Hook-Worm Disease.

HELEN TAYLOR, 1914.

Ankylostomiasis, or, as it is more commonly known, hook-worm disease, is a condition of anemia dependent upon, and caused by, the presence in the human intestine of a peculiar nematoid worm, the ankylostomum. This worm is present as a parasite and gives rise to anemia in its human host by its blood-sucking habits, and presumably by the introduction into the blood stream of an elaborated toxin or substance with blood-destroying properties.

Until recent years considered a tropic disease of some rarity, hook-worm disease is now known to be widely distributed, not only throughout the tropic belts of the world, in some countries of which it affects almost the entire population, but throughout the temperate zone as well. It equally affects males and females, regardless of race, and, while more common in early life between the ages of 3 and 40 years, may occur at any time. In many instances it is associated with a peculiar dermatitis generally of the feet, known as "ground-itch," and now definitely proved to be one point of entrance, as an infection atrium, to the human body for the ankylostomum.

It will be quite unnecessary, even superfluous, after hearing the excellent and comprehensive paper just read, even to mention the wide distribution of hook-worm disease, but as we are naturally more interested in our own country, I would like to remind you again of the fact that this disease is chiefly found in the southeastern group of states, notably Georgia, Alabama and North Carolina, and in the strip of land long known as the "poor-white belt," in which the residents, usually American-born, have for years been adjudged shiftless, lazy and inferior, not a few of them being "dirt-eaters." The astonishing discovery has been made that thousands of the "poor-whites" are victims of ankylostomiasis, as were doubtless their progenitors, and that the unlovely characteristics and the low grade of mentality of these people are the symptoms and results of hook-worm disease, which has long existed among them, unsuspected and untreated. That the quality of the soil upon which our villages and farmhouses are built, is thus able to influence the characters of our citizens by harboring and incubating these parasites which rob men of their energy and life-blood is a new and amazing thought, interesting to the political economist as well as the physician.

In discussing the etiology of the hook-worm disease, a brief review of the appearance, life habits and reproduction of the ankylostomum will make the principles of treatment more easily understood. Briefly, the life history of this worm is as follows:—Conjugation of the male and female worms occurs in the human intestine and the eggs of the impregnated female escape from the human body in the feces and are hatched in about 24 hours thereafter, if conditions are favorable. Warmth, air and moisture are necessary conditions, and loose, moist soil is a favorable environment for the hatching of the eggs. Growth of the embryo is rapid and accompanied by a moulting process, which is repeated several times before maturity is reached.
When hatched the young embryo is about 0.25 millimeter in length and very motile. After moulting twice the embryo becomes quiescent, ceases to eat and grow, and may live thus for weeks in the soil or water. Gaining entrance to the human intestine by one means or another at this stage, it again casts its skin and attaches itself to the intestinal mucosa of its host to feed, and, being sexually mature, reproduces itself. Two distinct and principal methods of infection are recognized, the one by ingestion, especially seen in those known to be "dirt-eaters" (though the disease may be contracted by eating uncooked vegetables grown in infected soil)—the other by the skin. The mature larvae bore into the skin, using the hair follicles as gates of entry and leaving their sheaths or shells behind them. The degree of irritation produced is dependent upon the number of larvae gaining entrance at one time. Through the hair follicles the larvae, after travelling over a circuitous route of lymph vessels, glands, blood-vessels, air cells in the lungs and from there to the bronchial tubes, larynx, oesophagus and stomach, finally reach the small intestine.

Having considered in detail the method by which the ankylostomum Americana reaches the intestine, the next point of interest is the symptoms which it produces during its stay there. The symptoms of hookworm disease are divided into two classes—the acute and the chronic cases—although no arbitrary time can be fixed at which an acute case becomes chronic. Both classes include mild and severe forms with intermediate degrees of severity. A mild, acute case may, in time, become a severe chronic one. As has been previously pointed out, the hook-worms do not multiply within the intestine and an infected person, removed from the environment and conditions favorable to continued reinfection, may simply harbor the original infecting worms. Thus, it is apparent that the severity of the anemia will usually depend on the number of hook-worms and the length of time they have been present in the intestine in any one given case.

