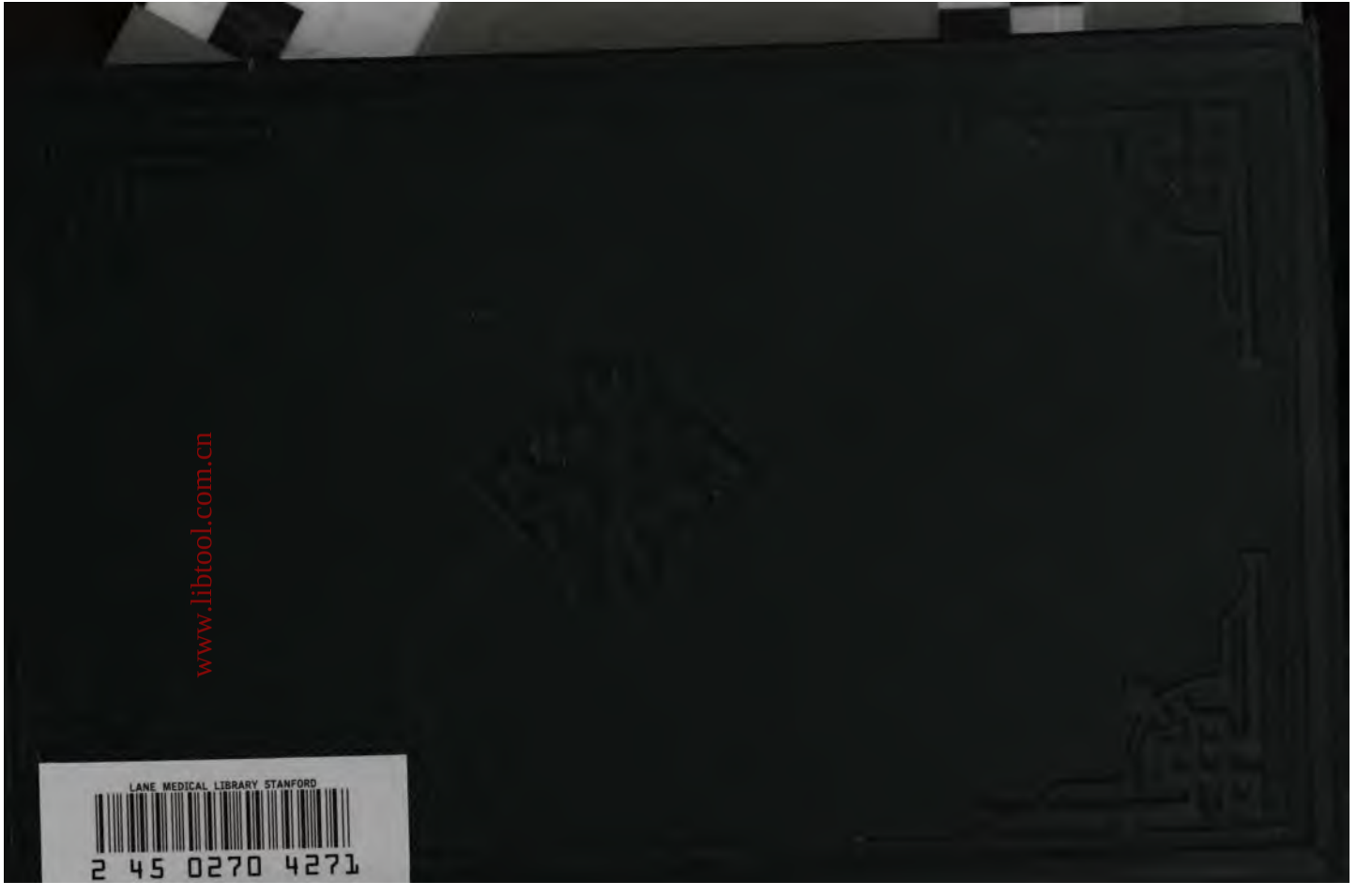

By Dr. A. E. M. Purdy.

Of N. Y. Feb 1890

A. E. M. Purdy

DOCTOR IN MEDICINE:

AND

OTHER PAPERS

ON PROFESSIONAL SUBJECTS.

BY

STEPHEN SMITH.

NEW YORK:
WILLIAM WOOD & CO.,
27 GREAT JONES STREET.
1872.

The papers contained in this volume were originally contributed to various periodicals.

CONTENTS.

I.

DOCTOR IN MEDICINE.

A GRAVE question must ere long present itself for the consideration of the medical profession of this country, on the solution of which will depend its character at home and its position abroad, viz., By what title shall a practitioner of legitimate medicine be recognized? What shall constitute a Doctor in Medicine? Hitherto it has been deemed sufficient that an applicant for admission to a regularly organized society should present credentials showing him to be a graduate of a chartered medical college, or a licentiate of a County or State medical society. But the ease with which charters are now obtained from State Legislatures for every nondescript association of men, whether for proper or improper purposes, has effectually broken down these safeguards to respectability, and thrown widely open the field of medicine to every one who desires to enter and profit thereby. With the single and most honorable exception of the State of North Carolina, we are not aware that any State has laws protecting the domain of scientific medicine from the intrusion of lawless adventurers. It will ever redound to the honor of the old North State,

that her legislators have shown such wisdom and intelligence, in ordaining that no one can assume the office of physician within her borders, who has not passed an examination before a State Board of Medical Examiners. In our own State, not only is the utmost license given to every species of charlatanry, but the chartered institutions of irregulars are placed on the same level with others, and the one may, by a civil process, even be compelled to receive into membership the graduates of the other. The recent attempts to establish a Homœopathic Professorship in the Michigan University and the efforts of this class of practitioners to obtain positions in hospitals, are indications of approaching evils that we would do well to heed, and, by timely action, avert. Our attention has been especially called to this subject by the recent application of several graduates of Homœopathic Colleges in the United States, to the British Medical Council, to be registered under the clause admitting graduates of Foreign Universities. The council found itself in a quandary, but finally referred the matter to the Attorney-General to advise the Council as to its duties. It is not difficult to predict the result of this inquiry; the institutions referred to will be found legally authorized to confer the degree of M. D., and the applicants will, doubtless, be admitted to registration. It may be a serious defect in the Registration Act, which is designed to distinguish qualified from unquali-

fied practitioners, that the Medical Council has not power to decide as to the *character* as well as to the legal status of the Foreign University from which the applicant claims to have graduated. But this does not concern us so much as the question which has, in fact, been put to us by this action of the Medical Council, viz.: What constitutes a Doctor in Medicine in the United States? We should answer truly if we replied: The assumption of the title M. D. Neither the law nor the public require more, and both unite to protect the pretender in acting out his assumed character. But to be more exact in the definition, we should answer: Any institution or society which has the power granted it, in its charter, of conferring the degree of M. D. The laws in this country do not differ in this respect, we believe, from those of other countries, except in these important particulars: Charters are granted by our State Legislatures to any and every body of men, for any and every conceivable purpose, without restriction or reserve; while abroad, great discretion is exercised both as to the object of the corporate body, its necessity, and its character. Its powers are carefully limited, and it is jealously watched that it fulfill its duties. With us the case is widely different. At nearly every session of our State Legislatures a brood of medical institutions are chartered embracing every conceivable shade of quackery, all equally with the schools of legitimate medicine

entitled to confer the degree of M. D. and to represent themselves abroad as Universities. We shall leave the Medical Council to settle this question as they think proper after hearing the opinion of their legal adviser. We may, however, assure our brethren abroad that, in the United States, the title of M. D., in a legal sense, is a misnomer, and that the term university is applied equally to our most honorable and useful institutions of learning, and to corporations utterly unworthy of the association of the term—science. To the medical profession of this country we put the question: What is to constitute a Doctor in Medicine among us, and by what title or insignia shall an American physician be distinguished abroad? Had we but one legislative body before which we could lay our grievances, we might seek and obtain enactments defining who are, and who are not, qualified practitioners of medicine. But as we must appeal to our State Legislatures, so fickle in their action, and so much under the influence of the prejudices of the moment, it is idle to waste time in seeking legal protection. The barriers erected one year with labor and care, are the next levelled by the first breath of opposition. But happily there is a power among us whose jurisdiction extends to the remotest limits of our country, and whose decision will be respected. That power is the American Medical Association, our National Medical Congress. Standing as the recognized

representative body of legitimate medicine in this country, high above all law, and enforcing its mandates by an inherent moral force, it can legislate for its own protection, and no evil influence can reverse its measures, or thwart its designs. This Medical Congress has the power to determine what title shall hereafter designate the practitioner of legitimate medicine, and to this body the profession must make their appeal. Perhaps the simplest method of attaining the desired end would be by a certificate of membership of this National Association and an appropriate title. We could thus at once separate the herd of pretenders, and give to each person bearing such title and certificate, an honorable distinction at home and abroad. But whatever plan might be adopted, the necessity for action is becoming daily more and more pressing, and can not much longer be delayed, if we would rescue the profession from a position so anomalous that the false can not be distinguished from the true, by our foreign brethren. And we believe that such distinctive title would tend powerfully to elevate the rank and general character of medical men in this country, as it would be eagerly sought after by every respectable and qualified graduate.

II.

EMPLOYMENT OF ANÆSTHETICS.

THE discovery of anæsthetics was universally hailed as a great and unqualified blessing to the victims of unavoidable pain. The year of the announcement of the power of ether to render the patient insensible under the hand of the operator, was distinguished as the *annus mirabilis;* it began a new era in the history of operative surgery, and the older surgeon, in the language of the elder Warren, "wished again to go through his career under the new auspices." We can well imagine with what enthusiasm he who had been accustomed to struggle through difficult operations on patients forcibly held, now pursued his dissections as on the cadaver, and saw the patient, on the completion of the operation, suddenly restored to a full possession of all his faculties, as if by magic. And when, a year or more after these first experiments with ether, chloroform was introduced to notice, so agreeable to the senses, so prompt in its action, and so harmless in its effects, the perfection of anæsthetic agencies was thought to have been attained. But every good must have its corresponding ill. It was soon announced that a lady, sitting in a

dentist's chair, had suddenly expired while inhaling chloroform preparatory to the extraction of a tooth. A second, third, and fourth case was reported, and always previously to some trivial operation. The faith of its friends, however, remained unshaken, and these unfortunate results were attributed to the attending circumstances, and not to the anæsthetic. At length fatal cases began to occur occasionally in hospitals, in the presence of eminent physicians and surgeons, and in spite of their previous precautions, and efforts to resuscitate the victim. Finally, the fact seemed established beyond a peradventure, that chloroform is not an innocuous agent, even under circumstances apparently the most favorable for its administration, by the occurrence of a fatal case (in a dentist's chair, however), in spite of the persistent and well-directed efforts of Professor Simpson himself to restore animation. It can now no longer be denied that anæsthetics are followed by unpleasant and occasionally fatal effects in a given number of instances. The latest statistics that have been published are as follows: Total fatal cases in Europe, one hundred and twenty-five. When we take into account the aggregate of cases of anæsthetization during the last sixteen or seventeen years, of their almost universal use in hospitals, and in private practice, this mortality is a percentage of the whole number of cases positively infinitesimal. It is doubtful if any active remedy of the materia medica

can show a better record. The recent death by chloroform in Bellevue Hospital has, we understand, raised the question in the Medical Board as to the propriety of allowing this agent to be longer employed for purposes of anæsthesia in that institution. Before this question can be properly decided, the comparative merits of ether and chloroform must be considered, for anæsthetics in some form are now indispensable to the practice of operative surgery and midwifery, and can never be discarded, even though the mortality from their use were tenfold its present percentage. And before chloroform is stricken from the list, it were well to inquire as to the real sources of danger for its use, for if it is demonstrated that under certain circumstances it is as safe as any anæsthetic, every surgeon will, under such circumstances, prefer chloroform. The comparative merits of ether and chloroform, as anæsthetics, it is not easy to decide. The statistics which we have given above show, that of the one hundred and twenty-five fatal cases from anæsthetics in Europe, twenty-five occurred during the inhalation of ether, and one hundred of chloroform, giving a mortality from the latter equal to four-fifths of all the cases. Although chloroform would seem by this exhibit to be the more fatal anæsthetic, yet a moment's reflection will convince any one that it may not even approximate the truth, for we have no knowledge of the percentage of deaths to the number of cases of

administration of either agent. It might, and probably would appear, could we sift this subject thoroughly, that chloroform had been given four times as often as ether during that period. We may, however, arrive at a very satisfactory conclusion as to the safety of chloroform, by taking the gross number of cases of its administration in certain well-authenticated instances, and noting the results. For example, it was given twenty-five thousand times by the French, in the Crimean war, without a single fatal issue. It is freely used in midwifery by many eminent English and American obstetricians, and, we believe, no fatal case has yet been reported in this department of practice. Professor Simpson is stated to have used from five to seven gallons annually for some thirteen years, without an unfavorable result. The real sources of danger in the employment of chloroform have not been sufficiently studied. Authors mention: 1st, *A full stomach;* for vomiting being a common symptom in chloroform inhalation, the patient is liable to be suffocated. 2d, Affections of the nervous system, as delirium tremens, epilepsy, hysteria, etc. 3d, Affections of the vascular system, as fatty degeneration of the heart, atheromatous deposits, etc., etc. We do not propose to discuss these alleged contra-indications to the use of chloroform, as it is by no means as yet established how far these conditions are to be regarded as complicating its effects. We believe, however, that it was main-

tained by the late Dr. Snow, whose opinion on all subjects relating to chloroform is entitled to our confidence, that even when lesions of the nervous and vascular system do exist, chloroform properly administered, is far less dangerous than an operation without an anæsthetic. From some recent investigations as to the nature of death from chloroform, the following interesting facts appear: 1st, That the great majority of deaths (two-thirds) occur in slight operations, and those performed on sphincters, in tenotomy, strabismus, tooth-drawing, etc., etc., but few during the larger operations, as amputations, resections, ovariotomy, etc. 2d, In the majority of fatal cases by chloroform, death occurred before the operation,—during the first stage of inhalation—the stage of excitement. 3d, That the deaths that have occurred after the operation, and were attributable to the anæsthetic, have generally been when ether was slowly administered, or ether and chloroform, but not pure chloroform. Without dwelling on these subjects, which are all of the deepest interest to those who are discussing the question of the relative or actual merits of the different anæsthetics, we shall allude to what we consider, if not the real, certainly a great source of danger in the use of anæsthetics in general, and chloroform in particular, in our hospitals. We refer to the gross and culpable carelessness of their administration. Rarely is the patient carefully examined by a competent person to determine if

there be any contra-indication to the use of anæsthetics—a point that should never be neglected. The delicate and most responsible task of administering the agent is usually committed to a junior physician, who has no knowledge whatever of the nature of his duties; he knows nothing of the different stages through which the patient is to pass, or of the value of the symptoms which appear during the administration; his inhaler is a towel well saturated, and directions often are to apply it directly to the face. The stage of *profound coma* having been reached, the operator seizes the scalpel, and all eyes are directed to its movements; the innocent junior, all absorbed in the operation, forgets his duty, unconsciously drops the towel upon the patient's face, and occasionally adds the weight of his body, to its suffocating effect, as he leans forward in the anxious pursuit of knowledge. At length a moan, or the collapse of the jetting arteries, or the suggestion of a bystander more interested in the sufferer than the operator, recalls attention to the condition of the patient. Naturally enough he has ceased to breathe; the operation is suspended; the messenger is dispatched for brandy; and in the mean time artificial respiration by the most improved method is attempted by every available means. Fortunately the patient is generally resuscitated, at least sufficiently to have the operation completed, and be taken to the ward. We do not here give

an overdrawn picture, for such scenes if haply not more unpleasant, may be witnessed in our hospitals almost weekly. The reform should commence with the mode of administration of these agents. A physician of known ability should be selected to administer the anæsthetic; we say physician, because he will not become so much interested in the operation as to forget his duties. In large hospitals where operations are frequent, it would be an act of prudence to appoint a competent physician for this special duty. To his care should be committed, so far as practicable, every patient who is about to submit to an operation. This is but that precaution which every surgeon exercises in private practice, and hence the few cases of deaths from anæsthetics which occur outside of our hospitals. If this degree of care is exercised in our hospitals and still fatal consequences follow the use of ether or chloroform, or both, the question may well be raised as to the propriety of rejecting the more dangerous.

III.

PHYSICIAN AND APOTHECARY.

THE memory of many now living can recall the time when the physician was his own apothecary, his person all redolent of the composite aroma exhaling from the health-giving preparations which distended his ample portmanteau, and the daily entry in his ledger gave as prominent a place to pill and potion as to professional advice. In the good old times when cinchona bark, in spoonful doses, was the standard febrifuge, and calomel and jalap the officinal stimulant of torpid livers and sluggish bowels, the first lessons of the youthful candidate for Esculapian honors were in the use of the mortar and pestle, and much of his subsequent tuition consisted in acquiring the art of expertly moulding the pill at his fingers' ends. There was then little need of laws against the importation of impure drugs, for the physician selected each individual article, as he selected his lancet, according to its potency. There was then no more doubtful interpretation of the action of the pill than the lancet; if the latter refused to cut, the fault was charged to the temper of the steel, and not to a change in the type of the disease,

or a constitutional peculiarity of the patient; and so of the pill, if it did not produce its desired effect, it was esteemed inert, and cast aside as refuse. Purity in the drug market was then a necessity, for the purchaser applied it directly to its proper service, and personally tested its efficacy, equally as does the husbandman the quality of the seed which his own hand casts into the soil carefully prepared for it. But among the many divisions of labor which the progress of civilization induces, is that of physician and apothecary, in dispensing remedies to the sick. The increase of our cities, especially in wealth and in the refinements of a higher social state, has called into existence a class of shop-keepers who have monopolized the business of compounding and dispensing medicines. It will at once occur to every reflecting reader, that this division of labor is of great importance, not only to the progress of pharmacy, but equally to that of practical medicine. While these two departments remain united in a single profession, little improvement can be expected in either. The former will almost universally be regarded as wholly subordinate to the latter, and receive no other attention than is deemed necessary to success in the general practice of medicine. And yet that attention which the practitioner is required to give to the selection and preparation of drugs, withdraws him from the close and accurate study of those more recondite subjects on

which the progress of medicine depends. If we contrast the progress and present position of these departments in countries where they have been separated, with others where they are still more or less united, these statements are readily proved. In France and Germany the pharmaciens, or dispensing chemists, have long been a distinct class; they are compelled to qualify themselves by a thorough academic and pharmaceutical education, and then follow their chosen business exclusively. The result is seen in the elevation of this class as a scientific body, for as its representatives we may mention the names of Liebig, Robiquet, Pelletier, Persoz, Dumas, Trommsdorf, Varentrapp, Fresenius, etc. Their innumerable and invaluable contributions, not only to pharmacy but to all departments of chemical science, will occur to every reader. The part which these eminent pharmaciens take in the routine of the druggists' business, and the social and political rank to which they have attained, are well given in the following anecdote by Mr. Mackay, of Edinburgh:

"Professor Christison repaired to Paris about thirty-four years ago, to study practically the higher branches of chemistry. His adviser there, the late eminent physiologist, Dr. Edwards, recommended, to his surprise and amazement, that he should place himself under the tuition of a Chemist and Druggist. The Professor's surprise, however, ceased, when he found he was to have for his teacher, under the designation above given, the late amiable, inventive, scientific Robiquet. M. R.'s dwelling communicated with his

boutique or shop, where he superintended an extensive dispensing establishment, and with his laboratoire, or Chemist's laboratory, he, in immediate contact with the ordinary routine of trade, carried on with unwearied enthusiasm those scientific researches by which the name of Robiquet will ever be distinguished among the most successful cultivators of chemical science. As if to make the nothingness of Pharmaceutists in this country at that time complete, the Professor further states it required little acquaintance with French chemistry to perceive that this distinguished Chemist was the type of a class in France numerously representing the higher walks of the profession of Pharmacy, men to whom the world has since assigned the most elevated rank as chemical discoverers in a field equally rich in scientific and practical results. Some of these Pharmaciens or dispensing Chemists of Paris attained to the rank of Members of the French Institute, the rarest and highest of all purely scientific honors in Europe."

The reciprocal advantages which practical medicine derives from this entire monopoly of the Pharmaceutical art by a distinct class of eminently scientific men, may be seen in the activity of the investigations in every branch of medicine in these countries. In Great Britain, the apothecary is still the medical practitioner to the masses, and as a consequence the status of pharmacy is very low, and affords the most striking contrast to that of the continent. The position and character of the pharmaceutists of our own country are in a transition state. Such is the state of the medical profession, so low the standard of education required of practitioners, and so large the number who annually enter its

ranks, that the general practice of our large towns is entirely monopolized by regularly graduated physicians, and the apothecary is necessarily almost entirely excluded from the practice of medicine, and compelled to confine himself to the business of his shop. But a new evil springs from the limitation of his occupation; finding, in the immense competition to which an unrestricted license to practice as an apothecary gives rise, that the dispensing of medicines on prescriptions pays but poorly, he becomes the retailer of nostrums, and at length extends his business to the sale of any article which the public taste may require. Accordingly, he converts his store into a dazzling bazaar, whose gaily decked windows excel, by day, in variety and novelty of article, those of the neighboring toy-shops, and whose brilliant and variegated lights vie, at night, with those of the oyster saloons. Here everything of a fancy nature finds a place. In no establishment, save a pawnbroker's shop, can be found such a collection of heterogeneous articles as in one of our attractive retail drug-stores. But the American Apothecary, intent upon gratifying every taste of his customers, does not always stop with the fancy trade, but extends his business to the gratification of the pleasures of the palate, and over his counter retails liquors of the same impure quality as his drugs. In this connection we can not forbear quoting the description of a

prominent house in Boston, a "Gem of a Drug Store," as it is entitled by a correspondent of the London *Chemist and Druggist*, but which is a fair description of such stores generally, so far as the proprietors are able to furnish them.

"This shop, which has been recently opened, is located on the spot dear to all doctors, druggists, and tavern keepers—the corner lot; and its beautifully variegated marble-paved entrance can not fail to strike the most unobservant. On entering you find the same paving continued right through; counters also of marble, handsomely carved and panelled with mirrors, and interspersed at top with deep show-cases with silvered mountings. The counter scales are also sunk in the marble, the only portions visible being the pans and parts of the arms; the weights fit into vulcanite cups sunk in the counter, and, like the entire metal work, are electroplated. Of course the never-failing soda fountain appears; it is made of cased ruby glass, handsomely cut, and electroplated inside. The shelves are fitted at back with mirrors, and supported by Scagliola columns; the bottles are of varied colors, and labelled in gold in a very elegant style. Pots are supplanted by shouldered glass jars labelled to match the bottles, grooved in the lids, and lined with India-rubber; the jars are rendered perfectly air-tight by having their necks fitted into the grooves. I was shown some glass show-jars about twelve inches high, the cutting of each of which took about seven days. The stock being quite fresh and tastefully arranged, produced, in conjunction with the fittings which I have attempted to describe, a beautiful appearance. Lubin's Extract, Child's Hair Brushes, Prout's Tooth Brushes, Ede's Crimson Ink and Diamond Cement, and the various novel niceties of Morgan Brothers (all of which seem to have obtained a great reputation out here) caught my eye. The shop, though by no means

large, occupied the proprietors nine months in preparing, and cost them over £3,000; and they now have the satisfaction of transacting a thriving business in the most original and handsome store in America."

The above sketch affords a melancholy proof of the low state of pharmacy in this country. Such a display is surely not intended to facilitate the dispensing of medicines, but is simply and solely designed to attract customers to the purchase of fancy articles. It may be inferred that an American apothecary is not a very brilliant ornament of the profession represented by a Liebig and a Robiquet. He is in fact but an ordinary shopkeeper, retailing drugs in addition to the other and more extensive branches of his business. Too often he has neither an academic nor pharmaceutical education, but enters upon his business, after an apprenticeship more brief and less thorough than that of the ordinary merchant's clerk. It is not surprising that, with such a class of apothecaries, adulteration of drugs, by every possible means, is as much a matter of business as the watering of milk by the dairymen. Nor need we anticipate any diminution of the homicides and suicides by poisons, whatever may be our laws, while our druggists, as desititute of moral and professional obligations as the common shopkeeper, regard strychnine as vendible an article as a tooth-pick. But the druggist is not alone in this abuse of his profession. Too often the physician, also, is a party

to the "tricks of trade," and prostitutes his own high calling to the low arts of gain, by conniving with the apothecary. It is not altogether a novel occurrence for physicians, of self-constituted respectability, regularly to emerge from an inferior drug-store in the vicinity of their residences and commence their daily round of visits from this low stand-point. It very frequently happens that patients are sent long distances to *my* druggist under the foolish pretence of the *cheapness* and *purity* of his articles, when, in truth, the physician and druggist have laid their heads together to cheat the patient, and share the proceeds of their crime. Indeed, the utterly disreputable and knavish practice of having a profit or percentage on their prescriptions, is still followed by physicians who would fly into a passion on being accused of stealing—a crime not more revolting to a truly conscientious mind. But low as is the grade of pharmacy with us, we have the most cheering evidences of reform. There is a band of earnest, enlightened men in that profession, who, scorning the low mediocrity toward which the mass gravitate, are nobly striving to elevate the standard of pharmaceutical education. In our larger towns, as Boston, New York, Philadelphia, Baltimore, St. Louis, Cincinnati, and Chicago, schools of pharmacy have been established, and regular courses of instruction are given by competent teachers. In addition to these schools, the basis of true reform, they have

established a national Pharmaceutical Association, which comprises upward of three hundred members, who are animated with that spirit of progress in the science and art of pharmacy, which must result in its renovation. Their annual gatherings are well attended, and the published proceedings of their meetings make a volume respectable in size, and replete with scientific information. We hail these cheering tokens of a better time coming for the profession of pharmacy. But medical practitioners are deeply interested in the educational qualifications of apothecaries, and can not remain idle spectators of the efforts of those who are struggling to elevate the character of their profession, and purify it from the gross abuses to which it is subjected by unworthy members. No respectable physician will withhold his assent to the following proposition: It is necessary to the successful practice of medicine to have educated and scientific apothecaries to prepare and dispense medicines. It follows then that physicians should patronize only that class of druggists who are educated. They should shun the herd of so-called apothecaries, whose brilliant show-shops adorn nearly every corner of our thoroughfares, and direct their patients *exclusively* to regularly educated or properly qualified pharmaceutists—in a word, to *graduates of the colleges of pharmacy*.

IV.

RECRUITS FOR THE PROFESSION.

THE opening of the schools inaugurates the medical session of the year. No annual event, properly considered, is of equal importance in the republic of medicine. Yet we fear that it too often passes unheeded by our profession, simply because its significance is not appreciated. Let us consider its bearing upon the future of American medicine. The four or five thousands of students who are now gathering in the schools throughout the country, are the recruits who are to replenish and swell the ranks of that army of practitioners which now numbers in this country not far from forty thousand. Is it of little consequence that these recruits are qualified by education, habits, and moral training for the peculiar service of the physician? They are to be our brethren, our equals, and in the progress of events they are to be the exponents of the character of our profession, and give it rank in the popular regard. If they are thoroughly qualified by previous education, and bring to the investigation of the abstruse science of medicine, minds well disciplined to patient study and accurate research, then will they become masters in its various departments, and

in subsequent life will sustain its reputation as a learned profession. If in addition to educational qualifications, they have correct morals, and sensibilities keenly alive to the sufferings of their fellows, then will they confirm its reputation as the most humane profession. But if the majority of those who are now about to enter our ranks have but a limited education, dissolute and profligate habits, and are seeking personal aggrandizement as the end and aim of life, then they will degrade the profession to which they belong in the estimation of all whose opinion is entitled to respect and consideration. Could we determine the character of the recruits that are to-day admitted to the ranks of the army, we could with certainty foretell the value of that army, when the struggle of the conflict comes. We need scarcely add that if we judge from the past, many who now enter upon their medical studies have no proper qualifications. We could wish that it were not so; that those who stand at the threshold of the temple as its guardians, would carefully scan the applicants for admission, and turn away to more congenial pursuits the ignorant, the immoral, the unworthy. Every association of men, for whatever purpose, guards vigilantly the door through which accession is gained to its ranks. The wisest and most trustworthy are stationed at the portals to examine each candidate that no improper person may become a member of its select body, and change the peculiarity

of its original organization. But the ancient and honorable profession of medicine gives little heed, in this country at least, to the character and trustworthiness of those who guard the portals of its temples. Unconcerned it witnesses the annual influx of members, and sees the most unworthy too often elevated to the privileges and honors of its order without a remonstrance. It is true that hitherto the profession, as a body, has lacked the organization, and consequently the power, to protect itself from these degrading associations. The field of legitimate medicine, like a wide domain imperfectly hedged, is guarded by mercenary sentinels, and thousands, unqualified, annually purchase admission, and with the most meritorious garner its rich fruits. But a better day is dawning upon American medicine, and a brighter era will ere long occur in its history. The profession at large has an organization which is already sufficiently powerful, were its forces but properly directed, to protect its own domain from further incursions. Through the medium of the American Medical Association, it can erect such defences as it chooses, and dictate, authoritatively, who may, and who shall not, be admitted to its highest privileges. That it can not compel the educating bodies, as by legal force, to scan more closely the preliminary qualifications of students, and indicate the standard of educational qualifications of graduates, is very true; but it can by suitable organization establish

its *own* standard of education, have its *own* examining body, and confer its *own* degrees. The exigencies of our times demand this of the American Medical Association; the honor, dignity, and character of American medicine are approaching a crisis which this body can avert. We may not now indicate the precise steps by which this great reform is to be accomplished, but that the initiatory step must soon be taken, and the work resolutely prosecuted to its consummation, no one who has at heart the honor of our profession can for a moment doubt. In the collection of medical schools which it was our privilege to present in the students' number, we have laid a foundation for rational speculation in regard to medical education in the United States. It not only affords the opportunity, much needed, of learning the advantages which the schools in different sections of the country offer to students, but what is of more consequence, we there learn the value which each school attaches to its diploma. This valuation indicates their standard of medical education. It is not our intention at this time to enter upon that critical examination of the subject of medical education, to which this collection invites us, but simply to offer some general conclusions which are apparent on a superficial examination. What will, perhaps, prove to the mass of readers the most marked difference in our medical schools, has a sectional bearing, viz. between the Northern and Southern schools. It

will be noticed that the fees in the Southern schools are uniformly high, those most recently established having a scale as high as the largest and most favored schools of the North. Among the Northern schools, the scale of fees varies from the lowest of the Southern schools to the price of the parchment for a diploma. If the scale of fees indicates anything as regards the estimate of the school of its educational advantages, and the value of a thorough medical education, this exhibition of figures shows a vastly higher appreciation of a medical education at the South than at the North. The next most striking feature in the schools is the almost universal interest now manifested in clinical instruction. This is indeed the most hopeful sign of the times. Heretofore the importance which the schools attached to clinical advantages depended entirely upon the facilities which their particular location happened to afford. The school so unfortunate as to have a situation distant from any hospital or infirmary, loudly decried clinical instruction, and many will remember that a venerable professor went so far a few years ago as to regard it as absolutely injurious to the student. Schools situated in our lake and seaport towns saw their advantage, and vaunted their facilities for clinical instruction, and, not unfrequently, published in their annual circulars a list of all the medical institutions of the town, many of which were not even open to a transient visitor. Although clinical instruction, as given in

our colleges and hospitals, lacks system, and is as inefficient as it well can be, still we attach to it so much importance, that we regard this evident desire on the part of the schools to afford such advantages to their pupils as in the highest degree encouraging. Again, it will be noticed, that nearly all of our most flourishing schools have large Faculties, and lengthened courses of instruction, several extending their terms to five months. This fact is worthy of notice, as it is due to the direct influence of the American Medical Association. In concluding these desultory remarks, which the opening of the medical session has suggested, we may add that a careful observation of the history of our educational bodies for the last few years, reveals certain inevitable tendencies which afford reliable data from which to cast the horoscope of the medical schools of this country. Clinical instruction is to become the *sine quâ non* in a course of medical education, and hence those colleges located in populous towns which abound in public medical charities, will make the strongest appeal to students, and gain the largest classes. Those cities, again, which offer to the schools the largest advantages for hospital practice, will become inevitably the centres of medical education. Nor is it difficult, in the light of the above facts, to indicate the cities which are to be crowned with this proud distinction. That different sections of our wide extended republic must have their own schools of

medicine, in which the differences of diseases dependent upon climate are to be especially taught, is evident. The North must have her own schools, and the South and West must have theirs. Already the Pacific coast constitutes a fourth climatic division which must have its schools. The great emporia of these grand divisions of the country must become the centres alike of commerce and education. We trust the day is not distant when the schools of the country, which from their location can not give clinical instruction, will be abandoned. They are in every respect a great obstacle to thorough education. Even if they did not have the power of granting diplomas, but merely served to instruct the student in the primary branches, no useful purpose would be gained. They are organized in the interest of a few persons who have no regard for the true welfare of the student; their aims are low, and the student begins his studies at a disadvantage which many can not overcome. We believe every medical student should enter the schools located in large cities, and pursue his entire course under the discipline which they enforce. Nor should his diploma be granted until he has attended a systematic course of clinical instruction.

V.

SUICIDE IN THE TOMBS.

A YEAR ago our citizens were startled by the occurrence of one of the most public and reckless murders in the annals of crime. In the latter part of a summer's day, on Broadway, at an hour when this great thoroughfare is crowded with pedestrians, a gentleman drew a pistol and deliberately shot a lady, the ball taking effect in the temple, and causing death at the expiration of several days. The homicide was witnessed by hundreds, and the murderer, arrested in the very tracks when the deed was committed, acknowledged that the crime was premeditated. But to go through the farce of a trial, he had to plead the bitter falsehood, "*not guilty*"—a legal fiction that has too often thwarted retributive justice—and was accordingly committed to the Tombs for *safe keeping* to await his trial. Meantime his counsel set earnestly at work to save their client from the doom that seemed impending, and the jolly public, satisfied that in due time it would be gratified with the details of another execution, peered occasionally into the prisoner's cell to ascertain that the victim was there, and thought no more of the matter. Some nine months after the

occurrence, the morning papers announced that this criminal had perpetrated self-destruction. Public curiosity was eager to know by what means an inmate of that sepulchral residence had been able to cheat the world of another hangman's tale. One of that quartette of coroners in which this city rejoices—ever vigilant on the scent of blood but never overtaking the game—forthwith set to work to unravel the mystery. Attended by a jury of his countrymen, resident in that delectable neighborhood, he proceeded with due ceremony to view the body, and determine by this enlightening process the nature of that peculiar visitation by which the prisoner had been so unexpectedly deprived of life. Whereupon it appeared that deceased had never been satisfied with the accommodations furnished him by the city, and had long ago determined to exchange them for quarters more secluded, and less exposed to public gaze. To this end he desired the transmigratory influence of a certain drug, and accordingly wrote the following recipe: "Strychnine, two shillings worth, to kill dogs." This message was intrusted to his attendant, with directions to obtain the article at a drug store. But the faithless servant thwarted his design by handing the prescription to the Warden, and thus revealed the secret purposes of his master. A close watch was now placed over his cell, and every precaution taken to prevent the prisoner's self-execution. But intent on his purpose, and undaunted

by his defeat, again the tenant of the Tombs issued his orders; but this time he wrote for laudanum. The message was again intrusted to his servant, who so far fulfilled his wishes as to obtain from a druggist the required potion. But the conscience of the servant proved too sensitive for his task, and again he betrayed his trust by handing the package to the vigilant Warden. Notwithstanding the infidelity of the servant and the vigilance of the keepers, the prisoner was one day found dying of narcotism, and an empty vial labelled McMunn's Elixir, concealed in his room, revealed the cause of death. The ardent Coroner pursued his inquiries, intent on learning *how* the poison was smuggled into the cell in order that he might fix the crime upon some responsible agent. The Physician to the Prison is naturally suspected, but he clears himself by deposing that he never gave deceased a dose of opium. The keepers had all maintained a vigilant watch over that particular cell, but had never seen a package passed surreptitiously through the grating, therefore they were free from suspicion. The learned Coroner summed up this mass of negative evidence, and the intelligent jury, enlightened as to their duties, retired, and after a short deliberation returned the following verdict:

"The deceased came to his death by the administration of creasote and a preparation of opium, taken for the purpose of self-destruction. Further, the Jury would recom-

mend the proper authorities to place wire-netting, similar to that now in use on the lower corridor, on all the cell-doors of the City Prison."

Thus stands revealed the thrice disgraceful fact, that poisons are so freely sold in this city, that a criminal lodged in prison for safe keeping to await his trial, can dictate to his waiter the kind of drug with which he will rid himself of life, and but for the treachery of the latter could obtain it. From the closely-locked and carefully-guarded cell of the murderer goes forth the written order for deadly poisons, and in large quantities; the druggist into whose hands it falls, with nimble fingers prepares the fatal draught, and asks not a question as to its destination. The prescription for strychnine would have been as quickly made up, and delivered at an ordinary drug store, as that for laudanum; though had the druggist paused and considered the purport of either, he would have read in as unmistakable characters as was written "to kill dogs," these terrible words, "TO KILL A MAN!" The remedy suggested in the verdict can by no means reach the evil. Vain are bolts and bars, wire-netting and vigilant sentinels, when the inmate of the Tombs determines upon self-destruction. He may not be able to accomplish the deed with knife, or razor, or hemp, but while druggists sell poisons as a common article of trade, the weapons of the suicide are at his command. No degree of vigilance or precaution on the part of keepers

can prevent his access to them; no wire-netting is so strong or so close that they will not be clandestinely placed within his grasp. If human hands can not convey them to him, "some bird of air" will be the messenger. If that Jury had done its duty, it would have gone directly to the source from which this class of crimes proceed. The druggist who sold the laudanum should have been charged with the violation of the law to regulate the sale of poisons, and properly proceeded against. Though the parties to this individual crime may not have been discovered, the true responsibility should have been fixed where it belongs, viz. upon the druggists who still continue to sell poisons, regardless of the law or the consequences of their acts. We know of no more needed reform than that which would forever prevent the sale of drugs as common articles of trade. Druggists of the character and qualification of those who dispense drugs in this city, can not be relied upon to faithfully execute any mere rule or regulation. There must not only be stringent laws regulating the sale of drugs, but these laws must be rigidly enforced.

VI.

NOSTRUM ADVERTISING.

ONE of the religious papers of New York, a few weeks ago, took to task a secular paper which claims to stand upon "great primal Christian truths," for presuming, with such professions, to admit into its advertising columns theatrical advertisements, whereby "the homes of Christian families" would be demoralized. It concluded its rebuke as follows:

> "Now, if theatrical advertisements must go to the homes of Christian families, we say, let them be taken there simply as theatrical advertisements, and not by a messenger who professes to stand upon 'great primal Christian truths' in their distribution. We can not think that 'the time has come for a living Christianity' *thus* 'to assert itself.'"

