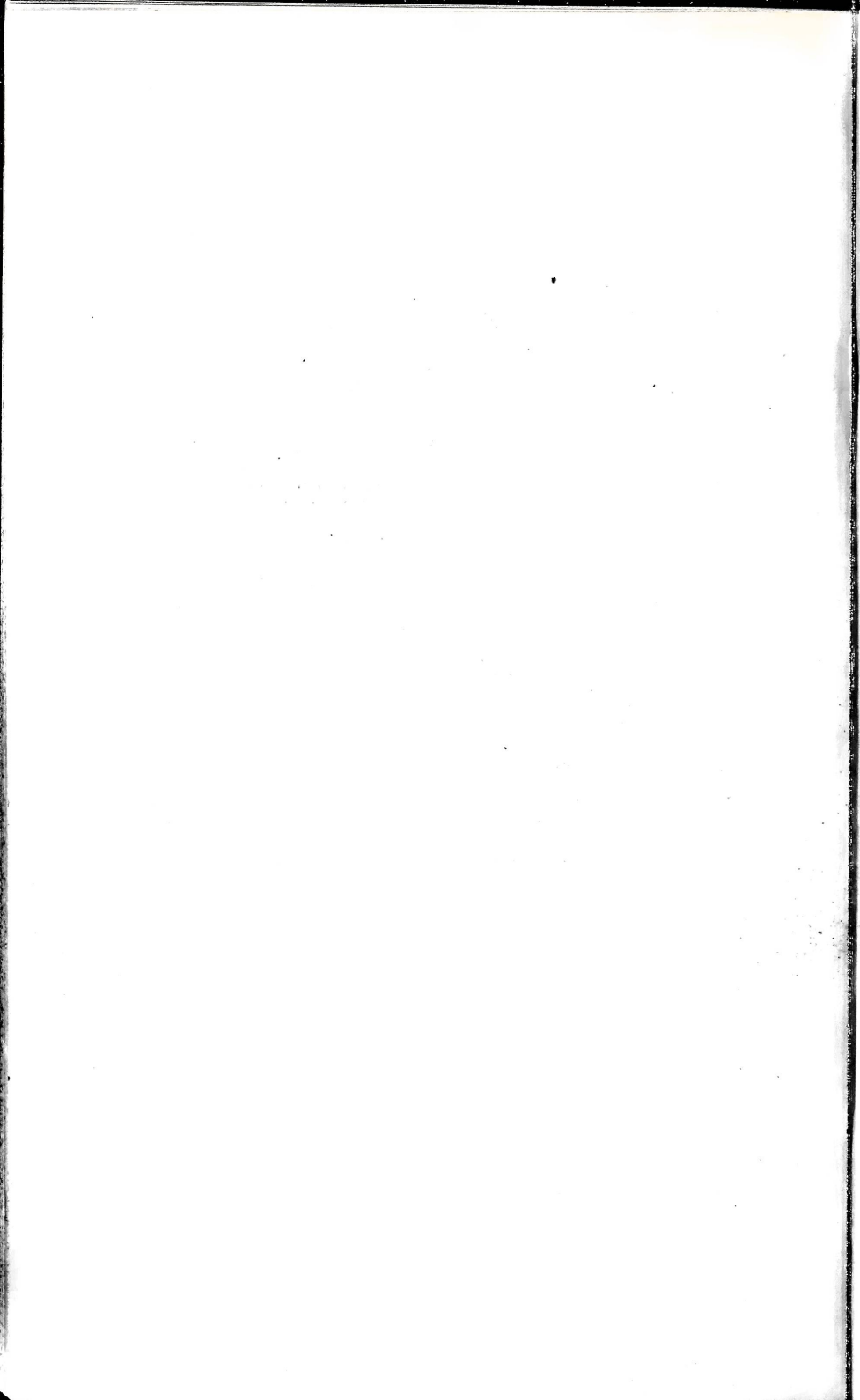
RECENTLY DELIVERED AT CARDIFF

LONDON

SMITH, ELDER, & CO., 15 WATERLOO PLACE

1884

[All rights reserved]



INTRODUCTION.

EARLY in the year 1874, I introduced the subject of Cremation to the English public by an article in the 'Contemporary Review.' It attracted a good deal of favourable attention, and also much adverse criticism; a notable example of the latter being an elaborate reply from the Medical Inspector of Burials for England and Wales, which was presented in the following number of the Review. And my rejoinder to this appeared in the succeeding issue.

My two Papers were shortly afterwards published in the form of a pamphlet, a large edition of which was soon exhausted, but no further reprint took place.

The result of the interest thus excited was the formation of the 'Cremation Society of England' in the year 1875. This Society has quietly but unceasingly pursued its objects; viz., the dissemination of information on the subject of Cremation; co-operation with similar Societies on the Continent, and the purchase of a freehold site (at Woking), with the construction of a crematorium there on the most approved principles.

Ever since its foundation, the Council of the Society has encountered serious opposition in certain official quarters, and for some years felt it therefore desirable to maintain a cautious attitude. By this means they escaped hostile action on the part of their antagonists, who had threatened to take steps to make the employment of cremation illegal, or at all events extremely difficult.

Recent events, however, have greatly altered the situation. Sir James Stephen's late decision has dispelled all doubts as to the legality of the Society's aims, and created a new interest in them throughout the country. A reprint of the two Papers referred to has been widely demanded. The Council of the Society, of which I have the honour to be President, have decided to republish them, together with a very able paper presented by Sir Spencer Wells to the British Medical Association at their meeting in Cambridge in 1880. They think it desirable also to publish the correspondence which took place between themselves and Her Majesty's Government in 1879-80, referred to in the preceding paragraph. And last, but not least, the elaborate judgment of Sir James Stephen is appended, appropriately completing a collection of material, which it is hoped may be useful to those who are seeking information upon this important subject.

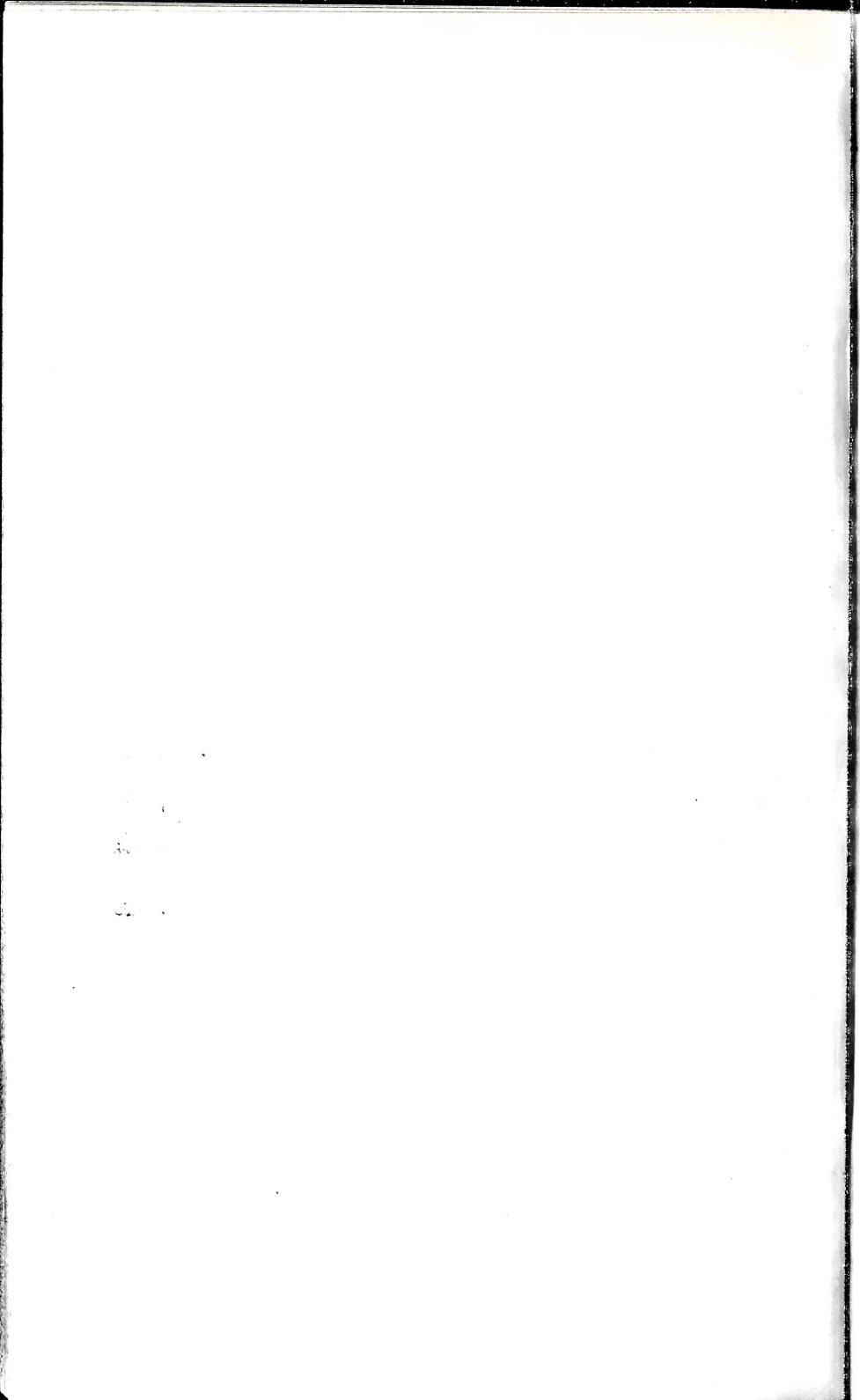
HENRY THOMPSON.

April, 1884.

CONTENTS.



	PAGE
INTRODUCTION	v
CREMATION. By SIR HENRY THOMPSON	1
CREMATION OR BURIAL? By SIR T. S. WELLS, BART.	39
CORRESPONDENCE BETWEEN THE CREMATION SOCIETY AND HER MAJESTY'S GOVERNMENT	50
MR. JUSTICE STEPHEN ON THE LAW OF CREMATION	59



CREMATION :

THE TREATMENT OF THE BODY AFTER DEATH.

By SIR HENRY THOMPSON.

AFTER DEATH! The last faint breath had been noted, and another watched for so long, but in vain. The body lies there, pale and motionless, except only that the jaw sinks slowly but perceptibly. The pallor visibly increases, becomes more leaden in hue, and the profound tranquil sleep of Death reigns where just now were life and movement. Here, then, begins the eternal rest.

Rest! no, not for an instant. Never was there greater activity than at this moment exists in that still corpse. Activity, but of a different kind to that which was before. Already a thousand changes have commenced. Forces innumerable have attacked the dead. The rapidity of the vulture, with its keen scent for animal decay, is nothing to that of Nature's ceaseless agents now at full work before us. That marvellously complex machine, but this moment the theatre of phenomena too subtle and too recondite to be comprehended; denotable only by phraseology which stands for the unknown and incomputable—vital, because more than physical, more than chemical—is now consigned to the action of physical and chemical agencies alone. And these all operating in a direction the reverse of that which they held before death. A synthesis, then, developing the animal being. The stages of that synthesis, now, retraced, with another end, still formative, in view. Stages of decomposition, of decay,

with its attendant putrescence; process abhorrent to the living, who therefore desire its removal. 'Bury the dead out of my sight,' is the wholly natural sentiment of the survivor.

But Nature does nothing without ample meaning; nothing without an object desirable in the interest of the body politic. It may then be useful to inquire what must of necessity happen if, instead of burying or attempting to preserve the dead, Nature follows an unimpeded course, and the lifeless animal is left to the action of laws in such case provided.

It is necessary first to state more exactly the conditions supposed to exist. Thus, the body must be exposed to air; and must not be consumed as prey by some living animal. If it is closely covered with earth or left in water, the same result is attained as in the condition first named, although the steps of the process may be dissimilar.

The problem which Nature sets herself to work in disposing of dead animal matter is always one and the same. The order of the universe requires its performance; no other end is possible. The problem may be slowly worked, or quickly worked: the end is always one.

It may be thus stated: The animal must be resolved into—

a. Carbonic Acid [CO_2], Water [HO], and Ammonia [NH_3].

b. Mineral constituents, more or less oxidised, elements of the earth's structure: Lime, Phosphorus, Iron, Sulphur, Magnesia, &c.

The first group, gaseous in form, go into the atmosphere.

The second group, ponderous and solid, remain where the body lies, until dissolved and washed into the earth by rain.

Nature's object remains still unstated: the constant result of her work is before us; but wherefore are these changes? In her wonderful economy she must form and bountifully nourish her vegetable progeny; twin-brother life, to her, with that of animals. The perfect balance between plant existences and animal existences must always be maintained, while 'matter' courses through the eternal circle, becoming each in turn.

To state this more intelligibly by illustration: If an

animal be resolved into its ultimate constituents in a period, according to the surrounding circumstances, say, of four hours, of four months, of four years, or even of four thousand years—for it is impossible to deny that there may be instances of all these periods during which the process has continued—those elements which assume the gaseous form mingle at once with the atmosphere, and are taken up from it without delay by the ever open mouths of vegetable life. By a thousand pores in every leaf the carbonic acid which renders the atmosphere unfit for animal life is absorbed, the carbon being separated and assimilated to form the vegetable fibre, which, as wood, makes and furnishes our houses and ships, is burned for our warmth, or is stored up under pressure for coal. All this carbon has played its part, 'and many parts,' in its time, as animal existences from monad up to man. Our mahogany of to-day has been many negroes in its turn, and before the African existed was integral portions of many a generation of extinct species. And when the table which has borne so well some twenty thousand dinners, shall be broken up from pure debility and consigned to the fire, thence it will issue into the atmosphere once more as carbonic acid, again to be devoured by the nearest troop of hungry vegetables—green peas or cabbages in a London market garden, say—to be daintily served on the table which now stands in that other table's place, and where they will speedily go to the making of 'Lords of the Creation.' And so on, again and again, as long as the world lasts.

Thus it is that an even balance is kept—demonstrable to the very last grain if we could only collect the data—between the total amounts of animal and of vegetable life existing together at any instant on our globe. There *must* be an unvarying relation between the decay of animal life and the food produced by that process for the elder twin, the vegetable world. Vegetables first, consumed by animals either directly or indirectly, as when they eat the flesh of animals who live on vegetables. Secondly, these animals daily casting off effete matters, and by decay after death providing the staple food for vegetation of every description. One the necessary com-

plement of the other. The atmosphere, polluted by every animal whose breath is poison to every other animal, being every instant purified by plants, which, taking out the deadly carbonic acid and assimilating carbon, restore to the air its oxygen, first necessary of animal existence.

I suppose that these facts are known to most readers, but I require a clear statement of them here as preliminary to my next subject; and in any case it can do no harm to reproduce a brief history of this marvellous and beautiful example of intimate relation between the two kingdoms.

I return to consider man's interference with the process in question just hinted at in the quotation, 'Bury the dead out of my sight.'

The process of decomposition affecting an animal body is one that has a disagreeable, injurious, often fatal influence on the living man if sufficiently exposed to it. Thousands of human lives have been cut short by the poison of slowly decaying, and often diseased animal matter. Even the putrefaction of some of the most insignificant animals has sufficed to destroy the noblest. To give an illustration which comes nearly home to some of us—the grave-yard pollution of air and water alone has probably found a victim in some social circle known to more than one who may chance to read this paper. And I need hardly add that in times of pestilence its continuance has been often due mainly to the poisonous influence of the buried victims.

Man, then, throughout all historic periods, has got rid of his dead kin after some fashion. He has either hidden the body in a cave and closed the opening to protect its tenant from wild beasts, for the instinct of affection follows most naturally even the sadly changed remains of our dearest relative; or, the same instinct has led him to embalm and preserve as much as may be so preservable—a delay only of Nature's certain work;—or, the body is buried beneath the earth's surface, in soil, in wood, in stone, or metal:—each mode another contrivance to delay, but never to prevent, the inevitable change. Or, the body is burned, and so restored at once to its original elements, in which case Nature's work

is hastened, her design anticipated, that is all. And after burning, the ashes may be wholly or in part preserved in some receptacle in obedience to the instinct of the survivor, referred to above. All forms of sepulture come more or less under one of these heads.¹

One of the many social questions waiting to be solved, and which must be solved at no very remote period, is, Which of these various forms of treatment of the dead is the best for survivors?

