should be reckoned with by the sanitarian, especially in establishing sanitary standards.

While it is admitted that the education of the public is necessary for the perfection and promotion of preventative medicine, we must also admit that there is a need of education of physicians along public health lines. There are, for example, physicians like the one I read of in the New York Medical Journal, when asked if he had any cases of measles, none having been reported by him, replied, "Yes, lots of them, but h—l, I don't report such cases"—physicians who choose rather to deliberately endanger the community for the sake of currying favor with this or that family by thus enabling them to avoid quarantine restrictions. A case is reported of a hotel clerk having scarlet fever outside of the State of New York. The physician called; said that the patient could either go home or else he would have to quarantine him there in a hospital. The patient chose to go to his own home in New York, and several cases of scarlet fever followed immediately in his home locality. It is all right to stress prevention with the public, but the physician should first be informed himself.

The sex life, while a delicate question, is one deserving more attention by health authorities and health laws, than it has yet received. In an exhaustive article on this subject, I. M. Slingerland has made some timely remarks. He says that all married and all of marriageable age ignorant of these facts should be instructed in regard to the danger and results of diseased unions to themselves and offspring. If they should become diseased after marriage, they should be put in the best possible physical and moral condition at once.

A very important essential would be to have all children taught sex life at as early an age as they are able to comprehend it. Do this as a fortification, and not have instruction concerning the most important function in the vegetable and animal kingdom, that of reproduction, relegated to the street gamin and the vile to teach the boys and girls what should be entrusted only to the most skilled and purest of teachers, physicians and intelligent fathers and mothers.

The sex life of the simplest form of plants should be taught first, and there should be a gradual growth of sex knowledge until its full nature is understood in the highest type of animal life—man. Of course, these are ideals that may not be altogether practicable now, but it would be a very great achievement for mankind, as all then would look upon sexuality in its pure sense and would guard it as a priceless blessing, not to be misused or abused, but used as nature intended. Ignorance may be bliss sometimes, but

in the matter of sexuality it is a disease, death and eternal destruction. Upon the proper teaching of this great subject hangs the destinies of our race. Perverted sexuality is perverted mentality, morality and spirituality. No good fruits grow without perfect seed. On this same principle neither does mankind exist without good, healthy parentage.

When God created man in his image he was pure and free from disease, but by disobedience a great part of that image has been lost through disease. Unless these processes are checked by the forces of good, the forces of evil will mar still more that image until man is buried in physical and moral filth.

DENTAL CLINICS IN PUBLIC SCHOOLS.*

By A. B. Horn, D.D.S.,
Union Springs, Ala.

My appreciation of the honor of an invitation to read a paper before this association, the greatest State medical association in the United States, is beyond expression, and is only exceeded by the pleasure I feel in responding. The only explanation I have of being accorded this privilege is that I come from Union Springs, of which the Journal, *Oral Hygiene*, says in an editorial:

"Union Springs, Ala., is on the oral hygiene map hard and fast. Union Springs not only has compulsory medical and dental inspection, but no scholar can attend school unless he or she has a permit from the dental inspector. Both medical and dental inspectors are salaried officers appointed by the board of education."

The subject assigned to me is too comprehensive to be given justice in the time allotted, but I feel that I must first discuss at length the dental examination of all school children, as this is essential to the efficient working of a dental clinic, and as yet an unrecognized though one of the most important factors to be considered in the great public health propaganda which is sweeping the country.

Examine, for instance, the mouths of children entering the public schools and what do you find? Our examinations show 90 per cent of these children have decayed teeth. Fifty per cent of the decayed teeth are the first molars, the sixth year permanent teeth and the keystones to the dental arch, frequently decayed beyond repair while parents are considering teeth so important, as temporary and unworthy of attention. In 20 per cent we find pus pouring from one or more abscessed

*Read before the Medical Association of the State of Alabama, at Mobile, April 16-18, 1913.

teeth, which, of course, is swallowed with each mouthful of food. Consider these conditions and you will wonder why the fly, the mosquito, the pure food law, and yet we allow without raising a protest, so many children to pour pus into the stomach and supply culture tubes for pathogenic bacteria in the form of decayed teeth that the human organism may be supplied with their increase and probably not so impressive but equally as important, allow the young generation to grow up with deformed mouths, thereby preventing the proper mastication of food, shortening life or giving to the world individuals who can never fill to the greatest efficiency their economic place in the world.

