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CREMATION

AN INCENTIVE TO

CRIME:

A PLEA FOR LEGISLATION.

BY

FRANCIS SEYMOUR HADEN, F.R.C.S., &c.

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CREMATION

AN INCENTIVE TO

CRIME.

THE OBJECT OF THE PRESENT PAPER IS :--

I. To contrast Burial as it is with burial as it ought to be; and again, Burial as it ought to be with Cremation as a proposed substitute for it.

II. To test the validity of a statement made by Sir Henry Thompson at the late Congress of Hygiene and Demography to the effect that "Burial, by spreading infection, is a cause of increase in the zymotic death-rate."

III. To prove that, as the Practice of Cremation would render the rectification of any doubt which might subsequently arise as to the cause of death in any given case impossible, such a practice cannot fail to operate as a direct incentive to crime, especially to such forms of crime as are known to be difficult of detection without prolonged, and possibly repeated, methods of investigation.

Before attempting to deal with these several propositions, I cannot do otherwise than refer with regret to two or three circumstances which, though insufficient to turn me from the task I have undertaken, are yet of a nature to render that task anything but an easy one. It is not easy, for instance, to deal single-handed with any movement which has acquired the dimensions and character of an agitation ; with a portion of the Press, which has so far identified itself with that movement as to publish unwillingly, and frequently to suppress altogether, anything which tells seriously against it ; and with a sanitary authority which persists in issuing instructions, not for the resolution, but the preservation of the bodies of the dead. An agitation, again, is not always

exactly scrupulous as to the methods it employs, and the Cremation Society, by heading its appeals "Cremation v. Burial," instead of "Cremation v. the Abuses of Burial," and so leading people to believe that there is only one way of burial, is no exception to this. Again, though I refer to it with the greatest reluctance, no adequate idea can be had of the difficulties of the question with which I have undertaken to cope without some previous insight into the composition and character of the recent meeting of so-called Hygiene and Demography, because the present paper is the immediate outcome of that meeting. Composed as that meeting was of ladies ready to hold up their hands for whatever was most advanced and of advanced cremationists in about equal portions-inordinately long papers were read at it which largely transgressed the fifteen minutes allowed for them, and which took up so much of the available time of the meeting as to leave exactly three minutes, and no more, for the defence of the more regular papers of which due notice had been given and which strictly conformed to the rules laid down for the guidance of their authors. No wonder that when a resolution was proposed favourable to cremation at a meeting worn out by the reading of these long papers, no hands were found to vote against it and that this same resolution should have been since paraded in all directions, and on every occasion, as a deliberate expression of European opinion. I say no more of it. On the other hand, if I had said one word less, I could have given you no idea of the uphill battle which it has devolved upon me either to abandon or to fight. Having premised, and I repeat most unwillingly premised, this much, I now proceed to the consideration of the propositions which stand at the head of this paper.

I. First, then, as to burial as it is. Burial as it is consists in this —in the hermetic enclosure of the dead body, which, instead of being buried at once has been kept in the house till putrefaction has set in, in a strong air-tight box or coffin (of oak it may be, or even of lead), and in disposing of these boxes one upon another till a legalised piece of ground called a cemetery is full of them; then, in doing the same thing in another piece of ground till that also is full; then in a third till that is full; and so on, in one piece after another, till all are full—till the

dead, in fact, are in permanent possession of all of them, or, as Lord Stowell pithily puts it, "till the dead have shouldered out the living." I have already said so much of this mode of burial that I need here say no more of it.

Burial as it ought to be, again, consists in the enclosure of the body as soon after death as possible (as soon, that is to say, as the *rigor mortis*, which is a proof of death, has passed off and before decomposition has well begun) in a coffin as perishable as itself, and which allows of its gradual disappearance without harm to anything or anybody. For this method, or, rather, for this *principle* of burial, I am myself entirely responsible, and if this principle were well understood, as I have described it elsewhere I need not again refer to it. It is, however, even now, so much a sealed book to many, that I may, perhaps, be forgiven if I once more repeat what I said of it at a meeting presided over by Lord Shaftesbury many years ago :—

" It is the departure from the simple conditions which should attend the act of committing a body to the earth which is the cause of all the evils that surround the subject, and which it is the aim of all I have written to mitigate if not altogether to remove. The retention in a dwelling-house for as long as possible of a body which ought to be committed to the earth as soon as possible, is the first departure of this kind. It is also the most important, because it is this departure which necessitates the strong coffin, and it is the strong imperishable coffin, again, which prevents the resolution which it is the beneficent office of the earth to accomplish, and which, therefore, it should be the first care of the living to promote. Some curiously mistaken notions exist as to what happens to a dead body when, in the words of the old ritual, it is 'laid into the ground,' the popular notion being that it becomes a part of the clay to which it is committed. Nothing of the kind, of course, is the case. A body properly buried-buried, that is to say, in such a way that the earth may have access to it-does not even remain in the earth, but returns to the atmosphere. Let me explain. Suppose a body buried three or four feet below the surface, the earth, as earth, affects it in no way whatever. The part played by the earth in its resolution is that of a mere porous medium between it and the air which is above it. Through this medium the air with its dews and its

