The dental adviser : a treatise on the nature, diseases and management of the teeth, mouth, gums, &c.; / by Thomas Palmer.

DENTAL ADVISER

BY

T. PALMER, D. D. S.

THE

DENTAL ADVISER:

A

TREATISE ON THE NATURE, DISEASES AND MANAGEMENT

OF THE

TEETH,

MOUTH, GUMS, &C.,

BY

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PREFACE.

The following work is designed to give correct and reliable information in regard to the nature, diseases and treatment of the human teeth, mouth, gums, etc., and also to give the most important and general rules for the preservation of the teeth, and to show the great benefits which may be derived from the Dental Art.

The author being an uncompromising opponent of empiricism, wishes to give information to the inexperienced and unsuspecting, to enable them to guard against the widely extended impositions which are practised at the present day, in this profession.

It being manifest that the community are not generally aware of the vast importance of the subject here presented, therefore there is a call for a work of this description.

The views herein expressed are intended to be in accordance with the various modern improvements in the science, and with the Principles and Practice of Dental Surgery, as taught generally in the Dental Colleges.

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DENTAL ADVISER.

DESCRIPTION OF THE TEETH.

THE TEETH are organs of prehension and mastication. They are the most dense portions of the whole system, located at the entrance of the alimentary canal, occupying the alveolar cavities of the upper and lower jaws, and forming two curves or dental arches.

The different portions of a tooth are called the crown, the neck, and the fang, or root. The teeth, in structure, are composed of four different parts, viz: the enamel, the bone, the pulp, and the cementum. The enamel covers the crown and extends to the neck of the tooth. It is the hardest of all animal substances; it is generally of a pearly white, and is much harder on some teeth than on others.

The bone or ivory forms all the hard portion of the tooth except the enamel and cementum. It is composed of earthy and animal substances, and is more or less sensitive. The pulp is the soft vascular substance within the tooth, giving to it vitality; it contains the nerve of the tooth, and is extremely sensitive. The cementum is a thin covering of the root, and is similar to the bone, excepting it is more vascular.

The teeth are of two divisions; the temporary or infantile, and the permanent or adult teeth. The temporary teeth are twenty in number, ten in each jaw, and are of three classes: — Incisors, Cuspids, and Molars.

The permanent teeth are thirty-two in number, sixteen in each jaw, and of four classes:—Incisors, Cuspids, Bicuspids and Molars. The four front teeth in each jaw are called Incisors, fron *incido*, to cut, their office being to cut the food.

The two central ones are called central incisors, the outer ones, lateral incisors. The incisors of the upper jaw are larger than those of the lower. The central incisors of the upper jaw are much wider than the laterals of the same, but resemble them in shape. The lateral incisors of the lower jaw are generally a little wider than the centrals, though the difference is not very perceptible.

Next to the incisors are situated the teeth with conical crowns, one on each side in both jaws, called cuspids, from *cuspis*, a point. They are commonly known as canine or eye-teeth. Their office is to arrest and tear the food: hence we find that carnivorous animals are abundantly supplied with teeth of this class.

The next, four in each jaw, two on both sides, are called Bicuspids, from *bis*, twice, and *cuspis*, a point; being so called from their having two distinct points on

their grinding surfaces, one outer and one inner.

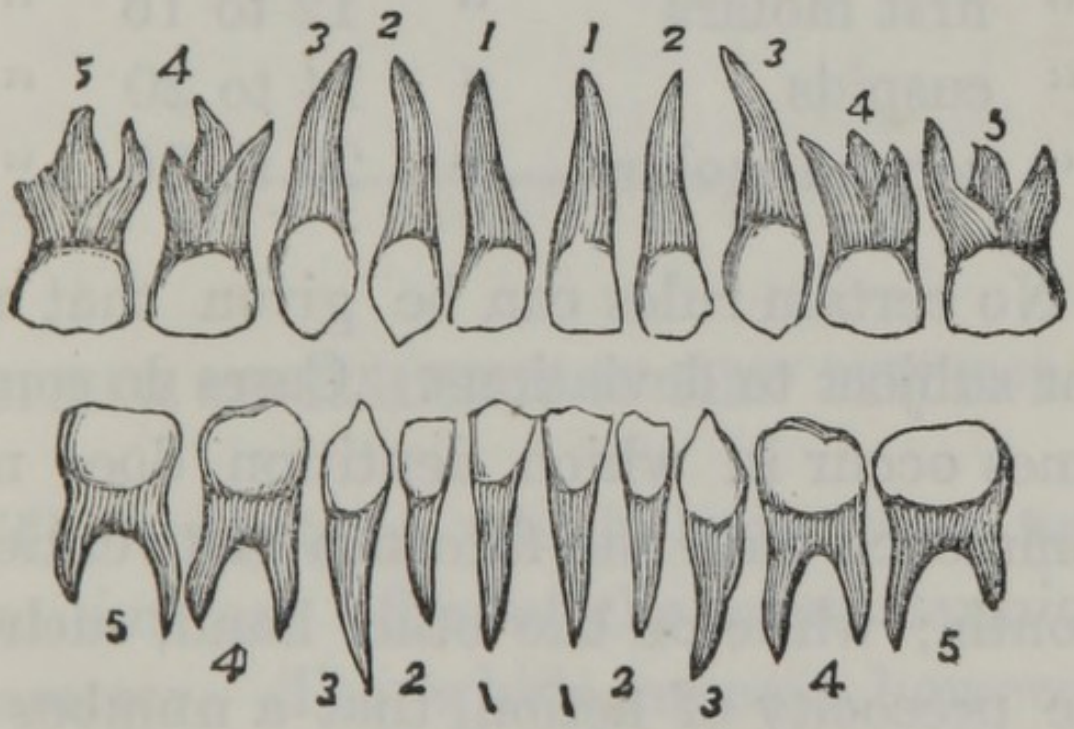
The bicuspids belong only to the second or permanent teeth, and supply the place of the temporary molars.

The next, four in each jaw, two on either side, are called molars, from *mola*, a mill-stone, or that which grinds. They are distinguished by their greater size, and the number of protuberances and depressions on their grinding surfaces. The use of the molars as their name signifies, is to triturate or grind the food. This is the full complement of teeth in the mouth of a person at the age of fifteen.

There are four others, two in each jaw, one on each side, that generally appear between the eighteenth and the twenty-third year. They are sometimes called molars, but more commonly *dentes sapientiæ*, or wisdom teeth, from the fact that the individual has arrived to years of discretion before they appear. In many in-

stances they are attended with much trouble and pain, and their extraction sometimes becomes necessary as soon as they present themselves above the gum. In some cases they never appear. Thus it will be seen that the entire number of teeth in the mouth of an adult is thirty-two.

FORMS OF THE TEETH OF FIRST DENTITION.



EXPLANATION.

FIGURE 1s, Central Incisors; 2s, Lateral Incisors; 3s, Cuspids; 4s, First Molars; 5s, Second Molars.

FIRST DENTITION OR INFANTILE TEETHING.

The period of the eruption of the deciduous or temporary teeth is variable, depending probably upon the constitutional health of the child. The time and order in which they usually appear are as follows:

The central incisor	from	5 to 8	months after birth.
" lateral incisor	"	7 to 10	"
" first molars	"	12 to 16	"
" cuspids	"	14 to 20	"
" second molars	"	20 to 36	"

No certain rules can be given that are not subject to deviations. Cases do sometimes occur in which dentition does not commence until the fifteenth or twentieth month; while on the other hand, such is the precocity of action, that a number of fully developed teeth have been found in the mouth at birth, and in some cases the

molar teeth are the first to make their appearance.

In the mouth of a child at the age of three years, there are twenty teeth, ten in each jaw. Between the fourth and sixth year, four large molar teeth are erupted immediately back of those of which we have been speaking. These are the first of the permanent class, and nature supplies them but once. Hence the necessity for keeping the mouth and teeth clean and healthy in early childhood.

EFFECTS AND TREATMENT OF FIRST DENTITION.

The symptoms which accompany first dentition are often of the most alarming character. The whole process, however, is sometimes completed without inconvenience, but at other times, is attended with

so much pain and irritation that the most complicated forms of disease result from it, and it is regarded as a critical period of life. When the irritation is merely local, it subsides as soon as the teeth appear through the gums; but when the irritation is severe it is frequently attended with various cutaneous erruptions on different parts of the body, also with cough, diarrhœa, convulsions, and sometimes death. The gums of the infant during the whole period of teething, should be often rubbed with the finger, in order to render the scarfskin firm, and to cause a natural absorption for the advancing teeth, without soreness, pain, or inflammation.