Presuming, from the confident tone of the editor, that his advertising sheet must be a model for a religious journal designed for the homes of Christian families, we glanced down its columns, and what was our amazement to find them crowded, not with notices of theatres, the least dangerous of all possible advertisements to the morals of families, but with the most disgusting and demoralizing notices of diseases, and the quack preparations adapted to them. Here is

"Dalley's Magical Pain Extractor" which is advertised to prevent and cure (in a list of thirty-eight different diseases), small-pox and cancer. Can the Editor plead ignorance of the utter and malicious falsity of this statement? Does he use Dalley's Pain Extractor to protect his own children from small-pox, or would he recommend a friend to try it? And yet he is willing to lend the pages of his professedly religious paper to introduce this bitter falsehood into "the homes of Christian families." And this paper the cunning charlatan selects *because* it is a messenger who professes to stand upon "great primal Christian truths" in the distribution of its advertisements. In an adjoining column of the same paper, under the startling title, "Health of American Women," appears the announcement of the Græfenberg Company, which we never fail to find in a paper professing to stand upon "great primal Christian truths" in the distribution of its advertisements. Is the Editor aware of the nature of the Græfenberg Marshall's Uterine Catholicon? Does he recommend it in his own family? Nay, dare he read that advertisement at his own fireside? We believe not. Again, we have Mrs. Winslow's Soothing Syrup for Children Teething." The advertisement says, very truly, "Depend upon it, mothers, it will give rest to yourselves and relief to your infants." Thousands of mothers in this city are annually relieved of all further care of their infants through the magically soothing

effects of Mrs. Winslow's syrup, which the religious papers, as messengers who profess to stand upon "great primal truths in their distribution," introduce to the homes and confidence of Christian families. We commend to the careful reflection of the Editor the following extract from the City Inspector's last report, in regard to patent medicines and their effects upon the mortality of children:

"A very large number of children are killed annually, in this city, by *patent medicines*. They are exhibited without any knowledge of their properties, or their power to allay the symptoms for which they are given. I ask, how many hundred infants are destroyed by the various vermifuges alone that are advertised?—given to them with the idea that they are affected with worms, when, in reality, nothing of the kind exists in a large majority of cases. The symptoms that are taken to be indicative of worms are often those of teething, or the incipient stages of hydrocephalus or tabes-mesenterica, etc., which, by judicious treatment, might be cured. These nostrums never fail to coincide with the disease and aggravate the symptoms."

Editors of religious papers should ponder this statement, and estimate how many of the 15,000 children who died last year in this city are chargeable to their account? We do not desire to be hypercritical in these remarks; our only purpose is to call the attention of religious journals to the fearful responsibility which they assume when they prostitute their columns toward the furtherance of the low, vulgar, and immoral objects of advertisers of nostrums. They well know

that this class of persons especially seek the columns of religious papers, because their malicious falsehoods are thus clothed with a certain respectability, and are received by Christian families as indorsed by the paper in which they appear. But however desirable it may be to have a reform in this regard, we shall not see the day when religious principles will so far triumph over the power of money, as to make professing Christians, in the daily walks of business, reject with scorn the latter, to save untarnished the former. The character of the advertisements which fill the religious papers would justify the belief that the only question which proprietors ask of advertisers is, "How much will you pay?" We submit to this and all religious papers the following advice: "*Now, if quack advertisements must go to the homes of Christian families, we say, let them be taken there as quack advertisements, and not by a messenger who professes to stand upon 'great primal Christian truths' in their distribution. We can not think that 'the time has come for a living Christianity' thus 'to assert itself.'*"

VII.

PAST AND PRESENT.

THAT we have fallen upon evil times seems to be the settled conviction of some of our medical brethren. We never fail, when we meet them, to be entertained with their repinings at the low state of medicine in these degenerate times and the consequent prevalence of empiricism. Some of our older physicians, of this class, have been heard uttering pious benedictions upon the early communities in which they practised their profession, and predicting for the rising generation of medical men, lives of unrequited toil, and life-long contentions with the evil genius of medicine. A veteran practitioner was lately bemoaning the unwillingness of his patients to submit to bloodletting, and attributed this fatal prejudice to the influence of the prevalent systems of quackery. Another, in the meridian of life, ambitious of a wide consultation business, with many a vain regret, deplored the strict rule of ethics which debarred him from cropping in the flowery fields of illegitimate practice. A third, encountering in his families the baneful influences of unbelief, was half tempted to become everything to every one, to retain and extend his busi-

ness. We think, indeed, that many a one is led, at times, to believe that our age is about the most trying upon which he could have fallen. He sighs involuntarily for a return of that period when the good physician was held in equal veneration with the Gods. It flatters his professional pride, galled and chafed by daily contact with the rude and inappreciative age in which he lives, to recall the language of inspired wisdom: "Honor the physician with the honor due unto him, for the most high hath created him because of necessity. * * * Give place and honor to the physician, for God hath created him; let him not go from thee, for thou hast need of him." How his heart warms toward Herophilus, who called physicians, "The hands of the Gods;" and how he honors the great Homer, who affirmed "That one physician is far more worthy than many other men." He regrets that his lines had not fallen in the pleasant places of the past—among the intelligent Abderians of whom it is said, when Hippocrates came to their city to cure Democritus of his madness, not only the men, but also the women and children, and people of every age, sex, and rank, went forth to meet him, giving him, with a common consent, and loud voice, the title of tutelary deity and father of their country; or among the Athenians who celebrated plays to his honor, and placed upon his head a crown of gold, and finally erected his statue for a perpetual monument of his piety and learning. He will note

many other periods in the history of medicine when it would seem far happier to have lived than at the present; when physicians appear to have been held in higher public estimation, and empiricism had far less influence. But the student of history, who penetrates beneath the surface of events, with due discrimination contrasting the spirit of the past with that of the present, finds much to commend the latter to his esteem, and to nerve him to greater effort and vigilance. He learns that the grossest forms of quackery prevailed universally among the people of the past, and that Hippocrates, Galen, Parè, and others, had to contend, life-long, against its widespread popular influence. He learns, too, that all the great names which adorn the history of medicine derive their chief lustre from lives of probity, self-sacrifice, and devotion to the highest interests of their profession. In vain he searches for evidence that they ever made their profession subservient to the interests of worldly honor or gain; or by evil associations, directly or impliedly, recognized charlatanry in any form. To such a student these are the repinings of selfish or shallow men, who pursue their profession from motives the most grovelling and unworthy. The present has its trials, as had the past; but it will require little penetration to discover that the degeneracy of our times does not show itself so much in the prevalence of empiricism or the credulity of the people, as in the ignorance, the cupidity, and the

low, selfish aims of regularly educated medical men. "Medicine," says Hippocrates, "is of all the arts the most noble; but owing to the ignorance of those who practise it, and of those who inconsiderately form a judgment of these, it is at present far behind all other arts." A remark more pertinent to our own times could not well have been made. The venerable physician who condemns his patient's aversion to his favorite operation of phlebotomy, has lived to see the patient become wiser than himself. It is not a change in public sentiment that renders the practitioner of to-day less successful in gaining the confidence of his families than formerly, but it is the rust that he has allowed to accumulate upon his knowledge, which the intelligent communities of our time readily discover. We have mentioned cupidity as one of the sins of medical men, which tends to abase medicine. We believe it is the most damning evil of the profession of our times. It is not only the grand obstacle to the constant acquisition of knowledge, which should characterize the true physician, but it leads him into evil practices and unprofessional associations, which degrade his profession to a level with that of the merest trade. The wild rush of medical men for business, the arts by which they often obtain it, and the desperation of the less successful, are most humiliating to witness. It is not to be denied, and we make the confession with shame, that there are practitioners among us, holding

important medical positions, who give professional advice to irregular practitioners, simply to gain the paltry fees which accrue from such associations. Many weak and timid men are led by these examples to disregard the high obligations of their calling, and, allured by the vaunted popular estimation of the various forms of empiricism, to seek its flattering rewards; they soon become indifferent to their shame and disgrace, and are lost to our profession. Such are some of the causes of the evil times upon which we are thought to have fallen, and of which we hear such frequent complaints. The remedy, like the evil, is in the profession itself. The line between the true and false, the honest and the dishonest, can not be too strictly drawn, nor too rigidly maintained. Let the profession not only eschew all alliance with empiricism, but reject from its fellowship all who countenance or abet irregular practice. Let it purge itself of these unworthy members, these perpetual croakers, whose instincts lead them to quackery, and who are withheld from its full embrace only by the desire to maintain a certain degree of respectability. Then will the greatest obstacle to the triumph of legitimate medicine be removed, and we may hail the epoch of the "good time coming."

VIII.

PREVENTION OF CRIME.

DURING the past year *one hundred and sixteen* citizens of New York City died by the hand of violence. Of this large number, 59 are recorded as homicides, and 57 as suicides. The problem of the prevention of crime has taxed the genius of the wisest statesmen and the most experienced philanthropists. To this end the penitentiary, the prison, the rack, and the gallows have been established, but as yet without avail in completely restraining the vicious. With reference to homicide this question presents two phases: 1st, The removal of the causes of crime; 2d, The punishment of the criminal. It will surprise no one to learn that on investigation it appears that in the great majority of cases of homicide, intemperance is the cause. In this city, so distinguished for its "rum for the million," it supplies the animus to the criminal, however thoroughly his plans are premeditated, in nine cases out of ten. This fact is so patent to every observer that it needs no illustration at our hands. But one plain, simple, practical question presents itself to the legislator, viz. shall this prolific cause of the most heinous crime known to human so-

ciety, be removed? On the answer to this question depends the length of our criminal calendar. We are aware that many difficulties tend to complicate its settlement in the affirmative, but we are also aware that these obstacles have been met by other communities, and resolutely overcome. The results of such legislation have always been of the most cheering character. Penitentiaries, prisons, and almshouses have been deprived of their occupants, and even courts have met to adjourn without a cause upon their criminal calendar. No man can doubt that if during the year upon which we have entered, not a drop of spirituous liquor was drunk by the people of this city, our almshouses, hospitals, and prisons would be emptied of nine-tenths of their present number of inmates, and our criminal statistics for the year would be reduced 99 per cent. Again, insane persons, with depraved and dangerous propensities, are so frequently permitted to roam unrestrained about our streets, that we are prepared to witness tragedies the most horrible and sudden at any time and in any place. On the 7th of December last, this city was thrown into a fever of excitement at the report of the shocking murder of Mrs. Shanks, a worthy seamstress and shopkeeper, while at her breakfast in the parlor adjacent to her store. This fiendish act was perpetrated in an open apartment on a busy street, within a few steps of Broadway and Union Square. The murderer was a lad well known in

that neighborhood as a strange and sullen fellow, and in the criminal courts he was recognised as a person of unsound mind and uncontrolled propensities to commit crimes against property and life. To the police he was known as an epileptic whom they often rescued from harm when suffering his unfortunate seizures in the streets. He sometimes had as many as twenty-five of these fits in a single day, and his mind was so affected that his parents could do nothing with him. After having been four months in a Lunatic Asylum he was permitted to return to his parents' home and go at large in the city. Having at one time set fire to some shops and a public school-house, he was judged guilty by the prosecuting officer, but allowed to go unrestrained upon condition his parents would remove him from the city! And now, at last, this miserable young man, after such a career and such unmistakable evidence of mental and moral insanity from a well-known physical disease, yields to his fiendish impulses and brutally murders a kind-hearted lady who has previously shown him peculiar kindness. The deed was manifestly an impulsive one, for strolling into the little store, and seeing the woman at her breakfast, he seized the knife with which she was cutting a loaf, and instantly cut her throat from ear to ear. After the deed he was shy and fearful, and started upon an emigrant train for the West. Being arrested and returned he attempts to cover and deny his crime, as a sane man would

do, and as a lunatic might, but without success. The fact of his insanity had been as clearly established before as it has been since the murder; and his dangerous proclivities were known. The prosecuting officer at first declined to admit the plea of insanity; but after considerately hearing the simple story of the lad's physical and mental disorders, he promptly ordered him to the State Lunatic Asylum. In the correction of criminals, the first impulse of government was to appeal to the fears of men, and hence have been instituted the most frightful punishments. While the more simple offences growing out of avarice and kindred propensities were thus checked, the more heinous crimes, which are the result of violent and intensely stimulated passion, received but little restraint. Subsequently a more philosophical study of criminal jurisprudence discovered the fact that vicious men are restrained rather by the certainty, than the severity of punishment. This led to important discriminations in the degrees of crime, and corresponding modifications in the severity of the penalties, and should never be lost sight of in legislation for the suppression of crime. But with the progress of human knowledge and practical Christian philanthropy, new opinions have been formed of man's moral nature, and of his relations to his Creator and his fellow-men, which are yet to lead to the most important modifications of our criminal laws. The question

should not all punishments be so modified as to be reformatory of the individual? is already receiving a practical solution in many States. The final prevalence of the conviction, that the period of restraint of the criminal should be taken advantage of by the State for his reformation, that he may be returned to society a good citizen, will be the grandest triumph of a Christian civilization. The prevention of suicide involves also two points, viz. 1st, The removal of its causes; 2d, The removal of the means by which it is accomplished. The alleged causes of suicide are numerous. They are insanity, intemperance, melancholy, disappointment, revenge, etc. If, however, each case were carefully investigated, we doubt not these causes with due discrimination might, for the most part, be reduced to one, viz. insanity. The researches in psychological medicine have established the fact that insanity lurks in the community in concealed forms, while all are cognizant of its sudden development in the perpetration of shocking crimes. There can be no doubt that many who are actively engaged in business, or walk the streets, or mingle in society, have those mental proclivities which the most trifling perturbating causes would so unbalance as to lead to personal violence. Most physicians can recall instances of the self-destruction of persons, who, on reflection, they recollect have exhibited many singular peculiarities to which they did not attach sufficient importance.

Toward this class of suicides our profession has a most important duty to perform. We should be more thorough in the investigation of the secret springs of melancholy, disappointment, or other disturbing influences of the mind and passions, and so far as possible remove them. The physician alone can frequently recognize those early deviations of the mind from the standard normal to the individual, which give timely indications of approaching danger. And he alone can discover the causes at work, and the physical conditions induced, and suggest the required remedial measures. The remedy is often extremely simple, and perfectly averts the impending evil, if it is thoroughly and judiciously applied. If remedies do not succeed, and the case progresses unfavorably, it is the duty of the physician to secure the patient's restraint or control to the extent necessary to prevent the terrible crimes of homicide and suicide now so frequent. Not only must the community at large, and families which unconsciously retain in their unprotected circle a member who at any moment may commit the most horrible acts, depend upon our profession for the discrimination of this class; but the poor, misunderstood, and often maltreated victim of mental alienation, equally appeals to us for that protection, consideration, and care which he can secure from no other earthly source.

IX.

CARE OF INFANTS.

SOME weeks since we received a communication from an English correspondent who has given much attention to the subject of wet-nursing in its bearings upon the public health. From this source we learn that at the International Statistical Congress, held in London last year, Dr. EDWARD JARVIS, a delegate from Massachusetts, in the discussion which followed the reading of a paper on the *Statistics of Wet-Nursing*, remarked that in the United States "the employment of a wet-nurse is very rarely resorted to; indeed, the custom is almost unknown there." This statement seems to have excited great interest, and has been the subject of much comment. Coming from a responsible source it has been received as authoritative, and has afforded good ground for the supposition that wet-nursing is by no means as necessary as the ladies of England seem to consider. We do not know the source of Dr. Jarvis' information, nor on what investigations his conclusions were based. They should certainly have been arrived at only after extended inquiry, especially in our large cities, as, uttered in that high presence,

they could not but have an important influence upon the discussions which followed the reading of the paper mentioned. Nor has their influence ceased with the adjournment of the Statistical Congress, but we now learn that subsequent writers have alluded to them as conclusive on the subject of wet-nursing. Although we are not prepared to give statistical data, yet the results of extensive observation authorize us to state that wet-nursing is far from being unknown in New York city. On the contrary, it may be considered a very prevalent custom, supported alike by necessity and fashion. Whoever will consult the columns of "Wants" in our daily papers will soon become satisfied of the existence of this practice in our community, though it is not possible to obtain a knowledge of its extent from that source. To gain more accurate information of the amount of wet-nursing requires familiarity with the lying-in departments of our public charities, and with the poor and unfortunate in their homes. Extended inquiry of those who have devoted much time in public institutions, and in dispensary practice, confirms our own observations, that wet-nurses always find a demand for their services. The applications for wet-nurses at our Lying-in Institutions often, indeed, greatly exceed the supply. There can be no doubt, therefore, that wet-nursing is more customary than Dr. Jarvis would believe. The practice of wet-nursing grows out of: 1st, The inability of the mother to discharge

her maternal duties; and, 2d, Either false pride, or an indisposition to be burdened with the care of her offspring. Both of these conditions exist in this, as in all large cities, and we are not a little surprised that an educated physician should have failed to recognize them. The first unquestionably renders the practice, to a limited extent, a necessity; the second springs from that social refinement which sets at naught all natural laws, and renders life, as far as possible, entirely artificial. The former of these causes, we are inclined to believe, leads to the employment of the wet-nurse in the majority of instances in this community, though the latter exerts an influence to no inconsiderable extent. We have before us a paper on "The Practice of Hiring Wet-Nurses considered as it affects Public Health and Public Morals," which was presented to the "National Association for the Promotion of Social Science," England, in 1859, by M. L. Baines. The evils of wet-nursing are here presented in a two-fold light: 1st, moral and social; and 2d, physical. The former grow out of the employment of fallen women, a practice urged by a class of philanthropists, but which can not be too severely condemned, not only on account of its immoral tendencies, but also of the physical evils that are liable to be entailed upon the nurseling by the imbibition of constitutional proclivities to disease. The latter evils result both to the child of the nurse, which is either put out to an inferior nurse,

or is hand-fed; and to the child which she assumes to nurse, owing to its deprivation of maternal milk. It is stated by this writer that, "It may be fairly assumed that the *children of wet-nurses form a very large proportion of those who die prematurely.*" We are not prepared to indorse this, as a general statement, but we have the most undoubted proof of the great mortality among foundlings in this city; while they were put out to nurse, nearly one-half died annually. It appears also that out of every one hundred children in Paris, nursed by their mothers, eighteen die in the first year, while of those wet-nursed, twenty-nine die. The practice of employing wet-nurses, therefore, can but be considered an evil, and one which is destined doubtless to increase in the ratio of our increase in wealth and luxury. What is the remedy? The entire responsibility of resisting its progress rests with the medical profession. We should endeavor to remove the causes of the evil, by inducing mothers to rear their own children by the means that nature has given them. The arguments which may be employed are too strong to be resisted, if kindly, conscientiously, and firmly presented by the medical attendant. If this duty were thoroughly discharged, in every instance, the system of wet-nursing would at once fall into disrepute, and the custom would truly become what Dr. Jarvis represented it, "almost unknown" in this country. In the comparatively few cases where

the mother is absolutely disqualified, it is still a question if artificial lactation, in the hands of a competent nurse, might not be preferable to wet-nursing. But admitting that the wet-nurse must be obtained, the physician is still the adviser, and has it in his power to make the selection. And here occurs an important duty, which is almost invariably overlooked; if the wet-nurse has a child of her own, it is liable to be put aside without a care, or even thought, on the part of the employer. The physician should remember that, in providing a nurse for his patient, he is not less responsible for the life of the helpless human being which is set aside, and should insist that it be properly provided for. It is a most unjustifiable and inhuman act to condemn an infant to leave its mother and run the risks of bottle feeding for the sake of saving the life of another. No conscientious medical attendant could be a silent partner to such a crime. We have done little more than open this subject, but if we have succeeded in impressing upon even a single physician the importance of discharging a duty long neglected, our purpose has been accomplished.

X.

WOMAN AS PHYSICIAN.

ABOUT twenty years ago the Faculty of a Medical College, in an interior town, was surprised by the receipt of a letter from a lady making application for admission as a medical student. The application was accompanied by testimonials of moral character, and proficiency in her studies, from a medical man of high standing. In their extremity the faculty determined to leave the question of her admission to the class, with the avowal that if one member dissented, the application of the lady student should be refused. A class meeting was held, and influenced by the novelty of the request, a unanimous approval was unhesitatingly given. Several days after, one of the professors, on entering the class-room, was accompanied by a short, thick-set young lady, with features expressive of decision, resolution, and energy, who took her seat upon the first tier, and without embarrassment began taking notes of the lecture. Time wore on, and though the first effects of the presence of the lady upon the class gradually passed away, still there was no time that her appearance a few minutes preceding the lecturer would not instantly hush

to perfect silence the most noisy and uproarious gathering of medical students which we ever met. She attended the lectures with scrupulous punctuality, and in the public examinations by the professors proved herself as capable as the best qualified students in attendance. She was absent but once during the term, and the occasion of this delinquency reflected creditably upon her character, and gained for her the admiration of the class. At the close of a lecture on the anatomy of the organs of generation, the professor read a letter from the lady-student, who had been refused admittance, administering a stern rebuke for his refusal to allow her to be present at these lectures, expressing her determination to attend the complete course, and modestly offering to take the highest seat in the theatre, and remove her bonnet, if thereby he would feel less embarrassed. She completed her course, and graduated with honor. Subsequently she visited the hospitals of Europe, and everywhere won the respect of the medical men whose acquaintance she made. On her return to this country she commenced general practice, but failing of success she opened a private hospital, which is now in active operation, and is doing good service among our medical institutions. Since that period considerable progress has been made in the education of female physicians; we have chartered medical schools for females exclusively, and also for males and females, while public opin-

ion, of course, sets strongly in favor of the medical education of females. In the medical profession, the question has already been mooted, Shall female physicians be recognized? This is a new question in medical ethics, which is not provided for in our national code. How shall it be decided? Shall we, or shall we not, recognize properly educated female physicians as practitioners in good and lawful standing? To recognize them is to encourage their study of medicine, and to commit ourselves to the removal of every obstacle to their education. It were well therefore if this question were definitely settled. We have sketched above a representative example of a female physician. Let us consider the salient points which it presents; and incidentally indicate the principal sphere of usefulness which medically educated women are calculated to fill with advantage to themselves and the public. 1st. The allegation of the incompetency of women can not be sustained. This lady was one of the best qualified of the graduating class, many members of which have since risen to positions of usefulness and distinction. She persisted in her resolution to attend the entire course on anatomy, not from any morbid taste, but from a firm determination to make her medical education thorough and complete. She won the respect of the most learned of our profession abroad by her intelligent zeal in the pursuit of her professional studies. But we need not discuss the question of

woman's intellectual abilities to cope with the most abstruse questions in the medical sciences, while the admirable works of Mesdames Boivin and Lachapelle are recognized as authorities. 2d. Nor could it be alleged against her that she sought to pursue any irregular course of medicine. On the contrary, she was in the highest sense orthodox; and it can not be proved that female physicians will be more prone to quackery than the opposite sex, provided the same educational advantages are accorded to them. 3d. This lady physician engaged in general practice, and though she had the sympathies of a large circle of wealthy and influential friends, as well as physicians, she failed of patronage, and hence of success. She was found unable to meet the exigencies of the every-day duties of her profession, as every one practically familiar with the exacting nature of those duties would have foreseen. The storm, the cold, the night, the distance, were barriers which she could not overcome without assuming the habits, dress, and manners of the opposite sex. And often the disease which she encountered was of such a nature as to compel her either to unsex herself in regard to her instinctive habit of reticence and modesty, or preserve her feminine sensibilities by neglecting her professional duty. 4th. Subsequently she became the medical head of a private charity for the treatment of sick women, in which capacity her medical education is admirably adapted to

develop and give efficiency to her natural tastes and instincts, and thus render her life one of eminent usefulness. In this sphere of professional duty, we shall doubtless yet see woman take a most prominent part. There is scarcely a charity, having a medical element, which she is not in many respects better adapted to manage than the opposite sex. In hospitals and asylums for her own sex, for children, and for the aged, she is pre-eminently qualified to have the entire management. It is questionable also if her quick perception, her generous sympathies, her kindly influences, and her admitted jurisdiction over all that pertains to domestic regulations, would not peculiarly qualify her for the care and superintendency of lunatic asylums, reformatories, etc., if a proper medical education were superadded. These are but few of the many branches of medical service which will open inviting fields of labor to those women who are attracted to the study of medicine. It is idle to resist the progress of public opinion toward the largest liberty in the education of women for the most active duties of society, and their free choice of, and perfect equality in, such departments as they may elect to enter. It is certain that medicine, which gives such scope to the study of the natural sciences, and such development to the higher sentiments and holier feelings in the practical application of its principles, will hereafter invite women to our ranks in yearly increasing numbers.

XI.

FOREIGN EMIGRATION.

THE facilities for emigration from European ports have been largely increased within a few years, and it is gratifying to notice a corresponding improvement in the class of persons who are now seeking homes among us. The protection which our authorities now extend to the immigrant immediately upon his arrival, and the facilities which they afford him for reaching his destination, should be noticed as having an important bearing upon his happiness and future success. For a long period the immigrant was left a prey to desperate bands of land-pirates who hovered about quarantine. Ignorant of the language, unaccustomed to traveling, unsuspicious and confiding, the poor traveler would readily fall into the toils laid for him, and even before landing would often be divested of every farthing of his carefully preserved treasure. Thus thousands, whose destination was the far West, were left destitute in our city, and compelled to seek daily bread by any menial service. Happily these outrages are now rarely perpetrated, and the immigrant, with his family and goods, passes directly, rapidly, and undisturbed

to his ulterior destination. There is, however, one passage in the history of the emigrant which deserves the immediate attention of government. We refer to the wholesale prostitution of unprotected females on shipboard by the ship's crew. The revelation of these crimes, which are frequently made, are discreditable in the highest degree to masters of ships, and even to shipowners. If we are not misinformed, emigrant vessels are often but floating brothels. Government should throw around the emigrants, during the voyage, such safeguards as will protect them from the hand of violence and of crime of every nature. There are some features in the history of emigration to this country which we shall take occasion to notice in connection with the above facts. Previously to September 30, 1819, no reliable records of immigration were kept by our government, and all computations of its amount at any given period before that date are conjectural. It is estimated, in round numbers, that from 1754 to 1819, 150,000 immigrants landed on our shores. After 1819 the public records give us reliable data from which to ascertain the extent and fluctuation of immigration. It appears that from this date, to December 31, 1855, the number of alien emigrants was 4,212,624. For the first year of this period, ending September 30, 1820, the number was 8,385, the increase was gradual, until 1831–2, when it rose from 22,633 to 53,179. From this period the increase regularly continued

until it reached in 1842, 104,565. During the next two years, 1843–4, the number again fell, but from the latter date to 1854 it rapidly increased until it reached the enormous figure of 427,833. In the following year, 1855, it fell nearly half, and in 1858, it was but 144,652. It is estimated that the aggregate emigration to this country from 1784 to 1859 amounts to 5,000,000 persons. There are always two circumstances influencing, if not controlling emigration. The first is the condition of the country from which emigration takes places, and the second that of the country toward which it tends; the very act of emigration indeed presupposes that the former is unfavorable and the latter favorable to the prosperity or happiness of the emigrating classes. Human history is but a panoramic view of these shifting scenes, each illustrating but different phases of the same truth. In general, the causes which lead to the removal of any considerable class from their paternal homes, spring either from the oppressions of government or the hope and promise of gain. Proscribed classes have often been forced to seek permanent abodes on foreign and sometimes inhospitable shores. But more frequently emigration is a voluntary act, determined by both of these causes, viz. oppresion at home and the hope of gain by adventure. This is eminently true of the emigration to America from European and other countries, and the fact that this tide has set steadily to our

shores, from all parts of the world, for eighty years, with but an occasional ebb, proves conclusively the adaptation of our soil, climate, and above all, our free institutions, to promote the happiness and prosperity of mankind. The sources of this emigration, and its amount from different countries, do not determine positively the degree of oppression under which an individual people labor, and the restraints to which their physical well-being is subjected by either soil, climate, or government, though they must approximately. In this view, it is interesting to notice the countries which have constituted the aggregate of our alien population during this period. Of the 5,000,000 immigrants who have arrived since the establishment of our government, Great Britain and Ireland contributed 2,600,000; Germany, 1,600,000; France, 200,000; British America, 100,000; Sweden and Norway, 50,000; China, 50,000; Switzerland, 40,000; West Indies, 36,000; Holland, 18,000; Mexico, 16,000; Italy, 8,000; Belgium, 7,000; South America, 5,500; Portugal, 2,000; Azores, 1,300; Russia, 1,000. The fluctuations in emigration which we have noticed have been due to temporary causes, which have merely interrupted the enlarging current, or suddenly swollen it to an unprecedented degree. Among the first of these we notice the disturbance of the friendly relations existing between our government and those from which emigration takes place, commercial crises,

etc.; and of the latter, the chief are acts of proscription by foreign governments, the occurrence of famine, etc. The emigration to America, since the establishment of our government, considered in any respect, whether political, social, or religious, must be regarded as the most remarkable in the history of mankind. For nearly a century, from every civilized, and from many semi-civilized nations, the drift of emigration has been to our shores. The emigrant is generally the poor, the disaffected, or the vicious, who seeks either to improve his condition, or gain a wider field for the exercise of his hitherto restrained passions. Yet from this singular admixture of races, religions, and diverse political education, there has as yet resulted only harmony, peace, prosperity, civil and religious freedom, and universal domestic happiness. The problems which these now historical facts present to the speculative are numerous, and of remarkable interest. The theoretical statesman has no precedent to determine the future complexion of our political institutions; the speculative theologian can by no process of reasoning or generalization establish a national church; and the ethnologist is at a loss as to the final type of an American.

XII.

WHAT SHALL WE READ?

A FACETIOUS Professor in one of our medical schools is accustomed to give the following as his parting counsel to the graduating class: "If you find leisure to read during your first years of practice, select novels in preference to medical journals." This admonition is generally received by the students as one of those broad jokes for which its author is so greatly distinguished, and is no further heeded. But that the advice is seriously given, is proved by the fact that the professor himself strictly adheres to it. His library is entirely free from this dangerous class of publications, but abounds in light literature of every description. During the past year the professor's theory was put to a practical test, and the sequel furnishes a lesson which we wish to impress upon the recent graduates, upon the general practitioner, and finally, upon the teachers in our medical schools. A question arose in the profession, as to the propriety and possibility of a given operation in the department of practice which this professor has taught in a manner peculiarly his own for a score of years. Now, as often happens, this operation had been

discussed almost entirely in the medical journals, and many of the well-recognized authorities had therein declared the operation practicable and proper. The inquiry was made of this devotee of novels, whether the operation was approved by any responsible author; to which he returned an emphatic No! The correspondence was subsequently published, and the profound ignorance exhibited of the well-known improvements in the branch which he was teaching, has rendered the position of the professor truly unenviable. It will doubtless seem quite superfluous to those who habitually read our best medical periodicals, to urge the importance of this class of publications, and their claim upon the profession. But whoever will institute a careful inquiry as to the number of medical men who, even if they subscribe to, and pay for a medical periodical, read it with care and attention, will be astonished at the result. He will find that few, comparatively, really profit by the journals which they may happen to take, and the proof of the fact will be seen in the practice of the individual. For those who read with interest our best medical journals are invariably found to be the most successful practitioners, and *vice versâ*. But this indifference to medical journals is not confined to the general practitioners; the person alluded to in the opening paragraph of this article, is the type of a class of public teachers, who move in an atmosphere never tainted by such publications. They

discard all new-fangled notions, as they style the improvements and discoveries first laid before the profession through this medium, and annually repeat to their classes the old and often obsolete theories which they themselves learned when students. These teachers are by no means exceptional, even in our most flourishing schools. We have listened to lectures on surgery, medicine, and obstetrics, within a few years, not a whit in advance of the age of Hunter, Cullen, and Denman. Is it not time that this class of professors were supplanted by men who are capable of teaching these branches in the light of modern science? The question has frequently been asked: at what age does a medical man become unable to keep pace with scientific discoveries, and at what age are professors in our medical colleges no longer competent to instruct classes in the latest improvements in the medical sciences? We shall give to both queries one answer: when a medical man reaches an age where his self-conceit leads him to believe that he can learn nothing from medical journals, he is no longer able to keep pace with the progress of the medical science, nor to instruct classes in its latest improvements. In view of these facts, therefore, and of the deliberate advice given from professional chairs, we deem it our duty at this time to enter a plea in behalf of medical journals, as the proper reading of recent graduates, of established practitioners, and even of the professors

in our medical colleges. What is the proper office of a medical journal? Undoubtedly it is to be the medium of communication between the members of the profession. Such a medium is now recognized as essential to the progress of every science and every art. It stimulates to active effort, not only in research, by the constant attrition of minds engaged in a common pursuit, but to the practical application of principles and newly discovered facts. It performs in this respect, to the profession at large, the same office that a local organization does to the few, being the medium of mutual improvement and encouragement. The advantages of a medical journal to the general practitioner, who has to grapple with the stubborn facts of every-day practice, are incalculable. They have not unfrequently contributed to his immediate success, by giving him timely information of new and important discoveries. Many of the most valuable methods of practice introduced to the knowledge of the profession within the last five, and in some cases even ten years, have not found a place, as yet, in practical treatises, but must be studied in the original journal where the paper first appeared. It is, indeed, a common remark that the physician who keeps pace with the improvements in his art, must be a careful student of medical periodicals. Again, the medical journals fulfill another, and not less important mission. They elevate the tone of professional morality; they

cultivate a just and liberal criticism; and finally, they establish a higher standard of attainments. In this view, we welcome the appearance of new and well-conducted periodicals in distant localities, and regard them not only as evidences of the progress of legitimate medicine, but as safeguards against the bickerings of individuals and the encroachments of quackery. And we take this occasion to urge upon physicians living in localities where such publications exist, the duty of sustaining them liberally, both by literary and pecuniary contributions. Finally, they tend powerfully to unite the profession in a common brotherhood for the attainment of those rights and privileges, whether social or political, which are due to legitimate medicine. The triumph of the British medical profession in obtaining the enactment of laws designed to establish it upon a firm legal basis, is a striking proof of the power of medical periodicals to concentrate its sympathies and influences. No country has greater need of such publications than ours, and in no country may they exert a more salutary influence. With free institutions susceptible of infinite modification, the medical profession forming a most respectable element in every community, however remote, may wield a power of unlimited extent. This power it is the province of the medical journals of this country to organize and concentrate, and thus ennoble the profession, and advance the best interests of society.

XIII.

DUTIES OF CORONER.

IT is well established, that promptness and certainty in the punishment of criminals are the most powerful safeguards which society has against the reckless commission of crime. When retributive justice overtakes the murderer while his hands still reek with the blood of his victim, the most salutary check is given to homicide. In the early history of all communities, we find abundant examples of the sudden and permanent arrest of high crimes by the summary punishment which an excited populace has promptly inflicted upon the offenders. In older communities, where criminal jurisprudence is so administered as to be tardy in the arrest of criminals, doubtful in their conviction, and slow to inflict penalties, we see crimes of every grade gradually multiply. It follows, therefore, that that community is best protected against the commission of crime which has the most effective regulations for the apprehension and conviction of criminals. But it will be apparent, that efficiency in the execution of any code of laws presupposes activity, vigilance, and intelligence on the part of those whose duty it is to enforce it; without these,

laws had better never have been enacted, for they serve rather to embolden than check and deter the vicious. One of the most important officers in the execution of our criminal laws is the coroner; and it is to the duties of his office, and the manner in which they are now too often performed, that we wish to direct attention. English jurisprudence has bequeathed to us not only the form, but the spirit of the office of coroner. Originally, it was connected with the Pleas of the Crown, and was of the most honorable character. The Lord Chief Justice of England was the principal coroner in the kingdom, and could exercise the duties in any part of the realm. The coroner was of equal authority with the sheriff in keeping the peace; he was to be a lawful and discreet knight; and was to receive no fees for his services. But his special duties were, by means of a jury, to make inquiry as to the cause of death where persons die suddenly, or are slain, or die in prison. He was directed to inquire "when the person was slain; whether it were in any house, field, bed, town, tavern, or company, and who were there. Likewise it is to be inquired, who were culpable, either of the act or of the force; and who were present, either men or women, of what age, if they can speak or have any discretion. And such as are found culpable by inquisition, shall be taken and delivered to the sheriff, and committed to jail." It will thus be seen that the original duties of a coroner were

most important in the prompt detection and arrest of criminals. As many of the duties, however, pertaining to the office were of an unpleasant character, such as examining dead bodies, gentlemen of rank subsequently shrank from their performance, and it gradually fell into disfavor. And when, at length, fees were added, it became the prize after which clamored the lowest grade of politicians. Thus has fallen into unmerited disrepute, an office once honorably distinguished by its intimate association with the highest tribunals of justice. But notwithstanding this degradation of its character, and the inferior grade of incumbents consequent thereon, its functions have scarcely been changed. In most of the States the office of coroner exists, and the rules which govern it do not differ materially from those imposed by the English laws. These are loose and indefinite to a degree that renders the office almost nugatory when administered, as it now too often is, by imcompetent men. The law which created the office of coroner and defined its duties centuries ago, still governs it in spirit. Notwithstanding the immense increase of those subtile agencies by which crime may be clandestinely perpetrated, and the vast improvement of the methods of investigating the causes of death, as by the microscope, by chemical manipulation, and by accurate pathology, a coroner is still allowed to make as superficial an examination as he pleases, and render a verdict as to

the cause of death in terms so indefinite, that it can not be classified according to any modern system of nomenclature. Mr. Farr says (Registrar General's Report): "The causes of deaths, registered as the result of a solemn, judicial investigation, are the most unintelligible in the Register, as it is impossible to attach a specific idea to 'natural death,' to 'visitation of God,' and several other phrases in use in coroners' courts." We can not, indeed, present a better illustration of the utter perversion of the true objects of this office than that drawn from actual experience. An arrogant, conceited official, ignorant not only of the first principles of law and medicine, but even of the English language, decides as to the cause of death where a capable medical attendant is in doubt. He refuses a post-mortem examination, probably considering it a reflection upon his intuitive knowledge of the cause of death, and instructs the jury, composed of some luckless employees lounging in the vicinity, as to the verdict that they must render. This must not be taken as an exceptional case; scenes like these are of every-day occurrence in our city. No one need be surprised that New York has gained an unenviable notoriety for its weekly deaths by violence, when the officer whose duty it is to take the initiatory step toward the arrest of criminals, exhibits such gross ignorance and imbecility. How shall these evils be remedied? Two methods are suggested.

The first is, the abolition of the office, and the transfer of its duties to the magistrates' court, where these investigations would be conducted in a legal and orderly manner. It is contended by eminent medical and legal gentlemen that the interests of society would be equally subserved if this change were made. Many who have been obliged to attend much upon a coroner's court, and submit to the insufferable medical and legal pedantry of the presiding genius, will be inclined to favor this method of reform. The second proposition, and which is the most rational, is to remodel our laws relating to the office of coroner, and compel the selection of a competent person as its incumbent. The laws should define with exactness the various duties to be performed by the coroner, such as causing, in *all* cases, post-mortem examinations by competent persons, such investigations by experts as the present state of the medical sciences requires, to determine satisfactorily the causes of death. But even this would fail of securing an enlightened and efficient medical jurisprudence without qualified coroners. That this officer should, in general, be a medical man of education and experience, no one can doubt. It is true that not every physician is qualified for the office of coroner, but we hold that a medical education is a prerequisite which the law should establish.

XIV.

THE SABBATH QUESTION.