In mild, acute cases the symptoms begin with epigastric uneasiness or even pain, and variability of the appetite. The pain may be relieved by taking food or it may be increased thereby. Dizziness and frontal headache may be present, and languor, either physical or mental, sets in early. The circulatory symptoms are palpitation and shortness of breath, with soon a pallor of the skin. Arrest of development from impaired nutrition, and convulsions are apt to occur in children.

In the moderate acute case these symptoms are accentuated in direct proportion to the degree of anemia. Thus, in addition to a capricious and failing appetite there may be a morbid craving for dirt, earth or sand, especially in children. The digestive symptoms may now include nausea and vomiting. Headache and dizziness are severe and tinnitus is also present.

The advanced chronic cases, the truly severe forms of ankylostomiasis, are secondary to the acute, moderate cases described and the patient shows profound anemia and pallor with pearly, slightly icteric sclerae, dryness of the skin, clubbed finger-tips, which show cyanosis, and many of the evidences of malnutrition and oxygen starvation. At the apex and base of the heart, and also over the large veins of the neck are to be heard hemic murmurs, and moderate dilatation of the heart may be made out, while the pulse is soft, weak and compressible, but not unusually rapid.

The ankles and feet show swelling and ascites or general anasarca may develop, with effusions into the pleural and pericardial sacs. These clinical groupings must not, however,
be taken as absolute ones, for the disease does not permit of a sharply defined classification and the acute cases gradually fade into the chronic ones.

But how are we going to treat this disease which has such a widespread distribution and causes such serious consequences? It must, indeed, be accounted fortunate that we have a specific cure for ankylostomiasis, that cure being thymol. In view of what has been stated it will be plain that two indications as to treatment exist:—first, to dislodge and remove the hook-worms from the intestine of the host; secondly, to repair the damage which they have done, or, in other words, to correct the condition of anemia. The prophylactic treatment—such as the boiling and filtering of all drinking water, the thorough washing with boiled water of all vegetables eaten raw, or, better yet, the cooking of all vegetables; the wearing of shoes and gloves for all earth workers, etc.—cannot be too thoroughly carried out. But most emphasis must be placed on the medical treatment. To make this treatment clear let us cite a case of hook-worm disease and proceed with our definite plan of cure: The evening meal is omitted and a full dose of an ounce of magnesium sulphate, the chief object of which is the expulsion of protecting masses of feces and mucus, is administered at bedtime. In the morning, the magnesium sulphate having meanwhile produced free, watery movements, a dose of 30 grains of thymol is given at 7 A. M., the patient remaining in bed without breakfast. At 8 A. M. the dose of thymol is again repeated and 2 or 3 hours later another one-ounce dose of epsom salt is administered. It is claimed that the epsom salt effectually checks absorption as well as flushing out the intestinal contents.

There is, however, one great danger connected with this effectual cure, and it is, therefore, of the utmost importance that the physician be familiar with the symptoms of thymol poisoning and also with the treatment. The symptoms are those of paralyzed nerve centres in the spinal cord, lessened reflexes, slowed respirations, lowered temperature, general weakness and coma, followed by death. A sense of warmth in the epigastrium, ringing in the ears, increased output of urine, greenish in color, indicate absorption of the drug. The treatment should include hypodermic injections of nitroglycerin, strychnin or atropin, external heat, stomach lavage and free purgation. Above all, the utmost care should be employed to prevent attendants or kind friends from giving alcohol or other solvents in any form.

A number of other drugs have been employed, among which are the male fern, croton oil, calomel, podophyllin, and a mixture of sulphur, terpin and condurango—but none have the success of thymol, despite its grave danger of absorption. To determine the successful effect of the thymol treatment, the stools of the patient should be properly treated and examined for embryos for a week. If, after two weeks of examination, at weekly intervals, no ova or embryos can be found, the cure is then complete. Then, with the aid of iron, tonics and good hygiene the former hook-worm sufferer is now changed to a cheerful, clean, energetic person. Is not such a tragic condition, so quickly and easily cured and with such a radical change, worthy of our deepest interest and help?
Disastrous Diseases of Historical Interest.

Jennie McKeel, 1916.

