

The claims of dentistry : an address delivered at the commencement exercises of the Dental Department in Harvard University, February 14, 1872 / by Oliver Wendell Holmes.

Contributors

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THE CLAIMS OF DENTISTRY.

AN ADDRESS

DELIVERED AT THE

COMMENCEMENT EXERCISES

OF THE

DENTAL DEPARTMENT

IN

HARVARD UNIVERSITY,

FEBRUARY 14, 1872.

BY

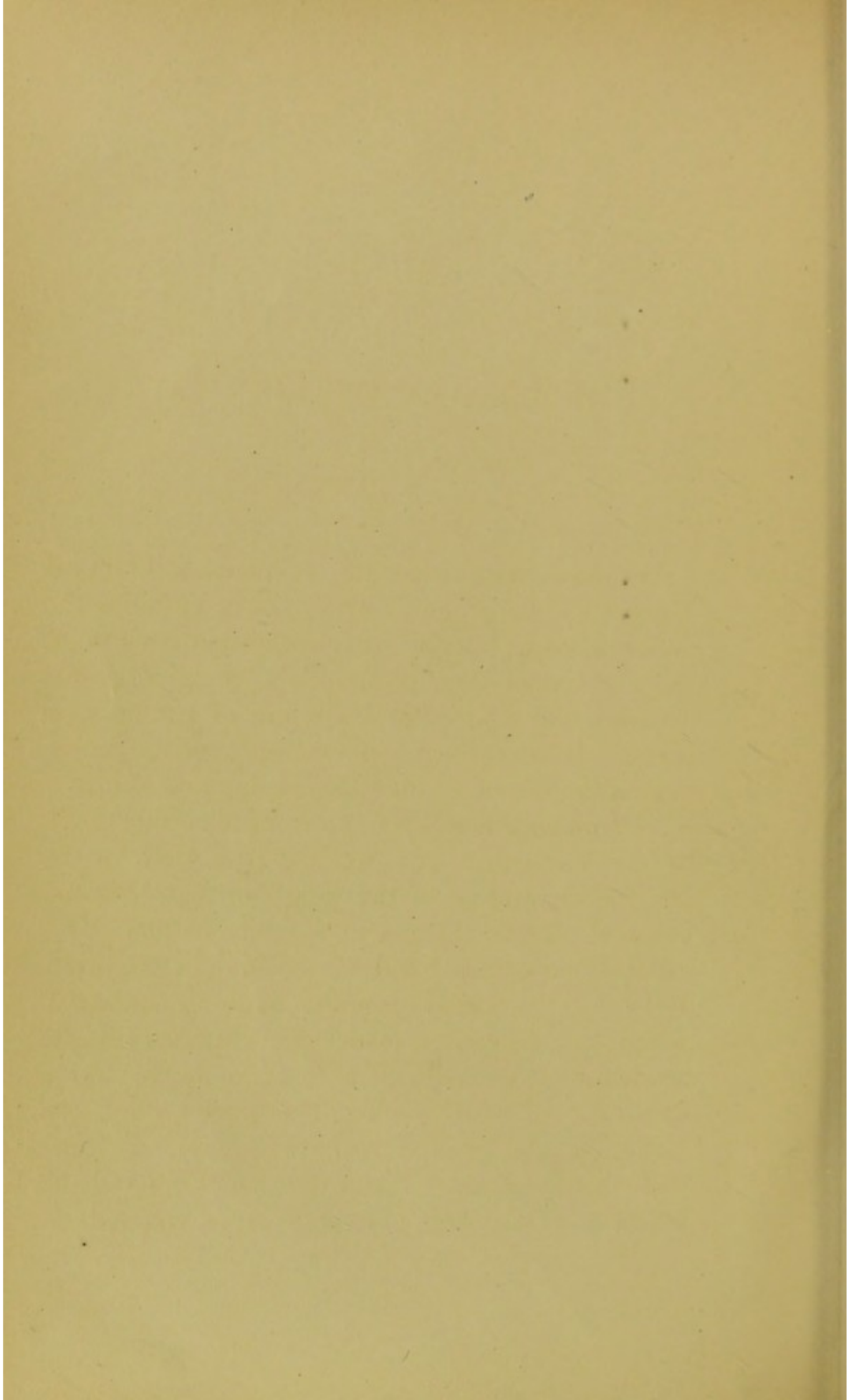
OLIVER WENDELL HOLMES, M.D.,

PARKMAN PROFESSOR OF ANATOMY.

BOSTON :

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1872.



THE CLAIMS OF DENTISTRY.

WE have met, under the auspices of Harvard University, to recognize by formal ceremonies the entrance of a class of students in dentistry upon the exercise of their profession. We give to this occasion the time-hallowed name of Commencement. Here ends the period of pupilage; here begins the life of applied knowledge and skill.

