

VIRES VITALES SUSTINETE.

TRANSACTIONS

OF THE

National Eclectic Medical Association

OF THE

UNITED STATES OF AMERICA,

FOR THE YEARS 1895-6.

*Including the Proceedings of the Twenty-fifth Annual Meeting,
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Meetings of the Sections.

SECTION A.

JUNE 19, 1895.

Materia Medica and Pharmacy. Chairman, H. K. WHITFORD, M. D.; Vice-Chairman, Eugene E. Bronson, M. D.; Secretary, John V. Stevens, M. D.

The Section of Materia Medica and Pharmacy was duly organized on Wednesday afternoon; Chairman H. K. Whitford, D., being absent, Vice-Chairman E. E. Bronson, M. D., took the Chair; Secretary J. V. Stevens, present.

PAPERS PRESENTED.

THE EPIDEMIC REMEDY.

PROF. JOHN FEARN, M. D., Oakland, California.

So far as I know, the late John M. Scudder, M. D., was the first to call particular attention to the thought that there was such a thing as an epidemic remedy. Since first I read from his pen his account of observations along this line, I have been on the watch for phenomena that would either prove or disprove his theory; and the longer I practice medicine and the more thought I give to this special feature of practical therapeutics, the more I am convinced that there is such a thing as an epidemic remedy. Before proceeding further let me define what I do not mean by the epidemic remedy.

I would not have you for one moment think that I teach that there is such a thing as a remedy that will bit every case curatively in the course of an epidemic! No! No!

This idea would never work with specific medication—in fact, it would be entirely contrary to that theory.

Now, let me in a few words express myself as to what I mean by the epidemic remedy. I mean when during an epidemic a majority of cases, presenting themselves to the physician, show such pathological wrongs,

or such a train of abnormal symptoms, there is quite a similarity. The specific medicationist has been in the habit of meeting these wrongs by certain specified remedies. The remedy may be anyone of twenty or more. But that remedy which is most frequently indicated and most certainly successful has a right to be called the epidemic remedy.

Thousands of physicians, who are not in any sense specific medicationists, have noticed that during the existence of any wide prevailing disease, whether it be epidemic or endemic, many of the cases present abnormal conditions wonderfully similar in their manifestations.

The same disease prevails in the same locality a few years afterwards, and the abnormal manifestations are quite dissimilar, and the man who prescribes definite remedies for specific results will find himself prescribing entirely different remedies, though the diseases in both cases maybe the same in name; so that the the epidemic remedy for 1895 may not be the one, and, in all probability, will not be the remedy which was so successful in 1893. So that this theory is entirely different from the theory of specifics for certain diseases.

Let me illustrate from practical experience. During the years '93-4-5, the majority of acute diseases coming under my observation, either as physician in charge or consultant, might be named as pneumonia, dysentery, bronchitis, typhoid fever and typho-malarial fever. During the experience of those two years I found four remedies principally called for, outside the special sedatives; those remedies were specific ipecac, baptisia, asclepias tuberosa and rhus tox, and I will make a few observations on each in the order named.

Specific ipecac.—For the two years mentioned I have no doubt that in my experience this was one of the pronounced epidemic remedies. For what cases was it prescribed? It was prescribed in diseases of the respiratory tract, where there was irritation of mucous surfaces, with tendency to cough; the cough being very pronounced at night, preventing sleep; the sputa was principally mucous, no great amount, or little hard to move. Specific ipecac 7 to 10 drops, in a glass of water—a teaspoonful frequently would loosen the secretion, allay the irritation, stop the cough—whether in child or adult. One little sufferer about five years old, who had been through a long siege, and had affusion on right side, was particular to see that I left him plenty of cough medicine, showing that the child had observed its beneficial results.

In irritation of the gastro-intestinal surfaces it was equally good. If the vomit was chiefly mucous with much straining from irritation, 5-8 drops, in a glass of water, were successful; in cholera infantum, in dysentery, with frequent mucous discharges, sometimes greenish and occasionally tinged with blood, the remedy was equally useful in a large class of such cases, leaving nothing to be desired. After the acute stage had passed, and the patient had come to that stage where tonics were needed, I found that small doses of specific ipecac added to spec. nux vomica helped the nux to act more rapidly and certainly; of course, if there was a call for aconite, that was added, but ipecac was a pronounced remedy.

Specific Baptisia.—I have heard physicians decry this remedy—say they got no good out of it. My experience has been entirely different. Those who decry the remedy must have either had a poor article, or they have used it in cases where it was not called for. To those who would give this remedy a fair trial I would say, if you cannot get the fresh drug to make an infusion, use none but the specific medicine, and, in the second place, use it according to the directions laid down in Scudder's Specific Medication; if you use it thus you will be delighted with its action. In my hands it has done good work acting as a stimulant and antiseptic. Wherever we have feeble capillary circulation, with tendency to ulceration, either of throat, stomach or bowels, and the tendency is to local death and decomposition, I have found this remedy to be a wonderful sweetener, getting, by its kindly stimulating properties a better local and general life. Recently, I was called in counsel in a very unpromising case of typho-malarial fever—other much-vaunted antiseptics had been used—I advised:

Specific baptisia.....20 drops.