This question may be regarded from two points of view, both possessing importance, not equal in degree perhaps; but neither can be ignored.

A. From the point of view of Utility: as to what is best for the entire community.

B. From the point of view of Sentiment: the sentiment of affectionate memory for the deceased, which is cherished by the survivor.

I assume that there is no point of view to be regarded as specially belonging to the deceased person, and that no one believes that the dead has any interest in the matter. We who live may anxiously hope—as I should hope at least—to do no evil to survivors after death, whatever we may have done of harm to others during life. But, being deceased, I take it we can have no wishes or feelings touching this subject. What is best to be done with the dead is then mainly a question for the living, and to them it is one of extreme importance. When the globe was thinly peopled, and when there were no large bodies of men living in close neighbourhood, the subject was an inconsiderable one and could afford to wait, and might indeed be left for its solution to sentiment of any kind. But the rapid increase of population forces it into notice, and especially man's tendency to live in crowded cities. There is no necessity to prove, as the fact is too patent, that our present mode of treating the dead, namely, that by burial beneath the soil, is full of danger to the living. Hence intramural interment has been recently forbidden, first step in

¹ 'Burial at Sea' is a form of exposure, the body being rapidly devoured by marine animals.

a series of reforms which must follow. At present we who dwell in towns are able to escape much evil by selecting a portion of ground distant—in this year of grace 1873—some five or ten miles from any very populous neighbourhood, and by sending our dead to be buried there:—laying by poison, nevertheless, it is certain, for our children's children, who will find our remains polluting their water sources, when that now distant plot is covered, as it will be, more or less closely by human dwellings. For it can be a question of time only when every now waste spot will be utilized for food-production or for shelter, and when some other mode of disposing of the dead than that of burial must be adopted. If, therefore, burial in the soil be certainly injurious either now or in the future, has not the time already come to discuss the possibility of replacing it by a better process? We cannot too soon cease to do evil and learn to do well. Is it not indeed a social sin of no small magnitude to sow the seeds of disease and death broadcast, caring only to be certain that they cannot do much harm to our own generation? It may be granted, to anticipate objection, that it is quite possible that the bodies now buried may have lost most, if not all, of their faculty for doing mischief by the time that the particular soil they inhabit is turned up again to the sun's rays, although this is by no means certain; but it is beyond dispute that the margin of safety as to time grows narrower year by year, and that pollution of wells and streams which supply the living must ere long arise wherever we bury our dead in this country. Well, then, since every buried dead body enters sooner or later into the vegetable kingdom, why should we permit it, as it does in many cases, to cause an infinity of mischief during the long process?

Let us at this point glance at the economic view of the subject, for it is not so unimportant as, unconsidered, it may appear. For it is an economic subject whether we will it or not. No doubt a sentiment repugnant to any such view must arise in many minds, a sentiment altogether to be held in respect and sympathy. Be it so, the question remains strictly a question of prime necessity in the economic system of a

crowded country. Nature will have it so, whether we like it or not. She destines the material elements of my body to enter the vegetable world on purpose to supply another animal organism which takes my place. She wants me, and I *must* go. There is no help for it. When shall I follow—with quick obedience, or unwillingly, truant-like, traitor-like, to her and her grand design? Her capital is intended to bear good interest and to yield quick return: all her ways prove it—‘increase and multiply’ is her first and constant law. Shall her riches be hid in earth to corrupt and bear no present fruit; or be utilised, without loss of time, value, and interest, for the benefit of starving survivors? Nature hides no talent in a napkin; we, her unprofitable servants only, thwart her ways and delay the consummation of her will.

Is a practical illustration required? Nothing is easier. London was computed, by the census of 1871, to contain 3,254,260 persons, of whom 80,430 died within the year. I have come to the conclusion, after a very carefully made estimate, that the amount of ashes and bone earth, such as is derived by perfect combustion, belonging to and buried with those persons, is by weight about 206,820 lbs. The pecuniary value of this highly concentrated form of animal solids is very considerable. For this bone-earth may be regarded as equivalent to at least six or seven times its weight of dried but unburned bones, as they ordinarily exist in commerce. The amount of other solid matters resolvable by burning into the gaseous food of plants, but rendered unavailable by burial for, say, fifty or a hundred years or more, is about 5,584,000 lbs., the value of which is quite incalculable, but it is certainly enormous as compared with the preceding.

This is for the population of the metropolis only: that of the United Kingdom for the same year amounted to 31,483,700 persons, or nearly ten times the population of London. Taking into consideration a somewhat lower death-rate for the imperial average, it will at all events be quite within the limit of truthful statement to multiply the above quantities by nine in order to obtain the amount of valuable economic material annually diverted in the United Kingdom for a long term of years

from its ultimate destiny by our present method of interment.

The necessary complement of this ceaseless waste of commodity most precious to organic life, and which must be replaced, or the population could not exist, is the purchase by this country of that same material from other countries less populous than our own, and which can, therefore, at present spare it. This we do to the amount of much more than half a million pounds sterling per annum.¹

Few persons, I believe, have any notion that these importations of foreign bones are rendered absolutely necessary by the hoarding of our own some six feet below the surface. The former we acquire at a large cost for the original purchase and for freight. The latter we place, not in the upper soil where they would be utilised, but in the lower soil, where they are not merely useless, but where they often mingle with and pollute the streams which furnish our tables. And in order to effect this absurd, if not wicked, result, we incur a lavish expenditure! I refer, of course, to the enormous sums which are wasted in effecting burial according to our present custom, a part of the question which can by no means be passed over. For the funeral rites of the 80,000 in London last year, let a mean cost of ten pounds per head be accepted as an estimate which certainly does not err on the side of excess.² Eight

¹ Value of Bones imported into the United Kingdom, of which by far the larger part is employed for manure, was, in—

1866	£409,590
1869	600,029
1872	753,185

Statistical Abstract, 20th Number. Spottiswoode, 1873.

² Items comprised in the calculation—

1. Cost of shroud, coffin, labour of digging a grave—essential now in all burials.
2. Cost of funeral carriages, horses, trappings, and accoutrements. Ornamental coffins in wood and metal.
Vaults and monumental art—more or less employed in all funerals above the rank of pauper.

The cost of simple modes of transit are not included in the calculation, because necessary in any case, whatever the destination of the body. The above-named items are only necessary in the case of interment in a grave, and not one would be required, for example, in the case of cremation or burning of the body.

hundred thousand pounds must therefore be reckoned as absolute loss, to the costs already incurred in the maintenance of the system. Thus we pay every way and doubly for our folly.

What, then, is it proposed to substitute for this custom of burial? The answer is easy and simple. Do that which is done in all good work of every kind—follow Nature's indication, and do the work she does, but do it better and more rapidly. For example, in the human body she sometimes throws off a diseased portion in order to save life, by slow and clumsy efforts, it is true, and productive of much suffering; the surgeon performs the same task more rapidly and better, follows her lead, and improves on it. Nature's many agents, laden with power, the over-action of which is harmful, we cannot stop, but we tame, guide, and make them our most profitable servants. So here, also, let us follow her. The naturally slow and disagreeable process of decomposition which we have made by one mode of treatment infinitely more slow and not less repulsive, we can by another mode of treatment greatly shorten and accomplish without offence to the living. What in this particular matter is naturally the work of weeks or months, can be perfectly done in an hour or two.

The Problem to be worked is: Given a dead body, to resolve it into carbonic acid, water, and ammonia, and the mineral elements, rapidly, safely, and not unpleasantly.

The answer may be practically supplied in a properly constructed furnace. The gases can be driven off without offensive odour, the mineral constituents will remain in a crucible. The gases will ere night be consumed by plants and trees. The ashes or any portion of them may be preserved in a funeral urn, or may be scattered on the fields, which latter is their righteous destination. No scents or balsams are needed, as on Greek and Roman piles, to overcome the noxious effluvia of a corpse burned in open air. Modern science is equal to the task of thus removing the dead of a great city without instituting any form of nuisance; none such as those we tolerate everywhere from many factories, both to air and

streams. Plans for the accomplishment of this have been considered; but discussion of the subject alone is aimed at here. To treat our dead after this fashion would return millions of capital without delay to the bosom of mother earth, who would give us back large returns at compound interest for the deposit.

Who can doubt now that the question is one of vital economy to the people of this country? This is still no reason why it should not be considered from the point of view of sentiment. And what has sentiment to urge on behalf of the present process? Let us see what the process by burial is.

So far as I dare! for could I paint in its true colours the ghastly picture of that which happens to the mortal remains of the dearest we have lost, the page would be too deeply stained for publication. I forbear, therefore, to trace the steps of the process which begins so soon and so painfully to manifest itself after that brief hour has passed, when 'she lay beautiful in death.' Such loveliness as that I agree it might be treason to destroy, could its existence be perpetuated, and did not Nature so ruthlessly and so rapidly blight her own handy-work, in furtherance of her own grand purpose. The sentiment of the survivor on behalf of preserving the beauty of form and expression, were it possible to do so, would, I confess, go far to neutralise the argument based on utility, powerful as it is. But a glimpse of the reality which we achieve by burial would annihilate in an instant every sentiment for continuing that process. Nay, more; it would arouse a powerful repugnance to the horrible notion that we too must some day become so vile and offensive, and, it may be, so dangerous; a repugnance surmountable only through the firm belief that after death the condition of the body is a matter of utter indifference to its dead life-tenant. Surely if we, the living, are to have sentiments, or to exercise any choice about the condition of our bodies after death, those sentiments and that choice must be in favour of a physical condition which cannot be thought of either as repulsive in itself or as injurious to others.

There is a source of very painful dread, as I have reason

to know, little talked of, it is true, but keenly felt by many persons at some time or another, the horror of which to some is inexpressible. It is the dread of a premature burial; the fear lest some deep trance should be mistaken for death, and that the awakening should take place too late. Happily such occurrences must be exceedingly rare, especially in this country, where the interval between death and burial is considerable, and the fear is almost a groundless one. Still, the conviction that such a fate is possible, which cannot be altogether denied—will always be a source of severe trial to some. With cremation no such catastrophe could ever occur; and the completeness of a properly conducted process would render death instantaneous and painless if by any unhappy chance an individual so circumstanced were submitted to it. But the guarantee against this danger would be doubled, since inspection of the entire body must of necessity immediately precede the act of cremation, no such inspection being possible under the present system.

In order to meet a possible objection to the substitution of cremation for burial, let me observe that the former is equally susceptible with the latter of association with religious funereal rites, if not more so. Never could the solemn and touching words 'ashes to ashes, dust to dust,' be more appropriately uttered than over a body about to be consigned to the furnace; while, with a view to metaphor, the dissipation of almost the whole body in the atmosphere in the ethereal form of gaseous matter is far more suggestive as a type of another and a brighter life, than the consignment of the body to the abhorred prison of the tomb.

I do not propose to describe here the processes which have been employed, or any improved system which might be adopted for the purpose of ensuring rapid and perfect combustion of the body, although much might be said in reference to these matters. There is no doubt that further experiments and research are wanting for the practical improvement of the process, especially if required to be conducted on a large scale. Something has been already accomplished and with excellent results. I refer to recent examples of the process as practised by

Dr. L. Brunetti, Professor of Pathological Anatomy in the University of Padua. These were exhibited at the Exposition of Vienna, where I had the opportunity of examining them with care. Professor Brunetti exposed the residue from bodies and parts of bodies on which he had practised cremation by different methods, and the results of his latest experience may be summarised as follows : The whole process of incineration of a human adult body occupied three and a half hours. The ashes and bone earth weighed 1·70 kilo., about three pounds and three-quarters avoirdupois. They were of a delicate white, and were contained in a glass box about twelve inches long, by eight inches wide, and eight deep. The quantity of wood used to effect absolute and complete incineration, may be estimated from its weight, about 150 pounds. He adds that 'its cost was one florin and twenty kreuzers,' about two shillings and fourpence English. The box was that marked No. IX. in the case, which was No. 4149 in the Catalogue : Italian.¹

In an adjacent case was an example of mummification by the latest and most successful method. By a series of chemical processes it has been attempted to preserve in the corpse the appearance natural to life, as regards colour and form. Admirable as the result appears to be in preserving anatomical and pathological specimens of the body, it is, in my opinion, very far from successful when applied to the face and hand. At best a condition is produced which resembles a badly-coloured and not well-formed waxen image. And the consciousness that this imperfect achievement is the real person and not a likeness, so far from being calculated to enhance its value to the survivor, produces the very painful impression, as it were, of a debased original ; while, moreover, it is impossible not to be aware that the substitution of such an image for the reality must in time replace the mental picture which exists, of the once living face lighted by emotion and intelligence, of which the preserved face is wholly destitute.

To return to the process of cremation. There are still numerous considerations in its favour which might be adduced,

¹ Far better results have been since attained (1884).

of which I shall name only one; namely, the opportunity it offers of escape from the ghastly but costly ceremonial which mostly awaits our remains after death. How often have the slender shares of the widow and orphan been diminished in order to testify, and so unnecessarily, their loving memory of the deceased, by display of plumes and silken scarves about the unconscious clay. And again, how prolific of mischief to the living is the attendance at the burial ground, with uncovered head, and dampstruck feet, in pitiless weather, at the chilling rite of sepulture. Not a few deaths have been clearly traceable to the act of offering that 'last tribute of respect.'

Perhaps no great change can be expected at present in the public opinions current, or rather in the conventional views which obtain, on the subject of burial, so ancient is the practice, and so closely associated is it with sentiments of affection and reverence for the deceased. To many persons, any kind of change in our treatment of the dead will be suggestive of sacrilegious interference, however remote, either in fact or by resemblance to it, such change may be. Millions still cherish deep emotions connected both with the past and the future in relation to the 'Campo Santo,' and the annual 'Jour des Morts.' And many of these might be slow to learn that, if the preservation of concrete remains and the ability to offer the tribute of devotion at a shrine be desired, cremation equally, if not better than burial, secures those ends. On the other hand, I know how many there are, both in this country and abroad, who only require the assurance that cremation is practically attainable to declare their strong preference for it, and to substitute it for what they conceive to be the present defective and repulsive procedure. A few such might, by combination for the purpose, easily examine the subject still further by experiment, and would ultimately secure the power if they desired to put it in practice for themselves. And the consideration of the subject which such examples would afford could not fail to hasten the adoption of what I am fairly entitled to call the Natural, in place of the present Artificial, Treatment of the body after death.

[*The foregoing paper having appeared in the 'Contemporary' of January, 1873, a reply from Mr. Holland took place in February; the following paper, defending his original statements, was published by Sir Henry Thompson in the March number of that journal.*]

CREMATION :

A REPLY TO CRITICS AND AN EXPOSITION OF THE PROCESS.

I CONFESS that it is not without some surprise that I find my proposal to substitute Cremation for Burial as a sanitary reform formally opposed in the last number of the 'Contemporary' by a member of the Medical Profession. From the general public, on account of its natural and tender sympathy with ancient customs, especially when hallowed by religious rite, I had expected adverse criticism. From those who are interested, or believe themselves to be so, in the celebration of funereal pomps and ceremonials of all kinds, a protest was also not unlikely to be heard.

In all this, however, I have been mistaken. So far from encountering opposition, I have received encouragement and support from all classes to an extent which would have been to me almost incredible had I not witnessed it.

Clergymen are anxious to demonstrate how few are the words requiring change in our Burial Service to render it wholly applicable to Cremation. The public Press has all but unanimously spoken favourably of the scheme, demanding only to be assured on certain grounds of possible objection, with which presently I shall have to deal. Persons in all ranks and stations of life write me to say there is nothing they would more gladly obtain than the assurance that their wish to be burned after death could be realised without difficulty.

And, lastly, I am bound to say that the much—perhaps too much—abused undertaker, with a knowledge of the world and a breadth of view for which some might not have given

him credit, has said to me: 'I only desire to supply the public want: as long as the public demands funeral cars, magnificent horses, display of feathers, and a host of attendants in black, I must furnish them; but I am equally ready to perform Cremation to-morrow if the public demand it, and if you will tell me how to do it properly.' And I find him an ally at once, and not an enemy.