Where the gums are irritable or swollen, the most important and sure remedy is the use of the gum lancet, freely cutting them down to the teeth, which will relieve the disease and remedy the febrile symptoms. This practice is thought by many to be cruel and unnecessary. We would invite

the attention of such to the following lines from Brown's Dentologia:

"The first dentition asks our earliest care,
For oft, obstructed nature, laboring there,
Demands assistance of experienced art,
And seeks from science her appointed part.
Perhaps ere yet the infant tongue can tell
The seat of anguish that it knows too well,
Some struggling tooth, just bursting into day,
Obtuse and vigorous, urges on its way,
While inflammation, pain, and bitter cries,
And flooding tears in sad succession rise.

The lancet, then, alone can give relief,
And mitigate the helpless sufferer's grief;
But no unpracticed hand should guide the steel
Whose polished point must carry woe or weal:—
With nicest skill the dentist's hand can touch,
And neither wound too little nor too much.

Be prompt to act:—'tis dangerous to delay,
Since life awaits the issue of a day:—
Reject the gentler means:—employ the best:—
Let unobstructed nature do the rest.
This rule neglected, many a smiling form,
With beauty bright, and life blood glowing warm,
Its parent's pride, a flowret in its bloom,
Descends lamented to an early tomb."

As soon as the infant's teeth make their appearance through the gums, it should

be the duty of the nurse to clean them frequently with a soft brush and water, to preserve them from the influence of vitiated saliva, and other deleterious fluids. This practice should be faithfully continued through infancy and childhood until the individual is capable of performing it properly; and afterwards it must be a habit of life to keep the mouth clean, remembering that "Obedience is better than sacrifice."

Some suppose that the preservation of the temporary teeth is unimportant, but this is an error, and has led to their almost entire neglect. Disease of the temporary teeth and their sockets interferes with the healthy formative process of the permanent teeth.

SHEDDING OF THE TEMPORARY TEETH.

The temporary teeth are shed by pairs in the order in which they first appeared. After one pair has been shed, a sufficient time usually elapses before the shedding of another, for those of the permanent set to come forward and take their place. Thus the mouth is by nature, never deprived of more than two teeth in each jaw at any one time.

Many think the temporary teeth never have roots, inasmuch as they are found to be wanting when the teeth drop out. This is not so. They have roots proportionately as large and numerous as the corresponding ones of the second set, until the permanent teeth in their growth begin to press upon them; then by a most wonderful operation of the economy of nature, the roots of the temporary teeth are absorbed as fast as the permanent advance,

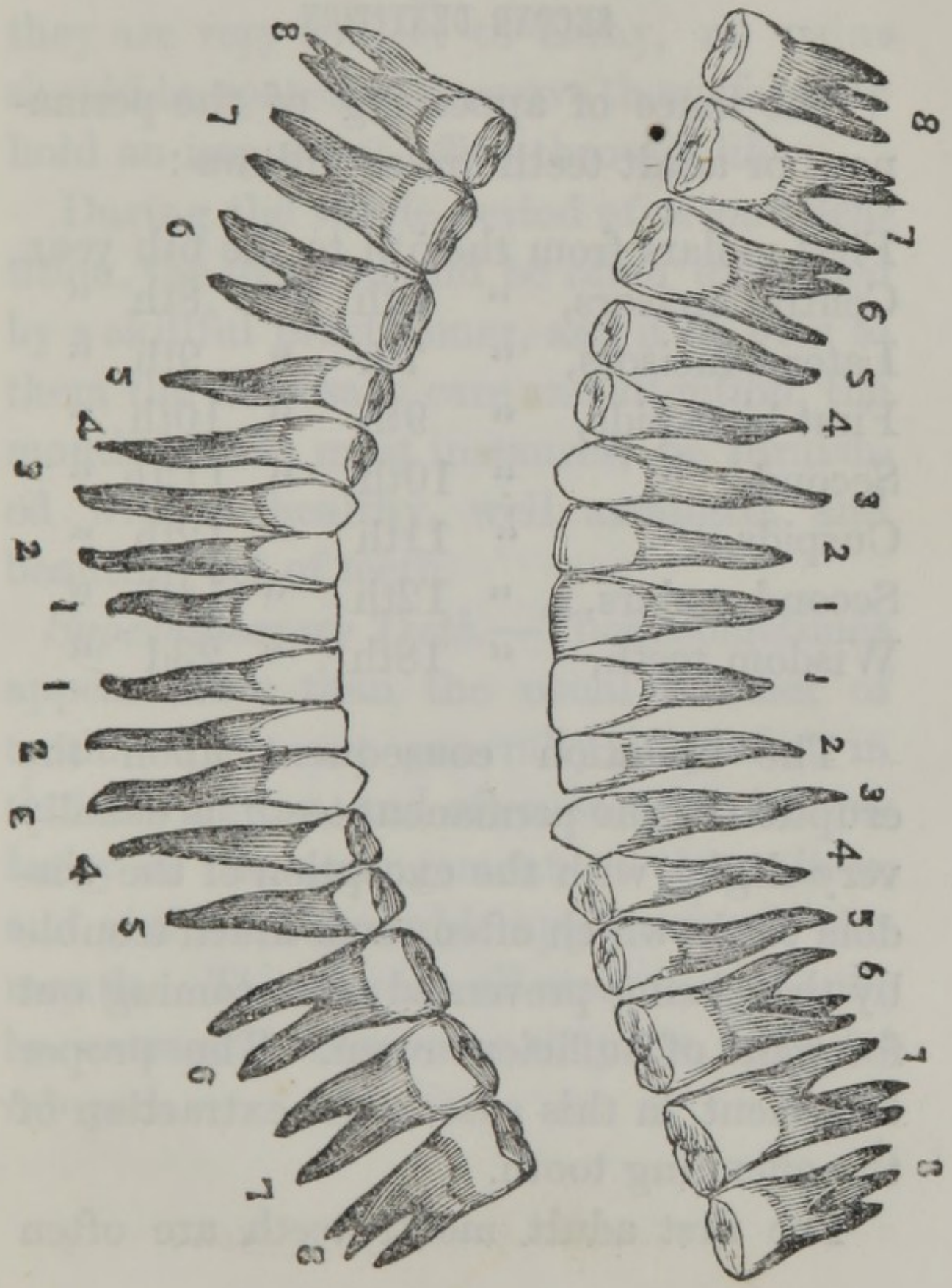
until nothing remains but the crown above the gums.

The temporary teeth may be extracted too soon or left too long. If they loosen by the absorption of their fangs and allow the permanent teeth to take their proper place, all will be well; but if the first teeth remain firm, and the second on their appearance require room, do not delay to give them place by removing the corresponding ones of the first dentition. In all cases where a temporary tooth remains after the permanent makes its appearance through the gum, it should be extracted, as the permanent teeth must have sufficient room, or irregularity and decay will ensue.

EXPLANATION TO CUT.

FIGURE 1s, Central Incisors; 2s, Lateral Incisors; 3s, Cuspids; 4s, First Bicuspids; 5s, Second Bicuspids; 6s, First Molars; 7s, Second Molars; 8s, Wisdom Teeth.

FORMS OF THE TEETH OF SECOND DENTITION.



SECOND DENTITION.

The times of appearing of the permanent or adult teeth are as follows :

First molars	from the	5th	to the	6th	year.
Central incisors,	"	6th	"	8th	"
Lateral incisors,	"	7th	"	9th	"
First bicuspids,	"	9th	"	10th	"
Second "	"	10th	"	11½th	"
Cuspids,	"	11th	"	12th	"
Second molars,	"	12th	"	14th	"
Wisdom teeth,	"	18th	"	23d	"

The irritation consequent upon the eruption of the permanent teeth, is usually very slight, with the exception of the wisdom teeth, which often cause much trouble by their being prevented from coming out for want of sufficient room. The proper treatment in this case is the extraction of the offending tooth.

The first adult molar teeth are often

supposed to belong to the temporary set, and no attention is given to them. But as they are very subject to decay, no pains should be spared to preserve them, for they hold an important office through life.

During the whole period of second dentition, the teeth should be often examined by a skillful practitioner, and if he give to them the necessary care and attention, the mouth will in most instances, be furnished with a healthy, well arranged, and beautiful set of teeth.