EUROPEAN travelers in this country are accustomed to remark the general observance of the Sabbath as a day of rest by the masses of the American people. So strikingly does this custom contrast with the prevailing habits of continental communities, that many have regarded it as a distinctive feature of our civilization. Of the truth of this observation there is no doubt. Although as a people we present a singular admixture of the European nations, every one being represented but in variable proportions, the social fabric of our civilization was firmly laid by a single and united class, exiled from these old communities. During the long interval of nearly two centuries which elapsed between the first settlement of the Protestant refugees in America, and the general emigration of all classes from the Old World, the principles upon which our civil as well as social institutions were established, became of vital importance in the opinions of the people to their very existence. To our Puritan forefathers are we indebted for many of our distinctive social peculiarities, and for none more directly than

the civil as well as Christian Sabbath. The religious observance of this day by the entire community was regarded of such consequence to the welfare, not only of the individual, but of the State, that government early took cognizance of it, and forbade, under severe penalties, the slightest infringement of its sacred obligations. Ludicrous as appear many of the civil restrictions thus imposed upon individuals, we can not fail to recognize the deep and lasting impression which religious training, enforced and made obligatory by the sanction of the State, has made upon our social and civil condition. The observance of the Christian Sabbath, as a day of rest from all secular employments, and for the inculcation of religious truths, may be considered a fixed American custom. The general emigration which took place from all European countries during the last quarter of a century, and converged to our shores, has concentrated, especially in large towns, a people educated to regard the Sabbath as at best a day to be devoted to recreation and amusement. They are intolerant of the restraint which government has imposed, and demand entire freedom in the pursuit of self-gratification. Within the last two or three years the respective advocates of these two phases of social and civil custom have been arrayed against each other, but, as yet, the American idea of the Sabbath has prevailed in all the States where the question has been agitated, and laws have been enacted providing still stronger safeguards

against Sabbath desecration. While it is true that the rigid practice of all the virtues in the Decalogue will not exempt one from disease in any form, it is equally true that the strictly virtuous are not liable to a long catalogue of maladies which by preference attack the vicious. No one, we are persuaded, will deny that the laboring man who spends his Sabbath with scrupulous regard to its religious obligations, is less liable to those common vices which are the exciting causes of disease, than his neighbor who resorts to places of amusement. Holidays in general are acknowledged to be universally productive of vice and crime among the laboring classes. The source of the evil is not in relaxation from labor, but in the pursuit of those amusements which stimulate the passions, and in the indulgence in intoxicating beverages—the universal stimulus to vice. If these latter agencies were entirely withheld during holidays and Sundays, all observation shows that the amount of vice would be greatly diminished. We may cite facts from our police records which prove this point incontestably. From July 1857 to December 1858 (seventy-six weeks) there was no restraint in this city upon the sale of liquors on the Sabbath, and the following is the comparison of arrests on Sundays and Tuesdays:

	Intoxication.	Disorderly.	Miscellaneous.	Total.
Sundays.....	2,453	2,580	4,680	9,713
Tuesdays.....	1,928	1,865	4,068	7,861
Excess on Sundays,	525	715	612	1,852

During the five months from July 3 to December 1, 1859, the liquor stores were closed on the Sabbath, and the following are the criminal statistics of the two last days:

	Intoxication.	Disorderly.	Assault and Battery.	All others.	Total Arrests.
Tuesdays.....	2,161	897	616	1,311	4,976
Sundays.....	1,515	652	352	828	3,357
Excess on Tuesdays.....	646	245	264	483	1,619

Thus it appears that when the liquor stores were open, there were twenty-five per cent. more arrests on Sundays than on Tuesdays; but when they were closed, the arrests were nearly fifty per cent. more on Tuesdays than on Sundays. Another fact of even greater importance was noticeable when the Sunday liquor traffic was suppressed, viz., a steady diminution in the ratio of arrests on both Sundays and Tuesdays is recorded. What the effect of this universal drunkenness every seventh day must be upon the health of the laboring classes, no one will be at a loss to determine. Medical men, however, who are familiar with the habits of the poor, are cognizant of the fact that there is a large increase of sickness on Monday, the results of the previous day's dissipation. During the prevalence of epidemic diseases, the results of Sabbath dissipation are sometimes frightful. Cholera numbers its victims on Monday in a tenfold greater ratio than on any other day. The laboring man of gener-

ally good health is thus often unable to resume his employment for several days, even if he be not discharged by his employer on account of his delinquencies. The miseries which are heaped upon a poor family by a Sunday debauch of the husband and father are thus often incalculable. The proposition that the suppression of Sunday amusements, as theatrical performances, concerts, etc., is a measure tending to promote public health, will not be readily admitted as a necessity. There are many philanthropists who compassionate the laboring man in his incessant toil during the week, and desire to render the Sabbath not only a day of rest to him, but of recreation and diversion. It is true that a Sabbath spent in rural scenery, away from the excitements of the jostling, city crowd, may be elevating, refining, and hallowing; but very different is the effect upon the *morale* of the individual, when the day is occupied with boisterous and exciting city amusements. These scenes are not conducive to rest, or even recreation, but they stimulate the passions and appetites, and lead to the wanton commission of offences. Sunday theatres, sacred concerts, etc., are the very hotbeds of vice in every city where they exist. Prostitution in its most attractive form and exterior allurement here invites the unwary and unsuspecting. One who visited these resorts on Sunday in a neighboring city, says that in some he found the attendance of courtesans serving out lager beer

to customers, and at the same time making their assignations with such as may be inclined thereto. The class of persons in attendance is thus given by another: "A large proportion of their guests are youth of both sexes; but there have been seen in many of them children of tender years, drinking their lager and sharing in their sports. Probably it would be no exaggeration to estimate the number of people gathered in these places on a single Sunday night at fifteen thousand; and the whole number of different persons patronizing them during some part of the Sabbath, at thirty thousand." In view of the facts here briefly presented, it requires no argument to prove that liquor-selling and specious amusements on the Sabbath, tend not less to degrade public morals than to deteriorate public health. The necessity of reform had long been felt by many of our citizens. Grand-juries had also repeatedly directed attention to these fruitful sources of crime and disease, and called for the enforcement of the laws designed for their suppression. Stimulated by these appeals, and the request of citizens, the police commissioners at one time began the work in earnest, and both liquor-selling and theatres on the Sabbath were suppressed in this city. The result, as shown above, was most salutary; the Sabbath was a day of the most perfect quiet; good order prevailed everywhere; and Monday was no longer the day of the largest percentage of sickness. It is

surprising that any one could be found who should petition our Legislature "to repeal an act to preserve the public peace and order on the first day of the week;" and it is truly astonishing that such petition should find a legislative committee willing to report favorably upon it. As medical men, we protest against the repeal of the laws designed to promote good order and sobriety on the Sabbath. Nearly every State in the Union throws around this day legal restrictions which prevent the disturbance of its hours of repose, and encourage the contemplation of moral subjects. The Legislature of this State should heed the eloquent appeal of the minority report, which certainly meets the hearty approbation of every well-disposed citizen: "In view of the fact that the repeal of any portion of the laws in question would involve a departure from the legislative policy of this Commonwealth for more than two centuries; that it would contravene the known convictions of the great body of good citizens in all parts of the State, as it would be abhorrent to the moral sense of the entire Christian community; that it would encourage a spirit of lawlessness, immorality, and vice; that it would remove the barriers protecting the laboring poor from their tempters to drunkenness and folly —we submit that the bill reported by the majority of the committee ought not to pass."

XV.

THE ILLEGITIMATE.

IN considering the subject of wet-nursing, we assumed that the practice is a great evil, and endeavored to point out the responsibilities of our profession for its continuance, and the duties of individual physicians with reference to the nurse and her own child. The latter, we stated, is too often set aside to make room for the new and more consequential nursling, helpless and uncared for, except by the unfortunate mother. The thoughtful and humane physician (these qualifying terms are important) will recognize here a duty to perform which it would be criminal to neglect. He will see to it that the infant of the nurse is properly provided for, that it may suffer as little detriment as possible by the necessary but deplorable deprivation of its natural source of nutriment, as well as of maternal care and sympathy. This responsibility has hitherto been generally overlooked, but we trust will hereafter be regarded. We shall, indeed, be abundantly rewarded, if we have succeeded in drawing the attention of a single practitioner to this subject, so as to impress him with the importance of his individual efforts, first, in counter-

acting the fatal heresy, that a mother may nurse her own offspring or not as she "takes a fancy," and, second, when necessity leaves no choice but the selection of a wet-nurse, that he must as tenderly provide for the helpless child of the nurse, as for the little patient under his immediate charge. Akin to the subject of wet-nursing, and the professional duties and moral obligations of physicians which grow out of it, is the management of illegitimate children. That illegitimacy is an unmitigated evil, no rational person can deny. The very definition of the term implies the moral destruction of one human being, and the physical deterioration or death of another. The history of the miserable victim of seduction may too often be comprised in three words: *disappointment, abandonment, prostitution;* while the history of her offspring may be still more concisely written: *neglect, death.* It is a well-established fact that this evil widely prevails in this country, and to a deplorable extent in our large towns. This may be inferred from the gradual annual increase of still-births and abortions, and the increasing frequency of applications of unmarried women for admission to our lying-in institutions. While it is true that abortions and still-births are by no means generally the result of an effort to escape this disgrace, it can not be denied that such is very often the case. The experience of medical men tends to prove that, in the majority of instances, this cause un-

derlies the greater number of applications to have abortion produced. Dr. Sanger, who carefully investigated the social condition of the prostitutes of New York, says: "To speak in plain terms, of every hundred children borne by women who are now prostitutes, forty-three were born before the mothers (married women or widows) embraced this course of life." Whatever the exact truth may be, it is safe to assume, as above, that illegitimacy is a great and growing social evil in this country. We do not propose to discuss at length the various questions which suggest themselves as we review this subject, but simply to consider the following proposition: What are the claims of the illegitimate? If this question were to receive a judicial decision, we are aware that this unfortunate class would have their civil privileges abridged; society, and even the medical profession, seem to regard them in very nearly the same light. When the victim of seduction first realizes her shame and approaching downfall, she readily finds kind friends, and occasionally a very benevolent physician, who are only too anxious to aid her in destroying the testimony of her dishonor. They place the reputation of one human being in contrast with the life of another, and find no difficulty in deciding that the latter should be sacrificed to save the former. If, however, the victim of this conspiracy eludes the toils of the abortionist and his abettors, and at length breathes the vital air, "a living

soul," it first sees the light in some secret chamber, or distant asylum ward, as if to be born in due time, according to the laws of nature, was a shame and disgrace. The crime against the illegitimate begins even before its birth, and is prosecuted without cessation to its death. Good, religious people, with the most praiseworthy intentions, are anxious to save the mother from ruin, by reinstating her in her former social position. In the accomplishment of this object, one insuperable obstacle must be overcome. This is, such a complete and permanent separation of mother and child as will amount to a perfect obliteration of all natural ties, and render each as independent of the other as if no peculiar relation ever existed between them. In this unhallowed work the physician is a willing accomplice. He watches with painful suspense the last pangs of parturition, in the hope that he can announce a still-birth to the attendants, and should the torch of life flicker in the first breath of animation, he makes no special effort to protect and fan its feeble flame. With nimble fingers he prepares it for its swaddling clothes, and so quietly and dexterously passes it out of the room, that its first helpless petition for maternal care and protection never greets a listening mother's ear. The kidnapping is complete; the little outlaw is conveyed by unknown hands to unknown parents, and after a miserable existence of a few weeks, or months, or years, disappears forever, to the great

relief of the anxious participants in the conspiracy against its existence. A few pious ejaculations, as—"Poor fatherless child! How fortunate that it has died young! What a life of sorrow it has escaped!" and the history of the illegitimate is forgotten. We have recorded here the history of nine-tenths of the pseudo-orphan children that enter our alms-houses and many of our asylums. Few of them survive the fifth year of their orphanage, while vast numbers perish within the first twelvemonth. Those who chance to reach adult life are too often the subjects of inveterate diseases, and their manhood is marked by the decrepitude and dependence of old age. The question which we wish to press upon the conscience of every medical man is: Has not the child an inalienable right to its mother, let the accidents of its birth be what they may? Admitting that a child may be reared by a nurse, and that between them the physical relations seem properly adapted, still who can doubt that instinctive sympathies and secret influences exist between parent and offspring, highly essential to the growth and symmetrical development of the latter? How often does the nursling languish in the care of the most attentive nurse, as if from some secret grief to which it can give no utterance? Let him who wishes to prove this truth visit the alms-house, where he may read in the pinched faces of five hundred starving infants, as on so many printed pages,

the sorrows, diseases, and lingering death which surely follow maternal desertion. What, then, is our plain duty as medical attendants at the birth of illegitimate children, or as advisers of parties who are interested in these unfortunate beings? —for in the great majority of cases a regular physician is consulted at some period. We should not less consider the welfare of the child than that of the mother. Though it may be for her interest and happiness to be restored to society, unsuspected of crime, let us remember that it will doubtless be effected by the destruction of the child. If we sunder the life-giving ties which bind mother and child, and place the latter where it lingers out a miserable existence of a few months or years, are we guilty of a less crime than the mother who grasps her offspring by the throat and ends its life with its birth? No, verily. Plainly then, our duty is to insist that the mother is responsible for the care and support of her child, let the social consequences to herself be what they may. To abandon her offspring is as unjustifiable as infanticide, and he who advises, aids, or abets such a course, is *particeps criminis*.

XVI.

CONSERVATIVE SURGERY.

SCIENTIFIC surgery proposes as the problem of our time: How may diseased or injured limbs or parts best be preserved? The true reputation of a surgeon is now based, not on the number of limbs amputated, but on the number saved from amputation—not on the amount of deformity created, but on that relieved; and it is interesting to note the multifarious ways in which this problem is being solved by earnest and practical students. Shrewd observers of nature's resources are devising, and cunning hands are executing, in every department of practical surgery, new methods of removing diseased parts and structures, or preserving the healthy, in however close proximity. So well established and well defined are many of the more recent rules in operative surgery, that operations which were legitimate a score of years ago, would to-day be justly accounted malpractice. Let us notice some of the more important advances of conservative surgery. The regeneration of bone from the preserved periosteum enables us to save the limb in necrosis. The number of amputations in hospital practice was

formerly largely increased by those cases of necrosis which involved a considerable portion of the bone of any extremity. If the dead bone was removed by an operation, the periosteum was removed also, and the result was a useless limb. Surgeons preferred, therefore, amputation, in many cases, to the removal of the dead bone, so much would the limb be crippled by the latter operation. It now appears, however, that the periosteum has the power of reproducing the removed bone entire, and in a condition capable of supplying its functions. And very marvelous are many of the instances of the reproduction of bone. We may have the entire shaft of the tibia renewed, and the leg restored to its former serviceableness. The radius, with its complicated office of rotation, is equally capable of regeneration, both in tissue and function. The clavicle has thus been reproduced, and has proved quite as useful as in the healthy state. The most remarkable instance of regeneration is seen in the inferior maxilla, which has now been so frequently reproduced entire, with the exception of the teeth, that its renewal, when the periosteum is preserved, may always be prognosticated. The rule may be considered established on immutable principles, that in the removal of bone, we may have the vacancy supplied with the same tissue, if the periosteum is preserved. Amputation in such cases, though formerly sanctioned, would, in our day, be an unjustifiable procedure, if performed

simply because of extensive necrosis. The resection of diseased and injured joints enables us to save many limbs which, though not as useful as the originals were, still can not be compensated by any artificial contrivance. All the joints have been subjected to this operation, and with results such as render it highly encouraging, especially in the upper extremity, if not always advisable, when the question lies simply between resection and amputation. In the Crimean war, the mortality of these operations appears strikingly favorable to resections; thus, of amputations at the shoulder-joint one-third died, of resections one-thirteenth; of amputations of the arm one-fourth died, of resections of the elbow-joint one-sixth. Statistics on a larger scale give for excision of the shoulder a mortality 22.5 per cent., and amputation at the same joint 40.8 per cent.; excision of the elbow-joint a mortality of 22.15, and amputation through the arm 33.4 per cent.; showing that, as a question of safety, excision is to be preferred, at these joints, to amputation, when there is opportunity to choose. Resections of the hip and knee joints, though perhaps not as well established as the same operation at the elbow and shoulder, are well-recognized surgical expedients for saving limbs. Resection of the head of the femur for morbus coxarius has given excellent results, and in military surgery is far more successful than amputation at the hip-joint. Resection of the knee-joint

has saved scores of useful limbs, which the older surgeons would have condemned, and may to-day be set down in the catalogue of accepted operations in conservative surgery. The resection of bones is a method of avoiding amputation worthy of the attention of every surgeon. The individual bones of the tarsus or carpus, when diseased, and rendering the extremity useless, may be removed with the restoration of the usefulness of the limb. The astragalus may be removed with a percentage of about 86 cures, and the calcaneum with a percentage of about 99 cures, in cases where formerly amputation was performed with a mortality of 30 per cent. Gunshot wounds of the articular extremities of bones are now not to be treated by immediate amputation, but by resection. Esmarch has shown that resection of the head of the os brachii should be preferred to amputation when even four inches of the bone are involved, the resulting limb being useful. The free opening of joints, now so confidently asserted by some to be harmless, and as strenuously denied by others, may yet relieve us from the necessity of amputation in those cases in which the larger joints are involved in injuries. In military surgery, the rule of treatment in gunshot wounds fracturing the articulating ends of the bones entering, for example, into the knee-joint, would be immediate amputation of the thigh. But if it is proved that the joint may be freely laid open in such cases, the fragments removed,

and the wound treated as an open sore, without endangering the life of the patient by the complication of a suppurating joint, a great point is gained, and fewer amputations of the legs will be performed hereafter, both in civil and military practice. We believe the day is not distant when this will be the established practice in injuries, and in many diseases of the joints. In military surgery, Stromeyer has already put it to the test by laying the front of the knee-joint freely open, as if for exsection, in a case of gunshot wound, with encouraging results. The frequent accidents in which the entire joint is exposed, and yet complete cures are effected, with no unfavorable symptoms, confirm this opinion. The rule to save as much of the limb as possible, when amputation is inevitable, is a prominent feature of the surgery of our day. Its advantages are especially seen in the lower extremity in the amputations at the ankle-joint. The simple methods of Syme and Pirogoff, by which the limb is rendered nearly as serviceable as with the foot complete, illustrate well the advance of our art. We have thus pointed out some of the methods by which conservative surgery is accomplishing its beneficent mission. We could adduce examples from every branch of practice, but these may suffice.

XVII.

PUBLIC BENEFACTORS.

"HAPPY the man," says an old moralist, "who has never had the misfortune to discover or invent anything useful or profitable to mankind." At the first blush no statement would appear more paradoxical. In all the wide world, that man esteems himself the most fortunate who realizes the consummation of years of dreaming in the full perfection of a curious or useful invention. Every discovery in the arts and sciences has apparently made at least one man happy. From Archimedes to the last inventor of a Yankee notion, the ecstatic shout of every discoverer has been, Eureka! Eureka! And this burst of enthusiasm far less often gives expression to the unselfish gratification of genius triumphing over the "hidden things in nature," than to that inordinate and insatiable desire for fame, wealth, and ease, always existing in a state of expectancy in the human breast. We can conceive of no sublunary honors or rewards more likely to be acceptable to man, than to be known, through his inventions or discoveries, as a public benefactor. But he alone is the correct observer of the sources of happi-

ness and misery among men, who penetrates beyond the seeming and apparent, which gloss the present, and contemplates the ultimate bearing and effect of current events on the lives of individuals. And whoever thus pauses to reflect upon the subsequent lives of those who esteem themselves the benefactors of their race, by the utilization of a discovery or invention, will be forced to acknowledge that the proverb of the moralist has a profound significance. We know not what example he may have observed, where a life of toil in the patient search after truth, it may be through poverty, disappointment, and disgrace, but crowned with ultimate success, had been rewarded with the most relentless persecution and cruel defamation. He may have seen a student of science, after years of labor and sacrifice, educe a principle of world-wide application to the arts of living, only to have the remainder of his life rendered miserably unhappy by the assaults of slander and detraction. How rarely, indeed, does the public benefactor wear his wreath unchallenged by the tongue of slander! The history of many branches of science and art is but a continuous record of the struggles of discoverers to establish their just and honest claims to consideration. Nor does this conflict cease with the death of the devotee of science, but the tooth of envy and detraction ever gnaw at what of reputation may have survived, until this too is consumed, or until posterity may haply embalm

it beyond the possibility of destruction. While these remarks are true of science in general, they are eminently applicable to medicine. The noblest, most learned, most self-sacrificing, most magnanimous profession has been but a bear-garden from the time of its founder to the present. As a body it is united in fraternal and indissoluble bonds, against any and all attempts to harm its integrity or impair its strength, while it is rent by intestine feuds, and distracted by personal assaults. Envy and jealousy rule the hour, and hunt down innocent virtue with a ferocity that knows no control. We need not instance examples; they will recur to every one in ample numbers. From Hippocrates to Morton —from the first invention to the latest modification of splints for the treatment of morbus coxarius, there is an unbroken line of martyrs. We claim to be students of the most progressive science in the entire circle, and yet the path of medical progress is marked with the crosses on which were crucified those who have ventured to take a single step in advance of their fellows. Whoever dares to raise his head above the common level and assert a new principle, becomes at once the target at which a thousand shafts are launched, and too often by unseen hands. With a certain class of medical men, we know of no greater stimulus to research than the announcement of a new invention in the mechanics of our art, or a new principle in its science. Busy hands are at

once at work in our libraries, musty volumes are rudely taken from their dusty retreats, medical journals through long unindexed series are consulted page by page, modern Latin, old French, obsolete German text, are deciphered, and in due time an elaborate article appears, proving conclusively that this contemporary discovery was well known, or at least hinted at, in some former period. We are amazed at the revelation, and marvel that so little should be known of it in our day. In our surprise we forget the just claims to our gratitude of him who has reproduced and utilized a principle, dimly perceived, perhaps, and but obscurely apprehended by his predecessors. Reclamation and crimination follow, and though our knowledge of the past may be advanced, it is at the expense, too often, of the just reputation, may be life-long discouragement, of a worthy member of our fraternity. We have long since come to commiserate in advance the man who is about to make public something new in his profession. Whatever may be the character of the discovery, whether a new elementary body in nature, a new remedy, a new physiological or pathological process, or a new surgical instrument or appliance, we can assure him that his claims to novelty will be disputed. We may refer to hundreds of examples within our recollection where the medical enthusiast, after long and patient effort, has committed to the public press his claims to discovery, only to meet with the ten-

der epithet, "plagiarist." Who doubts that Sims utilized the silver suture? and yet a long and elaborate essay has been written by an Edinburgh Professor to prove that *metallic ligatures* were previously used! Thomas has demonstrated the best method of treating a prolapsed funis, but a contemporary writer has shown that a London obstetrician once recommended the same practice. Reid has taught by dissections the most obscure practitioners how to reduce a dislocated thigh, but a learned neighbor has discovered that this operation has been *accidentally* performed many times before. Galt invented an ingenious trephine, but the moment it was made known, many of the old operating cases were found to contain somewhat *similar* instruments. Sayre illustrated a new instrument with which morbus coxarius could be cured, when a half dozen of the same sort, long since invented, were brought to light. We do not desire to deprecate free criticism on the utility, and even originality, of inventions and discoveries. But we must protest against that carping and cynical spirit, so prevalent in the profession, which always strives to destroy, and, failing, to lessen the merits of those who really advance the science of medicine. The man who renders useful and practical, in his own age, the neglected and useless ideas of a past generation, is equally, and indeed often far more, entitled to our esteem than the original discoverer. Whoever is imbued with the liberal

and catholic spirit of medicine does not stop to dispute with every one who lends him aid. Accepting with gratitude every means by which his progress can be advanced, he has no time to defame his fellows, and no disposition to question their sincerity. Were this the spirit that animated every member of our profession, what causes of endless wrangling would be removed! What sources of jealousy and heart-burnings would be forever obliterated! We should then present to the world the pleasing spectacle of a united brotherhood, governed by a code of morals above reproach. Every member would fulfill his mission, however exalted or humble, and receive from his co-laborers the plaudit of "well done." The inventor would rejoice to see his theories reduced to practice, and the practitioner would cheerfully give due credit and honor to one who had rendered his labors more simple and effective. We need not wait for the millennium to place the medical profession on such a peace basis; let each physician in his position cast aside forever the narrow and petty jealousies which govern men of other pursuits, and the reform will be complete. In all earnestness we urge the cultivation of that fraternal charity which suffereth long and is kind, envieth not, thinketh no evil, and rejoiceth in the truth.

XVIII.

PRELIMINARY EDUCATION.

THERE is no literary institution in the United States that does not put every student who seeks to enter its halls to the test of a rigid examination in the elementary branches of learning. If not found proficient, or not to have attained the required standard, he is refused admission, and compelled to turn back and qualify himself for those higher studies, or seek some employment better suited to his talents and acquirements. We are not aware that any one has complained that this system is too rigid, or that it is unjust. No one has even suggested that it were better to allow every student who applies for admission to the classes of our literary institutions to go through a regular course unchallenged and obtain what education he could, urging that thereby he would be a more useful man than he possibly could be educated. The position would certainly not be irrational, and might be maintained with a good array of arguments. On the contrary, all interested in the cause of education unite in sustaining the system, and give the best support to the colleges whose examination is most stringent. Nor do the pro-

fessors in these institutions complain that by being thus careful in guarding the portals of the halls of learning they so effect a diminution of their classes as to endanger the very existence of their respective schools. There exists among them a spirit of emulation which exhibits itself in efforts to graduate classes well appointed by education to take high rank in subsequent life, rather than in measures to simply swell numbers regardless of their educational qualifications. The true measure of success with them is not the quantity but the quality of the material manufactured. Should a literary institution be established which admitted all who chose to apply, without an inquiry as to the moral character or preliminary education of the applicant until the completion of the prescribed course, we can have no doubt as to the rank which it would take. It might boast of well-filled halls, of overflowing classes, of a long catalogue of patrons, but it would never refer to the educational character of its graduates—the real test of its merits. Such a literary college would soon become a hissing and a byword among the educated, and would speedily sink under the load of infamy which it would call down upon its devoted head by such a prostitution of its powers. It would be repudiated by every honorable, conscientious, and high-minded student, and its diploma would not be worth the parchment on which it was written. Its testimonial of proficiency in learning would be

but a price set upon idleness, incompetency, and demerit. While our literary institutions exhibit such commendable zeal in behalf of a high standard of education, and consider their chief excellence to rest in the character and not the number of their graduates, our institutions for medical learning pursue a diametrically opposite policy. They esteem the true measure of success to be the number of their graduates, and not the proficiency of these graduates in medical science. Their doors are not only thrown widely open and every one invited to enter, but, in some cases, their servants have been sent out into the highways and byways to compel students to come in that their lecture-rooms might be full. No test questions must be put to such guests, lest they should take it as an insult and attend a neighboring school. The only preliminary examination ever instituted, that we are aware of, was as to the *color* of the student. Some schools have not even the courage to exact the stipulated fee lest they should give offence and diminish their classes, while nearly all swell their lists with the names of many who are not full students of medicine. Under the title "beneficiaries" many colleges contrive to admit large classes who are totally unfit for the study, and much less the practice of medicine. All colleges agree in waiving an examination into the moral character and qualifications, by preliminary education, of the student, until he has completed the course of

three years of study, and an attendance upon two full courses of lectures. And what if he is then found unqualified? Ah! but who ever heard of a medical student after "three years' study and an attendance upon two full courses of lectures, the last of which was in *this institution*," who was not found qualified? It is too cruel after three years of study, and especially after having attended the last full course of lectures (and paid his fees) at "*this* institution," to tell him flatly that he is not qualified to practice medicine. And what an amount of assurance on the part of a Faculty would it not require to do their whole duty in many instances, and candidly inform the candidate that he had altogether mistaken his calling; that he was never qualified, either by natural or acquired mental force, or by early education, for the profession of medicine; that, in a word, he has wasted both time and money in his present pursuit, and must now, after fulfilling all the required terms for graduation, except passing a "satisfactory examination," give up the course of life which he and his friends had marked out for him, and seek some more congenial avocation. No Medical Faculty, however high-minded, would have the moral courage to take from a student his time, and his hard-earned fees, and then deliberately tell him the truth in regard to his qualifications. Many conscientious professors, anxious to do their duty to the profession, and yet sympathizing with the

student, whose future life trembles in the balance, are annually put on the rack. With many a doubt, and much hesitation, they at last yield to the force of that policy which makes it too late to deny the student, when he is first put to the test of a rigid examination. Thus many of our best schools are betrayed into granting their diplomas to graduates who not only disgrace them, but who cling like a nightmare to the medical body politic. It is from this class that quackery, to the everlasting shame of the medical educating bodies, gains its recruits. Nor can we expect better things until a radical and complete reform is made in our system of medical education; and that reform is suggested by the practice of literary institutions of examining candidates on their first application for admission to the course of instruction. No consideration other than the desire to do justice primarily to the student, and secondarily to the school, could then influence the judgment of the examiner. If the applicant were disqualified by want of natural abilities to acquire a proper knowledge of medicine, he would be unhesitatingly informed, and thus doubtless would be persuaded to abandon a pursuit for which he was not adapted. If he were but partially qualified by preliminary education, he would be advised to establish first the basis upon which he was to build. Thus the profession would be saved the infliction of membership of the incompetent and uneducated

graduates which now annually swell its ranks. Although the institution of this reform, and its practical fulfillment, rests with the medical schools, yet the experience of the past has taught us that the impelling power is with the great body of the profession. While the false idea of merit obtains among colleges that the size, and not the educational excellence, of the graduating classes is to be regarded, no reform can be expected. The profession at large must destroy this false and pernicious system, create a new standard, and bring the schools to its test. It may appear to be a very difficult undertaking to so concentrate the influence of the great body of practitioners as to radically change old and hereditary customs in the art of teaching, especially when the reform effects the pecuniary interests of these close corporations; but if it be borne in mind that schools rely upon the general practitioner for support, and that they not only desire, but eagerly seek his favor, there can be no doubt as to the power of the latter to influence the former. All that is required to effect this object is the co-operation of the various medical organizations throughout the country in an emphatic indorsement of a given plan, and the schools must conform to the policy indicated. Nor should such action be longer delayed.

XIX.

THE AGE OF UTERINE DISEASE.

IT has been remarked by a popular writer that this is "the age of uterine disease." In the medical profession, and with the other sex, the assertion certainly is not wide of the truth. Uterine diseases have been the all-engrossing theme of a large class of practitioners for many years. Volumes have been written upon these affections, with chaste or unchaste illustrations of every grade, from the secret and undetermined forms of sterility, to the gravest forms of cancer; interminable discussions have been held upon the ever-varying phases of the diseases of this organ; and students of uterine pathology have always been rewarded with rich discoveries in this fecund placer. If we were to believe all that is written of the inherent and acquired diseases of the organ, on the integrity of which depends the perpetuation of our species, how surely fated to early extinction would seem the human race! If it be perpetuated, it would be through decaying germs that must give origin to imperfect forms and decrepid generations. But while it is true that uterine diseases exist and form a large class of affections which are capable of destroying the

health and happiness of the sex, can any observant practitioner doubt that the uterus is, in our time, the scapegoat of many a latent malady of the female that is not correctly diagnosticated? Said an eminent obstetrician of this city: "If I should confirm the diagnosis in every case that is sent to me from the country, as one of undoubted uterine disease, I could add thousands of dollars to my annual income." He was emphatic in the expression of his opinion, that medical men, nowadays, conveniently referred to the womb a vast number of affections of which they either had not the tact or knowledge to determine the seat and nature. He examined the consulting patient with an habitual anticipation of finding a normal condition. Such statements are startling, and indicate a vast amount of carelessness or ignorance, or both, in the medical profession. In general, no diseases are more readily susceptible of accurate diagnosis than those peculiar to the uterus. They belong, in fact, to the diseases distinguished by the French as external pathology. If there is an ulcer on the parts, it is seen as distinctly as if on the leg; if there is unnatural enlargement, it is as detectible as a swollen finger; if there is a tumor of any kind or description, it is as demonstrable as a similar growth on the face; if there is displacement in any direction, it is as apparent as a dislocated limb. Indeed, a physician, with all the mechanical aids which we now possess for inves-

tigating uterine diseases, can not be held guiltless of culpable ignorance who pronounces falsely upon the presence of grave lesions. He has no excuse for diagnosticating an ulcer when there is none; or prolapsus, when the organ is in a normal position; or anteflexion or retroflexion, when neither exists. And yet these false opinions are, it must be admitted, daily given, greatly to the discredit of many a physician in the eyes of an honest and competent expert. We believe that these errors are generally the result of carelessness. There is in many, also, a disposition to give always a definite opinion, especially in an obscure case; and it is convenient to fix upon an organ which has the popular acknowledgment of being the happy abode of all the undiscovered maladies of the female organization. The uterus has now come to enjoy the relative position of the liver in its ability of concentrating within itself all the undefinable diseases to which the sex are subject. Although the term "liver complaint" has now become obsolete in the nomenclature of many practitioners, yet its place is more than supplied by the phrase "uterine disease." Aside from the humiliation of professional character which results from such ignorance and carelessness, there are other evils of a very different kind that must not be overlooked. We have thereby opened a large and fertile field for the special advantage of quackery in its lowest and most revolting forms. It is not strange

that the interesting and interested subjects of these affections have become alarmed at the almost universal prevalence of the belief in the disabilities peculiar to their unfortunate sex. Thousands of nervous ladies suffering from some slight and obscure derangements of digestion, or other departure from health, are secretly informed by friends that the womb, that mysterious organ, with its innumerable susceptibilities, is liable to an infinite number of strange disorders. At once a mania for an investigation seizes the individual victim, which nothing but the manipulations with the speculum can relieve. And alas! too often instead of relieving a proper apprehension on the part of the patient, even though she is correctly informed that the womb is not diseased, a new source of excitement is established which is far more dangerous to her happiness than actual disease. If her ailments are lightly treated by her medical attendant she readily falls into the hands of a vulgar irregular, and becomes the dupe of his villanous machinations. In more than one instance has the profession of this city witnessed a uterine furor, created by an unblushing quack, which neither reason nor modesty could control. And but recently we noticed an instance in which a most ignorant pretender opened a hospital for the treatment of uterine tumors, in one of the most intelligent and moral communities of an interior State; crowds of women flocked to him, and all were found to

be suffering from tumors of the womb. By accident a patient more intelligent than others, discovered that the tumor was a piece of raw meat, which was introduced at the first examination, and which, after long treatment, was removed to the great relief of the patient. It is time that uterine pathology was thoroughly understood by every practitioner. It is not, as we have already intimated, difficult to learn so thoroughly that mistakes in diagnosis will be only exceptions, and not, as now, the rule. And physicians should exercise the most scrupulous care in the management of such diseases where they really exist, especially in the unmarried. He has then not only to deal with a local disease which may be readily cured, but with temperamental conditions not apparent, yet existing, and liable to be developed into dangerous activity. The term "Speculum-mania," used by medical practitioners, may yet pass into the nomenclature of the alienist. It is certain that in some instances, and they may be far more numerous than we suspect, the local treatment has been regarded as the origin of a moral obliquity which terminated in abandoned lives, and occasionally in confirmed insanity. In no branch of practice, therefore, has the daily practitioner a more delicate and responsible duty to perform than in the treatment of the victims of uterine disease.

XX.

HOSPITAL CONSTRUCTION.

HOSPITALS are great public necessities which have always commanded the regard and support of the Christian world. No appeal to the benevolent is more likely to be cheerfully responded to than that which seeks to sustain these institutions. Governments have also generally recognized their value; some have endowed them liberally, and others have taken them under their fostering care, and lavished upon them untold sums of money. They are, in some measure, the criteria of a nation's progress in civilization, and the measure of its cultivation of those benevolences which spring from the heart of a people imbued with philanthropic sentiments. And yet how often is this benevolent intention frustrated in its endeavors to benefit the unfortunate by the faulty construction of the costly structures reared for their benefit, and consecrated to the holy purpose of relieving human suffering, and providing a home for the homeless and destitute sick! Nay, how often do these very buildings become the sources of disease and the causes of death to those who enter them as asylums for the relief of their individual

maladies! Every physician, who has long been attached to one of these public charities, must have felt that our hospitals are too often the great foci of endemic diseases. Typhus, erysipelas, scurvy, hospital gangrene, and all those affections which are generated and always intensified by the congregation of individuals, here prevail from year to year, with no other alternation than that which is produced by the change of seasons. Surgical injuries and operations here reach their maximum of mortality, always greatly in excess of that in private practice. Lying-in women are decimated with a pestilence, so palpably the result of local causes, that it seems barbarous to continue these departments in public hospitals. Foundling institutions are little better than receptacles where these unfortunates are prepared for early death, or imbecile youth, or premature old age. In military practice the evils of the faulty construction of hospitals stand out so vividly that they have long since attracted public attention. The remark of Sir John Pringle that "hospitals are among the chief causes of mortality in armies," was confirmed in the Crimean war, where in the early part of the campaign nearly one-half of those treated in hospitals died. Says Rush, an active and intelligent participant in the management of the hospitals in the war of the Revolution: "Hospitals are the sinks of human life in an army. They robbed the United States of more citizens than the sword." With

rare foresight he thus intimates the reform that would remedy this evil: "Humanity, economy, and philosophy, all concur in giving a preference to the conveniences and wholesome air of private houses; and should war continue to be the absurd and unchristian mode of deciding national disputes, it is to be hoped that the progress of science will so far mitigate one of its greatest calamities as to produce an abolition of hospitals for acute diseases." That hospital architecture has made great advances among us is undeniable; but it has, as yet, failed to remedy the evil. Deficient ventilation has been justly regarded as the chief cause of the evils of our hospital system, and multifarious are the measures for accomplishing the desired improvement. The natural courses of cold and hot air have been carefully studied; curious ventilating apparatus has been constructed to conduct the air along the channels which it seeks, or forcibly compel it through devious paths from which it recoils; ceilings have been elevated and wards enlarged to give a larger atmospheric area; but still we have not reached that degree of perfection which is attainable. The fundamental error in our present system of hospital management is in the aggregation of the sick. Whatever may be the mode of ventilation, however cleanly wards may be kept, there will be a constant and overpowering generation and accumulation of the causes of those diseases dependent upon large collections of persons.

XXI.

OUR STATUS ABROAD.

AN American, it has often been remarked, is decidedly cosmopolitan in his sympathies. He refuses all restraints in his intercourse with the world, whether in trade, in science, or in literature. This feeling not only leads him to seek freely for whatever may interest or gratify him wherever it may be found, whether at home or abroad, but it tends to make him acknowledge unreservedly the source from which it is obtained. To what these national peculiarities are due it is not easy to decide, though we may surmise, that as the American people is a *mêlange* of all the nations of the earth, there exists among all ranks and conditions of society a filial affection for the older countries. What is true of the American people in this general sense, is also true of the medical profession. We are accustomed to seek knowledge in every quarter of the globe, and are quite as much rejoiced to learn the discovery of a new principle in medical science if the discoverer be an Englishman, Frenchman, or German, as if he were our next-door neighbor and "a true American." It is alleged, indeed, that we are so accustomed to look to

other countries for our medical knowledge, that we do not advance medical studies at home; that we have no national medical literature, and never can have, until we exchange our free-trade policy for protection. However that may be, it is nevertheless true, that the general and rapid diffusion of information in the profession, gathered from all sources, must create a constantly increasing demand for an improved medical literature, and gradually elevate the tone of public medical sentiment. This trait in our character has been attributed to our weakness, to our want of resources, and the like; but such is not the true explanation. It is rather, as already intimated, an inherent national peculiarity, growing out of the make-up of our people. It is an admirable trait and one of which we may well be proud. While Englishmen discard everything French, and the French everything English, and the Germans reject Anglo-French ideas, and all distrust the "Yankee Nation," the American physician, as a member of the Republic of Medicine, accepts, in full faith and confidence, whatever new and useful is communicated to him by one of his fraternity. While we pursue this liberal policy out of the most generous regard for the rights of others, and the interests of medicine, it accords little with our sense of justice to find cases published by American physicians, styled by foreign journals "American Stories," and repudiated simply because they were related by an American.