Surprised, then, as I am, equally at the number of my friends, and at the quarter from whence my one opponent arises, it is with no little satisfaction, since I am to have an opponent, that I find him to be one so well qualified for the task; the writer of the article in question being no less an authority than the Medical Inspector of Burials for England and Wales to the Home Department. I feel sure, then, that all which can be said in defence of Burial and in opposition to Cremation will be urged by so experienced and redoubtable an antagonist: one who, according to his own showing, has had a large share in controlling and directing the public money for the establishment of Cemeteries during the last twenty years. And, after all, I cannot wonder, seeing how extensive is his acquaintance with the present state of these matters, and how closely he himself is identified with them, that he should intimate at the outset that in itself my paper 'is not worth a reply,' 'the theory on which its main conclusion is based being so entirely without reasonable foundation.'

He, nevertheless, consents to discuss the subject, although he fails to specify the theory thus stigmatised. As I intend to examine the article carefully, the omission will probably not be important. The following may be accepted as a fair summary of the views expressed in it. Mr. Holland admits the great evils of burial when it is adopted within the limits of the town; but believes that 'amply large and well-situated Cemeteries' having been established, for which 'a heavy expense has been incurred;' if, furthermore, they are not too much crowded at first, and are not too soon disturbed afterwards, it is 'possible for burial to be continued without danger, that is, without, not the possibility, but the probability of injury.' All these advantages granted, even then

Cemeteries 'may be mismanaged so as to become unsafe,' 'for so long as men are men, mistakes, and worse than mistakes, will occasionally occur;' and he states that 'the real danger from a well-situated and well-managed Cemetery, large in proportion to the number of its burials, is not larger than that of a well-managed railway.'

We learn, then, from her Majesty's Inspector that Burial is by no means a certainly innocuous procedure: although, provided all the conditions named above are present, which, by the way, is by no means always the case in our very popular suburban Cemeteries, much mischief may not occur.

In addition to this he combats at some length views which he quite erroneously attributes to me; and also imputes inaccuracy in a statement of mine relative to chemical changes, which imputation I shall prove to be wholly without foundation.

It is on these grounds that Mr. Holland advocates burial, and he is bold enough to assert its superiority to Cremation, although, it appears, he has had no experience whatever of the latter process! I doubt whether he ever witnessed an experiment, much less has performed one himself; indeed, I am compelled to infer from his remarks that he knows nothing of it beyond the account which in my last paper I gave of the experiments by Brunetti of Padua, the results of which, although excellent, are, as I intimated more than once, very inferior to those which might easily be attained. He feels bound to admit that, 'no doubt, if sufficient care be taken, no actual nuisance need be caused' by Cremation, but qualifies the admission by suggesting that the process 'is far more liable to mishaps' than burial, 'such mishaps as must be occasionally expected causing far more disgusting nuisance, far more difficult of concealment.'

To all this I shall reply: first, that the evils of Burial are far too lightly estimated by Mr. Holland, respecting which I will adduce overwhelming testimony of a kind that he will not question or deny.

Secondly, that the plan of Cremation I have myself adopted and will now advise, is wholly free from objections of the kind Mr. Holland has imagined to exist: that it is com-

plete in its results, and is absolutely causeless of danger or offence to others.

The evils inflicted on the living by the burial of the dead, I find myself compelled to demonstrate. In my original article I assumed these to be well known and universally admitted, and had no idea that evidence on this subject could be required. This, however, was an error. Thus I have several times been asked quite gravely by young men, well educated and intelligent, if it were an ascertained fact that decaying dead bodies within a grave could really induce disease in the living: true, they might give rise to horrible effluvia, and be very disagreeable, but were they positively harmful? And one respectable journal suggests, as worthy of consideration, whether solicitude on these matters does not betray an undue care for the preservation of life, and regards an attempt to control this fertile source of disease, as dictated by 'a constant and morbid fear of death'! For all this remarkable ignorance of the subject I can only account by the fact, that a generation has risen up since there was made that notable revelation of horrors in the London churchyards which the older men of our time can never forget, but which the younger men never knew.

Some five-and-twenty years have now elapsed since a systematic examination of the churches and graveyards of the Metropolis was made by the most eminent and trustworthy men of the day, when details were brought to light which, at that time, smote the public with horror.

The result was that Acts of Parliament were passed prohibiting intramural interment. The poisonous abominations were removed, vaults were hermetically sealed, and the dead were carried miles away; nevertheless the same detestable process of putrefaction goes on, although it is, at present, beyond the reach of our senses, and only now and then obtrudes itself on our notice.

My task, however, becomes yet more necessary, since we have before us to-day a Medical Inspector of Burials, who, while admitting, with manifest reluctance, that some danger still attaches to the process of interment, comes forward to advise the public, with all the weight of his experience, to

continue that practice, instead of inquiring, which he has not done, whether a mode of disposing of the body may not exist which is absolutely harmless and devoid of all the evils named above.

It is clear then that, for the sake of the general reader at all events, it is necessary to refer, although briefly, to the indubitable evidence which exists relative to this subject.

For his information let me state that the 'General Board of Health' made, in 1849, a special investigation, commissioning for the purpose Southwood Smith, Chadwick, Milroy, Sutherland, Waller Lewis, and others, to conduct a searching inquiry into the state of the burial-grounds of London and large provincial towns: and to devise a scheme for extramural sepulture. From their report,¹ which abounds in information, I shall make two or three extracts.

Happily, any minute description of the state of the graveyards and their contents which resulted from 'the present practice of interment in towns' need not be given. It will suffice for our purpose to observe that the reporters say:— 'We shall be under the necessity of making statements of a very painful nature, and sometimes of representing scenes which we feel most reluctant publicly to exhibit; but we should ill discharge the duty entrusted to us if we were to shrink from the full disclosure of the truth; more especially as a thorough knowledge of the evil is indispensable to an appreciation of the only effectual remedy.'²

Passing over these details, I quote again as follows:—'We,' say the reporters, 'may safely rest the sanitary part of the

¹ *Report on a General Scheme for Extramural Sepulture.* (Clowes and Sons, 1850.)

(Signed)

CARLISLE.

ASHLEY.

EDWIN CHADWICK.

T. SOUTHWOOD SMITH.

The subject had been examined before by official authority; and at an early period by Walker, whose work on *Graveyards* is well known, and contains much information. (Longmans, London, 1839.)

A Special Inquiry into the Practice of Interment in Towns; by Edwin Chadwick (London, 1843), is replete with evidence, and should be read by those who desire to pursue the inquiry further.

² *Report on a General Scheme, &c.*, p. 5.

case on the single fact, that the placing of the dead body in a grave and covering it with a few feet of earth does not prevent the gases generated by decomposition, together with putrescent matters which they hold in suspension, from permeating the surrounding soil, and escaping into the air above and the water beneath.'

After supporting this statement by illustrations of the enormous force exercised by gases of decomposition, in bursting open leaden coffins whence they issue without restraint, the reporters quote the evidence of Dr. Lyon Playfair (late H.M. Postmaster-General) to the following effect:—

'I have examined,' he says, 'various churchyards and burial-grounds for the purpose of ascertaining whether the layer of earth above the bodies is sufficient to absorb the putrid gases evolved. The slightest inspection shows that they are not thoroughly absorbed by the soil lying over the bodies. I know several churchyards from which most fetid smells are evolved; and gases with similar odour are emitted from the sides of sewers passing in the vicinity of churchyards, although they may be more than thirty feet from them.'

. . . . He goes on to estimate the amount of gases which issue from the graveyard, and estimates that for the 52,000 annual interments of the Metropolis¹ no less a quantity than 2,572,580 cubic feet of gases is emitted, 'the whole of which, beyond what is absorbed by the soil, must pass into the water below or the atmosphere above.'

The foregoing is but one small item from the long list of illustrative cases proving the fact that no dead body is ever buried within the earth without polluting the soil, the water, and the air around and above it: the extent of the offence produced corresponding with the amount of decaying animal matter subjected to the process.

But 'offence' only is proved: is the result not only disagreeable but injurious to the living?

¹ A number which has already reached 80,000, in 1873, so rapid is the increase of population. The above was written in 1849.

It has been stated by some that the mere contact of the corpse with fresh earth suffices for safe disinfection! Such a monstrous delusion is disposed of by this evidence.

The Report referred to gives notable examples of the fatal influence of such effluvia when encountered in a concentrated form; one being that of two gravediggers who, in 1841, perished in descending into a grave in St. Botolph's churchyard, Aldgate. Such are, however, extremely exceptional instances; but our reporter goes on to say that there is abundant evidence of the injurious action of these gases in a more diluted state, and cites the well-demonstrated fact that 'cholera was unusually prevalent in the immediate neighbourhood of London graveyards.' I cannot cite, on account of its length, a paragraph by Dr. Sutherland attesting this fact: while the many pages detailing Dr. Milroy's inspection of numerous graveyards are filled with evidence which is quite conclusive, and describes scenes which must be read by those who desire further acquaintance with the subject.¹

Dr. Waller Lewis reports the mischievous results of breathing the pestiferous air of vaults and the kind of illness produced by it.² His long and elaborate report of the condition of these excavations beneath the churches of the metropolis, presents a marvellous view of the phenomena, which, ordinarily hidden in the grave, could be examined here, illustrating the many stages of decay; a condition which he describes as a 'disgrace to any civilisation.' But it may be said all this is changed now; intramural interment no longer exists: why produce these shocking records of the past?

Precisely because they enable us to know what it is which we have only banished to our suburban cemeteries; that we may be reminded that the process has not changed, that all this horrible decomposition removed from our doors—although this will not long be the case, either at Kensal Green or Norwood, to say nothing of some other cemeteries—goes on as ever, and will one day be found in dangerous vicinity to our homes. And here I must make an explanation which I think can be necessary to very few who read my former article, although Mr. Holland misunderstands me, and bases the

¹ See independent examples on each of pages 13, 14, 15, 17, 18, 21, 26, 28, 43-46, and many others in the *Report* above quoted, p. 29.

² See also Chadwick's *Special Inquiry*, for numerous illustrations.

greater part of his paper upon the utter misrepresentation of my meaning he is pleased to make. Because I said that in burying the corpses of to-day in distant graves we were 'laying by poison for our children's children,' he takes special pains to inform me that probably these particular corpses must at that future time be as innocuous as if they had been burned. No doubt they will be so ; but as years pass on, the close neighbourhood and ultimate contact of the putrefying dead with our living descendants must arrive.

It is only a question of time. And it was expressly for the purpose of guarding against the misapprehension I complain of, and which has furnished my opponent with such large opportunity of needless remark, that I added the following passage, which it is only charitable to suppose he must have overlooked (although it forms the immediate sequel to that which he quoted) :—

'It may be granted, to anticipate objection, that it is quite possible that the bodies now buried may have lost most, if not all, their power of doing mischief by the time that the particular soil they inhabit is turned up again to the sun's rays, although this is by no means certain ; but it is beyond dispute that the margin of safety as to time grows narrower and narrower year by year, and that pollution of wells and streams which supply the living must ere long arise wherever we bury our dead in this country.'

Now there is no doubt that the passage which has been thus unfairly separated from its context, and so made to appear the exponent of views I do not hold, and have, indeed, expressly disclaimed, is that in which he professes to find ground for his statement that the 'theory on which my main conclusion is based is entirely without reasonable foundation.' What then becomes of this sweeping assertion ?

At this point let me call another witness on this important subject. Perhaps it would be difficult to name a higher authority in this country on any question of public health, than that of Dr. Edmund Parkes, Professor of Military Hygiene of the Army Medical School at Netley. With the particular part of his writings which I am about to quote, I

was unacquainted until the last few days, perhaps because they appear in a work 'prepared especially for use in the medical service of the army.' That at all events must be my excuse for not having them within reach before.¹ In a short, but suggestive, chapter 'on the disposal of the dead,' he proposes the following question:—

'What, then, is the best plan of disposing of the dead so that the living may not suffer? At present the question is not an urgent one; but if peace continue, and if the population of Europe increase, it will become so in another century or two. Already in this country we have seen, in our own time, a great change; the objectionable practice of interment under and around churches in towns has been given up, and the population is buried at a distance from their habitations. For the present, that measure will probably suffice, but in a few years the question will again inevitably present itself.

'Burying in the ground appears certainly the most insanitary plan of the three methods.² The air over cemeteries is constantly contaminated (see p. 76), and water (which may be used for drinking) is often highly impure. Hence in the vicinity of graveyards two dangers to the population arise, and in addition, from time to time, the disturbance of an old graveyard has given rise to disease. It is a matter of notoriety that the vicinity of graveyards is unhealthy.'

To return to our reporters: we have seen the condition of graveyards in towns, but it will not be undesirable to glance at the evidence relating to the condition of provincial churchyards, where, in the midst of a sparse population, the pure country air circulates with natural freedom—numbers of such spots are mentioned—let one single example be 'Cadoxton Churchyard, near Neath.' Respecting this, the reporter writes:—'I do not know how otherwise to describe the state of this churchyard than by saying that it is truly and thoroughly abominable. The smell from it is revolting. I could distinctly perceive it in every one of the neighbouring houses which I visited, and in every one of these houses there

¹ *A Manual of Practical Hygiene.* (London, Churchill, 1864.)

² *Burial in the Land, or at Sea, and Burning,* p. 458.

have been cases of cholera or severe diarrhœa.' This is not a selected specimen, some are even worse ; for further examples see below.¹

I next complain that there is insufficient recognition in Mr. Holland's paper, of the unhealthy character of the emanations which result from the process of putrefaction when affecting the human body. He lays great stress on the fact that at the *end* of those long stages of decay which burial renders necessary, the result is as harmless as at the end of the process of Cremation, passing over as not worth notice the fact that for long years the corpse is replete with influences, which are mischievous to anything which may come within their range ; absolute isolation being the only condition of safety. Conversely stated, this is precisely my own argument, and demonstrates triumphantly the superiority of Cremation. I affirm that, by burning, we arrive in one hour, without offence or danger, at the very stage of harmless result which burying requires years to produce. True, indeed, it is, 'that the ultimate result is the same,' but an infinity of mischief may happen by his process, and none can happen by mine. And, after all, he can only on his own showing claim a perfect result by burial 'if no more dead be buried than the free oxygen contained in rain and dew carried through it, will decompose ; and if such soil be left undisturbed, &c., and if the use of such ground for burial be discontinued,' &c., &c. Again, there is another instance of Mr. Holland's insufficient recognition of the unhealthy character of cadaveric emanations which I must particularly call attention to. I had stated that in the resolution of an animal body the gaseous products were carbonic acid, water, and ammonia. He impeaches my correctness, saying that I am—

'Not, however, quite accurate in describing that result to be the formation of water, of ammonia, and of carbonic acid, as the chief products ; for if the decomposition either with or without fire be complete, no ammonia will be formed in the soil ; or, if formed, it will be converted before it need escape

¹ *Op. cit.*, p. 48. Report of Mr. Bowie, describing graveyards at Merthyr Tydvil ; Hawick, Roxburghshire ; Greenock, and other places.

either into the air, or be carried off by water, in the form either of uncombined nitrogen, or changed into some compound of that element with oxygen, such as nitric or nitrous acid, &c.'

I never said the ultimate result of the resolution in question was ammonia, but I repeat that ammonia is an intermediate formation in large quantity, by which nitrogen passes off before it comes to be 'the nitric or nitrous acid' he speaks of, the latter being, by the way, no more an ultimate step in the process than is ammonia. At what point shall we stop if we are to trace to their last stages the volatile component elements of the body? Why, certainly not at ammonia, nor at nitric acid, but at carbon, nitrogen, hydrogen, and oxygen. I chose to rest at ammonia, because the evolution of ammonia is an important fact, and I re-assert that it is largely produced. So much for the *à priori* statement. Now what is the evidence from observation in this matter? Was I right or was I wrong, as Mr. Holland says I am, in stating that the body is resolved among other things into ammonia? Any intelligent witness will do for me, but we have Dr. Parkes still in the box: let us interrogate him. That same short chapter almost commences with the following passage:—

'After death the buried body returns to its elements, and gradually, and often by the means of other forms of life which prey on it, a large amount of it forms carbonic acid, *ammonia*, sulphuretted and carburetted hydrogen, nitrous and nitric acid, and various more complex gaseous products, many of which are very foetid, but which, however, are eventually all oxygenised into the simpler combinations.'¹

In another part of the volume, in speaking of the air of churchyards, he writes:—

'The decomposition of bodies gives rise to a very large amount of carbonic acid. . . . *Ammonia* and an offensive putrid vapour are also given off.'