Supernumerary Teeth.—There sometimes appear more than the usual number of teeth. They are generally imperfect in their formation, and often occasion irregularity in the arrangement of the others, and give a disagreeable appearance to the mouth. Therefore in all cases they should be extracted as soon as they are fully developed.

IRREGULARITY OF THE TEETH.

"Now mark the contrast in some hideous face,
Robbed by neglect, of symmetry and grace:
Behold those organs, formed on nature's plan,
To serve important purposes to man;
To form the sounds in which his thoughts are dres'd,
His wishes uttered and his love confest;
To fit his solid food of every name,
For healthy action on the general frame;
Behold these organs, wasted by abuse,
From wisest purpose, and from noblest use,
Deranged, displaced, distorted, set awry,
Disgusting objects of deformity!
Such mal-formations hardier man perplex,
But, with more grief, afflict the softer sex;—
But learn the remedy—the dentist's skill,
Subjects disordered nature to his will;
So he—the master of the dental art,
Can order, grace, and symmetry impart.
Such benefits this useful science lends,
To earliest youth;—and yet its aid extends
To following years, assuaging mortal pain,
And oft restoring beauty's flowery reign."

[*Dentologia.*

The temporary teeth are usually quite regular in their arrangement, but the permanent are not unfrequently very irregular,

protruding from almost any part of the jaw and in almost any direction, causing great inconvenience in mastication and in speaking, also injuring the form and beauty of the mouth and face. They are much more liable to decay than other teeth. This irregularity is most commonly occasioned by their coming in contact with the adjoining temporary teeth, by being too large for the space left for them, or by narrowness of the jaws.

When a temporary tooth gives a wrong direction to the permanent, it should be extracted, and the deviating tooth should be pressed several times a day with the finger, in the proper direction. This will generally be all that is requisite. But when irregularity is the result of a narrowness of the jaw, or want of room, it is usually necessary to extract one or more of the permanent teeth on each side of the jaw in order to make room for those that are improperly situated, and by applying

pressure in a proper direction with a variety of fixtures for the purpose, a skillful practitioner can adjust the most irregular set of teeth, if attended to before the individual arrives to years of maturity, and can bring them into a complete arch.

CARIES OR DECAY OF TEETH.

"Destructive caries comes with secret stealth
T' avenge the violated laws of health,
Dilapidates the teeth by slow decay,
And bears them all successively away."

Caries is the most common disease to which the teeth are subject. It was formerly supposed to arise from some internal cause, but more modern investigations have proved that it is the decomposition of the earthy part of the hard portion of the teeth, usually occasioned by acetic and vitiated matter retained in contact with

them, arising from particles of food, from the fluids of the mouth, and from a deranged state of the system. Decay of the teeth usually commences in their interstices, and in the parts which come in contact with each other, or in cracks of the enamel caused by sudden transitions from heat to cold, or external violence, and also at any other part of the teeth where foreign matter is most liable to lodge.—There are also indirect causes of caries, such as tartar upon the teeth, effects of mercury in the general system, artificial teeth improperly inserted or of bad materials, and roots of teeth remaining in the gums.

TARTAR OR SALIVARY CALCULUS.

"If sloth or negligence the task forbear
Of making cleanliness a daily care;
In dark disguise insidious tartar comes,
Incrusts the teeth and irritates the gums,
'Till vile deformity usurps the seat
Where smiles should play and winning graces meet,
And foul disease pollutes the fair domain,
Where health and purity should ever reign."

Tartar is the earthy substance deposited on the teeth by the saliva. It is found in greatest abundance on the outer surfaces of the upper molars, and on the inner surfaces of the lower incisors; these teeth being situated opposite the mouths of the salivary ducts.

The presence of tartar upon the teeth is always productive of injury. At first, it is so soft that it may easily be removed with a brush; but when permitted to accumulate for any great length of time, it becomes nearly as hard as the teeth. The saliva is vitiated, and the gums become so

sensitive that a tooth-brush cannot be used without causing great pain, and consequently no attempt is made to cleanse the mouth. As it continues to increase, it attaches itself to the crown and neck of the tooth, sometimes in quantities equal in bulk to the tooth itself, eating down the gums, loosening the tooth and causing it to decay, until one by one the teeth fall victims to its desolating ravages. Whole sets of the best constituted teeth are in this way frequently destroyed. Not only are the teeth injured by tartar, but the breath is oftentimes so affected by it as to emit an almost insufferably offensive odor.

Tartar adheres very firmly to the teeth, and can not be safely removed by chemical agents, but can only with difficulty be removed with instruments nicely adapted for the purpose.

Much skill and tact are requisite to remove it properly, especially from between the teeth.

IMPORTANCE OF A HEALTHY MOUTH.

Most people in civilized communities give much attention to their health, and to general cleanliness of person, but at the same time seem almost wholly to forget the mouth, until attention is called to it by disease and pain. More trouble and suffering often arise from an unhealthy state of the mouth and teeth, than from any other part of the system.

All ages and conditions suffer more or less from this cause alone. It injuriously affects both the nervous system and the general health. The salivary fluid, bathing and remaining in contact with ulcerated gums, decaying teeth and fangs, being loaded with vitiated matter, is rendered totally unfit for mixing with the food, and for reception into the stomach. The breath also is corrupted. As one writer observes, "The air which is drawn in up-

on the lungs, is rendered poisonous by its passage through this depository of filth."

There are few blessings of a physical nature, greater than sound, healthy teeth. "They are an ornament to youth, and a comfort to old age," but like most other blessings are seldom appreciated, until by neglect we are deprived of the use of them. But their loss is to a great extent unnecessary. To such perfection is the science of Dental Surgery now brought, that it is in the power of the skillful dentist to insure to almost every person a good set of teeth through life, if he will but take care of them and avail himself of his skill and science before it is too late.

BEAUTIFUL TEETH.

"Let azure eyes with coral lips unite,
And health's vermilion blend with snowy white;
Let auburn tresses float upon the gale,
And flowery garlands all their sweets exhale;
If once the lips in parting, should display
The teeth discolored or in disarray,
The spell dissolves, and beauty in despair
Beholds her fond pretentions melt in air."

The Creator seems to have designed not only that comfort and utility should characterize his works, but he has also set upon them marks of grace and beauty. These are qualities as manifest in the teeth, as in the eyes or any part of the "human face divine."

Those on whom nature has generously bestowed a sound beautiful set of teeth, may justly feel themselves highly favored. "The expression and general appearance of the face depend much upon the condition of the teeth. If they are perfect, regular, pure, and clean, they contribute

more to beauty than any of the other features; but if neglected, diseased, or incrusted with an offensive accumulation, they excite in the beholder both pity and disgust."

We would refer our fair readers to the following lines:

"What pity, blooming girl,
That lips so ready for a lover
Should not beneath their ruby casket cover
One tooth of pearl!
But, like a rose beside the church-yard stone,
Be doomed to blush o'er many a mouldering bone!

"The dark black eye may be ever so piercing, the soft blue eye may melt with tenderness, the rose may blossom brightly upon a downy cheek, and the graceful form, even of the *Venus de Medicis*, may be found among the softer sex; yet if the teeth are defective, all these charms lose their power,

"As one contrasted fault alone,
Disarms all conquering beauty of a thousand charms."

TOOTHACHE, OR ODONTALGIA.

"When caries the solid tooth destroys,
That sullen enemy to mortal joys,
The toothache supervenes:—detested name,
Most justly damned to everlasting fame!
Thou haggard fiend! of hellish imps the worst,
To mercy deaf, by sorrowing man accurst;
Though cheerless days made desolate by thee,
And long, long nights of sleepless agony,
Have marked thy fearful reign in days of yore,
Thy power is crushed,—thy scorpion sting no more
Affrights the helpless, for the dental art
Commands thy gloomy terrors to depart,
Then wipes from beauty's cheek the tears that burn,
And bids her roses and her smiles return."

Odontalgia is pain more or less severe in the teeth resulting mostly from two causes; viz. inflammation of the lining membrane and the pulp's being exposed by caries, or from inflammation of the alveolar or investing membrane which covers the fangs of the teeth.

Toothache arising from exposed pulp or nerve, is very acute, and temporary re-

lief can often be afforded by palliatives, such as oil of cloves, or any of the essential oils, or opiates.