It can not be denied that American physicians have reported a large number of extraordinary cases; but many of them have been remarkable only because they were the first of the kind placed on record. We may instance McDowell's case of ovariotomy; Mott's cases of ligature of the arteria innominata, of the common iliac, and of exsection of the clavicle; the case of Alexis St. Martin, with a fistula leading into the stomach; and finally, the case of Gage, who had a bar of iron driven through his head and recovered. These were all very remarkable cases, and were probably at first pronounced "American Stories;" but who now denies the accuracy of the reports? McDowell's name, with universal consent, is recorded among the first ovariotomists; Mott's patients still vindicate the correctness of the many extraordinary cases which he published. Every text-book on physiology attests the importance of the investigations into digestion conducted through the fistula in St. Martin's stomach; and finally, the patient till recently survived through whose head a tamping-rod (three feet seven inches long) was projected from base to apex, as do many reliable witnesses to the accident. It is undoubtedly true that cases can be cited where American physicians have made exaggerated statements, but it is altogether unjust to infer from this circumstance that the profession of this country is thereby rendered obnoxious to the charge of publishing "exaggerated facts and strained con-

clusions." We believe our current medical literature, so far as relates to a conscientious regard to accuracy of detail, will not suffer in comparison with that of any European country. But aside from this grievance, the American medical profession have another and just cause of complaint against their foreign brethren. Not only do the latter too often discredit the statements of our writers, but they not unfrequently seize upon important discoveries in practical medicine, first made among us, and without due acknowledgment of their indebtedness, introduce them to their countrymen as their own inventions. We could mention several instances in illustration, but the following example will suffice. The method of reducing dislocations at the hip-joint by manipulation no sane medical man who has any knowledge of his profession will deny was introduced into practice and completely illustrated by Dr. Reid, of Rochester, N. Y. (U. S. A.) This method of reducing dislocations was never alluded to by any foreign journal that we receive, until the full details were republished in one of the English semi-annuals. Several weeks after its appearance, a London journal announced that a surgeon of one of the hospitals of that city had discovered a method of reducing dislocations at the hip-joint by simple manipulation, and had succeeded perfectly in three instances. The details of the method were given, and they were precisely those published by Reid.

No allusion whatever was made to Reid by way of acknowledgment; the surgeon's name was immediately prefixed to the method; reporters and editors extolled the ingenuity of the operator; and to this time it is familiarly referred to as this surgeon's method of reducing dislocations of the thigh. We are quite willing to admit that such instances are few and exceptional, but the fact that they do occur in the very centres of medical respectability abroad, certainly tends to mitigate our own shortcomings, and to relieve us somewhat of the censure which we so frequently receive. We deprecate this spirit, and regard it as inconsistent with the liberal and fraternal feeling which should pervade all ranks of a learned profession. Medicine, cultivated as a science, aims by innumerable influences to unite its members in a universal brotherhood, and that fraternity should be one of perfect equality. There can be no class privilege, no aristocracy, and no distrust among medical men who properly estimate the honorable character of their calling. They will accord to each new member that generous confidence and fraternal regard which is due to brethren bound together by a common sympathy. Nor will that bond be broken, nor that confidence destroyed, except by the most absolute proof of professional delinquencies.

XXII.

CONCENTRATED MEDICINES.

ONE of the most wide-spread of the popular errors created and fostered by the friends of homœopathy, is that which attributes to this pretentious system of quackery the comparatively diminished amount of medicine prescribed by regular physicians. And it far too frequently happens that medical men tacitly or openly acknowledge the truth of the assertion. Admitting the fact that less medicine in bulk is now administered than formerly, they see no other explanation than that so often alleged which has now well-nigh passed into a proverb. The admission of this statement is utterly false, and damaging to the profession. Homœopathy is entitled to as little credit for the improvement of our therapeutics as for the advancement of pathological or surgical science. It is important that we should understand on what basis rests the actual changes in our present materia medica, that we may give a rational explanation, and not make improper concessions to quackery. It should be understood that the homœopathic hypothesis was made at a peculiar period in the history of medicine, and one well adapted to give

it popularity. About the time of its promulgation a great change had taken place in the science of chemistry, especially in that branch which we may term pharmaceutical chemistry. The alkaloids, the active medicinal principles of remedies, were just then discovered, and by this discovery a new impetus was given not only to chemistry but to therapeutics. The oft reiterated query of centuries—Can you not give your remedies in smaller bulk, and in a more agreeable form?—was about to be answered. It was apparent that the physician could give the same strength as formerly in a very much less, in fact in a minute dose, and there was hope that eventually all medicines would be thus reduced. Where the older practitioners gave opium or bark in large bulk, the younger therapeutist gave the small and elegant preparations of morphine or quinine. The homœopaths very early finding the utter inertness of the medicines they professed to give, surreptitiously administered these alkaloid principles, which could be given in minute doses, and produce marked results. A sect which had started upon a new hypothesis, presenting so many points of favor with the public, did not intend to lose these advantages by any concessions of the inability of their infinitesimals to produce marked and visible effects upon the systems of their patients. Where infinitesimal doses did not succeed, the alkaloids, most frequently administered by their own hands in full doses, pro-

duced certain and marked results, thus presenting to the public an apparent confirmation of the soundness and truthfulness of their dogmas. This system of medication immediately gained favor with the delicate, the nervous, the fastidious. Many of the older practitioners who had become routinists did not attempt to investigate these causes of success, or use the new remedies which science had presented to them, but continued to administer the old and nauseous medicines, thus driving many of their best patients into the hands of the homœopaths. In those preparations which could be taken with but little taste, most persons believed that there was but little real medicine, and boasted to their former physicians of the minuteness of the dose which now affected them, little thinking that frequently in the small quantity was concealed treble the medicinal power which they previously took in large quantity. Thus the assertion of the homœopaths that they administered less medicine than the other physicians, and much less than was formerly given, was in fact a falsehood; for by calculating the amount of active principle given within a specified time, it was found to exceed the amount of the same principle contained in the crude material formerly used. There can be no question that the innocent dupes of homœopathy are constantly dosed with powerful medicines, which make them perpetual patients. In homœopathic families the habit of dosing be-

comes permanent to the infinite injury of all the members, but especially to the young and susceptible. This practice tends to but one result, viz., constant minor ailments which ultimately lead to prolonged medical attendance and large fee bills. It is a demonstrable fact that patients who have left their old medical attendants, and placed themselves under the care of homœopaths, have had much more sickness than before, and have more than quadrupled the amount of their expenses. The number of alkaloids and active principles that have been discovered, though numerous, do not present remedies for all cases. Therefore in some instances the whole medicinal substance or plant is still used by physicians. But this can not be done by homœopaths, because they have promised the public minute and almost tasteless remedies. When, therefore, cases are presented to them that can not be reached by these new remedies, the patient must and does suffer a longer and more dangerous sickness. If he recovers, his convalescence is tedious, with complications which might have been prevented by appropriate treatment at an early stage of the disease. But with the numerous fallacies of the system of homœopathy we have nothing at present to do. It was our present purpose simply to answer the oft-repeated assertion that homœopathy has taught regular physicians to use less medicine, and also to refute the error that homœopaths use less

medicine than educated practitioners. Briefly, then, we gladly acknowledge and rejoice that all educated physicians use less medicine, and less nauseous medicine than formerly, but this result has been brought about by physiological and pathological investigations. Theories have given place to facts, and improved methods of diagnosis have taught clearly what we have to cure. A better understanding of therapeutics has taught us the application of remedies to the cure of diseases, and an improvement in chemistry has given us remedies of definite and certain power. At no period in the history of medicine has the practitioner occupied such vantage-ground as to-day. He can determine as never before the exact stage of progress of the disease, and select his remedy with the precision that a mechanic selects his tools for a given task. And these remedies are veritable and potent, and not the flimsy pretexts obtained by the mysterious process of shaking a bottle. Let us, therefore, maintain the position firmly, that whatever improvements have been made in the art of prescribing, are not due to the teachings of empiricism, but are the fruits of science.

XXIII.

MECHANICAL SURGERY.

SURGERY has not made more rapid advances in the conservation of limbs hitherto doomed to destruction, than has mechanical surgery in supplying the defective parts. It is quite impossible, nowadays, to determine what part of an individual is natural, and what artificial. Of ten men who walk the street each with an artificial leg, in nine we are more liable to fix the disability upon the natural than the artificial limb. The western bride who was thrown into convulsions on seeing her bridegroom suddenly deprived of an entire leg by a waggish friend, illustrates in one of a thousand ways the present perfection of the appliances of mechanical surgery. We now have artificial teeth which baffle even dentists to detect their genuineness; and artificial eyes which flash with intelligence, sparkle with merriment, and doubtless roll with the fine fancy of the poet. Even nasal appendages are now manufactured to order so as to imitate exactly the natural tint of that organ, or the more brilliant colors of the acne rosacea (brandy nose) not infrequent in the higher circles of society. But mechanical surgery is only

in its infancy; most of the improvements which we witness date back but a score and a half of years. The clumsy apologies for legs which fifteen years ago represented the highest degree of art, would not be sold by any respectable manufacturer of our time. The same is true of artificial hands, trusses, etc. The genius of American invention once directed to this fertile field for useful and profitable effort, there is no limit to the advances which it will make. Already in the treatment of deformities, mechanical appliances are accomplishing results which lead us to anticipate that they will yet monopolize this entire field of practice. Mechanical surgery is a legitimate branch of the healing art. Whatever unprofessional men may have accomplished in the way of invention in any of its departments, has for the most part been the result of accidental circumstances. A farmer, annoyed by a hernial protrusion, has, sitting at the side of his plow, whittled a block into a form that, when applied, answered its purpose well. It is often alleged in recommendation of an artificial leg that the inventor had an amputated limb, which directed his attention to this special study, and led to the invention of the limb in question. But mechanical surgery is not a simple branch of mechanics, to which any ingenious artisan can successfully turn his attention; it requires also an accurate knowledge of anatomy, of physiology, and of surgery. Rationally, the mechanical surgeon, or the

"surgeon artist," to use an elegant phrase, must be a thoroughly educated physician as well as an inventive genius. A man might with as much propriety prescribe remedies without a knowledge of diseases as undertake to apply properly a truss without a knowledge of the anatomy of the malady. The same remark is true of every branch of mechanical surgery. Quackery in this department, or the pretensions of uneducated and unqualified men, are as gross and unmitigated as in the simple practice of physic. The medical profession have too long regarded mechanical surgery as the legitimate province of non-medical men, or medical speculators in patents. This has tended powerfully to deter worthy and competent medical men from adopting any branch of it as a specialty, and thus the art has been until recently almost monopolized by the merest pretenders. But medical men of real merit have recently entered this field of service, and already the ripe fruits of skilled labor begin to appear. We now see in every department the results of long and careful study of the anatomical or pathological abnormalities to which appliances are adapted. From medically educated mechanical surgeons the profession may obtain many practical hints, and it is important that we have a class of artisans in these several branches to whom we may with confidence refer questions of practice. The place of election for amputation of the lower, and even the upper extremity, should

always be decided by the mechanical surgeon, and hence how important it is that he be thoroughly qualified to give a just decision. But we need not multiply examples of this kind. It must be evident to every one that mechanical surgery is a branch, and a most desirable branch of surgical science and art. As such it should be fostered by the profession by every proper means. First, we should encourage educated medical men to engage in its several departments as special objects of study and practice, and then give them the most cordial support. If the profession recognize the claims of this branch of the healing art, and take under its protection those who devote themselves to it, there will be no need of patents to insure to an inventor the honest proceeds of his labor and study. Second, we should discountenance on all occasions, and under all circumstances, the uneducated pretenders in this department of surgery, who throng our cities and hawk their wares in every market. Whatever merit some may have as inventors, as a class they are not entitled to the slightest consideration, and should meet with unqualified condemnation. They not only do great harm by their competition with qualified manufacturers, but too frequently their appliances do fatal mischief to deformed limbs.

XXIV.

COLOR BLINDNESS.

JOHN DALTON, an English chemist, relates that, when a boy, he went to see a review of troops, and was quite surprised at hearing his companions speak admiringly of the red coats of the soldiers and the purple sashes of the officers, when he could not discover any difference between the color of their coats and the grass in the field. His inquiry of his comrades as to what difference they could see was received with so much laughter and ridicule, that he was led to believe that there was something peculiar about his own vision. Subsequent observations revealed to him that he could not distinguish pink from blue, and in the solar spectrum he could scarcely discern the red, it appearing to consist of two colors, yellow and blue. He afterward, about 1798, published an account of his case, which attracted much attention, and led to further investigation. It was soon found that many persons were similarly affected, in a greater or less degree. The affection was called Daltonism, and those suffering from it were called Daltonians. The subject has latterly been very thoroughly studied, and it has been found to be a

very common defect of vision, though, unless existing in a marked degree, it does not always attract attention. Dalton was informed of nearly twenty persons with vision like his own; and out of twenty-five pupils he once had, to whom he explained the subject, two were found color-blind, and, on another similar occasion, one. Prevost was of the opinion that of every twenty men assembled by chance, one would be color-blind. Wilson made extensive inquiries, and found an average of one person in seventeen affected. In an examination of 1,154 persons, it appeared that one in fifty-five confounded red with green; one in sixty brown with green; and one in forty-six blue with green. The defect is much more marked in some than in others. Distinguished men like Dugald Stewart, Sismondi, and others, have exhibited this singular peculiarity of vision. The mistakes which color-blind persons make are often ludicrous. A member of the Society of Friends purchased for himself a bottle-green coat, intending to select a brown color, and for his wife a scarlet merino dress for a dark one. A minister of the same Society selected scarlet cloth as the material for a new coat. It has been alleged that many of the followers of George Fox were color-blind. A journeyman tailor was promoted to the position of foreman, where he had to match colors, and was soon involved in difficulty. The scarlet back of a livery waistcoat was provided with green strings to

match; a ruddy brown was put side by side with a dark green; in general, he confounded reds and browns, and crimson and blue. An artist painted a brown horse bluish green, and roses blue. A farmer could not distinguish red apples from the surrounding leaves, except by their shape. An engraver found this defect of vision useful. He says: "When I look at a picture, I see it only in white and black, or light and shade; and any want of harmony in the coloring of a picture is immediately made manifest by a corresponding discord in the arrangement of its light and shade, or, as artists term it, the *effect*." Color-blindness may be congenital (from birth) or it may be acquired. When congenital, it is generally hereditary, and may often be traced through a number of generations. Like other hereditary peculiarities, it frequently passes over one or two generations, and then appears in all its intensity. It is far more often noticed in the male than the female members of a family. The causes of this defect of vision are not well understood. When congenital, it is supposed to be due to a defect in the organization of the brain, at the point where is located the sense of sight. Phrenologists assert that the organ of color is located immediately above the middle of the eyebrow, and they claim to find at this point in the color-blind a marked depression. It is said that Mr. Ransome, who is no phrenologist, states, as a fact noticed in the dissection of Dal-

ton, "that there was a marked deficiency in the convolutions of the brain over the orbitar-plates, which are assigned to the organ of color." It is remarked by Wilson that there is doubtless a great difference in original endowment in regard to the sense of color among nations. People who live under bright skies, and among plants and animals of vivid and brilliant colors, exhibit skill in arranging and harmonizing tints which would seem to prove that they are not afflicted with color-blindness. The Chinese, Japanese, Venetians, Italians, Spaniards, and the inhabitants of Southern France, have for centuries excelled as florists, painters, dyers, glass and porcelain makers and stainers. On the contrary, the nations of northern climates, where the summers are short and the winters long and gloomy, and all colors are subdued, have but little regard to the colors of their dress and household adornments, and hence color-blindness is probably not infrequent. When the disease is acquired, it depends upon some temporary disturbance of the system affecting the circulation. When congenital, the defect is permanent, and persons suffering from it must adapt their business to this peculiarity of their vision. They should never engage in any occupation where this defect of vision would involve the lives of others, as in the use of signals.

XXV.

LITERATURE IN MEDICINE.

THERE is an anecdote current that a New York physician, recently traveling abroad, met a distinguished Parisian surgeon, to whom he spoke in somewhat laudatory terms of his preceptor. "What has he done?" was the prompt inquiry of the foreigner, adding, "I don't remember to have read any of his writings." "It is true, he has never written anything," replied the puzzled American, "but then he has a very large business." "And is that the standard by which you estimate professional excellence?" retorted the surgeon, with look and gesture expressive of contempt. There is in this incident a world of meaning. It sets forth vividly a national trait in our profession, which disgraces us individually and as a body. We are proud of being called practical, having no time to write, on account of the severe pressure of our business engagements. The young man, who, after being located half-a-dozen years in practice, still goes on foot, is set down as a failure. There is no hope of his ever rising to a level with the aristocracy of his profession. It matters little what may be his scientific attainments or his moral worth; he is an

object of pity, if not of contempt. Men in high and influential positions frequently boast of their incomes, and exhibit their list of daily calls, or their bank-books, as an evidence of success. Half of the gossip in professional circles relates to the income of individuals. These false ideas of professional success have taken deep root among us, and are bearing bitter fruits. The recent graduate is driven to seek business as the first great desideratum. He abandons the pursuit of special studies, for which he may have a predilection, because they will not immediately "pay." He can not afford to labor patiently in the pursuit of knowledge, and let business come as its sweet reward. Like Ortugal, he demands that "the golden stream be quick and violent." If patients do not immediately seek him, he goes out into the highways and byways and compels them to come in. At all hazards he must have the appearance of business. Urged on by this infatuation, he assumes all the externals of success. His mode of living, and his equipage, are often far beyond his income, but he lives in the hope that these glittering baubles will advance his business, and in the end reimburse his outlay. He *may* attain the summit of his ambition, and acquire the largest practice in the community; but it is not improbable that he will sadly fail. But, whether he succeeds or not, he is lost to the science of his profession. He may seek positions in hospitals, schools, and societies, as collateral

aids to success, but in every position he is a nonentity. His name may be trumpeted throughout the world, but no man of education will even recognize it. He dies, and leaves behind him no memorial but the perishable marble. A short generation passes from the stage, and his memory is swept forever from the earth. It is time the profession of this country set up a higher standard of merit than that now so generally adopted. We should pay homage only to genuine worth. The palm of excellence should be given to him who has the profoundest practical knowledge of the science and art of medicine, and who makes that knowledge available to others. As a profession, we should not only cultivate science, but we should also cultivate literary taste. History and observation prove the truth of Zimmermann's remark—"that the greatest medical writers of any age were the best physicians." We have no right to ridicule the man who frequently communicates his views to the profession. While it is true that too many write who have nothing worthy of publication, it is sadly true that many who fill high places withhold altogether their experience from their brethren. There are in this and other communities too many of this latter class. They are intellectually and morally worthy of the confidence of the profession, and capable of being the leaders in the department of practice to which they are especially devoted. By virtue of true merits they have obtained responsible positions

in our hospitals, schools, and associations, and are qualified by long experience and sound judgment to instruct. It is to them that the profession look for sound instruction in practical medicine, surgery, and obstetrics, and for a just estimate of the value of the more recent improvements. But they are sealed books that give no information. They are quick to turn every advantage which official position may have given them to their personal and pecuniary account, but they make no return to those who have raised them to power. They will have their reward in that utter oblivion which is hereafter to cover their names. The close of a life so destitute of substantial results, where large opportunities for usefulness have been neglected, or used only for selfish purposes, ought to excite pity and contempt. But we have become so accustomed to rate that man successful who obtains the largest practice and accumulates the most wealth, that it is difficult to fix a higher standard of greatness in this country. We are, however, hopeful of the coming generation of medical men; they are in general far better qualified by a preliminary education; they have fixed habits of study and investigation; they have more culture and refinement, and are thoroughly imbued with the spirit of progress and improvement.

XXVI.

FEMALE NURSES IN HOSPITALS.

IT is conceded that woman may be employed "as the regular administrator of the prescribed medicines," and that she is more capable than the opposite sex of those "delicate, soothing attentions which are always so grateful to the sick." This has already been proved. Well-trained nurses generally win the good opinions of the very physicians who at first are opposed to their admission. Says an observer in a military hospital: "The presence of these ladies has demonstrated that there are numberless little things essential to the comfort of the sick, which not one man in a thousand ever thinks of, but which woman sees by intuition, and supplies as if by magic." We doubt not it will also be admitted that she is better adapted than man to prepare food for the sick, to preserve cleanliness of the wounds, and of the beds, and to regulate and keep in order whatever relates to the domestic appointments of a hospital. Miss Nightingale has aptly said on this point: "I think the Anglo-Saxon would be very sorry to turn women out of his own house, or out of civil hospitals, hotels, institutions of all kinds, and substitute

men housekeepers and men matrons. The contrast between even naval hospitals, where there are female nurses, and military hospitals where there are none, is most striking, in point of order and cleanliness." There can be few who will not agree with her in the opinion, that "the woman is superior in skill to the man in all points of sanitary domestic economy, and more particularly in cleanliness and tidiness;" and further, that "great sanitary civil reformers will always tell us that they look to the woman to carry out practically their sanitary reforms." What then are the objections to the employment of female nurses in general hospitals? We are not aware what plan will be adopted in hospital practice nor what special duties will be assigned to female nurses, if they are employed; but we know from personal knowledge, that the objections raised are rather imaginary than real in a hospital that has a proper organization. Let us recur to experience. It was our fortune to spend a portion of our medical pupilage as resident in a hospital which was entirely under the supervision of women. This hospital was general in its character, admitting all classes of patients, medical and surgical, and of both sexes. During this period cholera prevailed in the town, and the sick of this disease crowded the wards. The general management was under the direction of a matron who had for years been an experienced hospital nurse. Subordinate to her were six chief

nurses. These nurses were educated, intelligent, and refined, and many of them were from the highest ranks of society. They were skilled nurses. They adopted this employment from strong religious convictions of duty, and, entering upon it as a life-work, submitted to thorough preparation by systematic training. The division of labor was as follows: one had entire charge of the culinary department, a second of the laundry, and the remaining four of the several medical and surgical divisions of the wards. Under their immediate supervision, therefore, was the preparation of the diet, the washing of the clothes and bedding of patients, the administration of medicines, and all minor dressings. There was also the usual number of visiting physicians and surgeons, and a resident medical student. Although there was but a single male attendant, assistance was always to be obtained among the convalescents. The administration of the medicines was never committed to assistants, nor, indeed, any of the details of nursing. Surgical dressings of a delicate character were, of course, under the immediate charge of the resident physician, and the assistance of male patients from their beds was the proper duty of the orderly. During a residence of a year in this institution, we never knew the slightest indecencies on the part of male patients toward their nurses, nor were the latter ever placed in a position embarrassing to one unaccustomed to the daily duties of hospital

wards. On the contrary, the patients entertained the most profound respect for the nurses, the convalescents volunteering with the utmost alacrity to aid them in their duties. In regard to that hospital, we speak but the unanimous sentiment of every physician and surgeon connected with it when we affirm that in cleanliness of wards and beds, in the preparation of the food for the sick, in the precise administration of medicines, in watchful care at the bedside, in a a word, in everything pertaining to the management of the domestic and medical department of a hospital, this was a model institution, and one which has no equal in this country. And if we add to these excellencies the thousand little offices of kindness which woman alone knows how to bestow upon the sick and suffering, we need not be surprised that many a patient from that hospital was heard in after years to utter a benediction upon his former nurses, the good Sisters of Charity! The testimony of those who have seen the practical working of the system of female nursing is to the same purport; and as such evidence is that upon which we must rely in coming to a rational conclusion, we shall refer briefly to the opinions of those who have had opportunities for extended observation. At Guy's Hospital, London, there were *no male nurses* in 1857, according to the evidence of Mr. Steele, its superintendent. There were eighteen chief nurses, having charge of the day and night nurses; of

the former there were twenty-seven, and of the latter twenty-three. The duties of the chief nurses are thus stated: "They have the general superintendence of the wards, and they are responsible to the physicians for the medicines and wines, and for the cleanliness of the patients; they have charge of the ward furniture and the bed-linen." The other nurses had the immediate charge of the patients. In reply to the question, Does your system of nursing work well? he answered: "Remarkably well." The only improvement suggested was the employment of one or two orderlies for the venereal and bad surgical cases. The same system was in operation in London Hospital. After an extended investigation of the working of the hospital systems on the continent, Mr. Alexander gave evidence before a Parliamentary Commission as follows: "From what we saw and heard of the female nursing in Paris and Brussels, there can not be a doubt that good results would follow the introduction of a certain number of well-selected educated nurses to our hospital establishments. In Jamaica, in 1837, I recommended female nursing to be employed, from what I saw of the evil effects, and even risk of life, by orderly or soldier nursing in severe cases, but no attention was paid then to my recommendation; and from my more extended experience, I am still more convinced of the advantages that would be derived from the judicious introduction of female nursing

into our permanent hospital establishments." It appears also, that at the time this investigation was made, the French emperor was forming a corps of female nurses for military hospitals, the selection being made from the Sisters of Charity in the civil hospitals. During the Crimean war female nursing in military hospitals was put to a practical test, and the opinions of those who witnessed its efficiency are worthy of especial consideration. Dr. Parkes, who had charge of the Renkioi Hospital, says: "I have a very high opinion of female nurses, if they have been trained and are proper nurses." Mr. Meyer, Medical Director of the Civil Hospital at Smyrna, states that "they worked uncommonly well; out of twenty-two female nurses only one was removed for any misconduct. . . . . Several of the ladies that we had did the work uncommonly well, and it would have been very difficult to have got a larger class of severe cases of fever attended to so well by night and day except by the agency of those ladies, who were thoroughly to be relied on, not only from their superior intelligence but their devotion to the work." But we need not multiply this testimony, for we require no further arguments or evidence to prove the importance of employing qualified female nurses in civil and military hospitals.

XXVII.

MATERNAL VIGILANCE.

IT is said that Sir Edward Codrington, when a young officer at Toulon, was so anxious to distinguish himself that he passed the greater part of the day on deck, watching for signals to give intelligence of the movements of the French vessels, and when he retired, he sank into a sleep so profound that the loudest noise did not awake him; but when the word "signal" was whispered in his cabin, he immediately sprang up. This anecdote proves how sleepless in the midst of the profoundest slumbers is that faculty of the mind which for the time being is intensely excited. The same truth is well illustrated in the case of the mother. She is the most sleepless person in the household. For months, and often for years, she does not enjoy two consecutive hours of sleep. But it is not the noises in the street, nor anxiety, nor nervousness, that disturb her repose. She can sleep soundly when others are made wakeful by unusual sounds or voices. But there is one sound, one voice, more potent in her ears than all others: it is the voice of her child. When that is heard, even in the faintest whisper, she arouses from the deepest sleep; however in-

sensible she may be to other voices, that one never fails to be heard by her quick ear. Mothers often relate that long after their children have grown to manhood and womanhood, they are startled from their slumbers by the old and familiar cries of their babyhood. This instinctive wakefulness of the mother to the wants of her child teaches a most important lesson in the care of children at night. It is a growing practice in our first-class families to commit the infant to the care of the nurse at night, that the mother may not be disturbed, but may have her regular and full amount of sleep. This is done under the pretence that the mother's health requires that her night's rest should not be broken by the care of the child. Except in extraordinary cases, there is no truth in the assertion: if the mother and child are in ordinary health, the proper care of her infant at night does not tax the mother beyond her strength; while the judicious care of the child by the mother diminishes greatly the irritability and restlessness of the former. But there are certain positive evils and dangers attending the care of the infant by a nurse at night. It will prove in nine cases out of ten, that the nurse considers her own sleep of paramount importance, and, in about the proportion given, it will be found that she manages to obtain it. In the first place her affections are not stimulated by the child, and hence her sympathies are not en-

listed in its care and welfare. She sleeps quite unconscious of and undisturbed by its cries, when its plaintive voice penetrates to the mother's ear, though in a distant and secluded part of the house. Thus many a helpless infant that has become tired of lying in one position, and merely requires to be changed to secure perfect rest and quiet, cries itself asleep from sheer exhaustion, unable to arouse the leaden ears of its nurse. One of the first and most dangerous consequences of committing the child to the care of the nurse at night, is her liability when asleep to over-lay and smother it without hearing its stifled cries. The English mortuary records show that two or three hundred children are thus killed annually. But if the child escapes death or injury from this cause, it is by no means free from danger from other sources. It is liable to be habitually drugged to sleep. This may, and doubtless will be regarded by many as an unjust suspicion upon their own "faithful" nurses; but there are too many facts accumulated against them to make it doubtful. It must be assumed as a truth that nurses *will have* their own usual amount of sleep. If they can not obtain it on account of the restlessness of the child, they soon learn the remedy for its sleeplessness. They try it secretly and cautiously, and find it succeeds perfectly; they repeat it with equal success several times; and now made bold and confident, they administer the anodyne with

liberal hand every night, or at least when they fear the child will disturb their own slumbers. A child thus treated soon becomes unusually irritable and peevish, its digestion is impaired, its complexion is a dirty, sallow hue, it suffers from constipation, and finally sleeps soundly only when under the influence of its accustomed drug. How many children in every wealthy and fashionable community, with good native constitutions, fall into premature decay from this cause it is impossible to determine; but the coroner's inquests prove that many infants die annually from the imprudent use of the drugs constantly found in nurseries. It can but be regarded as an axiom of the utmost importance in the rearing of children, that the mother should have the personal charge and care of them at night. A medical writer of great experience says: "How many children sleep the sleep of death through the undue administration of carminatives and other nostrums! It requires the mother's greatest vigilance to prevent such weapons being introduced into the nursery; for a nurse, however otherwise excellent, is apt to prefer the comfort of uninterrupted slumber to the performance of her duty in studying the welfare of the child committed to her care." This advice can not be too frequently repeated by the physician in his daily visits among the wealthy and fashionable classes.

XXVIII.

A SUSPENSE OF FAITH.

A DISTINGUISHED leader of a religious sect characterized by its disregard of the teachings of the past, its rejection of all forms, creeds, ceremonies, and tangible incitements to devotion, and for its purely spiritual worship, recently startled the world by the announcement that a new Church was required to meet the religious wants of mankind. From his own stand-point it was evident to him that there was "a suspense of faith" among Christians; a prevalent dissatisfaction with those theological refinements which exalted the spiritual at the expense of the material; a certain anxious looking for the revelation of a new mode of worship. Regarding man as a finite being, having senses through which he is to gain a knowledge of the external world, and in all his pursuits dealing with substance and not shadow, with material forms and not essences, he very rationally concludes that to meet the religious exigencies of at least his own denomination, they should return to those forms of worship which in the highest degree stimulated to devotion by an appeal to the senses. Accordingly, he recommended the

establishment of a Church with temples of the most imposing architecture, with altars smoking with burning incense, with music the most solemn, and ceremonials the most impressive. This theological philosopher, though advocating the most absolute changes in his own sect, reasoned from true premises, and came to logical, rational conclusions. Man has a spiritual and material existence so intimately blended, and mutually so dependent, that the one contributes constantly to the aid of the other in their normal and healthy action. His religious being can not long subsist on the vagaries of the imagination, or the airy nothings of a speculative theology. Medicine, like theology, has its transcendental worshipers. Rejecting the methods of investigation by which every other science is advanced, they adopt a dogma at once irrational and insusceptible of explanation, and upon this build up a theory purely imaginary. Whatever does not square with this theory is to be rejected, though its practical value may have been proved. The acquired knowledge of the profession, however exact and true, is accounted as nothing, unless in harmony with this absurd principle. The history of medicine, in all that relates to its material interest, is obliterated, and a new era commenced. They thus discard alike the accumulated experience of the past, the discoveries of the present, and the aids by which nature and art are made to subserve the interests of science.

To them pathology reveals no useful facts in the history of disease, and the microscope and organic chemistry are cast aside as useless methods of investigation. Withdrawing from the profane and vulgar touch of material objects, they seek to advance their knowledge of human maladies by studying the influence of intangible entities upon a diseased imagination. Causes are entirely lost sight of, in their anxiety to discover agents producing like results; symptoms are ascribed to the potency of the ultimate particle of inert substances; and the physiological termination of diseases is attributed to the elimination of a mythical cause by fabulous remedies. It is not strange that an inquiring mind should at length sicken of such irrational pursuits, and turn from this pseudo-science which has only a retrograde movement, to that true science which daily unfolds new and hidden treasures to its votaries. It is only marvelous that an educated person could long occupy himself with studies so trivial, and investigations so unscientific and deceptive. We can only account for it, knavery aside, by the fact that medicine, in many respects, gives the greatest latitude for self-deception. But he who is firmly established in correct principles, and has the support of a sound judgment, can maintain his integrity while studying its most obscure chapters. We have ever been confident that educated persons adopting a system so destitute of

merit, would finally become weary of its hollow pretensions, its inability to progress, and the unsatisfying nature of its studies. There have long been striking evidences of a "suspense of faith" among the practitioners of this school. Discontent pervades its ranks, exhibiting itself in a universal tendency to abandon the intangible, imponderable, and imperceptible in remedies—the dogma dear to the heart of its founder. Silently many have returned to their old faith, while the majority have sadly backslidden, and indulged clandestinely in the sin of employing old curative measures. The leaders have endeavored to meet this exigency, not by affectionate appeals to duty or stern reprimands for delinquencies, but by devising means of concealing from public recognition the real defection of their followers. Ingenious methods of disguising full doses of every important remedy seemed for a time to answer their purpose; but there was a limit even to this device. Aloes and assafœtida could thus be administered in large doses without detection; but by what means could blisters, leeches, and the lancet, so long, so loudly, and so persistently denounced, be used, without utterly destroying the fabric which had been raised with so much labor and art! Even this point seemed to have been attained. A diligent inquirer set to work to determine upon what principles these three remedies acted; when, to the astonishment of himself and friends,

he discovered that blisters and leeches acted purely according to the dogma of their school, and therefore were to be boldly employed. He also further ventured the assertion, that venesection would doubtless be found to act upon the same principle, if its action were thoroughly investigated, when the lancet would also be recognized as a legitimate resort in acute diseases. Here was a total abandonment of everything but the name, which has long passed for nothing. But even these concessions and compromises, it now appears, will not answer the exigencies of that school. The flimsy subterfuges which it raises will not long suffice to cover its nakedness. The larger body of its members require a new faith, and that faith will be RATIONAL, SCIENTIFIC MEDICINE. Medicine, like theology, has had its isms, which have, in various ways, and by multiplied deceptive charms, and insidious influences, enticed its members from its ranks. The history of medicine presents a continued series of popular theories, which have for the time engrossed the attention, and then fallen into contempt. No age, however enlightened, can claim exemption from the prevalence of medical heresies, but we may console ourselves with the reflection that medicine also, like theology, has always had its true Church, to which the footsteps of every honest seeker after truth finally tend, however far he may have wandered from the paths of rectitude.

XXIX.

THE PHYSICIAN AS CITIZEN.

UNDOUBTEDLY, medicine, whether considered as a science or an art, in its study or in its practice, is the most noble and honorable profession which man can follow. Such at least is the opinion of medical men, and there are few learned and considerate persons of any other pursuit who do not yield it equal homage. Indeed, no liberal mind, familiar with the range of natural sciences which medicine comprehends, the ennobling and liberalizing effects of its study, and above all, the humane objects which its practical application to man's physical necessities contemplates, can but regard it as a profession of the most noble and honorable character. And yet it would scarcely seem possible that a man could entertain so exalted an opinion of his business, as to consider himself exempt from the common privileges and obligations of citizenship. And this remark would have especial force, where the existing government imposed individual duties and responsibilities. The very opposite conclusion would be the more rational; the higher and more sacred the particular calling and obligations of the individual, the more grave

and important his responsibilities as a citizen. The natural supposition would be that such pursuit derived its sacredness from its opportunities and power of benefiting the race. For surely that business in life must be of all others the most selfish, which so exalts the individual above his fellows, that he lives entirely to himself. There is, we believe, in our profession, a widespread and growing misconception of the duties of medical men as citizens; and this error of judgment is far more prevalent among that class, the members of which are regarded as representatives of the true spirit of medicine. With them, to exercise that most sacred of all the privileges of citizenship, viz., the choice of rulers by the ballot, is a condescension of dignity never to be submitted to, except, perhaps, at the solicitation of a wealthy patron who may have a personal interest in the result of the canvass. And this act, in itself the most honorable perhaps of their lives, but truly dishonorable from its motives, is performed with the shamefacedness of premeditated guilt. They scorn a knowledge of our political history, and a familiarity with current political events, as matters too vulgar to occupy the attention of minds devoted to the sacred calling of physic. Diseases and their remedies are the never-varying themes of their thoughts and conversation. Health, and preventive medicine, and all measures of public interest, are discarded as without the pale of their "peculiar pursuits." All such ignoble sub-

jects are consigned, with a contemptuous sneer, to that class of medical men whom they term "political doctors." Whoever has been interested in those measures which contemplated such social reforms as would improve the health and happiness of the people, but required the aid of legislation to give them form and force, and has sought the aid of medical men, has found too frequent exhibitions of this false pride of professional dignity. He has met with physicians from whom he anticipated a cordial support, who have signed petitions with a manner indicating that they tacitly protested against such desecration of their names and influence. In the recent crisis of our national government, was heard, though in subdued tones, the reproachful terms of these wiseacres of our profession; the adoption of patriotic resolutions by some of our county societies, the organization of medical bodies for the supply of hospital and other materials to the army, and the enlistment of surgeons into the country's service, were regarded as acts unworthy of high-bred physicians. They have no sympathy or fellowship with those who entertain such *unprofessional* subjects, and engage in such menial service. Patriotism and treason are, to them, meaningless words; for, governed by the catholic spirit of medicine, they regard only scientific attainments as the test of membership in their exalted social state. It is not a little singular that in a free government, where the duties as well as prin-

ciples of the citizen are indefinitely extended; where practically, as well as theoretically, he is the sovereign, there should be a class of persons who lightly esteem their civil obligations. And it is still more remarkable, nay marvelous, that such a class should be found in a profession which holds the most intimate relations to those influences through which the most beneficial results to society may be secured. In European countries medical men regard it as a proud distinction to be engaged in the service of the State; here it is well-nigh sufficient cause for expulsion from a medical society. Abroad, the most prominent physicians labor for years to attain courtly rank, or positions in government service; while with us an intimation of such a *penchant* is evidence that the aspirant for political favor has abandoned all claims to professional respectability, and is gravitating to the lowest rank and level of his profession. American medicine will have but half fulfilled its mission when it attains the rank it seeks only as a science. Upon it are also laid the burden and responsibility of important social reforms, which it alone can accomplish. Preventive medicine, or the practical application of the principles of sanitary science to the art of living, is yet to engage the earnest attention of medical men in this country. But whoever enlists in this great work, must for the time incur the odium that many foolishly and most unjustly attach to those public movements

of medical men necessary to the establishment of proper organizations. But let them not be disheartened. Preventive medicine will yet be recognized, we believe, as the noblest branch of the science, and those who succeed in systematizing its operations among our people, will be regarded as the most worthy of the profession, as well as public benefactors. Says Dr. Rush: "Permit me to recommend to you a regard to all the interests of your country. It was in Rome, where medicine was practised only by slaves, that physicians were condemned by their profession 'mutam exercere artem.' But in modern times, and in free governments, they should disdain an ignoble silence upon public subjects. The American revolution has rescued physic from its former slavish rank in society. For the honor of our profession it should be recorded, that some of the most intelligent and useful characters both in the cabinet and the field, during the late war, have been physicians." An active participant in most of the political measures of the Revolution; with such colleagues as Morgan, Warren, Shippen, Jones, and Bartlett; Rush was led to believe that this great event would form an era in the social and political history of his profession. And contemplating the influences and privileges which citizenship under a free government conferred, he foresaw that medical men, by their intimate social relations, might and should be an important element of political power.

XXX.

MEDICAL EXPERTS.