“Commencement” is not a word to conjure with, as it was a century ago, when it paralyzed for the day the commerce of the neighboring town, and emptied all the villages in a circle of fifty miles of their black-coated and white-wigged clergymen. It is not the grand pageant as I remember it, when the Governor made his entrance to the academic precincts with a troop of horse and a cavalcade of white-frocked truckmen; when the Common was covered with tents, as if an army had encamped upon it, and the trafficking and the revelries of Bartholomew Fair were enacted on

the provincial scale upon the green consecrated to the quiet pursuits of learning.

But this Commencement of the Dental School has a real significance, though it makes little show, and does not appeal to any vulgar interest. It publishes the fact that a new pursuit has been assigned its place among those chosen professions which a fully-organized educational institution may fitly take in hand, and provide for teaching. And you may be assured, that, before our old university would take such a step, its governing boards had satisfied themselves that the time was fully ripe for it. The dental profession had achieved its success, and had won its place in the estimate of the intelligent public, before its teachers were asked to share the labors and the dignities which belong to the faculties of this great institution.

The occasion must naturally bring together many who have no other special knowledge of dentistry than such as they have gained while sitting in one of those magic chairs which fit alike the giant and the dwarf, which would accommodate the visitors of Procrustes, and suit itself to all the transformations of Proteus. Were this an assemblage of dentists and dental students only, who would dare to open his mouth for speech before the members of a profession in whose presence kings are silent, at whose com-

mand eloquence is struck dumb, and even the irresistible and irrepressible voice of woman is hushed into a brief interval of repose? Even if this first fear were overcome, a speaker might well hesitate to address an audience of experts, who know all that he is like to tell them, and a great deal more. But this hour does not belong only to our friends of the dental profession; and they can bear to listen to much that is familiar to them for the sake of their visitors, whose knowledge is limited to what they have acquired after the manner of poets, of whom Shelley says, —

“They learn in suffering what they teach in song.”

A few generalities are all that can be attempted in a discourse like this; enough to give some little idea of what the dental profession has grown out of, and what it has grown to; a few hints to make us feel more keenly its importance; a picture or two of old superstitions and fancies and barbarisms to contrast with the enlightened knowledge of our own time; a brief mention of some of the leading modern improvements in the scientific and practical departments relating to the teeth; an explanation of the causes which have kept the dental profession from receiving the recognition it has a right to claim; and a vindication of its title to the regard of the community, and to a fair

representation of its teachings at the great seats of learning. I mention some of the points I shall touch upon rather than discuss, not under formal headings, and with strict adherence to the order in which I have mentioned them, but as they appear to present themselves most naturally.

The greatest difficulty in handling the subject is the extent of its literature, and the infinite detail of ingenuity which has gone to the bringing about of the perfection of its mechanical processes. The value of the teeth to human beings is so prodigious, that, as soon as attention was fairly turned to their proper management and the methods of repairing their losses, inventive talent precipitated itself, so to speak, upon the new department of human industry. There is no pearl in any royal crown for which a young queen would give one of her front incisors. And those who know what a perfect organ each one of the teeth is, as shown by the more recent revelations of minute anatomy, what pains Nature has taken with its complex organization, will not wonder at the estimate set upon it.

The teeth, in their relation to the beauty of the human countenance, have figured in poetry from the earliest times. "Thy teeth are like a flock of sheep that are even shorn, which came up from the washing; whereof every one bear twins, and none is barren among them," says the imaginative au-

thor of the "Song of Songs." Their whiteness has been compared to that of snow, of Parian marble, and of pearls, until verse is tired of the images. The ancient poets and satirists are full of allusions to the beauty and deformity depending on the conditions of the teeth. The ladies who made it their business to please, on Bentham's principle of procuring the greatest happiness of the greatest number, had recourse to every kind of artifice to disguise their defects, and commend their charms. Here is one of these tricks as given by Athenæus, in a passage not cited by Duval in his large collection of classical quotations relating to this subject. I give a part of it in English:—

"They whose teeth are elegant force themselves to smile even against their inclination, so that the beauty of their mouths may be seen by their visitors; but, if their smile is not so pleasant a sight, they hold a sprig of myrtle in their mouths, so that it will cover their teeth when they open their lips, on purpose or otherwise."

As for the unfortunates whose teeth were discolored, or had suffered some of the common changes that age brings about, the satirists scoffed at them in such coarse language, that their phrases are quite unbearable to modern ears. Even such a personal remark as that of the graceful Catullus would be considered inadmissible in our time:

“Your mouth is full of teeth half a yard long, and your gums are like an old wagon-box.” The first circumstance — the seeming inordinate length of the teeth — is a well-known effect of age, which produces a shrinking of the gums. The Frenchmen talk of *dents déchaussées*, unshod teeth; and I remember that Thackeray, in one of his stories, speaks of certain ladies, not very young ones, as “long in the tooth,” among other by no means flattering peculiarities.