The entire destruction of the nerve will sometimes, though not always, afford permanent relief, but usually extraction is the only sure remedy, which should be done, unless the tooth is situated in the front part of the mouth, in which case the nerve can often be destroyed with good success. Toothache arising from inflammation of the investing membrame, is generally of a dull, heavy character, sometimes extending to the jaws, face and temples, and producing facial neuralgia.

The inflammation of the investing membrame often arises from inflammation of the lining membrame, also from colds, diseases of the gums, mercurial medicines, blows, and jarring of the teeth. This inflammation produces soreness of the teeth, causes them to rise up slightly in their sockets, sometimes causes the face and

jaws to swell to a great extent, and finally results in ulceration and loss of the teeth.

By proper treatment of toothache arising from inflammation of the investing membrame of the fangs of the teeth, in the early stages of the disease, relief can often be afforded by applying mild poultices, or hot salt moistened with vinegar and laudanum to the face, by bleeding the gums, or in some cases even by holding cold water in the mouth and applying it to the face. But in many instances their extraction is the only remedy.

Toothache also often arises from morbid sympathy between the teeth and other parts of the body, and from a nervous sympathy with other aching teeth on the same side of the mouth. Tic douloureux is usually a species of sympathetic toothache, and in most cases is principally the result of the transfer of nervous irritation, from diseased teeth and gums, to the jaws, face and head.

"My curse upon your venomed stang,
That shoots my tortured gums alang,
And through my lugs gi'es money a twang,
Wi' gnawing vengeance!
Tearing my nerves wi' bitter pang,
Like racking engines!

Where'er the place be priests ca' hell,
Whence a' the tones o' misery yell,
And ranked plagues their numbers tell,
In dreadful raw;
Thou—toothache, surely bear'st the bell,
Amangst them a'."—[*Burns.*

EFFECTS OF TOBACCO UPON THE TEETH.

The use of tobacco has no direct chemical action upon the teeth, either to preserve them or cause them to decay. But it indirectly injures them as it deranges the general health and produces diseases of the gums, causing them to recede and expose the necks of the teeth. It is true that tobacco will sometimes deaden the sensibility of exposed nerves of the teeth,

and relieve the pain, but this alone is not a sufficient reason for such an uncleanly, disagreeable, and injurious habit, when there are so many other and better agents that will produce equally as good effects. The use of tobacco, particularly in smoking, is liable to blacken the teeth and give them a very disagreeable appearance. Chewing tobacco which is gritty, when long continued, wears away the teeth.—Also the use of the pipe wears away the teeth with which it comes in contact.

EXTRACTION OF TEETH.

This is an operation which the dentist is often called upon to perform, and one to which most persons submit with great reluctance.

The teeth are subject to various irregularities and numerous diseases, cau-

sing much inconvenience and suffering, which in many instances can be relieved only by their extraction. A few of the indications which call for the operation are as follows: most cases of severe tooth-ache,—the temporary teeth when they obstruct the eruption of the permanent teeth, —in treatment of irregularities of teeth, —many cases of ulcers and gum boils,—teeth which discharge fetid matter through carious openings in their crowns from the nerve cavity,—and loose and dead teeth and roots. It is of vast importance that the practitioner should be perfectly familiar with the general construction of the teeth and all the various irregularities and diseases to which they are subject, so as to enable him readily to ascertain on examination any indications for their extraction, as he will often be called upon to extract teeth which the patient supposes to be the cause of pain, but on examination will be found to be perfectly

sound and healthy, the pain at the same time arising from teeth in some other location.

When the operation of extracting teeth is performed by a skillful practitioner and with suitable instruments, it is both safe and easy, but if attempted by one who is ignorant and inexperienced, it may be attended with serious and even dangerous consequences. In unskillful hands it often happens that teeth are broken off and the roots left in the gums with their nerves exposed.

In some instances portions of the jaw have been broken out, carrying with it several sound teeth; and the front teeth have sometimes been badly cracked by blows of the instruments against them. But with one who is experienced such accidents seldom if ever occur.

Formerly the key instrument was the only one used for extracting teeth, and its use is still continued by some, but is

mostly dispensed with by the most experienced dentists. More recently, however, there has been invented a variety of instruments, greatly improved and nicely adapted to every class of teeth, and dentists who well understand how to apply and use them, can remove teeth with great ease and facility.

HEMORRHAGE AFTER EXTRACTION OF TEETH.

Sometimes, though rarely, excessive bleeding is occasioned by the extraction of teeth. In some instances it becomes alarming, and it has been known to terminate fatally. It is through want of proper knowledge and management that such cases ever happen. Excessive hemorrhage after extraction of teeth can in all cases be so far checked, even by the patient, as to be beyond danger until other

aid can be obtained, and in most cases entirely stopped by putting wads of lint or cotton into the orifice and pressing hard upon it with the finger.

CLEANSING THE TEETH.

The most important rule to be observed for the preservation of the teeth is to keep them perfectly clean. Any foreign substance remaining upon or about them night and day, is the principal cause of inflammation of the gums, an offensive breath, loosening of the teeth, and by soon becoming acetic, occasions a premature decay. Cleansing the teeth and mouth should with every individual be a daily habit.

"Let each successive day unfailing bring
The brush, the dentifrice, and, from the spring,
The cleansing flood:—the labor will be small,
And blooming health will soon reward it all."

It should be faithfully done after every meal, or at least once a day, and that at night in preference to morning. When cleansed only in the morning they remain so but a short time, and whatever collects upon them during the day will remain upon them all night; but if cleansed after supper they will be free from food until breakfast.

"In sickness the rules for cleanliness of the teeth should be more rigidly enforced than at any other time, as then they are more exposed to destructive agents, and are very liable to participate in the general debility and disease of the system."

When artificial teeth on plates, are worn, they should in all cases be taken out daily, and by the use of a brush be thoroughly cleansed with fine soap and water.

TOOTH-BRUSHES AND TOOTH-PICKS.

The tooth-brush and the tooth-pick are the most suitable instruments for cleaning the teeth. Tooth-brushes should not be so hard and stiff as to lacerate and wound the gums, but should be moderately soft, and as elastic as possible, yet not too soft to effect the object which is necessary.

The best materials for tooth-picks are ivory and the goose quill. Metallic substances should never be used.

Some persons make use of a sponge, or a cloth, or the finger, for cleaning the teeth, but instead of removing foreign substances from those parts of the teeth most liable to decay, they only remove them from the most prominent portions of the teeth where there is no danger, and leave untouched their depressions and contiguous parts.

Floss silk is often used to remove substances from between the teeth, and is one of the best means when properly applied.

DENTIFRICES.

Tooth powders and washes may sometimes be advantageously employed in cleansing the teeth, and treating diseases of the gums. In a healthy condition of the teeth, usually no substances need be used with the brush, except pure water. Many of the dentifrices vended at the present day for whitening and beautifying the teeth, contain properties which exert upon them a deleterious effect. Charcoal has been largely used for cleaning the teeth, as it has been supposed to contain properties which would prevent their decay. But it is found not only that it does not produce the effect ascribed to it,

but that its use is productive of injury, inasmuch as it gets between the gums and necks of the teeth, causing inflammation and a black appearance.

Many dentifrices contain acids and sharp gritty substances which should never enter into their composition, as acids decompose, and gritty substances wear away the enamel of the teeth. When dentifrices are used, they should be composed of such materials as will tend to purify the breath, neutralize any acids that may be about the teeth, and remedy sponginess or any disease of the gums.

A small quantity of fine soap pleasantly flavored, may often be advantageously employed in cleansing teeth.

FILLING TEETH.

——"With skill
The practiced dental surgeon learns to fill
Each morbid cavity, by caries made,
With pliant gold:—when thus the parts decayed
Are well supplied, corrosion, forced to yield
To conquering art the long contested field,
Resigns its victim to the smiles of peace,
And all decay and irritation cease."

This is an operation for arresting the progress of caries of the teeth, by removing the diseased parts, and by filling the cavity with gold or some other substance. This is the most important and at the same time the most difficult operation in Dental Surgery. Says Dr. C. A. Harris, "It oftentimes baffles the skill of operators who have been in practice from ten to twenty years. It is, also, when well performed, the most certain and only remedy that can be applied for the cure of deep-seated caries. But to be effective, it must be executed in the most

thorough and perfect manner. The preservation of a tooth, when well filled, and with a suitable material, if it be afterwards kept constantly clean, may be regarded as certain. At any rate, it will never be attacked again in the same place by caries."