One of the earliest plagues of great importance of which we have an account is the "Destruction of Sennacherib's Army." During the invasion of Palestine, by Sennacherib, king of Assyria, in the year B.C. 702-1, when all the people from the country round about were gathered within the walls of Jerusalem for protection, Sennacherib, who had thus far been successful in his campaign, finding Hezekiah defiant and unwilling to surrender, tried to frighten him by boasting of his great strength and of the uselessness of dependence upon Jehovah for protection.

But in accordance with the prophecy that the city of Jerusalem should be protected, and that the king of Assyria should not come into the city, the Bible tells us that "the angel of the Lord went forth that night and smote in the camp of the Assyrians a hundred and four score and five thousand, and when men arose early in the morning, behold, they were all dead corpses." "All the mighty men of valor and the leaders and the captains of the camp perished." "So Sennacherib returned with shame to his own land."

The Jewish traditions handed down from generation to generation understood the language of the Scriptures as indicating an outbreak of pestilence, let loose, as in the case of similar visitation of Jerusalem and David by the angel of God specially commissioned to inflict the divine wrath.

One of the Bible commentaries says that the plague arose apparently from the malaria of the marshes in the northern coast of Egypt, near where Sennacherib lay, and that it would appear in midwinter, and last, at most, six months. At its first outbreak it caused almost instant death, and even during its whole visitation was commonly fatal in a few hours. About all we know of this plague is its results to Sennacherib's army, for he, seeing the ruin of his host and feeling that Ashur his god had forsaken him, felt there was nothing else left for him to do but to retreat in a most disorderly manner to his own country.

Another great plague was the Plague of Athens, during the Peloponnesian War. According to Thucydides' account in Grote's History of Greece, the plague began in Ethiopia, passed into Egypt and Libya, and overrunning a considerable portion of Asia, came into Greece.

Its progress in Athens was as rapid and destructive as its appearance had been sudden. Conditions for its spreading were very favorable on account of the heat of the summer, and of the great number of people within the city walls, who had fled there for protection from their homes in the country.

Thucydides not only witnessed the effects of the disease, but was also one of its victims. He describes the plague as being an eruptive typhoid fever, distinct from, yet analogous, to smallpox. The seizures were sudden, and a large portion of the sufferers perished after deplorable agonies about the seventh or ninth day. Those who were constitutionally strong enough to resist it longer became victims of an exhausting and incurable diarrhoea. Others having passed both these stages, the disease settled in some part of their bodies, as the eyes, genitals, hands or feet, which were rendered permanently useless. There were some whose recovery was attended by a total loss of memory. The symptoms were: Fever, redness and inflammation of the eye, fetid breath and unquenchable thirst. There was also sneezing, hoarseness and a violent cough, and the body was a reddish, livid color, broken out in small pimples and sores.

No treatment was of any avail. Physicians tried their accustomed means, but failed: contracted the disease themselves and died. Patients
resorted to charms and incantations. Some thought that the Peloponnesians had poisoned the water in their cisterns, others that it was a visitation of the wrath of the gods. When neither priest nor physician could help the people in their distress, they gave up in despair, and when attacked by the disease, made no attempt to preserve their lives.

The dead and dying lay piled one upon another, not only in the streets but also in the temple. The calamity lasted three years, and the public loss was incalculable. It helped much to bring the wars to a close by destroying the armies and desolating the fleets of the Athenians; and the Peloponnesians fearing the disease retired from Attica.

To all these dreadful scenes of physical suffering and death was added another evil. The bonds of law and morality became relaxed, and the people, feeling that they would soon be victims of the disease, sought to get all the pleasure out of life, and all the gains however gotten, while they had the opportunity, and thus great crimes were committed, for they had lost all fear of the gods, and neither did the laws of men restrict them.

The greatest plague that has prob-ably ever devastated the world in his-toric times is the Great Plague of Europe, or Black Death. It overran Europe, after devastating the whole of Asia, from China to the Caucasus, as well as Africa. It was spread by the great trade routes of the East, appearing first in England in 1348, during the reign of Edward III. In England alone, in one year, it carried off 2,500,000, half of the entire population of England. And it is estimated that the total number of victims were about two-thirds of the number of people living at that time.

