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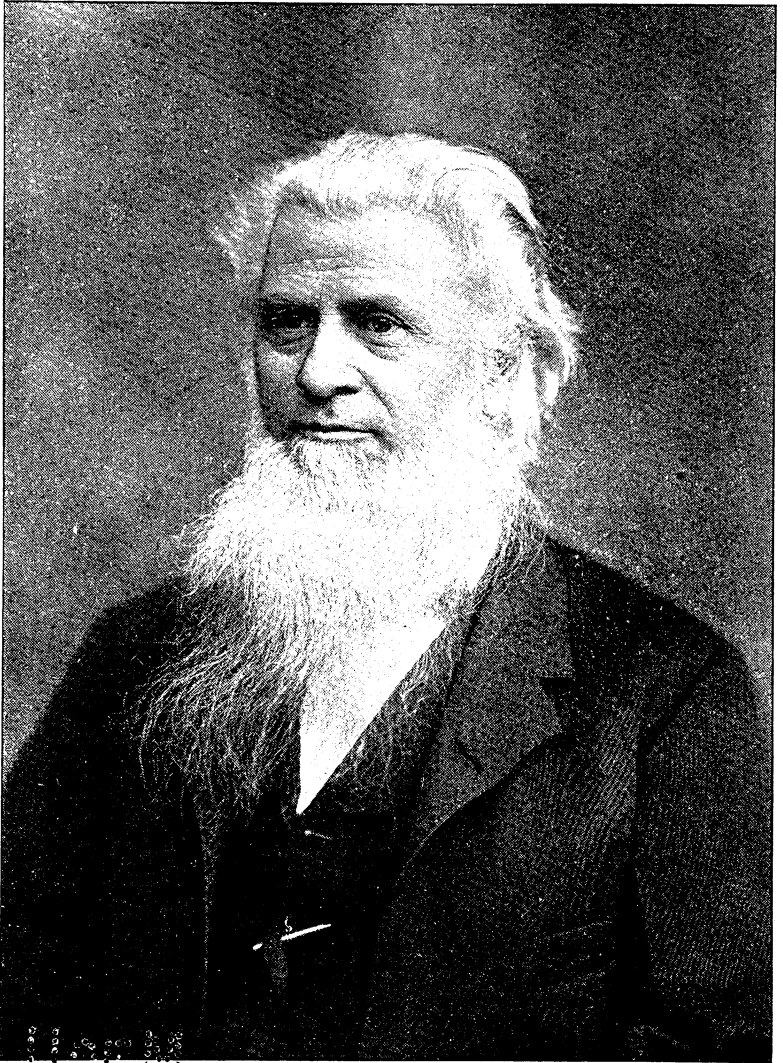
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T. B. WELCH, M. D.

ITEMS OF INTEREST.

VOL. X.

PHILADELPHIA, JANUARY, 1888.

No. 1.

Shots from the Profession.

THE COMIC SIDE OF OUR PRACTICE.

JENNIE HILTON, D.D.S.

A dentist practicing his profession in a country town has all classes to deal with. The high and the low, the rich and the poor, the educated and the illiterate—all come under his professional care. He cannot select his practice as a city dentist can. To be a successful practitioner the country dentist must serve all, giving each his best professional services. He must endure the dirty, educate the ignorant, give his services to the poor, and be profoundly thankful for the clean, the intelligent, and the rich.

Ignorance and poverty are sad conditions, but the dentist who is true to himself and his calling must meet both with wisdom, sympathy and generosity, if he would have the patronage of the public.

But there is a comical as well as a pathetic side to our subject.

One bright girl said: "Say, doctor, what is a nerve? Is'nt it like a spirit?—something that can be felt and not seen?"

A lad of fifteen said, after I had examined his aching tooth, "Oh, do you think there is any danger of it exploding?"

A Swede said, "The meat in my teeth is sore; can you tell me vy?"

A man thought he had an aching tooth in his "lower jaw blade."

A mother wanted us to examine her daughter's cuspidular tooth, as she thought it was defected.

A woman came rushing in one day and said, "Can you kill my nerves here? My teeth are all a-achin', and I want my nerves killed."

A German girl said, "I want to take ether, and have my teeth pulled; but I am afraid if I do, I will lose my nervous, and never get it back again."

Another came in with a bitter complaint, saying, "Mrs. Jones' plate has a wind sucker in it, and mine ain't."

Another wanted an expression taken so she could have a set of new teeth made.

"My teeth are decayed already so quick," said a German girl.

One wanted her teeth examined, so we could tell her the number of cavities there were in them.

A mother enquired if it was just as well to have one tooth brush for all the family.

"The hindest tooth on the top side, she aches," said a sufferer.

"I want my measure taken for some new teeth," was the order we received from a toothless patient.

"Let me examine your sets of teeth; I want to buy a set for myself," said a woman. We assured her we did not keep them for sale ready made. She said, "Oh, I only want a part set; I suppose you can sell one of that kind, can't you?"

"My teeth's set easy. I pull many out mit my pinchers, mine own self," said a German.

"The bones are no good in this country," said another German, after having had a tooth extracted, "Germany is the place for good bones."

"Is that a ventilized gas machine?" was a lad's inquiry as he pointed to the gas apparatus.

"Have I many cabinets in my teeth?" said another.

"Make her teets very sharp, so that she can eat tough meat," said a man, when his daughter had had an impression taken for some new grinders.

"I had some teeth pulled me, and the roots were all wrapt round the jaw bone," said a man.

On enquiring after the health of one of my patients from her servant, she said, "Oh, she is discovering herself very fast now."

"Law sakes," said an old lady, "you needn't hister me; guess I can get up alone." I had begun using the lever in raising the dental chair. She added: "Guess my teeth ain't very clean; you see I am visitin' in town and left my tooth brush to hum. I kind of hated to borry from the folks where I am stoppin'."

In answer to our stern inquiry, "Why don't you brush your teeth?" a Yankee (for who else would have thought of inventing such a tale) said, "Well, you see, I live on a farm, and farming is such dirty work. I can't keep my teeth clean; but when I move into town, then I can do better.

Allow me to relate a little experience of my own on the tooth brush line:

When quite a young girl, I was teaching school in one of the rural districts, and boarded with the "best family." In those days.

teachers had but few privileges; they would have been thought "stuck-up," had they dared to ask for a separate sleeping-room, wash basin, towel, or any of the other necessaries to "aristocrat" living. All these conveniences they had to share in common with the family. I had a tooth brush, however, that I clung to tenaciously, as the only thing I could keep sacred, and as not belonging to the family. One morning my precious brush was missing. I searched my room, or rather my share of a room, everywhere, but could not find it. I went down-stairs looking disconsolate, I suppose, for my landlady said, "What's the matter this morning?" I said, "Oh, I can't find my tooth brush, and how can I eat my breakfast without brushing my teeth?" The old lady's face lighted up, while she said, "Why, Jane (I always did hate to be called Jane), I have got your brush down here; I used it, and forgot to take it back." "Used it?" said I, aghast. "Oh, yes," said she, "I have been a usin' it every day, to brush my false teeth with; but, Jane," said she, "I hain't hurt it none. Here, take it; it's as good as ever. There isn't a bristle out on't." I replied, "Oh,—keep it; I—don't—care—to brush my teeth—this morning—thank—you.

The oldest daughter, a girl of sixteen, said with a great deal of pride, "Well, we used to have a brush in our family of our own, too; but brother Jim, he took it last year to black his moustache with, and spoiled it, and we haven't had any since; but Ma, she ain't hurt your brush none. Some folks are awful particular and stuck up, it seems to me."

PARTIAL LOWER PLATES.

Reported by the *Cosmos*.

At a late meeting of the Odontological Society, Dr. S. L. Benson presented a lower gold plate, to which were attached partial caps bearing on the crowns of the remaining natural teeth so as to prevent the forces of mastication forcing the plate into the gum.

Dr. William Jarvie. The pressure comes on the crowns of the natural teeth, and not on the gums?

Dr. Benson. Yes. It enables a person to masticate without any pain, trouble, or inconvenience. I have been wearing such a plate, and I can speak strongly concerning its comfort. I have not seen such a device till recently. It may be new, and it may not.

Dr. J. Morgan Howe. I wish to call attention to the case that Dr. Benson presents, for I think that it is the most important of recent contributions in mechanical dentistry. Over six months ago, when at Dr. Bogue's office, he showed me a case that he was just putting into the mouth, on which he used spurs or caps of gold in

connection with clasps, to go over the grinding surface of teeth remaining in the mouth, so as to prevent the plate from pressing too hard on the gum. There was an upper and a lower partial gold plate, and all the force that could be brought to bear on the artificial teeth was not sufficient to make them impinge on the gum so as to cause pain. I saw that the advantage of it was great in many cases, and I have since used it a number of times with success. I learned from Dr. Bogue that he had used the method for a long time, and I desire to give him the credit justly due him.

Dr. Perry. I never saw a device of this sort before to-night, but it seems to me to be one of the most important improvements made for a long time, inasmuch as it is well suited for use in place of bridge-work. How any one can do bridge-work after seeing this device I cannot imagine. It can be removed and kept clean without trouble, and will do all that bridge-work can do, and a great deal more.

The President. I do not know how the idea came to me, and I do not know that the credit should be given to me. But it is immaterial where it came from so long as we have it and can use it. I was exceedingly pleased to find that Dr. Benson, in a case that I had conjointly with him, was able to accomplish by the method here exhibited what he had never been able to accomplish for the patient before,—viz., utilize all the teeth in the mouth, above and below, protect the incisors from breakage, and fill all vacant places. Dr. Benson was successful in accomplishing a good result, and I proposed to him that he should come here and exhibit the case. The patient stepped in the other day to say how comfortable he had been with the appliance, and to express his acknowledgments for the care and skill with which the work had been done.

Dr. Jarvie. With reference to this appliance for preventing the plate pressing too severely on the gums, I will say that in a recent number of the *Dental Cosmos* appeared an article from the pen of some London dentist describing exactly the same thing,—that is, a gold clasp arranged in such a manner over the crowns of bicuspid and molars as to prevent the plate from slipping up and injuring the gum.

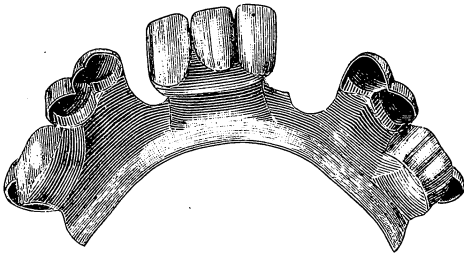
Dr. J. Smith Dodge, Jr. Since that invention has gone so far as England, I would like to assure the gentlemen that it is a good working device. My father, who has not done much at dentistry for a number of years, has been doing that ever since I can remember. It must be two years since Dr. Watson D. Woodward, who is here to-night, made for me a lower plate which is almost a fac-simile of this one that has been passed around, with caps over the third molars, the only teeth remaining back of the single bicuspid on each side, holding the plate so that it would not drive down into the gum. It was very

successful, and mastication was well performed. I have not seen it for a year, but I saw it a year after it was inserted and it was working nicely at that time. My father has turned over these little ears on the side of the clasp, especially on bicuspid, as long as I can remember. So that my contribution to the discussion is that it is not only a good thing, but has been abundantly proved to be a good thing, that wears well. I happen to think of a patient for whom my father made such a plate very many years ago, and I know he wears it still, for I have seen the plate within a year. It is a thing that stands the test of time.

Dr. Perry. We will have to give your father a little mild scolding for not letting us know about so good a thing.

REMARKS BY THE EDITOR OF THE "ITEMS."

By an accident when a boy, we lost three front lower teeth, and, by our parent's neglect, the first lower molars. By abrasion, the other lower grinders became shortened and very sensitive. Five years ago, we had our son Charles cap them with gold and platina alloy, which effectually cured their sensitiveness; and three years ago our son Frederick, now of Syracuse, substituted the lost teeth with a partial lower set, with a plate having gold caps to fit each of the remaining grinders, as illustrated in the accompanying cut. We had worn partial sets before, but with great discomfort.



It will be observed that the plate is movable, so as to be kept thoroughly clean, and yet the gold caps fit tightly, so as to prevent food, etc., working under them. There are no clasps; and as the pressure in mastication comes on the natural teeth, there is no impinging on the gums.

The English case, above referred to, is not the same. For thirty years we have prevented impingement of a partial plate by the manner in which the clasps or bands hugged the natural teeth; but the entire capping of the remaining natural grinders, as here illustrated, we have never before seen or heard of.

The co-instances related by our New York dentists show how many men, unknown to each other, may originate the same device.

A COURSE OF READING FOR DENTISTS.

J. D. MOODY, D.D.S., MENDOTA, ILL.

In answer to numerous inquiries I have arranged the following outline of study and work. It is one, too, which I believe will be found to be both profitable and interesting. Though not extensive, it will give a good idea of some of the basal principles on which our professional knowledge rests. It will make excellent filling in for rainy days, dull days and evenings.

It am confident that once commenced it will not be dropt. The arrangement is the outgrowth of actual trial. Having proven satisfactory to others, and believing it will in some degree meet a want which has been felt by many dentists, I give it the advantage of the wider circulation.