Aqua disti3 fluidounces

M. Sig. One dram every two hours, alternated with the special sedative.

The results were very satisfactory. From this and many other experiences I put down very confidentially as one of the, epidemic remedies for the period above-mentioned, *baptisia*.

Asclepias tuberosa.—If you get a good preparation of this root it is a good medicine. The root itself has poor keeping qualities, so we are obliged to use the tincture. Scudder speaks of this remedy as being a feeble remedy, well suited to children. I find it equally well suited to the adult. The remedy is slightly sedative; it allays that form of nervous

irritability closely connected with imperfect skin action. It increases true skin secretion. The diseases in which it has been specially useful to me are pneumonia and pleuro-pneumonia; action of skin impaired through nervous irritation, and from same cause there is difficulty of expectoration; cough short, dry and irritable. I have been in the habit of adding to the special sedative, say:

Specific aconite.....	5 drops
Specific asclepias tub.....	1 dram
Glycerine	1 fluidounce
Aqua	1-4 ounces

M. Sig. One dram every hour, as needed.

Under its influence the skin does its work, the secretion in the respiratory organs becomes reestablished, expectoration easier and the patient less nervous. It has done such good service for me that it has become a necessity in the treatment of such diseases, and may well deserve to be called an epidemic remedy.

Specific Rhus tox.—This remedy, for the same period, has been with me one of the most certain remedies when indicated. To save time I will ask the reader to turn to *Scudder's Specific Medication*, carefully read the several indications for its use. In typhoid fever, and in diseases of a typhoidal type, some of those pathological conditions have been very prominent, and no matter what the disease in which these conditions were presented, this remedy proved to be one of the certainties in medicine. I have seen it relieve nervous trouble, giving rise to loss of sleep; bring down temperature; relieve determination of blood to the brain, and even stop vomiting.

What I have said may not be conclusive to the readers of this article, but the experiences from which these statements have been deduced have to my mind been conclusive that we have epidemic remedies, and that for the past several years, the four remedies I have named have certainly earned the right to be designated *epidemic remedies*. In conclusion, will say it will often call for close investigation and observation to find out the indicated remedy; the dividing line between symptoms calling for different specific remedies is often very fine, but when found and acted upon the results well repay us, and, I believe, the thought expressed and contended for in this paper will bear even a wider explanation.

Some years ago, I used with great success a combination of cocaine, Lloyd's colorless hydrastis, plumbi sub-acetatis in aqua distil. as an injection in gonorrhoea. I cured the cases that came to me in my own practice rapidly and pleasantly, then a string of sufferers who had been vainly treated by my neighbors, came to me, they also were cured, until I began to feel like crying "*Eureka.*" But suddenly my success was at an end, it cured no more. Why was it? I know not. The cases looked and acted similarly, but they were intractable to the old treatment.

If the gono-cocci had been carefully examined under a powerful microscope, the last intractable fellows might have been found harder to kill, in fact more virile and therefore, the old shot was not deadly enough. Let us at all times be careful in diagnosis, be quick to note pathological manifestations, then when we have located our game go for it with a dose small enough, and yet large enough to do *execution.*

PASSIFLORA.

By C. W. RODECKER, M. S., M. D., Wonewoc, Wisconsin.

The therapeutics of passiflora are as yet very imperfectly known. It has been experimented with, no doubt, very considerably, and the consensus of opinion places the remedy in the list of nerve sedatives first, and secondarily in the list of nerve tonics. Again, it is a glandular stimulant, consequently, an alterative of no mean value; it is undoubtedly hypnotic, and acts as such in insomnia.

The remedy in its liquid form is of a grass-green color; not a bright green, but a dark, dirty colored green. The taste is similar to that left after chewing grass—a flat, greasy taste, which does not remain in the mouth any length of time, and is not pungent. The taste is more alkaline than acid.

Passion flower is a native of the southern parts of the United States, where it grows in abundance, and is cultivated for the beauty of its flower. It had been passed by as a plant having no particular virtue, until, by accident, its extraordinary virtues and power as a remedial agent in a certain class of diseases were discovered.

The specific has been found, and, like Cascara, we wonder how we could

get along without it.

In insomnia, the tincture in teaspoonful doses has proved wonderfully effective.

In simple neuroses of children, in worm fever accompanied by spasms, it is a specific; also in teething.

We have a class of children in which there is a hyperaemia of the vaso-motor system, as in teething, worms, cholera infantum, etc., that have, no doubt, caused the physician many anxious hours. Passiflora robs these cases of the fear of impending crises. In megrim, another form of nervous disorder, it has proved a Godsend, and in neuralgias from whatever cause, it will bring the right result every time. In neuralgia of the stomach or bowels, in palpitation of the heart, and in all nervous disorders, it has many times astonished me in its results. In tetanus, caused by a rusty nail penetrating the foot, the tincture in teaspoonful doses every hour had a very happy effect. In that dreaded traumatism it proved itself a blessing to the beast as well as to man.

In hysteric eclampsia, passiflora is fine in results. In the epileptic form of convulsions of children, it has proved wonderfully efficacious in my hands.

Its application to irritable ulcers has proven of decided benefit.

In spinal irritation in the lying-in woman, or in cases where she is troubled with those twisting or grinding pains, it will give prompt relief without in the least deranging the stomach, also in the after-pains of child-birth it is excellent.