We have grown more civil than the Romans; but we know the beauty of a fine set of teeth, and the deformity of its opposite, as well as they did. It is true that men can often conceal the imperfection of their dental arrangements by letting the eaves of a heavy mustache overshadow their mouths. But to women, to hide whose smile would be to take away half the sunshine of life, and to whom Nature has kindly refused the growth that would deprive us of it, there is no element of her wondrous beauty which can take the place of white, even, well-shaped teeth. And as beauty is not a mere plaything, but a great force, like gravity or electricity, the art which keeps it, mends it, and, to some extent, makes it, is of corresponding importance.

But we must add to this the consideration, that speech is so largely dependent on the perfection of the teeth, that our language, we might almost

say, loses a letter with every tooth that falls. What can be more painful to witness than the efforts of a hapless friend to bite his consonants out of the alphabet when he is reduced to the condition of the infant, whose boneless gums are unfit for any task but the caressing pressure of the maternal mouthful!

And then the humbler, but still necessary function of mastication, — how much depends on the ease and perfection with which this is performed! You can tell the state of a village by going to the mill. If it has enough to grind, and grinds it well and cheaply, you will find good farms and well-fed people: so, if you see a good square jaw, filled with good sound teeth, and moved by a set of muscles that mean business, and do it, you will find, in all probability, that they nourish a sound frame in man or woman. I have never forgotten the complaint of poor Walter Savage Landor, — a sadder one than any of the Preacher's, it seems to me. I quote it from memory. "I have lost my mind," he said; "that I do not care so much about: but I have lost my teeth, and I cannot eat." It has been my custom for many years, when lecturing upon this part of anatomy, to bring forward the skull of a large turtle, in order that its jaws might be compared with those of the human being in very advanced years. The sharpened edges of the alveolar border in the old man show

the retrograde process by which he returns to the quasi-embryonic condition, reminding us of that earlier period when he passed through the scale of being, upward, to reach the supremacy of which age is constantly trying to deprive him.

It is no wonder, then, that the teeth have been particular objects of attention from the earliest period. The Egyptians, who made specialties of every thing, had professional dentists; and it is asserted that artificial teeth of ivory or wood, some of them on gold plates, have been found in the jaws of mummies. The teeth of mummies are said also to have been found filled with gold. I do not find any distinct notice of a dental profession from the time of the Egyptians to that of Galen. You will permit me to quote, in the original, a passage which I have unearthed in one of his treatises, because it makes use of an adjective which will be found in our catalogues and diplomas, where it was admitted after some discussion:—

“Omnes tamen istos communi nomine medicos appellant, perinde ut eos, puto, qui a quibusdam membris, quorum præcipue curam gerunt, vocitantur: hos namque oculos, auricularios, DENTARIOS (ita dicere liceat) medicos nominant.”

It is a long interval from Galen to the middle of the seventeenth century; but I have not found any other traces of a special dental profession

until I came upon the following, which looks very much as if it referred to such specialists. In the Diary of the Rev. John Ward, vicar of Stratford on Avon from 1648 to 1679, — the book rendered famous by a reminiscence of Shakspeare, for which the poet would not have thanked him, — is the following: —

“Uppon a signe about Fleet Bridg this is written,

‘Here lives Peter de la Roch and George Goslin, both which, and no other, are sworn operators to the King’s teeth.’”

Whether these operators had any other calling than this august office does not appear. Early in the next century, the practice of dentistry seems to have been in the hands of silversmiths and jewelers. I think many of us can recall the name of a fellow-citizen, — originally, I think, a watchmaker — who branched off, without any special training, into the business of a dentist, and who acquired a considerable name for filling teeth with skill and success, taking time enough about it, and receiving very handsome pay for his services.

Dentistry as a profession may be safely said to have come into existence during the present century. In this country, its growth has been of wonderful rapidity. One would have thought that Cadmus had sown a new furrow full of teeth, and

that they had sprung up dentists. In 1820, it has been computed that there were not more than a hundred dentists in the United States: in 1858, there were four thousand. I presume they have increased in as rapid a ratio since that time; and, in the mean while, works on dentistry, journals devoted to it, institutions for teaching it, have become so numerous, that it is recognized as one of the great callings of life.

If we would know what we have gained by the elevation of dentistry into an honorable special branch of medical practice, we must go back to the time when ignorance, superstition, and bungling awkwardness, reigned over the whole province of art, now so fully illuminated by science, and in which such admirable mechanical skill has developed itself in every form to relieve suffering, to supply deficiencies, to add in all possible ways to comfort and comeliness.