rain filters, and, when it reaches the body oxidises it, that is to say, resolves it into new and harmless products; and then these new products, passing upwards again through the same sieve-like medium, re-enter the atmosphere and become the elements of its renewal, and of the nourishment and growth of plants. The body, in fact, literally as well as figuratively, ascends from the dead, and fulfils the cycle of its pilgrimage by becoming again the source and renewal of life ; yet it is this beautiful provision which, with our strong imperishable coffins, we are doing our best to prevent ! Another mistake, too, is to suppose that, after a time, this coffin itself decays in the earth. It does not. Substances only which contain nitrogen readily decay in the earth, decay being the effort of the nitrogen to get out. But wood is a nonnitrogenous body and does not readily decay; so that, in the Holborn Burial-ground, the coffins of Charles II.'s time were found pretty much as they were buried, and with their contents just as putrid, while the surface had been raised no less than eighteen feet by this mass of boxed-up putridity. . . . The coffin, therefore, should be of the lightest material, such as pulp, now in daily use at Woking. Moreover, as the coffin is the fons et origo mali, it should be the first object to remodel and reform."

I hand round a representation of one of these perishable coffins, that those present may see not only what it is like, but that I do not, as a prominent member of the Cremation Society! is fond of declaring, "bury in a basket." I may also state that as the patent for this coffin is out, any one may make it, and—as its prime cost is small—sell it for much less than the Woking Company is now doing. Before I entirely quit this subject of "burial as it ought to be," however, I cannot forbear to express my gratification that authorities so eminent as Drs. Brouardel, Du Mesnil, and Ogier, of Paris, have since fully endorsed the principle on which it rests, especially as to the action of the air as well as the earth in promoting the resolution of the buried body. I append a note of their observations to this paper:—"I. If," say Messrs. Brouardel, Du Mesnil, and Ogier, "when interments took place in churches it was possible for accidents to result from the escape of putrefactive gases

^{*} Congress of Hygiene and Demography, London, 1891.

—in these days, when such gases are allowed to find their way into the open air, such dangers are imaginary; while the air of the open cemetery is absolutely inodorous. 2. That the soil of cemeteries contains large quantities of carbonic acid gas only, and of other gases contrary to the general belief—none in any appreciable quantities. 3. That the decomposition of dead bodies buried in the earth is rapid in proportion as the soil is porous. 4. That in proportion as the buried body comes into contact with the outer air, by the fact of the permeability of the soil and of the porosity of the coffin, its resolution is rapid and complete. 5. That extraneous substances of every kind put into the coffin to fill it up retard resolution."

I now proceed to describe, as fairly as I can, what I understand by Cremation. There are, however, I ought to say, two ways of describing it-the cremationist way and my way. The cremationist way-I quote from a letter I have just received from a very eminent half-cremationistis this :--- " Efficient cremation and efficient burial are the same processes differing only in time. I would recognise both, notwithstanding a case of poisoning here and there, though at the same time inefficiency in the performance of either should be made an offence." Then comes my way. I say that if these two things are the same in theory they are not the same in practice. That while burial is a complete process leaving no residuum behind it cremation is an incomplete process leaving a very positive residuum behind it, not to say a very embarrassing residuum. That while one, therefore, is an efficient and perfect process the other is an inefficient and imperfect one, and, therefore, as my distinguished friend says truly, but not I think quite intentionally, it ought to be "made an offence." That while, by burial, the body remains at rest till such time as its perishable parts re-enter the air, and its imperishable parts remain to form (as nature intended) an integrate part of the earth's substance-by cremation it is thrust into a furnace and, by the aid of one of those tall chimneys which we have been so long trying to get rid of, its combustible parts are poured-and that for two or three hours-into the pure air around, and its incombustible part (weighing from five to seven pounds, more or less), is returned to the mourners to take away with them ! What the effect on the surrounding

air would be if a dozen, or twenty, or fifty, of such vomitoria were all at work at the same time, I leave to those whose fate it might be to live within half-a-dozen miles of them, to imagine. I might, if I thought fit, write a whole chapter on this part of the subject alone. I forbear to do so, and to satisfy those who would know more of the wonderful properties both of the earth and of the air, content myself with recommending for their perusal the many instructive papers on the subject by our distinguished Chairman, and also a recent most remarkable paper on "The Nitrifying Ferments of the Soil," * by Professor J. M. H. Munro-a paper which ought to be all the more convincing in that it is not advanced by its author to uphold any preconceived theory. In that paper Mr. Munro tells us not only that nitrification (which is Nature's way of turning all putrescent matter to a harmless and useful account) is impossible without the intervention of the earth, but that inoculation with even minute quantities of soil is sufficient to produce it. "The quantity," indeed, "of this most important factor," he says, " present at any one time in relation to the whole mass of soil, is so nearly infinitesimal that the most scientific chemical test will barely detect it." "Sometimes," he goes on to say, "there is less than one part-often less then ten-of this nitrifying element in a million parts by weight of soil!" If I have gone out of my way to quote what is said in this most interesting paper, it is because it comes to me as a revelation of that wonderful power on the part of a thin covering of earth to prevent any appreciable odour from the presence immediately beneath its surface of a dead body, a fact at which I have always wondered, but the reason of which I could never till now understand; and also, because it furnishes a complete answer to those indiscreet and untruthful advocates of cremation who are always telling us of the pestilential vapours emitted by grave-yards.