In threatened abortion or miscarriage, from whatever cause, passiflora given in one and two drachm doses, has proven a splendid adjuvant to treatment. It acts slowly, but lastingly, and without any narcotism or derangement of the digestive system. I will endeavor to classify the diseases in which passiflora acts well, if not decidedly and promptly.

Insomnia, acute meningitis, cerebro-spinal meningitis, delirium tremens, dipsomania, hyperemia, neuralgia of whatever kind, tic douloureux, cervical and occipital neuralgia, spasms, convulsions, cramps, chorea, hysteria, tetanus, acute eclampsia, trismus neonatorum, epilepsy, catalepsy, sunstroke.

I think I have given points enough here to lead you to interest yourself in this wonderful remedy, and hope by a more thorough experimentation to give its secondary effect if any, as well as a more extended account of its medicinal virtues. It is my candid opinion that, with perhaps one or two exceptions, no remedy has been discovered in this century, that gives more universal satisfaction in the treatment of a large class of diseases that has perplexed the physician, and the treatment of which has proven so very unsatisfactory until *passiflora* came into use and proved so effective. One very remarkable thing in regard to the drug is, that in all its active medicinal results it makes no difference in the size of the dose, there does not appear any narcotism, and in all my readings I find no one speaks of the poisonous effects of the medicine.

Dr. Spees in the *Medical Gleaner* says: *Passiflora* is a specific in toothache when associated with an irritability of the nervous system.

Dr. Euri in the *Medical Age* claims that it relieves diarrhea when accompanied with much pain, and that it is a valuable remedy in the restlessness of fever. It is also valuable in the spasms of poisoning by strychnia, and is prompt in its action in hysterical convulsions. He further says, that in confinement, when labor becomes tedious and pains ineffectual, irregular, spasmodic, and excessively severe, and the patient is nervous and fretful, it is the remedy to use. It relaxes the muscles and relieves nervousness, regulates the pains, and increases their effectiveness.

In reflex troubles peculiar to the diseases of women it is useful; relieving vomiting and morning sickness.

It is beneficial in asthma and whooping cough, and in the spasms of spinal meningitis, as well as in the restlessness and sleeplessness of children cutting teeth.

I frequently use it in nervous chills of old age; it always relieves in twenty or thirty minutes.

It is a grand remedy and will make many friends on account of its action being so expeditious. One peculiarity, however, is that while it is a soporific, it cannot be depended on to act as such on two successive nights with the same patient.

Dr. Ellingwood in the *Chicago Medical Times* recommended passiflora in spasmodic incontinence of urine:

The *Homeopathic News* says that in delirium tremens passiflora is unexcelled, also in the nervousness of those addicted to the morphine habit. In dysentery, it relieves the pain and griping tendency of the bowels.

In the *Medical Age*, Dr. F. J. Boulin states that in persistent wakefulness he has used passion flower tincture in thirty drop doses, repeated every half hour as necessary, with great satisfaction. Usually but two doses are required and on the second night the repetition demands a smaller quantity which is contrary to the rule for the employment of such drugs; on one occasion, he himself being wakeful during the night took 190 drops between 10 p. m. and 4 a. m., without any unpleasant effects whatever.

I have read of hundreds of cases in the medical journals to which I have had access, and find in all the same general opinion; that in all diseases of a nervous origin accompanied by pain or convulsions of a spasmodic character, that passiflora always acts promptly and satisfactorily, leaving no bad results.

Dr. Jos. Adolphus in the *Courier of Medicine*, (St. Louis), February, 1895, says regarding passiflora incarnata, May pop, "Its value as a therapeutic agent is known to only a few members of the profession. I was one of the first who wrote and published papers on this medicine. I have used it extensively, and experimented largely with it on lower animals, and in general practice. In 1874 I was in Macon, Ga., and while there I treated a horse which was in extreme suffering from lock jaw. A strong decoction was made from the root; this was administered in large doses in the intervals of the spasms, by drenching the animal. About two and one-half gallons were given and he was left to himself during the night (for it was an evening in May); no one believed the poor beast would recover. Early the next morning the owner and myself visited him, and to our surprise we found him grazing in the pasture, and all signs of lock jaw entirely gone. The use of the May pop as a cure for lockjaw was afterward well known in the various localities of the south."

It is a decided sedative to the nerve centers; its action is most

pronounced in the diseases of women and children, particularly the convulsive and neuralgic kinds. In these troubles I have used it extensively.

I have treated a few cases of after-pains with this remedy quite to my own and the patient's satisfaction. I think it deserves confidence in these cases.

I have also used it with success in the delirium of fevers of all kinds, especially in the low muttering kind. One of its marked beneficial effects is to produce sleep. Some cases of delirium are manifestly the result of sleeplessness and restlessness. I recall one case in particular; the patient was exceedingly restless and sleepless for five days and nights. I regarded it as probably a fatal case. As a last resort, I gave the patient tincture *passiflora* in twenty-drop doses every two hours; the last two doses were larger, a half teaspoonful, repeated at intervals of half an hour. Sleep came in half an hour after the last dose, and lasted five hours. It was a refreshing and restful sleep. The remedy was repeated in twenty-drop doses every four hours during the next two days, to provide against any probable return of the restlessness. The case went on steadily to convalescence.

