may well be proud of the achievements which are so faithfully recorded in it.

ART. II.—Bidrag til Belysning af Asphyxien og Døden, navnlig fra et hygieinisk og forensisk Synspunkt. Af P. A. SCHLEISNER, Dr. med., Stadslege i Kjøbenhavn. Kjøbenhavn, F. Hegel, 1868. 8vo. Pp. 94.

A Contribution to the Elucidation of Asphyxia and Death, especially from a hygienic and forensic point of view. By P. A. SCHLEISNER, M.D., Municipal Physician in Copenhagen.

The writers who, according to the author, have treated the subject of apparent death most scientifically and impartially, are Louis,1 Sommer,2 Bouchut,3 and van Hasselt.4

The first inquiry to which Dr. Schleisner directs his attention is, whether the accidental interment of living persons has really occurred so often as has been stated. He shows that most of the stories of this kind have, on due investigation, been refuted. It would appear, in fact, that there is on record in France only one authentic case of this nature which has been confirmed by a trustworthy physician, and that this dates back more than 100 years. The author believes that in the present day such an occurrence could scarcely take place, except in cases of sudden or violent death, and under unusual circumstances, as in great fields of battle or during destructive epidemics. But even under such circumstances the danger of interment during life is, in our civilised age, exceedingly slight, when so great care is taken of the wounded in battle, and when epidemics do not occur with the overwhelming violence and malignancy of former centuries.

The author considers the very general belief in the frequency of apparent death to depend on the assumption, more or less well founded, of the uncertainty of the signs of death; on the want of sufficient scientific inspection of the dead; and lastly, on the more or less perfect legal regulations prevailing in different countries as to the period of interment.

As to the signs of death the principal are: cessation of the

1 ‘Lettres sur la certitude des Signes de la Mort,’ Paris, 1752.
2 ‘Dissertatio de signis, mortem hominis absolutam ante putredinis accessum indicantibus.’ Partes I, et II, Hauniae, 1833.
3 ‘Traité des signes de la Mort,’ &c. Paris, 1849. Crowned by the Institute of France.
4 ‘Die Lehre vom Tode und Scheintode.’ Bd. 1, Braunschweig, 1862.
heart’s action, cadaveric spots and rigor mortis. These must be considered as sufficient proof of death; and Dr. Schleisner does not hesitate to express his conviction, “that when all these signs, or only two of them co-exist, death is certain.”

“The latter two constitute the transition to the first sign of putrefaction, which consists in a bluish green discoloration of the skin, especially in the groins and on the abdomen, a discoloration ascribed to the effect on the colouring matter of the blood of the sulphuretted hydrogen developed in the cavity of the abdomen (Rokitansky) or perhaps of the ammonia.” (Pp. 22-23.)

It is evident that death can be positively certified only by a medical man. Hence all writers who have treated of this subject agree as to the necessity of the rule, that no one should be buried without the inspection and certificate of an authorised physician. In France the organization for the verification of deaths, which had previously been confined to Paris, was, by a circular of the 24th December, 1866, extended, with some modification, to the country districts.

The machinery in the capital is as follows: in each of the arrondissements of Paris are three or four medical vérificateurs de décès; in addition there are for the whole city four medical inspectors, and finally there is a committee of inspection of the verification of deaths, composed of the Prefect of the Seine as president, different members of the Municipal Council, two physicians, one being the Dean of the Faculty, and some other professional members—in all eleven members. The committee is to meet at least once a month in the Hôtel de Ville, to consult respecting the reports received from the medical inspectors, who likewise are members of the committee. The honorarium of the vérificateurs is fixed at two francs for each certificate of death.