It is simply amusing to look back two or three centuries, and see what men were capable of believing. You will find in Ambroise Paré various forms of words in use in his time to cure the toothache. The notion that this pain was caused by a worm, which Shakspeare refers to, is at least as old as Avicenna. Strange significance was attached to an anomaly which an old friend of mine told me happened in his own person: I mean the same fact that Richard the Third boasts of, namely,

that he was born with teeth. "A girl was born at Picenum with six teeth," says Polydore Virgil; "and at that time the Turks began to capture our towns far and wide." But nothing quite equals the story of the miller's little son, whose second molar on the left-hand side of the lower jaw was a golden one, — as good, they said, as if a goldsmith had made it. Some pretended having seen the letters C S C legibly inscribed upon it. I have before me a most exact statement of the facts of the case, authenticated by a number of eminently respectable personages; and I find in Haller's "*Bibliotheca Anatomica*" various notices of the storm of controversy excited by the story of this Silesian boy with the golden tooth. "What it portends," says Laurence Scholtzius, "I do not hesitate to declare is known to God alone." It is to this most famous case that Sir Thomas Browne refers, when he says, speaking of the pretended difference of posture in which drowned men and women float, "But hereof we cease to discourse, lest we undertake to afford a reason of the golden tooth; that is, to invent or assign a cause when we remain unsatisfied or unassured of the event." And in the margin, "Of the cause whereof much dispute was made, and at last proved an imposture." All this was a good while ago; but I am myself old enough to remember several curious notions about the teeth, which

had a considerable currency, and came near enough to being believed to be told pretty seriously. If one had a tooth extracted, it must be burned, because, if a dog got it and swallowed it, one would have a dog's tooth come in its place. I recollect a story told me of a somewhat noted public character, whose smile, or other attractions, had made him dangerous to the sex formerly called the weaker one, — a personage too well known to the scandal of his time, — who was said to have had his teeth, or some of them, extracted, and replaced by those of a living animal, — a calf or a sheep. This story was told seriously; and the hero of it I have seen with my own eyes, when age had disarmed him of the fatal fascinations of his earlier days. There is a common notion enough, still prevalent, that some persons have a complete set of double teeth, as they are called, — a jaw full of molars. I never saw one, and I doubt if anybody ever did; but the teeth of Indians and sailors, ground down by the attrition of hard grains or sea-biscuit, might be mistaken for such a maleformation.

It is only since the year 1835 that the anatomy of the teeth, out of which necessarily arose new views of their physiology and pathology, can be said to have been fairly understood. It is true that old Leeuwenhoeck had described the "pipes," as he called them, of the dentine so long ago as the

year 1678; but his discoveries were so much ahead of his time, that they had to wait some generations, like the seven sleepers, before they woke up, to find themselves confirmed. An article in "The British and Foreign Medical Review," for the year 1839, brought before the profession in England and America, in a connected way, and with illustrative figures, a series of discoveries which had changed the whole aspect of dental anatomy. We owe all these discoveries, or rediscoveries, to the invention of the achromatic microscope, which enables any of us to show the student the beautiful intricate structure of the teeth as plainly as he can see the anatomy of the skeleton with the naked eye. You have all studied the exquisite tubular arrangement of the dentine; have speculated on the nature of the contents of the tubes, first demonstrated by Owen in the elephant; have examined the prisms of enamel, and the stellate cells of the cementum; you have seen the vascular systems of the pulp, and around the fang, and how they run into each other; the tooth is for you a delicately organized living structure, carrying on nutritive functions through the greater portion of its substance, and capable, to a certain extent, of repairing its injuries. To those who studied Bell's or Meckel's Anatomy, who read the works of Hunter or Fox on the teeth, all this is a revelation which only those can fully appreciate who were born in the benighted days of dental heathenism.

While the scientific basis of dental art has made these great advances in modern days, the practice of the art itself has undergone the most wonderful transformation. The work of filling teeth has been carried to such perfection, that not only is decay arrested, and a tooth which seemed destined to rapid destruction so repaired that it will last a lifetime, but, where the greater portion of a tooth was gone, it has been built up, so that the miracle of the boy of Silesia is wrought every day by mortal hands ; and we see a golden tooth in a living mouth without fearing an invasion of the Turks, or a war with England. I suppose that the improvements in this particular department of dentistry, the invention and perfecting of mineral teeth, their insertion on plates retained by atmospheric pressure, the substitution of the improved forceps for the clavis, and the application of anæsthesia to extraction, would be considered the greatest achievements of modern dentistry.