I have used the medicament in nearly every case I have had in recent years of pelvic engorgement attended with severe pain.

Such cases I used to treat with *gelsemium*, giving it in large doses progressively increased, with fair success; some of the annoying drawbacks in the action of this drug were double vision, blindness, drooping of the eyelids, and in insane cases, an almost complete abolition of power over the muscles. These conditions often caused considerable alarm to the patients and their friends, and caused them in many instances, to severely censure the medical attendant. *Passiflora* causes none of these symptoms or inconveniences.

Recently I have used the medicament in two cases of pain in the stomach, coming on about an hour or two after taking food. One case was markedly severe; the pain at times was so agonizing that an eminent medical man was consulted in regard to it, and diagnosed it malignant disease of the stomach. My remedy was *passiflora* in twenty-drop doses, every two hours, during the day. In brief, the treatment was successful after being continued a week; but occasional doses were taken during the day for a month longer.

The cause of the trouble was, I presume, hyperesthesia of the gastric mucous membrane. Wherever I have found hyperesthesia, in the mucous membrane, I have treated it with *passiflora incarnata*.

Its beneficent influence on the mucous surfaces, whether painful, catarrhal, or what not, is often markedly efficient and pleasant.

I am confident that this remedy has a kindly influence on the vasomotor and cardiac centers, and on the sensory roots of the spinal nerves. It is used successfully in anemic headaches, while some physicians claim that it is equally serviceable in the congestive variety.

A year ago I treated with success one of the most unpromising cases of so-called spinal irritation, with *passiflora* and *viburnum prunifolium*. At first I used the *viburnum* in ten-drop doses, and the result was unexpectedly good. To test the value of *passiflora* in the case, I dropped the *viburnum* altogether and gave *passiflora*; the improvement continued and I did not again resort to *viburnum*; nevertheless I must acknowledge the good influence of *viburnum* on the disease.

Passiflora is the remedy for over-excited reflexes; hyperesthesia of highly excitable surfaces, especially mucous membranes, and is also a good remedy in functional cardiac troubles.

In closing I will take occasion to remark, that from clinical experience I believe the dose usually given is too small; on this account the value of the medicament is discredited. I often give it in teaspoonful doses with excellent results. However, in occasional cases it causes dark urine. When this occurs stop the remedy awhile.

In twenty drop doses repeated every two hours it relieves palpitation.

Dr. Merson in the *Medical Age*, recopied from the *Homeopathic News*, says that, "for great nervous excitement and restlessness, I give teaspoonful doses of tincture *passiflora incarnata*, every three hours. After the second dose, if there is no evidence of sleep, I double the dose, both as to time and frequency, thereby securing the desired effect."

I could continue piling up evidence for *passiflora*, but trust I have already made clear the medical virtues of one of the best remedies discovered in the nineteenth century.

MEDICINAL VALUE OF THE SARATOGA WATERS.

By L. O. GOETCHIMS, M. D., Saratoga Springs, N. Y.

The medicinal value of the Saratoga waters has never been given with accuracy. The most learned people of the world visit Saratoga Springs to drink and bathe from the great health giving fountains, but fail to comprehend the magnitude of the underlying strata, the force and the power of the gases, or the direct source from whence they come. The new Springs discovered by deep boring and new in locations, have changed and contradicted most of the former theories in regard to the source and supply. The new spring waters contain more gas and mineral substance than the old, showing an inexhaustible supply. With the old and present unsystematical manner of drinking and bathing at Saratoga Springs it would be impossible to estimate the medicinal value of so many different fountains. The immense quantities of water flowing from over forty springs, varying in size and depth, from near the surface to five hundred feet, charged with various proportions of mineral and carbonic acid gas; each one a grand study of itself. (The student becomes amazed at nature's incomprehensible laboratory.)

Therefore, I consider the great health-giving medicinal waters of Saratoga Springs inestimable until some more accurate way of using the waters becomes established. The money value reaches into Millions of dollars. That a judicious use of the waters has cured or alleviated many diseases is proven beyond question. The general medicinal effects of the waters are diuretic, laxative, cathartic, diaphoretic, and somewhat sedative. A grateful drink for febrile patients. Antiseptic and detergent for bathing.

Medical Symposiac.

AUGUST 13, 1895.

Resolved, That a law forbidding the sale of cigars and cigarettes to minors should be enacted and enforced.

The following paper was presented on the affirmative of this question; no one was present to speak in the negative:

CIGARS AND CIGARETTES.

By W. F. CURRYER, M. D., Indianapolis, Ind.

The tobacco habit may appropriately and with strict justice, be described as a relic of barbarism. It was copied and adopted from the vicious and ignorant savages who lived in the West Indies, where they were discovered by Columbus. The result has been that while the European powers by treachery and the force of arms subjected the tribes and peoples of the Western hemisphere, these in their turn, have subjected and debased the populations of the Eastern continent by tobacco.