The books to which I refer may not be the best in these different departments, but they are all good authority and I mention them because they are just what I used myself, and they answered the purpose well. If desired, others in the same lines could be substituted.

Even if simply read through carefully, this course would result in much profit. But it will be found not only a delight, but a recreation of easy attainment to pursue it as laid down. A microscope will be needed. One of the cheaper stands of a reputable maker and the "Student" series of objectives will answer every purpose. However, if one has had some experience I would advise getting the better class of objectives. A $\frac{3}{4}$ and a $\frac{1}{4}$ objective will suffice, though better work could be done by having a 2 in., a $\frac{4}{10}$, $\frac{1}{4}$ and a $\frac{1}{8}$ objective. The $\frac{1}{4}$ and $\frac{1}{8}$ should be dry objectives and have long working distance combined with flatness of field. The little work, *Microscope for Beginners*, by Dr. Stokes, will be very helpful to the inexperienced. Of books, first get *Structural Botany*, vol. I., of Gray's *Botanical Text-Book*. Read it through carefully. Understand it. Next get *Physiological Botany*, vol. II. of the same series, by Goodale. Study through to page 195, using microscope. Then get *Practical Botany* by Bower and Vines, and work out with the microscope all of the different tissues there given. Don't slight this part of the work. For reference use *Plant Dissection*, by Arthur, Barnes and Coulter. It will be a good plan before beginning this work to gather specimens of all the plants required, and put in alcohol for use in the winter. This part of the work will be fascinating, A cabinet of beautifully colored specimens can soon be secured.

After completing Bower and Vines take up Goodale again, beginning at Part II., page 195. Read through once carefully to get a picture of the whole, then go back and study section by section, using

the microscope constantly. If you have access to Sach's larger work use it in reference. Also in this connection read Foster's Physiology, Book II., especially chapter 5, and the appendix on the Chemical Basis of the Animal Body. Also read the articles on Physiology, both animal and vegetable, and Nutrition, in the Encyclopedia Britannica; and a helpful little work, Wonders of Plant Life, by Mrs. Herrick.

When through with these procure Fermentation, by Schützenberger. Give it also a careful reading and in connection read Pasteur and His Labors, Micro-Organism by Black, the articles by Miller in the *Independent Practitioner* and the American System of Dentistry, and The New Chemistry, by Cooke. Take up one subject in Fermentations and compare it with the same or similar ideas in the others. Do this thoroughly. Now get Practical Biology, by Huxley and Martin. It will not do to simply read this if you wish to make anything of it. It must be studied. The microscope must be constantly in use. If possible this part of the work will be more fascinating than any of the preceding. With this the wayside ditch becomes a pleasure resort and the stagnant pool a paradise. A world of new beauty, such as we had not realized before, is opened up to our sight. Beginning at the portals of life we ascend in the scale of organized being from the yeast plant up through the ameba, molds, bacteria, ferns, beans, hydra, and mussel till the dissection of the cray fish and frog, completing the study, gives us an insight into the possibilities of recreative study undreamed of in our idle moments. Having thoroughly gone over this course, we have laid foundations on which real scientific work can be done. In connection with Practical Biology read Microbes, Ferments, and Molds, by Trouessart, and Microscopic Fungi by M. C. Cooke, and using Howe's Atlas of Biology for reference.

This course completed we are ready to branch off into any specialty our inclinations may direct us—such as embryology, histology and physiology. But to the dentist one of the most practical as well as most interesting of these "between-time studies" will be bacterial investigations. Get Klein's little work on Micro-Organisms, and supplement it with anything else you can get, such as Hueppe, Miller, Sternberg, Black. But do not fail to read and follow out the eminently practical and plain directions of Dr. Black, as given in the Transactions of the Illinois State Dental Society for 1886 and 1887.

For the technics of bacteriology I have liked best the articles by Cheyne in the *American Journal of Sciences* for 1886 and 1887.

I hope others may follow up this idea and give us out of their own experience other schemes of study. Especially do we need one in which chemistry is the underlying thought as biology is in this one. Also one on embryology, one on histology and one on microscopy.

THE PHYSICAL PROPERTIES OF VULCANITE.

GEORGE B. SNOW, BUFFALO, N. Y.

India rubber, when vulcanized, undergoes considerable changes. When subjected to heat, it expands with great force, and at a rate over six times greater than iron. When hardening, it contracts; increasing in weight, and showing its contraction by a change in shape of its mass, flat sides becoming concave, and convex sides distorted and flattened; the action being most evident in its thicker portions. After it is vulcanized, it undergoes contraction by cooling, more than most other bodies.

The extent and force of its expansion, when subjected to heat, makes it imperative that when it is packed in a mold and vulcanized, as when a dental plate is formed, a full and free escape should be provided for surplus rubber, and for its increase by expansion. This is usually done by cutting grooves or gateways extending from *the mold* (which term will be here used to denote the cavity, which is packed with rubber to form the plate) across the parting-face to the edge of the flask. (The term, "parting-face," is applied to the apposing surfaces of plaster outside the "mold," which come in contact when the flask is closed).

A reference to the engravings used as illustrations in books giving instructions for making vulcanite plates, will show this parting-face scored with radiating grooves, dividing the space between the mold and the flask, thus leaving a considerable portion of the face to come into close contact with its counterpart. When the facts are taken into consideration that rubber is excessively viscid, flowing only slowly and with considerable difficulty, and that when it once finds lodgment between two surfaces it is almost impossible to expel it by pressure, it will be evident that the remaining surface of the parting-joint will form a serious obstacle to the complete closure of the flask. Inspection of a plate as it is removed from the flask after vulcanizing, will usually show it surrounded by a "fin" of rubber, and the articulation of the plate will be faulty by the thickness of this "fin," which can only be present, under the usual circumstances, when the flask is incompletely closed. Therefore, the whole surface of the parting-face should be removed, except, possibly, a narrow margin, not over an eighth of an inch in width, next the mold, by a cut extending entirely around the mold, and gradually increasing in depth toward the flask. The escaping rubber will then be free, as soon as it passes the margin; and if this is scored at intervals, so that the rubber may still find vent, as it expands by heat, the flask may be closed more perfectly, and a closer articulation secured than if a large portion of the parting-joint is left intact. It may, indeed, be well to also remove a little from the

surface of the margin, enough to allow for the "fin" of rubber, which will always be found, if there has been any escape from the mold, and which, thin as it is, denotes a slight disturbance of the articulation of the plate. Little thought is usually given to cutting gateways; but if they are insufficient, or if so much rubber is used as to fill them, its force of expansion will inject the joints with it, darkening them, and will sometimes crack section teeth or force them out of place.

Much damage is done by haste and the exercise of force in closing the flask. Sufficient time should be taken to allow the rubber to accommodate itself to, and move before, the pressure applied to it. The few extra minutes required to do the work easily will be time well spent.

To insure good results, the following points should always be attended to in making vulcanite plates:

1. If section teeth are used, let them be thoroughly cleansed of wax. See that the rim of the plate does not overhang the edge of the gum at any point. If there should be a coating of wax on the surface of the teeth, the plaster investment could not be brought into close contact, so as to support the section properly, and it may be cracked by the pressure used in closing the mold. If the rim overhangs the gum, it may be broken by contraction of the rubber in cooling, as will be explained farther on.

2. In fitting the joints, they should be so ground that the surfaces of contact will bear entirely on each other. If the bearing is only at the front edges of the joints, the contraction of the rubber in cooling will draw the sections together with such force as oftentimes to chip little pieces of the face of the gum, forming a serious disfigurement. To prevent dark joints, fit them as closely as possible, always keeping the ground surfaces absolutely clean, and making a slight bevel on their inner edges. Before waxing, cover the outer edges of the joints with oxyphosphate of zinc. This is to be applied not *in* the joints, but to the gum surface—the sections being in place—to prevent dirt working into the joints from the outside. The oxyphosphate may be colored, to imitate the gum color, with a red pigment, preferably with iron as a basis: jeweler's rouge or Indian red. Red lead would blacken from chemical action in vulcanizing.

3. After the flask is filled, let it stand before proceeding to pack it, till the plaster is thoroughly hard; waiting, if possible, some hours. It may be opened and made ready in the meantime, but pressure should not be brought on the plaster till it is abundantly able to bear it without yielding.

4. Warm the flask before attempting to open it, by immersing it for a few minutes in *warm*, not hot, water. Remove the base-plate,

and rinse the mold thoroughly with a stream of *boiling hot* water.

5. Twist a very few fibers of cotton into a thread, and pack the beveled openings at the inside of each joint, fastening each end of the cotton into the plaster above and below with an excavator, and carrying the cotton well into the grooves; using not enough to entirely fill them. The mistake is often made of using too large a thread. Instead of packing the joints with cotton, as above described, they may be cemented with oxyphosphate, colored to imitate the gum.

6. With a scraper, cut away *all* the parting face around the mold on one part of the flask, preferably the lower or mold side, leaving only a narrow rim next the mold, and scraping this lightly. Let the cut deepen gradually, so that it will be nearly an eighth of an inch in depth next the edge of the flask. Cut notches at least a sixteenth of an inch deep at intervals half an inch apart into the cut just made, leading into the mold.

7. Paint the plaster surfaces of the mold (both palatal and lingual sides) with a *thin* coating of Liquid Silex, wiping off any surplus with a pledget of cotton. Do not allow any of the silex to touch the teeth or pins, and let the coating dry before packing the mold. It is usual to coat the model, either as above described, or with tin foil. It will be found advantageous to apply the silex to the lingual surface as well, as without it plaster unites with the rubber, and—especially if black rubber is used—the result is a hard, white crust, covering the plate, which is destructive to the edge of the scraper. If the silex is applied, the plate leaves the mold with a clean surface, easily finished.

8. Ascertain the exact quantity of rubber necessary to fill the mold. Guess-work is bad practice. If the base-plate is made of wax, weigh it, and use four or five grains more than twice its weight of rubber. If the ordinary balance is used, the wax can be added to the weights, after weighing it, to give the weight of rubber required, using as surplus, a piece as large as the finger-nail. If the base-plate is made of other material than wax, its bulk can be ascertained by displacement, the Woodward Rubber Gage being convenient. An approximation can be made by throwing the base-plate into a tumbler of water, noting the height of the water exactly, removing the base-plate and dropping in slips of rubber till the water stands at exactly the same point as before. If there are thick places in the plate, old vulcanized rubber may be put in with the new, when its weight is ascertained, and these pieces used in conjunction with the unvulcanized gum, to pack the thick parts. They should first be tried and fitted to the places they are to occupy, and should be *freshly filed* all over, and be thoroughly clean.

9. The rubber should now be warmed enough to soften it, by

putting it on a dish over hot water, and the mold carefully packed, putting in the rubber so that it will be moved as little as possible when the flask is closed. Place the two parts of the flask together and insert the bolts, screwing them lightly. The flask must now be heated to insure plasticity of the rubber. This is best done by boiling it in water. When it is hot, screw down the bolts slowly and evenly, passing from one to the other. Take plenty of time, and use as little force as possible. When the flask is closed, it is ready for the vulcanizer.—*Dental Advertiser.*

IRREGULARITIES.

DR. E. S. TALBOT, CHICAGO.

Doctor Roberts makes a statement which I think is incorrect, viz: that "the use of the forceps will in four cases out of five regulate the teeth, if judiciously applied." In my opinion, there are more irregularities caused by thoughtless extraction of teeth than from any other cause. I have given this subject very close attention for the past three years, and have taken a great many impressions for the purpose of securing models. Besides these I have received quite a number from different parts of the country, and therefore I think I am warranted in making this statement. I propose to show why this is the case, and why teeth should not be extracted early.

First, we must bear in mind that instead of one bone of the lower and one of the upper jaw, we must consider the jaw bones as composed of two distinct parts, the jaw bone proper and the alveolar process. These have two distinct functions. The true bones are solely for the attachment of muscles and for the action of the jaw, therefore they have a dense, hard structure. The alveolar process is solely for the purpose of retaining the crypts for the teeth while they are forming, and for their retention after they are formed. If we consider the development of the teeth and the manner in which they are shed, we find that the alveolar process has changed three distinct times before the permanent teeth are in place. The jaw bone proper grows independent of the alveolar process, the teeth grow independent of the alveolar process, but the alveolar process depends entirely on the location of the teeth for its shape and position.

If the teeth in the crypts are situated on the inner border of the lower jaw when they are erupted, the bone will build up around them, and the alveolar process will be much narrower on the upper border than the jaw bone itself.

On the other hand, if the teeth are situated in the crypts on the outer border of the jaw, the alveolar process will build up around it, and the alveolar process and the jaw bone will have the same diameter;

in other words, the alveolar process will be on the outer border of the jaw bone itself.

Again, if the temporary teeth are extracted, the first permanent molar will work forward and fill the space intended for the bicuspid tooth. In other words, the central incisor, lateral incisor, cuspids, temporary molars, and the six year molar, will all be in the jaw. If, at the same time, from decay or other cause, the second temporary molar is removed, the first permanent molar will work forward and fill the space of the second temporary molar.