The usual course of the disease was from three to five days. The special symptoms characteristic of the disease were:

1. Gangrenous inflammation of the throat and lungs.
2. Violent pains in the region of the chest.
3. Vomiting and spitting of blood.
4. Pestilential odor coming from the bodies and breath of the sick.

It was called the Black Death on account of pimpish blotches coming out on the skin.

Since the first appearance of the plague in England in 1348, there have been several returns of it, and each time with great loss of life. However, this long list of Death's visitations to England practically terminates with the "Great Plague of London" in 1664-65. The fact that it has never appeared again is said to be due to better drainage and sanitary arrangements.

Defoe in his "Journal" speaks of the quacks who made a great harvest out of the people in their terror. He says that some of them got £5 a day for their physic. Most of the physicians at that time were cowards and fled to the country till the pestilence was over. When they returned they were called "Deserters," and no one had any use for them.

Fillison describes some of the swellings of the disease, as being as large as a half-penny loaf, while others did not exceed a hen's egg in size.

The physicians applied plasters and poultices to break them, and if they refused to break, they cut and scarified them in a terrible manner. If they grew so hard that they could not be cut they would burn them with caustics—so that many died raving mad with the torment, and some in the very operation.

The Great Plague was a turning point in the national life of England. It formed the real close of the mediaeval period and the beginning of our modern age. About half of the population was swept off by this terrible disease, and the whole social structure was disorganized as well as catastrophe occurring in religious affairs. This plague lasted about two
years, and when it ceased there was such a scarcity of laborers, that many crops perished for want of harvesters. The women and even small children were seen plowing in the fields, while a great part of the entire kingdom remained uncultivated. Hence the value of laborers was raised and the “close of the epidemic marked the beginning in England of the chronic strife between capital and labor.”

The dreadful scourge of yellow fever visited the city of Philadelphia in the summer of 1793, being carried, as it was supposed, in some vessels that arrived here from the West Indies in July, in which there were several on board who were said to have the disease, and the people of Philadelphia strongly believed that the beds and bedding of the sick and dead which were brought into the city instead of being destroyed, were the means of carrying the infection. The symptoms which characterized the first stages of the disease were: A chill, quick pulse, then fever, pain in the head, back and limbs and attempts to vomit. “These symptoms continued with more or less violence from one to 3 and 4, or even 5, days. When these febrile symptoms subsided they were immediately succeeded by a yellow tinge in the cornea or whites of the eyes, then a vomiting of matter resembling coffee grounds in color and consistence, commonly called the “black vomit,” sometimes accompanied with or succeeded by hemorrhage from the nose and other parts of the body. There was a yellowish-purple and putrescent appearance of the whole body, with coma, delirium and, finally, death,” death occurring between five and eight days usually.

This disease was new to all the physicians at that time, and accordingly there was great discordance of sentiment on the proper mode of treatment and even with respect to its name. It was some time before the disease attracted public attention, and when it did, there was a great rush to get away from the city.

The College of Physicians had a meeting, August 26, to consider the nature of the disease and the means of prevention and cure. They advised the citizens to avoid all unnecessary intercourse with the infected and to pay great attention to cleanliness and the airing of rooms of the sick, etc. Vinegar and camphor were used as disinfectants, while men, women and children smoked tobacco incessantly to keep away the disease. A hospital was built near the city for the care of the poor, and Stephen Girard offered himself to manage and superintend the hospital of Bushkill, as it was called. The disease was most destructive among the poor, and the mortality was greater among men than women, and among the middle-aged and robust than the aged. Few negroes took it.

It was not until rain came and the weather became cold that the epidemic ceased, and it was then believed that the cold and rain caused the extinction of the disease.

If all the citizens had remained in the city, famine would have been added to the calamity, whereas the markets were said to have plenty during the whole time and the prices were about the same as usual. But after it was over there was a great desolation of homes. Many orphans were left without home and friends. The total loss of lives has been estimated as 40,000.

The Law and Eugenics.

Annie E. Freese, 1915.

When we approach the question of the law and eugenics, we face a very delicate, complicated problem, fraught with the gravest possibilities, and concerning which we find a wide diversity of opinion.