'In vaults, the air contains much carbonic acid, carbonate or sulphide of *ammonium*, nitrogen, hydrosulphuric acid, and organic matter.'²

¹ Parkes, p. 457.

² *Op. cit.*, p. 76.

My readers will agree with me, I think, that this matter is disposed of.

I now arrive at the second part of my subject, in which I have to show that the plan of Cremation I have myself adopted, and will now advise, is wholly free from objections of the kind Mr. Holland has imagined to exist; that it is complete in its results, and is absolutely causeless of danger or of offence to any.

Many persons have expressed to me the opinion that I ought in my first paper to have described what I believed to be the best mode of performing Cremation. May I say that this was also desired by the Editor of this Journal. I felt, however, although I was prepared to give the information in question, that it was impossible to judge beforehand what might be the reception by the public of my project, and that I might perhaps go too far and weight it too heavily if I actually sketched the process by which each reader could realise for himself its nature and mode of operation. I think the reticence was prudent, although it might possibly have been unnecessary.

I think it is fair to myself to say that, before that first article was published, a scheme for burning two thousand bodies a week for London (the average present requirement being about sixteen hundred) was quite completed, and that I had satisfied myself that to accomplish this would not be a difficult task, and that it would occasion no nuisance whatever.

Without entering on those details, I will give an example of what I have done in the matter of resolving the body into its ultimate elements by heat.

And first of all I must request the reader to dismiss from his mind all the allegations against the practice of Cremation which Mr. Holland has made, grounded on what he imagines that process to be. He states that it 'would necessarily require the active superintendence of a class of men whose services for such an office it would be scarcely possible always to obtain: while it is evident that imperfectly conducted burning of the dead would be inexpressibly shocking, and apt not rarely to occur.' The point first named is a matter barely worth contesting; but the last five words are absolutely with-

out foundation, and I challenge him to show a tittle of evidence to support the very grave allegation they contain.

A powerful reverberating furnace will reduce a body of more than average size and weight, leaving only a few white and fragile portions of earthy material, in less than one hour. I have myself personally superintended the burning of two entire bodies, one small and emaciated of 47 lbs. weight, and one of 140 lbs. weight, not emaciated, and possess the products—in the former case, weighing $1\frac{3}{4}$ lbs.; in the latter, weighing about 4 lbs. The former was completed in twenty-five minutes, the latter in fifty. No trace of odour was perceived—indeed, such a thing is impossible,—and not the slightest difficulty presented itself. The remains already described were not withdrawn till the process was complete, and nothing can be more pure, tested by sight or smell, than they are, and nothing less suggestive of decay or decomposition. It is a refined sublimate, and not a portion of refuse, which I have before me. The experiments took place in the presence of several persons. Among the witnesses of the second experiment was Dr. George Buchanan, the well-known medical officer of the Local Government Board, who can testify to the completeness of the process.

I challenge my opponent to produce so fair a result from all the costly and carefully-managed cemeteries in the kingdom, and I offer him twenty years in which to elaborate the process.

In the proceedings above described, the gases which leave the furnace chimney during the first three or four minutes of combustion are noxious: after that time they cease to be so, and no smoke would be seen. But those noxious gases are not to be permitted to escape by any chimney, and will pass through a flue into a second furnace, where they are entirely consumed; and the chimney of the latter is smokeless—no organic products whatever can issue by it. A complete combustion is thus attained. Not even a tall chimney is necessary, which might be pointed at as that which marked the site where Cremation is performed. A small jet of steam quickening the draught of a low chimney is all that is requisite.

If the process is required on a large scale, the second furnace could be utilised for Cremation also, and its products passed through another, and so on without limit.

Subsequent experiments, however, by another method, have resulted in a still greater success. By means of one of the furnaces invented by Dr. Wm. Siemens, I have obtained even a more rapid and more complete combustion than before. The body employed was a severe test of its powers, for it weighed no less than 227 lbs., and was not emaciated. It was placed in a cylindrical vessel about seven feet long by five or six in diameter, the interior of which was already heated to about 2000° Fahr. The inner surface of the cylinder is smooth, almost polished, and no solid matter but that of the body is introduced into it. The product, therefore, can be nothing more than the ashes of the body. No foreign dust can be introduced, no coal or other solid combustible being near it: nothing but a heated hydrocarbon in a gaseous form and heated air. Nothing is visible in the cylinder before using it but a pure almost white interior, the lining having acquired a temperature of white heat. In this case, the gases given off from the body so abundantly at first, pass through a highly heated chamber among thousands of interstices made by intersecting fire-bricks, laid throughout the entire chamber, lattice-fashion, in order to minutely divide and delay the current, and expose it to an immense area of heated surface. By this means they were rapidly oxidised, and not a particle of smoke issued by the chimney: no second furnace, therefore, is necessary by this method to consume any noxious matters, since none escape. The process was completed in fifty-five minutes, and the ashes, which weighed about five pounds, were removed with ease. The foregoing is a very meagre sketch of Dr. Siemens' furnace, the principle of which is well known to engineers, and to scientific men generally, and need not be described in detail here.

I will now add—not that it affects the process in the slightest degree as to results—that all my experiments hitherto have been made with the lower animals.

As a rough and unfinished sketch of a system to be

followed when Cremation is generally adopted, I would suggest the following :—

When death occurs and the necessary certificate has been given (relative to which an important suggestion will be made hereafter), the body is placed in a light wood shell, then in a suitable outside receptacle preparatory to removal for religious rites or otherwise. After a proper time has elapsed, it is conveyed to the spot where Cremation is to be performed. There, nothing need be seen by the last attendant or attendants than the placing of a shell within a small compartment, and the closing of the door upon it. It slides down into the heated chamber, and is left there an hour, till the necessary changes have taken place. The ashes are then placed at the disposal of the attendants.

I now come to a very serious matter, treated of by Mr. Holland in a manner of which I am compelled to complain. He is pleased to make merry himself, and to suggest that I am joking—or, to use his own phraseology, ‘poking fun’—when calling attention to my remarks relative to the ‘economical’ view of Cremation.

In speaking of this, I stated that ‘it is an economic subject, *whether we will it or not.*’ Now I wish him and all my readers to understand that I was never more serious, never more earnest in my life than I was then and am at this moment, and in consideration of this question of ‘economy.’ Anything like ‘fun’ or a ‘joke,’ wherever else it may be tolerated, is wholly out of place here. Seeing that the Great Power which has ordained the marvellous and ceaseless action which transmutes every animal body as quickly as possible into vegetable matter and *vice versâ*, and has arranged that this harmonious cycle should be the absolute and necessary law for all existence, I have space for no other sentiments than those of submission, wonder, and admiration. If any say that it is in bad taste, or does violence to some right feeling, to speak of the fate that inevitably awaits every one of us, in that, on some future day, the elements of our bodies must enter into that other life of the vegetable world, whence once they came, let the complaint thereof be

carried to the Highest Court of the Universe, and let the question be asked there, Whether 'the Judge of all the earth doth right'?

Meantime it suffices us to know that the very existence of these cavillers is solely due to that Divine fecundity which pervades all nature, and is regulated by economical principles, the beneficent operation of which we may feebly postpone, doing some notable harm thereby, but happily can never resist in the end.

My charge against Mr. Holland, however, is not this, but something much more serious. Alluding to the small modicum of remains in the form of ashes after Cremation, and which I was content should be preserved in an urn, stating only that the fields were their 'righteous' destination—as they are—he speaks of the latter suggestion as a 'desecration' and as 'outraging family affection;' and actually associates it in some fashion with savagery and cannibalism. Yet, can we believe it, he, so tender of sentiment on this subject of deceased remains, himself actually advocates and practises the utilising of by far the greater part of those remains for the production of grass and other vegetables for the express purpose of keeping his cemeteries sweet and wholesome! The gaseous elements of these buried bodies, which, as I particularly insisted upon when dealing with that question of economy, are by far the greater part, being incalculable in amount in relation to the ashes, which are by comparison a mere trifle, and which alone he is pleased to mention. That greater part, I say, he not only uses himself, but he knows that this very utilisation of it is the only way he has of preserving a cemetery in a tolerable condition. He knows perfectly well that the presence of abundant plant-growth is essential in the cemetery to assimilate the noxious gases arising from the buried bodies before alluded to, and that those plants owe their life and structure to the very elements of our 'friends and relatives,' about whom he professes to be so utterly shocked that I should conceive it possible to utilise them for any economical purpose! I charge my opponent then, his professions notwithstanding, as in part the

manager of the cemeteries of this country during twenty years, with having presided over perhaps the largest institution that ever existed for transmuting the human body into vegetable growth of various kinds. My one objection to his system is that it does it so slowly, so offensively, and so dangerously.

Now, lest perchance someone not himself acquainted with the facts alluded to may desire, for such a statement, other authority than my own, let us listen once more, and for the last time, to Dr. Parkes. In order to oxidise the fœtid organic exhalations of the burying-ground, he says : 'The only means which present themselves, as applicable in all cases, are the deep burial and the use of plants closely placed in the cemetery. There is no plan which is more efficacious for the absorption of the organic substances, and perhaps of the carbonic acid, than plants ; but it would seem a mistake to use only the dark, slow-growing evergreens ; the object should be to get the most rapidly growing trees and shrubs,' &c.¹

But even this is not my opponent's crowning inconsistency. So determined is he not to accept Cremation, that he suggests another mode, 'that of sinking the dead in the depths of the ocean,' as having 'far more to recommend it.' No doubt there is much to be said in its favour ; much more certainly than for burial. Yet shocked as he is at the notion that his father's ashes should ever fertilise the field, he would consign the body to a place whence, almost instantly, it would be devoured by fish and crustaceans, whose numbers would be multiplied correspondingly by their benefactor's enormous contribution of food, as the public markets soon would testify. No animal multiplies more rapidly than fish, and the 'economic' question would be determined in a manner more complete, and more direct, and with a more remunerative result than any which I had ever dared, or still should dare, to suggest !

This remarkable proposal appears actually on the same page as that in which he affects to be outraged by my sugges-

¹ P. 458. Dr. Sutherland also strongly insists on the same practice.

tion that burning the body would necessarily contribute to the 'food production' of the earth.

And here I shall take leave of Mr. Holland, to seek some less formidable antagonist. Possibly in this light may be regarded the writer of an article in the 'Spectator' newspaper,¹ whose objection, supposing it to be seriously urged, is almost the only one besides those already noticed which has appeared within the range of our periodical literature.

By stretch of charity one might almost imagine it to be a joke, seeing it is the writer's only way of retreat from a wholly untenable position. He urges that as the present generation is doing its best to exhaust 'the rivers, the rainfall, the mines, and the natural fertility of the earth,' we ought to leave our dead remains 'in bank for our descendants;' or, in other words—for the generous sentiment is repeated—'it is well that such a deposit as the dead of generations should be left to our posterity!' Waiving altogether the greatest objection to this testamentary provision for our grandchildren—viz., the amount of disease and death which is unquestionably produced by burial in the soil—the writer ought to have known that the 'bank' in question, to use his own simile, pays no interest; and that it is perfectly certain that such capital rendered productive at once, according to nature's design, must yield a far greater profit, even for posterity, than his own notable one of burying this one talent in a napkin as an offset against what he is pleased to consider our present exhaustion of 'rivers and rainfall,' which he declares is taking place at 'railway speed!' As if consumption of water in any form, were it a million-fold what it is, could exhaust or diminish the common stock a single drop! No modern schoolboy could make such a blunder as this; nevertheless, it is only a specimen of others existing within the short limits of that article, and equally easy to expose, if need be. I cannot pass over, however, one statement that this writer has dared to make. He speaks of my figures relative to the number buried in London in 1873, and estimating the amount of bone-earth and ashes belonging thereto as 'very debateable,' and, further, that they 'are open to

¹ *Spectator*, January 3, 1874.

question.' After saying this, he declines 'to fight so eminent a physicist on so small a point of detail.' Is the point so small? I declare those figures to be below, and not above, the truth, and am amply prepared to prove it. My veracity is at stake, for I know no higher crime than to issue misleading or exaggerated numerical statements in order to prove a case, unless, indeed, it be to utter insinuations, without offering a tittle of proof to support them, that an accurate numerical statement is untrue.

I now desire to afford explanations which have been asked relative to the following very important subject. It has been said, and most naturally, what guarantee is there against poisoning if the remains are burned, and it is no longer possible, as after burial, to reproduce the body for the purpose of examination? It is to my mind a sufficient reply that, regarding only 'the greatest good for the greatest number,' the amount of evil in the shape of disease and death, which results from the present system of burial in earth, is infinitely larger than the evil caused by secret poisoning is or could be, even if the practice of the crime were very considerably to increase. Further, the appointment of officers to examine and certify in all cases of death would be an additional and very efficient safeguard. But,—and here I touch on a very important subject,—Is there reason to believe that our present precautions in the matter of death-certificate against the danger of poisoning are what they ought to be? I think that it must be confessed that they are defective, for not only is our system inadequate to the end proposed, but it is less efficient by comparison than that adopted by foreign governments. Our existing arrangements for ascertaining and registering the cause of death are very lax, and give rise, as we shall see, to serious errors. In order to attain an approach to certitude in this important matter, I contend that it would be most desirable to nominate in every district a properly qualified inspector to certify in all cases to the fact that death has taken place, to satisfy himself as far as possible that no foul play has existed, and to give the certificate accordingly. This would relieve the medical attendant of the deceased from any

disagreeable duty, relative to inquiry concerning suspicious circumstances, if any have been observed. Such officers exist throughout the large cities of France and Germany, and the system is more or less pursued throughout the provinces. In Paris, no burial can take place without the written permission of the 'Médecin-Vérificateur;' and whether we adopt Cremation or not, such an officer might, with advantage, be appointed here.¹

For perhaps it is not generally known, even, as it would seem, by those who have emphasized so notably the objection in question to Cremation, that many bodies are buried in this country without any medical certificate at all; and that among these any number of deaths by poison may have taken place for anything that anybody knows. Is it in the provinces chiefly that this lax practice exists? No doubt, and more

¹ The practice referred to is thus regulated:—

The following is the text of the French law. Code Napoléon, Article 77. 'Aucune inhumation ne sera faite sans une autorisation, sur papier libre et sans frais, de l'officier de l'état civil, qui ne pourra la délivrer qu'après s'être transporté auprès de la personne décédée pour s'assurer du décès, et que 24 heures après le décès, hors les cas prévus par les règlements de police.'

Thus the verification of the deceased must always be made by a civil officer in person; viz., by the Mayor of the town, or by someone he shall appoint. The law, however, is executed differently in Paris and in the provinces. In Paris, the verification is made exclusively by medical men appointed for this purpose in each 'quartier.' Their functions are defined by an Act of the 31st of December, 1821. As soon as a death is reported, the civil officer communicates with the medical man of the 'quartier' in which the deceased resided, and awaits the report to decide (in concert with the deceased's friends) at what hour burial should take place. The medical man attends at the residence indicated, acquaints himself with all the circumstances of the illness, and reports in writing relative to the following particulars:—1. The christian and surname of the deceased; 2. The sex; 3. If married or not; 4. The age; 5. The profession; 6. The exact date and hour of the decease; 7. The 'quartier,' the street, the number and story of the house in which it occurred; 8. The nature of the illness, and if there be any reason for making an autopsy; 9. The duration of the illness; 10. The name of the persons who provided the medicines; 11. The names of the doctors and others who attended the case. Besides this verification made by the doctors belonging to each 'quartier' of Paris, by an order of the Prefect of the Seine, April, 1839, a committee was formed to watch over the service. The medical men who attest the facts connected with death at Paris are called the 'Médecins-Vérificateurs des décès.'