This will be better comprehended when you go home and examine the models and mouths of your patients. It will be seen that if the teeth have been removed on one side, the molar has worked forward from an eighth to a quarter of an inch, or as far as the crowns of the bicuspid. I have tried it time and again and it is invariably the same. If you will take your rule and measure from the middle line to the anterior surface of the first permanent molar, you will find that the space is narrower from the middle line to the anterior point of the first permanent molar by an eighth to a quarter of an inch than on the other side of the jaw where the temporary molars are in place. When we consider how many of the temporary teeth are prematurely extracted, we need not be surprised at the number of irregularities of the teeth. It is quite common to find this condition.

In regard to the extraction of the sixth year molar, I do not approve of the extraction of any teeth except in extreme cases. If we have the first permanent molar decayed to such an extent that the pulp is dead, and the roots are not properly formed so that they can be filled, that tooth should be removed. In some cases this will correct the irregularity but will not serve for all, because the permanent teeth have a tendency to work forward to fill the spaces so that the other teeth cannot come through.

Another irregularity which is quite common is where the permanent cuspid has pointed up on the outer side of the alveolar process. It is quite common to find the first bicuspid tooth worked forward to such an extent that the permanent cuspid cannot come down into place, and the cause of that is extracting the temporary cuspid tooth. Then often, if the arch is large, I agree that the first bicuspid should be removed, that the cuspid tooth may come down into position.—*Ill. Transactions.*

A great deal of talent is lost in the world for the want of a little courage. Every day sends to their graves a number of obscure men who have only remained obscure because their timidity has prevented them from making the proper effort.—*Rev. Sydney Smith.*

NECROSIS OF THE RIGHT SIDE OF THE LOWER MAXILLA.

DR. WM. H. ATKINSON.

I have an incident of office practice that clinches what I have endeavored to promulgate ever since I have been a public speaker to dentists. It is a case of necrosis of the right side of the inferior maxilla, that was treated in Philadelphia, in four distinct operations, by the man that I call the best oral surgeon living, Dr. J. E. Garretson, and it is not well yet. The patient was sent to me by Dr. Merritt, of Jersey City. Her condition was pitiable indeed. She was pale, anemic, and the skin just ready to burst on the right side of the face with a fistula large enough to admit your little finger. The operation was made by slitting the soft tissues at the median line, cutting along the base up to the ramus of the jaw, and lifting up and extirpating a so-called osteo-sarcoma. I found new bone formed on the exterior portion, and pretty well organized; but the hard part of the bone, as the ramus rises to constitute the coronoid process, is necrosed; and yet it is not what is generally understood as necrosis. The instructors in this field of labor have failed to define the difference between a case of caries and one of necrosis. All caries is necrosis, but it means superficial necrosis. This case is neither one nor the other; it is deep-seated caries in the hard part of the bone; and yet there is no line of demarkation set up between the living and the dead bone. An operation will have to be performed. I put the patient on tonic treatment. I washed out the cavity with peroxide of hydrogen till it ceased to bubble, and then washed it thoroughly with potassa mercuric iodide, one grain to six ounces of water, which is said to be more efficient than the bichloride of mercury at one grain to the ounce. I used about two ounces to each charge. I was afraid that it would burst through the cheek. It was reported to be a case of salivary fistula; but it was more than that. I was in doubt whether it was an osteo-sarcoma; but there was abundance of embryonal tissue, so bloodless as to look almost like a gelatinous polypus. I put in the dressing so as to enlarge both the external and internal portions, and put the patient on tonic treatment. I gave her American port wine. That was on Friday. On Saturday she came in and said she had been suffering much all night. As soon as the plug was removed and the discharge escaped the tension was off, and the intensity of the pain was relieved. I repeated the dressing twice that day, twice on Sunday, and twice to-day. There is scarcely any discharge now; and I can carry an instrument to the seat of the trouble, causing little pain.

The instruction for us in this case is this, that we should be like Davy Crockett, sure we are right, and then go ahead; not diagnose

cases six months in advance, but take them as they are; see that we get a *status quo*, and then take a step at a time.

One other word of instruction,—for I may not always be with you to tell you these things from a warm heart and a keen-cut intellect, that knows where the difficulty is by having met it so many times: It is not to assume too much, but take steps along gradually. Be a little sweet, but at the same time in every way independent about the case in hand. It was suggested that somebody else should have control of the constitutional treatment of this case,—some learned doctor,—and I said, “Oh, yes, fetch all the doctors you want; I am glad to have them here; but we must discuss the questions before the patient; let the doctors say what they have to say, and then be examined by everyone present; but no dictum; no saying, ‘You shall not go this way or that.’ Give me control of the case, or let somebody else take it.” If you once take that stand, you will have done much to illuminate your patient and make your practice easy.—*Cosmos*.

Implantation.—Dr. S. G. Perry says: I would like to report a case which has a bearing on the implantation of teeth after Dr. Younger’s method. A lady came into my office at dusk one evening, saying she had to take the train the next morning for San Francisco; she had broken off a lateral, and she came to ask me if I could do anything. I told her I thought I could, and I attempted to place an old-fashioned pivot-tooth with a metal pivot on the apparently good root. In pushing the pivot to its place in the ordinary way the root disappeared, the tooth going with it. On pulling the tooth back the root came too. It was then easy to see that an abscess had caused a large loss of bone about the root of the tooth. The query now came how to make this lady comfortable on such short notice. Some weeks before a little patient of mine had a lower lateral extracted which she brought to me. I removed the pulp, filled the root with gutta-percha, dipt the tooth in the usual solution of bichloride of mercury, and laid it away in cotton to save it for possible use in transplantation or implantation. I outlined in a moment to the lady this system, saying Dr. Younger, of San Francisco, was authority in the matter, and she could see him in about a week, and if she cared to have it done I would insert the tooth. She consented. I pushed the new tooth to its place in the gum, and it seemed to fit perfectly. She seemed very much pleased, and did not pull it out. I told her if it annoyed her on the way to California to pull it out and throw it away, but if it remained comfortable she had better go to Dr. Younger when she reached San Francisco and let him take off the thread with which I had tied it in place. She took the train next morning for San Francisco, and I heard

no more about it till last week (Friday), when she came to my office after I had gone for the day and asked my office girl to look at her tooth. She said it had been entirely comfortable from the moment it was put in; that Dr. Younger had taken the thread off and congratulated her on the success of the operation. I have not seen it myself, but my girl says she examined it very carefully, and that it was firm and had the appearance of perfect health.

The Near Approach to, and Actual Exposure of, the Dental Pulp involve conditions so nearly similar that I consider them together, and in doing so will deal more largely with the question of devitalization and conservation than the means by which either end is attained. In either case the possibility or the probability of inserting the filling without exciting serious irritation of this important organ has not seemed to me to be the most important question. With ordinary care and the aid of appliances now in general use, that is readily accomplished in most cases. The real question has seemed to be, Can we by so doing secure the best result?

The relative value of a vital and a devitalized tooth I do not question. Other things being equal, notwithstanding the greater success now possible in treating devitalized teeth, the greater value of a tooth normal in its relations to the general system over one whose relation is so greatly disturbed as is a tooth from which the pulp has been removed, I do not consider a debatable question. In this as in many surgical and dental operations we must compromise between possibilities and practicabilities, and adopt that course which promises the greater usefulness.

In cases where the cavity is favorably situated, and we can feel assured that the pulp has suffered no serious injury from the near presence of the decay, or from the pathological conditions associated with it, to devitalize is criminal. On the other hand, where the cavity is difficult of access, or where we have reason to doubt the actual condition of the pulp, I do not think we are justified in otherwise treating it. Apart from the condition of the tooth, however, are many considerations which are to be borne in mind. The best treatment for a patient always accessible may be the worst for one who may soon remove beyond the reach of skilled dental assistance. The condition of the health and of the teeth, the circumstances and surroundings of the patient, are factors always to be considered.—*Dr. Wm. H. Trueman.*

If you have an idea in one direction follow it out. It is the man of one idea that moves the world. As examples, I would cite you to Franklin, Morse, Edison, and others, and among our own numbers, Herbst, Black, Miller, Morrison, Younger, and others.

ARTIFICIAL TEETH AND CONSERVATIVE DENTISTRY.

DR. A. MORSMAN, OMAHA, NEB.

In an excellent paper by Dr. A. H. Thompson, published in the *Cosmos* for August, occurs this statement: "Whatever may have been the fact in regard to the wearing of artificial dentures fifty years ago, there is no truth now in the statement that the wholesale extraction of teeth and the wearing of artificial dentures is on the increase among young people. . . . There are fewer dentures being made, in proportion to population, than ever."

On the advertising pages of the same journal the S. S. White Dental Manufacturing Company invite attention to porcelain teeth, which they designate as "the largest and most important branch of our business."

We all know that the manufacture of artificial teeth has increased with wonderful rapidity; that large sums of money are spent in efforts to perfect forms and quality; that the stock that is carried by dealers all over the country is immense, and that the sales are proportionate.

Now I am not going to "indulge in gloomy moralizing," nor present "alarming statistics." Dr. Thompson may be right. I have no means of knowing the proportion that artificial dentures bear to population now, nor what that proportion was in times past, and I am afraid that his means are as limited as mine.

Much depends on the point of view. If we suppose the dentists of a certain locality—Topeka, Kansas, for instance—to be educated, conservative men, who hold their artificial teeth behind their back out of the patient's sight till an absolute necessity occurs, then a gentleman writing from that standpoint would look about him and say just what Dr. Thompson has said. But suppose the dentists of a certain other locality—most notably the small towns and villages—were neither well educated nor conservative, how long would it be before the picture from this point of view would present an entirely different coloring? I am afraid the immense increase in the manufacture and sale of artificial teeth, are greater than the increase of population. But to this point I wish to call attention: There is a tendency to self-glorification, and as we congratulate ourselves on the advancing strides our profession has made, we forget that too many of our number are doing just as they always have done.

Having ventured to doubt Dr. Thompson's statement, I now come to the real subject of this paper—the questions, "What are the bounds to conservative dentistry?" and "What justifies a practitioner in the use of artificial teeth?"

The loss of *individual* teeth is an accident to which all are liable.

Few persons reach mature age without having lost here and there in the mouth a tooth. Possibly there may not have been sufficient cause for this loss, but that is now beyond our vision. The teeth are gone, and if their loss is felt, the dentist is called on to furnish a substitute. Possibly, also, it becomes necessary as an occasional practice to remove one or two teeth or roots that are beyond the dentist's skill or the patient's patience, and to substitute therefor artificial teeth. In either case the dentist simply does what he can to remedy a palpable misfortune. This portion of dental substitution I regard as legitimate and the outcome of sound judgment. "Partial plates," therefore, bearing a few teeth to supply deficiencies, I eliminate entirely from consideration as being unavoidable and therefore having no bearing on the subject. The question then relates merely to full dentures for either jaw, or plates carrying in unbroken continuity a large number of teeth.

It is not unusual, indeed it is a common thing, to hear dentists speak of having "prepared" so many mouths during such a period of time, and advertisements of practices for sale often contain a statement of the number of "prepared mouths" waiting for artificial teeth. What does this mean? It means that the teeth have been extracted from these mouths. One tooth? No. It means in fives, tens, sixteens, and so on. It means, in the majority of cases, malpractice.

Eliminating accidents, what are the causes of the loss of human teeth? Only two that are sufficiently noteworthy to concern us here—decay and alveolar disintegration. Now, I would ask every intelligent dentist who reads this paper, to make a mental examination of the mouths of those of his patients of about twenty years of age, and to keep his impressions of these mouths in his mind. Look down the long years of life, left to patients of this age, consider the possibilities of natural teeth, and then tell me how many such patients would be *benefitted* by the extraction of teeth for a full denture of fourteen teeth? I say not one; and I repeat it in large caps, NOT ONE.

At this age there is only one cause operative against the integrity of the teeth—decay. Who ever saw a person of this age with teeth so badly decayed that some, nay, the most of them, could not be restored to usefulness in skilful hands. Were I sitting on a jury to decide on a case of dental malpractice, I should regard an edentulous jaw in a person of less than twenty-five years old as damning testimony against the defendant. And yet full dentures at eighteen, twenty and twenty-five are not rare.

Take another postulate; advance the age to about thirty, and again keep the appearances in your mind's eye. What is the distinctive

agency now? Decay. Anything else? No. Alveolar disease may be present, but it does not demand the removal of the teeth. Are the teeth now more liable to decay than before? No, they are less so, because they are now better organized. Is the necessity for using full dentures increased at this age, as compared to the preceding? Yes. By just as much as neglected mouths may have lost during the ten years passed over. How many such patients would be benefitted by the insertion of a full denture for either jaw? Very, *very* few. Do we not see hundreds of full dentures at thirty?

Pass ten years more of life. The teeth are still better organized. The greatest damages caused by decay *began* years ago. If the patient is thus far with any teeth, they are in pretty good condition, so far as the tooth itself is concerned; but the alveolar attachment may be almost destroyed. Sufficient to warrant extraction? Sometimes. How many patients at this age will be benefitted by the "preparation of the mouth," and the insertion of artificial teeth as a full denture? A few. Do we not see thousands of full dentures at forty?

Take the next twenty years as one period. What are the conditions now? In those mouths affected with alveolar disease the ravages are very extensive. Sufficient to justify extraction? In the latter half of the period, almost always; in the first half, very often sufficient to justify the extraction of all remaining teeth. Is decay a vigorous enemy here? No. How many patients at this age are benefitted by the extraction of remaining teeth and the insertion of full dentures? A large number. Is the insertion of a full denture at this age evidence of sound judgment and conservative dentistry? It is presumably so.