On this highly important operation, Dr. E. Parmly thus remarks: "If preservation be as good as cure, this is as good as both, for the operation of stopping, when thoroughly performed, is both preservation and cure. And yet, it must never be forgotton, that this assertion is true only in those instances in which the operation is well and properly done; and, perhaps, it is imperfectly and improperly performed more frequently than any other operation on the teeth."

Much labor, mechanical skill, and experience, are requisite to excavate carious teeth and fill them so as to secure their preservation, although many imagine that

almost any person with very little knowledge and experience in the business can "fill teeth." And indeed almost any one can poke out some of the decay and foreign matter from carious teeth, and stuff in a little filling, as many itinerating quacks do at the present day who procure a few instruments, and go about among strangers, calling themselves *Dentists!* They not only deceive those who employ them, and take their money, but leave them to suppose their teeth are in a state of preservation, unaware that decay is still going on, until it has effected their irreparable ruin.

Now such practitioners must be dishonest or ignorant of the manner of performing the operation, and in either case ought not to be entrusted with the treatment of the diseases of organs so valuable as the human teeth. It is a very common fault with those who have decaying teeth, that they neglect them too

long. As they experience no inconvenience or pain from them, they apprehend no danger, whereas they can not be attended to too soon. Carious teeth should in all cases be filled before their nerves are exposed. Then they will be serviceable and no more subject to decay than sound ones; but if they are neglected until decay has progressed so far as to expose the nerve, their preservation by filling is uncertain. If the filling press upon an exposed nerve, the tooth is liable to ache, and if filled after the nerve is destroyed, it is sooner or later liable to ulcerate and discharge matter through the gum. In performing the operation of filling teeth it is necessary to remove very carefully all carious and foreign matter lodged in the cavity, to wipe it perfectly dry, and press the filling in so as to be completely air and water tight, leaving its surface as smooth as the tooth itself. Teeth filled in this manner may

be preserved for many years, and in most cases during life. It is important that persons should have their teeth frequently examined by a skillful dentist, that the first appearance of caries may be detected and a remedy be applied. When filling is neglected too long, teeth can not be made so serviceable by the operation, and consequently blame is sometimes attached to the dentist.

The operation of filling is usually performed only upon the second set of teeth; but as their health and regularity depend much upon the healthy condition of the first set, these also, in many cases, should be filled whenever they begin to decay.

MATERIALS FOR FILLING TEETH.

Various materials have been used for filling teeth, and all of them are more or less objectionable, except gold, which, in the opinion of the author, is the only one that should ever be employed for this purpose; and teeth which are worth filling with any substance can be filled with gold. The gold, however, should be perfectly pure, and pressed so firmly and solid into the cavity as to be impermeable to the fluids of the mouth.

Thus in almost every case the permanent preservation of a tooth may be effectually secured.

Tin foil is less objectionable than most other articles used for filling teeth. When properly prepared and well inserted into the cavity, it will sometimes effectually preserve the tooth. It is considerably used, particularly for filling large cavities

in the back teeth, in cases where patients do not wish to pay for a more costly material. Tin is less durable than gold, and when the fluids of the mouth are very much vitiated, its exposed surface will slightly corrode, but it does not blacken the teeth, and is not attended with bad consequences.

There is used for filling teeth an amalgam, a compound of mercury and other metals, which is highly objectionable. There have been given to amalgam fillings various names, such as Enamel Cement, Bone Paste, Diamond Cement, Royal Succedaneum, Mineral Paste, Adamantine Cement, Lithodeon, &c. With some slight variations it has always been the same base article under whatever name it has been presented. By its use for filling teeth, the public have for many years been imposed upon, and it is still in use more or less—I will not say by dentists, but by quacks and imposters, "*operators*

on teeth," some of whom are even ignorant of its injurious effects, but many of whom know well its qualities, and use it only for want of knowing how to fill a tooth properly with gold. It is an article which can be applied by any one who can stop a hollow tooth with wax or putty; and being introduced in a soft state, it shrinks from the walls of the cavity in hardening, so as to admit the secretions of the mouth; consequently the progress of decay is not arrested. Teeth filled with this compound which soon oxydizes, become dark colored and are often rendered so black even into their fangs, that it is difficult if not impossible to restore them. The author has a collection of teeth which he has extracted, filled with these amalgams, that will fully illustrate the above statement. In the mouth of individuals highly susceptible to the influence of mercury, if much of this filling is used, it is liable to produce salivation,

and in most cases it is apt to produce diseases of the gums, mucous membrane of mouth, &c., therefore it should never be used.

ARTIFICIAL TEETH.

On account of the great liability of the human teeth to decay, and the means of their preservation being so much neglected, but few persons arrive at even years of maturity without loosing more or less of these valuable organs.

To such perfection has the art of dentistry reached, that their loss can be supplied by artificial ones, not only so completely resembling the natural organs as not to be detected by the most critical observer, but are also very useful in mastication and speaking, and restore to the face its natural appearance. Mineral teeth

are the only kind now used as artificial substitutes. They are composed principally of *feldspar* and *silex*. Artificial gums are made of similar materials, only colored. These teeth are incorruptible, not being affected at all by any action of the fluids of the mouth, and they always retain their color.

Artificial teeth can be inserted in any number from a single tooth to an entire set; and when properly adapted to the mouth, can be worn without suffering or inconvenience.

The methods of inserting teeth are, with pivots on the roots of the natural teeth, on plates kept in their place by clasps and springs, and by atmospheric pressure.—The six upper front teeth are the only ones that can be advantageously inserted with pivots on the natural roots. If the operation be properly performed while the roots are in a healthy condition, the teeth will in most cases be very serviceable for

many years. But if the roots are much diseased it is better to extract them and insert teeth on plate. A single tooth mounted on plate may be retained in place upon the upper jaw by atmospheric pressure, but when only parts of sets are needed, it is generally better to secure them by means of clasps, when it can be done without injury to the natural teeth. Whole sets are sometimes retained in place by springs, but can be held very much firmer on the principle of atmospheric pressure, and are much more convenient to the wearer, as springs are more or less troublesome.

The utility of artificial teeth depends upon their being properly made and nicely adapted to the mouth. As no two cases are precisely alike, much ingenuity and accuracy of execution are requisite in constructing and applying them so that they will remain firm in their place and not be productive of injury to the

parts with which they are connected, and at the same time be easily removed and replaced by the wearer. But when artificial teeth are improperly inserted, they are a source of great trouble and inconvenience to the patient, and are oftentimes productive of irreparable injuries.

Hence the importance of employing those only who are well known to be reliable and skillful operators.

Many who pretend to insert teeth on atmospheric pressure, do not seem to understand the principle at all, as the teeth they insert barely stay in place from the form of the jaw, without being retained in the least by atmospheric pressure, and are a source of trouble and inconvenience to those who wear them, as they so easily get out of place. The firmness with which teeth applied upon this principle, adhere to the gums, depends upon the proper form of the plate.

When teeth inserted in this way are

properly constructed and fitted, they will hold in their place very firmly, and can not be easily pulled down with the thumb and finger. The author has inserted many sets that will hold a weight of twenty or thirty pounds, and in all cases has been able to make them adhere with great tenacity. But unless great judgment and skill be used in their construction, an entire failure may be expected, or at least they never can be worn with comfort and satisfaction. When artificial teeth are inserted where the alveolar ridge is much absorbed and the gums are shrunk away, the deficiency of the natural gums should be supplied by artificial gums, which can be made perfectly, resembling the natural.

Gold is the best metal for plates employed in inserting artificial teeth, and is more extensively used than any other.

Silver is sometimes used for temporary purposes.

Platinum has long been used for dental purposes, and withstands the action of the fluids of the mouth as well as gold.

There has recently been introduced a method of inserting teeth, in which case platinum only can be used. This plan consists principally in cementing single teeth to platinum plates, which are used instead of gold, as they will withstand the great heat necessary to fuse this cement to the plates, which gold will not.

ARTIFICIAL PALATES AND OBTURATORS.

There are persons who have defects of the palate or roof of the mouth, which are either congenital or are produced by disease. When these defects can not be remedied by surgical operations they may be in most cases, by means of artificial palates made of gold, so as to render such defects scarcely perceptible.

CHLOROFORM AND ETHER.