Defining eugenics as “the study of agencies under social control that may improve or impair the social
qualities of future generations either physically or mentally,” let us consider what these agencies have been, are, and may be.

In prehistoric times, the elimination of the unfit was brought about by “natural selection,” through the “falling by the wayside” of those incapable of bearing the strain of advancing civilization, their physical incapacity or inferior mental ability.

Later, we find defective strains eliminated by plagues and various scourges. But in mediaeval and modern times, these were offset by the effects of “military selection”—a process that by removing the best material led to the survival of the unfit. In this way, we can, perhaps, account for periods of marked degeneracy in races—and, accordingly, subsequent improvement may have been due not so much to betterment by man as the reaction of nature.

Still, through the broadening of our knowledge and charity—poverty, ignorance, disease and economic and social conditions do not exact their former heavy toll of life.

Quoting from Major Darwin’s address to the First International Congress of Eugenics, held in London last year (1912):

“Looking forward—to the future—we can see that the greatest difficulties to be encountered will be moral, rather than intellectual** * * Our first effort must be to establish such a moral code as will insure that the welfare of the unborn shall be held in view—in connection with all questions concerning both the marriage of the individual and the organization of the state”—“conscious selection”—therefore replacing “natural selection.”

The maintenance of a moral code introduces most difficulties, as it is not sufficient to satisfy the students of biology and sociology, in order to insure the adoption of the needed reforms, but this knowledge must be widely disseminated, so widely, persistently and emphatically that the movement which has thus far progressed with such gratifying uniformity may soon be a world-wide established fact.

Our legal friends tell us that “society asks for a registry of matings in order to protect monogamy and the young from the legal consequences of marriage, and control matings that experience has taught result in undesirable progeny,” and the medical profession deems that “a child has an inalienable right to be well born; that is—the inheritance of such germ plasm from its progenitors as will yield a healthy, vigorous body and a brain capable of a high grade of development to individual and social usefulness; and, further, the protection of that brain and body from injury, and their submission to influences favoring the development of their powers.

The chief means under consideration for the accomplishment of these aims are: The segregation of the mentally unfit during the reproductive period; the sterilization of the morally and physically unfit, and the legal regulation of marriage.

These general means give rise to a multiplicity of considerations.

First. Segregation implies colonization—which is a serious economic problem; in fact, an impossible one—the numbers are too great, and our aim is to lessen the burden of the incapable upon the capable; therefore, it would seem that some form of control must be devised which will be effective upon the cases at large. For this, sterilization in some form seems best.

But selection of a plan of treatment is a far cry from its accomplishment. To secure enforcement, the plan must become a law. Here we are opposed by the clergy, moralists in general, and all who place the sacred rights of the individual above the general good.

Sterilization may be voluntary or involuntary. Voluntary—by those who sanely recognize their physical,
mental or moral condition to be such that transmission would be sinful, or who realize their possibilities through heredity. Involuntary—upon those who, in the judgment of recognized authorities, require it for the public good.

But when we consider operating on a man without his consent we meet such old laws as, e. g., in England: "No surgeon is empowered by law to perform any surgical operation upon any person," considering every surgical operation an assault; the consent of the patient or guardian must be secured, unless, however, the patient is incapable of giving consent and has no guardian.

Such sentiments have been the basis of the claims that laws passed authorizing asexualization are unconstitutional, so that what has been done in legislation has been rendered futile by lack of power of enforcement. But, last year, the Supreme Court of the State of Washington decided the law to be constitutional, so from this we expect the other States will fall in line, since the difficulty has seemed to be largely an unwillingness on the part of the legislatures and the courts to take the initiative and make a bold stand on the strength of their convictions.

In this country we find marriage laws in reference to the mental status of the applicant to have various bases. From a purely legal viewpoint:

North Carolina declares a marriage void if one of the contracting parties "lacks understanding."

Ohio, Georgia and Pennsylvania do likewise, and include those under the influence of intoxicating liquors and narcotic drugs.

In Maine the marriage of insane persons or idiots is void.

In Hawaii marriage of idiots or insane persons is not prohibited, but may be annulled upon the application of the sane party or a near relative of the idiot.