"The primary object of the dental examination of school children is the education of their parents to the end that the twenty millions of school children in our public schools may receive the treatment which is necessary to the preservation of their teeth and their physical well-being." Surgeon-General Blue, in his address before the National Dental Association, says: "This mouth hygiene campaign is a great conservation propaganda. Nowadays everybody recognizes the relations between the dental and mental condition of mankind. Mastication and dental development have an important effect on bodily development. Sound, good, healthy teeth are a guarantee of a sound, good, healthy nation." Dr. Charles H. Mayo points out the fact that the next great step in preventive medicine devolves upon the dentist. Dr. William Osler has called upon the dental profession to exert their influence upon the public health by the relief of suffering, the improvement of the digestive capacity of the public, and the beautification of the race.

The most important problem in carrying out every great movement for sanitation is the education of the masses. We must show them the existing evils and what is to be gained by their removal. Dental inspection of school children offers the most potent means of education at our command. Union Springs has had compulsory medical and dental examination in its public schools for two years, and I offer as an exhibit a copy of the dental examination blank used.

Among the striking results we have noted thus far are to be mentioned, the eagerness with which many of the children strive to get their mouths in good condition before the examination in order to show a good report. The use of the tooth brush has increased 20 per cent and more than double the number of cavities have been filled. The people of the rural districts have seen the benefits of such supervision and the Farmers'

Union has passed resolutions calling for medical and dental inspection of the children of the rural schools. Finally, a private negro school of the city has inserted in its catalogue as one of the requirements for entrance that every pupil must have a tooth-brush, and we doubt not that by another year they will have medical and dental inspection. Whatever the motive for this may be we will heartily commend the act as in towns so situated as Union Springs, if infectious and contagious diseases can be kept from the negroes, it will be an easy matter to control them among the whites. And just here, gentlemen of the medical profession, let me say that if you were to go with me on a tour of inspection through a negro school and compare the condition of the teeth of the rising generation of negroes with the proverbial denture of that race, you would recognize at once one of the factors in that great problem which you have tried so earnestly to solve, namely, the increased death rate of the negro.

More impressive, no doubt, than what we are doing in Union Springs, will be the results of dental examinations in some of the larger cities.

Number of pupils examined—Birmingham, Ala., 3,830; Detroit, Mich., 56,000; Cleveland, O., 4,734; Cincinnati, O., 28,441.

Percentage having defective teeth—Birmingham, Ala., 90 per cent; Detroit, Mich., 75 per cent; Cleveland, O., 97 per cent; Cincinnati, O., 90 per cent.

Just what this state of affairs means to the nation may be gathered from the fact that it requires children having defective teeth at least six months longer to complete the elementary school course than it does for children not so affected.

So much for oral conditions as shown by the dental inspection of school children. How shall we relieve the evils existing?

For those who are favored with a moderate amount of this world's goods we need only to convince them of the evils existing in order to have them remedied, but there is a very large percentage of these children who are unable to pay for dental services however urgent their need. Therefore their relief must be secured from State or philanthropic sources. To meet this demand and to solve the problem confronting us, State and municipal governments, dental societies and philanthropic organizations have not been slow to organize, finance and conduct free dental clinics for the relief of oral diseases both in this country and abroad.