Are more mouths at this age "prepared" than conditions fully warrant? Undoubtedly.

Our patient now reaches his allotted three score years and ten. He is either edentulous, or what teeth he has are fairly serviceable. At best his life is short. His health is broken; his ability to learn new tricks not great. How many are really benefitted at this age by the insertion of artificial dentures? A few.

Have I set the standard too high? If our dentists practiced according to this standard of conservatism would artificial teeth be the "largest and most important" factor in a dealer's business? There is an immense field yet for dental mission work. Let us be modest till we can look down the long line of dentists and see at the bottom of the ranks a man of intelligence, judgment and conservatism, and not a lot of ignoramuses with forceps and vulcanizer.—*Western Dental Journal*.

A FINE CASE OF BRIDGE-WORK.

DR. WM. H. ATKINSON, NEW YORK.

I present a case, which is an instructive one, where a gentleman had been advised to have his teeth broken off and an artificial set placed over them, he having stated that his teeth were very difficult to extract, being held so tightly in the jaw. He was not satisfied with the advice, and was sent by his physician to me. The left upper central incisor was largely decayed, and filled quite poorly with oxyphosphate, but sufficiently well to arrest the rapid progress of decay and leave the tooth in a tolerable condition. The molars were all gone on the left side below, and both bicuspid and two molars on the same side above. The first and second bicuspid were broken off, leaving sharp margins on the right inferior side of the mouth, and the first molar standing and in good condition; the second molar broken off in like manner with the bicuspid, and the outer face of the third molar split off, exposing the pulp. That tooth had been filled with oxyphosphate, and so well done that I did not remove it down to the pulp. The mode of procedure was to set Logan crowns on the bicuspid on the right side below, and to band the roots, which had been prepared and filled, of the second molar below. Both the first and second molars on the right side above were gone; the second bicuspid was pulpless and filled with amalgam; the third molar was decayed on the anterior face and the grinding surface, the anterior face having been filled with amalgam. I took a pair of bicuspid, which, because of the distance between the pulpless bicuspid and the third molar, just fitted the space, and put on a backing, leaving tenons extending forward into slots cut in the amalgam filling in the bicuspid; cut through the proximal and grinding-surface fillings of the third molar; packed the bottoms of these cavities with 120 gold so as to secure them against leakage, and wrapt the bars with 120 gold till they were thick enough to be just forced down into position, and so that the occlusion was right. I then filled on the sides with 120 gold. I got through about one o'clock, and the patient went and ate his dinner, and he said he had not had so much comfort in eating since his teeth were broken off till then. He left the city in that condition, the left side of the mouth not being provided with chewing apparatus. The feature that makes the case interesting is the fact that the gentleman is a bad dyspeptic, and was supposed to be a consumptive. He got into the hands of Dr. Salsbury, who had been treating him for the last six months, not allowing him to eat anything but chopt lean beef and water. His blood is in very fine condition, his cough is gone, and he feels stronger, but is not fat. The point that I want to make is the

city in which some dentists of fine ability give advice to patients about the breaking off of the teeth; then setting artificial teeth all around, though having many good teeth in the mouth. I think sible. I know the gentleman who gave that advice is a competent operator, as far as filling teeth is concerned, but he certainly does not appreciate the advantage of natural teeth. He is not a histologist, he is not a physiologist, and he is not a fine mechanician, though he fills teeth well. I wish to call attention to this to awaken the consciences of the brethren to the importance of being careful about giving immature advice to patients who, from their own common sense, will not submit to the practice advised.—*Cosmos*.

Replantation.—Dr. W. C. Barrett presented to the late meeting of the American Dental Association, the case of a boy of seven years, whose central incisors were just appearing through the gum, all the other teeth being very short deciduous ones. By an accident, one central incisor was knocked out. Forty-four hours afterward the boy was presented. The knocked-out incisor was incomplete as to development, there being but a mere shell of the root, while the foraminal opening was almost the entire size of the root. A piece of small platina wire was soldered at right angles to the plane of a very thin platina plate, sufficiently large to cover the end of the root. The wire was cut to a length that admitted its introduction into the tooth-canal through the foraminal opening. The root was then filled with oxyphosphate and the platina wire and plate placed in position, the latter being carefully burnished down over the end of the root. An impression in wax was taken, and a tooth about the size of the extracted one fitted in the cast and allowed to project to the length to which the original would probably have grown had development continued. Very thin platina was then carefully burnished over the plaster casts of the teeth, it was stiffened by flowing gold over it, filled with oxyphosphate, the extracted tooth having been first placed in position and the teeth all carefully dried, it was carried to place and held there till the plastic material had set. In three weeks reunion was sufficiently complete, and now, after one year, the extracted tooth cannot be identified by a stranger.

College Education.—The following closing paragraph of the Valedictory Class of 1887 of the Pennsylvania College of Dental Surgery, by Geo. W. Warren, is specially good: College education is the framework of the house; it remains for us, by careful study, close observation and increasing skill, to complete and adorn the edifice. Let us, in a kindly but courageous spirit, put forth our most earnest efforts. As another has said, “Never leave what you have to learn, till you can

reach your arms around it and clinch your hands on the other side;" but wrestle with it now and continue till you are the master, knowing the very effort will give you strength for victory. We have trials and difficulties, and will have them; but difficulty is a severe, though sure instructor. It is well to remember that our antagonist is our helper. "The path of life is beset with thorns, but they who are not afraid to encounter them may gather the rare flowers that grow between." Fear not to tread boldly in the tracks of those who have climbed before you, and who have attained the prize.

Life is before you! From the fated road you cannot turn:
Then take ye up the load. Not yours to tread or leave the unknown way;
Ye must go o'er it, meet ye what ye may.
Gird up your souls within you to the deed,
Angels and fellow spirits bid you speed.

Copper Amalgam.—Editor ITEMS: I notice in September ITEMS that Dr. George Elliot, of England, speaks of Sullivan's amalgam discoloring the teeth. He also says it wastes or wears away on the surface in two or three years. Sullivan's amalgam is supposed to be pure copper and mercury, and nothing else. But, judging from the manner in which it is prepared and manipulated, it must necessarily contain a great quantity of copper oxides. These oxides, I have no doubt, are the cause of the trouble. I find, after several years trial, that if copper amalgam is entirely free from the oxide of copper, iron or other metals, it will not cause discoloration of the teeth, though the filling itself will turn black. Neither have I ever seen the wasting away of the filling spoken of by Dr. Elliot. In fact, copper amalgam, properly made and properly inserted into a tooth, makes one of the hardest and most lasting fillings known. It is pre-eminently a tooth preserver.

GEORGE H. WEAGANT.

Cornwall, Ont.

TO VULCANIZE A SOLID RUBBER BALL.

DR. T. B. WELCH:

Dear Sir:—Being a reader of your ITEMS OF INTEREST, I feel at liberty to make a little inquiry with regard to vulcanizing a rubber ball *two inches in diameter*. The water to supply this town is pumped from a well drilled 240 feet deep on the hill. The valve in the bottom of the well is a ball two inches in diameter. A brass valve that size is too heavy, so the manager has been using a sort of black rubber, such as car-bumpers; but they wear but a few days, as the well is run at sixty revolutions per minute. The engineer asked me with regard to a vulcanite valve. I have prepared several, but all honey-combed inside. He run one a few days, but it broke on that account. I vul-

canized at a very low heat for 130 minutes or so. Can a solid ball that size, of ordinary vulcanite, be vulcanized; if so, how?

Barnhart's Mills, Butler Co., Pa.

L. A. GIBSON.

[Yes; you can vulcanize such a ball easily by working in the mass a large quantity of previously vulcanized rubber,—the more the better, if it is well mixt. Of course, it should be vulcanized slowly. But why have the ball solid to the center? Why not make a smaller ball of chalk, or other light substance, and cover this with vulcanizable rubber?—Ed. ITEMS.]

CORRECTION.

DR. WELCH:

Dear Editor:—I was somewhat surprised in your October number in the report of my paper on "Immediate Root Filling," to see grave changes made in the sense of the article. It makes me say in "near" pulp exposure, when the paper said "real" pulp exposure; and on page 435 it makes me say, in the eighth line, "bore," when it should say "force." And in your editorial in the November number, page 519, you make me say "near" pulp exposure, when I say "real pulp" exposure. Again, the report says when the root is fully developed—when the paper says "Tooth" where that says "root." I am always pleased with criticisms, but dislike to be criticised for what I do not say. I think in this correction you will see your editorial is perhaps inappropriate as applied to the paper.

Knowing you wish to be correct in all your statements, I hope you will give place to this in your valuable journal.

Chicago.

A. E. BALDWIN.

Promiscuous Extracting.—Editor ITEMS OF INTEREST: Is there a dental law in any state which will prohibit itinerant quacks from the indiscriminate destruction of teeth?

Our city was recently visited by a party of so-called Indian doctors, who gave exhibitions on the street every evening and extracted teeth by the hundred as an advertisement to sell a "cure-all" which they applied to the gums.

I know of no operation in dentistry where an unqualified person can do more harm to the profession or people than in the extraction of teeth. Yet many of the state laws seem to favor those frauds so much as to contain a clause stating that nothing shall be so construed to prevent any person from extracting teeth. The dignity of the profession is thus lowered to that of the tinker, and the people are damaged by losing teeth which should be saved. A dental law which permits such proceedings is surely of little benefit, and does not accomplish the object for which it was intended,

Yours respectfully, W. H. BAILEY.

EXTRACTING TEETH.

DR. T. M. NICHOLSON.

The extraction of teeth occupies a place in operative dentistry of about as much importance as any other branch of the art. Since the removal of them generally necessitates their replacement with artificial ones, which, good in their way, are, at best, poor substitutes, especially if the natural ones could have been preserved. If we could have entrusted to our care the teeth of a hundred individuals and be permitted to watch them and examine them at intervals of from four to six months, if we were capable or competent, I do not think there would be an urgent necessity for the extraction of many teeth. But as we do not have such opportunity, and if we do have a chance to advise as to what ought to be done, that the loss of good teeth might be prevented, so many impecunious individuals apply to us, that often teeth are sacrificed. I do not suppose there are many who are practicing dentistry for fun, or who would often treat such teeth and make no charge. And again there are cases that present themselves either with exposed or dead pulp; the individual comes to have such tooth extracted, we ask them, "Why not save the tooth?" and point out others equally as bad. But their answer, forgetting the injunction of Holy Writ, "That a soft answer turneth away wrath," is "You can't save it, for it has ached," or the nerve is exposed, or some other similar language; perhaps they will kindly inform you that they have had such teeth treated and filled, which they had to have drawn subsequently, all of which may be true, but does it follow, that that which proves a failure in my hands would in another's? I think not. Of course there are conditions which may arise, which would necessitate the extraction of teeth, for all teeth cannot be saved, even when entrusted to the hands of the most skilful, as a few pulpless teeth will be found from time to time, which are useless, and no attempt should be made to save them. Pulpless third molars, with no antagonists, the adjacent molars being in place, pulpless temporary teeth or permanent ones with the fangs exposed through the process, for they are, especially the temporary teeth, liable to cause irritation of the lips and cheeks and should be extracted or cut off, for which purpose I have found a wedge cutter to be very convenient. All teeth should be extracted when decayed to that extent as to render them unfit for crowning. I would extract all exostosed teeth if I could locate the offending member, which, however, is often difficult to do, especially if the teeth are otherwise sound. But there are times when the deciduous teeth are drawn possibly to relieve a crowded condition of the permanent ones, and to prevent irregularities before absorption of their roots, which will cause irregularities as often as it will prevent it; then the permanent tooth that

succeeds the one drawn will be retarded in its eruption, and perhaps the space which was intended for it to occupy is held by another and one or the other is crowded out of the arch. I do not advocate any such pernicious practices as the indiscriminate extraction of deciduous teeth. Neither do I extract such teeth simply because I am asked to do so by the parent or guardian of a child, for I know such aching teeth can be relieved, and by simple remedies. Teeth that would sooner call for such procedure are dead teeth, and we seldom see them till after suppuration occurs, the pain then is caused by tension or presence of pus which can be gotten rid of easily and the pain is not likely to recur in that tooth. For exposed pulp, aching because of the presence of food or some other irritant, I would excavate the cavity and apply, on cotton, carbolized rosin, which I have found to answer my purpose admirably. The deciduous teeth should be permitted to remain in the mouth just as long as it is possible to use them, providing they do not interfere or retard the process of the eruption of the permanent teeth, for their presence will assist to expand the arch, acting as so many wedges, and it is painless. I have extracted the second permanent bicuspid to relieve irregularity in the cuspids, and it has done it, while their loss was neither felt nor noticed. I would extract the 6-year molar if death of pulp occurred before the tenth year, trusting the 12-year molar to take its place. And should a person come to me with only one or two teeth in the mouth, who wanted artificial teeth, I would extract them though they were perfectly sound; for such teeth, associated with artificial ones, soon get tired of such an unholy alliance and become so sensitive about their necks as to require extraction. Such trouble I would anticipate, both to save my patient trouble and myself from his abuse.

