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DENTAL EDUCATION.

An Address

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Mr. President and Gentlemen:—I was quite surprised to find in a printed notice, received a few days since, that I was expected to be present at the meeting of the MERRIMACK VALLEY DENTAL ASSOCIATION to be held at CONCORD, on the 2d of November, and although nothing could afford me greater pleasure than to be with you on that occasion, I regret to say that professional and collegiate duties of the most engrossing nature preclude the possibility of my leaving home at this time. Under these circumstances, I have concluded to forward to you, as a substitute for my presence, a communication on DENTAL EDUCATION. The subject is suggested to my mind by the fact that the period has again arrived for the opening of the dental colleges, and if, as has been reiterated on different occasions in our magazines, dental education is tending downward rather than upward, it becomes a matter of grave moment to the student who has at heart his own best interests and those of the profession of which he desires to become an honored member, that he should be exceedingly careful in selecting the source whence he shall derive his professional education. In other words, that he should institute a rigid personal examination of the facilities afforded by such institution or institutions as he may have the opportunity of visiting, and thus determine for himself, unbiased by prejudice and uninfluenced by the opinions of others, where he will be the most likely to obtain the greatest amount of knowledge and be the best prepared to serve his fellow-man.

The course indicated, which would be appropriate at any time, is peculiarly advisable at a period when such an assertion as that referred to above is made, and it becomes a matter of some moment to determine whether it has a foundation in fact. Not only is this a matter of vital importance to those just entering upon their studies, but to the profession generally it is also of immense moment, for anything which tends to lower the standard of education must exert a prejudicial influence upon the character and position of the profession in the estimation of the world.

As one who has long felt a deep interest in the subject, and has made it an object of careful study for years, and as a student, a practitioner, and a teacher has had a somewhat extended and varied experience, I feel that it requires no labored argument to prove the reverse of the position, *viz.*, that dental education is tending *upward* rather than *downward*, and that, living as we are in an eminently progressive age, the march of dental science is by no means falling behind, but, on the contrary, maintains a pace equal to if not in advance of other departments of science. And in the active operations of the *past* as in the *present*, whether in the transactions of associations or as contributors to the literature of the profession, the teachers in our collegiate institutions have performed no insignificant part in aiding this progress.

Owing to the small number of students heretofore in attendance at the colleges, the influence of the faculties in this direction on dental education has been exceedingly limited, but the efforts of individual members in the magazines and in the associations have been powerful incitives to young and progressive minds to become more thoroughly acquainted with the science and art of the profession. And in this way a large class of minds have been reached who have never entered the portals of any institution.

That dental education is not yet what it should be, or what its ardent devotees hope it will be, is undoubtedly true. It is still in an infantile and immature condition, but it is gradually and steadily developing its powers and resources. Like individuals and nations, it must have its origin, growth, and maintenance, its trials and difficulties. It does not, *Minerva* like, spring into full vigor and perfection from the brain of the heathen god. Its beginning must be in the microscopic germ, and the feeble bantling needs much careful nursing, let its after-growth be what it may. Its origin is gradual, its growth tardy, often almost imperceptible, and yet, nevertheless, advancing. What it is, it has become by slow degrees, by hard labor, by the indomitable zeal, devotion, and constant self-sacrifice of men who, having its best interests at heart, willingly dismiss for the time mere mercenary considerations.

When one reflects upon the history of our country from the Colonial period down to the present time, and recalls the constant struggles for liberty and the maintenance of political existence, it is rather a matter of felicitation, that in spite of all those chilling, and apparently blighting influences, knowledge in all directions should be so generally diffused among our people, and one cannot but entertain a feeling of respect and gratitude for those wise and far-seeing men, the pilgrim fathers of New England, who, at the earliest period, and long before the savage had been tamed, the forest felled, or the fields cultivated, established seats of learning, and these begetting others, until at last our favored land rivals

the old country, not only in the number but in the character and reputation of some of its institutions.

Thus is it with the dental profession; while still in its infancy and its members only numbering a few thousands, colleges have been established, not merely to meet the wants of the *present*, but also to supply the demands of the *future*. What influence they shall exercise remains to be seen, but as the *present* may be justly said to foreshadow and mould the *future*, it is reasonable to infer that they will be able to sustain a fair comparison with time-honored institutions devoted to other departments of science.