So universal and so popular has the use of this article become, that to take any decided stand against it and proclaim the facts in regard to it, requires an unusual degree of moral courage. It is easier by far to keep silent and float quietly with the current, even of a river so execrably filthy. There are very many now, who will freely acknowledge every thing that can be said respecting the pernicious effects of this baneful drug, yet will inculcate a far different doctrine by their example. They will affirm unequivocally that the use of tobacco is disgusting and degrading to the moral nature, as well as injurious to bodily health, and yet in the presence of the very audience where they have borne this sweeping testimony, will continue the practice chew and spit, smoke and puff, snuff and sneeze, as if it were perfectly proper and becoming. It is a grave problem, how they can, under such a state of facts, reasonably expect to convince others, and in particular the law-makers, that they are themselves sincere, or that their declarations are true.

There is no narcotic of ancient or modern times which has been so extensively used, and no drug about which there exists so great diversity of feeling and opinion, both among the people generally and

the members of the medical profession. While the use of alcoholic beverages is very generally looked upon as debasing, and often exposes the individual to social ostracism, most persons will condone the offense of tobacco. Many individuals imagine that they possess some pent-up nervous energy, a deranged mental equilibrium, which tobacco serves as a safety-valve to benumb or goad into normal condition. In this way it has gained some degree of toleration and even of public approval.

The habit must be regarded as one of the greatest evils of the age. I do not except alcohol even with its long, murderous record. The use of tobacco is worse than alcohol because it is more general, because its moral status is considered as higher, and because its pernicious results are more gradual and less obvious to view.

LEGISLATION IN BEHALF OF MINORS.

The destructive effects of the use of tobacco upon youth are such as appeal to us to put forth our most earnest efforts for their safety. The proposition before us contemplates this state of things. It enquires whether a law forbidding the sale of cigars and cigarettes to minors should be enacted and enforced. Already has the matter engaged the attention of philanthropists and public men. As long ago as the 10th of January, 1891, Mr. Edmunds, of Vermont, presented a memorial of the citizens of the District of Columbia, to the United States Senate praying for the passage of a law to restrict the smoking of cigarettes and cigars, and the use of tobacco in the District. It was duly referred and ordered printed.¹

The legislatures of the several States have also considered the matter. There are laws prohibiting the sales of cigarettes or tobacco to minors, under specified ages, in Alabama, Arkansas, Connecticut, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Vermont, Virginia, Washington, Wyoming.

I do not find the State of Wisconsin in this category. It may, however, have passed such a law since 1891, and perhaps some other States ought now to be included.

¹ Miscellaneous Documents of the Fifty-First Congress, Second Session, No. 40.

In several States it is simply made unlawful to sell cigarettes or tobacco to minors; others impose likewise heavy fines and also imprisonment. There is also diversity in respect to the age. Maryland fixed the limitation at fourteen years; while Georgia and Idaho extend it to twenty-one. Most of the States named make it sixteen years of age. In Indiana the age is fixed at sixteen, and the fine is not less than one dollar or not more than ten; and it is also made unlawful for anyone to persuade, advise, counsel or compel any child under sixteen years of age to smoke or chew tobacco.

It is evident from this extensive legislation, that there has been at different times much anxiety entertained in regard to the pernicious effects of this practice. Yet, if the condition of affairs in other States, and in the cities, is like what it is in Indiana, these laws are virtually a dead letter. Like the practice pursued in respect to other prohibitory or restrictive legislation to affect the morals or personal habits of the members of the community, they are left to enforce themselves. They are like political platforms—a declaration and little more.

Meanwhile our youth, in alarming numbers, are everywhere following in the footsteps downward of their adult acquaintances. Hundreds of boys, and even many girls, are to be met who are addicted to the cigarette habit.

MAGNITUDE OF THE EVIL.

I will now present a few statements in regard to the manufacture and sale of cigarettes. The Western Tobacco Journal, for August, 1893, in an article upon the output of tobacco for that month, says that the number of cigarettes made was 357,844,360—an increase over the number made in the same month in 1892, of 87,054,430. The output for the entire year was estimated at 3,350,000,000!

The “American Tobacco Trust,” according to its own showing, made a profit, in 1892, Of FOUR MILLION DOLLARS from cigarettes alone!

In 1886, according to the reports of the Bureau of Internal Revenue, the money expended in the United States for tobacco was \$433,184,480. This would represent 4,957,528,488 cigars and cigarettes, and 191,592,240 pounds of tobacco and snuff. The cost as here given represents only the wholesale prices, not what is paid by the consumers.

While these figures are not up to the present date, they show an aggregate that is truly appalling. What adds to the cause for alarm is the fact that the expenditure and consumption at the present time far exceed the amounts here given.

The annual report of the Commissioner of Internal Revenue shows that, during the fiscal year ending with June, 1894, the number of cigarettes made in the United States exceeded 3,000,000,000. This would be an average of about fifty to each individual of the population. A decade ago, according to the Commercial Gazette, the number manufactured was only some millions. There has been a steady and rapid increase year by year.

HOW CIGARETTES ARE MADE.

So great is the demand, that cigarettes are not now made by hand as they are in Turkey and Russia. Like everything else in America, the facilities for manufacturing them have been notably increased by the adoption of machinery. Within the last few years, several extraordinary inventions for this purpose have come into use. The patents are immensely valuable. One of these machines is capable of turning out 275 cigarettes per minute, upon the average.

The mode of operating may be worth describing. The machine passes along an endless strip of paper, the width of which is the exact length of a cigarette. The tobacco is fed from above into little scales, which drop down as soon as they have received the precise amount required, emptying their contents upon the strip of paper, which is then rolled, chopped off with knives, and neatly glued together—all in a second of time, the machine then counting them, assorting them into packages, and wrapping them up, without the aid of human hands.