Chloroform and ether are colorless liquids, the vapor of which has been extensively used by inhalation, for the last few years, for producing insensibility to pain during surgical operations. A preference has been given to the use of ether in the New England states, either from its being regarded as less dangerous than chloroform, or from the fact that its use was here discovered. But generally both in Europe and in the United States, chloroform has the preference, and is considered no more dangerous than ether. A much less quantity of chloroform than of ether is requisite to produce the anæsthetic effect. Its action is much more rapid and complete, it is more agreeable to inhale, is not so apt as ether to produce coughing, and its effects pass off sooner after inhalation is suspended.

A pure concentrated article only, should be used, and should be administered with great caution. Most of the bad effects resulting from the use of chloroform and ether, are to be attributed to the use of an impure article, or from its being injudiciously administered.

The author has given chloroform or ether in several hundred cases in extracting teeth, and in other severe operations; giving it in all cases when the patient has desired it, unless where he considered it hazardous on account of disease or infirmity, and has not witnessed *any unfavorable results.* His method of administering them is to diffuse a little of the liquid upon a handkerchief or napkin, and hold it over the mouth and nostrils so as to be fully inhaled, and generally in about a minute or two the desired effect will be produced.

QUACKERY.

"Be watchful, ye—whose fond maternal arm,
Would shield defenceless infancy from harm,
Mark well the hour when nature's rights demand
The skillful practice of the dentist's hand.
But use discretion:—oft imposture wears
The same external guise that merit bears;
And bold pretenders show consummate wit,
By duping others to abandon it.

Beware of those whom science never taught
The hard but useful drudgery of thought,
For while in indolence their years have run,
They ask the wealth that industry has won:—
Can charity for such desire success?
No, let them eat the bread of idleness.
On just desert let all success attend,
And patient merit never want a friend."

There are ignorant pretenders to knowledge and skill in the dental, as well as in all other professions. Most persons, however, seem not to be aware how much imposture, bold, daring, unblushing quackery, there is in many of those who operate on teeth, particularly among the itin-

erating class, who stalk abroad with clamorous pretensions to surpassing skill and success, whose assurance is often a substitute for merit. These quacks have no hesitation in assuming the title of *Doctor*, and stealing the mantle of science and wearing it without license, trusting to luck for such qualifications as they deem necessary, going on for years without troubling themselves to obtain a scientific knowledge of the profession which they attempt to practice, but which they only disgrace. What little knowledge they do possess is usually merely mechanical, without any acquaintance with the anatomy and pathology of the mouth and teeth, which must go hand in hand with mechanical skill, or the operator will meet with insurmountable obstacles.

These Vandals are to be found in every city and almost every town and village in the land, and their ruthless depredations are almost daily to be met with in the

mouths of those who have fallen a prey to them. Thousands of teeth are annually destroyed by their hands, and the amount of injury and pain they inflict by various means, it is impossible to estimate. Quack dentists are mostly from that class of persons who think but few qualifications are needed to be a dentist, and that these can be obtained in perhaps a few days. With such views they procure some tools, and may be a few books, and in a short time claim to be *Dentists from some large City.*

For illustration, a case or two will be given. A carpenter by trade came into the office of the author, and looking at the instruments and other apparatus, remarked that he did'nt see why he could'nt operate on teeth as well as any body. Being told that he probably could by devoting sufficient time and attention to the study of the business, he inquired the expense and the length of time necessary.

On being informed, he replied that he could not afford to spend so much time and money just to study Dentistry. In less than six weeks he was among strangers, assuming the title of *Dr.* ——, *from Boston*, advertising to perform operations on teeth, such as cleansing, filling, extracting, setting on pivot, &c., and could be seen going from door to door, inquiring if any one wished for operations on teeth.

Another, who had worked at blacksmithing, called and said he was making himself some tools to "*fix teeth with*," and wanted to borrow some books to "*read dentistry*." In a very few weeks he was heard of in various places offering his services as a Dentist, and making great pretensions to skill and experience.

Although such operators are destitute of the qualifications requisite for a Dentist, it is not to be supposed that they are wholly ignorant of human nature and of means to obtain business.

Knowing that every one loves to save money and avoid suffering, they usually advertise to perform operations at low prices and without causing pain. Also they are ready to warrant their work, and are perfectly safe in doing so, as they seldom stop in one place long enough to have their work fairly tested. As to performing operations without causing pain, perhaps they do in filling teeth, by half excavating the cavity and half compressing the filling. But in extracting teeth, can it be supposed that their irons are easy to the teeth, or that they can wield them better than the most scientific and experienced? Or in treating tooth-ache and diseases of the mouth and teeth, can they understand it better than those who have pursued a thorough course of study and are experienced?

But how can they afford to do their work cheap? Because they have spent little or nothing in qualifying themselves,

and by using cheap materials. Operations performed by this class of workmen, instead of being cheap, usually prove to be dear ones, as they oftentimes are productive of serious injuries.

The writer would by no means advocate exorbitant prices, but only a fair compensation for dental operations.

These operators are patronized, and will continue to be as long as many seek for *cheap*, instead of *skillful* dentists, and are not willing to pay for such operations as would be serviceable to them.

There is a class of dentists to be found, particularly in large cities, who are far from being the most scientific, and who do not receive the patronage of those who best understand how operations upon the teeth should be performed. In order to obtain patronage they load the newspapers, particularly those which go into the country, with flaming advertisements of wonderful discoveries and improvements

in dental science. Such advertisements are usually not worthy of notice, as all inventions and improvements of real value are soon in the hands of all the most learned and scientific dentists.

By this means strangers are attracted to their offices for operations, supposing them to be superior to others who disdain to resort to such bombastic pretensions, and who rely only upon their real merit for patronage. And the true character of this boisterous class of dentists is not ascertained by those who employ them, until they find by suffering and inconvenience, that they have paid their money for inferior operations, which are of little or no service to them.

There is another class of dentists who are patronized and sustained on account of their excellent character and good qualities as citizens, and who may be honest in their intentions, yet for want of sufficient study of the science, or of mechanic skill,

or for some other reason, they do not succeed in performing operations so as to give satisfaction, particularly in more difficult cases. And many of those who employ them, after they find their work is inferior to that of other dentists, are unwilling to find fault, because, as they say, "He is such a very fine man I would not wish to injure him."

QUALIFICATIONS REQUISITE FOR A DENTIST.

A dental practitioner should possess sound judgment, a good degree of mechanical ingenuity, steadiness of hand, firmness of nerve, and should exercise complete self-possession, the greatest carefulness, and due regard to the feelings of the patient; for many persons when about to submit to some dental operation, however simple, often manifest oppressive fears and

nervous excitement, and this is the moment in which the dentist should manifest sympathy and speak a word of encouragement. The dentist in performing his operations, should not make pecuniary gain his only object, but should regard the real welfare and lasting good of his patients. He should make real excellence his constant aim, and render himself worthy of the unlimited confidence of those who favor him with their patronage.

Although the dentist may be the most careful and scientific in performing operations, yet if any difficulty occurs, all the blame is liable to be attached to him, from the fact that those who have operations performed are not aware of the insurmountable difficulties and perplexities which the dentist has to encounter.

In filling teeth, those who perform the operation in the most thorough manner, are liable to be accused of being harsh, as it is apt to cause more pain, thoroughly to

excavate the cavity and press the filling so as to preserve the tooth, than it is to perform the operation as slightly and imperfectly as many do.

DENTAL EDUCATION.

It is highly important that the dentist who is entrusted with the management of so valuable organs as the human teeth, should have a thorough, scientific knowledge of his profession, even as much so as the medical practitioner, the general surgeon, or men of other professions.

A thorough knowledge of this science can not be obtained without devoting considerable time and study to it. The dental practitioner should possess a minute acquaintance with the anatomy of the head, mouth, teeth, etc., and should be familiar with all the various diseases to

which they are subject, their treatment and remedy. He should also have a knowledge of general anatomy and pathology.

There are now several Dental Colleges in the United States, where the most thorough instructions are given in Dental Science, on a plan similar to that of Medical Institutions. There are also many scientific dentists of whom instruction can be obtained, therefore no one who makes choice of the dental profession as a business, need be destitute of the requisite qualifications.

In Dental Colleges the student is required to attend two full courses of lectures, which, in connection with the necessary study occupies about two years. Without devoting at least as much time as this to the study, no one should be considered qualified to practice as a dentist.