As this great country advances, as it is destined to do, from a population of *thirty, to five hundred millions of souls*, year after year these institutions, if properly managed, will be sought after as indispensable means of education by the large number of dental students who now, as it was formerly with the medical students, receive a limited and necessarily defective instruction from preceptors in private offices.

In England, France, and Germany, the most learned and scientific nations of Europe, it has taken ages to develop and mature the general plan of instruction, and the facilities afforded by their educational institutions, and again, existing as these do under the shadow of monarchical forms of government, any innovation upon old established routine, and particularly any attempts to establish a new order of things, is not only looked upon with doubt and jealousy, but, as a general thing, most violently opposed; as a consequence of this, little or no effort has been made in the Old World, except in England, toward the founding of institutions devoted to teaching the principles and practice of dentistry, and dental students from Europe, of necessity are compelled to seek our colleges for that theoretical and practical knowledge which has given to American dentistry its world-wide and justly merited reputation.

I have said that dental education is tending upward rather than downward; the evidence in support of that conclusion is as follows: When the dental institutions first came into existence, the members of the faculties very naturally not only lacked *experience* as teachers, but many of them were in other respects poorly fitted for that responsible position. Well do I remember the feeling of distrust with which, ten years ago—after having declined in preceding years the position—I entered upon the discharge of such duties, deeply conscious of my own deficiencies, and fully recognizing those of my colleagues.

Years have rolled by since that, and with these have come—it is trusted to all (along with new schools)—experience, enlarged attainments, and increased capabilities for imparting knowledge. Again, when I recall the entire absence at that time of anything like materials for illustrating the lectures in the various departments (and which are as indispensable

to the *teacher* as they are to the *student*), and contrast the ample and valuable collections now presented, one cannot but be impressed with the fact, that the opportunities and facilities for gaining knowledge are vastly improved in that direction. In addition to this, I feel satisfied that the standard of requirements for graduation on the part of all our institutions is of a decidedly higher order than used to prevail; and should be exceedingly sorry to think otherwise, for it certainly was low enough at the time when a sense of duty prompted me, as an individual member of a faculty, to protest to the Board of Trustees against the laxity which existed in that particular; this, however, was in another institution than that with which I now have the honor to be connected. Like some other experiences of the past, which I have been disposed to permit to sink into oblivion, rather than bring them under the notice of my fellow-practitioners, I should have made no reference to this, but for the assertion, that of late students have been guaranteed their diplomas before matriculating, and then graduated upon two months' instruction. That such things may have been done, is possible. I sincerely believe, however, that such charges cannot justly be brought against any dental institution. It is true that practitioners who have been diligent students for years, and thus by close application to their books, have made themselves as thoroughly acquainted with the various departments of science as they were *skillful* as operators, have after an attendance upon lectures for a few months come forward as candidates for graduation and passed the ordeal with the highest honors, and in a manner which would reflect credit upon any one, let his abilities and attainments be ever so exalted; but who shall assert that by such a course as this, dental education is tending *downward* rather than *upward*? So that a man has knowledge, it matters not where he gets it, whether inside of schools or out of them. That knowledge may be acquired more readily and easily in good schools, with able and competent teachers as *aids* and *guides* to the *student*, is undeniable, but that it *can be secured* outside of them by minds possessing an indomitable will and concentration of purpose with a greater expenditure of time, patience, and money, is equally true. The influence upon education is far more salutary when such men come forward and submit to an examination on the part of a capable and reliable faculty, who shall decide upon their right to possess a diploma, than when the so-called *honorary diplomas* are distributed *ad libitum* upon gentlemen who, however worthy as men and practitioners, have neither attended lectures, submitted to an examination, nor distinguished themselves in any way as contributors to the science and art of the profession. There may have been a period when such practices were to a certain degree admissible, but that has passed away, and it may be safely said that the liberal distribution of diplomas in this way is cal-

culated to render them as valueless in the estimation of their possessors as they are in that of the profession and the community at large.