II. To test the validity of a statement made by Sir H. Thompson at the recent Congress of Hygiene and Demography to the effect that Burial is a propagator of infection and a cause of increase in the zymotic death-rate.

^{* &#}x27;Journal of the Royal Agricultural Society,' third series, vol. ii. p. 702 (1891).

In entering as seriously as I can upon this, the second head of this enquiry, I find myself, if I may say so, suddenly called upon to contrast what I have always believed to be the ways of Nature with the ways, opinions, and statements of Sir H. Thompson. If, as I must confess has been the case, I have hitherto believed the ways of Nature to have been for our benefit, I must now, perforce, believe that they have been to our detriment. While Nature, up to now, has assured me that the great and universal disintegrator and destroyer of all forms of death and decay is the earth, Sir H. Thompson tells me that in giving me any such assurance Nature has deceived me altogether. On the contrary that the earth is a very hot-bed of infection, and its watersprings special carriers of that infection to the living. In a word, that while Nature has been doing one thing for the supposed welfare of the whole human race, Sir H. Thompson, for the purposes of the cremationist propaganda, is doing another. All that our Chairman and Professor Munro have told us of the wonderful nitrifying power of the earth on every form of animal decay-all that Sir John Simon and other eminent chemists have told us of its equally wonderful faculty of changing putrescent animal matter contained in water into neutral salts-all that we know of the complete cessation of cattle plague by the prompt burial of its thousands of carcases in shallow trenches-of the harmless resolution of hundreds of soldiers superficially buried on fields of battle-nay, even of the entire disappearance of the Great Plague itself after its victims had been cast by cartloads into pits dug for them in the open streets-all this, I say, and all that we observe every day in our heavily manured fields and gardens, we must now be prepared to give up and, at the novel dictation of the cremationist propaganda, to forget and throw to the winds! If those who now listen to me, and who may not unnaturally suppose that these expressions convey something more than the circumstances warrant, I can only say that their surprise cannot equal my own, when I heard for the first time from Sir H. Thompson's own lips that "burial within the earth was a propagator of infection and a cause of increase in the zymotic death-rate."

Now, there are three ways of meeting this extraordinary statementby the evidence of Experts, by the teachings of Bacteriology, and by the

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result of Experience—each I might almost say sufficient in itself to refute it. I, however, at once made up my mind to avail myself for this purpose of all three, and also that I would depend by choice on my own experience of forty years first.

Every member of the profession, of which I had for so long the honour to form a part, knows that all infectious diseases divide themselves into two great groups or classes-one which derives its origin from surface soil and surface water-the other which owes its convection to actual contact of one case with another in the open air. Again, that the first of these classes is itself subdivisible into two distinct types of disease-one which depends on vegetable exhalations from marsh lands and which includes within it all those forms of febrile disturbance known as malarial-the other which, like cholera and choleraic diarrhœa, depends on the actual introduction into the intestinal canal by means of surface soil and surface water of the dejecta of patients affected with the same disease.* Burial, therefore, four feet below the soil, can have nothing whatever to do with any of those forms which constitute, as I have said, the first class of infectious disease. The second, and by far the larger class, again, and which comprises small-pox, measles, whooping-cough, typhus, scarlet fever, diphtheria, &c., owes its propagating power to the actual contact or close contiguity in the open air of one patient with another. That class, therefore, has no connection with either soil or water, and being wholly independent of even the surface of the earth, can have even less to do with burial than the first class. To lump these two classes together, therefore, as Sir H. Thompson has done, is, to begin with, a scientific solecism of the most glaring kind, and-seeing how perfectly well known the superficial method of their propagation is-to suggest that they are spread by means of water when buried four feet below the surface is a statement which is to all appearance quite inexcusable and in the nature of a direct appeal to popular ignorance and credulity. The zymotic death-

* I include under the term "surface water" all water which after being used for domestic purposes is discharged into drains and cesspools, and from them into rivers and other effluents, natural and artificial, such as the Elbe at Hamburg, common sewers, &c.

rate, in fact, has nothing whatever to do with burial, only two out of the seven diseases which comprise it having ever been shown to depend in any way whatever, either on soil or water, and none of them, except in the imagination of Sir H. Thompson, to have been disseminated by water. Where, I would ask him, has he ever seen the water which does it? Water, except in the shape of rain, is never found at, or near, the surface of the ground, or within many feet of it. As we pass an excavation made for the foundations of a house, which excavation is much deeper than the bottom of the deepest grave, we see no such water; or even in larger and deeper excavations made for the building of a church or a theatre; or for the laying of pipes, or even in deep railway cuttings. The exposed surfaces of all these excavations and cuttings are, in fact, perfectly dry. Springs, again, come from a depth, and arrive at the surface by isolated channels of their own. Is not this suggestion of the water, therefore, an afterthought, a convenient probability rather than a fact, to tack on to and account for the statement that the buried body is a propagator of infection?