THE value of medical evidence in questions involving the causes and nature of deaths by unknown means has now been recognized nearly three centuries and a half. During this long period it has frequently demonstrated its accuracy of investigation of the subtle forces which destroyed life, and led with unerring certainty to the detection of the criminal or the exculpation of the innocent. In this field of research no other class of scientific experts can supersede the medical expert. His conclusions are based on an accurate knowledge of physiology, pathology, anatomy, chemistry, and the physical sciences, together with those attendant circumstances which are open to the observation of every one. The special knowledge which he is supposed and admitted to have, gives him the position of a skilled person, or one who is capable of deciding questions beyond the comprehension of ordinary witnesses. The position of the medical witness, therefore, becomes one of great importance to the cause of justice and truth, as well as of great responsibility. The courts of law are accustomed to accord to his

testimony great value, and to regard his opinions with the most profound respect. To sustain well the high character of the medical expert in courts is not a trivial undertaking. In the first place, no small amount of knowledge of the medical sciences in general is requisite to cope with the abstruse and obscure questions to which medico-legal questions give rise. There was a time indeed when surgeons only were allowed to testify as to the wounds of murdered persons in English courts; but that period has passed, and to-day the medical witness is expected to bring to the stand the most profound knowledge of his profession in all its departments of scientific investigation. In the second place, he must be an acute and logical reasoner in order to place the facts which he has drawn from science and from the surrounding circumstances in such harmony of relation as to make an unbroken chain of logical sequences. We might add as a third qualification, and which is the most important of all in the interest of justice—a perfectly disinterested mind, devoted only to the discovery of the truth. We have frequent and painful proofs that medical men do not always appreciate the responsible and truly dignified position which they are called to fill in courts of justice. Forgetful that they are presumed to be experts, or persons whose scientific attainments give their opinions great weight, and above all that they are unbiased by any circumstance connected

with the case, except positive and unquestioned facts, too frequently the medical witness takes the stand an avowed partisan, and shapes his evidence to sustain some personal interest or preconceived notion. Nearly all the cases of trials for alleged malpractice have their real origin in the malicious suggestions of a medical man, who subsequently comes upon the witness-stand as an expert in settling the many questions in which he has a personal interest. The position of such a witness is unenviable in the extreme. He is unworthy the name and association which give him such power for evil, and should be discountenanced by every means which we possess in our individual or organized capacity. The injury which such men inflict upon their brethren is incalculable; many are made to incur heavy expenses; others are mulcted in damages, which afterward hang heavily upon their resources, while a few are discouraged and driven from the profession. It is the duty of local societies to make stringent regulations in regard to that class of physicians who incite a prosecution for malpractice. The case should be investigated rigidly, and if the evidence convicts, the name of the guilty party should be stricken from the membership of every medical organization. Important as is the position of the medical man in courts of law, when upon his opinion rests the fair fame of a brother practitioner, it bears no comparison to those cases in which the life of

an individual is trembling in the balance. The responsibility which falls upon the medical witness in trials for suspected murder, is more weighty than that which occurs in any other relation of life. He assumes, indeed, to determine with more accuracy than can any other witness who did not actually see the deed committed, the nature and causes of death. His opinion is based upon an analysis of facts, often extremely subtile, and generally susceptible of various explanations. How important that his mind should be entirely free from all preconceived theories, and that he should be uninfluenced by position or prejudice. And yet we have occasional instances of medical witnesses exhibiting a degree of feeling altogether incompatible with that dispassionate search after truth, which should characterize the expert. Physicians, also, occasionally, seem forgetful of, or at least disregard professional courtesy, and manifest toward the opinions of their brethren a degree of contempt quite unworthy of their high position. In the history of a recent murder trial in this State, we have a melancholy example of the rancor which one medical witness may exhibit toward another, growing out of a mere difference of opinion. Accusations of dishonesty, falsehood, and sinister motives are as unqualifiedly made against a member of the profession of irreproachable character and of the highest respectability, but a differing witness in

the case, as if the parties were in a common street-brawl. One witness taunts another with being paid for his services, as though that were a crime, and at the same time announces that he himself received nothing, as though that were a virtue, and gave greater impartiality to his opinion. Every physician who resorts to such unworthy and unprofessional means in a court of law, only degrades himself. It is desirable that in this country our profession should study thoroughly forensic medicine. The courts accord to our opinions great weight, and it is exceedingly important that we do not abuse or lessen their confidence. And to this end students should, as a body, study medical jurisprudence, and become familiar with their duties and obligations when summoned to the witness-stand. In most of the colleges this branch is taught by a physician, and in a most superficial manner. The student learns but little of practical value, especially as regards the nature of medical evidence. On this latter subject, the one of which he knows the least, and yet requires the most knowledge, he should be taught by a competent legal instructor. This defect in the system of medical teaching is becoming more and more evident, and until remedied by the permanent establishment of chairs of Medical Jurisprudence, and the selection of qualified teachers, the graduate must be regarded as entirely deficient in an important branch of his education.

XXXI.

INCURABLE DISEASES.

MEDICAL men have one stereotyped complaint against the community. It is the want of faith which the latter seem to have in the power of medicines to cure diseases. This scepticism is thought by many to be a growing evil in our times, and is generally attributed to the prevalence of those heterodox systems of practice, which eschew all drugs as poisonous, at least when taken in tangible quantities. The physician, prescribing under such circumstances, is oppressed with a disagreeable embarrassment, which is seen in his hesitating course and undecided treatment. If the patient or friends lacked faith in his remedies before, they are now confirmed in their unbelief, much to his discredit and discomfort. He prescribes timorously, and often indiscreetly, and in consequence fails to prove by his works that his faith has a substantial basis. The very prejudice in the popular mind which he so deprecates, is strengthened and widened by his own conduct, and rendered seriously detrimental to his own interests, and to the position of medicine in public favor. But is there really a want of confidence in the public mind

in the efficacy of medicines? We think not. On the contrary, it will more frequently be found, that what at first seemed incredulity, is in fact but an overweening confidence in remedies which leads both patient and friends to resort to a larger variety than the practitioner is disposed to employ. They may thus lose confidence in the physician, or in his ability to select medicines for the individual disease in hand, but that there must be some drug all-powerful to relieve the malady, they do not doubt. A person afflicted with an incurable disease, will seldom rest in the belief that his case does not admit of cure by medicines. When he has exhausted the resources of one medical man, he immediately resorts to another, and never wearies in his search after the priceless boon—a specific for his physical infirmity. It is an interesting question how far the medical profession is itself responsible for the prejudice of the public mind. A physician sick of an incurable disease, is generally the most intractable of patients. His confidence in the power of medicines to relieve him is often morbidly great. He can not brook disappointment; he will not listen to the suggestion that he is beyond remedial measures. This is but the expression of that habit of mind which he has himself acquired in endeavoring to cure this class of diseases. Long experience of the utter futility of his remedies in such cases, has not weakened his confidence in the power of medicines to cure all human

maladies. The condition of mind which the physician exhibits under such trying circumstances has, to a greater or less extent, been reacting upon the community in which he lived. With commendable heroism he strives against hope in many a case, rather than yield to all-conquering fate. He has appealed to past experience, and has ransacked the materia medica, but all in vain. Such zeal is not lost on patient and friends. Every new pill or potion is hope renewed; but disappointment is the inevitable result; alternating thus, the disease steadily progresses to its inevitable termination. The impression created in the mind of all is, that the physician regards the resources of his art as quite equal to every emergency. If they subsequently lose confidence in him, they do not doubt the power of drugs to relieve all human ills. He may, and doubtless will, regard his lost patrons as sceptical in regard to the efficacy of drugs; but their faith is really not shaken, except in himself. Incurable maladies furnish quackery, in every form and grade, its chief source of support and profit. Could these affections be stricken from the list of human ills, or could specific remedies be found adapted to their prompt cure, there would never be another medical pretender. Equally fatal to the pretensions of charlatanism would be a profound and unalterable conviction in the popular mind of the absolute incurability of certain diseases. The attempt to create such a

belief will be deemed utopian. But may we not rationally conclude, that the same course of instruction, which has established the present universal belief in the efficacy of medicines, could, rightly directed, not only remove this ill-grounded faith, but in its stead implant in the mind of at least every rational person a firm conviction of the incurability of many diseases? The statement is susceptible of demonstration so far as regards many families, and even communities, which have been fully under the influence of a candid and earnest physician. If we should fail in such an undertaking, we do no more than our duty in ceasing to attempt impossibilities, and confining our labors to the practicable. We do not mean to discourage rational efforts to discover remedies curative of diseases now considered incurable. All such inquiries are praisworthy and commendable. But we would discourage that routine practice, so prevalent, of repeating the trial of vaunted specifics in diseases thus far justly reputed irremediable. We degrade rather than advance the science of therapeutics by such practice. It is an important question, then, how far we ought to give hope by promises of new remedies in incurable diseases. An eminent writer, Dr. Latham, says:

"But let us concern ourselves only with actual diseases, diseases existing and in progress. And of these let us ask whether the fact that they are, or are deemed to be, incura-

ble or intractable—the fact that there is no medicine or method of treatment known by which they have ever been successfully managed—whether this fact be enough to warrant physicians in doing and trying anything or everything indiscriminately upon them?—enough to justify or excuse us in falling in altogether with the world's notions, and adopting the world's practice of medicine, as far as they are concerned? I think not; for this would be mere gambling with drugs, and not the practice of medicine."

Sir William Gull has recently taken similar ground in regard to the treatment of many forms of hereditary diseases, contending that physicians should recognize the fact that these alleged diseases are but normal conditions of the tissues which will not yield to treatment. He says:

"Many states are still considered and treated as diseases which are certainly not diseases at all. Thus it may be fairly said there are some people who are made to ail, and without having disease, are born to suffer. Under the present condition of things they can not maintain a comfortable equilibrium. They are always ailing. Medicine fails on such. Unstable health is their law, in spite of the pharmacopœia. In practical medicine it is important to recognize this. . . . Yet I may appeal to my hearers if they can not recall cases where they have prescribed all the farrago of so-called tonics, with as good a purpose as if they would thereby strive to prevent the setting of the sun."

It is not contended that the services of a physician should cease when a disease is proved to be incurable. All such diseases may be palliated, and the progress of many may be materially arrested by proper treatment.

XXXII.

MORTALITY IN HOSPITALS.

IN the first lines of the preface to her admirable work, *Notes on Hospitals*, Miss Nightingale remarks: "It may seem a strange principle to enunciate as the very first requirement in an hospital that it should do the sick no harm." It does indeed seem strange that, in this day of the universal recognition of the necessity of hospitals, one of the ablest writers on this subject should lay down as the first principle in their construction that they do the sick no harm. We have been accustomed to regard the hospital as an asylum where every arrangement and appliance necessarily tended to restore the sick to health. To the temples of the ancients flocked the sick, the lame, the blind, as to shrines of health, to be healed of their infirmities. Out of this custom grew the modern hospital. Is it really true that, after centuries of experience, we have so far departed from the original idea in the establishment of hospitals that we need to be admonished of the real object of such institutions? Must we learn anew that hospitals are designed for the cure of the sick? Whoever calmly views this subject in the light of experience, must

acknowledge that Miss Nightingale has stated a truth full of significance and deserving of the most serious consideration. It is too true, as she remarks, "that the actual mortality in hospitals, especially in those of large crowded cities, is very much higher than any calculation founded on the mortality of the same class of diseases among patients treated out of hospitals would lead us to expect." This is especially the case with those diseases classified under the general head of typhoid, as erysipelas, pyæmia, continued fevers, etc. Our large metropolitan hospitals always show an excessive death-rate from these diseases. But there is a still more significant sense in which hospitals may be allowed to prove harmful to the sick, viz., by exposing them to local causes of diseases, which should never exist in a hospital. It now not unfrequently happens that patients enter general hospitals with simple diseases, but contract other maladies of a more fatal character, of which they die. The aggregate mortality of this class from fever and typhoid diseases in large city hospitals is not inconsiderable. In every lying-in ward or hospital we find striking proofs of the truth of this statement. Every life sacrificed from such causes is needlessly wasted. The practical direction which we wish to give to these facts is upon those who are interested in the establishment of new hospitals. Let us briefly glance at some of the causes of excessive hospital mortality. First, and chiefly, is an in-

salubrious location. A permanent general hospital should never be located in thickly settled parts of the town. The death-vapor which overhangs the crowded quarters of a large town affects most disastrously the sick congregated in hospital wards. This fact is strikingly shown in the vast difference of mortality between city and country hospitals. In England the rate of mortality in the country hospitals is considerably less than half that of the London hospitals. Secondly, hospitals should be so constructed as to give a large amount of air-space to each patient, with the rapid and constant renewal of air by night and day. No hospital is a proper residence of the sick which does not afford him a full and constant supply of fresh and pure air. We have not yet reached the ultimatum of thorough ventilation. By the means now employed, the air in the centre of a ward is stirred, but we fail to flush the floors and sweep the close corners with renewed currents. Thirdly, over-crowding is an evil closely allied to deficient ventilation. The statistics of hospitals show an exact correspondence of the rate of mortality with the number of patients in a single building. In a hospital with 100 inmates the chances of recovery from a given severe disease are one-third greater than in a hospital with 300 inmates. We see this fact strikingly illustrated in the difference in mortality between city and village hospitals. The former usually have 300 inmates, the latter

rarely more than twenty-five; while the mortality of the former is marked at 100 per cent. the latter is rated at less than fifty. Finally, the admission of contagious and infectious diseases to general hospitals imperils the lives of the inmates. The most dangerous of these diseases which still finds admission to the wards of many general hospitals, is typhus. The mortality records of one of the largest hospitals in this country affords a melancholy illustration of the truth of this statement. During a period of but nine months, fifteen of the resident medical staff were attacked with this fever, contracted within its walls, of whom five died. This is a startling record of mortality under any circumstances, but in the present instance is simply harrowing. Five young physicians, in the vigor of early manhood, lingering still in this great practical school to give to their education that perfection of temper and firmness necessary to rapid success, fall victims to fever. In the death of such young men, highly educated, devoted to duty, and with noble aspirations for excellence, the whole profession sustains a great, an irreparable loss. It can ill afford to needlessly expose to inevitably fatal diseases those who are so eminently qualified to sustain its dignity and honor, and to advance the science of medicine beyond its present bounds. If these things must needs be, if suffering humanity demands the sacrifice, the victims are always ready to be offered. The noblest

members of our profession have yielded their lives a willing offering to stay or mitigate the horrors of pestilential and epidemic diseases. Our hospitals bear ample testimony to the courage and heroic bravery of young medical men in the midst of danger from the most fatal infectious and contagious diseases. No post of duty is deserted, and when one falls another instantly steps forward to fill the ranks. But however important it may often be for the physician to take his life in his hand and go boldly into the midst of infection, and fearlessly incur the threatened penalty, the question recurs: Is it necessary to sacrifice so many valuable lives of young medical men in our hospitals to typhus or typhoid fever? Are not these preventable diseases? The spacious and liberally provisioned buildings, with their thousands of comfortable beds, bear testimony to the beneficent and large purposes of the governing boards of these noble institutions. But if it occurs that by some failure to conform their administration in accordance with the inflexible laws of sanitary science and the requirements of nature, the costly edifices and the richly furnished wards are transformed into fever-nests, and furnaces of infectious and deadly disease, spreading death to all classes of patients, and secretly poisoning the faithful attendants and zealous young physicians who are on duty there, then we are in duty bound to press the inquiry—Who is responsible for the

needless sacrifice of these lives? and the official guardians of those institutions must ask, What does sanitary science teach concerning such maladies? Though the localization of these diseases is an opprobrium to any hospital, lamentable experience in a very large number of hospitals in our country has shown how very difficult is the task of eradicating these poisons from the wards. Sanitary science teaches, and experience has abundantly demonstrated, that typhus and typhoid fevers are absolutely preventable. But the virus of these fevers must be rigorously dealt with as a terrible foe. Its birth is in the crowded ward, the unventilated and densely packed hall, the filthy tenement, and where effete organic matter chances to be accumulated or neglected. The essential fact relating to the processes of these fevers is, that they rapidly waste the organic elements of the human structure, and that in ordinary apartments, with an atmosphere at all confined, as by closure of windows and open fire-places, the typhic poison is fearfully communicable or personally infectious and contagious. And these facts demand attention from the governing boards of hospitals. The same fever tragedy is enacted within the same walls, and from the same preventable causes, year after year; and it will be repeated every winter until those causes are removed. Five of the choicest young physicians in a single institution killed by this

stealthy enemy of our hospitals during the past few months! More such sacrifices will rapidly follow, unless medical men come forward, and, with the redeeming power of sanitary knowledge, effect the needed reform. As a preliminary step in reform, let a rule be rigidly and peremptorily enforced, that patients with typhus or typhoid fever shall not be allowed to remain in a ward where there are any other maladies, surgical or medical; and, secondly, let there be such improvements in the ventilation of all the wards and hospital apartments as will effectually prevent the presence or the continuance of an endemic typhic condition. But such reforms are exceedingly difficult of execution, especially in general hospitals; the windows will be closed, the fire-places are already hermetically sealed in most wards, and, sad to say, nurses and patients alike cry out against fresh air; they are not accustomed to such air; surgical cases, consumptives, dyspeptics, and bed-ridden patients with organic maladies, will resist all ventilation. For such, and for stronger reasons, the fever patients must be put into a domestic quarantine, and should be kept immersed in fresh air and sunlight. And for fever wards there should be a specially rigid government, and *specially trained nurses*. This can only be thoroughly accomplished by establishing fever hospitals. And we put the question to the governing boards: Ought you not to open buildings for the reception and treatment of fever?

A simple pavilion can be quickly constructed with full ventilation, which would insure a greater percentage of cures, and complete immunity of attendants from this fatal disease. Such a fever pest-house is as much required as a separate building for the isolation of small-pox. We know how vague and uncertain the practical knowledge of these considerations is among laymen; and because we are forced to witness most cruel and needless sacrifices of precious lives, in consequence of such inattention to momentous facts, we speak thus urgently. And we pray our medical brethren to lend their aid to the work of rooting out the fever nests of our crowded districts. Let them insist upon the removal and proper surveillance of all communicable sources of contagious fever, and soon we shall see each hospital establishing a separate and well-isolated pavilion for the treatment of such fever. It is demonstrable that not until such isolation is adequately provided, will fevers cease to burst forth in our large hospitals; and while the fever demon of the crowded wards holds carnival, noble young martyrs will swell the immortal group of faithful physicians whose heroism in duty ennobles the history of the medical art, and to whose names the profession affectionately points, while it proudly inscribes upon the tablet sacred to their memory:

HÆC MEA ORNAMENTA SUNT.

XXXIII.

DISEASES OF CONSCRIPTS.

THE medical examination of conscripts during war presents a novel duty to the profession. While the volunteer desires to enter the service, and consequently conceals or makes light of his disabilities, the conscript wishes to escape service, and to do so, feigns disease or occasionally maims himself. The latter examination is much more difficult than the former, involving often the nicest discrimination of appearances, and the most careful study of symptoms made conspicuous but without an adequate cause. All the most recent methods of investigation must be applied, and oftentimes with much more skill than in ordinary examinations. The feigning of disease by conscripts has long been practiced, and most governments have passed stringent laws relating to it. Charondas, among the Greeks, punished those who employed stratagem to avoid going to war, by exposure in the dress of women on a scaffold for three days. In the Roman State conscripts often maimed themselves. Some cut off their thumbs (*pollice trunci*, poltroons), as was witnessed in the war of the rebellion. But they were still compelled to serve. Theodosius or-

dained that two maimed conscripts furnished by a district should count only as one efficient recruit in the prescribed levy. Constantine ordered that persons self-mutilated should be branded and still retained in service. Other emperors punished persons who maimed themselves to avoid serving in the campaigns of the Republic still more severely, and Augustus even put some to death. In modern times, persons endeavoring to escape service by feigning disease or disabling themselves, have been sentenced to imprisonment, to receive corporeal punishment, or have been compelled to serve in the army for life. To determine the nature of the complaint of the conscript, whether true or feigned, it early became necessary to call in the services of physicians. And it is not very creditable to our profession to find in subsequent legislation evidences of the connivance of the examining surgeon with the recruit to effect the exemption of the latter. In the *Code de la Conscription* is a regulation to this effect: "Officers of health and others, convicted of having given a false certificate of infirmities or disabilities, or of having received presents or gratifications, were to be punished by not less than one or more than two years' imprisonment, or by a fine of not less than 300 or more than 1,000 francs." In 1818 it was ordered by the French Government that medical officers who were proved to be accomplices of persons endeavoring to escape service when called upon,

should be imprisoned from two months to two years, besides being fined 200 to 2,000 francs. Still later, the surgeon who gave false certificates for liberation or exemption from the public service, should be punished with from two to five years' imprisonment, and if he accepted bribes and promises the penalty was banishment. Other governments have found it necessary—and we acknowledge the fact with shame—to introduce a clause punishing more or less severely the delinquent medical examiner of conscripts. The severe European wars of the early part of this century, and the frequent conscriptions that were made, added so many to the exempts from disability that the fact arrested public attention. More thorough investigation was made into the character of the diseases of those claiming exemption, when it was found that vast numbers were simulated or self-inflicted. This led to a more systematic study of feigned diseases, and the subject became one of great public importance, for upon it often depended the integrity of the army. During the last quarter of a century great advances have been made in establishing upon correct principles the proper interpretation of feigned diseases. This is seen in the comparison of the French conscription with recent investigations. From 1800 to 1810 every available man was pressed into the service of the French army, and yet, in every one thousand rejections, there were found, idiots, 8; deaf, 17; short-

sighted, 58; stammerers, 9; epileptics, 21; diseased eyes, 121; pulmonary affections, 169. Recent examinations show for one thousand rejections: idiots, 5; deaf, 2; stammerers, 3; epilepsy, 1; diseased eyes, 63; pulmonary affections, 7. It is proper to infer that the balance in conscription were feigned diseases or defects which the examiner could not detect. The diseases which conscripts feign are found to embrace the whole category of human ailments. Ludicrous as was the scene at the bar of Jupiter when all the sick and maimed of the earth came forward to exchange diseases, it is surpassed by the concourse of disabled which throng the examiner's office. Hundreds who have always been regarded by their intimate friends as sound in "wind and limb" are now found to be hopeless asthmatics or confirmed cripples. Many a gay and festive young bachelor has suddenly passed to the shady side of forty-five. Many heads have become gray from the neglect of the coloring hair tonic, and many artificial eyes have fallen from their sockets, leaving sad evidences of the insidious workings of age and disease, and revealing the mysterious arts of fashion and the skillful manner by which it conceals age and infirmities. Every physician must have noticed during a draft to fill the ranks of the army, an increase among his male patients of hernia, varicocele, varices, distressing coughs, and evidences of hereditary insanity, epilepsy, apoplexy,

etc. To discriminate between the false and true will require great experience, care, and skill in the diagnosis of disease. While it is of the greatest importance to detect the impostor and hold him to strict accountability, it is not the less important to the public service, and but common justice to the individual, that the genuinely disabled should be exempt. If the latter is pressed into the army, he becomes at once an incumbrance. He may endure the slight fatigue of the camp, and become a well-drilled soldier, but the first exposure or fatiguing march sends him to the hospital, an invalid for the remainder of his term of enlistment. The medical examination of persons claiming exemption from service, and alleging disability, must, therefore, always be a responsible duty. A distinguished medical author has very justly remarked: "It is obvious that the more we know of disease by reading and observation, the more patience and temper we possess, the more successful shall we be in the detection of imposture." Again, the chief of the army medical department of the Prussian army states, "that a knowledge and experience greater than is generally believed, along with an acquaintance with anatomy, physiology, and pathology, is especially required to decide upon the health and general efficiency of recruits, and to distinguish between defects that may be real from those that are only feigned."

XXXIV.

PRESCRIPTION WRITING.

THE recent case of death in consequence of a mistake in compounding a prescription, reveals one of those careless habits of physicians which demand reform. It is probable that the prescription, in this instance, was as legible as the penmanship of physicians ordinarily is, and that the druggist was the censurable party in the main; but the fact that, in the present mode of prescribing, mistakes similar to this not unfrequently occur, sometimes producing the most melancholy consequences, should lead the profession to inquire whether there is not some remedy or some safeguard against this evil. Only a few years ago, at one of the best known and best patronized drug-stores in Broadway, the clerk "put up" antim. tart. in place of antim. pulv., and as a consequence an interesting child with scarlet fever was vomited to death. At another store, powders containing poisonous doses of opium were dispensed, and the druggist, culpably remiss, gave no warning, so that the victim, an infant, was narcotized beyond recovery. Again, a liniment containing the most poisonous ingredients was administered to a child, through the

fault of a physician or druggist, or both, and immediate death was the result. These cases, among others, have been made public, and almost every physician in general practice is aware of instances which have fallen under his own observation, but which few knew beyond the circle of those immediately interested, in which the lives of patients were hazarded, even if they were not lost, by similar mistakes. Aside from the danger which attends the administration of a wrongly prepared medicine, the effect of such mistakes is very bad, particularly as regards public opinion. Probably the proportion of these mistakes to the number of prescriptions dispensed is not greater than one to five hundred, yet in consequence of the publicity given to some of them, a widespread fear, a distrust of the present system of dispensing, pervades all classes of the community. How often does the physician find that the medicine which he ordered the day before has not been given, or has been given in reduced doses and at long intervals, through the fear that it was improperly prepared, and this, too, when it is very important, in order to arrest or control the disease, that the remedy should be given regularly? How often, too, do we hear the wish expressed, through fear of these mistakes, that physicians would carry medicines with them, as is done in the country, or in smaller cities, or as was customary in cities of olden times? No doubt, the dread of being

poisoned or injured by incorrectly prepared medicines operates as an inducement to the employment of irregular practitioners, who provide their own remedies; and yet, with proper care on the part of physician and druggist, and a proper relation between the two, the system of written prescriptions is as safe as any; since although there are two to make mistakes, there are also two to detect them. We purpose to mention some particulars, by attention to which on the part of physicians the number of deplorable cases of fatal errors will be materially diminished. And first, and most importantly, we would call attention to the miserable specimens of medical penmanship which can be seen at any of our retail drug-stores. Druggists are often puzzled with prescriptions coming from men eminent in the profession, in which the writing resembles Egyptian hieroglyphics or the queer marks of a phonographer rather than that of educated men. For such penmanship there can be no excuse. There is a second particular in which physicians are even more reprehensible, for it is the result of gross carelessness. We refer to the careless practice of those who rarely write the directions on prescriptions, or even the doses. The directions are given to the friends at home, who in their grief or excitement frequently forget what is said, and as the druggist can not enlighten them, the medicines are liable to be improperly administered. It is so

easy a matter to write full directions on prescriptions, and thereby prevent much mischief, that any practitioner is censurable who neglects to do so. There is the greatest liability to mistake in the administration of medicines in those cases where several are sick in a family at the same time, as often occurs when contagious diseases are prevalent. The medicine designed for one may be given to another. The German physicians avoid this risk by writing the name of the patient on the prescription, which is transferred to the label on the bottle. It would be well if all practitioners would do the same. The physician can not justify himself by saying, that if such mistakes are made it is not his fault, but the fault of the family. It is his duty to remove, as far as possible, the liability to mistakes, whether on the part of the druggist or the friends of the patient. Let him not only write plainly, but if necessary use the vulgar terms rather than the classic, if thereby he can avoid the danger of error. Finally, prescriptions should be written upon white paper of ample size. Too frequently the practitioner makes no preparation when he begins his daily calls, and seizes upon any scrap of paper to write his prescription. Sometimes he finds a bit of paper partly written over; again, he takes the fly-leaf of a book; or, finally, as a last resort, the margin of a newspaper. No prescription written under such circumstances is positively safe.

XXXV.

DISEASED MEATS.

AMONG the subjects relating to the public health which should interest every citizen, that of the sale of diseased meats is of prime importance, and merits especial attention. We read the weekly reports of the health authorities and of the police, of the amount of diseased meat which they seize and remove, and though astonished at the enormous aggregate, are accustomed to believe that the whole has been removed from the market. But such is not the case. We should come nearer the truth did we estimate the amount removed as the hundreth, and perhaps thousandth, part which finds its way to the tables of the laboring classes, who are compelled to buy the cheaper class of meats. Since the introduction of railroads, the increase of diseased stock in our markets has been very marked. Not only does easy transportation facilitate the conveyance of diseased animals, which would otherwise be allowed to die in the country, but many healthy animals are so bruised in transit that, when slaughtered, large subcutaneous abscesses are disclosed. Formerly stock reached the markets of large cities

only by the slow process of foot-traveling, but this necessitated the feeding of animals at proper intervals, in order that they might retain their flesh. They thus reached their destination by easy marches, foot-sore perhaps, but never reduced in flesh, nor weak from suppurating sores. In railway transportation the whole system is changed. The stock is crowded into open cars, often hundreds of miles distant, exposed to the weather, unable to lie down, jammed with violence against the sides of the cars by the motion of the train or the crowding of others; and to add to this cruelty, deprived of food and water until they are slaughtered. Observation confirms our conclusions, that few, very few, perfectly healthy animals are now slaughtered in our large cities; but as yet no sufficient inquiry has been made to determine the extent of this evil. In England, where due importance is attached to every cause or measure affecting the public health, the subject of diseased meats has attracted great attention, and a bill has been introduced into Parliament designed to effect the desired reform. From a speech in Parliament, by Mr. Bruce, some instructive facts were developed in regard to the diseases of cattle. He stated that statistical tables show that in the six years from 1855 to 1860 inclusive, the average annual mortality among cattle was nearly five per cent.; the annual death-rate for sheep is estimated at four per cent. In regard to pigs, the

estimated loss in Ireland is ten per cent.; in England and Scotland it is much less. The most fatal of diseases is pleuro-pneumonia, from which at least half of the cattle died. He stated that an enormous mass of diseased meat, in various stages of disease, is annually sold. What the precise quantity is it would of course be difficult to estimate. Professor Gamgee estimated it at one-fifth. There is no conclusive evidence on the subject, although there is ample evidence that the quantities are very large, not only of meat killed while cattle were diseased, but of cattle which had died without the aid of the butcher. Mr. Bruce took the case where the figures were beyond dispute. The deaths in dairies are most numerous. In Edinburgh Professor Gamgee gave returns from eighty-eight dairies, and states that he found that out of 1,839 cows kept, 1,075 were sold diseased, of which 791 were sold to butchers, and 284 to be consumed by pigs. In nine dairies in Dublin, on an average of twenty years, out of 315 cows, 161 were sold diseased. Professor Gamgee says:

"In London I have seen butchers in private slaughter-houses dress extremely diseased carcasses and 'polish' the meat. This filthy practice consists in killing a good fat ox, at the same time that a number of lean and diseased animals are being killed. Boiling water is at hand, and when the lean animals have been skinned their flesh is rubbed over with fat from the healthy ox, and hot coths are used to keep the fat warm, and to distribute it over the carcass, that it may acquire an artificial gloss and an

appearance of not being totally deprived of fat. In Edinburgh I have seen sickly lambs without a particle of fat upon them dressed up with the fat of healthy sheep, much in the same way. From the private slaughter-houses in London I have known even the diseased organs themselves sent to the sausage-maker. In company with another member of my profession, I have seen a carcass dressed and portions of it prepared for sale as sausage-meat, and otherwise, although thoracic disease had gone to such an extent that gallons of fetid fluid were removed from the pleural sacs, and that large abscesses existed in the lungs."

In Edinburgh there were between one hundred and two hundred diseased cattle sold weekly in the market. At a meeting of the Royal Dublin Society, Mr. Ganley, salesmaster, said: "That unless some means were devised to give the farmer some compensation for diseased cattle, it was impossible to prevent him from selling them, or the butcher from killing and selling them. Unless some society were formed to have diseased meat paid for, it would be killed and eaten. There was no use in mincing the matter; every one of the salesmen sold diseased cattle. The farmer could not otherwise pay his rent. The disease is so prevalent that he could not live were he to submit his cattle to destruction." The deleterious effect of diseased meat upon the public health is established by the concurrent testimony of the best medical observers. Professor Maclagan, of the University of Edinburgh, stated at a public meeting held at Edinburgh on the

29th of January, 1862, that in his practice, both as a physician and a toxicologist, he had met with instances in which several persons had been attacked simultaneously with irritant symptoms after having in common partaken of meat which, on being examined, was found to contain no poison, nor to be in that state of putrescence which, as is well known, occasionally confers upon animal matters actively poisonous properties. Dr. Alfred S. Taylor, F.R.S., an eminent toxicologist, said:

"As a general principle, I think diseased meat noxious and unfit for human food. In the course of my practice I have met with several cases of poisoning which appeared to be attributable to diseased or decomposed meat—more frequently the latter. I can at present recall to my recollection only two fatal cases—one from diseased mutton, the sheep having had the staggers, and one from German sausages. Animal food has been frequently sent to me with a view to the detection of poison, the persons sending it having the impression that from the vomiting and purging produced poison must have been mixed with it. No poison has, however, been found to justify this suspicion."

Dr. Letheby, Health Officer of London, stated:

"My opinion of the injurious effects of diseased meat on the health of those who make use of it is very decided. I have seen so much mischief from it that I do not hesitate for one moment to say that some legislative measure is most pressingly wanted to prevent, not only the traffic in diseased meat, but also to prevent the slaughtering of diseased animals. Such regulations are now in operation everywhere on the Continent, and they are much needed here. In the city markets alone my officers seize from one

to two tons of diseased meat every week. Last year we seized 110,046 lbs. of meat, of which 78,697 lbs. were diseased, and 13,944 lbs. from animals that had died. We often pursue the offenders into a court of justice, and have them fined or imprisoned; but I feel that the mischief should be stopped before it reaches the markets. Officers are wanted to examine the cattle before they are slaughtered. As to the effects of such meat on the human subject, I have seen many cases of illness from it. One of these is sufficiently important to bring under your notice. In the month of November, 1860, a part of a diseased cow was bought in Newgate market. It came from one of the cow-houses in London. It was bought by a sausage-maker of Kingsland, and, as is commonly the case with very bad meat, it was made up into sausages. Sixty-six persons partook of the sausages, and sixty-four of them were made very ill. They were purged, became sick, giddy, and the vital powers were seriously prostrated, and they lay in many cases for hours in a case of collapse, like people with cholera. One man died, and I was requested by the coroner to inquire into the matter. I obtained some of the sausages, thinking that a mineral poison might be present, but I could discover none; and the whole history of the case showed that it was diseased meat which had done the work. Again, Dr. Livingstone tells us that whenever the natives of Africa eat the flesh of an animal that has died from pleuro-pneumonia, no matter how the flesh is cooked, they suffer from carbuncle. Now, it is a very remarkable fact that boils and carbuncles have been most prevalent in this country for several years past. The Registrar-General for Scotland has drawn attention to this fact."

And Professor Gamgee said:

"My own observations confirm the opinions of the eminent authorities just quoted. I have known in many instances where meat supplied to students in lodging-houses

in this city has led to vomiting, purging, and severe colic. In the majority of instances such meat was cooked in the form of beefsteak. Three of my own students were affected simultaneously one day in December last. Within a couple of hours after dinner they experienced colicky pains, purging, vomiting, and these symptoms lasted several hours. Bread, potatoes, and water were the only other materials they had partaken of at dinner. On another occasion two were affected, but did not attribute the injury to the steak until the next day, when the servant ate what had been left of the meat, and suffered severely."

Such startling facts should awaken the attention of every community that has to depend upon a general market for its meats. In this city we believe the evil, if known, would be truly alarming. But without any organized plan to prevent the sale of improper foods, the market-men have it their own way, and even go so far as to retail such articles on the street. "Meat for boarders" was for a long time the suggestive "sign" overhanging a large meat-stall in the neighborhood of the sailors' boarding-houses. In plain words it would have read: "Diseased meat sold cheaply." The remedy for this evil is to be found in the organization of bureaux for food inspection. Slaughtering should be concentrated in well-appointed abattoirs, and skilled inspectors should examine every animal before and during the process of slaughtering. All diseased animals and affected carcasses would thus be excluded from market, and this terrible crime against the laboring classes would be effectually prevented.

XXXVI.

RIOTS AND THEIR PREVENTION.

AMONG the improvements which the late Emperor of France is said to have introduced into Paris, was the removal of a large group of thickly clustered but dilapidated and wretched tenement houses, and the conversion of the site into a public square. The work was undertaken ostensibly to beautify that portion of the city. Those familiar with the history of these abodes of poverty, however, remember this locality as the place where have originated many of the most terrible riots with which that city has been visited; and they shrewdly suspect that the real motive of the Emperor was to destroy the nidus of future mobs and revolutionary movements. The example is one worthy of imitation, in all large cities. In July, 1863, New York passed through one of those ordeals of anarchy so common in European cities during civil commotions. Within a few hours of the commencement of riotous proceedings the civil authorities were completely overcome, and in the universal agitation of society the very dregs seemed to float to the surface, and surged to and fro along the streets and avenues, uncontrollable elements

of destruction. Business was suspended; public conveyances ceased their rounds; places of public amusement were deserted, and a pall of gloom hung over the city as if some terrible judgment was impending. Few citizens were seen abroad, but at every turn were groups of persons seldom if ever before met in the more respectable parts of the town. Their garments were ragged and filthy, and their faces, stamped with every crime, gleamed with the ferocity of unbridled passions. Individual acts of violence occurred on every hand, and this terrible carnival of murder and arson culminated on the first day in a grand ovation to the demon of the mob in the conflagration of an orphan asylum over the heads of several hundreds of helpless, homeless, and fatherless children. No mob can show a blacker record than that which disgraced New York on July 14, 15, and 16, 1863. The various political and social phases of this great riot was largely discussed in the daily papers, but there are some things worthy of record as gathered from a professional stand-point. It is a noticeable fact that the rioters represented for the most part the lowest and most abandoned class of the poor. They proceeded from those districts of the city notorious for their filthy and unpoliced streets, and wretched and uninhabitable tenement houses. Here live and grovel in darkness, filth, drunkenness, and disease, a large population, roughly estimated at twenty thousand. The

following description of this class, as drawn by Mr. N. P. Willis, an eyewitness to the scenes of arson and murder during the riot, will be recognized as truthful by every physician whose duties may have led him into these abodes of wretchedness:

"The high brick blocks and closely packed houses in this neighborhood seemed to be literally hives of sickness and vice. Curiosity to look on, at the fire raging so near them, brought every inhabitant to the porch or window, or assembled them in ragged and dirty groups on the sidewalk in front. Probably not a creature, who could move, was left in-door at that hour. And it is wonderful to see, and difficult to believe, that so much misery, and disease, and wretchedness, can be huddled together and hidden by high walls, unvisited and unthought of, so near our own abodes. The lewd, but pale and sickly young women, scarce decent in their ragged attire, were impudent, and scattered everywhere in the crowd. But what numbers of these poorer classes are deformed, what numbers are made hideous by self-neglect and infirmity, and what numbers are paralytics, drunkards, imbecile, or idiotic, forlorn in their poverty-stricken abandonment for this world! Alas! human faces look so hideous with hope and vanity all gone! And female forms and features are made so frightful by sin, squalor, and debasement. To walk the streets as we walked them, for those hours of conflagration and riot, was like a fearful witnessing of the day of judgment, with every wicked thing revealed, every sin and sorrow blazingly glared upon, every hidden horror and abomination laid bare, before hell's expectant fire."

It was also noticeable that while business was generally suspended, every establishment where liquor is sold was open, and crowded with cus-

tomers. Many of the more central grogshops had been previously supplied with money by the chief conspirators, and were directed to give the crowd unstinted measure whenever it made its demand. This was done, and it is due principally to liquor that the inhuman barbarities were practiced upon individuals, and many of the attempts at arson were made. Hundreds of industrious laborers driven from their work, and left to wander about the streets, were thus made fiends of the most malicious and daring kind. Scarcely an overt act of violence was perpetrated that was not directly traceable to intoxication. It would be lamentable, indeed, if the fearful lesson which this deeply laid conspiracy against the property and lives of our citizens has taught were allowed to pass unimproved. Transparent as is its political significance, its social bearings are not less clear. We learn the source from which must spring every lawless outbreak against order, law, and the peace of society. The elements of popular discord are gathered in those wretchedly constructed tenement houses, where poverty, disease, and crime find a fit abode. Here disease in its most loathsome form propagates itself from parent to child, more and more aggravated with each generation. Deformities of the body, typical of mental and moral aberrations, are seen in every household. Unholy passions rule in the domestic circle. Trained in such a school, children grow up desti-

tute of every generous impulse, and habituated to scenes of cruelty and vice. Everything within and without tends to physical and moral degradation. The noisome atmosphere which they breathe, the scanty and innutritious food which they eat, combine to dwarf the body and mind and lead to the most vicious habits. Here, in the tenement houses of our city, we find the seeds of civil discord, of every species of vice and crime, always ready to germinate with the slightest stimulation. Relax the legal restraints which surround the tenants of whole blocks of buildings, and madden them with rum, and they rush forth prepared to commit the most fiendish acts. As long as New York disregards the home-life of this class of the poor, she nourishes in her bosom a viper which any day may inflict a fatal wound. The great and patent prevention for riots like that which we have witnessed is radical reform of the homes of the poor. No family circle can be practically virtuous which grovels in the cellar or the garret, deprived of the sunlight and fresh air; nor can a family be very vicious which enjoys airy and spacious rooms, and is surrounded by the health-giving influences of pure air, sunlight, cleanliness, and thrift. Says Dr. Southwood Smith, England's great sanitary reformer:

"A clean, fresh, well-ordered house exercises over its inmates a moral, no less than a physical influence, and has a direct tendency to make the members of the family sober,

peaceable, and considerate of the feelings and happiness of each other; nor is it difficult to trace a connection between habitual feelings of this sort and the formation of habits of respect for property, for the laws in general, and even for those higher duties and obligations the observance of which no law can enforce."