The first dental clinic was established in Strasburg, Germany, in 1902. This clinic in five years

gave free treatment to 90,017 children of school age at a cost of seven cents each for examination and extraction and less than twenty-five cents each for treatment and filling to the city, and is now conducted in a \$60,000 building owned by the State. Germany now has 120 school dental clinics. London has seven dental clinics where, by the way, the teeth of children of school age are found to be in even worse condition than in the United States. Even revolutionary Mexico has turned her attention from war long enough to establish free dental school clinics.

The first free dental school clinic in this country was established in Rochester, N. Y., in 1905. New York City now has five dental clinics for her school children. These clinics were formerly supported by the dental societies and philanthropic organizations, but for the current year the municipal government has set aside \$29,800.00 for their maintenance.

Birmingham, the magic city, was not slow to take this step in progress, and in 1911 organized a dental clinic for her school children supported at first entirely by the Jefferson County Dental Society, though now they receive some aid from the National Dental Association.

There are hundreds of cities and towns throughout the United States in which free dental inspection and clinics are offered to the school children, and there would be many, many more were it not for the petty jealousy existing in the dental profession lest some member thereof should get a little free advertising. This profession has been confined to their offices so long that they walk out on the bridge of progress as officers or workers in the field of public health with an unsteady step.

Now let us turn our attention to some of the remarkable results of this clinical work. Cleveland, O., as before mentioned, finds 97 per cent of her children with defective mouths. In the prosecution of the clinical work twenty-seven children selected as having the greatest oral defects, in a school of 846 pupils, gave an average increase in their efficiency for school work of 99.8 per cent. This was apparently due wholly to the correction of their oral conditions and teaching them the proper care and use of their mouths. The improvement in their physical and moral status was quite as marked as that in their mental activity. As a result of this experiment at the close of the arithmetic lesson each school day next year 60,000 pupils in the Cleveland public schools will lay down their pencils, pick up their tooth-brushes and spend five minutes in industrious work on their teeth.

Chicago's experience with clinical dental work will especially appeal to the medical profession. During the epidemics of scarlet fever those affected were of course sent away and quarantined and not allowed to return until well, and the usual precautions taken. Their return was frequently followed by a fresh outbreak of the disease, the cause of which could not be determined for a long time. After the enforcement of a regulation requiring each child having the disease to have the mouth thoroughly sterilized and every cavity in the teeth filled before being allowed to return to school, the epidemic was stopped.

Valparaiso, Ind., records a somewhat similar experience with this disease and has the same regulation regarding the release from quarantine.

The St. Vincent's Orphan Asylum, Boston, Mass., during 1905-6 was in quarantine for three months on account of contagious disease. In each year preceding the dental clinic there were over 100 cases of contagious disease. In six months the number of cases had diminished 50 per cent and in the subsequent year this ratio was reduced to 2 per cent after the installation of a dental infirmary. The reporter of these results pertinently asks whether they were a coincidence or brought about by other factors. Certainly no such conditions ever existed in this institution before.

We might continue to enumerate the striking results of care and treatment of defective mouths among children, but sufficient has been said to show that it is accomplishing more than its originators ever dreamed of.

You are no doubt asking now why this special emphasis on the mouths of school children. My answer is that 90 per cent of the cavities in permanent teeth form between the ages of 6 and 16. This is certainly the time to teach oral hygiene.

"The practice of medicine and the practice of dentistry must play their parts in the great economic revolution that is taking place. There is nothing so different, so radical in the two professions that will prevent both from passing into the great field of public health." However, from the point of view of the public and even a large part of the dental profession, there must be a hearty co-operation, encouragement, yea, even a demand on the part of the medical profession before the dentist as a profession can be expected to take any very advanced steps in matters of public health.

"In the campaign we are launching we are asking you to join us with a view to materially increase the vigor and working efficiency of the pupils in our schools; to help sustain the health

and happiness of the home, and restore the strength, comfort and beauty of the nation. Dr. Wyllie says, 'You cannot give a child a better asset than a good set of teeth,' therefore let us as united professions "use every force within our power that will aid in making our schools institutions which will produce individuals both strong in body and mind, and let us stand shoulder to shoulder fighting for the life and health of mankind until we have health protection in this land of ours." Let us have laws on our statute books providing medical and dental inspection of school children of the State of Alabama trusting that as the ram was provided for Father Abraham, means will be provided for free dental school clinics throughout the State.