Bacteria, again, which are said to "swarm" (as if they were animals) in the earth and to "prey." on the buried body, are minute cellular organisms, which multiply by fissure, and, like all other plants (including mosses and fungi), grow best when undisturbed. Like plants, also, they require for their growth carbon and nitrogen; water, also, and a certain temperature are necessary for the maintenance of their vitality. Like plants, also, by the disintegration of organic combinations containing nitrogen, they produce certain chemical products, and, as fungi, assist fermentation. They vary, too, as to the amount of atmospheric air they require, some of them, like the bacteria of anthrax, being unable to maintain their vitality without it, and some being able to do with little (the so-called aërobic and anaërobic bacteria of Pasteur). That any of them, however, are able to do altogether without air I do not believe, and, therefore, humbly decline to admit these terms as warrantable. Like other plants, again, some are reproduced by spores, or seeds. When, by a linear arrangement of their primitive cells they grow like rods, bacteria are called bacilli. Anthrax is a bacillus of this kind, and being, like Bacillus septicus, what is (improperly) called anaërobic, dwindles and dies when deprived of air. If, therefore, the

body of an animal which has died of anthrax is buried entire, i. e. without being opened, the bacilli which characterise this form of disease die with it, and, notwithstanding statements to the contrary, not only die with it, but are incapable of reproduction. The infection of anthrax cannot, in fact, as cremationists declare, be spread when so buried. When, therefore, it has been reproduced in fields in which cattle infected with the disease have grazed, died, and been buried, the fresh outbreak is owing, not to the buried carcass, but to the spores which have been left by the dejecta of the infected animals upon the surface of the field in question. Both Klein and Koch are fully agreed as to all this, and Koch, in addition, has proved by direct experiment * that the spores of anthrax are not, as Pasteur has stated, taken up by earthworms and deposited on the surface by their castings; and that the spores of anthrax bacilli, when mixed with earth in which worms are present, are not taken up by these creatures at all. Klein, indeed, carries these statistics further, and says : "If bacilli grow in the depths of a fluid medium-in a medium, i. e. but scantily supplied with air-they do not form spores, and at length degenerate, and, as the fluid dries up, this degeneration goes on till, finally, nothing is left of them but their debris. Such bacilli, of course, are quite innocuous when introduced into the tissues of animals, or into fresh nourishing media." † Those, therefore, who have been able to follow me in this statement-a statement examined, re-examined, and confirmed by the most eminent men to whom I have submitted it (and, as I now understand, admitted by Pasteur himself)-will see how little reliance can be placed on the reports spread broadcast over the country by the advocates of cremation, that bacteriology is fatal to the practice of burial-and, on the contrary, how recommendatory it is of that practice, and how adverse to cremation. So much for the bacterial bugbear.

Lastly, and as my strongest point of all, I addressed to such medico-legal authorities as I thought best qualified to answer it, the following question :—" Do you, or do you not, agree with a statement made by Sir H. Thompson, at the Congress of Hygiene and Demo-

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^{*} Mittheil. a. d. k. Gesundheitsamte, 1881.

⁺ Klein, 'Micro-organisms and Disease,' ch. xi. pp. 155, 156, Macmillan, 1886.

graphy, that a human body, dead of an infectious disease and buried four feet below the surface of the ground, is capable-by water percolating the soil or by any other known agency-of propagating the infection of that disease or of any one of those diseases which are understood to comprehend the zymotic death-rate ; has any case of infection so conveyed ever occurred to you or come within your observation or knowledge; and, the present state of sanitary science considered, do you believe in the probability of such conveyance?" The answers to this question, though too variable in terms to be reproduced separately, I am justified in saying, amount to this :-- " The statement you refer to is not consistent, either in part or in the whole, with the trained observation and experience of this country. Of the seven diseases known as zymotic-namely, small-pox, measles, scarlet fever, whooping cough, diphtheria, enteric fever in various forms, cholera, and diarrhœa-the first five require for their propagation contact, more or less complete, in the air, and the last three the actual introduction into the alimentary canal (which is the seat of the disease) of animal dejecta by surface soil or surface water. To include in one common category all these diseases as if they had a common origin is, to say the least, unscientific, and-the nitrifying power of the earth on water charged with animal matter considered-in the highest degree improbable, if not impossible. No known warrant exists, in fact, for any such statement. If, out of the hundreds and thousands of these diseases which have come under observation within the last twenty years, any one of them has proceeded from, or depended upon, the neighbourhood of burial places in which such cases had received interment, all we can say is that the fact, if it has ever occurred, has been overlooked with singular uniformity by scientific observers."