On eugenical grounds, to reduce the number of children who will eventually require state aid, we find:

Connecticut, Delaware, Minnesota. Ohio and Michigan exclude also cured insane and any child of a parent who became insane before that child was born.

Michigan removes the bars if a regularly licensed physician certifies the person has been cured of his mental or physical disability.

Michigan, Minnesota and Ohio permit the superintendent of the State Institution for the Deaf, Dumb and Blind to solemnize marriages between the inmates.

New Jersey extends the prohibition to epileptics and former inmates of insane asylums and poorhouses.

Utah, to epileptics, except females over 45 years of age.

Washington, besides the usual classes, excludes the common drunkard, habitual criminal, epileptics, or persons afflicted with pulmonary disease in advanced stage.

For the prevention of venereal infection:

Michigan prohibits marriage to persons possessing active or dormant syphilis or gonorrhea. Punishable by a fine of $500-$1000 or imprisonment for not more than five years.

Utah, the same.

Washington, likewise, and in addition requires a physician's certificate of freedom from the prohibited diseases.

The District of Columbia and Virginia declare that "incapacity from physical cause" annuls the marriage.

Laws limiting consanguinity in marriage are usually confined to marriage between brother or sister, parent and child, child and parent's brother or sister, and first cousins, and these are practically universal, but are extended to several cousins and close relations by marriage in some States.

Miscegenation is naturally only of important legal interest in States possessing a large colored contingency, and in border States with Mongolians. The almost universal law is that a percentage of one-eighth
negro blood nullifies a marriage. Of the 48 States in the Union, 29 absolutely forbid it.

Sterilization of mental defectives and confirmed criminals has been legalized in California, Connecticut, Indiana, Iowa, Nevada, New Jersey, New York and Washington. The first law was passed in Indiana in 1907 and the last in New York in 1912.

Bills are pending before the legislatures of several other States, in which "vasectomy" is approved for chronic insane or defective male patients with certain restrictions. New York appointed a commission to investigate the matter, and a similar act was presented before the assembly of Pennsylvania—to no avail. (All this was last year, they may have been secured by now).

Our knowledge of marital legislation in other countries is meagre.

Germany and Austria forbid marriage to recipients of poor relief.

Austria also includes persons of bad moral character, those possessing contagious diseases or infirmities, madness, idiocy and mental defectives.

Punished by annulment of the marriage and imprisonment for one year or more in both Germany and Austria.

In Italy, those of unsound mind are debarred until a certificate of recovery is given.

In Norway and Sweden prostitutes were required to register and submit to examination in hospitals and treatment if infected—but in Christiania the registry is now abolished, and replaced by a law requiring physicians to report all cases of venereal diseases, which are then kept under municipal surveillance.

The Norwegian law of 1902 forbids the marriage of any one knowing himself possessed of a contagious sexual malady and punishes the offense by imprisonment up to five years.

The new Finland penal code decrees to such offenders imprisonment up to two years.

Denmark has similar laws.

At a meeting in 1904 of the Society of Sanitary and Moral Prophylaxis in Paris, it was voted to recommend to the administration powers the application of civil and penal responsibility for the transmission of syphilis and gonorrhea.

In Servia, idiots, manicacs, complete cripples, deaf and dumb, physical or mental defectives, and those unable to maintain a family, or who suffer from an infectious or hereditary complaint or venereal disease are debarred from marriage, but a certificate of cure removes the bar.

In the Argentine Republic, the marriage act of 1889 prohibits the insane, deaf and dumb, the immoral, prisoners of one year or more, and those unable to support a family.

So it seems to be universally recognized that the law which constitutes itself the guardian of the people in all respects through life shall add to its responsibilities pre-natal protection as the promptest and most effective means of producing better races.

But we cannot help feeling that if humanity applied the same judgment, forethought and consideration to the regulation of their lives and the training of their children that they give to business interests and the advancement of the sciences the necessity for stringent legislation would be confined to the then diminishing numbers of the manifestly incapable. For no amount or kind of legislation could ever accomplish what conscious selection, reinforced by habits of high moral standard would attain.

It is scarcely necessary to remind a company of women of the power woman has and always will wield in the making of history—per individuals. Yet, fundamentally, to her wisdom and acceptance of her responsibilities must we look for the highest results.
Eugenics in Philadelphia.