A great many dentists say they hate to see a person coming into their office to have a mouth full of teeth extracted, specially on account of the cuspids. I would rather extract a half dozen such teeth than one inferior molar situated on the right side. In extracting cuspids such as I have mentioned, I never take hold of the tooth by the labial and palatine surface, but always by the distal and mesial surfaces, thereby being enabled to hold it much firmer, and find it is much easier. In extracting the ten upper front teeth, I seldom rotate or give that outward and inward motion, that we are instructed to make use of in books, but having taken a deep, firm hold with a steady, straight pull extract my tooth—and with less pain than by any other motion. If these teeth are much broken and nerve canal much decayed, leaving me in doubt as to the sufficient strength of the walls, I extract with screw. The wisdom teeth of the upper jaw are so easily drawn that they seldom require more than to be taken hold of and

turned out toward the cheek. But the wisdom teeth of the lower jaw often give much trouble and annoyance to the operator. They have to be seen in each particular case, before one can decide as to the best method. I have drawn them with a right angled scaler when I could not with forceps. So we must use such judgment and skill as we possess, and then often the patient had called on some other dentist, relieving us of the chagrin attending the breaking off a tooth.—*Western Dental Journal.*

Setting Crowns.—Editor ITEMS OF INTEREST: Dr. C. S. W. Baldwin has given us some good points on crown-setting, and I wish to add my mite. For a Bonwill or Logan crown I prepare the root properly, and fit about it a narrow band of twenty-two carat gold, twenty-nine gage, also a thin cap of platina, which is soldered to the band about midway from top to bottom; the center is perforated to allow the pin to pass through. If for a Bonwill crown, I first set the pin firmly in the root, and follow by setting the banded cap with oxyphosphate. The crown is ground to fit the band above the cap very closely, and also set with the same kind of cement. It makes a perfect piece of work, and one that can scarcely ever fail by the cement dissolving away from between the root and crown. I use Dr. Ottolengui's instruments for root trimming, which I find works to perfection.

A. B. CRAWFORD.

Grand Rapids, Wis.

Where is the Source of Life of the Enamel, and How is it Nourished?—If any one will carefully examine a fine specimen under the microscope, with a power of 500 to 800 diameters, I think he will have no difficulty in determining that, if there is living tissue in the dentine, that living tissue extends into the enamel; and if there is any nourishment of the dentine, there must be, from the same source, nourishment of the enamel. I have tried on many occasions to show what is called by the different appellations of "the zone of consolidation, protection, or resistance," under a filling, or between the decayed part of a tooth (which is usually removed before filling) and the pulp; and I think I have shown plainly that there is not consolidation going on, but that a displacement of the lime-salts has taken place in consequence of the melting down of the organic portion of the tissue. This often appears under the microscope like consolidation, but if the specimen is studiously looked over it will be seen that this appearance is a modified condition of the thoroughly decalcified (decayed) portion of dentine. Experiments have been made in this country which show that in the process of decay in the deeper portions of a tooth there is no loss of lime salts.—*Frank Abbott.*

TOBACCO.

A smoker will mix carbonic acid and other gases from one's interior with tobacco smoke and then exhale the combination as a perfume for ladies and gentlemen around him. The thought that this may be disagreeable never defers a smoker from making himself happy by blowing this exhaled combination all around and into every one's face for reconsumption, whether preferred or not by the second consumer, who, if a smoker, may not mind, having done the same for others many times, and is willing to again, if any one will accommodate him with the weed.

It seems a pity that a social law could not be adhered to by smokers that would give to non-smokers freedom to breathe pure air.

Come in contact with the air inhabited by an inveterate cigaret consumer; whether it is his room, office, personal effects, or his person, and its occupant at once presents himself as one whose sense of smell is deadened, and force of mind weakened by a filthy habit.

It is often noticed that a man will change from a pipe or cigar to a cigaret; possibly for the same reason the man did who ate onions. He said unions properly prepared with milk and butter were a great delicacy, but the odor to some people was disagreeable; so, to change it, he always ate a garlic afterward.

T. L.

Extracting Sixth Year Molars.—Dr. Dwinelle says: It is remarkable how little the great Creator knew about making men, and especially about placing teeth in their mouths. It is remarkable that while He is so infinitely wise in all other respects He has failed so utterly in sixth-year molars, and put them into the human mouth to its great injury. It must be a subject of congratulation to us that Infinite Intelligence was inspired with the *afterthought* of creating and sending into the world a favored few, wiser than He, to correct His great mistake! I particularly deprecate the general and sweeping assertion, I am sorry to say has been so repeatedly made, that the sixth-year molars *as a rule* should be extracted. I do not think that sentiment is indorsed by the profession, and I think such persons will wait a great many years before he sees it so indorsed. There was in my office to-night a case in point. A lady, under the advice of a person who ought to know better, for I gave him better instruction, had removed an inferior sixth-year molar on the right side, though perfectly sound, because, as the dentist said, "it ought to be removed; sixth-year molars generally ought to be removed." He wanted, also, to take the others out, telling the lady that if they were removed they would be replaced by the wisdom-teeth. But unfortunately the wisdom-tooth that was to replace the molar he extracted never came in, and it

never will. I asked the young lady what her age was; a very delicate question; and she said she was twenty-five. Few maiden ladies ever get beyond that age, you know. A few hours afterward I asked her mother to tell me honestly, in the interests of science, how old her daughter was; for I was looking for *wisdom*. "Well," said the conscientious mother, "*in the interests of science*, my daughter is thirty-six." So there is no prospect of the wisdom tooth coming in. The effect of that extraction is that the twelfth year tooth has tipped forward, and simply articulates on a single point; the wisdom tooth has not come in, and the articulation is entirely broken up on that side so far as the molars are concerned.

Matrices are invaluable in many cases. They are frequently so in using amalgam, and more often with gold. In using them no retaining pits should be made, nor any groove made at the cervical margin. The floor of the cavity should be left smooth, and gently sloping toward the gum from the interior. Anchorages should be made in the lateral walls, some distance from the bottom, and sufficiently far from the top to preclude weakening the masticating surface. I hope the old methods of preparing and filling cavities are past, not only on our own account, but for the benefit of patients. It is impossible to use a piece of broken file for a matrix with success. With such an instrument we have a flat, unyielding surface, that will not conform to the tooth. Fillings made by its use are invariably flat and without contour, and the cervical margin is always a point of uncertainty. It is best to start the separating process slowly. In certain cases, nothing better has been devised than Perry's separator, and this is specially true in country practice, where patients come many miles. Use this instrument carefully, turning slowly till slight pressure is obtained. Then separate, stopping often to turn the screw up a little more, till the space desired is made. I want to urge the use of soft gold, or better still, tin and gold at the cervical margin and for the first third of cavities. Injudicious use of the ligature is often the cause of pyorrhea alveolaris, by forcing the gum back and allowing the formation of salivary calculi.—*Dr. Brophy, Chicago.*

Prompt Collections.—As soon as the operation is completed get your pay. Short credit make long friends. The system should be cash, but that cannot be where we work for families and keep on working for the different members. Still it should be collected monthly, however much or little is done, and statements should be rendered that there may be a correct understanding as to the work done.—*R. R. Vaughn.*

LOCAL ANESTHESIA.

DR. HENRY FISHER.

There are many persons suffering from diseases of the heart and other organs where general anesthesia can not be employed, and when lacking physical strength to bear the pain of extraction without an anesthetic, and when the operation is of such a character that gas does not allow sufficient time to operate, it becomes a serious question to know what to do. Fortunately for both patient and dentist, we are now able to treat such cases with local anesthesia.

Prof. Vian, of Paris, has called the attention of the profession to a method of producing local anesthesia which seems fully to answer the requirements, and I consider it of such importance as to justify me in giving his directions quite fully. He makes a two per cent solution of crystallized carbolic acid and dissolves, at the time required for use, a grain of hydro-chlorate of cocaine in ten drops of the acid solution, and injects slowly five drops or half of the mixture into the labial, and half into the lingual surface at the point between the neck of the tooth and the supposed extremity of the root. He is careful to hold a finger of the left hand on the puncture to prevent the liquid from flowing backward. The patient must then wash the mouth with fresh water. At the end of three minutes the soft parts are completely insensible, and between the fifth and sixth minute he operates. This process, he says, has always given him complete results as regards anesthesia, and he has operated on eighty-six subjects. Dr. Garrison, of Philadelphia, recently made an important operation on the antrum, removing the diseased bone with a dental engine. He used the solution as directed by Dr. Vian, and the subject experienced but slight pain. Dr. Duffield, of Illinois, reports a score of successful cases, without one failure.

I can bear witness to the many cases of extraction performed by Dr. Conrad, anesthesia being produced as directed by Dr. Viad, and the tooth extracted with but little or no pain. The great need of a safe and certain anesthetic is recognized by every dentist, and from all the information I can obtain, I am more than hopeful that it is almost an established fact that the method described by Prof. Vian is safe, is reasonably certain in its effect, and will prove an inestimable blessing to the profession.—*Western Dental Journal*.

A Pretty Alloy, said to resemble gold exactly, can be made with 16 parts copper, 1 of zinc, and 7 of platina. The copper and platina are covered first with borax and then with powdered charcoal and melted, then the zinc added, and the alloy thus produced is exceedingly malleable, and can be drawn into the finest wire, while it never tarnishes.—*Cincinnati M. and D. Journal*.

RUNNING SORE IN THE NECK CAUSED BY ABSCESSED ROOTS.

Mrs. B., æt. 23, of robust health, called to have the roots of the first lower molar extracted. She expressed some doubt about the operation because of a "running sore" on her neck. On examination, I found a fistulous opening over the clavicle, near the place of origin of the platysma myoides muscle. I had no difficulty in tracing the sinus to the lower border of the jaw, directly under the diseased roots. I extracted them, and without any further treatment the discharge soon ceased and the abscess healed. The case was of eight years' standing, and had been pronounced by a council of physicians to be of a strumous character.

On inquiry, I found that this tooth had ached just before the swelling appeared on her neck, at which time it ceased aching; and subsequently the crown had broken off, leaving the roots in the condition I found them. The roots of the tooth must have been unusually long; and, when an outlet was sought for the discharge of pus, the weakest point proved to be at the base, instead of the side of the jaw. When nature had secured an outlet through the bone, the pus gravitated down the fibers of the muscle till it found an outlet at its origin.

—*J. P. Wilson.*

A New Local Anesthetic —This local anesthetic, known as Steno-carpine, was brought to my attention by Allan W. Seward, M.D., of Bergen Point. It was first discovered by a veterinary surgeon of New Orleans. It is derived from a bush known as the Tanblanket, a species of the acacia-tree. This veterinary surgeon has used it with exceedingly good effect in operating on the fetlocks of horses. Some of the leaves were given to Dr. Seward, from which he obtained its alkaloid. One pound of the leaves produces thirty grains of the alkaloid. This alkaloid he uses in solution the same as cocaine is used, one grain to the dram. Hypodermically he uses five drops, or one-twelfth of a grain, which he claims is in its anesthetic effect equal to one grain of cocaine. It seems to be harmless when so administered; no irritation is produced, and no abscess follows. In experimenting, I believe he has killed a nine-months-old dog with one grain administered internally. I have not tried it on sensitive dentine, but I have saturated a bit of cotton with it and laid it on the surface round a second molar, and then extracted the tooth without any pain. We shall make other experiments with it and report.—*W. H. Mitchell.*

The Ingersoll bottles are indispensable for convenient use of chlora percha, shellac and sandarac. The glass covers, dressed with glycerine, secure the most volatile substances and may yet be easily removed. All glass stoppers treated with a coat of glycerine are cured from sticking.

A LITTLE THING.

We sometimes have difficulty in securing our ligatures.

To-day, while a T. merchant was putting up orders, I could not but notice that every time in making his first knot, and while still firmly holding the two ends of his cord, he revolved his hands around the knot, and always in the same direction, thus describing little more than a complete circle, keeping the cord well down on his work. This method forms acute angles within the knot, thus binding it together, when the second knot is made without danger.

W.

St. Thomas, Ont.

Irregularities.—Dr. Watkins reports the case of a young miss of thirteen, whose lower anterior teeth shut entirely outside the upper. By wedging with cotton tape, and without the placing of any fixture in the upper jaw, the arch was so spread that the upper teeth were carried outside. Then an apparatus, consisting of an inside bar to which the teeth were attached by elastic ligatures, was placed on the lower jaw, and they were drawn into place.

Nitrous-Oxide Gas.—The discovery of nitrous oxide gas places in our hands the means of relieving, with almost perfect safety, the patient from the pain of extraction, and if the patient dread the pain or lack the strength to bear the operation with impunity, I have always advised the administration of gas, if there was nothing to indicate that it should not be used. I deem it of especial importance that children be spared severe pain at our hands. The sensitive nervous organization of a child is so often shocked by the pain resulting from the extraction of a tooth that it is with horror they think of the dental chair, and can not be induced to submit to any further operations on their teeth. They are allowed to decay and are lost; and the dentist alone is responsible. Don't frighten a child by an unnecessarily painful operation; thus, perhaps, doing an injury for which you can not atone.—*Henry Fisher.*

Education the Solution.—Most of the blunders men make spring from the vulgar delusion that something can be had for nothing. Every intellectual and moral progress is a struggle to outgrow it, and every great social movement has to go through a stage of costly domination by it. Scientific medicine makes slow headway against quackery in popular appreciation, and the religion that is pure and undefiled emerges but slowly from entanglements with salvationism. Short cuts to prosperity and heaven, royal roads to learning and happiness, are advertised on every hand, and "twenty-seven millions, mostly fools," jostle each other in eagerness to try them.—*Work and Wages.*

ANSWER TO DR. J. R. WELCH, SPENCERVILLE, OHIO.