In Vienna, a similar document is always prepared, and perhaps with still greater care and minuteness. The same may be said of Munich, Frankfort, Geneva, and other Continental cities.

particularly in the principality of Wales. But it occurs also in the heart of London. A good many certificates of death are signed every year in London by some non-medical persons. In one metropolitan parish, not long ago, which I can name, but do not, above forty deaths were registered in a year on the mere statement of neighbours of the deceased. No medical certificate was procurable, and no inquest was held; the bodies were buried without inquiry. This practice is not illegal; and, in my opinion, it goes far to make a case for the appointment of a 'Médecin-Vérificateur.' During the existence of pestilence especially, such a safeguard is necessary. Before I quit this subject, let me make a brief extract from evidence given by Mr. Simon before the Royal Sanitary Commission in 1869, from which it appears that medical certification of death is not the rule, but the exception, in some districts of Wales. He says:—

'The returns of death made to the Registrar-General are necessarily imperfect. . . . We had to make inquiry on one occasion as to the supposed very large prevalence of phthisis in some of the South Wales counties. . . . It turned out that this great appearance of phthisis in the death registers depended upon the fact that the causes of death were only exceptionally certified by medical men. I remember that in one case only 15 per cent. of the deaths had been medically certified. The non-medical certifiers of death thought that "consumption" was a good word to cover death generally, so that any one who died somewhat slowly was put down as dying of "consumption," and this appeared in the Registrar-General's returns as phthisis.'

Dr. Sutherland long ago called attention to this matter. I quote his remarks from the work above named. Referring to Paris, Munich, and other cities, he says:—

'Where there are regularly appointed verifiers who are generally medical men in practice the districts of the city are divided between them. . . . The instructions under which these officers act are of a very stringent character, and the procedure is intended to obviate premature interment, and to detect crime. The French and the German

method of verification is intended to be *preventive*. A number of instances were mentioned to me in which crimes which would otherwise have escaped notice were detected by the keen and practised eye of the Verificator, and the general opinion certainly was that much crime was prevented.¹

This is but an episode in treating of Cremation; a very important one nevertheless. I have therefore thought it right to take this opportunity of advocating a more stringent provision than now exists for an official inspection and certificate in all cases of death.

Lastly, it would be possible, at much less cost than is at present incurred for burial, to preserve, in every case of death, the stomach, and a portion of one of the viscera, say for fifteen or twenty years or thereabouts, so that in the event of any suspicion subsequently occurring, greater facility for examination would exist than by the present method of exhumation. Nothing could be more certain to check the designs of the poisoner than the knowledge that the proofs of his crime, instead of being buried in the earth (from whence, as a fact, not one in a hundred thousand is ever disinterred for examination) are safely preserved in a public office, and that they can be produced against him at any moment. The universal application of this plan, although easily practicable, is however obviously unnecessary. It is quite certain that no pretext for such conservation can exist in more than one instance in every five hundred deaths. In the remainder, the fatal result would be attributed without mistake to some natural cause—as decay, fever, consumption, or other malady, the signs of which are clear even to a tyro in the medical art. But in any case in which the slightest doubt arises in the mind of the medical attendant, or in which the precaution is desired or suggested by a relative, or whenever the subject himself may have desired it, nothing would be easier than to make the requisite conservation. As before stated, the existence of an official verificator would relieve the ordinary medical attendant of the case from active interference in the matter. If then the public is earnest in its endeavour to render exceed-

¹ *Op. cit.*

ingly difficult or impossible the crime of secret poisoning,—and it ought to be so if the objection to Cremation on this ground is a valid one, the sooner some measures are taken to this end the better, whether burial in earth or Cremation be the future method of treating our dead.

I must add one word in reply to a critic who rather hastily objected that the estimate in my original paper of the mean cost of burials in London as about 10*l.* per head is too high. I have re-examined my calculations and find it, if in error at all, too low. Curiously enough, in going through Dr. Edwin Chadwick's work, already referred to, for other purposes, I find that he also made a similar calculation thirty years ago, and that his estimate is rather higher than mine. He puts it at more than 600,000*l.* for the metropolis, when the population was a little more than one-half what it is now; I reckoned 800,000*l.* for the year 1873. And he considers the cost of funerals for England and Wales to be, at that time, nearly five millions sterling. He includes cost of transit, which I omit, as being necessary equally with Cremation and burial, so that the difference between us is not considerable.

To sum up :—

For the purposes of Cremation nothing is required but an apparatus of a suitable kind, the construction of which is well understood and easy to accomplish. With such apparatus the process is rapid and inoffensive, and the result is perfect. The space necessary for the purpose is small, and but little skilled labour is wanted.

Not only is its employment compatible with religious rites, but it enables them to be conducted with greater ease and with far greater safety to the attendants than at a cemetery. For example, burial takes place in the open air, and necessitates exposure to all weathers, while Cremation is necessarily conducted within a building, which may be constructed to meet the requirements of mourners and attendants in relation to comfort and taste.

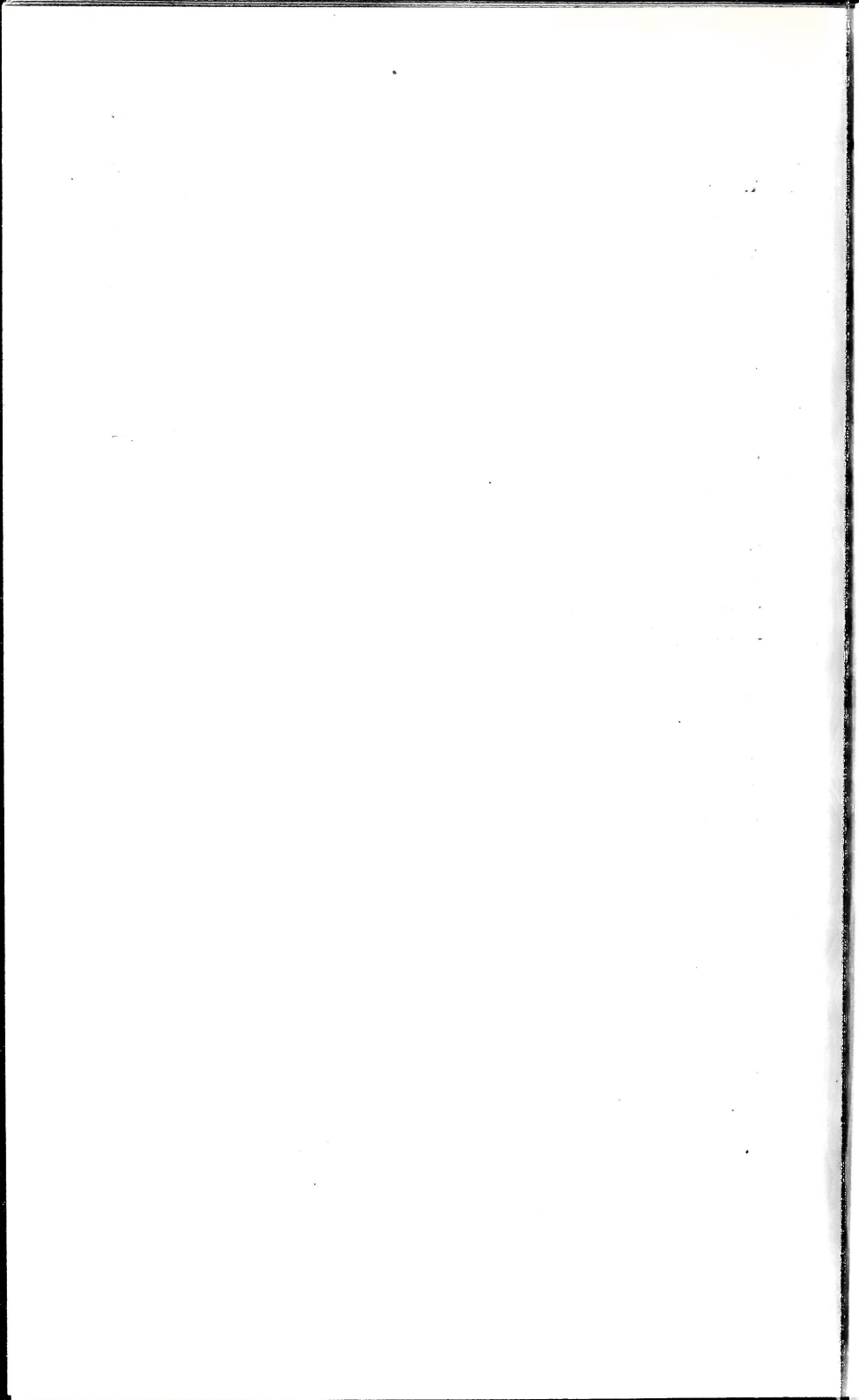
Cremation destroys instantly all infectious quality in the body submitted to the process, and effectually prevents the possibility of other injury to the living from the remains at

any future time. All care to prevent such evil is obviously unnecessary, and ceases from the moment the process commences. The aim of Cremation is to prevent the process of putrefaction.

On the other hand, Burial cannot be conducted without serious risks to the living, and great care is required to render them inconsiderable with our present population. Costly cemeteries also are necessary with ample space for all possible demands upon it, and complete isolation from the vicinity of the living, to ensure, as far as possible, the absence of danger to them.

It is a process designed essentially to prolong decay and putrefaction with all its attendant mischief; and the best that can be affirmed of it is, that in the course of many years it arrives, by a process which is antagonistic to the health of survivors, at results similar to, but less complete, than Cremation produces in an hour without injury to any.

HENRY THOMPSON.



CREMATION OR BURIAL ?

BY

SIR T. SPENCER WELLS, BART.,

Late President of the Royal College of Surgeons, Surgeon to the Queen's Household, &c.

A PAPER READ AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION IN CAMBRIDGE, AUGUST 1880.

THERE are, no doubt, many members of the British Medical Association who have not thought very much about the evils of the present mode of burying the dead in this and many other parts of the world. There are many more who have not heard at all, or have thought very little, of recent proposals to reform the present system, or to substitute for it one which can be proved to be far better. It is scarcely forty years since the causes of the high rate of mortality, and the means of preventing disease, attracted much attention in our profession; and the necessity for sanitary regulations was impressed upon public opinion. The influence of light and air, of a supply of pure water, of good drainage, ventilation, and cleanliness, as means of preventing disease and prolonging life in large towns, populous districts, and the country generally; the influence of employments upon health; the habits of different classes of the people; the condition of their dwellings; the injurious effects of many nuisances, and the inadequacy of power for preventing them, are all subjects of recent study, and do not yet form a sufficiently defined part of medical education.

It is quite unnecessary here to remind you of the beneficial influence upon the public health and the longevity of the nation exercised by our profession during the last forty years; but it does appear to me to be necessary to call for the earnest

attention of the Association to one source of danger which is increasing every year—the burial of the dead. It is about forty years since a member of our body, Mr. Walker, wrote the remarkable work on graveyards which led to the special inquiry into the practice of interment in towns, and the admirable report of Mr. Edwin Chadwick, which was presented to Parliament in 1843. The evidence he adduced as to the propagation of disease from decaying or putrefying human bodies was amply sufficient to prove the dangerous tendency of all interments in churches or in towns, and led to the removal of many burial-places from towns or crowded districts into suburban cemeteries. The effects have been salutary. But, with a rapid increase of population, we are now beginning to suffer from the evils which Mr. Chadwick foretold, namely, ‘shifting the evil from the centre of the populous districts to the suburbs, and deteriorating them’ . . . ‘increasing the duration and sum of the existing evils.’ Many of our suburban cemeteries are now very much in the condition of town graveyards forty years ago; and the attention of thoughtful men outside the bounds of our profession has already been directed to a growing evil. Only last year, at the opening of the Social Science Congress at Manchester, the respected and beloved bishop of the diocese, in opening the congress, thus referred to the recent consecration of a new cemetery. ‘Here,’ he said, ‘is another hundred acres of land withdrawn from the food-producing area of the country for ever.’ And he added, ‘I feel convinced that, before long, we shall have to face this problem, How to bury our dead out of our sight, more practically and more seriously than we have hitherto done. In the same sense in which the “Sabbath was made for man, and not man for the Sabbath,” I hold that the earth was made, not for the dead, but for the living. No intelligent faith can suppose that any Christian doctrine is affected by the manner in which, or the time in which, this mortal body of ours crumbles into dust and sees corruption.’ And he concludes: ‘This is a subject that will have to be seriously considered before long. Cemeteries are becoming not only a difficulty, an expense, and an inconvenience, but an actual danger.’

In the debate on the Burials Bill in the House of Lords on June 24th, the Earl of Beaconsfield said that what is called 'God's acre' is 'really not adapted to the country which we inhabit, the times in which we live, and the spirit of the age. What I should like to see would be a settlement of this question by the shutting up of all God's acres throughout the country. I think the churchyard of the ordained minister, and the graveyard of the dissenting minister, alike, are institutions which are very prejudicial to the health of the people of this country ; and their health ought to be, if not the first, at any rate, one of the first considerations of a statesman. Now we have been moving gradually in the direction of these views, and there has been for some years a notion, soon about to amount, I believe, to a conviction, that the institution of churchyards is one which is highly prejudicial to the public health. I think it would be a much wiser step if we were to say that the time has arrived, seeing the vast increase of population in this country and the increase which we may contemplate, when we should close all these churchyards, and when we should take steps for furnishing every community with a capacious and ample cemetery, placed in a situation in which, while it would meet all the requirements of the society for which it was intended, would exercise no prejudicial influence on the public health.' And he concluded his speech in these terms:—'I think the direction in which we ought to have moved would have been to shut all these churchyards and graveyards, and to have assisted the Government in some adequate proposal which would have furnished the country with cemeteries in which none of these painful controversies could have occurred, and which would have conduced to the preservation of the health and welfare of the country.'

The impressive exhortation of the Bishop of Manchester, from which I have just quoted, was the result, as he tells us, of the perusal of two very able papers written by one of the most distinguished members of our own body, Sir H. Thompson, and published in the 'Contemporary Review' in 1874. The first paper, on the 'Treatment of the Body after Death, led to a reply from Mr. Holland, then Medical Inspector of

Burials in England, which contains a summary of all that can be said in defence of cemeteries. But the rejoinder of Sir H. Thompson is a masterly exposition of the evils of our present mode of interment, with an answer to many of the objections to cremation as a substitute for burial, and some account of modern improved apparatus for burning dead bodies at a moderate expense, without any nuisance, and with due regard to the sentiments of surviving relatives. I trust that Sir Henry may be induced to reprint his papers in a form easily accessible to the people. One of the first effects of the perusal of Sir H. Thompson's papers was the association together of a small number of men, and the formation of the Cremation Society of England, numbering, among members of this Association, notably Mr. Ernest Hart and Mr. Lord. I have here the first part of the *Transactions* of this Society. It forms a pamphlet of only sixty-six pages, but it contains a great deal of information as to cremation at home and abroad, up to the date of the sixth anniversary of the Society last January. It may surprise many to learn that cremation is already legalised in parts of Germany and in Italy; that crematoria have been erected and used in Gotha and in Milan and Lodi, and that a society has been established in Rome. A phrase in the sanitary laws of Switzerland which forbade cremation has been removed, and a piece of ground in the new cemetery at Zurich has been set apart for the erection of a crematorium.

On June 16th last, Professor Polli (whose researches on the antiseptic action of the sulphites and hyposulphites I brought before the Association in this town sixteen years ago, in an address on the causes of excessive mortality after surgical operations) who, in late years, had been one of the most ardent supporters of cremation, who had himself proposed a method which was the first tried in Italy, had his body, by his own express desire, cremated, and his ashes were consigned to their resting-place, with all due solemnity, in the presence of mourning relatives. This cremation was the sixty-eighth which has taken place in Milan since January 1876.

Several large cremation societies have been formed in

Switzerland. One large society in Holland has several branches. In France, the Paris Municipality has called for designs for the best form of furnace. In Belgium, one society in Brussels has more than four hundred members, and M. Créteur has been thanked by the Government for the successful cremation of the bodies of soldiers killed near Sedan. In America, cremation has already been practised at Washington, and several societies have been formed; and the Brazilian Government is about to erect a crematorium at Rio de Janeiro.

While all this has been going on in the European continent and in America, the Cremation Society of England has been working on quietly but earnestly, has purchased an acre of freehold land near Woking, has erected a Crematorium on the model of the *Gorini* furnace, which is the most approved in Italy, and has experimentally proved that the body of an animal may be reduced to a clean innocuous ash, weighing about a twentieth of the unburnt body, at a very small cost, and without any appreciable odour or visible smoke.