NELLY M. WARD, 1915.

Eugenics, as you have heard from the papers already read, is a study of the agencies under social control, that may improve or impair the racial qualities of future generations. It is not merely a question of mating or mismating, as many think, but includes within its scope a study of such subjects as these, control of marriage, the general education of the public, both adults and children, in sex hygiene, the care of babies, the troublesome questions of prostitution, venereal disease and feeblemindedness. The questions of segregation and sterilization belong also to eugenics, but up to this time no special work has been done along these lines in Pennsylvania.

There exists in Philadelphia today no organized society which has for its express purpose the propagation of the principles of eugenics. There are, however, many different societies, working independently, which deal with different phases of the subject. The Commonwealth itself has taken up the question of the control of marriage. The law enacts that no person can obtain a marriage license who is mentally incompetent, or who has been so within five years, or who is a pauper or otherwise unable to support a family, or who does not swear that he or she has no communicable disease. Eugenists desired that the bill should have required a physician's certificate from both parties, but this appeared to be going too far.

Sex hygiene, we find, is being taught by the resident physician in all the public high schools. At the University of Pennsylvania the questions of eugenics and hygiene are being presented to the students in a series of lectures.

In some of the larger mercantile and industrial establishments there exist "welfare work" and "social service" departments, which are not only advantageous to the establish-

ments themselves as being a means of making their employees more efficient, but are also patriotic measures looking to the moral health of the people and the prevention of evil.

There is a great deal of individual effort which takes the form of occasional lectures on phases of eugenics in churches and public halls, in Young Women's and Young Men's Christian Associations. We all know of the course of lectures being given by Dr. Florence H. Richards at the Century Guild.

In connection with the Child Federation of Philadelphia there are several "Little Mothers' Leagues," in which girls from 7 to 12 years of age are being taught the care of the home and baby, knowledge which, we believe, will go far toward the uplift of the coming generation. We have all read and heard of the Baby-Saving Show and of the immense benefit it has proved to the poorer and more ignorant classes in Philadelphia. The child improvement contest going on just now will doubtless be the commencement of a new era in many lives.

There are 3000 social agencies in Philadelphia other than churches, and 300 immigration societies, but with all of this there are multitudes whom none of these societies reach.

The most extensive work yet done in Philadelphia is that of the Vice Commission appointed by Mayor Blankenburg in 1912. This commission did not undertake their studies in the interests of eugenics, but in an effort to clean up the city. Nevertheless their investigations should prove of as great interest to eugenists as to good citizens. The question of prostitution has been extensively investigated. It has been found that there are at least 499 disorderly houses, 3311 women plying the trade, and an annual expenditure of $6,250,400 in this city for purposes of prostitution. Waiving all questions of morality or legality, this business is disease-breeding. It is ruining the lives of men and women and unborn
children. The Commission holds that the statutes of Pennsylvania are fairly well able to cope with this situation if they were enforced, and suggests as a remedy the employment of only those officers who will strictly enforce the law, also the appointment of women on the police force. They do not expect even these measures to affect materially those at present connected with this business, but they hope that it will prevent the replacing of the old prostitutes by a new harvest of young and innocent girls. Their measures aim to protect the morals and health of the coming generation more particularly than those of the present.

As I have mentioned above, there is a limited amount of instruction in schools planned to increase the intelligence and safeguard conduct in sex matters. The elementary schools avoid the subject entirely. This, I understand, is due to the fact that these schools have not enough money to retain a school physician, and they do not think the instruction should be given by a visiting physician, who is a stranger to the children. The teacher, upon whom the duty necessarily devolves, has not sufficient knowledge of the subject to impart it in a wise and tactful manner. Not more than 3 per cent. of the children entering our public schools are touched by the sex instruction which the curriculum now includes, because only this percentage reaches the last year of high school. Sixty-eight per cent. of the children leave school at 13 or 14 years of age, and go out as wage-earners, facing the world with no more preparation than the grammar school affords.

After a detailed study of the existing conditions the Vice Commission offer some suggestions which they believe would solve some vexing questions. I submit them to you for your approval or otherwise.