The manufacturers, every one of them, have their own formulas for the article which they produce. These are more or less secret. None of the brands of cigarettes which are placed on the market are composed of a single kind of tobacco. The original material is merely the basis for artificial flavoring. To begin with, various aromatic oils are employed. The list of these includes rose-geranium, vanilla bean, tonka bean, and licorice root. These are added to the tobacco after it has been chopped into shreds ready to be rolled into cigarettes. Finally, the particular drug chosen is applied in the form of liquid solution and sprayed over the material with an atomizer. Careful discrimination is employed in regard

to the quantity, a precise number of drops being distributed to each cigarette.

From the best professional and other information at hand, there can be no doubt that opium, valerian, cannabis indica, and other appetite-kindling drugs are used to a large extent in this way. It is a significant fact that while the quantity of leaf tobacco manufactured is steadily increasing, less sugar and licorice are used, The other materials, it should be remarked, however, are used to a larger amount.

INJURIOUS EFFECTS OF THE HABIT.

When pure tobacco is used by an individual, it injures the nerves, the eyes, brain and heart. When opium is added to the tobacco, as is done in the manufacture of cigars and cigarettes, is it any wonder that college physicians, like those of Yale, Harvard and Amherst, found, after much care and frequent examinations, that the students lost weight, height, chest-girth and lung capacity, from the tobacco habit? And when Indian hemp and kindred drugs are used in conjunction, what are we to expect?

The tobacco habit is found almost everywhere and in all classes, from the outcast in the street to the king upon the throne, from the vile transgressor of every moral law to the most honored divine, from the ignorant to the learned and erudite, and from the child and youth to the veteran hoary with age. Many of its victims are fully conscious of its direful effects, yet constantly yield to its imperious demands. They had formed it, perhaps, when they were too young to know what it would entail, and now are its slaves, possibly not having moral strength to conquer it or even to attempt resistance.

SENIOR STUDENTS IN YALE COLLEGE.

I will enumerate some of the results to youth from this habit, as these are given by various superior authorities.

J. W. Seaver, M. D., thus describes the effects of tobacco upon the physical development of the students in Yale College.²

“Through the assistance of several members of the Senior Class, I am able to make a more complete statement, and equally interesting

²University Magazine, June, 1891

showing from a scientific point of view. The data at present discussed relate to 187 men, composing a senior academic class at Yale, all these men have been examined and measured at least twice during the course, viz.: immediately after entrance and in the last term of the senior year. With two exceptions, over ninety per cent. of the men were also examined in the sophomore year, and many in the junior year.”

The material, therefore, he says, was fairly complete, and the group large enough to eliminate the elements of mechanical error and chance growth.

“On entering college the class of 1891 had a list of 38 tobacco users, or about 15 per cent. of 205 men. At the beginning of the junior year their percentage had slightly increased ; although eighteen of the men, who were recorded as “tobacco users,” had for one reason or another left the college. At the end of the senior year, the record stood as follows: There were 77 men who had never used tobacco; there were 22 men who had used it slightly, at rare intervals, of whom six had begun the practice in the last term of the senior year; there were 70 who used it regularly.

“The growth of the men in favor of the principal anthropometrical items of varied character, is as follows:

	Weight.	Height	Chest-Girth.	Lung-Capacity.
Non-users	11.78 lbs.....	894 in.	1.74 in.	21.6 in.
Irregular users	11.06 lbs.....	788 in.	1.43 in.	14.4 in.
Habitual users	10.66 lbs.....	721 in.	1.27 in.	12.1 in.

If this growth be expressed in the form of percentage, it will be seen that in weight the non-users increased 10.4 per cent. more than the regular users, and 6.6 per cent. more than occasional users. In the growth of height, the non-users increased 24 per cent. more than the occasional users. In growth of chest-girth, the non-user has an advantage over the regular user of 22 per cent ; but in capacity of lungs the growth is in favor of the non-user by 77.5 per cent. when compared with regular users, and 49.5 per cent., when compared with irregular users.

“It has long been recognized by the ablest medical authorities that the use of tobacco is injurious to the respiratory tract, but the extent of its influence in checking growth, in this and in other directions, has, I

believe, been widely underestimated.”

STUDENTS AT AMHERST COLLEGE.

Dr. Seaver's conclusions in regard to the dwarfing effect of tobacco are fully corroborated by the statement more recently published, of Professor Edward Hitchcock, M. D., of Amherst College. He gives the results of tobacco-smoking upon the physical development of students, as shown by a study of the matter in the class of 1891. Of this class 71 per cent. increased in their measurements and tests during their entire course, while 29 per cent. remained stationary, or had fallen off. In separating the smokers from the non-smokers, it appears that in the item of weight the non-smokers have increased 24 per cent. more than the smokers; in height, they have surpassed them 27 per cent.; in chest-girth, 42 per cent.; and in lung capacity there is a difference of 8.36 cubic inches. This is about 75 per cent. in favor of the non-smokers, which is 3 per cent. of the total average lung capacity of the class.

Here is scientific demonstration that the use of tobacco checks growth in weight, height, chest-girth, and, worst of all, in lung capacity.