The Society has obtained the very highest legal authority, and the admission of the late Home Secretary, that cremation is not illegal, provided it be practised without nuisance, or leading to a breach of the peace. But Sir R. Cross obtained from the Council a promise that, before burning a human body, they would endeavour to carry a short Bill through Parliament, or to obtain the insertion of a clause in some Burial Bill, affirming that cremation might be legally practised, and under proper regulations. Hitherto, the Council have been unable to obtain this parliamentary sanction, and it remains to be seen how far Sir William Harcourt will consider the Council bound to the present Government by their promise to his predecessor in the Home Office. After any discussion which may follow this paper, I trust many of you will sign an address to him, which I will read after I have asked you whether the time has not arrived when cremation should be supported by the British Medical Association, collectively, and by each of its branches. The sanitary advantages over burial in coffins, or in wicker baskets, are undeniable and very great. Most of them are so well known to you all,

that I may pass them by without further mention ; but I must allude to one most remarkable argument in favour of cremation which has just been advanced by Pasteur, after his examination of the soil of fields where cattle had been buried, whose death had been caused by that fatal disease known as 'charbon,' or splenic fever. The observations of our own Darwin 'on the formation of mould,' made more than forty years ago, when he was a young man, are curiously confirmatory of the recent conclusions of Pasteur. In Darwin's paper, read at the Geological Society of London, in 1837, he proved that, in old pasture-land, every particle of the superficial layer of earth, overlying different kinds of subsoil, has passed through the intestines of earth-worms. The worms swallow earthy matter, and, after separating the digestible or serviceable portion, they eject the remainder in little coils or heaps at the mouth of their burrows. In dry weather the worm descends to a considerable depth, and brings up to the surface the particles which it ejects. This agency of earth-worms is not so trivial as it might appear. By observation in different fields, Mr. Darwin proved, in one case, that a depth of more than three inches of this worm-mould had been accumulated in fifteen years ; and, in another, that the earth-worms had covered a bed of marl with their mould in eighty years to an average depth of thirteen inches.

Pasteur's recent researches on the etiology of 'charbon' show that this earth-mould positively contains the specific germs which propagate the disease ; and that the same specific germs are found within the intestines of the worms. The parasitic organism, or *bacteridium*, which, inoculated from a diseased to a healthy animal, propagates the specific disease, may be destroyed by putrefaction after burial. But, before this process has been completed, germs or spores may have been formed which will resist the putrefactive process for many years, and lie in a condition of latent life, like a grain of corn, or any flower-seed, ready to germinate, and communicate the specific disease. In a field in the Jura, where a diseased cow had been buried two years before, at a depth of nearly seven feet, the surface-earth not having been disturbed

in the interval, Pasteur found that the mould contained germs which, introduced by inoculation into a guinea-pig, produced charbon and death. And, further, if a worm be taken from an infected spot, the earth in the alimentary canal of the worm contains these spores or germs of charbon, which, inoculated, propagate the disease. And the mould deposited on the surface by the worms, when dried into dust, is blown over the grass and plants on which the cattle feed, and may thus spread the disease. After various farming operations of tilling and harvest, Pasteur has found the germs just over the graves of the diseased cattle, but not to any great distance. After rains, or morning dews, the germs of charbon, with a quantity of other germs, were found about the neighbouring plants: and Pasteur suggests that, in cemeteries, it is very possible that germs capable of propagating specific diseases of different kinds, quite harmless to the earth-worm, may be carried to the surface of the soil ready to cause disease in the proper animals. The practical inferences in favour of cremation are so strong that, in Pasteur's words, they 'need not be enforced.'

And now a word as to the sentimental objections to cremation. The Bishop of Manchester, in the address to which I before alluded, admits that his sentiments are 'somewhat revolted by the idea of cremation;' but he adds, 'they are, perhaps, illogical and unreasonable sentiments.' We all know how difficult it is to convince illogical and unreasonable people; they must be left to the influence of time and example. But it is of importance to show to all that reason, and true sentiment, and good feeling of reverence for the dead, of affectionate regard for their memory, are more logically and reasonably associated with a purifying fire than with decay, putrefaction, and danger to the living; and on this important part of the subject I am glad to bring before you the book of my friend Mr. Robinson, who has done so much of late years to improve our gardens, parks, and open spaces, and who is one of the Council of the Cremation Society. He calls this book 'God's Acre Beautiful, or the Cemeteries of the Future.' He argues that the resting-places of the dead should be 'permanent, unpolluted, inviolate;' that permanent beautiful cemeteries could

be easily maintained if urn-burial were practised ; that existing graveyards and cemeteries can only be of temporary use ; that their monuments and memorial stones soon decay or crumble away ; and that urn-burial might lead in the future, as it has done in the past, to more noble and enduring monuments. Let me read to you a page from Mr. Robinson's book.

‘By the adoption of urn-burial, all that relates to the artistic embellishment of a cemetery would be at once placed on a very different footing. One of the larger burial-grounds now closed, perforce, in a less time than that of an ordinary life, would accommodate a like number of burials on an improved system for many ages. The neglect and desecration of the resting-places of the dead, inherent to the present system, would give place to unremitting and loving care, for the simple reason that each living generation would be as much interested in the preservation of the cemetery as those that had gone before were at any previous time in its history. We should at once have what is so much to be desired from artistic and other points of view—a permanent resting-place for our dead. With this would come the certainty that any memorials erected to their memory would be carefully preserved in the coming years, and free from the sacrilege and neglect so often seen. Hence an incentive to art which might be not unworthy of such places. The knowledge that our cemeteries would be sacred—would be sacred to all, and jealously preserved by all, through the coming generations—would effect much in this new field for artistic effort. In days when careful attention is bestowed upon the designs of trifling details of our houses, it is to be hoped that we shall soon be ashamed of the present state of what should be the beautiful and unpolluted rest-garden of all that remains of those whom we have known, or loved, or honoured in life, or heard of in death as having lived not unworthy of their kind. Such a revolution in our burial arrangements will not come suddenly ; but perhaps a little reflection may serve to convince those who have feelings of repulsion to urn-burial that, as a matter of fact, less dishonour is done to the remains of those whom one loves in subjecting them to a fire which reduces them to ashes which

can be carefully preserved, than in allowing them to become the subjects of the loathsome process of corruption first, and then subjecting them to the chance of being ultimately carted away to make room for some metropolitan or local improvement.' The preservation of inscriptions and memorials, whether in or around churches and public buildings, the erection of beautiful tombs with urns as family burying-places, would be worthy objects for the best efforts of artistic design.

As to the ceremony of burial and performance of any religious service, distinguished members of the clergy of the Church of England have shown that scarcely any alteration would be called for in our burial-service ; and it is felt that, as urn-burial might be practised to any extent and for any length of time in or around churches and public buildings, in towns as well as in distant cemeteries, and without the expensive transport and ugly expensive forms of our present system of burial, men might again, as of old, rest in death near the scene of their work in life ; and the restoration of the family tomb to the chapel or crypt would renew and add to the tie between the family and the church. Our places of worship and the spaces which surround them, if urn-burial became general, would be amply sufficient for the preservation of the remains of our dead for generations to come, and would enable us to convert existing cemeteries, which are rapidly becoming sources of danger to the public health, into permanently beautiful gardens. Instead of filling up large spaces with decaying dead bodies, we should have natural gardens, open lawns, pure air, fine trees, lovely flowers, and receptacles for vases, which, as well as the cinerary urns and chests themselves, might be made important helps in the culture of art. In country houses, urn-burial would lead to family burial places within the grounds, and encourage monumental work of high artistic merit ; and, in the country church, the ashes of the people might repose in the place where they worshipped, instead of polluting the earth of the surrounding churchyard and the water drunk by the surviving population, or being carried to a distant cemetery, which overcrowding must in time make only a very temporary resting-place.

The 'earth to earth' system, as it is called, so ably advocated by my friend Mr. Haden—the burial in porous wicker baskets, instead of wooden or leaden coffins—has some advantages. It is somewhat cheaper, and decay is more rapid; but the ground is for a long time occupied by what pollutes earth, air, and water. Mr. Haden's argument that, as a body, after coffinless burial, decays away in about six years, we may 'bury again in the same ground with no other effect than to increase its substance and to raise its surface,' surely strikes at the root of all sentiment of reverence or affection for the dead—and, with what hazard to the living, the recent researches of Pasteur are amply sufficient to prove. In addition to the dangers from simple putrefaction polluting earth, air, and water, we have to consider the dissemination of the germs of specific contagious diseases. Liquid animal matter oozing from putrefying corpses in a churchyard may possibly be so purified by the oxidising power of a few feet of earth as to be bright, clear, and inoffensive to any of our senses; but water which is neither cloudy nor stinking, but rather enticing and popular, like the water of the Broad Street pump in 1874, has carried cholera to those who drank it. How often typhoid fever has been caused in the same manner, who can tell?

But I must not detain you longer. Here is the Address to the Home Secretary, and I hope it may be signed by many who are convinced that the present custom of burying the dead is associated with evils which ought to be remedied.

'We, the undersigned members of the British Medical Association assembled at Cambridge, disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As this process can now be carried out without anything approaching to nuisance, and as it is not illegal, we trust the Government will not oppose the practice when convinced that proper regulations are observed, and

that ampler guarantees of death having occurred from natural causes are obtained than are now required for burial.'

In conclusion, let me ask you to think on the following propositions :—

Decomposing human remains so pollute earth, air, and water, as to diminish the general health and average duration of the life of our people.

Existing churchyards and cemeteries are not well fitted as safe, secure, permanent, innocuous places of repose for the remains of our dead.

The expense of funerals and interment in graves presses unduly upon the means of the middle and labouring classes.

The present system of registration of death is so imperfect, that common causes of preventible disease are not detected ; and life is also rendered insecure by the omission of efficient arrangements for the due verification of the fact and causes of death.

These evils might be mitigated or prevented—(1) if national cemeteries were provided and maintained, under the direction of duly qualified officers of public health, and not left, as now, to be sources of private gain to commercial companies ; (2) if no interment were allowed without a certificate of the fact and the cause of death by an officer of public health.

All this should be urged by those who are content to improve on our present mode of burial. Those who will go further, who will assist in the attempt to arrest the evils inseparable from even the very best mode of burial, who would add to our reverence for the remains of the dead, ensure an impressive religious service, and at a reduced expenditure provide for permanent monuments in beautiful open public spaces, may at the same time prove the influence which our Association can exert, and ought to exert, upon the health and morals of the Nation.

THE RELATIONS BETWEEN THE CREMATION
SOCIETY OF ENGLAND AND HER MAJESTY'S
GOVERNMENT. 1879-80.

A CONSIDERABLE amount of correspondence has taken place between the Cremation Society of England and the two Secretaries of State for the Home Department, Sir Richard A. Cross and Sir William V. Harcourt; and the Council of the Cremation Society has published the following correspondence. The whole will doubtless be read with considerable interest, seeing that this sanitary reform has been already practised in Italy and in Germany.

The Cremation Society was founded in January 1874 by a number of gentlemen eminent in science and art, and has since been more or less actively occupied in prosecuting the objects for which it was instituted. These have on one occasion only been brought before Parliament—viz. in March, 1879, when the action of the Society was made the subject of a question in the House of Lords, followed, however, by no practical result.

The following is a copy of the correspondence referred to, which began immediately after the reception by Sir R. Cross of a deputation from Woking and the neighbourhood, protesting against the building of a crematorium, which was then in course of erection near that place.

The Secretary of the Cremation Society to the Right Hon. R. A. Cross, Secretary of State for the Home Department.

11 Argyll Street, London: Feb. 3, 1879.

SIR,—Referring to the published report of the proceedings on the occasion of a deputation which waited upon you relative to the establishment of a crematory at Woking, I am instructed by the

executive body of the council of the Cremation Society, for which I act, a list of which council is herewith attached, to lay before you the following facts :—

The Cremation Society of England was founded in 1874, with purely public objects, and not for gain, by a number of scientific and other gentlemen, on the basis of the following declaration, which has been very numerously signed. Cremation Society.—Cremation having now been performed with perfect success, a society has been constituted on the basis of the following declaration, which has been influentially signed :—‘ We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised we desire to adopt that usually known as cremation.’ A great number of adhesions to this were afterwards sent in, and subscriptions were received. The earliest duty of the council was to ascertain whether cremation could be legally performed in this country, and a case was drawn up and submitted to eminent counsel. A copy of opinion is enclosed herewith, and being in favour of the proposed reform the council decided to go on. A still more decidedly favourable opinion was given in writing, although unofficially, by Lord Selborne to one of the council. In 1875 it was proposed to erect a building for the performance of the rite, and a large sum of money was subscribed for the purpose. A piece of ground was offered to the society in the Great Northern Cemetery of London, and a building would have been at once erected had the bishop of the diocese not objected to its establishment in consecrated ground. The history of the society at this stage will be seen in the report sent herewith. Soon after this it appeared that in several parts of Europe and in America cremation was becoming permissive, and several cremations took place in Milan, Dresden, and other places. Still later on, cremation was permitted in Gotha. A paper, descriptive of the systems in use in Europe and America, also accompanies this communication. This paper also furnishes a list of the modern cremations up to that date. The last cremation at Gotha was attended by a great many of the clergy. A short translation from a journal describing this ceremony is enclosed. After much seeking for a secluded yet accessible spot, a piece of ground not far from the cemetery at Woking was obtained, and the council of the society thought this a suitable site for a crematory pyre, as being near the Necropolis, and having a service of trains suitable for the conveyance of the dead. It may here be repeated that the society

is not in any way a trading society, but simply a scientific society. In order that the scope and aim of the society may be fully understood, I enclose a copy of No. 1 of the Transactions of the society, in which are set forth its rules and regulations. I am further instructed to say that some of the members of council will be happy to wait upon you, if agreeable to your wish, with further information, or for the purpose of learning your views in the matter of their further procedure, at any time you may appoint. The society have throughout aimed at carrying on what they believe to be hygienic reform, with thoughtful consideration of the sentiments and interests of other persons concerned, and they are anxious at this stage, as at all others, to proceed in the same spirit.—I am, &c.,

W. EASSIE, C.E.,
 Engineer and Secretary to the Society.

The Under-Secretary of State to the Secretary of the Cremation Society.

Whitehall : Feb. 7, 1879.

SIR,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 3rd inst., and enclosures explaining the objects of the society calling itself the Cremation Society, and giving the names of the principal members constituting the council of the society; and with reference to the wish conveyed in your letter of the council of the society to see the Secretary of State on the subject of the objections in the way of carrying out the design of the society, I am to inform you that the Secretary of State will shortly make an appointment for the purpose of receiving such a deputation.—I am, &c.,

A. F. O. LIDDELL.

W. Eassie, Esq., C.E., 11 Argyll Street, W.

The Assistant Under-Secretary of State to the Secretary of the Cremation Society.

Whitehall : Feb. 21, 1879.

SIR,—With reference to your letter and enclosures of the 3rd inst., I am directed by Mr. Secretary Cross to request that you will bring before the gentlemen, forming the council of the association calling itself the Cremation Society, the following observations on the subject of the introduction into this country of the practice of burning the remains of the dead, now generally known as the practice of cremation, which it appears that the above society has been organised to promote. Mr. Cross does not propose to enter into the question whether or not the system of cremation is in accord-

ance with the feelings of the public, or with respect due by law to dead bodies; it is sufficient for him to point out that it is a system which, in this country, is entirely novel, and that, whether or not the law forbids it altogether, the public interest requires that it should not be adopted until many matters of great social import have been duly considered and provided for. Burial can be followed by exhumation, but the process of cremation is final; the result of the practice therefore would be, that it would tend, in cases where death has been occasioned by violence or poison, to defeat the ends of justice; there will no longer be an opportunity for that examination, which, in so many cases, has led to the detection and punishment of crime. The practice of ordinary burial has become interwoven with the legislative arrangements of the country, and is closely connected with various safeguards respecting death, with the statistics of death, and with the evidence of death. The minister buries a corpse on the production of a certificate of death and its cause; the burial ensures the certificate, the certificate ensures the certainty of death, and is a check against foul practices. Again, the form in which the certificate is produced to the minister is that given by the Registrar, who issues the certificate in exchange for that of the medical attendant, and thus the statistical object is secured. Further, the certificate of burial is, in all legal proceedings, the proper and most economical form of the evidence of death. All these objects would be frustrated by the practice of cremation, unless that practice were in its turn surrounded by legislative provisions analogous to those which surround burial. I am, therefore, to acquaint you, for the information of the promoters of the Cremation Society, that Mr. Cross cannot acquiesce in the continuance of the undertaking of the society to carry out the practice of cremation, either at their works now in progress at Woking or elsewhere in this country, until Parliament has authorised such a practice by either a special or general Act, and that if the undertaking is persisted in it will be his duty either to test its legality in a court of law or to apply to Parliament for an Act to prohibit it until Parliament has had an opportunity of considering the whole subject.—I am, &c.,

GODFREY LUSHINGTON.