What a change since the time when teeth were allowed to decay as if they were not worth the gold it took to fill them ! What a change from the time of those ghastly *rateliers*, as the French call them, carved in ivory, and supported by springs that creaked with every motion of the jaws, like the thorough-braces of an old-fashioned stage-coach ! Could any thing be less inviting to

social intercourse? Could any thing be more appalling to tender infancy than the sight of one of those dancing-sets of artificial teeth, looking as if they were ready to jump from their owners' mouths, and fasten upon one, as they used to say a turtle's head would do after it was cut off? Mr. Greenwood of New York, you may remember, carved a set for the Father of his Country; and one can hardly fail to see how the flattened and compressed lips were in a perpetual struggle with those loose-fitting arches and rebellious spirals. Yet this was considered a masterpiece of dental workmanship; and I have no doubt that pilgrimages have been made to Mount Vernon by artificers in that line of business, who left with a tear in one eye at the sight of Washington's majestic countenance, and a twinkle of satisfaction in the other at the triumph achieved by Mr. Greenwood.

Contrast this state of things with the manufacture of artificial mineral teeth as carried on in this country, where it has been brought to its greatest perfection. More than ten years ago, there were nine factories engaged in their fabrication, and more than two million teeth were made in a year. To-day, I suppose they must be made and sold by the bushel, like the cereal grains; and, if the great factories required elevators to handle their products, it would hardly surprise us. Compare the delicately-tinted, exquisitely-shaped por-

celain incisors with those frightful ivory palisades that used to play up and down like a portcullis in a manner to terrify all beholders. In fact, the perfection of artificial teeth is carried almost too far. They have come to be for the inside of the head what the wig was for its outside in the days of our ancestors. It was so much more convenient to have a head of hair that one could whisk on and off in a moment; one that never grew gray; one that was just the shade the owner fancied, that was always in curl, that could be laid aside in hot weather to let the cool breeze play over the naked scalp (a luxury which Adam never knew in Paradise, and coming about as near to "sitting in one's bones" as is practicable while we are in the flesh), — all this was so much more convenient and comfortable than the arrangement provided by Nature, that the wig reigned undisputed for generations, and will, not very improbably, return to bless mankind before our children's children are bald and gray. So with the artificial teeth of this dental millennium in which it is our good fortune to live. They are comely; they never ache; they are contented with their situation, and keep their place, which is more than we can say of most of our living servants; they undergo no changes in the mouth; they admit of the nicest personal proprieties; they serve perfectly for articulation; and though one can hardly crack a peach-

stone with them, as some can with their native molars, or use them for biting off the heads of iron nails, as used to be told of Ethan Allen, they can do good service in the respectable and responsible duties of mastication. The consequence of all this is, that people are only too ready to have their natural teeth shelled from their gums like so many grains of Indian-corn from the cob, and a complete mouthful of artificial make inserted in their place. You miss your friend for a little time: he is in his chamber, with his jaws tied up, perusing "Zimmermann on Solitude" for a few days: suffering from toothache is the figurative language in which his condition is announced. When he returns to society, he has recovered his youth like Æson in the hands of Medea; and his smile is a glittering welcome, a mineral benediction, which it is a joy forever to have been blest with. Think, again, what that preliminary process of edentation would have been in the days when the rustic patient complained that he had to pay as much as his neighbor, who had been dragged three times round the room before the tooth came out. There never was a claw on bird or beast that was the cause of such anguish of apprehension, such howls of agony, as that diabolical instrument, looking like a vulture's talon, but known by the name of *the key*. It was a key indeed: it may have opened the door of heaven to the

sufferer in due time ; but, while the bolt was turning, the victim thought he was in that other place, where the man must be who invented the instrument of torture. *Now* a patient comes in ; takes a few whiffs of an anæsthetic ; has a dozen or more teeth submitted to the embrace of the gentlemanly forceps, which lift them from their sockets as one takes out the pegs of a solitaire-board, — say, rather, as a father lifts his first-born infant, — comes to ; stares about him ; asks when they are going to begin ; is told that it is all over ; bursts into tears of hysteric gratitude ; kisses the smiling dentist ; wants to hug all mankind, and make the human race happy at once ; sobers down presently, ties up his face, and takes to retirement and Zimmermann for a season, as before mentioned.

I have seen something, as, probably, most of us have, of the practical skill of dentists ; but, in alluding to some of the more important recent advances of the dental profession, I was unwilling to trust my own fortunately limited experience, and have consulted my friends, Dr. Moffatt of this city, and Dr. McQuillen of Philadelphia, the late editor of the journal known as “ The Dental Cosmos,” both of whom have kindly favored me with their own independent opinions as to late improvements.

The use of the mallet in filling teeth, every blow of which instrument is a fractional knock

on the head to the patient equal to about one hundredth of that which a slayer of cattle gives to a full-grown ox to finish him, but which, being taken in divided doses, allows the sufferer to escape with life, — the use of the mallet, automatic or other, far from agreeable as it is, is considered a vast accession to the art of dentistry. Every man must be anvil or sledge, says Goethe; and it is quite plain that our friends the dentists have settled it so far as they and we are concerned.