If this be true of young men so nearly grown, as are students in colleges, what must be the effect upon younger boys? Their growth ought to be more rapid in proportion ; but their undeveloped organisms can not so well resist the influence of this poison, and they must, therefore, be dwarfed and stunted far more than those who are older.

STUDENTS AT THE NAVAL ACADEMY.

Dr. Philip S. Wales, Surgeon-General, also bears important testimony of the United States Naval Academy at Annapolis, Maryland. Unquestionably, he declares, the most important matter in the health history of students at the Naval Academy is that relating to the use of tobacco. An experience of five years as health officer there has convinced him that the future health and usefulness of the lads educated at that school require its absolute interdiction. He had repeatedly found defective vision resulting from its use in earlier life. Irregularity of heart-action was one of the most conspicuous effects. He had found many cases of irritable heart, the “tobacco-heart,” among the boys who had acquired the condition by smoking after they had entered the school. To quite a number of these promotion had been refused, because of the heart disturbances and unsteady, tremulous hands.

Finally, he says, that he is sure that the use of tobacco predisposes to the use of alcoholic drinks. His observation was that it is an obstacle to mental application. Hence, he concludes, that an agent capable of such potent evil, which through its seductive effect upon the circulation creates a thirst for alcoholic stimulation, which exerts a depressing and disturbing influence upon the nerve-centers, which determines functional diseases of the heart, which impairs vision, which blunts the memory, and interferes with mental effort and application, ought—in his opinion as a sanitary officer—at whatever cost of vigilance, to be rigorously interdicted.

STUDENTS AT WEST POINT MILITARY ACADEMY.

Superintendent John N. Wilson, of the Military Academy at West Point, New York, states that on several occasions, during the past two years, youths who had successfully passed the physical tests, developed eye-trouble soon after beginning their studies. An expert oculist of New York, after having made several examinations, reported that the weakness had been caused by tobacco-poisoning, from the continuous use of the cigarettes before their admission into the Academy.³

TESTIMONY AT OTHER SCHOOLS.

The late Dio Lewis declared that at Harvard College during fifty years, although five out of every six of the students were addicted to the use of tobacco, not one of them had ever graduated at the head of his class.

At the public schools of Paris, in France, a committee was appointed at one time to ascertain the facts upon this matter. It was reported that in the various competitive examinations the students who smoked tobacco were far inferior to those who did not use the article. The investigations by this committee included alike the primary, intermediate and higher schools, as well as the colleges and professional schools. The result in them all was the same.

Dr. Willard Parker, speaking of the schools and colleges of America, declared: "Tobacco is ruinous, dwarfing body and mind." He made the further remarkable statement that in the Free College in the city of New York, in an examination of candidates for admission, out of nine

³The regulations of the Military Academy are very stringent in this matter. They prohibit the use of tobacco, and if cadets are detected smoking, prompt and severe punishment follows.

hundred girls, 71 per cent. succeeded, while of the boys only 48 per cent. passed. He further affirmed that as a general fact ten girls graduate where only one boy gets through. The teachers ascribed this difference to the simple fact that boys use tobacco and girls do not.

In Columbus, Ohio, the teachers and school officers found the cigarette habit so destructive that they were compelled to take action for its overthrow. They organized anti-cigarette leagues and encouraged the pupils to become members. Orders were promulgated likewise, forbidding any one to use tobacco on the school grounds or in the building.

The consensus of opinion among the teachers and superintendents of our schools and other institutions of learning is that the use of tobacco is the bane of the student. They agree generally in the declaration that boys so addicted are certain to deteriorate in scholarship, in self-control and self-respect. The habit takes off the fine edge of the sensibilities, injures the manners and dulls the moral perception.⁴ Poor is the preparation that such a condition makes for the work, the duties, the encounters of mature life.

Many boys have been led to imagine it “manly” to use tobacco. This is a sad mistake. It is the very reverse, and actually makes the growing youth as well as the grown-up man debased and unmanly. The using of tobacco hinders the attaining of those qualities which make the true man. Instead of being an object to be praised and admired, the tobacco-user is one for whom his friends always have to make excuses and apologies. The earlier in life that the obnoxious habit is formed the more certain and pronounced is the blighting effect on the delicate growing organism of the body.

ANOTHER GROUND FOR PROTEST.

While, however, we make an appeal in behalf of those who are thus injuring and debasing themselves, a word may be said upon another side of the question. Those who do not use tobacco, have also rights in the matter, which those addicted to the habit are morally bound to respect. Are they not to be protected in their enjoyment of God's gift of pure air? Must those who do not use tobacco, who prefer cleanliness above the filthiness incident to the quid, the pipe, the cigar and the

⁴ Some one has quaintly affirmed that the use of tobacco demoralizes; that it makes a boy careless about his hair; that he lets his nails go uncleaned, and his clothes soiled; in a word *he is dirty*.

snuff-box,—must they be compelled to inhale the polluted atmosphere that is diffused by the smoker? Must they be subjected to the obnoxious poison, whether they will or not?⁵

TOBACCO AND ITS DISGRACES.