The Secretary of the Cremation Society,
11 Argyll Street, London, W.

The Secretary of the Cremation Society to the Right Hon. R. A. Cross, Her Majesty's Secretary of State, Home Department.

11 Argyll Street, London : Feb. 28, 1879.

SIR,—I have the honour to acknowledge the receipt of your letter referring to the practice of cremation, and beg to state that I will, as soon as possible, call a meeting of the council of the Cremation Society, and lay it before them, after which I will take the first opportunity of communicating to you the results of that meeting.—I am, &c.,

W. EASSIE.

The Secretary of State for the Home Department to the Secretary of the Cremation Society.

March 18, 1879.

SIR,—I am desired by the Secretary of State to acknowledge the receipt of your letter of the 17th inst., and to acquaint you, in reply, that he will be glad to receive a deputation from the promoters of inquiry into the value of cremation at 12.30 o'clock on Tuesday, the 20th inst.

I am to add that the Secretary of State particularly requests that the deputation may be as few in number as possible.—I am, &c.,

A. F. O. LIDDELL.

A deputation, consisting of the President, Sir Henry Thompson, T. Spencer Wells, Esq., Ernest Hart, Esq., W. Robinson, Esq., and other members of Council, with the Hon. Sec., Mr. W. Eassie, C.E., waited upon the Secretary of State, and explained to him their views upon the subject of cremation, and several members of the deputation briefly addressed him. Some portions of the bones of a horse burned in the society's crematory near Woking, on March 17, a few days previously, were also exhibited to Mr. Secretary Cross, in order to show the perfection of the process.

Mr. Cross, in reply, suggested that a bill might be brought into the House of Lords so as to determine the matter upon a legal basis, and remove any doubt as to the wisdom of permitting cremation, as well as with a view of establishing a proper system of registration.

On the receipt of a note from the President of the Cre-

mation Society, stating that the society wished to act in conformity with the Government, in their procedure in the matter, the next following letter was addressed to the President of the society :—

The Secretary of State for the Home Department to Sir Henry Thompson.

Whitehall: March 24, 1879.

SIR,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 20th inst., stating that it is the intention of yourself and friends to act in strict conformity with the wishes and directions of the Government in regard to the practice of cremation.—I am, Sir,

A. F. O. LIDDELL.

A change of Government having taken place, and the council wishing to ascertain the views of the present Government, the Secretary wrote as follows :—

The Right Hon. Sir W. Harcourt, Secretary of State to the Home Department.

11 Argyll Street, London, W. : Dec. 11, 1880.

SIR,—I am instructed by the council of the Cremation Society of England to write and ask you when it will be convenient for you to receive a small deputation from the council, who desire to hand you a memorial in favour of cremation, signed by members of the British Association and others.—I have the honour to be, Sir, your most obedient servant,

W. EASSIE, Hon. Sec.

The Assistant Under-Secretary of State to the Secretary of the Cremation Society.

Whitehall: Dec. 16, 1880.

SIR,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 11th inst., requesting him to receive a deputation from the council of the Cremation Society who desire to present a memorial on the subject of cremation, and I am to acquaint you that the Secretary of State is unable to receive the proposed deputation, and to suggest that the council will submit their views in writing.—I am, Sir, your obedient servant,

GODFREY LUSHINGTON.

The Secretary of the Cremation Society to the Right Hon. Sir William Harcourt, Her Majesty's Secretary of State for the Home Department.

11 Argyll Street, London, W. : Dec. 24, 1880.

SIR,—In a letter of the 16th inst. you desire that, instead of receiving a deputation from the Cremation Society, the council should submit to you their views in writing. I am desired by the council of the society to forward for your consideration an address which was agreed to at a meeting, held last August in Cambridge, of the Public Health section of the British Medical Association, and which has been signed by one hundred and forty-three gentlemen, whose names are appended to the address.

I also forward copies of a paper which was read at Cambridge by Mr. T. Spencer Wells, one of the council of the Cremation Society, and also a copy of the first part of the Transactions of the society. Passages are marked both in the paper and in the Transactions, which set forth the result of a correspondence and of an interview with the late Secretary for the Home Department.

The present object of the council is to support the concluding request of the Cambridge address, and to express the hope that we may receive from you an assurance that the Government will not oppose the practice of cremation in their crematorium, on the undertaking by the council that nothing like a nuisance can be caused there, and that more ample guarantees of death having occurred from natural causes will be insisted upon than are now required for burial in churchyards or cemeteries.

The council desire at the same time to inform you that they have found so much difficulty in acting upon the suggestion of Sir Richard Cross, as to obtaining a discussion in either House of Parliament, that they do not consider the promise made to him as any longer binding upon them, and they express the confident hope that you will not consider Sir Richard Cross's alternative of introducing a prohibitory Act into Parliament as binding upon you.—I have the honour to be, Sir, your most obedient servant,

W. EASSIE, Hon. Sec.

The address agreed to at Cambridge, mentioned above, was as follows :—

‘We, the undersigned members of the British Medical Association assembled at Cambridge, disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which

cannot offend the living, and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As this process can now be carried out without anything approaching to nuisance, and as it is not illegal, we trust the Government will not oppose the practice when convinced that proper regulations are observed, and that ampler guarantees of death having occurred from natural causes are obtained than are now required for burial.'

The Secretary of State for the Home Department to the Secretary of the Cremation Society.

Whitehall: Dec. 31, 1880.

SIR,—I am directed by Secretary Sir William Harcourt to acknowledge the receipt of your letter of the 24th inst., forwarding a memorial signed by members of the British Medical Association assembled at Cambridge (and other papers), praying that Her Majesty's Government may think fit not to interfere in the event of the practice of cremation of bodies of the dead being adopted in this country.—I am, Sir, your obedient servant,

A. F. O. LIDDELL.

W. Eassie, Esq., 11 Argyll Street, London, W.

To the Hon. A. F. O. Liddell, Home Office, Whitehall.

11 Argyll Street, London, W.: Jan. 28, 1882.

SIR,—Referring to my letter of December 24, 1880, as Secretary of the Cremation Society, and your letter of December 31 acknowledging its receipt, the council not having received any further reply to the questions submitted to the Secretary of State for the Home Department, Sir William Harcourt, begs leave now to submit the following question addressed to them by one of the trustees of the society, Mr. Higford Burr:—'Supposing I were to die now, directing my executors to have my body burnt in our crematory at Woking, would my executors be liable to prosecution?' They have also been asked to cremate the bodies of the mother and wife of Captain Hanham, R.N., who have been buried under the usual certificates, but who had expressed an earnest desire that their bodies should be cremated. As the council are extremely unwilling to proceed with any cremation without the knowledge of the Home Secretary, and under conditions which shall ensure the legality of the proceedings, I am desired to ask you to favour the council with his decision as to the legality of cremation as proposed by them. I am also instructed to ask if you will allow

the council to submit to you for approval regulations in the practice of cremation intended to prevent the destruction of evidence of poisoning.—I am, Sir, your most obedient servant,

W. EASSIE, Hon. Sec.

Whitehall: Feb. 14, 1882.

SIR,—I am directed by Secretary Sir William Vernon Harcourt to acknowledge the receipt of your letter of the 28th ultimo, inquiring in behalf of the Cremation Society as to the legality of their proposed method of disposing of the remains of the dead by process of burning. And I am to acquaint you, for the information of the gentlemen forming the above society, that Sir William Harcourt can give no opinion in matters which belong to the jurisdiction and decisions of courts of law. He can only refer the society to the letters addressed to you from this department on February 21, 1879.

In Sir William Harcourt's opinion the practice of cremation ought not to be sanctioned except under the authority and regulation of an Act of Parliament.

It is the duty of those who desire to pursue such a practice to obtain such an authority, and, until it is granted, Sir William Harcourt must adhere to the view expressed by his predecessor in office, as stated in the letter above referred to.—I am, Sir, your obedient servant,

GODFREY LUSHINGTON.

The correspondence up to the present time here closes.

MR. JUSTICE STEPHEN
ON
THE LAW OF CREMATION.

CHARGE TO THE GRAND JURY, AT THE CROWN COURT, CARDIFF,
IN FEBRUARY 1884.

Gentlemen of the Grand Jury,—There are a considerable number of cases on the calendar, but, with one exception, they are of the most ordinary kind, and the circumstances attending them are of such a usual character that I shall not weary you with dwelling upon them at all. One of the cases to be brought before you is so singular in its character, and involves a legal question of so much novelty and of such general interest, that I propose to state at some length what I believe to be the law upon the matter. I have given this subject all the consideration I could, and I am permitted to say that, although I alone am responsible for what I am about to read to you, Lord Justice Fry takes the same view of the subject as I do, and for the same reasons. William Price is charged with a misdemeanour under the following circumstances. He had in his house a child five months old, of which he is said to be the father. The child died. Mr. Price did not register its death. The coroner accordingly gave him notice on a Saturday that unless he sent a medical certificate of the cause of death, he (the coroner) would hold an inquest on the body on the following Monday. Mr. Price on the Sunday afternoon took the body of the child to an open space, put it into a ten gallon cask of petroleum, and set the petroleum on fire. A crowd collected; the body of the child, which was burning, was covered with earth and the flames extinguished, and Mr. Price

was brought before the magistrates and committed for trial. He will be indicted before you on a charge which in different forms imputes to him as criminal two parts of what he is said to have done—first, in having prevented the holding of an inquest on the body; and secondly, in his having attempted to burn the child's body. With respect to the prevention of the inquest, the law is that it is a misdemeanour to prevent the holding of an inquest, which ought to be held, by disposing of the body. It is essential to this offence that the inquest which it is proposed to hold is one which ought to be held. The coroner has not an absolute right to hold inquests in every case in which he chooses to do so. It would be intolerable if he had power to intrude without adequate cause upon the privacy of a family in distress, and to interfere in their arrangements for a funeral. Nothing can justify such an interference, except a reasonable suspicion that there may have been something peculiar in the death, and that it may have been due to other causes than common illness. In such cases the coroner not only may, but ought, to hold an inquest, and to prevent him from doing so by disposing of the body in any way—for an inquest must be held on the view of the body—is a misdemeanour. The depositions in the present case do not very clearly show why the coroner considered an inquest necessary. If you think that the conduct of Dr. Price was such as to give him fair grounds for holding one, you ought to find a true bill, for beyond all question he did as much as in him lay to dispose of the body in such a manner as to make an inquest impossible. The other part charged as criminal is the attempt made by Dr. Price to burn his child's body, and this raises, in a form which makes it my duty to direct you upon it, a question which has been several times discussed, and which has attracted some public attention, though, so far as I know, no legal decision upon it has ever been given—the question, namely, whether it is a misdemeanour at common law to burn a dead body instead of burying it. As there is no direct authority upon the question, I have found it necessary in order to form an opinion to examine several branches of the law

which bear upon it more or less remotely, in order to ascertain the principles on which it depends. The practice of burning dead bodies prevailed to a considerable extent under the Romans, as it does to this day among the Hindoos, though it is said that the practice of burial is both older and more general. It appears to have been discontinued in this country and in other parts of Europe when Christianity was fully established, as the destruction of the body by fire was considered, for reasons to which I need not refer here, to be opposed to Christian sentiment; but this change took place so long ago, and the substitution of burial for burning was so complete, that the burning of the dead has never been formally forbidden, or even mentioned or referred to, so far as I know, in any part of our law. The subject of burial was formerly and for many centuries a branch of the ecclesiastical or canon law. Among the English writers on this subject little is to be found relating to burial. The subject was much more elaborately and systematically studied in Roman Catholic countries than in England, because the law itself prevailed much more extensively in those countries. In the 'Jus Ecclesiasticum' of Van Espen, a great authority on the subject, there is an elaborate discourse, filling twenty-two folio pages in double column, on the subject of burial, in which every branch of the subject is systematically arranged and discussed, with references to numerous authorities. The only importance of it is that it shares the view of the Canonists on the subject, which view had great influence on our own ecclesiastical lawyers, though only a small part of the canon law itself was ever introduced into this country. Without giving specific reference, I may say that the whole of the title in Van Espen regards the participation in funeral rites as a privilege to which, subject to certain conditions, all the members of the Church were entitled, and the deprivation of which was a kind of posthumous punishment analogous to the excommunication of the living. The great question with which the writer occupies himself is—In what cases ought burial to be denied? The general principle is that those who are not worthy of Church privileges in life are also to be excluded from them in

death. As to the manner in which the dead bodies of persons deprived of burial were to be disposed of, Van Espen says only that although in some instances the civil power may have entirely forbidden burial, whereby bodies may remain unburied or exposed to the sight of all, to be devoured by beasts or destroyed by the weather (he considers the dissection of criminals as a case of this kind), the Church has never made such a provision, and has never prohibited the covering of dead corpses with the earth. This way of looking at the subject seems to explain how the law came to be silent on exceptional ways of disposing of dead bodies. The question was in what cases burial must be refused. As for the way of disposing of bodies to which it was refused, the matter escaped attention, being probably regarded as a matter which affected those only who were so unfortunate as to have charge of such corpses. The famous judgment of Lord Stowell in the case of iron coffins (*Gilbert v. Buzzard*, 2 Haggard, Consistory Reports 333) which constitutes an elaborate treatise on burial, proceeds upon the same principles. The law presumes that every one will wish that the bodies of those in whom he was interested in their lifetime should have Christian burial. The probability of a man entertaining and acting upon a different view is not considered. These considerations explain the reason why the law is silent as to the practice of burning the dead. Before I come to consider its legality directly, it will be well to examine some analogous topics which throw light upon it. There is one practice which has an analogy to funeral burning, inasmuch as it constitutes an exceptional method of dealing with dead bodies. I refer to anatomy. Anatomy was practised in England as far back as the very beginning of the seventeenth century. It continued to be practised, so far as I know, without any interference on the part of the legislature, down to the year 1832, in which year was passed the Act for regulating the Schools of Anatomy. This Act recites 'the importance of anatomy, and that the legal supply of human bodies for such anatomical study is insufficient fully to provide the means of such knowledge.' It then makes provision for the supply of such bodies

by enabling any executor or other party having lawful possession of the body of any deceased person to permit the body to be dissected except in certain cases. The effect of this has been that the bodies of persons dying in various public institutions, whose relatives were unknown, were so dissected. The Act establishes other requisitions not material to the present question, and enacts that after examination the bodies shall be decently interred. This Act appears to me to prove clearly that Parliament regarded anatomy as a legal practice; and, further, that it considered that there was such a thing as a 'legal supply of human bodies,' though that supply was insufficient for the purpose. This is inconsistent with the opinion that it is an absolute duty on the part of persons in charge of dead bodies to bury them, and this conclusion is rather strengthened than otherwise by the provision in Sec. 13 of the Act, 'the party removing the body shall provide for its decent burial after examination.' This seems to imply that apart from the Act the obligation to bury would not exist, and it is remarkable that the words are not as in the earlier section, 'executor or other party,' which seems to point to the inference that the executor stood in a different position as to burial from the party having 'lawful possession,' and has a wider discretion on the matter. I come now to a series of cases more clearly connected with the present case. As is well known, the great demand for bodies for anatomical purposes not only led in some cases to murders the object of which was to sell the bodies of the murdered persons, but also to robberies of churchyards by what were commonly called 'resurrection men.' This practice prevailed for a considerable length of time, as appears from the case of *R. v. Lynn* (2 T. R. 738) decided in 1788, forty-four years before the Anatomy Act. In that case it was held to be a misdemeanour to disinter a body for the purpose of dissection, the court saying that common decency required that the practice should be put a stop to, that the offence was cognizable in a criminal court as being highly indecent and *contra bonos mores*, at the bare idea alone of which nature revolted. Many also said that 'it had been the regular practice of the

Old Bailey in modern times to try charges of this nature.' It is to be observed in reference to this case that the act done would have been a peculiarly indecent theft if it had not been for the technical reason that a dead body is not the subject of property. A case, however, has been carried a step further in modern times. It was held in *Reg. v. Sharp* (1 Dew and Bell, 160) to be a misdemeanour to disinter a body at all without lawful authority, even when the motive of the offender was pious and laudable, the case being one in which the son disinterred his mother in order to bury her in his father's grave, but he got access to her grave and opened it by false pretence. The law to be extracted from these authorities seems to me to be this: the practice of anatomy is lawful and useful, though it may involve an unusual means of disposing of dead bodies; but to open a grave and disinter a dead body without authority is a misdemeanour even if it is done for a laudable purpose. These cases, for the reasons I have given, have some analogy to the case of burning a dead body, but they are remote from it. They certainly do not in themselves warrant the proposition that to burn a dead body is in itself a misdemeanour. There are two other cases which come rather nearer to the point. They are *R. v. Van*, 2 Den. 325, and *R. v. Stewart*, 12 A. and E. 773-779. Each of these cases lays down in unqualified terms that it is the duty of certain specified persons to bury in particular cases. The case of *R. v. Stewart* lays down the following principles:—'Every person dying in this country, and not within certain exclusions laid down by the ecclesiastical law, has a right to Christian burial, and that implies the right to be carried from the place where his body lies to the parish cemetery.' It adds, 'the individual under whose roof a poor person dies, is bound (i.e. if no one else is so bound, as appears from the rest of the case) to carry the body, decently covered, to the place of burial. He cannot keep him unburied, nor do anything which prevents Christian burial. He cannot, therefore, cast him out, so as to expose the body to violation, or to offend the feelings or endanger the health of the living; for those reasons he cannot carry him uncovered to the grave.'