I consider, therefore, I am now justified in putting to Sir H. Thompson the following questions :---

1st. When, where, and by whom has any outbreak of small-pox, measles, whooping cough, or typhus been shown to be due to waterborne infection?

2nd. When, where, and by whom has any water-borne epidemic, or any other specific disease been proved to be due to specific contamination from a burial-ground? 3rd. When, where, and by whom has any zymotic disease whatever been shown to be due to interment when carried out four feet or even much less below the surface?

4th. When, where, or by whom has even increased general sickness, or increased general mortality, been shown to be caused by interment?

5th. What definite statistical evidence, in fact, is there to show (a) that the general death-rate, or (b) the zymotic death-rate, or (c) the death-rate from any group of diseases, or (d) the death-rate from any single disease, zymotic or otherwise, has ever been affected by burial, even under the present objectionable conditions?

And if Sir H. Thompson cannot, or will not, answer these questions, will he correct the *dictum* current in Manchester and other cremationist centres, that it is now "a recognised principle that contagious diseases (*sic*) are so spread "—a statement which is going the round of the cremationist Press and which is depended upon as a warrant for the erection of crematories in Manchester, Liverpool, Bristol, Darlington, &c.; and, further, is he aware that the inducement openly held out to would-be shareholders in these ventures is in no respect a sanitary object but the dividends which their promoters declare they cannot fail to yield? I very much doubt whether Sir H. Thompson will find it convenient to answer these questions. If he will not, I call upon him, at all events, to furnish the provincial Press with such a correction of Mr. Chancellor Christie's statement at Manchester as will, at least, go to prove that cremation is a hygienic, and not a speculative, movement.

And that reminds me to ask—since it is certain that the burning of a few bodies here and there can make no sensible impression on Burial either as a rite or as a custom—what is the object of this cremationist agitation? Is it a mere scientific fad, or does some ulterior aim, or aspiration more or less occult, lurk at the bottom of it? I cannot and will not believe the common report that, as at Manchester and elsewhere, it is a mere trade operation and that, instead of the magniloquent title of "The Cremation Society of England," a designation more in harmony with such ventures would better describe it. Nor, surely, now that the pestilent and pretentious vault is going out of fashion, can it be that it has for its aim the creation of yet *another aristocracy of the dead* of a new class able and vulgar enough—rather than lie with their

fellows—to pay for a separate and more ostentatious treatment of their poor remains. The healthy mind revolts at a phase of vulgarity under the circumstances so terribly misplaced ! The question, therefore, still forces itself to the front—what *is* the object of this Society ?

III. To prove that as the practice of cremation would render the rectification of any mistake as to the cause of death impossible, such a practice cannot fail to operate as a direct incentive to crime—especially to such forms of crime as are known to be difficult of detection without prolonged, and possibly repeated, methods of investigation.

I now, and I trust for the last time, come to that part of the subject which no cremationist if he can help it is willing to hear mentioned, which the newspapers engaged in the cremationist propaganda are careful not to discuss, and which, whatever the momentary success which may attend (or appear to attend) the agitation of the question, will assuredly, sooner or later, provoke the repressive action of the law.

With this part I may at once explain I have done precisely as I did when dealing with the sanitary part of the subject—put myself, that is to say, into personal communication with those members of the medical profession who, better instructed than myself, have had to cope with such cases in the courts of law, and whose experience is to be found in a concentrated form in the text-books on Medical Jurisprudence.

Taking note of Sir H. Thompson's statement to begin with, that "only 102 exhumations had been made during the last twenty years, and only one murder a year been discovered by them," I first applied to the proper official quarter for the record of such cases, and learnt, not only that no such return had ever been made, but that inasmuch as such return, if made, would not include the exhumations ordered by coroners, it would not be accurate. From Dr. Thomas Stevenson, again, the eminent Government analyst and editor of Taylor's great work on medical jurisprudence, I learnt that, "though he could not recall without great labour all the cases he had met with, he had, yet, not only discovered poison by their exhumation, but had been able, by such exhumation and analysis, to prove the innocence of suspected persons." From Mr. Thomas Bond, F.R.C.S., Consulting Analyst to