For excessive bleeding or hemorrhagic diathesis use oil eryeron, doses ten drams. It can be given every half hour till bleeding is stopt. (It is made by Park & Davis.) Compress with glycerin and tannin, add all the tannin glycerin will take up in two days.

Portland, Conn.

H. J. FISKE.

Saving Loose Bicuspid.—The inferior bicuspid are of vast importance to balance upper dentures. When they have become loose from pyorrhea or any other cause, use a gold band of suitable width swaged and driven tight to the cuspid; (and if made of coin gold it can be driven to an exact fit), then take another band of the same width and bend to the bicuspid, leaving it open on the posterior side, remove and solder to band No. 1. Now grind the crown of the bicuspid till it is as small as it is at the gum, bring the two ends of the band together and solder and you will have a double band that will hold the loose bicuspid firm for years. Where the lower molars are loose, wire them in position and with a fissure bur cut a slot between the loose and firm molars on both sides large enough to insert a silver dowel the thickness of a ten-cent piece and one-sixteenth of an inch in width and imbed with amalgam and you will save the tooth. Use silver instead of gold, as the amalgam has a stronger affinity for silver than gold, and it is firmer.

Dr. Harlan uttered an important truth when he said: "If you would cure pyorrhea, wire the teeth tight in position;" and let me add, take off all occlusion by grinding the cusps of antagonizing teeth not only while tightening teeth, but where you have had any inflammation or diseased dental pulps. Treat such teeth as you would sick persons who need rest.—*J. A. Robinson.*

Medical and Dental.—Do we have anything like a true conception of the little knowledge that the medical practitioner really has of the field comprising our labors? But a short time since I was asked by a medical gentleman what we meant by surgery of the mouth; and he really betrayed the fact that he had no adequate idea of what was considered as surgery in this field. He revealed the fact that he could only recognize one thing that might possibly come in a small sense under our surgical direction, and that was the treatment of cleft palate. Put these gentlemen in our place and see how they would manage the cases that we honor with the name of surgery. But we will yet stand with these men shoulder to shoulder and vie with each other for the good of suffering humanity.—*G. A. Mills, in Western Dental Journal.*

Dentists in the South.—Talk about the lack of energy and enterprise in the South! If any State, district or local dental society in the North, East or West, can point to as much enthusiastic interest as was manifested by our southern brethren in working up an attendance upon the recent meetings of the Georgia State Society and the Southern Dental Association, we would like to hear of it. Even the American Dental Association, with the vigor of the North, the brilliancy of the East, the energy of the West, and the prestige of *the* representative national body to draw on, has never been able to produce such results as those attained at Old Point Comfort, Va.; and it only needs a perusal of the dental journals published in the South to show that the dentists of that section are fully abreast of the times.—*C. L. Hungerford.*

Painless Dentistry must be made practicable, or we will continue to get the wrecks to work on instead of the fine new structure we should have. "Painless dentistry" though an ensnarer, is made of use by some practitioners to attract the masses; and we should take a hint and try to do to others as we would be done by. Judging from my own experience, dentists make the poorest patients, owing to their fear of being hurt. And we should not expect outsiders to be any better than we are. If it were possible to have the operator endure pain, I think it would not be long before we would have a different system from that followed by the profession. The business or financial part of our profession should receive more of our attention than most dentists give to it.—*R. R. Vaughn.*

Perry's Separators are worth their weight in gold many times over, enabling us to discover defects and restore them with greater satisfaction to both patient and dentist. They are valuable for supporting teeth, which have been wedged by the slow process, during the filling, thus preventing much pain. Fillings can be properly contoured by their use. The set may seem expensive to some, but get a "D" separator, if you can, first; this is used on the incisors, and your love for it will make the way easy to obtain the others. The practicability and advisability of using matrices is questioned by some and branded as a delusion and a snare; but I think a judicious use of some of the forms offers us a great help, and many hitherto difficult operations are by their use rendered simple.—*G. A. Bowman.*

Implantation.—Dr. S. C. Palmer, of Marvin, Iowa, writes: "I had a left lateral incisor implanted by Dr. Louis Ottofy, on the 6th of May, at Cedar Rapids, Iowa. My tooth had been out seven years. The operation was a decided success. It was completed in twenty-five minutes. I have had no cause of complaint since."

Annealing Steel.—The *Blacksmith and Wheelwright* says that a very good way to anneal a small piece of tool steel is to heat it up in a forge as slowly as possible, and then take two fire boards and lay the hot steel between them and screw them up in a vise. As the steel is hot, it sinks into the pieces of wood and is firmly embedded in an almost air-tight charcoal bed, and when taken out cold will be found to be nice and soft. To repeat this will make it as soft as could be wished.

Emery-cloth Disks.—Sandpaper disks are valuable adjuncts to the operating case, but I prefer those of emery-cloth. These, when moistened with oil, cut faster and with less pain to the patient from heat generated by the rapid motion. In addition to this, they are more pliable, and can be directed with a properly shaped instrument into depressions and irregularities of surface that no other disk will reach.—*Dr. Cady, Ill.*

Cleaning Instruments.—Dr. Genese, of Baltimore, writes us: Carbolic acid and glycerin, equal parts, should be used to dip all instruments into before using for the next patient, washed in hot water, and dried on spirit lamps (simply dried, not heated to draw temper). Burs, besides being thus treated, should be brushed with a wire wheel, or brush attached to the engine, before removing from the hand piece.

It Was a Plucky Act that of the English dentist, who at the Medical Congress at Washington, allowed a California dentist to take two good teeth out of his mouth that they might be planted again in another man's jaw. The California dentist said the thing could be done and the Englishman said it could not. A scientist who is willing to suffer himself for the advancement of science is deserving of high praise whether the experiment is successful or not.

[But a foolish and an unnecessary sacrifice.—ED. ITEMS.]

Celluloid was born during the reign of Josiah Bacon, with "great expectations," which as yet are unrealized! Dr. Evans, in the "American System of Dentistry," stoutly defends it; but the truth is, it is not used by one dentist to-day, where ten years ago it was used by fifty. A material which is so uncertain in its results, the fault of the dentist it may be, will be discarded as practically worthless by a majority of dentists. Such is celluloid.—*Medical and Dental.*

The Regulation of Teeth is the most vexatious business a dentist engages in. A part of the pay, at least, should be demanded in advance. If this be not done the patient is apt to get discouraged and stop half way, placing the blame on the dentist and defrauding him of the fees already earned.

Capping Roots.—At the First District Society, recently, Dr. J. M. Crowell, of New York, demonstrated his methods of making crowns, caps, and ferrules without an impression after the following manner: The root to be crowned is first measured with calipers, and a blank tooth of corresponding size, cut from plaster models of natural teeth, is taken, trimmed as required, and platina wire wound closely round it to form the ferrule. A cap struck up from dies is then made to cover the end of the blank, and gold flowed over all to complete the crown. It is afterward filed up to fit the case, or may be covered with gold body and enamel.

Putting on the Rubber.—To accomplish the carrying down of the rubber-dam to the cervical margin of the teeth, I stumbled on a device which has proven most effectual. I take a strip of elastic rubber, of proper length and thickness, and stretching it between the fingers till it will pass between the teeth, I force the dam to the point where it should rest. It will not cut the dam or tear it, while it will carry it to place much better than anything I have tried.—DR. MORRISON.

Irregularities.—For many years I have been working on the theory that irregularities in teeth should be prevented. Few cases would present if parents did their duty and were well informed. The deciduous teeth should be allowed to remain till pushed out by nature.—DR. MORRISON.

Dr. Brophy's Matrix.—Until about six months ago I was, after having tried a number, opposed to the use of any form of matrix, but at the earnest solicitation of a friend whose operative abilities I recognize, I tried the little instrument devised by Dr. Brophy, and was much pleased with it. I am satisfied that its use will, in many cases, save a vast deal of time and nervous strain to both patient and operator.—*Dr. Cady, Ill.*

E. Parmley Brown's Heroic Chisels are valuable to cut down enamel walls and in dressing cervical margins, are great time savers. Work with and prove all you do with a strong magnifying glass, and he who does not use one, little knows how many imperfections he covers up, for the time being, only to crop out later in life to condemn his carelessness.—*Dr. G. A. Bowman.*

Independence you had better cease to talk of, for you are dependent not only on every act of people of whom you never heard, and who are living round you, but on every past act of those who have been dust for a thousand years. So, also, does the course of a thousand years to come depend on the little perishing strength that is in you.

The Extraction of Teeth in first-class offices has become almost a thing of the past, when compared with the many formerly taken out. Teeth are not extracted now except where the loss of such teeth or roots are desired by the dentist for a specific purpose, and the reasons for the operations perfectly understood by him. Never let a patient or patient's friends persuade you to extract a tooth or root when your own judgment does not say there would be a benefit to the mouth by its removal.—*R. R. Vaughn.*

Dr. E. P. Brown's Bridge-work.—Dr. E. Parmly Brown, of Flushing, makes a beautiful bridge-work where the platina bar uniting the crowns is covered with enamel body and fused in a furnace. Plate teeth are selected for the purpose, the straight pins of which are bent over the platina wire and covered with the body, the platina wire being long enough to form the pins which anchor the piece at the ends. Where several teeth constitute the support for the bridge, one or more pins are inserted at proper intervals to make it more secure. It is strong and durable, and natural in appearance.

The Cervical Margin.—Dr. Brophy says: If tin and gold, or tin alone is used at the cervical margin, there will be no occasion to use at that point either disks or strips in finishing. All the polishing necessary can be done with the burnisher in most cases. If it is desirable to use anything more, Dr. Parmly Brown's strips, used with corundum mixt with glycerine to a paste of the consistency of honey, will be found superior to all else. Sandpaper disks and tape bear no comparison.

Inquiry about Gold Soldering.—I find much trouble in flowing coin gold for bridgework, and other cases requiring an investment, by the use of my common alcohol soldering lamp. Must I use a lamp with a much larger wick and a foot-blower?

Grand Rapids, Wis.

A. B. CRAWFORD.

German Dental Education.—There is a disposition on the part of some of our American dentists to cater to the German idea; to change our system to theirs and thus bring us to their position, on the plea that unless we do meet them there will be no recognition of American dentists. It ought to be remembered that the object of these laws is to keep the American dentists out, and an attempt to change our system to their's won't work. We don't want to teach as they teach, or to turn out such dentists as they turn out.—*R. B. Winder.*

Time Spent on the Marginal Walls will be amply repaid in the consciousness of having done your whole duty, even if you make a smaller financial showing at the close of each day.—*Dr. G. A. Bowman.*

For Our Patients.

IF WE KNEW.

If we knew the cares and crosses
 Crowding round our neighbor's way;
 If we knew the little losses
 So sorely grievous day by day;
 Would we then so often chide him
 For the lack of thrift and gain,—
 Leaving on his heart a shadow,
 Leaving on our hearts a stain?

If we knew how hard he labored
 That his work may be approved;
 If we knew how little favored
 Was he, as he upward moved,—
 Would we then so often blame him
 For his lack of skill and tact?
 Would we laugh and taunt and shame him
 For the polishes he lacked?

Let us reach within our bosoms
 For the key to other lives,
 And with love to erring Nature,
 Cherish good that still survives;
 So that when our disrobed spirits
 Soar to realms of light again,
 We may say, dear Father, judge us
 As we judge our fellow-men.

The Singing Mouse.—A story is told of a strange visitor which has put in an appearance at the office of a California dentist. For some time the doctor had heard what he supposed to be the singing of a canary bird, but gave less thought to the sound than to the frequent visits of a small mouse which ran fearlessly around his room. At last he set a trap to catch the little fellow, lest he disturb his patients. One morning he heard the same sweet sounds, which he supposed came from some neighboring canary, issuing from the trap he had set. On investigation he found he had caught a rare curiosity indeed—a singing mouse. While singing the little creature stands up on his hind legs and acts in many ways like a bird. For a month he was kept in the trap, and entertained the doctor with his songs, but, becoming too much care for the busy dentist, he was set at liberty; which, it seems, he considered neither sweet nor desirable, for the next morning after his release the queer little singer was found in his old quarters, where he now goes every night, and is let out in the morning.—*Selected.*

TO MY PATIENTS.

Teeth that are filled will decay again if exposed to the same causes that produced the original decay.

Your teeth are filled with an indestructible material, and decay can be prevented by careful watching and cleansing.

Have your teeth examined often. A small filling is less expensive than a large one, less painful to insert, and there is a better chance to save the tooth.

Cleanse the teeth every time food or anything else injurious to the teeth is taken into the mouth. Many medicines are injurious to the teeth, therefore it is well to cleanse them after they have been in contact with medicines.

Use prepared chalk and castile soap with tooth brush and picks to cleanse the teeth, and to correct acid conditions, bearing in mind that absolute cleanliness is of more value than the skill of the dentist.