In the case of *R. v. Van*, the court held 'that a man is bound to give Christian burial to his deceased child if he has the means of doing so; but he is not liable to be indicted for a nuisance if he has not the means of providing burial for it.' These cases are the nearest approach which I have been able to find to an authority directly upon the present point; for if there is an absolute duty upon a man having the means to bury his child, and if it is a duty to give every corpse Christian burial, the duty must be violated by burning it. I do not think, however, that the cases really mean to lay down any such rule. The question of burning was not before the court in either case. In *R. v. Stewart* the question was whether the duty of burial lay upon the parish officers or on some other person. In *R. v. Van* the question was whether a man who has not the means to bury his child was bound to incur a debt in order to do so. In neither case can the court have intended to express themselves with complete verbal accuracy, for in the case of *R. v. Stewart* the court speaks of the 'right' of a dead body, which is obviously a popular form of expression, a corpse not being capable of rights, and in both cases the expression Christian burial is used, which is obviously inapplicable to persons who are not Christians—Jews, for instance, Mahomedans, or Hindoos. To this I may add that the attention of neither court was called to the subject of anatomy already referred to. Skeletons and anatomical preparations could not be innocently obtained if the language of the cases referred to was construed, as it was intended to be, severely, and literally accurate. There is only one other case to be mentioned. This is the case of *Williams v. Williams*, which was decided two years ago by Mr. Justice Kay in the Chancery Division of the High Court, and is reported in the L.R. 20 Ch. Div. 659. In this case one H. Crockenden directed his friend, Eliza Williams, to burn his body, and directed his executors to pay her expenses. The executors buried the body. Miss Williams got leave from the Secretary of State to disinter it, in order, as she said, to be buried elsewhere. Having obtained possession of it by misrepresentation, she burnt it, and sued the executors for her expenses. I need not trace out all the

points in the case, as it avowedly leaves the question now before us undecided. The purpose was, says Mr. Justice Kay, 'confessedly to have the body buried, and thereupon arises a very considerable question whether that is or is not a lawful purpose according to the law of this country. That is a question which I am not going to decide.' He held that in the particular case the removal of the body and its burning were both illegal, according to the decision of *R. v. Sharp*, already referred to. 'Giving the lady credit,' he said, 'for the best of motives, there can be no kind of doubt that the act of removing the body by that licence and then burning it was as distinct a fraud on that licence as anything could possibly be.' This was enough for the particular case, and the learned judge accordingly expressed no opinion on the question on which it now becomes my duty to direct you. It arises in the present case in a perfectly clear and simple form, unembarrassed by any consideration as applied to the other cases to which I have referred. There is no question here of the gross illegality which marked the conduct of those described as resurrection men, of the artifices, not indeed criminal, but certainly disingenuous, by which the possession of the body was obtained in the cases of *R. v. Sharpe* and *Williams v. Williams*. Dr. Price had lawful possession of the child's body, and it was certainly not only his right but his duty to dispose of it by burying, or in any other manner not in itself illegal. Here I must consider the question whether to burn a dead body instead of burying it is in itself an illegal act. After full consideration, I am of opinion that a person who burns instead of burying a dead body does not commit a criminal act unless he does it in such a manner as to amount to a public nuisance at common law. The reason for this opinion is, that upon the fullest examination of the authorities, I have, as the present review of them shows, been unable to discover any authority for the proposition that it is a misdemeanour to burn a dead body, and in the absence of such authority I feel that I have no right to declare it to be one. There are some instances, no doubt, in which courts of justice have declared acts to be misdemeanours

which had never previously been decided to be so ; but I think it would be found that in every such case the act involved great public mischief or moral scandal. It is not my place to offer any opinion of the comparative methods of burning and burying corpses, but before I could hold that it must be a misdemeanour to burn a dead body I must be satisfied not only that some people, or even many people, object to the practice, but that it is on plain, undeniable grounds highly mischievous, or grossly scandalous ; even then I should pause long before I held it to be a misdemeanour, but I cannot even take the first step. Sir Thomas Browne finishes his famous essay on Urn Burial with a quotation from Lucan, which in eight Latin words translated by eight English words seems to sum up the matter, ' *Tabesne cadavera solvat an rogos haud refert.*' 'Whether decay or fire destroys corpses matters not.' The difference between the two processes is, the one is quick, the other slow. Each is so horrible that every earthly imagination would turn away from its details, but one or the other is inevitable, and each may be concealed from observation by proper precautions. There are, no doubt, religious considerations and feelings connected with the subject which every one would wish to treat with respect and tenderness, and I suppose there is no doubt that as a matter of historical fact the disuse of burning bodies was due to the force of religious sentiments. I do not think, however, that it can be said that every practice which startles and jars upon the religious sentiments of the majority of the population is for that reason a misdemeanour at common law. The statement of such a proposition is a sufficient refutation of it, but nothing short of this will support the conclusion that to burn a dead body must be a misdemeanour. As for the public interest in the matter, burning, on the one hand, effectively prevents the bodies of the dead from poisoning the living ; on the other hand, it might, no doubt, destroy the evidences of crime. These, however, are matters for the legislature and not for me. The great leading rule of criminal law is that nothing is a crime unless it is plainly forbidden by law. This rule is, no doubt, subject to exceptions, but they

are rare, narrow, and to be administered with the greatest reluctance, and only upon the strongest reasons. This brings me to the last observation I have to make. Though I think that to burn a body decently and inoffensively is lawful, or at the very least not criminal, it is obvious that if it is done in such a manner as to be offensive to others, it is a nuisance, and one of an aggravated kind. A common nuisance is an act which obstructs or causes inconvenience or damage to the public in the exercise of right common to all her Majesty's subjects. To burn a dead body in such a place, or in such a manner, as to annoy persons passing along public roads, or other places where they have a right to go, is beyond all doubt a nuisance, as nothing more offensive, both to sight and smell, can be imagined. The depositions in this case do not state very distinctly the nature of the place where the act was done; but if you think, upon inquiry, that there is evidence of its having been done in such a situation and manner as to be offensive to any considerable number of persons, you should find a true bill. This must depend upon details on which it would be improper, and, indeed, impossible to address you. I must conclude with a few words explanatory of the reasons which have led me to address you at so much length. The novelty of the matter, and the interest which many persons take in it, are a reason for going into it fully. The difficulty which a petty jury would find is avoided by my addressing myself to you rather than to them. The fact also that if I am wrong my error is in favour of the defendant, is another reason for stating my views fully to you, for if he should be acquitted upon my direction there would be no means of carrying the case to the Court for Crown Cases Reserved.

THE CREMATION SOCIETY, in consequence of the foregoing decision, issued at once the following paper, embodying their views and intentions :—

‘ THE CREMATION SOCIETY OF ENGLAND.

‘ THE Council of the Cremation Society of England purchased, in the year 1878, a freehold site at St. John’s, Woking, in Surrey, especially adapted by position for the purpose, and erected thereon a building, with an apparatus of the most approved kind for effecting cremation of the dead.

‘ They next tested it by experiment, and found that it accomplished the purpose required without occasioning nuisance of any kind.

‘ Since that time the place has been maintained in perfect order, but has not been used, owing to a doubt raised, soon after the date referred to, as to the legality of adopting the process at present in this country.

‘ A recent decision, however, of Mr. Justice Stephen declares that the cremation of a dead body, if effected without nuisance to others, is a legal proceeding.

‘ Under these circumstances the Cremation Society feel it a duty to indicate, without delay, those safeguards which they deem it essential to associate with the proceeding in order to prevent the destruction of a body which may have met death by unfair means. They are aware that the chief practical objection which can be urged against the employment of cremation consists in the opportunity which it offers, apart from such precautions, for removing the traces of poison or other injury which are retained by an undestroyed body.

‘ The following, therefore, are the conditions on which the employment of the Crematorium will alone be permitted by the Council :—

‘ I. An application in writing must be made by the friends or executors of the deceased—unless it has been made by the

deceased person himself during life—stating that it was the wish of the deceased to be cremated after death.

‘ II. A certificate must be sent in by one qualified medical man at least, who attended the deceased until the time of death, unhesitatingly stating that the cause of death was natural, and what that cause was.

‘ III. If no medical man attended during the illness, an autopsy must be made by a medical officer appointed by the Society, or no cremation can take place.

‘ These conditions being complied with, the Council of the Society reserve the right in all cases of refusing permission for the performance of the cremation, and, in the event of permitting it, will offer every facility for its accomplishment in the best manner.

‘ Signed on behalf of the Executive Council,

‘ WM. EASSIE, C.E.,

‘ *Hon. Secretary.*

‘ *To whom communications may be addressed, as well as subscriptions and donations to the funds of the Society; which, in present circumstances, are much wanted.*

‘ 11 ARGYLL STREET, REGENT STREET, W.:
March, 1884.’

SMITH, ELDER, & CO.'S PUBLICATIONS.

Crown 8vo. With Illustrations. 8s. 6d.

CREMATION OF THE DEAD.

By WILLIAM EASSIE, C.E.

With Illustrations. Demy 8vo. 1s.

TRANSACTIONS of the CREMATION SOCIETY of ENGLAND.

Containing a Short History of the Subject of Cremation at Home and Abroad up to the date of the Eighth Anniversary of the Society, January 13, 1880.

Edited by W. EASSIE, C.E.,

Engineer and Hon. Secretary of the Society,

AND PUBLISHED BY ORDER OF THE COUNCIL.

Crown 8vo. 6s.

HANDBOOK of RURAL SANITARY SCIENCE. Illustrating the best means of securing Health and preventing Disease. Edited by LORY MARSH, M.D., Member of the Royal College of Physicians, London; Member of the Royal College of Surgeons, England.

'The essays are all of a high order of merit, and are full of suggestions and hints invaluable alike to landlords, tenants, and sanitary boards.'

STANDARD.

'Such facts should quicken the general desire

for the inauguration of a policy of drainage. The essays are of a practical kind, and are full of suggestive hints, not only to the medical profession, but to all who study the law of health and the prevention of illness.'—GLOBE.

Demy 8vo. 6s.

PURIFICATION of WATER-CARRIED SEWAGE. Data for the Guidance of Corporations, Local Boards of Health, and Sanitary Authorities. By HENRY ROBINSON, M.Inst. C.E., and JOHN CHARLES MELLISS, A.Inst. C.E.

8vo. 10s. 6d.

LECTURES on STATE MEDICINE. Delivered before the Society of Apothecaries, at their Hall in Blackfriars, in May and June 1875. By F. S. B. FRANCOIS DE CHAUMONT, M.D., F.R.C.S., &c. &c.

8vo. 12s.

ESSAYS and PAPERS on SOME FALLACIES of STATISTICS CONCERNING LIFE and DEATH, HEALTH and DISEASE, with Suggestions towards an Improved System of Registration. By HENRY W. RUMSEY, M.D., F.R.S., Author of 'Essays on State Medicine,' 'Sanitary Legislation,' &c.

Eleventh Edition, with numerous Illustrations. Demy 8vo. 12s. 6d.

HOUSEHOLD MEDICINE: containing a Familiar Description of Diseases, their Nature, Causes, and Symptoms, the most approved Methods of Treatment, the Properties and Uses of Remedies, &c., and Rules for the Management of the Sick Room. Expressly adapted for Family Use. By JOHN GARDNER, M.D.

Second Edition. Crown 8vo. 10s. 6d.

A MANUAL of DIET in HEALTH and DISEASE. By THOMAS KING CHAMBERS, M.D. Oxon., F.R.C.P. Lond.; Honorary Physician to H.R.H. the Prince of Wales; Consulting Physician to St. Mary's and the Lock Hospitals; Lecturer on Medicine at St. Mary's School; Corresponding Fellow of the Academy of Medicine, New York, &c.

London: SMITH, ELDER, & CO., 15 Waterloo Place.

THE SANITARY RECORD:

A MONTHLY JOURNAL OF PUBLIC HEALTH.

EDITED BY ERNEST HART.

The SANITARY RECORD is a Monthly Journal of the progress of the Hygiene of Cities, Towns, Rural Districts, Mines, Factories, and Habitations; the Food, Water, Gas Supply, and Drainage of Towns, and Rural Districts; the Vital Statistics of Population; the Influence on Health of Trades and Occupations and the Operation of Acts bearing upon Public Health.

Annual Subscription, 10s. per annum, paid in advance.

London: SMITH, ELDER, & CO., 15 Waterloo Place.

International Health Exhibition, SOUTH KENSINGTON, 1884.

The Proprietors of the SANITARY RECORD have much pleasure in intimating that they have decided to publish a *Weekly Supplement*, to be termed the

'SANITARY RECORD EXHIBITION SUPPLEMENT,'

commencing simultaneously with the opening of the Exhibition. The Supplement will be devoted exclusively to a description of the various Exhibits, Illustrations will be used where practicable, and the publication will be continued until a full report of the Exhibition has been given, when it will be withdrawn.

This Supplement will not in any way interfere with the SANITARY RECORD proper, which will be published as usual on the 15th of each month; but the contents of the Supplement will afterwards appear in the SANITARY RECORD and LONDON MEDICAL RECORD, so that a full report of the Exhibition, as it will affect the readers of both of these Journals, will be provided to the Subscribers.

THE SUPPLEMENT WILL BE SOLD IN THE BUILDING AT 2d. PER COPY.

London: SMITH, ELDER, & CO., 15 Waterloo Place.

WHERE TO TAKE A HOLIDAY.

Under this Title will be published, on June 1st next, Price One Shilling, the Second Annual Issue

OF THE
HOLIDAY NUMBER
OF THE
LONDON MEDICAL RECORD.

The leading features of this issue will be an account of the principal Watering-Places and Health Resorts of the United Kingdom and the Continent, as regards their salubrity, sanitary condition, climatic and meteorological influences, Hotel and Lodging-House accommodation, &c.

There will be a large circulation of the Number, which will be distributed in every watering-place mentioned in it, as well as amongst the profession and a selected portion of the public.

London: SMITH, ELDER, & CO., 15 Waterloo Place.