With equal truth, Mr. Rawlinson, in his address before the Social Science Association, said:

"Defective house accommodations produce disease, immorality, pauperism and crime, from generation to generation, until vice has become a second nature, and morality, virtue, truth and honesty, are, to human beings so debased, mere names."

Every family in this city should be accommodated with an ample and suitably arranged domicil. The old rookeries in crowded and filthy districts should be destroyed, and new and commodious houses built. Tenement houses can be made convenient for families, with sufficient air-space and sunlight, proper rooms for cooking, eating, and sleeping, and still be remunerative. But no landlord will consult the wants of his tenants until compelled to do so by the rigid enforcement of law. To accomplish this necessary and imperative reform, the proper authorities should cause the improvement, and, as far as possible, the reconstruction of tenement houses, the opening of streets through densely populated districts, and the laying out of parks. Said Lord Shaftesbury at the Society of Arts (April 21, 1871) in encouragement of this reform:

"Work on till every workman should have three

good rooms, well ventilated, and with light before and behind. These were the requirements which were necessary for a Christian and a civilized being. Anything that would moderate these evils, however humble it might be; anything that would deal with the miserable, disgusting, alarming condition—alarming in a physical, moral, and spiritual sense, as well as in a political sense—of hundreds and thousands of people in this great and wealthy metropolis, should be welcomed and encouraged."

It is important, also, that the retail of ardent spirits should be placed under more stringent regulations. At present the largest license is given, or at least taken, and a rising mob finds at every corner the maddening draught awaiting its arrival. Dram-drinking, like prostitution, is one of those terrible social evils which every philanthropist wishes blotted out of existence, but which is still subjected to only a very modified control. This control should be more absolute than at present. Alchohol, like opium, should be regarded as a medicinal agent, to be administered only under medical advice. Prohibitory laws against its sale as a common article of trade, are founded in justice, and have regard to the highest interests of the individual, of society, and of the State. If such stringent laws are not enacted, there is an absolute necessity that in times of popular excitement at least every grog-shop should be closed, and the sale of liquors made penal.

XXXVII.

EDUCATION OF INFANTS.

A CHILD about four years of age recently died suddenly in a public school under the following circumstances, as narrated in the public prints: "It is the habit of the teachers of that school to detain after hours such of the pupils as may have been deficient in their lessons during the day. Upon the occasion in question the deceased, with twelve other scholars, was kept in. Deceased seemed to take the punishment very seriously, and asked her teacher to allow her to go. The teacher, noticing her agitation, kindly told her that she might go as soon as she was able to spell correctly the word "hedge." This appeared to appease her, and she went to her seat. Soon, however, it was observed that the child threw her head back, and was gasping for breath. The teacher took her in her arms and did all she could to relieve her, but after three or four spasms she expired." We have in this case a sad but instructive commentary upon the evils of the American educational system. A child but four years of age is found at school, and is not only required to perform a given mental task, but is also subjected to the

rigid discipline of the oldest scholars. Overcome by fear or grief, she falls into a syncope from which she never rallies. Such a singular phenomenon may well astonish the community. It were well for the rising generation if the lesson it teaches led to reformation in the management of children. It is surprising at what a tender age children are placed in school, and brought under the restraints of a worse than prison discipline. At that period of childhood, or rather of infancy, when during its waking hours every muscle naturally requires activity and free play for its proper development, the child is compelled to sit for hours as unmoved as a statue. But to this cruel restraint we have the additional evil that the child is confined to a room the atmosphere of which is infected with poisonous gases and foul exhalations from human bodies. The conditions necessary to retard the growth and development of the child are complete, and the result is always accomplished. We see many of the effects of such training in the feeble bodies, dwindled legs and arms, curved spines, and nameless other deformities of adolescents. But how many unseen and unappreciated vices of development and growth are created by these causes! How destructive to the delicate organization of the nervous system is such training of the child, and how sadly are its functions perverted! In the case related we see how seriously the nervous system had be-

come weakened, and how slight a cause completely overpowered it. We may well believe that this poor child is but a type of the children of our schools. Though such a melancholy termination of their pupilage is rare, yet thousands of children are doubtless brought to the very verge of the grave by the unhealthy influences acting upon their susceptible organizations. The vital question recurs: At what age should a child be sent to school? There can be no doubt that previously to the ages of six or seven the child should neither be subjected to systematic physical restraint, nor should its mind be tasked with appointed lessons. The full and perfect development of the body is a more important end to be attained in the training of the child than the cultivation of its mind. That system of education is perfect which secures these two objects. Previously to the age which we have fixed a child may be an apt scholar, though free from all bodily restraint. The cultivation of the powers of the body and mind may go together, and is productive of the very best results. We see in the Kindergarten of the Germans the very perfection of this system of training. Here the infant is free to play and romp in the open air, amid a profusion of flowers, or on the grass lawn, watched by a careful and tender nurse, who acts at the same time as teacher. While the child revels in the pure air and sunshine, it imperceptibly learns the lesson of the day. But

though we are unable to place a child in a school so favorable for its due and proper training, a faithful parent may accomplish much by personal instruction while the child still enjoys the most perfect freedom. In commenting upon this subject, Dr. Ray, a very able writer has said:

"Instinctively the young child seeks for knowledge of some kind, and its spontaneous efforts may be safely allowed. With a little management, indeed, they may be made subservient to very important acquisitions. In the same way that it learns the names of its toys and playthings, it may learn the names of its letters, of geometrical figures, and objects of natural history. There can be but little danger of such exercises being carried too far. But the discipline of school, if obliging the tender child to sit upright on an uncomfortable seat for several hours in the day, and con his lessons from a book, is dangerous both to mind and body. To the latter, because it craves exercise almost incessantly, and suffers pain, if not distortion, from its forced quietude and unnatural postures. To the former, because it is pleased with transient emotions, and seeks for a variety of impressions calculated to gratify its perceptive faculties. The idea of *study* considered in relation to the infant mind, of appropriating, assimilating the contents of a book, of performing mental processes that require a considerable degree of attention and abstraction, indicates an ignorance of the real constitution of the infant mind, that would be simply ridiculous, did it not lead to pain, weariness, and disgust. And such is the strange abandonment of all practical common sense on this subject, that many a person fails to view this practice in its true light, who would never commit the folly of beginning the training of a colt by taking it from the side of its dam, harnessing it to a cart or plow, and keeping it at work through a sultry summer's day."

XXXVIII.

PHYSICIANS IN OLD AGE.

A SURGEON once remarked, very shrewdly, that "few medical men grow old gracefully." The remark, doubtless, had reference to the pertinacity with which our elder brethren cling to business, and to those public positions which they have ceased to fill creditably. This fact has, doubtless, the greatest significance to the aspiring young practitioner. As he plods along his wearisome way to make his single daily visit, and that too often to a charity patient, he conceives the greatest contempt for the grasping ambition of the white-haired septuagenarian who dashes past over roads which he has traveled half a century, to the families of the wealthy. But in the eyes of all men his position is not enviable who, crowned with wealth and honor, toils on, as does many a medical man, unmindful of the shadows of the evening which are gathering thickly about him. The question is occasionally asked by members of other professions, "At what age do medical men retire from active life?" The only answer which can be given is, "at that age at which death overtakes them." If it is honorable to die with the harness on, without a

moment's interval in which to compose the mind for the great and eternal change, our profession is, of all others, the most worthy of the distinction. Seldom do we have an example of a successful physician who has retired voluntarily from his business with health and faculties unimpaired. Medical men there are in retirement, but they have not sought seclusion from a philosophical view of the amenities of age, but because they could no longer pursue their avocations. Unless some unlucky accident or unfortunate cerebral attack so far destroy their powers of locomotion, as to render their visits to their patients positively objectionable, our older brethren pursue their daily and even nightly duties far past the period of life at which men in other employments seek the repose which is generally grateful to old age. In the hot strife for business, we meet the veteran side by side with the graduate fresh from the schools. No toil or sacrifice of personal comfort can induce him to relax his efforts to maintain his hold upon his families, and to enlarge the circle of his practice. If we pass from the circle of private to the more responsible duties of public practice, we find medical men who have passed the period at which the mental and physical powers begin to decline, still occupying stations which they have long ceased to honor. In many hospitals there are medical attendants, infirm with age, clinging, with a grasp that only death will loose,

to positions which demand the activity and efficiency of middle life. The practitioner who has reached that age at which, in his own estimation, he requires no further light, and discards the teachings of contemporary science, should retire to the shades of private life. He may continue a respectable practitioner, but he does not do full justice to his patients. Unfortunately, this is the precise age at which all physicians believe that they are most competent. They now rely upon their experience and grey hairs, the latter being often the more valuable of the two. If a physician who has passed into his dotage is unfit to practice his profession, how much more unfit is he to instruct the rising generation of practitioners? It is little less than madness to allow such persons to fill important chairs in medical colleges. The pupil must subsequently unlearn all that he has learned from such sources before he can become a successful student of the medical sciences. It is not to be denied that physicians may continue to improve in their profession to a great age. There are striking examples in history of men who, though far advanced in life, became proficients in various kinds of learning. And, in our own profession, Brodie, in England, and Mott, in this country, were pleasing exceptions to the general rule, that medical men cease early to advance with the science they are called upon to apply to daily practice. But nevertheless, it is true, that the vast major-

ity of physicians cease to learn after the age of sixty or sixty-five, and too frequently begin to ridicule all recent discoveries. The conclusions which are to be drawn from the foregoing reflections are: 1. Medical men do not retire from business at a sufficiently early age. They are too much disposed to struggle to maintain a practice, when they have actually ceased to be competent practitioners. In general a physician at sixty-five is never as correct a practitioner as at forty, and thereafter he rapidly degenerates with advancing age. 2. Old medical men should not retain public positions. In France a physician or surgeon is compelled to withdraw from hospital practice at sixty. This is a most righteous regulation, and should be enforced in every hospital. Aside from their incompetence, the old men do great injustice to the young, who have time and talents to improve the advantage of hospital practice, by retaining these places long after they cease to improve them. And finally, it is most to be regretted that our schools retain men in their professorships who are representatives of past ages. We may daily hear the theories of a former century discussed by these antiquated teachers with the utmost earnestness and precision. In some medical schools, the surgery, midwifery-practice, and therapeutics taught, belong to the last half of the eighteenth century. The reform which is required is practicable, and we hope some day to see it established. Age

and decrepitude should not be tolerated in those responsible positions which demand youthful ardor and strength. Medical senility, resting under the shadow of a great name, sits in many a high place from which it should be cast out, to give way to those who represent contemporary medical science. In our medical schools the fact is, perhaps, still more apparent that medical men seldom grow old gracefully. Many chairs are retained by professors who have long ceased to keep progress with the advance of scientific investigation. They inculcate theories which have been discarded, and reject with the conceit of incredulous old age the recent demonstrations of science. We can, therefore, but regard it as a much needed reform in our profession, that those who have attained old age and competence should retire from active and responsible duties. They should not only yield to the young and ambitious the schools of instruction and the hospitals, but also the field of private practice. We can conceive of no position more enviable than that of the successful physician, who, recognizing the incipient stages of physical decay, gracefully retires from the active duties of his profession, while yet all respect, honor, and love him, and enjoys in the shades of retirement the enduring rewards of a well spent life. In new and peaceful occupations his days will be lengthened, while he sheds around him the healthful influence of a matured experience.

XXXIX.

FEE AND CONTRACT.

PROFESSIONAL remuneration, perhaps, more vitally interests the mass of American physicians than any other question which can be presented for their consideration. As a people, we are reputed to hold the almighty dollar in profound respect, and as a profession we are not exempt from the national scandal. For the most part we have reduced the practice of physic to a mere matter of business. We measure success by the amount of income, and are strongly inclined to gauge professional excellence by the same standard. At the last meeting of the Association for the Promotion of Social Science (England), a communication was read, which advocated the adoption of the contract instead of the fee system by the medical profession. The plan recommended was to dispense with the fee system, and to pay the doctor so much per annum, to include all ordinary work, and a fee to be paid for extraordinary work. Ordinary work was defined to mean periodical visits, attending to the health of the patient, etc.; and extraordinary work was held to be such exceptional services as calls to attend on

patients immediately, accidents, and so on. This arrangement, it was considered, would make prevention as well as cure the object of the doctor's care, and assimilate the interests of the physician and patient. This question has excited a lively discussion in the medical journals, and various are the arguments, pro and con. On the one hand it is alleged that if the physician make a contract of this nature he degrades his calling to the level of the common tradesman; that he is liable to be compelled to an excess of duty by being called when there is no need of his services; that it would lead to dissatisfaction of either patient or physician—of patient, if there was no sickness in the family, and of the physician if there was too much sickness. In favor of this plan it is alleged that it will "prevent many of those disgraceful insinuations which have been brought against medical men of 'creating practice,' of paying unnecessary visits, of perverting hospitalities to the purpose of their profession; and when the guest playing the doctor," "that it would be so far mutually beneficial, that, while the patient would have no hesitation in sending for the medical attendant at the earliest indication of illness, the practitioner would, on the other hand, feel no more reserve in exercising his discretion in the payment of visits, the purposes of which could no longer be misunderstood." The objections which are urged to the contract plan practically have

no foundation. It does not degrade the medical attendant any more to have a stipulated price placed upon his annual services in a family before than after that service is rendered. The "time-honored and respected honorarium," so sacred to many, has equal value in both cases. Besides, how frequently does the physician stipulate to attend infirmaries, dispensaries, manufactories, and life insurances for fixed annual salaries. In these instances, so common in the profession of every town, the contract plan is adopted without even the thought of professional degradation. The allegation that it would lead to overwork would not prove true if the contract exempted, as it ought, all special attendance, as at night, in cases of accident, etc. The arguments in favor of the contract plan are plausible, and deserve to be well weighed. It secures the payment of the services of the physician much more certainly than the fee system. In a far less number of instances we are assured, is the payment withheld under the former than under the latter system. The obligation of the patient may not be any greater morally under one than under the other, but legally he is bound by the contract to make prompt payment. The freedom of the physician to visit the family and prolong his attendance upon the sick is secured by the contract. His visits are not carefully noted, nor is it even intimated to him that his services are not required in a case of convales-

cence. But, perhaps, the strongest argument that can be adduced in favor of the contract is, that the physician assumes under it the highest and most dignified functions of his profession. His aim now is to prevent disease; he is now not always called to cure the sick, but he has a higher duty, viz., that of preserving the health. He visits his families as a hygienist; he attends carefully to the conditions which surround the family circle, and corrects any tendency to disease. The dwelling is often examined, and proper ventilation, drainage, etc., secured; the foods are inquired into, and those selected adapted to each member of the family; the clothing is inspected, the right material advised, and the proper style directed. In a word, the physician becomes a house-to-house visitant, advising and directing in all matters pertaining to the health of the occupants. It can not be doubted that were this system generally adopted the sum of sickness and mortality would be greatly diminished. The details of the contract plan are made up by the parties themselves. The special sum stipulated must depend upon the size of the family, and the conditions peculiar to each. But there is no reason for making the price less than the sum total of annual fees under the present system. The contract plan has already been adopted by some practitioners among us, and is generally highly approved. If universally approved, it may prove to be a most beneficial medical reform.

XL.

CRIME OF ABORTION.

THE appearance in the courts of two abortionists within a short period, to answer to the charge of homicide, and the introduction of a more stringent Act against this crime into the Legislature of New York, are suggestive of the query—"How far does this evil exist at present in American communities, and what is the popular opinion in regard to this crime?" If viewed in the light of an ancient civilization, the question would seem to have some pertinency, but it appears the most obvious anachronism to canvass the frequency of this crime, and the state of popular opinion in regard to it, in a Christian community. Nevertheless, the fact of the existence of abortion as a common and even increasing evil, appears in our mortality records; and the evidences that the public do not look upon it as a flagrant crime, and regard its abettors as criminals, become painfully apparent when the horrible developments of murder, by the imfamous acts of abortionists, are revealed. The proportion of still-births to the living gives the only basis on which can be calculated the number of cases of abortion. These figures are,

however, but approximative, for very many cases of still-birth are not produced abortions, while a vast number obviously escape detection and registration. Taking our mortality reports with all due allowance for these discrepancies, the record is still sufficiently humiliating. From these, it appears, that since the first registry in New York, in 1805, the proportionate and actual increase of still-births has been alarmingly rapid. In 1805, the ratio of fœtal deaths to the population was 1 to 1,633, but in 1849, 1 to 340. In 1856, the records show that 1 in every 11 is still-born in this city, while the reports of European countries, even allowing for criminal abortions, give the proportion of still-births at 1 in 15. Accurate records of the best practitioners give, as the ratio of premature births, or non-viable fœtuses, to the whole number of births, which includes, of course, only abortions from natural or accidental causes, 1 to 78; but in New York the ratio of the same births to the whole number is 1 to 40. The ratio of premature still-births at full time in this city, in 1846, was 1 in 10, and in 1856, ten years later, it had increased to 1 in 4. In 1868–71, it appears that the still-births amounted to upward of 8 per cent. of the total mortality. From these facts it is apparent, not only that produced abortions are frequent in this community, but that they are rapidly increasing. In seven years, from 1850 to 1857, the still-births doubled, and we have good evidence that since

that period the proportion has rapidly increased. New York may justly be taken as an index of this country. It certainly does not give an exaggerated representation. The registration returns of the State of Massachusetts show that the comparative frequency of abortions in that State is thirteen times as great as in New York city. Allowing that some discrepancy in the returns must exist, they still prove the general prevalence of this crime in one of the most intelligent and moral communities of the United States. Whoever examines the columns of country papers, and marks the large number of nostrums which in various and cunning phrases are recommended as certain to effect abortion, can not doubt the wide and almost universal prevalence of this crime. It is painful to believe that the public conscience is not alive to the moral turpitude of abortion. And yet we have frequent evidence that it not only is not shocked at the criminality of the act, but that it even regards with indifference the revelations of the scenes of cruelty, debasement, and utter loss of every virtuous impulse which the courts often reveal to the public gaze. The horrible tale of seduction, abandonment, suffering and death, now so frequently brought to light generally pass without a comment. On the contrary, it is to be feared that they are read by not a few with as much interest and as little profit as the idle tales of the magazines. It can not be denied

that in every grade of society lax opinions of the criminality of procured abortion exists. It is not alone the ignorant and vicious that consider it no crime; the religious equally entertain the belief that abortions may be practiced without a shadow of guilt. Every physician must have been approached by persons of upright motives with solicitations to prescribe remedies or employ means which would terminate an early pregnancy. There can not be a doubt that the public mind to-day is inclined to regard abortion as a crime only under certain circumstances. The life that is sacrificed is regarded as unreal, and the convenience or comfort of the parents is alone consulted. Who is responsible for the tone of the public sentiment on the question of the criminality of abortion? We believe it rests entirely with the medical profession. Medical men know well that abortion is the sacrifice of human life; they know well, therefore, the heinousness of the offense. In their daily intercourse with their patients they have the opportunity and the power of inculcating correct opinions of the nature of this crime. Every truly conscientious physician performs this duty faithfully, and often most effectually; the erring and unthinking are instructed, and the lesson makes a profound and lasting impression. But there is a class of physicians who treat this subject with so much indifference that they sanction rather than discountenance the crime. In mild terms they

object to employing means to produce abortion, and yet suggest the remedies by which it may be accomplished. The effect is pernicious, as the crime is generally perpetrated. There is still another class of medical men, standing on the boundary between legitimate medicine and quackery, who both advocate and practice abortion. They assume a sanctimonious air and a clerical dress, and under this specious guise practice the black art of abortionists. They are found in the most respectable medical circles, and make their professional associations subserve their base purposes. Judged by the moral code of a Christian civilization, they are the most abandoned criminals in the community, and should be thoroughly purged from the profession. City and country Medical Societies should inquire, "Have we not abortionists among us?" We do not doubt that they will be found, and that too in startling numbers, especially in large cities. The whole question of abortion, its religious, social, and professional bearings, should be discussed in all medical societies. The duties of our profession to itself, to religion, to the cause of humanity, should be established on a righteous basis, and every member should be compelled to conform his conduct to this standard. The sacred obligations which the Father of Medicine imposed upon his followers, with the solemnity of an oath, are as binding upon us as upon the graduates of the school of Cos.

XLI.

REVISION OF FEE-BILLS.

IT is becoming a common saying that "everything is rising but physicians' fees." The truth of this remark is every day more and more painfully evident. Every species of labor, whether mental or physical, is demanding a higher and higher premium, and every kind of commodity is rapidly tending to higher prices. This upward tendency is due to the depreciation of the currency, and though the advance of wages for service is fifty per centum, there is only a simple equalization of values when the income from labor and the outgo for living are balanced; that is, though the laborer now receives twofold prices for his services, and has to pay twofold prices for every article which he eats or wears, he does not improve his condition by demanding a larger salary, but merely maintains his former position in spite of the mutations of currency. The artisan who lives, as it is said, from hand to mouth, feels as sensibly the first fluctuations of prices as the thermometer the slightest variations of temperature. He can not long endure any considerable difference between income and outgo, and therefore demands that the equili-

brium be restored. Either he must have higher wages or the materials of subsistence must fall to their former standard. But while labor promptly adapts the values of its services to the increased cost of subsistence, the medical profession plods on undisturbed, adhering to its old fee-bills, which amount now in fact only to about one-third the former rates. We hear few complaints among practitioners, though every one who continues to charge the same fee as formerly, but purchases at current rates, is gradually becoming impoverished. He is truly living much beyond his income, and will finally meet the fate of all "fast men." If his rate of charges remain the same, he has but these alternatives—either he must have a corresponding increase of business, or—bankruptcy. It is not difficult to convince any medical man of the truth of these statements, and nearly every one has within a few years come by degrees to realize that they are decidedly applicable to his own case. While his income has remained the same, his necessary expenditures have largely increased. It is a hopeful sign of the times that the question of self-protection is beginning to be agitated in our profession in various sections of the country. In some localities there is a decided expression of opinion in favor of raising the rate of charges for professional services. In one or two instances medical societies have exhibited sufficient manliness to revise their fee-bill, and have

advanced the rate in a liberal manner. It is noticeable that this subject attracts more attention in the newer localities, as at the West, than in old communities. This shows a more progressive and independent spirit on the part of the younger members of the profession, and augurs well for the future character of the practitioners of the new States. The truth is, medical men are the most meagrely paid for their services of any class of any community. They are supposed to be liberally educated, and yet they are called upon to perform the most menial services. They have no hours of positive and undisturbed relaxation and repose either night or day. They have no independence in the choice of patrons, but must run at the call of the meanest as well as the best, the poorest as well as the richest. They are the common drudges to do all the hard labor, and that gratuitously, of every charitable institution. They expose themselves freely to every form of contagion, and meet death on every hand. And yet the reward for all this toil and self-sacrifice is little more than an "approving conscience." Medical men have never properly estimated the importance of their services. The physician who places a high estimate upon his professional opinion, and never gives it without ample compensation, makes a better impression than he who takes small fees. Self-respect and self-appreciation, inspire respect and and confidence in others.

XLII.

CONFIDENTIAL COMMUNICATIONS.

THERE has been considerable attention recently given to the question of the responsibilities of physicians in the communication of medical facts of a confidential nature. The trial of a practitioner in France, guilty of betraying such a trust, and the verdict of the court against him, has added much interest to the discussion. A physician of great respectability recently has been subjected to persecution by a person who suspected the former had given an opinion unfavorable to his character. In a second instance a physician was importuned by the employers of his patient to divulge the nature of the disease; and on evading the inquiries, was informed that they had examined his prescriptions in the hands of the druggist, and found them of such a nature as to cast suspicion on his patient. A writer regards the question of the duties of practitioners, under these circumstances, as so unsettled that it is advisable for the local associations to "vote as a body that they will not, under any circumstances, impart information when applied to in private, concerning *any* patient, in answer to an inquiry

which implies suspicion of the moral character of such patient." The obligations of physician to patient in matters of a confidential nature have been recognized and defined both by our profession and by writers on legal medicine. In this country the profession has been especially careful to establish the rule of conduct in such cases, and we can not believe that any well educated physician has any doubt as to the nature of his duties. Every graduate is required to subscribe, either in language or form, to the famous code of professional morals embodied in the oath of Hippocrates, which contains the following: "Whatever, in connection with my professional practice, or not in connection with it, I see or hear, I will not divulge, as reckoning that all such should be kept secret." This pledge has been incorporated into the text of every system of medical ethics from the days of its author to the present. We are not, however, left to this ancient inaugural oath for guidance; but the American Medical Association has defined explicitly and at length the relations of physician to patient. No American physician certainly needs to have his duties in confidential cases more clearly set forth. In Art. II., sec. 2, of the Code of Medical Ethics, is the following:

"Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with

discretion and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services; none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by him except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice."

But when we examine as to the medico-legal aspects of this subject, we find the duties of the physician are changed. If it is necessary to answer the demands of justice, the medical witness is required by the common law to divulge in court information of a confidential nature acquired in the practice of his profession. Fonblanque says: "When the ends of justice absolutely require the disclosure, there is no doubt that the medical witness is not only bound but compellable to give evidence, ever bearing in mind that the examination should not be carried further than may be relevant to the point in question." In a celebrated English trial it was decided "that, in a court of justice, medical men are bound to divulge these secrets when required to do so." But on that occasion the presiding judge made the following pertinent acknowledgment of the moral obligations of the physician: "If a medical man was voluntarily to reveal these secrets, to be sure he would be guilty of a breach of honor and of great indiscretion; but

to give that information which by the law of the land he is bound to do, will never be imputed to him as any indiscretion whatever." It has been contended, indeed, by able writers that, even in a court of law, where the testimony of the physician is important to meet the ends of justice, he ought not to be obliged to divulge confidential communications. Belloc, an eminent French authority, says: "The tribunals neither ought, nor have the power, to exact from a physician the revelation of a secret confided to him in consideration of his office; at all events, he may and ought to refuse." The late Prof. Lee, in his notes to Guy's Forsenic Medicine, takes the same ground. He says: "We believe it to be the moral right and the duty of medical men to refuse to disclose in a court of justice secrets intrusted to them in professional confidence, and we have always acted on such belief. If physicians become the repository of secrets, under the full conviction, on the part of society, of our moral and professional obligations to hold them sacred—secrets which otherwise never would have been revealed—who can believe that there is any earthly power which ought to wring them from us, or which can, if we rightfully understand our privileges and duty? If private confidence is thus to be broken upon every imaginary necessity, where is the end to the mischievous consequences that would arise—especially at this day, where every trial is published to the world

through the medium of the public prints?" Such reasoning has had its influence upon legislative bodies; and in some States the statutes have been so framed as to prohibit the physician from disclosing confidential communications. The following is the substance of this rule in New York, Missouri, Wisconsin, Iowa, Indiana, and Michigan:

"No person duly authorized to practice physic or surgery shall be allowed to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."

In whatever light we view this subject, the fact is constantly prominent, that the moral obligation of the physician to retain inviolate all communications of a confidential nature is undisputed. By the Hippocratic oath he is not to divulge what he sees or hears, whether in connection with his professional practice or not. The code of ethics of the great governing body of this country pledges him never to divulge the privacies of personal and domestic life, nor the infirmities of disposition, nor flaws of character observed during professional attendance, except when imperatively required to do so. It is only in courts of justice that the seal of secrecy can be broken, and even here the peculiar moral obligations of the physician are acknowledged and respected.

XLIII.

CIVIL AND MILITARY SURGEONS.

PREVIOUSLY to the late war the medical profession in this country was divided into the civil and military, and these two branches were unfortunately widely separated. This estrangement was due to circumstances, and not to prejudice or partisan feeling. The graduate who entered the army was of necessity immediately withdrawn from the circle of social as well as professional life, and assigned to duty at some remote frontier station far beyond the bounds of civilization. Here he was detained often for years, completely shut out from all intercourse with his brethren, and thus was lost to the profession in civil life. Whoever has mingled familiarly with civil and military surgeons must have noticed certain marked differences between them. We will allude to the two most patent. And, first, the great advantages for improvement in the practical duties of his profession, which the civil surgeon enjoys in contrast with the military, necessarily gives the former a more extensive and profound knowledge of his art. The civil surgeon is constantly stimulated to study and investigation, and is called upon

hourly to apply his knowledge practically. He could not if he would avoid the daily lessons which are pressed upon his attention. He lives in an atmosphere charged with the vitalizing influences of professional success, and if he fail, his failure is due to his own incapacity or indolence. But the surgeon who enters the army resigns, at the very threshold of his career, every hope, and, in truth, every aspiration for future eminence in the knowledge of the science and art of medicine. He is at once removed far from all the facilities for scientific investigation, and his sphere of observation is narrowed to the smallest possible circle. He forsakes every incentive to study and every association for improvement, and consigns himself to the aimless routine of a pioneer. He is not allowed vacations for travel, observation, and study, but throughout his whole professional life remains isolated and steadily confined to his duties. It is not surprising that, though the Army Examining Board has always selected the best qualified graduates, the scientific and practical character of the Medical Staff falls considerably below that of the profession in civil life. If now we compare the moral tone of the two classes of surgeons, we find the contrast equally great, but quite reversed. The average of civil practitioners have not that high and unwavering sense of the dignity of their calling which characterizes their brethren in the military service It is not entirely through the

ignorance of those who practice it that, in our day, medicine occupies an inferior position; much is due to the want of a higher moral tone and sentiment, and a more correct appreciation of the dignity and sacredness of the physician's duties. Too many practice their art as a mere trade, and comparatively few are found willing under all circumstances to defend it against the machinations of charlatanry. Social intercourse and the power of gain seem gradually to detract from its honorable character, and we find it too often prostituted to unworthy purposes. But when we turn to the medical staff of the regular army, as formerly constituted, the change is as marked as it would be if we entered the ranks of another profession. The whole body is pervaded by a common sentiment of loyalty to, and even veneration for, their calling. Under the rigid discipline of the former chiefs, who, whatever their faults, had a nice sense of honor, and compelled all who came within their jurisdiction to appreciate it, there was infused into the whole staff, in a remarkable degree, a personal dignity and a regard for official and professional character. All the representatives of the staff, make those who approach them feel that they are in the presence of men who hold in proper esteem their official position and profession. Indeed, we believe that in the ranks of the old corps of the regular army were to be found the best representatives of the true

dignity of our art. The whole body was penetrated with a regard for its honor and worth so profound and all-pervading that no moral delinquencies could be tolerated. Members were thus placed under an obligation to sustain the high character of the staff, which acted as a most powerful restraint upon their conduct. The result of this discipline was the gradual elevation of the character of the surgeon, until he occupied an enviable position in the army. The medical officer was everywhere regarded as the soul of honor, and as a model of official integrity. He was marked as a gentleman of education and refinement, and the most implicit confidence was reposed in him. There was that *esprit de corps* which made the staff a unit in the preservation of its dignity. Whoever seriously offended lost rank and position even in his own estimation, and sooner or later concealed his shame in retirement from the army. The war brought about a remarkable commingling of the two sections of the medical profession. The civil practitioner entered the army, and the army surgeon returned from the frontier post. The two branches of a common stock again became united, and it is a matter of no small interest to notice how favorably they reacted upon each other. The members of the regular army rapidly advanced in a knowledge of the science and art of surgery; while the civil surgeon became animated by a higher sentiment of loyalty to his profession.

LXIV.

NEW SCHOOL OF OBSTETRICS.

PRACTICAL Surgery is evidently, at the present time, thoroughly committed to conservatism. This rule of practice is so firmly established, that no one would risk his reputation by even the suspicion that he did not fully and heartily assent to it. The same may be said of practical medicine, which, long since adopted expectancy as its governing principle, and all representatives of the most advanced views in this branch of physic accept it as a safe if not a universal guide. But what is the tendency of modern obstetric medicine? Time was when the ruling motto among accoucheurs ran thus, "meddlesome midwifery is bad." So earnestly was this idea inculcated by obstetrical professors, that if a graduate forgot everything else, this terse sentence rang in his ears every time he approached the lying-in chamber. Many will remember during their natural lives the vehemence with which an eccentric professor, twenty years ago, denounced the forceps, and, incidentally, in language not less severe, the practitioner who would use them. Language failing to give full expression to his contempt of obstetrical opera-

tions, he illustrated his meaning by grimaces and a variety of grotesque manipulations of his person which served to fix in the mind of the terrified student the truth that meddlesome midwifery *must* be bad. Such teachings bore their legitimate fruits. Operative interference in obstetric practice was a resort to which each practitioner was brought only after every prudent mean was exhausted, and the condition of the patient imperatively demanded assistance. The frequent employment of artificial aid in midwifery practice was an opprobrium under which no accoucheur would willingly rest. It was the pride of practitioners to report the number of cases which they attended annually without the use of forceps. Several of the oldest and most eminent obstetricians of this country can boast that they never had occasion to use the forceps more than once, twice, or thrice in their own practice; nor did they have a considerable annual mortality among their cases. Their records of practice, on the contrary, exhibit a per-centage of deaths too slight for criticism. But whoever is familiar with current medical literature must have become convinced that a new and powerful school of obstetrical practitioners and teachers is rising into importance, which has for its chief aim to popularize operative midwifery. With them the old text, "meddlesome midwifery is bad," passes for a prejudice of our forefathers. Brushing it away as the rubbish of the past,

they have laid as a foundation for the superstructure which they are building, the power and necessity of art to guide to successful issue the processes of nature. While science is leading physicians and surgeons to conservatism, its teachings have a contrary influence upon obstetricians. As the *armamtarium chirurgicum* diminishes, the *armamentarium obstetricum* increases. Twenty years ago few practitioners had obstetrical instruments, and these were carefully concealed; to-day they are a necessary part of the graduate's outfit, and occupy too frequently a conspicuous place in his office. The change in obstetrical practice which we have indicated as now in progress must be witnessed with alarm by every believer in conservatism in medicine. Already we witness the sad results which must inevitably follow the inculcation of an aggressive practice in midwifery. Many lying-in asylums give a far larger mortality of puerperal cases and of still-births at full term than formerly; and the history of these institutions shows that the number of instrumental cases is annually largely increasing. Private practice would, if honestly written, give similar results. The medical journals teem with the death-records of meddlesome midwifery; and it is surprising what senseless audacity is frequently exhibited by these progressive obstetricians in publishing to the world the records of their own shame. It was not long since that a

practitioner of this school gravely advocated version in natural labor, and reported a large number of cases in proof of its advantages, in several of which the arm or leg was fractured during the necessary manipulations. It would seem quite impossible that a school of practice, founded on such erroneous principles, and giving such disastrous results, could ever make proselytes. It requires, however, but a slight knowledge of human nature and the peculiar temperament of the present age, to discover that such a code of practice has many elements of popularity. The éclat of an operation is never lost sight of by the ambitious. If the license is given they will never fail to find the opportunity to impress the community with their skill and daring. The tedious waiting at the bedside may also be limited by interference, and the practitioner is liable to consult his convenience rather than the interests of the patient. In the earnest and eloquent words of a recent author, "it is time that plain language should be spoken on this subject: the spirit of conservative midwifery seems to have been lost in sleep; the ordinances of nature have been disregarded, and the accoucheur with instrument in hand, rampant in his desire for opportunity, rushes with good heart and unmeasured confidence to what he deems the scene of conquest, but too often, alas! it proves a scene of harrowing agony to the unhappy patient."

XLV.

SPECIALISTS IN MEDICINE.

THE tendency of the age is to the division of labor. We see it in all the mechanic arts and in every department of human service and thought. It grows out of the limited capacity of both the body and mind, and the constant expansion of every branch of science and of every department of industry. Not all minds can grasp the widely varying facts in any one of the generally recognized divisions of the sciences, much less become profoundly conversant with them. Neither can the artisan become proficient in many branches of the same business. He who is recognized as a "Jack at all trades" cannot excel in any one art, though he may be a most useful person by his general knowledge. Medicine, as a science and an art, has not escaped this tendency to the division of labor. The three grand divisions, practical medicine, surgery, and obstetrics, have long been recognized and adopted. They very naturally grow out of fundamental differences in methods of treatment of diseases. Surgical affections require, for the most part, entirely different remedial agents from medical diseases; and the prac-

tice of obstetrics differs equally from both in the appliances of art. In the progress of the medical sciences many of the classes of maladies embraced in these several grand divisions have become objects of special study, as the diseases of the eye and ear in surgery, of the heart and lungs in medicine, and of the uterus in obstetrics. These divisions have gradually become more and more numerous, until surgery, medicine, and obstetrics are little else than an agglomeration of specialties. The necessity of pursuing the study and practice of a single branch in order to success, is beginning to possess the minds of young physicians. They are stimulated by the examples of men who have won reputation and fortune by devotion to a specialty. It is time that this subject was thoroughly discussed in all its bearings, that the younger members of the profession may have correct views of the advantages or disadvantages of such a course. The arguments generally brought forward by the advocates of specialties in medicine are, as we have already intimated, those which apply to a division of labor in any other department of business. And they have great plausibility. To surpass all contemporary laborers in any single pursuit requires the undivided efforts of every ordinary mind. But we are not prepared to accept this reasoning in an unqualified sense. As a general rule we must aver that the man whose knowledge

in business takes the widest range has the best basis for success. This fact is eminently true in medicine. The general surgeon, physician, or obstetrician, will prove a better practitioner in any particular disease than the specialist. The most successful surgeon is the man who has also a thorough knowledge of practical medicine. The relations of diseases are intimate, often obscure, and frequently all-controlling. The practitioner who fails to detect these relations will certainly not be thoroughly qualified, whatever may be his pecuniary success. He will treat diseases in his specialty from the most narrow stand-point, and too frequently fail to comprehend those remote influences and widely extended sympathies which most seriously modify their progress. These peculiarities the general practitioner anticipates and readily recognizes, and promptly meets every manifestation with proper remedies. It has been remarked by an accurate observer of the progressive changes in the medical profession, that the older physicians often much excel the younger in methods of treatment, because they take a much wider range of symptoms, and do not narrow their view to single organs and individual diseases. There is much truth in the remark. The recent graduate has his mind pre-occupied with scholastic divisions and subdivisions of diseases of individual parts, and in his analysis he becomes more and more restricted, until the attention is fixed upon a

limited, perhaps an insignificant part of the subject under investigation. The same is true of the pure specialist, as the term is now employed. In general, he is necessarily a poor practitioner, and though he may more correctly interpret the purport of pathological changes than others who have studied the special forms of disease less minutely, he will show but little skill in employing remedies. If we contrast also the usefulness and the rank in the profession of the general practitioner with that of the specialist, we shall see clearly that the studies of the former tend much more to enlarge the mind, to strengthen its grasp, and increase its powers of correct analysis. Every force acting upon or within the human organism is investigated, and its near or remote influence carefully weighed or measured. It is a matter of historical record that the great practical men of the profession, in all times, have been students of medicine, in the largest sense; they have embraced within the scope of their studies the circle of its sciences, and have made each department contribute to their success. Hunter, Abernethy, Brodie, Simpson, Hosack, Mott, Warren, are a few of the recent names which occur to us as examples of that large and liberal culture, which embraced the widest field of scientific research, and subsidized every available fact. They limited their specialties in practice to the three grand natural divisions, viz.: Medicine, Surgery, Obstetrics.