the Westminster Hospital, I learnt that though, like Dr. Stevenson, he could not furnish particulars of every case he had had to do with years ago, he had yet had no less than four such cases in the course of last year (1891), all of them proving (by exhumation of the body) murder by arsenic; that this year (1892) he had made two such exhumations, which proved to him that a double murder had been committed-a man, in one of them, having been shot from behind at a distance of six feet or thereabouts, and a woman, also in the back, at a distance of one foot, a coroner's jury, notwithstanding, having found the wounds in both cases "accidental," and the result of a struggle between the two. That, on another occasion, he had exhumed a body after two months' burial, and found that death had resulted from the performance of an internal illegal operation, and that he had had a similar case since.* That, in the case of Harriet Lane, murdered by Wainwright, after twelve months' burial, and though an attempt had been made to destroy the body by quicklime, the had proved murder by a bullet wound in the brain. That in the case of the Austrian, De Tourville, who killed his wife on the Stelvio, the case brought home to him had turned out (by exhumation of the bodies) to be only one of several, one of the victims being his first wife's mother, whose death, after twelve years' burial, was shown to have been caused, not, as was certified, by an accidental wound in the eye, but by a shot from behind. Mr. Bond, too, ends his letter with this pertinent reflection, that he " had no doubt that many persons skilled in the use of poisons would more frequently resort to them if it were not for the knowledge that their operations were liable to be handicapped by exhumation." Mr. Lowndes, again, the well-known surgeon of the Liverpool police, reports in the Times an equally instructive case. In this case two women, Higgins and Flannigan, had combined to murder, and did murder, by means of arsenic, a man of the name of Higgins, the husband of one of them, the crime being discovered by a post-mortem examination of the body before its burial; and that this murder had brought to light (by

^{*} Mr. Bond, I observe, is now engaged on yet another case of this form of constructive murder : see *Times*.

[†] Quicklime is found, contrary to Sir H. Thompson's statement, to harden animal tissue and retard its destruction.

exhumation) no less than ten others by the same women, at the examination of three of which he (Mr. Lowndes) had himself assisted, the cause of death in all of them having been certified to have arisen from poison. Yet, that as the case of the man Higgins was complete in itself, and the exhumation of the ten others had been merely "corroborative, not essential," to the discovery of that case, therefore, they ought not to be counted, and need not, in his (Mr. Lowndes's) opinion, stand in the way of a fair trial to do without exhumation !

Ouitting, however, these cases, the result of current experience, and going for further information to the text-books which positively bristle with them, we find in them abundant evidence of how fatal it would be to the ends of justice to do away with exhumation and to rely on certificates merely. I need only refer here to a few of them. A man named Winslow is tried for poisoning his mistress by antimony; three of his relatives are exhumed in consequence, and all of them are proved to have been put an end to by the same poison, notwithstanding which (and for some reason satisfactory, possibly, to a cremationist), the man was acquitted. At Bilston, three children die in one family, antimony being found in the bodies of two of them, and, two months afterwards (by exhumation), in the body of a third, the cause of death, in the last case, having been certified as "asthenia and gastric fever." Mary Ann Cotton, again, poisons her stepson, whose body (being exhumed) is found full of arsenic; whereupon, further exhumations bring to light the cases of no less than nineteen other persons, all of whom had been murdered by arsenic, viz. those of her mother, fifteen children, three husbands, and a lodger, making up the ghastly roll of twenty in all. The case, however, most to the point for the purposes of such a paper as this, because of the contradictory opinions it elicited as to the "cause of death," is undoubtedly that of William Palmer, executed at Rugeley for the murder of J. P. Cook, because in that case the murderer would, undoubtedly, have got off but for the exhumation of six others of his victims, all of whom were found to have been murdered by him with the same motive, though not always (he being an expert) by the same means. I lay peculiar stress on this case, because it furnishes a complete answer to those who, like Sir H. Thompson, Mr. Lowndes, and others, seem to think that with a better system of certification we may safely do without exhumation. Alas ! medicine is not, and never will be, the exact science which such reasoning supposes, and, under no conceivable circumstances shall we be able without such ocular demonstration as exhumation affords, to say-with anything like certainty-that certain symptoms which are compatible with death from natural causes are not also compatible with death by poison. Palmer, for instance, poisons Cook by a mixture of strychnine and antimony. The strychnine kills, and the poison is removed by the vomiting purposely (?) set up by the antimony. At all events, neither poison is found in the unburied body in sufficient quantity to warrant a conviction for murder. Moreover, the action of both these drugs is so consistent with the symptoms of certain forms of disease, that no two medical witnesses dealing with that case alone could be found to say with certainty to which category they belonged. "Bilious cholera," "Epilepsy with tetanic convulsions," and "Angina pectoris" were each, in fact, certified by eminent practitioners as the cause of death, one of these gentlemen going so far as to write a pamphlet to show that the others were wrong! Now what, I ask, would have been the result in this most instructive case if it had not been for exhumation? First, while the case of Cook is under examination, the body of Ann Palmer, Palmer's wife, after fifteen months' burial, is taken up, and murder by antimony discovered, "Bilious cholera" having being certified as the cause of her death. Two other medical certificates had also been given to the same effect, which, says Taylor, in narrating the case, "coupled with the social and professional position of the murderer, checked all suspicion." Walter Palmer, again, on whose life his brother had effected insurances to the extent of 82,000L, was poisoned by him with prussic acid, and it was on the strength of these discoveries that the body of Cook (being exhumed) was again examined, and then it was, and not till then, that it presented all those appearances which are now known to depend on poisoning by strychnine-the limbs being still flexed and rigid. These, with others-nine in all, if not more-would, but for exhumation, never have come to light; nor would Palmer himself have been convicted. And again, may not exactly the same thing be said, notwithstanding an extraordinary amount of special pleading in the Times by Sir H. Thompson, of the case of Neill and his four victims? If, instead of