This subject is more fully discussed in the following, from the pen of Professor

Handy: "The *object* of dental education is assuredly the same as that of medical education, to wit, the relief of suffering humanity by applying all the resources of medicine and surgery to the cure of the diseases of the dental organs—as that of medical education, under the head of general medicine and surgery, does to all the diseases of the whole body. In other words, dental education is only a link in the great chain of medical knowledge—that it is a part and parcel of the same great science, rests upon the same immutable laws, and must consequently be studied in all its extent and relations, for the practical and proper application of those general principles which belong to any one part as well as to the whole of the body.

It is no objection to urge that because the dental organs are of limited extent, that therefore the object is not the same—or at most, that dental education is not re-

quired to be near so extensive as that of the medical. With equal propriety, it might be urged, that as the eye and the ear form but very small portions of the whole body, that those, therefore, who devote their whole time to the cure of the diseases of these organs, have no need of any further knowledge of the rest of the system, and that, as they practice no further, that consequently their object is not the same as that of the general practitioner. But no such a position has ever for a moment been entertained by any one; but on the contrary, our ablest physicians and surgeons are always selected to preside over those large infirmaries for the cure of the diseases of the eye and the ear; and from the settled belief and undoubted truth of such convictions, that he that is most familiar with the whole body and all its diseases, would be most likely to relieve any particular part of the same body when deranged and requiring treatment.

Now, if such be true of the eye and the ear—the same must be as certainly true of teeth and the whole of the dental apparatus—for no one pretends to question the fact that the teeth are organized bodies, though this statement was formerly disputed, and even in this day of progressive knowledge and discovery, practically denied, by all the host of dental pretenders, who go to work upon the teeth as they would upon so many nails driven into the billet of wood, just as if there was not a spark of vitality present—though the sense of pain thrilling through the sensitive nerves of the patient, declares in the loudest language of nature, that the teeth are organized, and that the assurances of boasted ignorance should stand abashed and ashamed to attempt the repair of such delicate structures of nature's workmanship.

* * * * *

To perpetuate and extend this high honor and usefulness is a sacred trust, be-

queathed to those who are about or shall hereafter enter the ranks of the dental profession. To secure and guard this trust, we desire, therefore, most earnestly, to insist upon, as a fundamental element, the absolute necessity of a *thorough dental education.*

Presuming enough has been said in support of the position that the *object* in both a dental and medical education is the same—we are now prepared to discuss the last point we propose to notice, which is to consider the *means* of attaining this object. The object of both professions being the same, it necessarily follows that the means used in each must also be the same—and these may be summarily arranged under three heads, viz: 1 Physical, 2 Mental, 3 Moral.

These threefold means or instrumentalities refer to the compound being or threefold nature of man, as being endowed with material instruments, intellectual and moral powers.

The highest possible education of each of these several agencies, forms the surest guarantee of the highest possible skill, success, and eminence, both in dental as well as the medical profession.

The *hands* as representative of the *physical means*, must be constantly exercised, so as to acquire that nice tact so necessary, in all the various surgical and mechanical manipulations upon the mouth and face, and still further of unfolding, by means of the knife, all the various tissues of the body, so as to acquire that *anatomical knowledge*, which is of such vast importance as to form at once, both the basis and guide in rearing the superstructures of either practical dentistry or general surgery — and this anatomical knowledge, so necessary for practical purposes, (we here desire to state,) can nowhere be obtained in books—the dissecting room is the only place it is to be found, and can here be secured only by the most

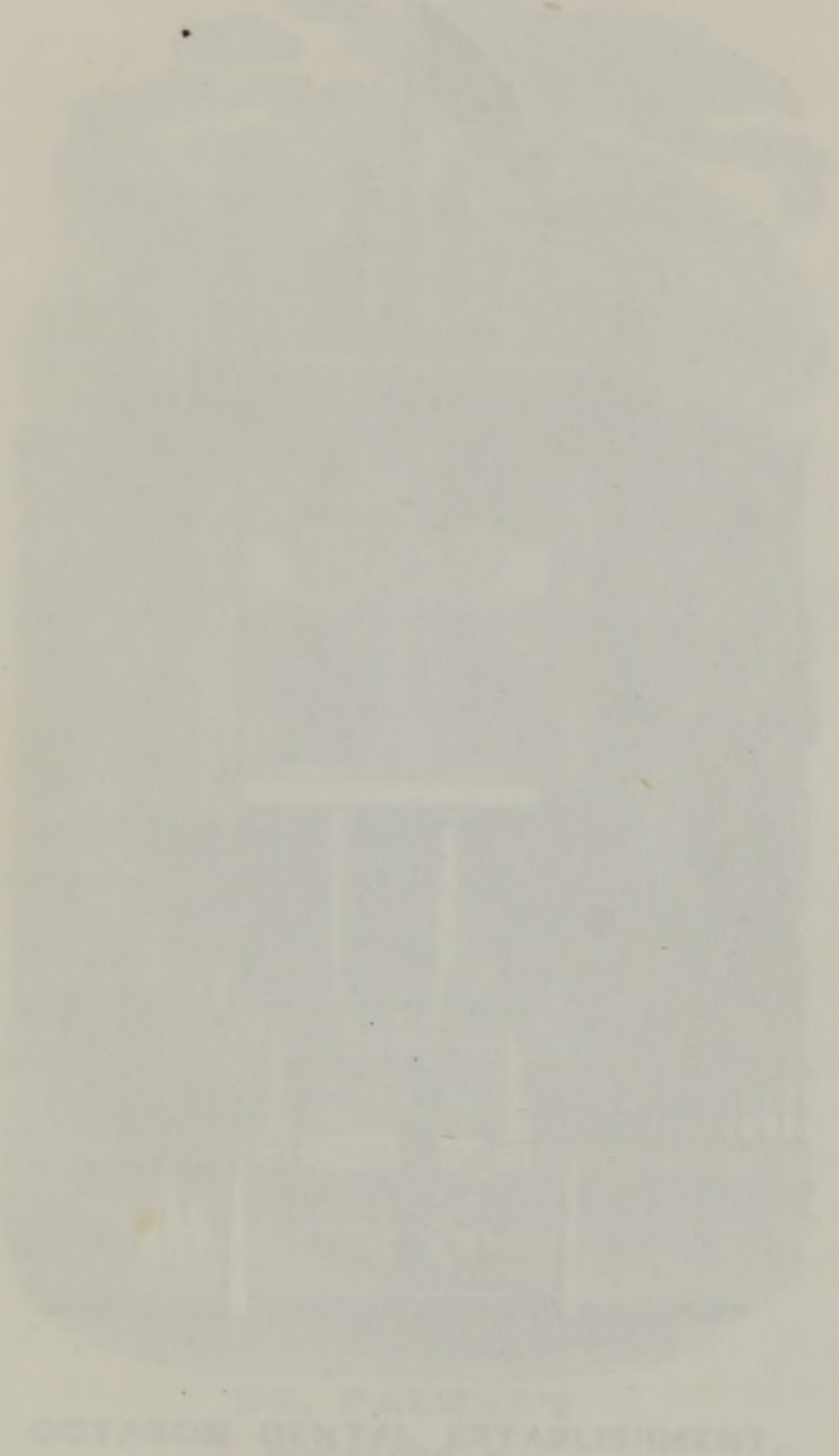
assiduous and untiring perseverance in the use of the knife, in dissecting the whole and every part of the body.

The *mental means* refer to the education of all the faculties of the mind, in the acquisition of all kinds of knowledge, both dental and medical, that can, in any way, assist the dental student in reaching the highest possible point of dental intellectual eminence, by which his reasoning powers will become so thoroughly drilled, that he can readily discriminate with the greatest conceivable accuracy the relations of cause and effect, and thus most effectually apply the vast and varied resources of his intellectual storehouse to the best method of restoring to health any of the dental organs that may be deranged.

The *moral means* constitute the master and finishing stroke of the dental education, which is deemed necessary to the at-

tainment of the highest possible of professional dental excellence.

Without the education of the heart, in the exercise of all those high moral and elevated feelings of benevolence and charity, of obeying the golden rule of duty as well as of professional etiquette, to wit, of doing unto others as we would that others should do unto us. We say, without this latter species of education, all the brightness of the two former, however so brilliant, will necessarily wear a shadow, which in proportion to its extent and intensity, must in like proportion eclipse the usefulness, and detract from the otherwise high eminence which has been attained."



DR. PALMER'S

OCTAGON DENTAL ESTABLISHMENT,

FITCHBURG, Mass.

Advertisement.