XLVI.

GRATUITOUS SERVICES.

THE medical profession has the reputation, at least among its own members, of being greatly overworked and miserably underpaid. It is true, even of those services for which medical men are promptly and fully paid, that the physician receives a smaller compensation than any person who brings to the discharge of duties special knowledge; he ranks below many classes of artisans. And we must add the fact that much of the time his services are confessedly rendered gratuitously. All the poor are his patrons, and by far the most exacting patrons that he can claim. Their demands upon his time are constant, and their calls are always imperative. Finally, if there is a public institution which requires a medical attendant, this service must also be gratuitous, though the governors or commissioners who control its affairs receive large salaries. It is not our intention now to pass in review the instances of extortion practiced upon our profession, but to notice one in particular where reform is needed, and which medical men should unite to obtain. Life Insurance Companies are wealthy organizations which re-

ceive large incomes from their business. Many of these corporations have amassed immense wealth, and all are in a greater or less degree prosperous. These societies are actually dependent upon medical officers for protection and success. The medical examiner is indeed the most important officer in the organization, for the prosecution of the business calls for his daily examination of applicants. The success of the whole business of Life Insurance may be said to rest most unequivocally upon the professional knowledge of the medical examiners. No Life Insurance Company would for a moment employ a medical officer of recognized incompetency. On the contrary, every such association seeks out the best educated and most reputable physician for this office, and to his professional knowledge intrusts its future success. Here is a marked instance in which the prominent medical men of any given community are placed in a position to command full and ample remuneration for their services. Their patrons are wealthy and powerful, and bestow large salaries on other important officers. The medical examiner ranks among the first in point of real consequence, and brings to the discharge of his duties a higher qualification than any other officer, viz. the education of a scientific expert. Such services in every other department of business command respect and the most liberal reward. Why do they not in a Life Insurance Company? There is

but one reason, and that is apparent on the most superficial examination of the subject. It is that medical men do not place a proper estimate upon their own services. There are found in this and every community physicians in large practice taking high rank in their profession, who are willing to travel several miles at mid-day to attend at the offices of Life Insurances, and, after making as critical medical examinations as would be required in most obscure diseases, they accept with gratitude the paltry fee of *three*, *two*, or even *one dollar* per head. Indeed, the passion for serving these great monopolies almost gratuitously, is so strong among our leading physicians, that they struggle for the vacancies which occur with all the desperation of politicians. Instead of rejecting with scorn the miserable pittance which these companies dole out to them in the way of fees, they pocket it with an air of the most intense satisfaction. We might forgive such greed in a young man who has to struggle hard to obtain a livelihood; but in older members, enjoying sufficient incomes from their legitimate business, it is reprehensible and unpardonable. A great reform is needed in this matter. The profession should unite in requiring that every medical examiner in a Life Insurance Company shall demand an adequate payment for his services. Instead of three dollars for each examination let him require seven or ten dollars, or still better

twelve, as in English companies. In this engagement he has the power of compulsion, for no Life Insurance Association will exchange a reputable physician for one of even doubtful character. There can then be no reasonable excuse for this humiliation of the profession at the hands of the older members. There is, however, still another method in which the profession are induced to serve these wealthy corporations, and in this instance they render their services gratuitously. To insure itself against all possible risks the Association requires the applicant to obtain from his regular medical attendant a lengthy certificate as to his predisposition to disease, etc., etc. This certificate is generally made out by the physician as a favor to his patient, when in reality it is a gratuitous service rendered to the insuring company. They require it as an additional safeguard. The physician acts the part of a consultant, and receives nothing for his trouble and information. View this act in whatever light we may it can but be regarded as a gross imposition upon the profession, and should be resolutely resisted. The medical attendant of the applicant is entitled to his fee as a consulting physician, and should demand it without reserve. In this case, also, he has the power to demand that justice be done him, and to compel the performance of the act. His information is absolutely essential to the complete medical examination of the insured, and the

Company will not proceed without it. The duty of the profession seems to us apparent. By concert of action individual members engaged in Life Insurance Companies should demand an adequate remuneration for their services. The question is not whether A or B can afford to leave his business, and attend at the office of the Company an hour or two daily for three or five dollars; it is rather a question which concerns the honor and dignity of the whole profession, and which no individual has the right to settle according to his own necessities. In this matter he is bound to consult the interests of his calling, and this calling demands of every member that he sustain in his own person its claims as an exalted scientific pursuit. It is equally clear that every physician should positively refuse to make out a certificate for insurance for his patient unless he is paid by the Company a full consultation fee. By declining this gratuitous service he does no violence to his relations with his patient, and will demand only what is just and right. If the profession will unite, these most desirable objects can readily be obtained. In England a noble stand has been made against the system of gratuitous services to these monopolies, and the result has been most favorable; after a feeble resistance, the value of the services of physicians to the success of the business of insurance was conceded by the allowance of ample remuneration to every one who serves them.

XLVII.

ALLEGED CRIMINALS.

THE frequent instances of attempts at suicide by persons detained in confinement deserves serious consideration. These occurrences would not be worthy of remark if they were limited to prisoners awaiting the execution of the death-penalty, or even condemned to a long period of imprisonment. We should then have an adequate cause for the attempted self-destruction, for in all periods of history, criminals have been guilty of this crime. But in this instance the crime is more frequently attempted by quite another class of prisoners: they are those persons who are awaiting their trial, and who have been charged with grave offences. In nearly every case the victim of self-destruction has left behind him an explanation of his last criminal act. The exciting cause, if it may be so designated, is confinement in the dreary, noisome cells of prisons. No sane person can be taken from the fresh air and sunlight, and be immured in these gloomy recesses, more dreary than the niches of a catacomb, for any considerable period, without coming to prefer death to life. Shut out from even a ray of sunlight, stifled by the dead and fetid

atmosphere of a living tomb, permitted no other liberty than to pace the length of his own body, the mind of the prisoner gradually loses its susceptibilities; the past with its pleasant memories aggravates the miseries of the passing hour, and the future takes coloring from the gloom and melancholy of the present. He implores to be put on trial, and either by acquittal or condemnation be relieved from the horrors of a living death. But courts do not hear his petition, and his case is adjourned for long weary months. Meanwhile the prisoner is gradually approaching suicidal mania or melancholy, and suddenly, and often unexpectedly, he takes the fatal step. As yet his guilt or innocence is unproven. This violent termination of his life is, however, in the public estimation, sufficient evidence of his guiltiness, and upon the poor man's memory is stamped the ineffaceable stigma of crime. It is a well established maxim of criminal law, that the accused shall be regarded as innocent until he is proven to be guilty. In this recorded decision of our courts we have a beautiful illustration of justice leaning to the side of mercy. For, the mere arrest of a person charged with the commission of crime might be taken as presumptive evidence of his guilt; and for the general good, as well as protection of society, he might, with the greatest propriety, have been treated as a criminal until proven to be innocent. But mercy has so far tempered the decrees of

justice that the humanitarian view has been universally adopted, and the accused stands before the court an innocent person until proven to be guilty. It would seem to follow, as a natural sequence from this maxim, that persons arrested for crimes should be treated as if innocent; that they should be placed under such restraints, or bonds, as will simply insure their appearance in courts, and that they be not otherwise deprived of their liberty. It is but right that a person who is believed to be innocent, and who in the eye of the law is innocent, should have all the privileges of one who is innocent. There would seem to be a manifest injustice in removing such persons from their ordinary duties, and much more in subjecting them to confinement. It might with great propriety be added, that the citizen who allows himself to be accused of crime, and to be put on trial, yields sufficiently to the necessities of society without being subjected to any further humiliation until he is proved to be guilty. But practically the law reverses its own wise and humane maxim. It not only demands the arrest of the accused but condemns him, before trial, to a felon's or a murderer's cell. In close and solitary confinement, deprived of every social, domestic, and political privilege, he remains for months, and often for years, before the question of guilt is determined. Our criminal jurisprudence should be radically changed. Either the accused should be immediately put on trial

as soon as the necessary evidence is obtained, or he should be held to appear by suitable bonds. If restraint is absolutely necessary to insure that appearance in case of capital offences, provision should be made for his comfort in keeping with the spirit of the law, which as yet regards him as innocent of the alleged crime. He should have all the privileges compatible with simple detention. His room should not be a cell, but a cheerful, well-aired and sunlighted apartment, furnished with comforts and conveniences such as the individual can command when at liberty; he should no longer have meagre and unwholesome prison fare, but be provided with a liberal and healthful diet; his freedom for exercise in the open air should be ample; and books and papers, and other means of mental recreation should be freely supplied. And it is quite as important that his companionship should be carefully selected. Not unfrequently the alledged criminal is of pure mind, but by hourly contact with the impure and vicious he gradually sinks to their level, especially if he is young and susceptible. We learn from the prison records that many of the most daring offenders took their first lessons in the methods of perpetrating crime in the jails in which they were lodged previous to their first trial. Thus the State not only inflicts a great wrong upon the individual, but too frequently, converts an innocent citizen into an expert criminal.

XLVIII.

MODERN MILITARY SCIENCE.

AMBROSE PARÉ, the famous Chirurgeon to three consecutive Kings of France, writing, now nearly three hundred years ago, "of wounds made by gun shot, other fiery engines, and all sorts of weapons," contrasted the fire-arms of his time with the warlike weapons of the ancients, and says of the latter, "they seem to me certain childish sports and games made only in imitation of the former." So impressed was he with the destructive power of the "fiery-engines" of war in use that he pronounced the following opinion upon the inventor of the gun: "I think the deviser of this deadly engine hath this for his recompence, that his name should be hidden by the darkness of perpetual ignorance, as not meriting for this, his most pernicious invention, any mention from posterity." The only comparison which he could make of the effects of "this hellish engine" (a cannon) "is with thunder and lightning;" greatly, however, at the expense of the latter. He says: "For what in the world is thought more horrid or fearful than thunder and lightning? and yet the hurtfulness of thunder is almost nothing to the cruelty of these infernal

engines." Had the pious Huguenot surgeon foreseen how these "infernal engines" and "magazines of cruelty," as he calls them, would multiply in after ages, and be rendered infinitely more destructive of human life, we may well believe that he would have added fearful maledictions to his condemnation of their inventor. But if a collection of the "fiery engines, and all sorts of weapons" of the sixteenth century were to be exhibited in our day, it would be the object of universal merriment. The formidable weapons which struck them with consternation would be regarded as little better than children's playthings compared with the instruments of warfare which are now brought into the field. The improvements in the various enginery of war are indeed marvelous in our time; even if we compare it with that of a half or a quarter of a century since. It is seen, not only in the comparatively greater precision of firearms, at greater distances, but in the destructive character of the missiles projected. A favorite order in the war of the revolution, when the old flint-lock musket was the weapon in the hands of the common soldier, was, "hold fire until you see the white of the enemy's eye." Even ten years ago the musket balls would not strike the object at eighty yards, and hence the few wounds which often followed a discharge of musketry, at the distances at which opposing forces generally meet. In Caffraria 80,000 rounds of ball-cartridges fired

from the old musket wounded but twenty-five Caffres; and at the battle of Salamanca but one ball in 3,000 took effect. Contrast these results with the rifle, which is now principally in the hands of our soldiers. The Enfield rifle is sighted at 1,000 yards, and two-thirds of the shots of a company of infantry have been known to take effect upon an attacking body of cavalry. The contrast in the precision of recent firearms with those in use in the early part of this century is strikingly exhibited in the following: At the actions in Flanders on the 16th, 17th, and 18th of June, 1815, including the battles of Quatre Bras and Waterloo, the number of wounded in the British army was about 8,000. The armies approached within 1,200 yards of each other, and were for the most part out of reach of all but field guns. Now, balls will take effect at 2,000 yards, and the result is seen in the battle of Solferino, where in a single contest, 11,500 French, 5,300 Sardinians, and 21,000 Austrians were wounded. Another noticeable effect of improved firearms, "*armes de prēcision*," is the lodgment of several balls in a single person. This was seen after the battle of Solferino, where soldiers were found to have several wounds of different origin in the same person. One was noticed who had received four balls at the same time. The late Col. Baker, who fell at Leesburg, Va., is said to have had no less than five bullet wounds. It should also be stated that the additional force

given to projectiles increases largely the number of wounds from a single ball. One Enfield rifle ball has thus been known to wound several persons. The improvements in the destructive capacity of heavy ordnance are in kind and degree like those in small-arms. The improvement in projectiles is not the least important item in the comparison of the present and the past state of military science. The round musket-ball was very liable to be diverted in its course by bones, vessels, tendons, etc.; it was not uncommon to find it traversing large tracts of the body without seriously wounding important organs, or parts. The cylindro-conoidal ball, now so much used, is not diverted even by bone, but penetrates directly every tissue or organ in its track, leaving the most dangerous and destructive wounds. The bearing of these facts upon the duties of the modern military surgeon are obvious. Not only are his duties greatly increased, but they are rendered far more difficult than formerly. A single battle is liable to overwhelm the surgical staff with labor, to the great distress and loss of the wounded. Well appointed as was the medical staff of the French army, at the battle of Solferino hundreds of the wounded had to wait for days before they had surgical attendance. At Brescia, 15,000 of the wounded were congregated soon after the battle, most of whom were in urgent need of medical and surgical aid. In our sanguinary war, we witnessed the same lamentable

deficiency in the medical corps, which has been more and more apparent in recent wars; dwellings and churches were often crowded with wounded imploring relief, to whom no other relief came than death; hundreds died of wounds which admitted of prompt succor. We hear of surgeons, who frequently stood appalled at the magnitude of their duties, and their utter inadequacy to the task. Foreign States have in some measure supplied these deficiencies. In addition to the three regimental surgeons, they have organized corps of ambulance attendants, trained to the proper handling of the wounded, and who are made, by special instruction, sufficiently familiar with injuries to be able to succor the severely wounded on the field, as where hemorrhages are imminent. These semi-medical auxiliaries to the staff of surgeons are of great service on the field. They follow the advancing column closely; examine the fallen; if their wounds are necessarily immediately fatal, they merely place the soldier where he may die undisturbed and uninjured. If the wounds do not demand immediate surgical attendance, they are temporarily dressed and the soldier is dispatched to the permanent hospital; but if they require immediate operation, the wounded man is sent to the field hospital, where the surgeon is in waiting with assistance. Thus the surgical staff is prepared to meet every emergency, however great it may be.

XLIX.

HOSPITAL APPOINTMENTS.

THERE can be no doubt that a new era in medical education has begun in this country. The marked success of schools connected with hospitals proves too unmistakably that theoretical instruction is about to be supplanted by the demonstrative. It is vain to oppose the progressive change in the public mind. It is based on the self-evident truth that medicine, a science of experiment and observation, can be cultivated successfully only at the bed-side—a truth which all the logic of causistry can never unsettle. That truth underlies every branch of scientific industry, but finds in practical medicine its highest development and brightest illustration. Science and art, theory and practice, are one and indivisible. Science teaches the mind, and art instructs the hand; the former gives the sound, discriminating judgment, and the latter the cunning skill in execution. Both are alike essential to success, both are to be acquired together. We advise the student of anatomy to dissect with his chart before him; and why should we not advise the student of practice to study his book at the bedside? The simple truth is, we have

far too long taught medicine by an artificial plan. The profession has not been governed by the same good sense that men exercise in the ordinary duties of life. Let us now call attention to the organization of hospitals, when regarded as the great centres of medical education. They have hitherto been regarded as merely the receptacles of the sick. In their organization the comfort of the inmates has been the especial care of their guardians, and but secondary attention has been given to the character of the medical attendance. They have been rendered subservient to the profession as practical schools, where the physicians and surgeons might attain by experience and observation to great excellence. The large majority of the distinguished men of the profession have held positions in hospitals, and in these large fields for study and accurate investigation have acquired that skill which has given them success in practice. Nearly all of the familiar names which adorn the pages of medical history represent so many different hospitals. But a higher and nobler service is about to be rendered by these institutions. They are to be not only the resort of the sick, and schools for the training of a few physicians and surgeons, but they are to become the great fountains of medical knowledge. Within the hospital ward the student of medicine will hereafter begin and complete his education. The school and hospital will no longer be separate institu-

tions, but they must be the same in location, the same in name, and the same in organization. In this view it becomes a matter of no small importance, that their medical and surgical staff be selected with great care. Hitherto the governing Boards have exercised but little discretion in the choice of candidates for vacancies. In general, that person has been chosen who has brought the largest pressure of a political, social, or pecuniary kind to bear upon the appointing power. Merit is almost universally elbowed out of the way by arrogant conceit; and places of power and influence are filled by those whom the genius of medicine would discard. For this reason, our hospitals have been, for the most part, poorly provided with medical attendance. The physicians selected are rarely the growing and advancing members of the profession. They are too often those third-rate men, who, in practical life, necessarily take an inferior rank. They are not familiar with the late discoveries in medicine, nor do they reflect its present condition; errors in diagnosis and treatment are the daily clinical lessons which they teach. The surgeons are equally unqualified for their responsible positions. They are not only frequently men of no science, but they are as frequently deficient in ordinary skill. We must go to our hospitals to witness poor surgery. Here may be seen the most palpable and deplorable errors, openly and shamelessly committed. We shrink from the

mention of the terrible lessons which incompetent surgeons impress upon those who attend much upon public practice. If the study of mal-practice is useful to the student, then do those half-educated physicians and surgeons, who may be found in every hospital, serve a beneficial purpose; their lessons are certainly most impressive. The medical attendance upon these institutions can never meet the present and prospective demands of the profession until a new system of appointment is adopted. So long as Boards of laymen may choose a physician or surgeon from among candidates, no reliance can be placed upon their choice. They may by mistake select a proper person, but the present staff of most civil hospitals proves that the contrary must be the result. If the French method of deciding by concours is not adapted to our social peculiarities, it certainly would not be difficult to devise a plan by which the unqualified could be distinguished from the qualified and the former be prevented from securing these positions. The evil is one which will not correct itself, but like many others must be fearlessly met and remedied. And the remedy must be devised and applied by the medical profession. It has but to manifest its purpose, and assign the reasons therefor, and governing boards will yield and promptly comply with its demands.

L.

ASYLUMS FOR INEBRIATES.

THE recognition of the fact that those inebriates who have been considered hopelessly devoted to their cups, are laboring under a species of insanity which requires their restraint, will form the brightest feature of our civilization. They pervade all ranks of society, and have, hitherto, like lepers, been regarded as outcasts, for whose relief the grave was the only refuge. Whatever may be the social position of the dipsomaniac, a more pitiable object in human shape can not be conceived. Disease, in its most revolting forms, has far more mitigating conditions than that fatal passion which clings with resistless grasp to its victim. The former may waste the body, and render life intolerable by suffering, but leave the intellect undisturbed, and allow the affections to have full and natural play. But the latter not only gradually obliterates all traces of original manhood, but turns the affections into fiendish passions, and submerges the intellect in the muddy waters of idiocy. It is not every tippler, or even drunkard, that is a dipsomaniac, but it is the man over whom appetite has so far triumphed that he can

no longer voluntarily resist the temptation. Says Dr. Peddie:

"There is, especially in persons of a nervous or sanguine temperament, and more readily in women than in men, a condition in which the mere vice is transformed into a disease, and the mere vicious habit into an insane impulsive propensity, and then the drunkard becomes a dipsomaniac. * * * He becomes destitute of any command over his own will, of all ability to resist the craving, and he is transformed into the involuntary slave of an insane propensity. Physically, the dipsomaniac is truly lamentable to behold, with his general broken-down aspect, feeble, tremulous limbs, pale or leaden-colored visage, and watery, lustreless eye. But in the manifestations of mind and heart, the degradation is still more apparent and mournful. His habits of drinking are not now social, but solitary. He no longer drinks from mere relish for the liquors but yields to a desire which is insatiable—giving himself up to a demon which has taken body and soul into subjection. Intelligence is extinguished; the best affections of the heart are deadened; the moral feelings are perverted; the dearest social ties no longer restrain him; truth is no longer a principle of action. He can not now control his conduct or manage his affairs; he is useless or dangerous to himself or others; disqualified for social and civil duties, a wreck of humanity, and a burden on society."

But this affection may be hereditary, and thus resemble a constitutional disease, and especially insanity. It is no uncommon thing to find in the family of the confirmed drunkard, children early assuming the habits of the parent, and exhibiting the most uncontrollable passion for ardent spirits. The vice of the parent seems also

to exist in a two-fold intensity in the offspring. The latter is early lost to all sense of shame, and every influence is powerless towards reform. But whether acquired or hereditary, the disease is essentially the same, and requires the same, remedial measures. It is interesting to notice that Dr. Rush entertained the most positive views in regard to the insanity of inebriates. He considered them "as fit subjects of hospital treatment as any other class of madmen." "They are monomaniacs—the subjects of physical disease located in the brain. At first, their drinking is the fruit of moral depravity, but when long indulgence in this vice has produced disease of the brain, then is their drinking the result of insanity." The remedy for this deplorable malady has long been sought in vain. The great temperance movement inaugurated under the motto "Teetotalism," established one important conclusion, viz., that the most inveterate inebriate may be rescued if the temptation is wholly and for a long time removed. But the reformers trusted at first to the resolution of the reformed solely, and the trial necessarily proved, in the vast majority of cases, a failure. Few were found sufficiently strong to resist the temptation, which allured them on every hand, to assuage the fever which raged consumingly within. The advocates of teetotalism then undertook the removal of the temptation itself, and in this they have been par-

tially successful. But the great step in this reform was the recognition of the true physical, moral, and psychological condition of the inebriate. That he is an insane person, in every respect in which a monomaniac can be so considered, is susceptible of demonstration. The logical conclusion follows, that for his proper treatment there must be such isolation from exciting causes, and such moral influences as will best promote recovery. Of the value of Inebriate Asylums, or of the plan of isolation, with proper moral and hygienic influences, we now have practical as well as theoretical testimony. Many persons have been secluded at their own request, and have thereby been saved from destruction. Many illustrative examples might be given of the success which will attend seclusion, but we will only quote from the report made by Dr. Christison, of a visit to a private asylum for inebriates in the island of Skye, Scotland. He says:

"Here we found ten gentlemen—cases originally of the worst forms of ungovernable drink-craving—who lived in a state of sobriety, happiness, and real freedom. One, who is now well, had not yet recovered from a prostrate condition of both mind and body. The others wandered over the island, scene-hunting, angling, fowling, botanizing, and geologizing; and one of these accompanied my companion and myself on a long day's walk to Loch Corruisk and the Cuchullin mountains. No untoward accident had ever happened among them. I may add, that it was impossible not to feel, that—with one or two exceptions—we were among a set of men of originally a low order of

intellect. Radical cures are rare among them; for such men, under the present order of things, are generally too far gone in the habit of intemperance before they can be persuaded to submit to treatment. Nevertheless, one of those I met there, a very bad case indeed, has since stood the world's temptations bravely for twelve months subsequently to his discharge."

The State of New York was, we believe, the first to carry out practically this idea. The noble institution at Binghamton, is the proudest monument which the Empire State can raise to the intelligence and humanity of its people. Other States have taken up the subject, and leading men are earnestly laboring to establish asylums for the inebriate. The organization of the American Association for the cure of Inebriates is an important movement, designed to enable the friends of this reform to coöperate throughout all the States. In Great Britain the reform has taken a strong hold upon the medical profession and philanthropists, and great exertions are being made to obtain such legislation as will enable them to render it efficient and entirely practicable. Dr. Christison, Dr. Peddie, Dr. Mackesey, Dr. Dalrymple, and others, have brought the subject prominently forward, and none who have read their papers fail to be convinced of the vast importance of the reform. In the British Social Science Association the subject has been largely examined, and we may soon expect to see the fruits of this discussion in the adoption of such legal measures as are required.

LI.

SURGEON AND PATIENT.

IT is not generally known to the surgeon, we believe, that he gives his services under the form of a contract. This agreement may be implied, or it may be expressed in terms. In either case he is responsible for the fulfillment of his part of the contract. The implied contract grows out of his offering his services to the public as a qualified practitioner of his art; and in all suits for alleged medical malpractice under it, the courts have uniformly held that the practitioner is bound to bring to his case the ordinary degree of skill in his profession. In the legal phraseology: "The implied contract of a physician or surgeon is not to cure—to restore a limb to its natural perfectness—but to treat his case with diligence and skill." "His contract, as implied in law, is that—1. He possesses that reasonable degree of learning, skill, and experience, which is ordinarily possessed by others of his profession; 2. That he will use reasonable and ordinary care and diligence in the treatment of the case committed to him; 3. That he will use his best judgment in all cases of doubt as to the best course of treatment." The mean-

ing of the term "ordinary skill," has given rise to much discussion, and too frequently is regarded by lawyers as requiring too high a standard of attainment. An eminent English jurist declares that all surgeons are not required to have the skill and knowledge of Astley Cooper, but only that skill which gives average results. Judge Story says: "In all these cases, where skill is required, it is to be understood that it means ordinary skill in the business or employment which the bailee undertakes; for he is not presumed to engage for extraordinary skill, which belongs to a few men only in his business or employment, or for extraordinary endowments or acquirements." But the surgeon may make a special contract with his patient, and then he is held strictly by its terms. If he contract to do what is *absolutely* impossible at the time the contract was made, he is not bound thereby, for a man cannot be compelled to perform an impossibility. He will forfeit all compensation for his services. If, however, he contract to do anything *accidentally* impossible, the contract is binding, "it being his own fault and folly that he did not expressly provide against those contingencies he should know might possibly transpire, and exempt himself from responsibility in certain events." The surgeon may then contract to effect an absolute cure; and the highest degree of skill, combined with the utmost care and diligence, will not relieve him of his responsi-

bility, "because it was his own fault, or inexcusable ignorance, that so uncertain a result should have been guaranteed successful. The extent of the physician's or surgeon's liability, under an express contract to cure, will depend upon the circumstances of the case. If he undertakes an absolute impossibility, the law will not hold him responsible for the full extent of the damage resulting to the patient by reason of the failure to cure. His responsibility extends to a forfeiture of all compensation for medicine and service; the impossibility of the undertaking excuses him in part." The surgeon who makes a special contract cannot afterwards plead ignorance or want of skill; he, in effect, binds himself to bring to his undertaking a degree of skill and knowledge equal to its performance. The subject of special contracts between surgeon and patient has been reviewed by one of the courts of the State of Ohio, and a new and interesting phase has been given to it. A suit for alleged malpractice was brought in due form, and evidence brought forward to prove that the defendant did not exercise ordinary care and skill. The defendant claimed that he had a special contract with the plaintiff that he would not be responsible for results. The Court charged the jury as follows:

"A physician or surgeon, in undertaking the treatment of a surgical or medical case, enters into a contract with the patient. In the absence of any special one, the general law requires that the physician or surgeon shall render

to the patient the ordinary skill—not the highest order of skill, nor the lowest, but something like the average skill of the profession. The general law also requires a reasonable amount of care on the part of the physician or surgeon. These principles are applicable to persons engaged in other pursuits. A mechanic in building a house, or a lawyer in the management of a case at the bar, is responsible for the exercise of reasonable skill and care. The defendant, Dr. Butler, however, claims that he had a special contract, which obligated him only to the exercise of the skill that he himself possessed. This contract the defendant had a right to make; and this contract, if proven —a matter of which you are to be the judges—is the measure of his responsibility, in the case at issue, for surgical skill."

Whereupon the jury gave a verdict for the defendant. If this decision is accepted as a rule in our courts in suits for alleged malpractice, we see no reason why the surgeon may not always relieve himself from all liability to damages in the practice of his profession. He has only to stipulate that he will use all the skill which he himself possesses, a fact to which in several States he may be a witness, and a nonsuit would be the result. The necessity of protection from the prosecution of malicious persons has been increasingly felt by surgeons, but there has as yet been no adequate measures of relief proposed. The right to appear in one's own defence was an important gain, as the surgeon can generally so explain the case as to convince the jury of the propriety of his practice. But a contract properly drawn is a more direct and available safeguard.

LII.

WRITER'S CRAMP.

IT occasionally happens that a person long accustomed to writing, finds at length that his finger or fingers execute singular and unaccountable movements; he experiences difficulty in retaining his pen between his thumb and fingers, and accordingly he grasps it more tightly; it may be pushed by his first finger over the nail of his thumb, and it is difficult to bring the pen back to its place—a finger starts suddenly, and hence his writing looks unnatural. The same symptoms are sometimes noticed by others, as by those who play upon instruments. The pianist may have such spasmodic action of a finger as to touch keys which he intended to avoid. The violinist may find his fingers stiff and uncontrollable. Laboring people may suffer in a similar manner—as, for example, the seamstress pricks her fingers, and with all her efforts her stitching is irregular; the bricklayer may be unable to use the trowel; the milkmaid may be unable to pursue her avocation; the tailor and shoemaker have to abandon their trades. For a long period these symptoms were regarded merely as peculiarities, and no importance was at-

tached to them. It did not occur to the earlier observers that they indicated a true disease. But such proved to be the case, and the affection is now known as "Writer's Cramp," or "Scrivener's Palsy," because it is more often met with in this class of persons. This singular disease is chronic in its form, and is "characterized by the occurrence of a spasm when the attempt is made to execute a special and complicated movement the result of previous education." At first the spasm is often very slight, so as hardly to attract attention, and when the effort ceases there is no evidence that there is any special affection. But when an attempt is again made, the spasm returns. The disease is liable to extend and involve other fingers, the thumb, and even more distant muscles, as of the arm. Persons sometimes endeavor to overcome the difficulty by moving the entire arm in the act of writing, and some have even learned to write with the other hand. But it has too frequently happened that the spasm has immediately occurred in the hand last educated. All efforts to control the spasm and force the affected hand into action has resulted in increasing the difficulty. The cause of this cramp is unknown. It has been supposed to be due to excessive writing, but there are no facts to warrant the opinion. Some have attributed it to the use of a metallic pen, but there is no proof of this assertion. The truth is that writing, like playing upon a piano, is a very complicated

act, and requires great coördinating power. It is learned with difficulty, as many muscles have to be educated to act in harmony. The performance of the function of every muscle depends upon the integrity of the nerve supplying it, and of that part of the brain from which the nerve takes its origin. A slight derangement, therefore, of any of these parts interferes or destroys the function of a muscle or muscles, and the result is interference with the particular act previously so easily and rapidly performed. It is no uncommon thing to find a loss of power in a part which destroys some most important function of the body. In writer's cramp, there is, from some cause unknown, a defect in the power of coördinating movements of a limited kind, but yet sufficient to interrupt a series of movements which we have been educated to perform, and which have through long practice become automatic. The treatment of this malady is simple, and consists in rest. When the patient promptly lays aside the particular business in the performance of which spasm or cramp occurs, recovery is almost certain. Every effort to overcome it by persistent use of the part only increases the immediate spasm, and renders it more liable to extend and involve other parts. It is idle to attempt a cure by any known medicinal preparations. When recovery is complete, the patient may resume his business, but he must not overtax the previously affected part. Relapse is not liable to occur unless the part is overworked.

LIII.

THE GREAT DESTROYER.

IT may safely be affirmed that there is no single disease in the long catalogue of human pestilences that has created greater havoc and been more justly dreaded than small-pox—*variola*, or as once well named, *the Great Destroyer*. Other contagious diseases have slain their thousands, but small-pox has slain its tens of millions. It has destroyed armies, raised sieges, and scattered whole tribes and communities of people. The barbarian devoutly sacrifices to its deified representation when it appears, and the Christian flees as from the presence of death. The date of the first appearance of small-pox is doubtful. There is a tradition in the East that it was first derived from the camel; but there is no proof of the truth of the statement. The "sore boils" of Job have been attributed to small-pox, but foolishly. There is no evidence even that the Greek and Roman physicians knew of this disease. Procopius, who lived in the middle of the sixth century, gives a graphic account of a disease closely resembling small-pox, which began A. D. 544, in Egypt, and spread to Constantinople. In A. D. 569, the year of the

birth of Mohammed, an Abyssinian army was compelled to raise the siege of Mecca by a pestilence very like small-pox, which created a terrible mortality. The first medical writer who gave an authentic description of the disease was Rhazes, an Arabian physician, who wrote about 910. From that period the pestilence has had many historians, and we have no difficulty in tracing its progress from time to time, and estimating the extent of its ravages. It has spread most widely where there have been the largest movements among nations; as in the conquests of the Arabs and Saracens, during the crusades, in the emigration of the Spaniards to America, etc. Wherever it appeared in those early periods, it was regarded as an avenging angel. Whole continents were decimated, and some nations were almost completely annihilated. It is estimated that 45,000,000 of the people of Europe died of small-pox in the one hundred years preceding the introduction of vaccination. As late as 1720, 20,000 persons died of small-pox in Paris. It did not respect rank or condition. A recent writer makes the following statement of its ravages in the royal families of Europe: "Among the family of Charles I. of Great Britain, of his forty-two lineal descendants up to the date of 1712, five were killed outright by small-pox: viz., his son Henry, Duke of Gloucester; and his daughter Mary, wife of the Prince of Orange, and mother of William III.; and three of the children

of James II.: viz., Charles, Duke of Cambridge, in 1677; Mary, Queen of England, and wife of William III., in 1694; and the Princess Maria Louisa, in April, 1712. This does not include, of course, severe attacks, not fatal, such as those from which Queen Anne and William III. suffered. Of the immediate descendants of his contemporary, Louis XIV., of France (who himself survived a severe attack of small-pox), five also died of it in the interval between 1711 and 1774: viz., his son Louis, the Dauphin of France, in April, of 1711; Louis, Duke of Burgundy, son of the preceding, and also Dauphin, and the Dauphiness, his wife, in 1712; their son, the Duc de Bretagne, and Louis XV., the great-grandson of Louis XIV. Among other royal deaths from small-pox in the same period were those of Joseph I., Emperor of Germany, in 1711; Peter II., Emperor of Russia, in 1730; Henry, Prince of Prussia, in 1767; Maximilian Joseph, Elector of Bavaria, December 30, 1777." The history of nearly every case shows that the sick were abandoned by their most devoted friends, and left to die or recover alone. The mode of propagation of small-pox long remained doubtful. That it could be communicated by actual contact (to touch) of the sick with the well, or by contagion, was early apparent, and it was soon demonstrated that the sick infected the air of the room in which they lay. It became in time well established, therefore, that the disease was both contagious and

infectious. It was also discovered that the bed and clothing of the sick absorbed the poison, and afterward gave it off when exposed to the air, and thus communicated the disease. These clothes or other articles were called *fomites*, from their power of retaining the poison. The porous walls of the room also received the virus, and would give it to the next occupant. So subtle, indeed, did the poison seem to be, and so many sickened without known contact with the sick, that it came to be believed that the disease was communicated by sight and by hearing, and even by the imagination. More recent investigations have developed the theory that the human subject is born with certain materials in his blood or tissues, which the poisons of small-pox, scarlet-fever, or measles act upon as yeast acts upon the dough—namely, as a ferment. In this fermentation, the peculiar poison multiplies itself infinitely, and shows itself in the efflorescence or eruption. But it destroys wholly or in part the original material upon which it acted: when it entirely destroys this material, the disease can never repeat itself in the same person; when the fermentation is partial, the disease may recur. This theory explains also the nature of the process of inoculation and vaccination—the two great preventive measures of small-pox and the necessity of revaccination until the individual has no longer any susceptibility.

LIV.

STUDY OF MEDICAL ETHICS.

THE Code of Ethics of the American Medical Association has now been the recognized standard of medical morals in this country for a quarter of a century. It was prepared by the wisest members of our profession, among whom we recognize the honored and trustworthy names of Drs. Bell, Hays, and Emerson, of Philadelphia; Prof. Clark, of New York, and Prof. Arnold, of Georgia. When submitted to the Convention of 1847, the Code was adopted unanimously. Since that period no one has dissented from its provisions, but every legitimate medical organization in the country has adopted it; and thus it stands as our organic medical law. This document defines with admirable simplicity and purity of language, and with the nicest appreciation of the exalted spirit of scientific medicine, the duties of physicians to each other as members of a liberal profession, and the reciprocal obligations which exist between them and the individual members of society. It is, in a word, the guide to the formation of a true medical character. And yet how little is this regarded by physicians, and how few are familiar with its admirable pro-

visions? Of the hundreds of graduates who are annually introduced to the ranks of the profession, how few are aware of even the existence of such a chart to professional excellence, much less imbued with its spirit? Annually, on the commencement day, some venerable physician addresses the departing graduates; dwells upon the duties and responsibilities awaiting them in their new relations to society; encourages them by the hope of success; stimulates their ambition by the example of great lives which have adorned the profession; then, with a parting blessing, the young Esculapians are dismissed to their great encounter with the realities of medical practice. Such advice is useful, but the inquiry naturally arises whether our colleges can be said to do their whole duty toward students in fitting them to practice successfully, when they fail to instruct them in those rules of professional intercourse whose observance brings them, antecedently even to intellectual merits, the approbation of their fellow-practitioners, and on the contrary, whose violation insures them the certain and immediate reprobation and scorn of their professional brethren. If an individual wishes to rise to meritorious eminence in any profession he must, first of all things, secure to himself the sympathy and the respect of his fellow-laborers. Without that he can never permanently sustain his status among gentlemen. For, although he may rise spasmodically, and flutter in mid air awhile upon

waxen wings, yet the inexorable sunlight of Truth will speedily dissolve these frail supports, and leave him to flounder among the shoals of pretenders who swarm in the lower depths of the profession. It does not follow because a man has acquired large stores of knowledge that he may not at the same time be a low and vulgar boor, whose self-conceit or selfishness leads him to trample alike upon the rights and the feelings of his professional brethren, in his insensate haste to become rich, or to gain the bubble reputation. These things are of too frequent occurrence not to have been noticed by all, and it is not difficult in any community to point out some physicians who, great enough in intellectuality, are yet moral idiots in respect to the dignity and the honor of the profession they follow. Such men, whatever their talents, their wealth, or their factitious distinctions, are still living in virtual outlawry to the canons of medical ethics, nor can the ephemeral praises of an indiscriminate press indemnify them for the lost sympathy and respect of their fellows. Pitiable indeed is the condition of that man who is shunned by his peers, whose name provokes only contempt, and who is dismissed from the thoughts as one fallen from the high estate of a Christian gentleman and an honorable man. Our code of ethics, therefore, in all its length, breadth, and strength of application, should be taught to the young men in the medical colleges.

LV.

THE GRAND ARMY.