In England the same object is attained partly through the institution of coroners for sudden and violent deaths, dating from the time of Edward I, and partly by means of the civil registration of deaths. England had formerly the honour of being the only country in Europe which had carried out, so far as possible, a medico-scientific system of death certificates. In 1856 there were in England and Wales in all 324 coroners (of whom a great part were medical men), the cost of this institution amounting in that year to £67,000, of which £29,068 went for coroners’ fees. The civil registration was established for England and Wales by the Act of the 17th August, 1836, for registering births, deaths, and marriages, which was subsequently extended to Scotland and Ireland. Dr. Schleisner remarks upon the “singularly permissive” nature of English
legislation, which so often has a "may," where we should expect a "shall," and he expresses his surprise that the certificate of registration is not made the express condition on which interment should be allowed. Stillborn children are not registered, &c., but he adds:

"It must, on the other hand, be admitted, that this institution, under the uncommonly talented guidance of the celebrated statistician, Dr. W. Farr, who, though not by name, is in reality the chief of the general registration—has attained to great perfection. This result is due especially to a judicious use of the 7th and 25th sections of the Act, but also to the benevolent interest with which all the medical men of the country, recognising its great importance to the public health, have afforded their co-operation." (P. 27.)

Dr. Schleisner quotes Dr. Farr’s Report, to show that, for the whole of England and Wales, seventy-nine per cent. of the deaths are certified by medical men, four per cent. by coroners, and seventeen per cent. without the intervention of medical men, while in London the proportion is still more favorable, ninety-two per cent. of the deaths being registered on medical certificates, five per cent. by coroners, and only three per cent. without medical certificates, a result which, he adds, no other country in the world can show, and which is the more surprising, as the number of those who die yearly in England of want andprivation—a cause of death now quite unknown in Denmark—is not so very small. Nevertheless, Dr. Farr is anxious to effect a special medical registration for the fraction of deaths at present unattested by medical men, a proposition which will more than double the cost of the institution, raising it from £41,350 to £91,350 per annum. This change Dr. Schleisner hopes to see carried out.

On comparing the French and English systems, the author gives unqualified preference to the latter. The plan of receiving certificates from those who have not had the deceased under treatment during life, he condemns as being calculated to lead to many errors, while it is extremely galling and inconvenient to the respective families, is very costly, and implies a mistrust in the whole medical profession in France, which is almost inexplicable. "The English system is much simpler and more certain with respect to the determination of the causes of death, and security for the discovery of concealed crimes is obtained by means of the coroner’s inquest."

In Denmark it is only in the market towns that the deaths are attested by a physician; in the country parts this is done by the inspector of the dead appointed by the "Amtmand," a superior revenue officer having jurisdiction in certain cases.
This is, of course, a state of things which calls for reform. The arrangements for the investigation of violent and sudden deaths are also very defective; and therefore, to illustrate this part of his subject, the author proceeds to lay before his readers some statistics bearing upon it, derived from other countries, and "especially from England."

The facts he brings forward are quoted from the coroner's returns, as given in the average for the five years 1852-56 in the Nineteenth Report of the Registrar General. Upon these facts he remarks, that

"This review gives an insight into the whole social life of the English people, greater and more complete than that which even a detailed description of the customs and manners of the people could supply. We see from it, among other things, that it is with very great sacrifices that England gains the prize of being, in an industrial and material point of view, the most advanced people in Europe; and it is really the case, as Mr. Farr has somewhere remarked, that this large number of violent deaths has the same effect for England, as if she every year carried on the most bloody war. But as statistics have been able to unveil this side of English life, they have also placed the Legislature and the Administration in a position to adopt such regulations as year by year, in part at least, diminish and obviate these calamities. This is so far the case, that the manifold hygienic agencies, which in this direction are met with in England, may be said to be based upon the results deduced from the statistics of mortality, of which the Registrar-General's various reports bear so many and such eloquent proofs." (P. 35.)

Dr. Schleisner calls attention to the fact, that of the deaths by violence in England, so large a yearly number as 401 is due to the administration of poison. A still more surprising and indeed appalling circumstance is, that of these 286, or nearly three fourths, should be the result of accident. The author's remarks on this point deserve special attention. He shows that this wholesale accidental poisoning does not proceed from an excessive use of poisons in trade.

"On the contrary it will be seen," he says, "that laudanum, opium, and morphia, prussic acid, mercury in combination in different secret remedies, (as Godfrey's cordial and Morrison's pills), and unsuitable medicines, and too large doses of medicines have, out of the yearly average, made up the considerable number of 143. This remarkable result depends upon circumstances peculiar to England, especially the want of a protecting anti-quackery law, and the fact that in England pharmacy is a free trade." (P. 37.)