It is the matured conviction of the men who have given careful attention to the subject that the use of tobacco is the precursor to that of alcohol. “Show me a drunkard who does not use tobacco,” said Horace Greeley, “and I will show you a white-blackbird.” To this the celebrated Dr. John Lizars, of England, adds his confirmatory testimony: “It is a notorious fact,” said he, “that the two vices, tobacco and alcohol, are twins, and are always associated together.”

The late Doctor Mussey, of Cincinnati, Ohio, also makes the strong declaration: “Smoking and chewing tobacco produce a continual thirst for stimulating drinks, and this tormenting thirst is what leads to drunkenness.”

It is too true, however, that many of our leading and most talented citizens are votaries, if not abject slaves, of the tobacco habit. We have over-frequent public exhibition of the abhorrent fact. The famous Yorktown Commission is yet fresh in memory. Among its items of expenditures, as presented to Congress, was a bill for cigars and cigarettes alone, amounting to the monstrous sum of \$1,386.20, while that for liquors and tobacco exceeded SEVEN THOUSAND DOLLARS. Yet a deeper disgrace attaches to the junketings of the funeral train that accompanied the coffin of President Garfield. Similar occurrences have taken place repeatedly in the cases of others who died in the public service, but we forbear.

The moral sense of the men who could render, or even incur such bills, or participate in such revels and orgies must be obtuse beyond our power to perceive or imagine. The occurrences themselves reflect deep disgrace, not only upon those immediately taking part in them, but also upon the constituencies electing representatives having such habits, and upon the Nation itself, whose servants they are. No matter for wonder can it be that so many are without respect for the laws, when they are vividly conscious that the men who enact them are thus vicious

⁵ A good story is told of a collector for a publishing house in Boston, that sold law books on credit. This collector was an inveterate tobacco-chewer. Whenever he waited upon a debtor, the latter was sure to pay the bill without delay, in order to escape a second visit from this man of reckless expropriation. It was simply a question of paying the bill or spoiling the carpet.

and corrupt, and the fountain itself is thus polluted. Yet, despite other agencies of a wrong, we may remain very confident that but for the foul tobacco habit, the evils would be infinitely less, and that the disgraceful spectacle would not be exhibited.

TOBACCO AND INSANITY.

Mental alienism is another sequence. An agent so potent in deranging the nervous system can but be a powerful factor in promoting disturbances of the functions of the mind. In this proposition a large number of physicians and experts will be found to concur. Dr. Bremer, of St. Louis, who has long been connected with the St. Vincent's Institution for the Insane, is unequivocal in declaring this conviction. Tobacco really does cause insanity, he stoutly affirms; and in all such cases, where the tobacco habit is fully overcome, the symptoms of insanity in its various forms, are sure to disappear.

Dr. Woodward, of the Massachusetts Insane Asylum, Dr. Lizars, Dorothea Dix, and others declare that the immoderate use of tobacco produces an affection of the spinal cord and weakness of the brain, resulting in madness. In the young, it is not only liable to arrest growth and physical development, but to cause permanent feebleness of the mental faculties. We may witness this on every hand. Few of the children and youth that we witness with cigar or cigarette in mouth will ever go beyond mediocrity, if they do not become insane or imbecile outright.

WHAT IS THE: REMEDY?

Scientific analysis has been expended upon tobacco and arrived at tolerable exactness in regard to its nature and qualities. We need no explanation, either, of its various properties or its extra. ordinary fascinating qualities. These are alike apparent on every side. But its baneful nature should be carefully studied. It is a deadly poison, and its oil or concentrated extract will destroy life as unconditionally as the acid of the peach, the juice of the woorara, or the venom of the hooded snake. A result of smoking is the deadly cancer. The use of tobacco produces nervousness, dyspepsia, heart-disease, paralysis. It injures the voice, enfeebles the sense of taste and smell, brings on weakness of the eyes and blindness, and, in short, overturns health and hastens death. It impairs the mental and moral constitution, weakening the faculties for acquiring knowledge, benumbing the sensibilities, rendering the

individual filthy in personal habits, and uncourteous in manners, blunted in the sense of right and wrong, and producing a tendency to the excessive use of alcoholic drinks and consequent drunkenness. The habit is expensive as well as filthy. Taken all in all, it is destructive of all that is best and purest in a human being, the highest moral and intellectual qualities of our human nature.

Its use, therefore, should be after every proper and lawful manner, discouraged. Its sale to the young and immature should be absolutely forbidden with severe penalties. The arguments and pretexts which seem to justify at times the use of alcoholic beverages can never be truthfully employed for tobacco. The children of this decade will be the young men of the next, and every consideration worthy of our manliness and humanity dictates that we train them aright, and preserve their bodies and moral constitutions pure and vigorous.

Those who make the laws should sternly and resolutely interdict and prohibit. Parents and teachers should instruct diligently and thoroughly. Every endeavor should be put forth to rouse the moral sense against the impure habit, and to impress the condition and perception of its pernicious character and influence. Religion should be called upon to help; everyone should be taught to keep himself pure from pernicious defilement. If those who know the facts about tobacco so well and the evil effects of its use should illustrate their knowledge by example, raise their voices against it, thus teaching the truth by word, pen, and personal action, it would not be very long before the evil would be rooted out. Our laws would then be better obeyed and respected. The human race might then hope to be redeemed from this filthy vice of savages and the frightful moral as well as. physical slavery and degeneracy which it entails.