being available for exhumation the bodies of these four poor creatures had been cremated, where would Neill be now, and what would he be doing? True, in his last letter to the Times, Sir H. Thompson hopes to be able to "devise" a death certificate which may be depended upon as a safe warrant for cremation. He may hope, but if he will read, not our English books (for we are terribly behindhand, on the whole subject), but the French and German standard works which deal with it-"Briand et Chaudé" in particular, and the several able contributions to the same end by Brouardel-he will see how vain (without proceedings which the amateurs of cremation would never hear of) that hope would be. Nay, he would also find this-that however advanced on all such matters both these continental nations are, no such certainty has ever been arrived at even by them. I did, indeed, after one of these confident letters of Sir H. Thompson to the Times, write to that journal, and point out how constantly a second and even a third examination was found necessary to correct the errors of a first. The editor, however, did not put my letter in, thinking, no doubt, that it was only a piece of captiousness on my part, and little knowing that the very existence and future legality of cremation will be found to hinge on the impossibility it opposes to these secondary examinations. The suggestions of Dr. Brouardel on this part of the question are, in fact, invaluable and sufficient in themselves to set at rest the ignorant pretensions of the Cremation Society for ever. I have by me a short report by this eminent expert to the French Government on this very matter. It is enough to satisfy any one of the absolute necessity, in certain cases, not of one but of several post-mortem examinations of the same case before the death certificate could by any possibility be arrived at; yet, so loosely are we forming our opinions on this all-important fact, that when I wrote to the editor of the Times to tell him so, he put-or at least I presume he put-for it has never appeared-my letter into the rubbish basket ! Well, I am content to wait. Meanwhile, another proof of Sir H. Thompson's imperfect understanding of the seriousness of a subject which he would thus dispose of so easily is to be found in the common belief that it is only in cases of poisoning that we need apprehend any difficulty in making out a satisfactory death certificate. However, Dr. Brouardel shows that poisoning-though in these days of

vegetable alkaloids a difficult crime to be sure of-is by no means the only crime to puzzle the medico-legal expert. I am not now speaking of cases in which death was the invariable result. I hold in my hand a return of cases of all forms of crime, whether ending in death or not, which this gentlemen alone has been called upon to investigate in the course of six years-that is to say, between the years 1878 and 1883, both years included. It will astonish those, I think, who heard Sir H. Thompson say at the Congress of Hygiene and Demography that only one murder a year was discovered by examinations of this kind-examinations undertaken not only for the discovery of cases of poisoning, but of crime of all sorts. After quoting no less than 505 of these examinations, Dr. Brouardel tells us, as if in correction of Sir H. Thompson's statement, that no less than 359 yielded results of a nature to lead to a conviction, while 146 only were insufficient to do so; and this accords with Dr. Stevenson's experience when, in his letter to me, he says that while he had often been able to detect crime, he had also not seldom been able to prove the innocence of the suspected person. I must not take up time by going though the long list of crimes of all kinds which Dr. Brouardel has had to deal with; but it will, I am sure, surprise many who hear me, that poisoning formed but a comparatively small part of them-but eighty-three cases, in fact, while in forty-two of those no poison was discoverable, and "natural death" certified. I have, however, quoted enough to show the very onerous and responsible nature of the obligation which the Cremation Society is taking on itself so easily-a responsibility the degree of which the newspapers which support them can have no idea, and of which, it is equally clear they have no idea themselves. Meanwhile, for the purposes of this paper, I am content to depend on the case of Palmer alone, as a case which, since it puzzled half-a-dozen medical men, would certainly have puzzled the all-sufficient expertwhoever he may be-depended upon by the Cremation Society !*

* So important is this matter of the "death certificate" held in Germany that, when two or more experts disagree on the point, the case is referred to a special court consisting of the most eminent men in the country and only

V.—CONCLUSIONS.

I have now done, and the conclusions I have arrived at-many of them I may say forced upon me-are as follows :---

1. That owing to the one-sided statements put forth by the Cremation Society, a very general impression has been created that there is only one kind of burial and only one remedy for it—cremation; a statement which is entirely misleading.

2. That this belief has been greatly assisted by the systematic suppression on the part of an influential portion of the Press of all effectual answers to the cremationists' statements, and that, in this way, the country has become flooded with these unopposed statements.

3. That the Government, as represented by the divided authority of the Home Office and the Local Government Board, is equally to blame for allowing the abuses I have pointed out to go on, and is, therefore, to that extent, responsible for the cremationist agitation.