To say that the increase of schools, by inducing competition, tends to degrade education, indicates, if not an entire ignorance of the subject, at least narrow and contracted views of it. No country in the world has left upon the page of history a more valuable and enduring record of mental cultivation and development, and the advancement of science and art, than the Grecian Republic. Was this due to the action of a single school or the operation of numerous academies, lyceums, etc.? In our own free country, and particularly in the Northern section, is the general intelligence of the people attributable to the operation of a single institution or to the numerous universities, colleges, high-schools, and the public and private primary schools? Again, any one who is at all familiar with the literature of science is aware of the fact that to Germany, more than to any other country, we are indebted for some of the most important discoveries made in every department of science during the past half century. To such an extent is this true, indeed, that with propriety this may be almost called the Teutonic age. In substantiation of this it is only necessary to mention the names of a few among the many active German minds to whom the world of science is under lasting obligations, viz., Schwann, Schleiden, Oken, Liebig, Virchow, Kölliker, etc.

The German discoverers and writers have first been called transcendental, visionary, idealistic, and then at last when their facts and arguments have proved irresistible, they have been adopted, and too often by unprincipled plagiarists, without acknowledging the source whence their matter was obtained.

Is this truly wonderful activity on the part of the German mind, and which has completely revolutionized organology in particular, attributable to the operation of a single university or to the beneficent influence of numerous universities in various parts of that great country, affording, as they do, the most ample facilities not only to students, but also giving employment and securing opportunities to a number of professors to devote themselves to favorite departments of science, and thereby extend each year the boundaries of science in all directions?

It demands no argument to prove, that the more institutions of learning a country possesses the more extended is the diffusion of knowledge and the more enlightened and useful are its people. That which is true of general education is equally true of professional education, and although self-interest may prompt men to oppose the establishment of new institutions of learning, it is a generally recognized fact that private interest, beyond a question of doubt, must ever be held subsidiary to the general good.

In the ordinary operations of the world, men of marked ability and

integrity do not complain of competition, but rather favor it than otherwise, satisfied that by such means the latent powers of all are more likely to be fully developed. They know that the unreal cannot always pass for the real; that shoddy, however complete the cheat may be, will not wear like good broadcloth; and that, although the paste brilliant may glitter in the rays of the sun, its meretricious lustre pales before that of the genuine diamond. The same thing is true of men and institutions; they may be *overrated* or *underrated*, but sooner or later, time, which settles all things, solves such matters, and permits the truth, the whole truth, and nothing but the truth, to stand forth in the clear light of noon-day.

No better evidence can be afforded that dental education is advancing than the elevated character of the discussions in the national and local dental associations. In place of the old topics which formerly were discussed over and again until they almost became threadbare, those difficult and intricate subjects which require an intimate and extended acquaintance with science are taken up and handled in a manner which indicates a perfect familiarity with them. Not only is this true of the *theoretical*, but the *practical* is also attended to, for at the meetings of all the associations now *clinics* are held, and thus opportunities are afforded for demonstrating the manipulative abilities of operators, as the discussions test their mental capacities and attainments. Some of those who engage in these various directions, and in a manner highly creditable to themselves and the profession, are gentlemen who have recently graduated from the dental colleges.

In the ages progress implies deficiency to be supplied, and error to be corrected. It may be doubted whether the perfection of science and art will ever be reached; indeed, I believe it is decreed by an all-wise Providence that endless struggle and approximation should be the law of our intellectual being, the condition on which we have the activity of busy life, and not the sluggish indolence of possession, which is mental death. Recognizing this, it is a source of satisfaction to notice a number of young and generous minds, engaged in the effort to urge forward with eager and emulous hands the ball of progress, and while this amicable struggle continues, little apprehension need be entertained relative to the cause of dental education.

In conclusion, as one who favors and desires the honorable success of all institutions, not only those now in existence, but in addition those which may be established hereafter, I have studiously avoided advocating the claims of any school, and have only aimed to respond with truth and justice to an unjust and depressing assertion, affecting alike the interests of the profession and the community at large, and with the facts and arguments which have been presented, I leave you and the profession to decide whether dental education is tending upward or downward.