Nothing has excited my admiration more than the wonderful drills, moved by the foot, or any other power which may be preferred, finding their way into every corner of the mouth with a sinuous grace of movement such as the serpent displayed for the fascination of our unfortunate first parent, and making their way into the solid dental substance with a rapidity from which the engineers of the Hoosac Tunnel might borrow a most significant lesson.

The employment of sponge gold for certain purposes, and the use of heat to develop the cohesive properties of the metal, have enabled the dentist to perform those remarkable feats of building up a tooth from its ruins, to which I have before referred.

The public seems hardly to appreciate the very great value of the cement fillings, — both the oxide of zinc and the gutta-percha, — either of which is

capable of preserving for long use a tooth too infirm to bear filling with gold.

The use of sheet India-rubber to protect a tooth from moisture while being filled is another most valuable innovation.

I learn that even exposed pulps may be protected by artificial means, and thus a tooth saved as a living organ from an almost hopeless condition.

Important as are these mechanical inventions, the growth of dental associations, educational institutions and journals, mark a still more general advance of the profession. I have known something of the teachers of the art, of their zeal, their capacity, their disinterested desire for the elevation of their calling. I have for years been a frequent reader of "The Dental Cosmos," and I can bear testimony to the great intelligence with which it has been edited. I have found in its pages much information, of interest and value, that I have never met with elsewhere; and I have seen a great many medical journals with a broader titlepage and a vastly narrower table of contents. Yet this is but one of five dental journals published in the United States; and at least as many are published in other countries. It is from a living and wide-awake profession, then, that the new faculty is invited to share with us the honorable task of teaching; and we cannot doubt that

the community will encourage, and it may be hoped in due time liberally endow, the infant offspring of Harvard University, now cutting its first teeth with every promise of health and vigor.

The picture of old age drawn in Ecclesiastes is wonderfully impressive, — all the more so in consequence of the obscurity of some of its images. But we all know what the Preacher means when he speaks of the drawing-nigh of the years when we shall say there is no pleasure in them, and of the day when the grinders shall cease because they are few, and those that look out of the window shall be darkened. There were no dentists in those days to rejuvenate the old man with a third dentition. There were no opticians to supply his failing vision with the second eyes of old age. The aged people seem to have been in a most forlorn condition at a time when the men of to-day not rarely have a good deal of vitality left, and enjoy life, and help to make others enjoy it. To us who remember the late Josiah Quincy and Dr. James Jackson long after they were eighty years old, who knew something, by report, of Lord Lyndhurst and Lord Brougham in their later years, it seems strange to hear Barzillai say to King David, "I am this day fourscore years old; and can I discern between good and evil? can thy servant taste what I eat or what I drink? can I hear the voice of singing men and singing women?"

But what would old age be to a great number of persons without the aid of the dentist and the optician? The worn-out laboring man, unused to books, and with limited capacity for social intercourse, may get along well enough, perhaps, with his pipe, and his seat in the sunshine or by the fireside. Father Abraham may not have felt the need of spectacles: he went to bed early, no doubt; there was no daily newspaper to read; and he did not shave. But what would become of the scholar, or of persons of any cultivation in our days, who at fifty or sixty should find themselves cut off from reading, and, not improbably, rendered unpresentable, or at least miserably uncomfortable, in society, in consequence of imperfect articulation? The care of the eyes is therefore recognized as one of the most important specialties in medicine, and the study of ophthalmology has engaged some of the most distinguished professional talent in this country as well as in Europe. The province of dentistry is only second in importance to the other domain of medical science and art, and rivals it in the intelligence and activity of those who teach and practise it. In one respect, it is of greater public interest than the other branch: most children's and young persons' teeth require positive attention; whereas their eyes, in the great majority of cases, take tolerable care of themselves. I think

there are twelve times as many dentists in this city as there are oculists. If every one had twenty eyes in the early part of his life, and thirty-two when full grown, the numbers of oculists and dentists might be more nearly equal.

The branch of the medical profession to which this graduating class has devoted itself has not taken its proper position until within a comparatively recent period; but, in this respect, it has been no worse off than other branches in former times, or than the entire profession at some periods of its history. The Romans contrived to live without doctors for some five hundred years: when they got them at last, they were slaves, — Greeks, for the most part, — and kept as appendages of a great man's establishment, as he kept a cook or other servant.