DR. H. PALMER,

DENTIST,

AND

MANUFACTURER OF MINERAL TEETH,

OCTAGON BUILDING,

MAIN STREET.....,FITCHBURG,

MASS.

Would say to his numerous patrons and the public generally, that he is constantly prepared to perform all the various operations pertaining to his profession, in the most thorough and scientific manner, and that his New Establishment is fitted up in the best style for the accommodation and comfort of patients, and with unsurpassed facilities for business. He would further say that by great experience and exceeding carefulness, he is able to perform operations with comparative freedom from pain.

He intends to make his charges so moderate, that all may avail themselves of the benefits to be derived from the Science of Dentistry.

Filling and Cleansing Teeth.

He would say, that he gives the most particular attention to the preservation of the Natural Teeth, which is of the first importance, by very carefully and nicely Filling and Cleansing them.

ARTIFICIAL TEETH.

He is also constantly supplying Artificial Teeth, under every variety of circumstances, from a Single Tooth to an Entire Set, with or without Artificial Gums, upon his highly approved methods, which are giving the highest satisfaction.

The Teeth which he inserts are manufactured at his Dental Laboratory, from the most choicely selected materials, which gives him advantages to adapt their form and color to each case, superior to Dentists who do not manufacture Teeth. They are not surpassed for utility, beauty, durability, and ease and comfort to the mouth, as hundreds who are wearing them can testify.

Teeth Inserted upon a New Plan.

This consists principally in cementing Single Teeth to Platinum Plates, forming a continuous gum, giving to the work a very natural appearance and rendering it easily kept clean.

PLATINUM is the only metal which can be used for plates for this kind of work, as it will withstand the great heat which is necessary to fuse this cement to the plate, which gold will not. This plan is mostly used for half and whole sets of Teeth, on the *Atmospheric Pressure* principle.

Extracting Teeth.

DR. P. has extracted over nine thousand Teeth during the last eight years of his practice; a large number of which, have been extracted while the patient was rendered insensible to pain through the effects of Chloroform or Ether.

With such extensive experience and with the greatest facilities, he feels sure of success in all cases, and will pledge himself to extract Teeth, however difficult, with the greatest carefulness and facility, and the least possible pain to the patient,

Treating Irregularities of the Teeth.

This is an operation which but few Dentists undertake, and which, to insure success, requires the greatest perseverance and the most consummate skill.

Dr. P. has adjusted the most difficult cases of irregularity with the most extraordinary success, and would suggest to those whose Teeth are irregular, the importance of the operation.

ARTIFICIAL PALATES.

He would say to the few who have defects of the natural Palate, causing impediments of speech and other inconveniences, that he can supply artificial substitutes, so as in a great measure to remedy these difficulties.

DENTIFRICES.

Dr. P. dispenses in his practice, a highly approved Tooth Powder, for correcting an *offensive breath*, and cleansing and beautifying the Teeth. Having alkaline properties, it neutralizes the *sceptic* condition of the fluids of the mouth, resulting from decayed teeth, sour stomach, &c.

— ALSO —

Palmer's Aromatic Mouth Wash.

A superior preparation for Spongy Gums, Canker, Inflamation of the mucus membrane of the Mouth and Throat, and imparts a delightful fragrance to the breath.

ACCOMMODATIONS.

DR. P. would inform those residing at a distance, that he is prepared to furnish entertainment at his DENTAL ESTABLISHMENT, to those who may wish, while stopping to have operations performed.

For the greater accommodation of his numerous patrons and the citizens generally, of the neighboring towns, he has had constructed a

MOVABLE DENTAL OFFICE,

AND HAS CONNECTED WITH HIM IN BUSINESS AN

EXPERIENCED DENTIST,

who will visit with this Office, the towns in the vicinity of Fitchburg, giving to those who may wish, a favorable opportunity to consult him in regard to their Teeth, and to have operations performed.

DR. PALMER'S TESTIMONIALS.

To the many for whom he has performed operations he considers testimonials of his qualifications unnecessary; but to strangers he considers it but justice to say that he has availed himself of the greatest advantages which the country affords, to thoroughly qualify himself for his profession; and that he has testimonials of qualification of no ordinary degree, from gentlemen of the first standing in the profession, to whom he has been subjected for examination in each and every branch of the Dental Art.

He is a regular graduate of the Baltimore Dental College, and Fellow of the American Society of Surgeon Dentists.

He would also refer them to the following gentlemen in this place and vicinity, a few of the many who have tested his practical skill:—

ALFRED HITCHCOCK, M. D., FITCHBURG.
T. R. BOUTELLE, M. D., "
P. S. SNOW, M. D., "
L. PILLSBURY, M. D., "
O. L. HUNTLEY, M. D., "
C. W. WILDER, M. D., "

T. W. WADSWORTH, M. D., FITCHBURG.
C. ROBINSON, M. D., "
HON. MOSES WOOD, "
N. WOOD, Esq., "
ALVAH CROCKER, Esq., "
C. H. B. SNOW, Esq., "
G. F. BAILEY, Esq., "
A. NORCROSS, Esq., "
L. DOWNE, Esq., "
T. K. WARE, Esq., "
Col. IVERS PHILLIPS, "
WALTER HEYWOOD, "
DAVID BOUTELLE, "
STEPHEN SHEPLEY, "
HENRY J. LOWE, "
BENJ. SNOW, Jr. "
J. B. LANE, Druggist, "
WM. B. TOWNE, "
H. HILL, Deputy Sheriff, "
L. H. BRADFORD, "
C. MARSHALL, "
Rev. E. DAVIS, "
Dea. J. T. FARWELL, "
Dea. ABEL THURSTON, "
McINTIRE & JAQUITH, Fitchburg Hotel.
PHILLIPS & HAMMOND, American House, Fitch'g.
C. HAYWARD, Rollstone House, Fitchburg.
REV. E. W. BULLARD, Royalston.
REV. QUINCY WHITNEY, Westminster.
J. R. GAUT, Preceptor of Westminster Academy.
C. C. FIELD, M. D., Leominster.

C. H. COLBURN, P. M.,
WM. H. CUTLER, M. D., Ashburnham.
A. MILLER, M. D., "
W. D. PECK, M. D., Sterling.
DR. KING, Lunenburg.
DR. COCHRAN, New Ipswich, N. H.
DR. KITRIDGE, " " "

THE HIGHEST PREMIUMS

Were awarded to DR. PALMER for superior specimens of Artificial Teeth, at the Fairs held at Fitchburg, in 1850, 1851, and 1852.

DIPLOMAS.

TRANSLATIONS.

THE ACADEMY
OF
DENTAL SURGERY,
BALTIMORE.

To all to whom these Letters may come,

Greeting:

THOMAS PALMER, a virtuous, honest, and talented man, has been a student with us, and has devoted himself so diligently to the Science in which we are particularly skilled, that after a sufficient term of time having elapsed in our Halls, and having been referred to an examination by our Curators, he has shown himself sufficiently accomplished in the studies, and we have created him a Doctor of Dental Surgery, and have conferred upon him all the honors, rights and privileges belonging to this profession. In testimony of which we have subscribed to these letters our names, sanctioned by the Seal of the Academy.

Dated Baltimore, February 15th, 1847.

[SEAL.]

C. A. HARRIS, M. D., D. D. S.
Prof. Principles and Practice, Dental Surgery

THOS. E. BOND, A. M., M. D.
Prof. Special Pathology and Therapeutics

W. R. HANDY, M. D.
Prof. Anatomy and Physiology

AMOS WESTCOTT, A. M., M. D.
Prof. Operative and Mechanical Dentistry

THE AMERICAN SOCIETY

OF

SURGEON DENTISTS.

To each and all, to whom this may come,

Greeting:

Be it known, that THOMAS PALMER, D. D. S., is a member of our Society, instituted in the year of our Lord, One Thousand Eight Hundred and Forty, for the purpose of promoting the art of Dentistry. He is a man of talents, of spotless character and of superior skill in the above mentioned profession. Therefore, by virtue of this diploma, we permit and direct him, always and everywhere, to claim for himself the privileges of this society.

And, of these things, our common seal affixed to this parchment, and the names of the President and Secretary of the Society subscribed, are a witness.

Given in the city of New York, on the eighth day of March, in the year of our Lord, One Thousand Eight Hundred and Forty-seven.

[SEAL.] E. PARMLY, PRESIDENT.

AMOS WESTCOTT, SECRETARY.