4. That burial, as at present carried out in coffins which prevent the resolution of the body, is equally a reproach to the intelligence of the country and to the Government that permits and even prescribes such a practice.

5. That to make the practice of burial perfectly harmless and to do away with all excuse for cremation, nothing more is necessary than to take this matter of the coffin out of the hands of the undertaker, and to make its structure and composition a matter of municipal regulation.

decided on their report. This court at Berlin is at the present moment actually composed of MM. Virchow, Professor of Pathological Anatomy; Hoffman, Director of the Chemical Institution; Bardeleben, Professor of Surgical Clinique; Quincke, Geh. Med. R.; Skarzecka, Professor Extraordinary; Eulenberg, Geh. Ob. Med. R.; Westphall, Clinical Professor of Mental Maladies; Kerstandt, Geh. Ob. Med. R.; Schroeder, Clinical Professor of Obstetrics; V. Bergmann, Professor of Clinical Surgery; Pistor, Polizei Præsidium. 6. That while burial, properly conducted, is a complete and perfect process leaving no *residuum* behind it, cremation is an incomplete and imperfect process leaving a considerable and very embarrassing *residuum* behind it—a *residuum* equal in bulk and weight to $\frac{1}{20}$ th part of the whole body, and for the disposal of which it makes no provision whatever.

7. That while the earth, properly used, is capable of disposing of any number of dead bodies, and of disposing of them silently and with advantage both to its own substance and to the air above it, the practice of cremation on a scale large enough to have even the slightest influence on burial, either as a rite or as a custom, supposes the necessity not of one but of many furnaces with tall chimneys, the use of which in towns no municipal authority in its senses would for a moment permit; and which in the open country would cause such a consumption and carbonisation of pure air as to render (changes of wind considered) a large area in the neighbourhood of such chimneys uninhabitable.

8. That Sir Henry Thompson's statement that burial, however conducted, is "a propagator of infection and a cause of increase in the zymotic death-rate," is absolutely without warrant and abundantly disproved by expert evidence from all parts of the country.

9. That water is not, as he has stated, a carrier of any one of the contagious diseases which comprehend the zymotic death-rate.

10. That bacteriology, so far from being adverse to burial, is distinctly in favour of it.

11. That Sir H. Thompson's further statement made at the Congress of Hygiene and Demography, as to the number of exhumations made and of murders discovered by them, is equally incorrect, unless he counts Palmer's six cases as one, De Trouville's seven as one, Higgins and Flannigan's ten as one, Cotton's twenty as one, and so on.

12. That the natural destination of all organised bodies that have lived and that die on the earth's surface is the earth.

13. That the evils supposed to be inseparable from the principle of interment are independent of that principle, and of our own creation.

14. That the source of these evils is to be found, not in the burial of the dead, but in the unreasoning sentiment which prompts us to keep them unburied as long as possible, and then to bury them in such a way that the earth (and the air) can have no access to them.

15. That the principle of burial supposes the resolution of the body by the agency of the earth to which we commit it, and that the earth is competent to effect that resolution, and to effect it innocuously.

16. That to seek to prevent the beneficent agency of the earth by enclosing the dead in imperishable coffins, brick graves, and vaults, is in the highest degree irrational, since it engages us in a vain resistance to an inevitable dispensation, and has led us to accumulate in our midst a vast store of human remains in every stage and condition of decay.

17. That unwarned and undeterred by the magnitude of the evils we have thus created, we are still engaged in extending and perpetuating them.

18. That were the dead only properly buried, not one of those evils would have any existence, not a single dead body would remain to encumber the soil, and a quantity of land of incalculable value, now hopelessly alienated, would be liberated for purposes of hygiene and of utility.

19. That the remedy for such evils is, therefore, not in cremation or in any of the alternatives that have been proposed for burial, but in a sensible recognition of, and a timely submission to, a well-defined law of nature, and, since some of these alternatives are dangerous, in legislative action to enforce the provisions of that law.

20. That the destruction, by cremation, of all demonstrable evidence of the cause of death—of all such evidence, that is to say, as is only to be obtained by the exhumation of the body—is a danger to society, and an arbitrary act on the part of an irresponsible body of persons, which ought to be at once made the subject of competent investigation, and, if its dangerous character is recognised, declared illegal.

It would therefore seem that what is wanted is not a Bill to regulate cremation-which, on the contrary, as a measure of public safety, ought rather to be at once declared a misdemeanour—but a Bill to regulate and ensure safe and proper burial; which Bill, to be effectual, should, besides dealing with the whole subject of cemeterial management, contain the following provisions :—

- (1) For burial within the earth as the only legal mode of disposing of a dead body.
- (2) For a limitation of time beyond which it should be illegal to keep a dead body unburied.
- (3) For the illegality of strong coffins, brick graves and vaults, and of all contrivances having for their effect to retard resolution, and to confer on the dead a tenure, practically illimitable, of the soil which is necessary to the purposes of the living.

F. SEYMOUR HADEN.

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