The worthy vicar of Stratford on Avon, to whom I have before referred, gives us some very curious information as to the state of the medical profession in England in his own time and before it. A few paragraphs are worth quoting: —

“ The Saxons had their blood-letters, but under the Normans physick begunne in England; 300 years agoe it was not a distinct profession by itself, but practisd by men in orders, witness Nicholas de Ternham, the chief English physitian and Bishop of Durham; Hugh of Evesham, a physician and cardinal; Grysant physician and

pope; John Chambers Doctor of Physick, was the first Bishop of Peterborough; Paul Bush, a bachelor of divinitie in Oxford was well read in physick as well as divinitie, hee was the first Bishop of Bristol." "In King Richard the Second's time physitians and divines were not distinct professions; for one Tydeman, Bishop of Landaph and Worcester, was physician to King Richard the Second." And again: "Edmund, Earl of Derby, who dyed in Queen Elizabeth's days, was famous for chirurgerie, bonesetting and hospitalitie."

We may be sure that all this meant a very low condition of medical knowledge. And this opinion is confirmed by what is found in the same Diary a few pages farther on.

"Dr. Sydenham is writing a book which will bring physicians about his ears, to decerie the usefulness of natural philosophie, and to maintaine the necessitie of knowledg in anatomie in subordination to physick.

"Physick, says Sydenham, is not to be learned by going to Universities, but hee is for taking apprentices; and says one had as good send a man to Oxford to learn shoemaking as practising physick."

There were other heretics besides Sydenham; for, as Mr. Ward tells us, "Some have said that physick is no art at all, nor worthy of the name of

a liberall science, as Peter And. Canonherius, a practitioner at Rome, endeavored to prove by sixteen arguments."

The vicar himself practised physic, as well as preached, like others of his clerical brethren. We find from him that quarrelling and quackery were quite as common then as now. The university-teaching which Sydenham spoke of with such contempt was, of course, the book-learning of the time, and not the practical instruction of later days. Much as we have gained, the following words from the Diary are not so far from truth to-day as they might be:—

"There are several sorts of physitians, said one; first, those that canne talk but doe nothing; secondly, some that can doe but not talk; third, some that can both doe and talk; fourthly, some that can neither doe nor talk, and these get most monie.

"Some doctors have a noble out of a pound of their apothecaries; as Dr. Wright; many (have) a crowne, as an apothecarie in London told me."

In this last sentence, and in the fact that the English "general practitioner," so called, has charged, not for his advice, but for his pills and potions, lies the secret of that disgraceful drugging system which has racked the entrails of Englishmen from generation to generation; which we inherited from the mother-country; and which

is fast giving way to those more rational views, in which healthy nutrition, and the skilful alleviation of symptoms, are taking the place of the exhausting depletions and specific poisons supposed necessary to the cure of disease. In spite of this corrupting influence, English medical science and art asserted themselves successively in men like Linacre, Harvey, Sydenham, and Mead, and the practitioners who confined themselves to medical, in distinction from surgical, practice, so as to deserve the eulogies of such personages as Dryden and Pope, of Johnson and Parr and Blackstone.

But chirurgery — medical hand-work — fared very differently. No longer ago than when President Holyoke, whose son, the venerable physician, some of us well remember, entered upon the duties of his office, and for years after that time, the London Company of Barber-Surgeons were holding their meetings at their hall in Monkwell Street; and it was not till very near the middle of the last century, that the surgeons were incorporated as a separate body. It was about the same time, that is, during the reign of George the Second, that the question was discussed in open court, before the chief justice of England, whether a surgeon was an "inferior tradesman," within the meaning of a certain statute of William and Mary. But we must remember in what contempt other of the most useful occupations were held so long as

society was enslaved by its feudal traditions. Traffic and agriculture were scorned by the descendants of the Norman robbers, until they were starved into better views and more civil language than they had inherited.

“The toiling tradesman and the sweating clown
Would have his wench fair, though his bread be brown,”

says Michael Drayton in the poetical epistle of Edward Fourth to Mistress Jane Shore. And now the great nobles of Britain are very glad to turn an honest penny by traffic, instead of taking it by force from their neighbors.

“Lord Stafford mines for coal and salt ;
The Duke of Norfolk deals in malt ;
The Douglas, in red herrings.”

One son of the Duke of Argyle marries the queen's daughter ; and the other comes to New York, and goes into a trading-establishment. In this country, more especially, the useful arts have no right to complain of their want of fair recognition. If we do not absolutely forbid idleness, our rich men and women who live for amusement only are very apt to find themselves uncomfortable until they can get out of a country where there are bounties granted to fishermen, and nothing but taxes for gentlemen of leisure.

The movement of civilization is a perpetual struggle between the arts of destruction on the one hand, and those of construction and conservation on the other. All that the earth teaches us of man in the earlier periods of his ascertained existence shows him to have been a fighting cannibal, who cracked the bones of his deceased relatives, to get their marrow, with the same pious satisfaction his descendant shows in breaking the seal of a last will and testament. The best man among savages is the one who swings the heaviest club, and has eaten the largest number of his enemies, or who carries most scalps at his girdle. It is somewhat better in our day; but the ideal state of society is not yet made quite real. The fighting man is still the one most honored by the world. Even the phraseology of our religion, which points to the Lord of hosts and the Captain of our salvation, shows us how deeply-rooted is that feeling of the supreme excellence of a military title, which we inherit from the man-eating troglodytes.