If you neglect your teeth the fillings are apt to fail, your dentist is unjustly blamed, and your most intimate friend will not tell you that you have a bad breath.—*Morgan Adams.*

"TUBERS."

We have recently found an old disease under a new caption. A long, lank backwoodsman came into my office. We were busy at the time and asked him to be seated; but as volumes of tobacco juice began to pour over the hot stove, and the stench was about to overpower us, we hastened to put ourselves at his disposal. "Well, Dr.," he said, "I've got a tooth that's pestering me like fire, and I thought I'd get you to kill the nerve in it before 'tubers' (them nuggins like) grow at the end of the root. If yer can't fix her up fer me and stop 'tubers' then we'el see what cold steel will do for her." The old man had been used to "grubbin taters," had'nt he?

W. W. R.

Left-Handedness, Dr. Gillipe believes, is caused by "morbid heredity." But if this theory held good, should we not see evidences of this in these persons? The celebrated tribe of Benjaminites were noted for full development of strength and powers. The fact that this tribe of Israel were nearly or quite all left-handed would go to show that left-handedness was heredity, but when we find left-handedness rare in general communities,—among all nations and through all the ages, with this one exception,—we should be cautious about considering it hereditary. It seems rather an unaccountable freak of nature. A left-handed parent is not any more likely to have left-handed children than are right-handed parents. Our father and mother, and all my eleven brothers and sisters, were right-handed, but we are left-handed; and our seven children are right-handed; so are our ten grand children.

Editorial.

WHAT SHALL BE OUR RESOLVES?

Some discourage new resolves for a New Year. Among our best impulses have been New Year Resolves; and among our best achievements have been the results of these resolutions.

It is well to have specific times for retiring within ourselves to see of what stuff we are made; to contemplate our past; and to estimate the possibilities of the future. What merchant, or mechanic, or even farmer, or private business man, fails to take an account of the losses and gains of a past year, and to thus calculate the possibilities of the year to come?

But the mightiest article of value of any man's stock in trade is himself; and he who fails to properly estimate this central figure, or to wisely place it in its relation to all else in his inventory, or to rightly estimate its value in his forecast of future operations, cannot properly sum up his possessions, nor wisely calculate for the coming year.

A few men are egotistic. Ever over-estimating themselves, they are ever falling from pinacles of their own erection; or they are walking on stilts, on which they make themselves ridiculous. But most men underestimate themselves, and therefore neglect opportunities they might use to advantage, and they fail to put forth their best efforts to occupy possible positions. If we have no faith in ourselves, how can we expect others to have faith in us? and if we will not do our best to rise, how can we expect others to help us rise?

In our search for riches, we shall never find a greater treasure than the mine within us. Undeveloped, but there. Perhaps undiscovered and discredited, but there: a mine richer than gold, more precious than pearls, and more easily developed than surface diggings. Diamonds are not to be compared to it. If we knew it was beneath the jungles of Africa, we would spend our life in developing it. No spot would be too remote, no place too difficult, no labor too severe, no hardship too exhausting, no risk too hazardous. But distance does not lend enchantment to our mine, mystery does not give it charms, and risks do not inspire bravado. It is within our reach, and has been all our lives. Therefore, like the Arab who unconsciously owned acres of diamonds about his tent, we live in poverty and wonder why fortune does not come our way.

We are rich, and do not know it; we are a power, and do not realize it; we are a mighty store-house of treasure, and do not unlock its door.

Now for an effort: a shaking that shall rid us of our follies; an

arousing that shall show us our strength; a consecration that shall sacredly set us apart for a worthy purpose; a devotion that shall sacrifice every thing to success.

The year eighteen hundred and eighty-eight shall know no time, no money, no strength, misspent. By the help of God, we will reduce the employment of our time to a fixed method; we will economize every penny to buy golden opportunities; and we will devote our full strength to self-development, to material advancement, and to obtain a position that shall place us among men, A MAN.

But let us not be indefinite. *What* would we be? If we are thoughtful, reasonable, and diligent, our position in life does not come to us at random, nor is its selection one of chance. God made each of us for something definite, though many of us are far from where we belong, or occupy our right place in more disgrace than honor. All fish are in the water, but each species, by instinct, inhabit definite localities, and are not at home outside of specific surroundings. So it is with us, unless we allow life to drift us, instead of we employing our intelligence to guide our life; for if we are too lazy and indifferent to control circumstances, circumstances will control us.

Nor can we expect our mere choice of what we would like to be sufficient to place us there. To the victor belongs the spoils; and victory comes only to the valient; and *that* quality is only bought with diligence, discipline, self-denial, and indomitable perseverance.

THE EFFECT OF CHARACTER ON PHYSIOGNOMY.

It is not so easy to act the hypocrite as we may imagine. What we are stamps itself on what we appear to be. Every true thought, every noble impulse, yes, even every elevating resolution, sets its seal of harmony, beauty, and intelligent attractiveness on the lineaments of the face. So, also, every wrong motive and every foul thought makes outwardly its distortion. The whole person, appearance and aspect, the gait, manner and general bearing, the words we use, our tone of voice, and our unconscious influence, each reveal much of the real character within.

Thus we have a dual nature; and the most real, the most important, and the most influencing on the world around us, is the nature within. With wonderful accuracy, the outward responds to the inward, the physical to the spiritual, the subordinate to the superior. How can it be otherwise than what we are within—the real man—should *force* itself through every avenue of our physical being to the outward, duplicating on the surface an expression of our real selves?

It is true, we cannot always read these various outlines, these delicate tracings, each so microscopic; and yet, collectively they are

a well-written book. Like the philosophy of history, physiognomy is complex, and often needs much analyzing, and delicate and abstruse study, to give us its combined meanings; but it is there for those who have discernment. Many read history and see in it no philosophy; and so many read physiognomy and see nothing but its outline. To study the philosophy of history, we must read between the lines; so, to read character, we are often required to consider what is omitted by neglect, what is blotted by slovenly tracing, and what is there by unintention.

So, also, must we remember that our physiognomy is not made in a day. We may inspire it with a new thought, we may light it up suddenly with a new born love, or by some mighty resolution, but in substance it is something that grows, and grows slowly. Infancy is expressionless, and even childhood is only a promise of what may be. It requires deep thought and mental force, to make character, unless inanition is character. It is a pity there are so many children of mature age, even infants in men's clothing, expressionless, vacant, and indefinite in physical outline, because void of thought, or purposeless in activity. O for more men and women in development as well as in age! Then physiognomy would not be so difficult to read, for the lineaments of the features would be more distinctly marked by mental strength, dominant will and strong purpose. We should not then have to read character by what was *not* there, but by the distinctive readings that show clear individuality, or by that glow which is the outbursting rays of heavenly fire and holy enthusiasm.

We repeat then: We are mainly what we appear to be. The years of labor of the indwelling architect have in maturity brought out the character that dominates within. All along the many days of the many years that architect has been working on those features, he has been doing the will of the man who dwells within; does it, whether he will or not; does it, though it is in spite of his will; does it, because he *must* work, and must work faithfully.

Thus every thought, will, and activity of the mind, passions, and spirit has its physical effects, but by such a constant, silent, imperceptible impression, and by such an accretion of such impressions that no one day's work can be traced; no one month's work can be seen; hardly a whole year's labor is clearly marked. Yet the tracings come; they will accumulata. Dot by dot, line by line, here a little and there a little, now a faint outline, then a slight resemblance of what may be, and finally distinct readings. The genii of intelligence, the cherub of love, and the golden-winged Scriph of spiritual life, vie with each other to see how noble, how symmetrical, and how beautiful can be made the countenance of one devoted to goodness and infinite progress;

while the imps of darkness are making ugly and distorted the mouth-piece of the soul abandoned to ignorance, vice, and death.

REST AS A CURE.

We take too much medicine, employ too many doctors, seek too many outside helps. Half of our diseases are preventable or easily dissipated by attention to the common sense rules of health; many of the other half will usually yield to absolute rest,—rest of muscles nerves, brain, and stomach. We go through life on high pressure, and wonder our engine is ever out of order. Well, an engine does not require so much attention as our body; but no wise engineer will allow his engine to run till it bursts for want of occasional examination, nor even to choke for want of cleanliness.

Sickness is called a calamity: It is more often nature's necessary reminder of our inconsistencies. If sickness did not occasionally cry a halt, our mad rush would soon bring us to the brink of destruction. The trouble is, when nature thus calls us aside from the world's busy whirl, instead of patiently listening, and lying quietly a little time to obey her dictates, we begin to swallow all kinds of poisons. We are so anxious to be on our feet that we are unwilling to give a little comparative rest to this wonderful machinery. We have no time to hearken to the voice of common sense, nor inclinations to heed the piteous entreaties of our tired misused and abused body, though it has been cruelly lashed to unwonted pace by the whip of our ambition, or our lusts, or our greed.

Lie quiet, and talk with your conscience awhile, and with your reason, and with your spiritual nature; it will do you good. Think of the medicines within your reach before sending for the medicines in the doctor's saddle-bags. Ask your own body to instruct you; feel of your own self calmly, patiently, consistently, and take the medicine nature suggests as from a physician you can trust, and should have obeyed long ago. Above all things *rest*,—rest the stomach, till it calls for food loudly, and then supply it sparingly; rest the body, till it has time to recuperate its energies; rest the brain, till it longs for healthful occupation; rest the passions, till they are content with normal activities; and still rest, till, through and through, the warring elements subside, and peace reigns; rest, rest, rest, till the whole man,—body, soul, and spirit,—is ready to rise renewed, purified, enthused in character and purpose.

Ah, if this was the medicine we took when sick in body or mind, we should not "have to" be sick so often, and when sick, it would be a short if not a sweet repose, and we should be made much better by its lessons.

WHAT'S IN A NAME?

Much. Think you "the assafetida rose" would smell as delicious as "the otto rose?" They might be the same, and yet the imagination of two ladies out of three would smell a difference.

We are disgusted with some names belonging to persons. When a boy, we had a relative by the name of Hog. We never went to see him because his name was so hoggish. There are names positively vulgar.

Women change their names at marriage, so they have some choice. Why shall men not change theirs when they become of age, if disgusting?

Anciently this was not so important, because children did not inherit the father's name; but now his name is perpetuated to succeeding generations. Mr. Hog's children are not even innocent little pigs; they are hogs from their very birth. Some parents with this name even add a second "g," that it may be still more hoggish.

When children were named after some peculiar circumstance, appearance, mark, disposition, characteristic or tendency, or in after years had their name changed because of some achievement or peculiarity, some defeat or disgrace, some accident or occupation, or even by some trifling occurrence or joke, there was an excuse for an occasional uneuphonious or disgusting name, especially as he could change his name as easily as he got it, by changing his relation to society. Perhaps Mr. Hog had shown himself hoggish; let him change his disposition to one of innocence and inoffensiveness, that he may be known as Mr. Lamb. So that man, who had become so stubborn as to receive the name of Mule, might become so docile, suave, kind and affectionate as to be called Mr. Love. That hard fisted, grasping, selfish man might change his name from Miser to Loveman, by changing his character, just as Mr. Chaff might become Mr. Wheat, or Mr. Gruff become Mr. Sweet, or Mr. Coward, Mr. Sampson. But *now* Mr. Cheatman may be an honest man, and Mr. Spendthrift noted for economy, Mr. Mountebank may be a sober christian, and Mr. Christian a rascal.

Besides, sometimes an outlandish name may be a positive hindrance to a man. Think you Henry Wilson would have been a Senator and a Vice-President of the United States if he had not changed his name from Jeremiah Coldbath? Do you wonder at that young minister changing his name from Dunghill to Goodwill? And that celebrated lawyer who changed his name from Playfalse to Playfair? Sometimes a change of a single letter changes an outlandish vulgar name to one of euphony and better significance; as Mr. Buck to Mr. Luck, Mr. Hell to Mr. Hill, Mr. Bull to Mr. Full, Mr. Beast to Mr. Feast, Mr. Sin to Mr. Win. But if the change must be radical, that is better than to longer perpetuate outlandish names handed down from a primeval time.

VOLAPUK.

This is the name for what is proposed by some in Europe and in this country as a universal language. It is hardly expected it will supercede other languages; it is designed more especially to fill the long-felt want among commercial men and travelers as a common medium of communication; with as few words as possible, composed largely of root-words capable of expression to give the root thought, various modified expression. "For instance: The English word 'pen' was transferred to Valapuk without change of form or meaning; from it is made the verb *penon*, to write; the noun *penot*, a written word, the noun *pened*, a letter, and so on. Thus the formation of the derived words from the original root proceeds according to iron rules, so that one needs to know few original words to be able to speak or write many. For instance, knowing that *puk* means language, the student may immediately decide that *pukon* must mean to speak. In the same way he would know that *pukat* means a thing spoken, a discourse. Volapuk is a language without any exceptions. It has no irregular verbs, only one conjugation, one declension for nouns, none for adjectives, only two genders and only one form of comparison for adjectives. The entire tongue has been constructed on a clearly defined plan; the main object being to acquire simplicity of form and construction."