FROM the prostration which followed the memorable battle of Bull Run the country gradually recovered, new armies were raised, equipped, and put in the field, surpassing in numbers, physical perfection, provisions, and every article necessary to the comfort and health of the individual soldier, any army of modern times. The "Grand Army" was the proud title which was given to the new army of the Potomac. The nation took courage, became proud of its military strength, and finally stood ready, not only to crush all domestic combinations against its authority, but to arbitrate diplomatic questions with foreign governments on the field of battle. One year passed—a year of battles, of victories and defeats, of marchings and countermarchings innumerable. The country rang unceasingly with the clash of arms. But the year closed, as it commenced, with a great crisis. The "Grand Army" on which rested the hopes of the nation, had met with a reverse more disheartening than the defeat at Bull Run. It had failed in every particular to accomplish its object, and lay on the inhospitable banks of James River,

weak, worn, and wasted, a mere remnant, watched over and protected from the rapacious enemy by an all-powerful fleet. That year was replete with valuable but dearly-bought experiences to us an unmilitary people. The secret of most of the failures of this army was comprised in a single word—SICKNESS. Study the campaigns in whatever light we may, the inevitable conclusion is that its defeats were almost solely due to sickness. At the close of that year one hundred regiments were invalided, and this represents but a fraction of the actual reduction of its physical energy and strength. The campaign on the Peninsula is a striking example of the utter failure of a large and well appointed army to accomplish its purpose, when little or no regard is paid to the prevention of disease. Within the short space of three months it is estimated that 50,000 men were sent to the rear of the "Grand Army of the Potomac." During that time it was within twelve hours' sail of the Capitol, and Commissary stores were in unlimited quantities, at the command of the proper officers. The army marched less than a hundred miles through a rich farming country, but long before it reached the point for effective operations the commanding officer was obliged to ask to have his army renewed. During this time there was no prevailing epidemic, nor other disease which a careful attention to the simplest laws of hygiene would not in a great degree have prevented. The first cause of weak-

ness was due to mustering into service unfit recruits. This had been done to a most dangerous extent. Boys and old men, men suffering from herniæ, varicose veins, chest and heart diseases, etc., often passed muster without a word of objection. There are many instances of persons joining the army because their diseases incapacitated them for active business. The blame rested with the medical inspectors appointed by the State authorities. These inspectors were in some instances utterly unfit for such duty, being unqualified to make a proper medical inspection. At one of the most important recruiting stations in the country nearly every form of disability was overlooked. In other instances the inspectors, for the smallest bribes, passed men whom they knew to be unfit for the service. An army made up of such material has, within its very earliest organization, the seeds of disaster and ultimate failure. The army of the Potomac was composed of much of this material, which was not very apparent while in camp, and subjected to no other fatigue than the daily drill. But the first decided movement diminished the number of soldiers, but not the strength of the army, by thousands. This class of persons also filled the hospitals throughout the entire season. The first exposure to the inclemencies of the weather and to fatigue, invalided them for the period of their enlistment. A second palpable cause of disease was the unhealthy location and

inadequate provision of camps. There is doubtless an occasional military necessity for the location of a camp on grounds unfit for the residence of man, but this is seldom, and almost never of long duration. And yet the army of the Potomac was scarcely ever on healthy grounds, though often in the immediate vicinity of healthy localities. When it broke camp in March, the troops were marched rapidly to Manasses, thence back to the Potomac, upon the banks of which they lay for three weeks waiting for preparations for the expedition to be completed. During that time they were almost within sight of their comfortable but deserted tents, with no covering other than meagre shelter tents. As a consequence the hospitals of Alexandria and every available building were filled with soldiers suffering from rheumatism, pneumonia, pleurisy, etc. When at length the army moved to the Peninsula, the most unhealthy localities were selected. The extensive low grounds at the mouth of James river, which during the spring season are covered with pools of stagnant water, were occupied by the army. Here they remained for weeks with the same meagre tents, and the same result followed as at Alexandria. The hospitals were soon crowded with every form of disease dependent upon exposure; so excessive was the sickness that hospital tents in large numbers were erected in the vicinity, and all were crowded. Here the Grand Army had its strength sadly reduced.

Moving forward to the scene of its first operations the army sat down before Yorktown. Again the camping grounds were selected with no better care, and combined with this fertile source of disease was hard labor in the mud and cold. From this point the transports were busily engaged for weeks in conveying the sick away to distant hospitals. The depletion of the force here was so great as to excite apprehension that this army might not be able to cope with its adversary. After the evacuation of Yorktown, the army pressed on by hurried marches to the Chickahominy, where it again sat down in the very stench of malaria. The reduction of its numerical and physical strength now became frightful and alarming. It was rapidly melting away in the very face of the enemy beyond all power of recuperation. In the final struggle its commanding general required 50,000 more men than he had, but that precise number had been invalided from its ranks through gross neglect of their health and comfort. A third cause of disease was a disregard of camp police. Cleanliness of the grounds, and cleanliness of the person, were in general most shamefully neglected, and the result has been diseases of the severest type. In vast numbers of regiments of the Grand Army, every form of nuisance had been allowed to accumulate on the ground and in and around the tents. In these regiments personal neatness was not even thought of. No trite apology of "military necessity" can excuse

a neglect of cleanliness—the first element of health. A fourth cause of disease was improper and badly cooked food. The supply of food in the gross to the army was not deficient, except in extraordinary cases. Government was lavish in this respect, and no pains were spared to give a good supply of food. But the most consummate knaves were allowed to make the purchases, and so fearfully did they impose upon her confidence that the term Commissary was a by-word and a hissing in the army. Every article that could be adulterated, was, so thoroughly, that of many articles the original could not be detected by the senses. And yet for all these stores the Government had originally paid the highest market price. In regard to the cooking it is safe to say that the food could not be well made more unpalatable and indigestible. An hour spent at surgeon's call convinced any one of the truth of this statement; the greater number of those suffering slight indisposition complained that they "could not keep the food on their stomachs." The history of the disastrous peninsular campaign of the Grand Army in 1862, reveals the sources of weakness in modern armies. All details are carefully attended to, except those on which the strength and effectiveness of the forces depends. It will be seen that the chief causes of failure were easily preventable; they grew out of the violation of some of the simplest laws of hygiene. Good camping ground can, with but

an occasional exception, be selected without in the slightest degree interfering with the military plans of a commandant; tents and their necessary furniture may be preserved, as a general thing, if proper care is exercised. A disregard of camp police and personal cleanliness is an unjustifiable neglect of the plainest laws of health. In the matter of the supply of food, a system could be adopted which would bring to the camp the best article in market. Cooks should be sent with the army, whose whole duty is to attend to the care and preparation of the food. Finally, the advice of the medical officers should not only be sought on all questions relating to the camp, the food, the clothing, etc., but equally in all movements of the army. If a campaign is to be undertaken the most perfectly projected plans must have the sanction of the chief of the medical staff to insure success. In the late war this fact was repeatedly demonstrated. Important campaigns were elaborately arranged by commanding officers, but the medical staff was only consulted as to supplies; the result was failure owing to excessive sickness. To the General medical counsels are as essential to success in planning and executing campaigns as are the maps of the coast survey to the Admiral who is about to attack a hostile seaport town. The former, like the latter, deliberately invites disaster and defeat, when he ignores the guide to success.

LVI.

RESPONSIBILITY OF PHYSICIANS.

THE question of the responsibility of the physician in the administration of chloroform, or for alleged injuries resulting therefrom, has at length been decided in a Court of Law. The case was tried at Philadelphia before Judge Hare, and a jury, and among the witnesses we notice the names of Professors Gross and Goddard. The evidence in this case and the charge of the Judge have an important bearing upon practice. The plaintiff, Mr. Bogle, was a driver on the horse-cars, and was thrown from his car, striking his head against a tree-box. He was taken up insensible, but so far recovered as to resume his work on the following day. Some three months after the accident, Mr. B. called on Dr. Winslow, a dentist, to have several teeth extracted. Chloroform was administered, and it was found necessary to give it in large quantities, and for three-quarters of an hour, and in the intervals between the drawing of the different teeth, as signs of returning consciousness appeared. The operation completed, Mr. B. left in company with a lady friend, but he staggered like a drunken man, and was obliged to lean on

his companion for assistance. He grew worse after that; his tongue thickened so that his articulation became indistinct, and finally, on the fourth day, he had paralysis of the left side. Dr. Winslow was called, and treated him for this sickness for four weeks, at the end of which time no perceptible relief having been afforded, another physician, Dr. Longshore was employed, under whose treatment he remained until he was able partially to resume his employment. For the loss sustained by him by reason of his sickness and continued inability to attend to his duties the suit was instituted. Dr. Longshore, the principal witness on the part of the prosecution, testified that, after hearing the evidence in the case, he inferred that the chloroform was the cause of the paralysis; never knew chloroform to be given without producing paralysis; that is its purpose; it is not permanent, however; there are cases reported in the books of paralysis of the tongue resulting from the use of chloroform; never heard of a case of paralysis of the side; chloroform might produce paralysis of the side by reason of its effect upon the brain; cerebral hæmorrhage produces paralysis; never heard of a case of cerebral hæmorrhage produced by chloroform; the kick of a horse will produce it; does not think it resulted from such a cause in this case; there is no standard for a dose of chloroform; the operator must be governed by the action of the patient; if the effect was not

produced in three-quarters of an hour I would stop the use of the chloroform, as I would be afraid of the consequence; there might have been an injury to the brain, brought into action by the use of chloroform, but if it resulted from injuries received two months before, there would be complaints on the part of the patient. Dr. Harbeson testified that he knew of a case where paralysis was caused by the use of chloroform; a tumor had been removed from the left breast of a patient while under the influence of chloroform, and paralysis ensued; it was considered a dangerous agent, and was, for that reason, not used at the Pennsylvania Hospital; he had known of death resulting from its use. The defence set up was, that Dr. Winslow was a graduate of twenty years' practice, eminently skilled in the use of chloroform, and that no matter how large the quantity used, or its length of application, no such effect as paralysis could result. Besides, it was on evidence that in the preceding January, the plaintiff had been kicked in the breast by one of his horses, hurled over the dasher into the street, and against the curb, his head violently striking a lamp-post, and it was contended that this was more likely to have been the cause of the paralysis. The character of the evidence on the part of the defence may be gathered from the testimony of Professor Gross. He testified that chloroform is regarded by the profession in general as a proper agent to relieve

pain; it is one of the approved remedies of the profession; in the present case he considered the length of time resulted from the want of the proper number of assistants by Dr. Winslow; don't think there is any case on record, except two referred to by Dr. Longshore, that chloroform caused paralysis; these two are cases reported by Dr. Haphold, of South Carolina, and these cases are not authentic; he has given chloroform since 1842, and under almost all circumtances; to a child of six weeks of age, and to a person of seventy-five years of age; he had given it to all classes, and never witnessed any ill effects from it; he did not think that the paralysis in this case was the result of the chloroform; in his judgment it had nothing to do with it. Professor Gross explained the effects of a concussion of the brain in producing paralysis; several months might elapse between the injury and the paralysis; he thought it not unlikely that the patient would complain of headache, etc.; though it did not follow that he would actually complain; if the man had not been kicked by a horse, he would not attribute the paralysis to chloroform from what he knew of its effects; he had given several ounces to patients; in Louisville he gave a man eight ounces, and kept him under its influence for three hours; chloroform, like many other agents which a physician is obliged to use, is dangerous; so is laudanum, etc.; if improperly used it would not produce paraly-

sis; he would not consider it improper to continue the use of chloroform after a patient has resisted its influence three-quarters of an hour; he should continue for five hours, until he had accomplished his object; a patient who resists only proves that he has not taken enough. The charge of Judge Hare is remarkable for its clear enunciation of the principles which should guide the jury in arriving at conclusions as to the existence of malpractice in this or any other case. He said:

"We know nothing of the effects of the agents of this description, except from experience, and the records of that experience are to be found in scientific works, and the evidence of men who have made it the subject of their study. The jury are, however, to decide in the last resort; but even if they doubt the safety of the agent employed, there is still a consideration of the highest reason which they ought not to disregard. All science is the result of a voyage of exploration, and the science of medicine can hardly be said to have yet reached the shore. Men must be guided, therefore, by what is probably true, and are not responsible for their ignorance of the absolute truth which is not known. If a medical practitioner resorts to the acknowledged proper sources of information, if he sits at the feet of masters of high reputation, and does as they have taught him, he has done his duty, and should not be answerable for the evils which may result from errors in the instruction which he has received. Medical opinion varies from time to time. What is taught at one period may be discovered to be erroneous at another; but he who acts according to the best known authority, is a skilful practitioner, although that authority should lead him, in some respects, wrong. He will then have done all that he

can, all that is given to man to do, and may leave the result, without self-reproach, in the hands of a higher power. If, however, you should decide that chloroform was an improper agent, or that it was erroneously administered in this instance, you will then have to consider whether the paralysis was the result of its administration. * * * * If we were to traverse the whole circle of mankind, we might possibly find, even among healthy men, some one who could be paralyzed by its influence, or if not, still among the numerous diseases with which man is afflicted, there may occur peculiar conditions of the system in which chloroform may tend to paralysis. This topic is not irrelevant, because the medical testimony here is, that the severe blow on the head received by the plaintiff might have produced a latent disease only requiring some exciting cause to rouse it to activity. If the plaintiff was from previous circumstances, predisposed to paralysis, it might well happen that the extraction of his teeth without the chloroform, or the use of chloroform without the extraction, would bring on a paralytic attack. Even if this was the case, still it would not be just to make the defendant answerable for consequences which he could not foresee, which were not the ordinary or probable results of what he did. He was only bound to look to what was natural and probable, to what might reasonably be anticipated. There is nothing to show that he was made acquainted with the accident that had befallen the plaintiff, or had any reason to suppose that there was greater danger in his case than that of other men. Unless some such guard is thrown around the physician, his judgment may be clouded or his confidence shaken by the dread of responsibility at the critical moment, when it is all-important that he should retain the free and undisturbed enjoyment of his faculties, in order to use them for the benefit of the patient."

LVII.

MEDICAL MEN *vs.* MEDICAL MEN.

A CASE has recently been tried in an English court, which strikingly illustrates the moral obliquity of some members of our profession, when called to the witness stand during the trial of a medical brother. Instead of appearing and testifying as members of a common brotherhood, the honor and dignity of which they are bound to protect, they improve the occasion to show to the world how futile are medical facts and observations; and instead of defending a professional brother from the malicious aspersions of character to which he is subjected in the performance of his duties, they join in the prosecution, and state their opinions in such manner as to prejudice a jury against the unfortunate defendant. The case alluded to is especially aggravating from the nature of the prosecution and the character of the medical evidence adduced. The following are the facts as given by a London contemporary:

"Dr. W—— gives, kindly and unfortunately, his gratuitous services, at his own house, to a hysterical female, the servant of one of his patients. He examines her with the speculum, finds superficial ulceration of the os uteri,

and applies lunar caustic six or eight times. The woman is long under his observation. She at last goes to Malvern, where she comes under Dr. G——'s care, and complains of a swelling in her stomach, the nature of which was not appreciated by the extensive experience in hydropathy and homœpathy of the presiding doctor. Eventually, and to her great astonishment (?), the female is delivered of the tumor in the shape of a child. She was, as her tale runs, made insensible during two hours by a potion administered to her by Dr. W——, and in that condition the deed was effected. She named the time and day on which the thing was done. This was her statement, which the jury by their verdict, and the judge in his charge, pronounced to be an infamous lie. The woman was of the class of clever, cunning, hysterical impostors; and by her plausibility had won the complete confidence of her mistress, who, out of kindness to her servant, was determined to have justice done upon Dr. W——. We need hardly add that there was not a shadow of suspicion attaching to Dr. W—— in the matter. He has been most cruelly subjected to an accusation to which every member of the profession is every hour liable. And therefore it is that he has especially the right to ask at the hands of his medical brethren their warmest sympathy and, if need be, pecuniary support."

The charge here made was of the gravest nature, affecting at once the honor of the profession and the moral character of a physician of hitherto good reputation. It would not seem possible that a medical man, having any regard for justice or for his profession, could be found who would consent to support such a prosecution by his testimony as a scientific expert. And yet three medical men were pro-

duced on the part of the prosecution, and all well known in this country as high authorities. They were Dr. Robert Lee, Dr. Ramsbotham, and Dr. Taylor. It is impossible to read the evidence of these witnesses without a feeling of deep mortification. We can not divest ourselves of the impression that there is exhibited a singular want of candor and honesty, and a disposition to view the subject in a light unfavorable to the defendant. Dr. Lee seems, indeed, to have taken the position of a public prosecutor. He declared that no ulceration of the os uteri had ever existed, and that the speculum had been employed for the purpose of seduction. He took occasion to denounce the use of the speculum, and it is stated, "after leaving the witness-box he conspicuously continued to display his disapprobation of the instrument by publicly exhibiting specula of various shapes and sizes in the body of the Court, before the judge and jury, and passing them round for the special inspection of the apparently much amused rows of barristers." A London journal thus justly comments on his testimony:

"There is not an honorable mind in the entire kingdom that did not experience a sense of shame when reading the examination of Dr. Robert Lee. Gross in its levity and reckless in its assertion, as devoid of good feeling as it was deficient in scientific truth, it formed an exhibition than which anything more degrading to science and disgraceful to his profession can not be imagined. It was gross in its levity, for Dr. Robert Lee forgot that the fame, fortune,

and future of a man of equal reputation with himself were involved in his testimony, and selected such an opportunity for idle badinage and personal puff; reckless in its assertion, because at variance with the experience and writings of men of the highest reputation. It was devoid of good feeling, inasmuch as the accusation was one that every right-minded man must have supported with pain rather than battled for with zeal; deficient in scientific truth, if Dr. Robert Lee's own publications ten years ago are to be trusted, which he however declares (and in this we agree) are as destitute of authority as others now consider his present testimony to be. It was degrading to science and disgraceful to his profession, as involving the declaration that those who have spent their lives in medical practice and study, profit so little by their labors that they needlessly violate the sanctity of the female person in the gross abuse of an instrument admittedly necessary for the treatment of disease."

Dr. Ramsbotham supported Dr. Lee's theory, but in a much more subdued strain. Still, he spoke like one committed to a cause which he felt bound to sustain. The same is true of the testimony of Dr. Taylor. In spite of these eminent men on the part of the prosecution, the verdict of the jury acquitted the defendant. Thus ended a most malicious attempt to destroy the reputation of a medical man by means of scientific experts, who readily, we fear voluntarily, allowed themselves to become *participes criminis*. The origin of nearly every trial for alleged medical malpractice may be traced to the reckless criticisms which rival practitioners pass upon the works of one another. Unguarded

expressions in the presence of patients of doubt as to the propriety of methods of treatment, or open censure of the results attained, pass for positive opinions with the ignorant, and soon produce their legitimate effects in the prosecution of the attending physician. At the trial which follows, an accusing medical witness will always be found arrayed on the part of the prosecution, who is, in fact, as much a part of the prosecution as the attorney. His evidence is entirely *ex parte*, and he exhibits in the statement of his opinions all the adroitness of the legal counsel in making them bear against the case of the defendant. That this is the secret history of most prosecutions for malpractice every one must acknowledge who has witnessed many of these trials. The scene which is enacted in court is always most discreditable to those members of the profession who instigate the proceedings or who appear on the part of the prosecution. Their position is generally false both in fact and ethics, and sooner or later they reap the just rewards of their unprofessional conduct. It is not always the common practitioner who takes this stand against his neighbor. We have had notable instances of men eminent in special departments of practice, who have allowed the weight of their evidence to appear against a medical brother when their opinions were unsupported by facts. We have seen the fair fame of young physicians suddenly blasted, and a good

name tarnished by the alliance of some opinionated "Professor" with the prosecution. Nay, more, there are not a few instances in which accomplished physicians have retired from the profession in disgust at such malicious treatment by their seniors. But the injury thus inflicted is not limited to the defendant; the profession at large suffers severely in general estimation. When those who are regarded as the exponents of medical morals array themselves in courts of justice against their brethren, and with denunciatory language and violent gesticulation not only denounce established methods of treatment, but attack private character, the public confidence in our art and in our integrity is sadly diminished. We agree with the *British Medical Journal:*

"It is high time that some serious steps were taken by the profession to put down this most unseemly persecution of medical men by medical men. How often have we not of late had occasion to refer to such scenes as these, where medical men too eagerly appear in court to assist in the blasting a brother practitioner's fair fame! The very fact of men in the position of Dr. Lee and Ramsbotham appearing in the case, gives an immense impulse to the accusation. Nay, we may even venture to believe that, but for their countenance, such an action as this could never have been brought at all. Is it not, indeed, reasonable to believe that their influence could have even arrested the action? Surely no men should know better than they how scrupulously cautious a medical man should be in accepting the one-sided statements of a clever hysterical female; and especially so when, as was evident, the blasting of Dr. W——s' fame would be the saving of her own reputation!"

LVIII.

THE ART OF TEACHING MEDICINE.*

THE art of teaching medicine, like many other arts, reached its highest development during the earliest period. Necessity compelled the first instructors to combine theory with practice, science with art, didactic with clinical instruction. Hospitals and schools were united, the one being the complement of the other. The carefully compiled records of observation and experience formed the text-books of the student; and the immediate application of the principles and precepts learned at the bed-side of the sick, and under the direction of the master, completed the curriculum of daily study. This is the rational system of teaching—at once the most thorough and efficient—and should never have been departed from. We can not better improve the present hour than by tracing its origin, progress, and complete development. We may thus learn what are the defects, as well as advantages of the past and present methods of instruction,

* Remarks made at the opening of the course at Bellevue Hospital.

and apply the practical lessons which this review will inculcate.

Among people of high antiquity, the first effort to systematize the treatment of the sick consisted in exposing them in public places, in order that any passers-by, who had been similarly afflicted and cured, might give their advice for the benefit of the sufferers. At a later period, those who had been cured of diseases were required to go and deposit in the temples a votive tablet, which was a detailed account of the symptoms of their diseases, and the remedial agents which had been beneficial to them. It very soon became popular to visit by preference some temples of great and wide-spread fame, and these, therefore, were in time made the principal depositories of the registers of the sick. These records were kept with the same care as the archives of the nation. At first they were open for inspection and consultation by the public. Every one had the right and privilege of consulting them personally, and of choosing for his sickness, or that of his friend, the remedies which long experience had here recorded. Every man thus became his own doctor—a system which has in our day been revived, which places in the hands of the patient a record of symptoms, each offset by its appropriate remedy. But it was found to be inconvenient as well as dangerous to allow the common people to prescribe for their own diseases. Symptoms were misinterpreted, and remedies

were misapplied. The records were therefore withdrawn from public scrutiny, and placed in the exclusive charge of the priests who ministered in the several temples. The sick now related their symptoms to the official organ, who in his turn consulted the tablets or records, and prescribed the proper remedies, and received in behalf of the presiding deity the votive offering. The priests having thus the exclusive control of all the recorded facts and observations in medicine, and having monopolized the practice of the art, endeavored to reduce their knowledge to a system. The records were carefully revised and collated, and finally formed into a medical code, which they called the Sacred Book. This book was the undeviating guide to medical practice for centuries. Whoever departed from its precepts and injunctions did so at the peril of his life. We here trace the beginning of the legal responsibilities of medical men. Under this medical code occurred the first prosecutions for malpractice, and the physician found guilty of ignoring its aphorism was condemned to death.

We can not be surprised that the ancients attached so much importance to this volume. It embodied the whole science of medicine; it contained the aggregate experience of centuries. It was the most precious legacy which the past had bequeathed to the present. It was a faithful transcript of the ever-varying phenomena of disease, and the only guide to the use of remedies

To doubt its sacred aphorisms was to cavil at the laws of nature. It was a medical book without a theory. It contained only facts. And so it was received as the great statute-book of ancient medicine. The temples where the sick congregated were the hospitals of that period, and the votive tablets were the clinical records of the diseases. These temples became in time the great centres of medical knowledge and education. Thither students flocked from distant States and foreign countries to drink at the original fountains of experience. Men of genius and cultivation here attained to a profound knowledge of the recorded wisdom of the past, and became skilled in the practical application of that knowledge to the relief or mitigation of human infirmities. As their fame spread they attracted pupils, and attaching themselves to the temples, in turn became practical teachers of the art of healing. Thus arose schools of medicine in near and remote countries, many of which attained to great eminence, and had a lasting influence upon the future history of medicine. Great as was the veneration for the Sacred Book, and binding as were its precepts upon teachers and pupils, it could not entirely restrain within the bounds of rational inquiry the free play of the human mind. A class of teachers in time appeared, who discarded observation and experience, and appealed to reason and the suggestions of the imagination. The plain, practical, and unyielding axioms of the medical code,

confirmed by long practice and supported by the authority of the greatest masters of the art, were but so many clogs and hindrances to speculation. The immutable facts of science were employed as the scaffolding to the theories which they ingeniously constructed, and when they had served that purpose were rejected as worthless material. They no longer sought to add their quota to the records of their predecessors. They forsook the temples, and betook themselves to retired and undisturbed retreats. They became pure theorists.

In the little Republic of Greece, at a period somewhat later, ancient civilization shone forth with unwonted splendor. Philosophy and the fine arts were cultivated with passionate fondness, and in their turn they quickened the intellect to an extraordinary degree. The imagination supplanted reason, and speculation was preferred to deduction. Theories were built up on foundations which crumbled to pieces even while the architect was moulding the superstructure to his taste. Not only did the philosophers of that age devise systems on subjects beyond the range of observation, but they frequently rejected the teachings of experience, and all positive knowledge, and abandoned themselves to idle dreaming. Forsaking the paths of logical induction and deduction, they began to reconstruct the infant sciences on the shallow basis of hypothesis. Medicine, still wrapped in mystery, proved

to be a most fruitful field for cultivation, by these transcendental philosophers. Nor were they long in entering it, nor scrupulous in the use of means to revolutionize both its theory and its practice. Two schools of medicine now arose in Greece, with sharply defined peculiarities. Each had its special method of studying and teaching, and both have impressed their customs upon all succeeding generations. The first adopted the Sacred Book as the safe and unerring guide to truth. It still located itself within the sacred precincts of the temples where the sick congregated, thus basing its system of teaching upon observation and experience. It accepted no asserted fact as true, and deemed it unworthy even of consideration, unless it had been subjected to rigid experimentation. Every disease was investigated in the light of the sacred record—the science of that time—and every remedy was applied with the exactest detail. The student was forbidden seclusion. He was constantly brought face to face with disease in all its forms, and compelled to make a practical application of his knowledge. Reason was allowed its full scope in the construction of theories and systems, but its premises must be fixed and indisputable facts. Every pupil was required to follow rigid, logical induction and deduction, when he departed from the axioms of the past. This was pre-eminently a practical school; it was also a clinical school; it was the basis of scientific orthodox medicine;

and from it sprang the rational system of studying and teaching. Opposed to this demonstrative method were the theorists. They withdrew from the temples, to them defiled by the presence of the sick, and betook themselves to quiet groves and secluded retreats, where nothing would divert their thoughts, or obstruct the full play of the imagination. Here their classes assembled and listened to fine-spun theories on the essences, on the prognostic value of particular numbers, on the indications of dreams, on the influence of the moon upon the sick, or on the therapeutic uses of plants according to their color. Doubtless they felt the pressure of the popularity of the clinical school, and on certain days compelled a few sick vagrants to visit their classes, when the professor explained to his distant and wondering pupils how precisely the disease had conformed to his theory. With his own finger he touched the pulse and informed the pupils how it felt; with his own hands he applied each dressing and manipulated the affected part. The pupil was left to doubt and conjecture, or in after times to repeat his lesson as an experiment upon his patients. All was theory—nothing was practical.

The Practical or Clinical School of the greatest renown was located on the Island of Cos, in the temple of Esculapius. Its head was the Father of Rational Medicine—Divine Hippocrates. At this brilliant period in the history of Greece—the age of Pericles, of Socrates, of Plato—

Hippocrates was one of the most eminent philosophers. He was one of the best observers and one of the most profound thinkers of that or indeed of any other age. His works are the very perfection of philosophical writing. They are remarkable for accuracy of observation, precision of detail, and severity of logic. He seems to have rigidly scrutinized every recorded observation and practically applied every precept of his predecessors. Trained to the closest habits of study and investigation in the clinical school, he was prepared to advance beyond the limits of existing knowledge, and add largely to the sum of positive facts and practical principles in our art. He reconstructed the groundwork of rational medicine, extended and perfected its foundations, and added not a little to the beautiful superstructure which it is our privilege to witness so near its completion. Hippocrates is justly regarded as the Father of Medicine. He was no less truly the Father of clinical teaching. The greatness and influence of the School of Cos grew out of its eminently practical character. It arose to great and deserved eminence, not more through the wide-spread fame of its founder, than the rigid system of teaching which it practiced. Students annually gathered at the temple of Esculapius from every portion of Greece, and from countries beyond the seas. An elegant writer has pictured to us the opening of a course of lectures at this famous school. He remarks: "Near

a column of the temple, and holding a roll of papyrus in his left hand, stands Hippocrates. Gathered about him in picturesque little groups there is a company of Greek youths. Their tasteful and elegant costumes, their earnest and intelligent faces, and their general air and bearing, all show plainly enough the superior refinement and culture of the class to which they belong. They are medical students who have assembled here from the several States of Greece, to acquire the clinical skill and experience of the great surgeon and physician of Cos, and to listen to the eloquent lessons of the illustrious professor."

If we examine the works of Hippocrates it will not be difficult to determine what were the heads of this introductory discourse. We hear him saying in language full of significance—"Medicine is of all the arts the most noble, but owing to the ignorance of those who practice it, it is at present far behind all the other arts. There is, unfortunately," he adds, "no punishment visited upon the ignorant physician, except disgrace, and that does not hurt those who are familiar with it. Such persons are like the figures which are introduced in tragedies, for as they have the shape, and dress, and personal appearance of actors, but are not actors, so also physicians are many in title but very few in reality." Turning to those who were commencing the study, he says: "Whoever is to acquire a

competent knowledge of medicine, ought to be possessed of the following advantages: a natural disposition; instruction; a favorable position for the study; early tuition; love of labor; leisure. First of all, a natural talent is required; for, when nature opposes, everything else is vain; but when nature leads the way instruction is easy, and the student readily appropriates the principles to himself. He must also bring to the task a love of labor and perseverance, so that the instruction taking root, may bring forth proper and abundant fruits. Instruction in Medicine is like the culture of the productions of the earth. For our natural disposition is, as it were, the soil; the tenets are, as it were, the seed; instruction in youth is like the planting of the seed in the ground at the proper season; the place where the instruction is communicated is like the food imparted to vegetables by the atmosphere; diligent study is like the cultivation of the fields. Having brought all these requisites to the study of medicine, and having acquired a true knowledge of it, you will be esteemed physicians not only in name, but in reality. But inexperience is a bad treasure, and a bad fund to those who possess it, whether in opinion or in reality; it is the source of both timidity and audacity." The degree of knowledge to which they were to attain he thus defines:—"It is the business of the physician to know, in the first place, things similar and

things dissimilar; those connected with things most important, most easily known, and in anywise known; which are to be seen, touched, and heard; which are to be perceived in the sight, and the touch, and the hearing, and the nose, and the tongue, and the understanding; which are to be known by all the means we know other things." Enlarging upon these and kindred topics—all exhibiting an intensely practical mind—he must have alluded in terms of severe sarcasm to the schools of the theorists, which rejected the humble teachings of nature, and occupied themselves with vain imaginings. In conclusion, he thus addresses those who were attending their last course of lectures, and were about to enter upon the responsible duties of their profession: "When you have selected the city of your future residence, consider well its situation—how it lies as to winds and the rising of the sun—whether north and south or east and west; consider also attentively the waters which the inhabitants use, whether they be marshy and soft, or hard, and running from elevated and rocky situations, and then if saltish and unfit for cooking. And the ground, whether it be naked and deficient in water, or wooded and well watered, and whether it lies in a hollow, confined situation, or is elevated and cold; and the mode in which the inhabitants live, and what are their pursuits, whether they are fond of drinking and eating to excess, and given to indo-

lence, or are fond of exercise and labor, and not given to excess in eating and drinking. From these things you must proceed to investigate everything else. For if you know all these things well, you cannot miss knowing either the diseases peculiar to the place, or the particular nature of common diseases. Thus you will be able to foretell what epidemic will attack the city, either in summer or winter, and what each individual will be in danger of experiencing from the change of regimen. You will also not be in doubt as to the treatment of the prevailing diseases." His address concludes with that solemn and sublime admonition so frequently quoted, but so little heeded: "Life is short, and the Art long; the occasion fleeting."

With such views of the nature of the studies and duties of physicians, we cannot doubt what was the curriculum of study in the school of Cos during this period. First, the great Master opened the Sacred Book, the volume of science, and expounded one by one the aphorisms, explaining on what exact observation each was based, and what was its practical significance. Then grouping together such as had some special or general relation, he constructed systems having for their bases logical deductions from established premises. From the lecture they proceeded to the apartments devoted to the sick, where each student in turn was instructed by the master in the practical application of the truths

or principles just taught. Each student with his own finger learned the exact nature of the pulse in every form of disease; with his own hands he applied the most complicated as well as the most simple surgical dressings; with his own eyes he studied the physiognomy of disease. Thus, under the medical supervision of the Master, he so studied and practiced his profession as to become an expert in every branch —both of its science and of its art. It is not surprising that the School of Cos, the great clinical school of the past, became so famous, and attracted pupils from such a distance and in such immense numbers. Its graduates went forth prepared for any emergency in practice. They began their career at an advantage which their rivals of the theoretical schools did not attain in a score of years of active duty. From the first they were skilful, hence confident, bold, and aggressive, while their competitors were timid, hesitating, and faltering. Throughout all Greece they became the chief physicians, and their services were often in demand at foreign courts. The true glory of the ancient clinical school was in the practical union of the science and art of medicine in teaching. The hospital was the basis of the school; science was the guide and instructor of art; precept and practice went hand in hand. The student personally learned "everything which is perceived in the sight, and the touch, and the hearing, and the nose, and

the tongue, and the understanding." To remove the school from the hospital, was to divorce two branches of education mutually dependent upon each other for life, and even vitality. Educated in the science of his profession only, the student had no power to apply his knowledge. Educated only in the art, he had no knowledge to apply. The true physician must therefore be educated in the hospital-school. The clinical schools long maintained their supremacy. The intrinsic merits of their methods of teaching, the high and influential positions which their graduates attained, and the overshadowing influence of the great master of the school, gave them power and permanence. But in time they were corrupted, their customs perverted, and finally they disappeared in that night of universal superstition, the Dark Ages. The clinical method of teaching was henceforth numbered among the lost arts. Here and there in the succeeding centuries we find a great mind seizing the grand idea of the Father of Medicine, and developing the rational system of teaching. Boerhaave, the modern Hippocrates, deserves especial mention, as he followed the original method of clinical instruction, and with great success; students flocked to him from every part of Europe, and he became the most eminent instructor of his age.

In our own time there is a tendency to revive the Clinical or Practical Schools of the ancients.

In Europe, and in England especially, the union of medical schools and hospitals is recognized as essential to the true success of the former. The advantages that flow from this union are seen in the high standard of medical education which is maintained abroad, the rapid development of the medical sciences, and the practical character of the general practitioner. In our own country the value of clinical instruction has long been recognized, and feeble attempts have been made to supply the deficiency in the medical colleges. But instead of removing the colleges to the hospitals, the teachers invite the sick to visit their class-rooms and repeat the story of their sufferings. The student and patient are not brought in contact, and the instruction imparted, however valuable in itself, is practically lost. The student must learn, if he learn at all, by proxy. How much such knowledge will avail him when in after years he endeavors at the bedside to apply it, every one can truly estimate. Such schools are the theoretical schools of the ancients. They teach theories and systems, but they do not teach practical medicine. They educate the brain, but leave the hand palsied, the eye blind, and the ear deaf. Their graduates go forth to practical life like full-fledged eaglets deprived of wings. They lack the one thing needful to early and complete success—the power or ability to use their knowledge. Any system of medical education that

does not supply this defect is unworthy the support of the profession. And such will yet be its most emphatic verdict. The plan of uniting didactic and clinical instruction by the union of schools and hospitals, has been much agitated within the last few years, and has received a cordial support from the body of practitioners. Many schoolmen have opposed it with argument and ridicule, but every physician finds in his own experience overwhelming counter arguments. How many times in the simplest operations or manipulations has he been embarrassed, and perhaps foiled, for the want of an educated touch? How frequently has he striven in vain to discriminate physical signs for the want of an educated ear? How many who have never had clinical advantages, have, after years of toil in practice, been easily supplanted by the student fresh from the hospital? Such arguments can not be answered except by shallow sophistry. The tide of professional sentiment has been setting more and more strongly in favor of a radical change in our system of education. The profession has demanded that it should be more thorough and more practical. There can be but one change which can meet the requirements of practitioners—and that is, a return to the primitive system—the union of hospitals and schools. It is scarcely half a dozen years since the first effort was made in this country to unite clinical and didactic instruction, and to-day we witness its

complete triumph. We have laid the foundations of an hospital school within the sacred precincts of these temples where the sick congregate in such vast numbers. Here the science and art of medicine are indissolubly united, the one being the helpmate of the other. Here precept and practice have embraced each other, no more to be separated. To these temples the sick turn their steps by thousands, each bearing the votive tablet to be placed conspicuously for your study. Here you may learn every phase and aspect of disease from living records, and accustom every sense to the quick perception of its ever-varying phenomena. Here you may open a book far more sacred than that which the ancients so much venerated, and study the rough sketches or delicate outlines of disease which pathology unfolds. From these seats, where you learn the principles of medicine, you go directly to the wards and personally test their value, and study the practical application of each aphorism. Here you may become learned in every branch of the medical sciences; there you may become skilled in every department of the art of healing. We have in this college practically answered two objections to a clinical school. The first is that students are liable to be diverted from the study of the science of medicine by attendance upon clinical instructions. The opposite has proved to be true. The student most devoted to clinical

study, has also been the most thoroughly versed in the principles of his art. This fact has been observed of students who commenced their studies with clinical and didactic instruction combined. And it is but natural that this should be the universal rule. Why should the student of auscultation master the entire science by study in a closet before he begins to accustom his ear to the normal and abnormal sounds of the lungs and heart? The ear, the eye, the hand, are to be educated by long and skilful training as well as the mind, and no time should be lost in the short course of study allotted to the student. If this training for practical duties is postponed to a later and more convenient day, experience proves that it will never be accomplished. It has also been alleged that clinical teaching is injurious to the patient. Whoever has lingered behind the class in the wards to examine special cases more at leisure, has not failed to find patients complaining that the doctors had passed them by without notice. They believe that the whole class are consulting upon their cases. They are not only anxious to have a large number interested in their diseases, but those examined are often proud and boastful of the attention which they have received. From long personal experience in hospital practice, I am satisfied that clinical teaching is, with rare exceptions, useful to the patient. It revives his hope, and satisfies his longing for sympathy and atten-

tion. But while it is true that the sick not only cheerfully submit to physical examination but are often much gratified, the student should not be unmindful of the fact that he must handle them gently. The first lesson that you should learn in clinical instruction is *never to cause unnecessary pain.* By gentleness you ensure the patient's confidence, and render your examination useful to yourself and pleasing to the sick.

You are now surrounded by every means necessary to your complete medical education. The result must rest with each individual student. No limit is set to your acquirements. You may during your pupilage, become profoundly versed in any or all branches of your profession. No greater facilities than are now at your command can you require for the successful study of anatomy, physiology, chemistry, materia medica, surgery, practical medicine, and obstetrics. The opportunity which this hospital affords you for becoming personally familiar with every department of practice, are unlimited. No student should go out from this class unprepared. He has but to put forth his hand to become skilled in minor surgery, to use his ear to become expert in auscultation, to exercise his reason to be learned in diagnosis, prognosis, and therapeutics. Never was the medical student stimulated by so many incitements to perfect himself in all his studies. Our navy, rapidly expanding, is in such need of educated surgeons that promotion

to the highest rank occurs in the second year. The army has absorbed thousands, and still calls for more. But the army and navy will have only the best. I wish it were in my power on this occasion, the commencement of a course of lectures, to point out to you the royal road to knowledge, or to place in your hands a book in which the study of medicine is made easy. But this I cannot do. That road remains undiscovered, that book remains unwritten. Great as has been the advance of the sciences, wonderful as are the means by which they have enabled man to cheapen labor and mitigate the rigors of the primal curse, they have as yet failed to discover a method by which a student may sleep in the class-room and inhale knowledge, or saunter idly in the wards and become an expert even in the simplest art. Whatever dream you may have indulged of acquiring a profession without labor should to-day be dissipated. Effort and unceasing toil are the true aids to success. Let yours be the motto of the ancient Hippocratic school:

LIFE IS SHORT,

AND THE ART LONG;

THE OCCASION FLEETING.