BIBLIOGRAPHY.

- Oral Hygiene, November, 1912, p. 867.
 Oral Hygiene, April, 1911, p. 235.
 Dental Digest, December, 1912, p. 686.
 Address before Chicago Dental Society, C. H. Mayo, January 31, 1913.
 Address at Royal Dental Hospital, London, Dr. Wm. Osler, December, 1905.
 Jour. A. M. A., February 12, 1911, pp. 508-11.
 Dental Digest, October, 1910, p. 830.
 Boston Med. and Surg. Jour., October, 1912.

ALCOHOL AS A PUBLIC HEALTH PROBLEM.*

By B. C. Keister, M.D.
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The alcohol problem, with its various important relations, is now commanding the attention of the world's greatest minds. Each decade sheds more light and reveals greater and more important data upon this unsolved problem. The best trained minds of the medical profession of all the leading nations of the world are giving this subject careful and deliberate study. Laboratory research has solved the problem so far as the physiological effects of alcohol on the human body are concerned. We know how susceptible each individual organ is to the deleterious effects of this narcotic poison. We know its action on the gray matter of the brain, the nervous system, its numbing and paralyzing action on the nerve centers, causing incoherency of thought and speech; and while in this abnormal state should the passion of anger become aroused from the simplest imaginary affront or insult on the part of a dear friend or loved one, assault with intent to kill is the usual outcome, all of which is due to acute poisoning of the intellectual powers of the brain. No

less than 2,000 homicides of this character were committed last year in the United States by persons who were under the influence of alcoholic beverages. In the year 1907 there were committed in the United States 10,780 suicides, 78 per cent of these, according to careful estimate, were under the influence of "strong drink" at the time of their committal. There are today over 3,640,000 hard drinkers (drunkards) in the United States, 125,000 of whom die annually from the direct effect of alcohol, 5,000 of whom take their own lives.

By careful estimate there are 195,000 insane persons in the United States, and over 90,000 epileptics, 50 per cent of whom owe their hopeless condition to the hereditary effects of alcohol on the brain and nervous system (Horsley).

All contagious diseases, such as yellow fever, cholera, small-pox, typhoid fever, tuberculosis, influenza, pneumonia, etc., when contracted by persons addicted to alcoholic beverages are very much more serious in character, and the mortality is more than doubled, varying somewhat with the quantity taken and the length of time that each person has been addicted to the habit of strong drink. In view of these plain and authenticated facts expressed and emphasized by such men as Wm. H. Welch, Professor of Pathology at the Johns Hopkins Medical College; Adolf Strumpell, Professor of Special Pathology and Therapeutics at the University of Leipzig, Germany; Sir Victor Horsley, Professor of Pathology at the University College of London; Dr. T. D. Crothers, author of a late text-book on the subject of alcohol and its physiological effects on the human body, and I might cite a score of other distinguished writers who have made investigations on the subject that are equally as important; I say, in view of these facts, should we not give this subject our most careful consideration from a public health standpoint?

Consider, if you please, the increased mortality of that dread disease pneumonia, the "nightmare" of the medical profession, a disease that defiantly stalks abroad in every clime, in every community and in every household, regardless of the ordinary sanitary precautions of municipal health boards. When this monster tyrant attacks one of our fellow mortals who has been addicted to alcoholic beverages to any great extent we may consider his doom almost in sight. His chances for recovery are decreased from fifty to sixty per cent, and when complicated by influenza or any other infectious or contagious disease the mortality is doubly increased. On account of the pathological conditions caused by alcohol the heart is weakened, the power of resistance is lessened, the

*Read at Sixth Annual Meeting of Southern Medical Association Jacksonville, Fla., November 12-14, 1912.