But the modern movement, in its truest form, insists that mutual destruction is not the chief end of man. Even the fighting Romans had got so far as to decree that the oak-leaf garland, *ob cives servatos*, should take precedence of the conqueror's laurel. And Christian civiliza-

tion is ready to acknowledge, to-day, that the only really noble warfare is that against the evils which beset the race. Men must be slain for a long time, always perhaps, in the greater conflicts of right and wrong; but humanity confesses, that, apart from the righteous end to be attained, a bloody victory is only a less calamity than a bloody defeat.

The arts of peace are gaining in consideration over the arts of war, slowly, we must own, but steadily. And, if any one of these arts of peace should have appeared entitled to the highest consideration of a civilized people, it would seem to be that which professes to relieve suffering, and prolong life. So it would have been if medicine could have done all that was asked of it. The physician would have been held only second to the Deity, had he not too frequently disappointed the expectations of those who were ready to worship him. This always was and always will be. The children of Israel complained that they had to make bricks without straw: the physician has to make bricks without clay. Many of the patients that come to him had never any physiological right to live at all. They are not much nearer to the true human pattern than that same starved Justice Shallow, who was like a man made after supper of a cheese-paring; when

he was naked, for all the world like a forked radish. And they come complaining that they are not in condition to run ten miles within the hour, or fight the champion of the heavy weights for the prize belt. It has taken a dozen sickly generations to breed them down to constitutional invalidism, and they want a pill or a powder to set them all right again. Or they come to the physician at fifty or sixty, wrecks of fine constitutions, got up originally without regard to expense, but burned out with strong drink, and browned to the marrow with narcotics and narcotics, and want back the virginity of their sodden and corrugated tissues. Or, it may be, some desperate and violent malady has stabbed them to the death; and, because no one has seen a hand with a poniard in it, the patients or their friends think that some drop or potion will undo the mortal effect of the invisible dagger-stroke.

These inevitable disappointments have kept the medical profession from receiving that degree of confidence and of honor to which its noble function seemed to entitle it. It does its best; but that is not enough for the eager demand of men for health, and length of days. Hence the great number of pretenders and pretentious systems which profess to be able to meet this want. Men, and, still more, women, wish to be deceived; and

it becomes a lucrative trade to promise cures, as it was to promise gold in the days of the alchemists.

“Spondent quas non exhibent divitias, pauperes alchimistæ.”

In spite of all the obstacles which meet those who give their lives to the pursuit of knowledge, without regard to the prejudices it disturbs, science was never honored as it is in our time; and the science of life was never studied as at the present day, — never with such an apparatus of research, never with such concentration of talent on special investigations, never with such hope of resolving the most difficult problems within the reach of human faculties. Considered merely as a study, medicine is a great and profoundly interesting branch of science; but having regard to the interests it deals with, — life and death, well-being and misery, the conditions of mind and body, the happiness or wretchedness of whole communities, — we can hardly wonder, that, in early ages, a divine origin was assigned to it, and that he who is called the Lord of hosts is also spoken of by the nobler title of the Healer of the land and of the people.

Your profession, young gentlemen, is now an accepted province of this great and beneficent calling. It has shared the effects of that onward

movement which has asserted for the arts of peace the dignified position to which they are entitled. You are bound, in your turn, to reflect honor on the institution which has invested you with authority to go forth as its representatives in the domain of your special duties. The diploma you have received is a certificate of your fitness for these duties; but it implies a promise that you will try to do credit to those who stand sponsors for you as you are christened with your new title. Harvard University is doing all it can do to recognize the value of your profession to the community; and it does this at the time when it is making the most strenuous efforts to place medical education on a basis worthy of a branch of knowledge so complex, so vast, so all important to mankind. That open volume with *Veritas* inscribed upon it should be, and it is, carried at the figure-head of the argosy of our American intellectual progress. Our university always was, and must be, a leader in educational movements. She is waiting for those to follow that dare, to pass her that can; and, if any drop astern, she must wave them a courteous salute, and leave them.

And now, gentlemen, we bid you God-speed as you go from these halls to exercise the talents which have been here trained, and apply the

knowledge which has been here imparted to you. May you find the public ready to appreciate and reward your skill; and so acquit yourselves, that the ear which hears you shall bless you; and the eye that sees you bear witness to you; that the smiles of innumerable friends may reveal to you the perfection of your own handiwork; and your praise be in all the mouths of a grateful community!