But why not make English the univeral language? It is the most beautiful, symmetrical, and comprehensive language in the world. Only one defect shackles it: its foolish, inconsistent, and exceedingly difficult spelling. Correct this, by throwing out its surperfluous letters, and by representing its forty-three sounds by distinct characters, and it would fly as on the wings of intelligencé to all parts of the earth and soon be spoken by all peoples. Our language now is synonymous with civilization, Christianity and prosperity; but this ugly, awkward, tremendous board fence of our orthography shuts us in and others out.

With our language representing a perfected alphabet, there would have to be added only about eight more characters to represent the sounds in the languages of all civilized nations, and but three or four added to these to make it a *Universal Alphabet*.

R.—Did our readers ever think of "r" as a vowel? Not in every situation: at the beginning of a syllable,—as in *ray*, *royal*, *rise*, *derive*, *direct*,—it has the rough sound of the consonant, but after a vowel in the same syllable,—as in *ark*, *ire*, *fire*,—it is a vowel. And yet, in this vowel relation, we are almost always preceding or following it with "e," as though this added the vowel sound,—as in *centre*, *center*, *bearer*, *blister*, *foster*, *nitre*,—whereas "e" is a superfluity. These words would be as perfectly spelt *centr*, *fostr*, *bearr*, *blistr*, *nitrr*.

PUBLISHER'S NOTICE.

We purpose, during this year to give the portraits of the Editorial Staff of our American Dental Journals. It was our design to commence with the one having given the longest service, Dr. J. Taft, but by a delay in its preparation we present our own editor.

Dr. Welch, whose portrait we give in this number of the *ITEMS*, has been the editor of the *ITEMS OF INTEREST* from its beginning, nine years ago. It commenced as a small four paged newspaper; then it was enlarged to an eight paged paper; till finally, in 1881, it assumed its present form. That the Doctor has given satisfaction in the management is made clear by the constantly increasing patronage of the magazine by the Dental Profession. It has now the largest circulation in the United States and Canada of any Dental Journal.

The Post-office Department have recently made some rulings with reference to second and third class matter that, without being of any use, is a source of incalculable annoyance and loss to thousands who use the mail. Instance the *ITEMS OF INTEREST*. The wrappers in which these are mailed at second class rate of one cent per pound are allowed to have printed thereon the name of publication and name and address of publisher. If these *ITEMS* are mailed separately and at third class rate of one cent per ounce, the name *ITEMS OF INTEREST* dare not appear on wrapper without subjecting it to first-class rates of two cents per ounce.

Hundreds of thousands of open letters or circulars are charged letter postage, without any previous notice to the senders, because the name and business of the sender is on the wrapper. The Pennsylvania Railroad is thus mulcted because on their wrapper is printed "Pennsylvania Railroad, Freight Department." This company threatens to sue the postmaster to test the ruling.

On the wrapper of the *ITEMS*, the name of the editor has appeared for some time; the ruling of the P. O. Department now is that this subjects the *ITEMS* to letter postage, and in consequence the name was obliterated on 50,000 thus printed.

The Periosteum and Peridental Membrane, by G. V. Black, is well worth the study of every dentist. It is a volume written almost entirely from a record of personal observations, and displays much study, research, and scientific and professional knowledge. Published by W. T. Keener, Chicago.

Pearson's Dental Appointment Book is a convenient blank diary. It is small, designed for the vest pocket, and yet sufficient for the mass of dentists, better than as though it was larger. We cannot state the price. R. I. Pearson & Co., Kansas City, Mo.

Miscellaneous.

COMPRESSED AIR POWER.

An engineering scheme of a novel character, and one fraught with important consequences for power users in all parts of the country, is now, at length, after many hindrances and delays, in a fair way of being realized by the approaching completion of the first part of the works of the Birmingham Compressed Air-Power Company, Limited. There is nothing absolutely new, of course, in the employment of compressed air for motive purposes. In Paris, Popp's system, covering an area nearly equal to that undertaken in Birmingham, has been in operation over five years for the synchronic working of clocks. At Eastbourne, Warrington, Southampton and other places, compressed air is used in connection with a pneumatic drainage system. In Liverpool, blocks of warehouses are fitted up with hoisting apparatus, worked by the same convenient and docile power; and in many collieries and private works in various parts of the country it has been found advantageous to discard more modern motive agents in favor of this primitive propelling force. Birmingham, however, is the first place in which it has been adopted as a common motive power, supplied from a central source for the driving of general machinery, and its application here, therefore, is distinctly a new departure, involving important and far-reaching issues. It is about four years since the present project first assumed shape, and more than twelve months have elapsed since the works' contracts were placed; but the company have had many unforeseen difficulties to contend with, not wholly of a financial or engineering kind. Parliamentary powers had to be obtained, the local authorities propitiated, the opposition of vested interests overcome or appeased at every step, and even the requirements of municipality, for safeguarding the network of gas and water-pipe, sewers and tram lines, with which the streets of the town are intersected, have added not a little to the embarrassment of the promoters. Now, however, that the experimental works are at length within a measurable distance of completion, it is evident that, however bold and novel the undertaking, there is nothing chimerical or impracticable about it, and that whatever the ultimate commercial results, the mechanical and engineering problems involved are comparatively easy of solution. There is clearly no reason why driving power should not be supplied from a common centre, in the same way as gas, water and electricity, and compressed air seems to offer many advantages for this purpose over steam and other motive agents, which are subject to heavy waste in transmission, or require new and costly appliances. In the first place, air can be applied to existing engines without necessitating any change of plant or other expense beyond that incidental to connection with the air mains; and this cost is more than counterbalanced by the gain in getting rid of boilers and furnaces, with their necessary attendants. Then, in place of smoke, exhaust steam, ashes and condensed water, the only waste product of the pneumatic system is pure air, which can be used to assist the ventilation of workshops, as well as to expedite many manufacturing processes, in which atmospheric currents are needed. With a stream of

compressed air constantly laid on, and available at any moment by the simple turning of a tap, no time need be lost nor fuel expended in getting up steam. The wear and tear of boilers, fire-bars, etc., is entirely obviated; no cleansing of flues, removal of refuse or insurance of boilers is needed; the risk of boiler explosions and of the bursting of steam pipes in frosty weather entirely disappear; the smoke nuisance is abolished; and last, but not least, the power is supplied on terms with which neither steam nor electricity can pretend to compete. How far the company are correct in their calculations, experience only can determine; but if it be true that they can afford to supply compressed air at a rate equivalent to a little over \$65.00 per indicated horse-power per annum, as against the general average here of \$88.00 per indicated horse-power, for all engines up to twenty-five nominal horse power, the money-saving offered by the substitution of the new for the old motive agent should be something like 20 per cent. That is to say, for every owner of an engine estimated for rating purposes at twenty nominal horse-power, or sixty indicated horse-power, the saving per annum should be not less than \$1000, to say nothing of the gain in space, comfort, cleanliness, etc. From the user's point of view, these are certainly potent arguments in favor of wind as compared with steam.—*London Times*.

For the Boys.—Many people seem to forget that character grows—that it is not something to put on ready-made with womanhood or manhood, but day by day, here a little and there a little, grows with the growth and strengthens with the strength, until, good or bad, it becomes almost a coat of mail. Look at a man of business—prompt, reliable, conscientious, yet clear-headed and energetic. When do you suppose he developed all those admirable qualities? When was a boy. Let us see how a boy of ten years of age gets up in the morning, works, plays and studies, and we will tell you just what sort of a man he will make. The boy that is late at breakfast and late at school stands a poor chance to be a prompt man. The boy who neglects his duties, be they ever so small, and then excuses himself by saying: “I forgot; I didn't think,” will never be a reliable man; and the boy who finds pleasure in the suffering of weaker things will never be a noble, generous, kind man—a gentleman.—*Busy Bee*.

To Prevent Glass Stoppers from Sticking.—Dr. S. C. G. Watkins, of Mount Clair, N. J., states that the annoyance of having stoppers of either cork or glass stick in varnish-bottles may be entirely prevented by applying to the stopper a little glycerin whenever the varnish is used.

A little pamphlet, advocating a new system of condensed printing, states that it costs the *London Times* \$2500 a year to use the superfluous “u” in the English spelling of such words as favour, colour, endeavour, etc., counting material, labor and space at advertising rates, and very many more thousand dollars to insert other superfluous letters. What a shame that sensible men cannot look on this subject sensibly, and move in it.—*The Epoch*.

ADHESIVE GUM FOR LABELS, ETC.

The following mixture is stated by M. Eliel (*Revue Photog.*) to form a strong adhesive gum, which will really make paper or parchment *stick* to any surfaces on which it may be applied, such as wood, glass, stone or metal of any kind. It is, therefore, admirably adapted for use in the pharmaceutical laboratory; and, indeed, with certain modifications introduced by ourselves, will be welcome among merchants and manufacturers generally. It is made thus:

Gum acacia.....	120 grams or parts.
“ tragacanth.....	30 “ “
Glycerin.....	120 cubic centimeters or parts.
Thymol.....	2.5 grams or parts.
Water.....	q. s. to make 1 liter or 1000 parts.

Soak the gum separately in a little water, and when the tragacanth is fully swelled, beat it up to the consistence of a thick, homogenous mucilage, and mix this with acacia, and pass the whole through a piece of fine linen or “tammy.” Add to this the glycerin, in which the thymol has previously been shaken up, and, lastly, make the whole up to a thousand parts, or one liter by measure, and store in suitable, well-corked bottles ready for use.

For the $2\frac{1}{2}$ grams of thymol we prefer 2 grams of eucalyptol, or about $3\frac{1}{4}$ grams or parts of Australian eucalyptus oil. With this gum labels or circulars can be made to adhere firmly to tins or metallic drums, etc., and if written or printed with the boracic “label ink,” and afterward washed over with “water varnish,” such labels, etc., will be very durable, and will remain unaffected by ordinary chemical solutions or dilute acids.

What is Natural Gas?—As to my views of the mode of formation of the gas that exists now in such enormous compression in these different strata, I ask, first, what *is* this gas chemically? Always essentially, from whatever horizon obtained, it is *marsh gas*, that hydrocarbon of all others which contains the most hydrogen and the least carbon, the compound which naturally and necessarily forms the final residue of the abstraction of carbon from organic matter by a powerful oxidizing agent, since in nature we scarce find elementary hydrogen as such a residue. Now, what oxidizing agents are there, or, rather, what have there been in all these rocks that could effect such a combustion? I reply, oxides of iron, now represented in these rocks by iron sulphides, showing the iron oxides to have passed through the forms of sulphate.—an action similar to that “evolution of marsh gas going on in every stagnant pool, loaded with vegetable matter, and blackened by sulphide of iron, which is occupied in conveying the oxygen of the water to the carbon of the mud.”—*Prof. Wurtz.*

THERE IS ALWAYS ROOM AT THE TOP.

Mr. N. T. Kane had a remarkable business career. Eight or nine years ago he was working by the day in a woolen mill in Washington county, N. Y. He then branched out in business for himself and leased a knitting mill, and is estimated to have become worth in that short time upwards of a quarter of a million dollars. He was a man of great personal popularity, and perseverance.

TEACH YOUR SON A TRADE.

The *Talmud* says: "If a man teach his son no trade it is as if he taught him highway robbery." The force of this saying has, no doubt, come home in after years to many a fond parent, who, in speaking of his son has said: "He is too smart for hard work." Too many American boys have been brought up with the pernicious idea of being able to make their living by their "wits" firmly implanted in their minds, thus taking away from them one of the most powerful incentives to honest and earnest labor; destroying in the germ that natural ambition which, if properly fostered and directed, would have been the means of making them an honor to their parents and valuable members of the community. It is not the fault of the boy so trained that he despises labor and laborers. He has never been taught the value and dignity of honest toil, or that the true worth of a man is measured by his good works, not by his ability to outwit and cheat his fellows. To demonstrate the assertion that the majority of American youths are educated in the idea of maintaining themselves otherwise than by manual labor, it is only necessary to insert an advertisement for a clerk or book-keeper in the daily papers.

Applications will be received by the hundreds. In the same issue an advertisement for a skilled mechanic may not bring half a dozen replies, though the wages of the mechanic may be double that paid the clerk.—*Power and Transmission.*

Onions.—Those who are in the habit of indulging in raw onions, says a medical exchange, may be consoled for the social disadvantages which ensue by the fact that onions are about the best nervine known. No medicine is really so efficacious in cases of nervous prostration, and they tone up a worn-out system in a very short time. Their absorbent powers are also most valuable, especially in times of epidemic. It has been repeatedly observed that an onion-patch in the immediate vicinity of a house acts as a shield against the pestilence, which is very apt to pass over the inmates of that house. Sliced onions in a sick room absorb all the germs and prevent contagion. During an epidemic the confirmed onion eater should, however, eschew his usual diet, as the germs of the disease are present in the onion, and contagion can easily result. Sanitas' fluid, used as a mouth wash, will completely destroy the odor of onions and tobacco.—*Dental Review.*

Technic Schools.—The Carriage and Builders' Association, lately in session in Washington, passed the following resolution: "Believing that the mechanical schools already established in connection with the common schools are doing silent but important work, and believing that their increase would greatly benefit the productive interests of this country, we would urge on the Boards of Education of the different States the necessity of increasing these schools and of making them more useful by the appointment of mechanics as instructors in the use of tools."

A Paste with which to stick labels to tin boxes.—Use starch paste with which a little Venice turpentine has been incorporated while it was warm.