It is curious that in the criminal use of poison a certain fashion seems to prevail in different countries. Thus, while in
England opium occupies the first rank in the accidental, suicidal, and partly in the criminal poisonings, arsenic has in France continued to play the same prominent part in criminal poisonings, which it has held since the middle ages, when, as is well known, it constituted the principal ingredient in the "Cantarella" of the Borgias, and in the later famous or rather infamous "Aqua Tophana." In France, however, phosphorus seems now to be replacing arsenic. From a statement of the Prussian judicial chemist, Dr. Sonnenschein, it would appear that in his country nine tenths of the poisonings are nowadays attributed to prussic acid and cyanide of potassium (Deutsche Klinik, No. 13, 1867, p. 119).

"The reason why opium in England so frequently gives rise to fatal poisonings, must be sought partly in the fact that this potent medicament can there be obtained without a prescription in any chemist's shop, and partly in the bad habit which prevails, especially in the manufacturing districts, of quieting crying children with opium drops." (p. 39, note.)

The author next directs attention to a very important class of poisonings, the most dangerous of all, and which seems to have been very much overlooked by toxicologists, namely, poisoning at second hand, by the use of the flesh of animals poisoned by the administration of strong medicines, or in some other way. A case, brought forward by Mr. Gamgee, is quoted from the number of this 'Review for January, 1865,' p. 34, in which 107 persons suffered from partaking of the flesh of an ox to which two ounces of tartar-emetic had been given. The pig is, however, the animal which is most frequently exposed to poisoning; and the author mentions instances in which large numbers of swine have been lost from meeting with poisonous matters in offal. There are thus three ways in which pork may become dangerous, by communicating trichinosis, splenitis (miltbrand) and poison (especially phosphorus, arsenic, and antimony). Of these Dr. Schlesiner considers the uncomplicated trichinosis, the mode of death in which is far from being satisfactorily explained, to be the least dangerous.

As deaths by poison are very frequent in England, the same is undoubtedly true of modes of violent deaths in general, which scarcely occur in the same proportion in any other country, not even in Belgium. An exact international comparison is, however, extremely difficult, as the official reports are not drawn up upon the same plan, and it is greatly to be desired that an uniform system of statistics should be, without delay, adopted in all countries, especially with regard to those causes of death which may be considered to be of predominant im-
portance in a hygienic, forensic, and economico-social point of view. These are—1. Deaths from epidemic diseases. 2. Violent and sudden deaths; and 3. Deaths from diseases which may be considered as eminently calculated to deteriorate race—syphilis, glandular and pulmonary phthisis.

We have dwelt so long upon the first three chapters in Dr. Schleisner’s important and interesting work that the space at our disposal will not admit of our doing more than stating the subjects of the remaining two. In the fourth he treats of the danger, in a sanitary point of view, of permitting a prolonged interval to take place between death and burial, and of the Danish legal regulations on the subject. In the fifth he speaks of asphyxia, or apparent death in the stricter limitation of the term; of the medical definitions of life, disease, and death; of the different methods of resuscitation; and he concludes his valuable brochures with an account of the operations of associations for the rescue of the drowned and of the apparently dead, and especially of the Royal Humane Society at its principal station under the able, experienced, and zealous direction of Dr. Christian, of Brompton.

Art III.—On the Physiological Relations of Colloid Substances.
By Arthur Ransome, M.D.; M.B. London. 1866. Pp. 22.

Dr. Ransome, in this paper, a reprint from the ‘British Medical Journal,’ of the 3rd of February, 1866, gives a brief summary of Dr. Graham’s very important observations on colloid substances which, in their vital relations, open a new and most interesting field of physiological research.

As compared with crystalline substances, “crystalloids,” they appear, to use Dr. Graham’s words, “like different worlds of matter, and give occasion to a corresponding division of chemical science,” the distinction between them being that subsisting between the material of a mineral, and that of an organized mass.

From the facts already established, it seems highly probable that the inquiry carefully conducted may afford explanations of many vital processes at present but imperfectly understood,—such as digestion, chylification, secretion, excretion, and may shed light on some of the obscure problems of pathology as well as of physiology. Much caution and reserve, however, we need hardly remark, will be required in reasoning on forces so unstable and obscure as those which are concerned in all opera-