1. That churches, schools, universities, extension societies, educational institutions and individuals should spread ideas affecting sex understanding and conduct.

2. That the public should be taught as to the change of scientific and traditional estimate of chastity, the hygiene and pathology of sex.

3. By correction of the practice among physicians of keeping married women who are under treatment for venereal disease in ignorance of the causation, nature and effects of their condition.

4. By the cultivation of a sentiment, professional and lay, in favor of making venereal disease reportable, and subject to such regulations as are now used to control less serious contagious diseases.

5. By the preparation of leaflets, etc., for popular distribution.
   (a) For those receiving marriage license.
   (b) On the prenatal care of the mother and child, with emphasis on the duties of the father at this period.
   (c) On the care of infants.
   (d) On the care, physical and mental, of adolescent children.

6. That all hospitals receiving State aid should be compelled not only to provide a ward for venereal patients, but also to receive them.

How far any of these suggestions may have been followed I have been unable to find out. An excellent basis, however, has been established by the work of the Vice Commission upon which those interested in this city's welfare may build. There is found a widespread and increasingly insistent demand among teachers and parents for help in their work with the young along these lines, also there is among younger adults a sense of need for a larger knowledge of life that they may have guidance, both in mating and parentage.

It, therefore, becomes all organized bodies performing educational service in the community to take part in working out the manner and method of the enlightenment which the people need.
In response to a request for a few words regarding the recent equipment of the Laboratories of Histology and Embryology, the members of the laboratory staff take pleasure in announcing that their efforts to raise a fund of $500.00 for the purchase and installation of an Edinger drawing and projection apparatus have, thanks to the loyal support and generous contributions of numerous friends, been at last crowned with success. The apparatus, which was imported from Germany, is now in position and the installation of the necessary wiring, together with a mercury-rectifier for the purpose of changing the alternating to the direct current, is almost completed. For the darkening of the laboratory black opaque shades have been generously placed in position in the side windows by the college authorities, and the remaining shades covering the sky-lights and door, have been contracted for from the special fund and will soon be in place. Besides this, sockets for electric lights and a cautery for the cutting of wax plates have been installed in the main laboratory and in each of the two private laboratories. We, as members of the staff, wish to take this opportunity of expressing our sincerest gratitude to all, both friends of the college and students, who have contributed toward the fund necessary for the purchase and installation of this equipment. The lack of such an apparatus has been keenly felt for years. Not only will it prove a very valuable aid in the way of enabling all the members of the class to see the actual microscopic preparation at the same time, but it will also be an indispensable help to the members of the staff in the making of wax models of organs and embryos for the laboratory, and in the pursuit of special lines of research. A part of this equipment consists of a camera for photomicrographic work, so that photographs of the actual sections may be made for the benefit of the students, and also in connection with research work. Enlarged drawings of tissues and organs at any given magnification can be made with great rapidity and accuracy.

Mr. Wilbur F. Rose, in addition to his generosity to the laboratories in connection with the endowment and electrical equipment funds, has very kindly presented the department with a handsome black walnut case for the dust-proof housing of the collection of wax models.

Dr. Harley Stamp has very generously loaned to the laboratories a series of wax reconstruction models made by him during the summer at the Harvard Post-Graduate School of Medicine, showing the development of the ear, the heart and the brain of a 19 m.m. pig embryo. Dr. Cushing's wax reconstruction of a similar pig embryo brain showing the origins of the cranial nerves, will be very helpful. In addition, the members of the staff now own and will place at the disposal of the students serial sections of 6, 9, 10, 12, 14.5 and 18 m.m. pig embryos, as well as a number of serial sections of 12, 36 and 48-hour chicks. A list of such serial sections is kept on record by several institutions in the country, and our serial sections will be registered at these institutions for the benefit of any investigators who may care to use them.
Another new feature is a "Drawing Scrap Book." In this we have placed the Histological and Embryological drawings which have been made by students from time to time from slides. Aside from its artistic and historical features we feel that this collection will help to fix detail and histological accuracy and prove an incentive to good work. A new array of large solution-bottles with metal faucets is another addition which will be greatly appreciated by the students. This means no more slipping siphons or mouths filled with alcohol, xylol, etc., to add to the agonies of the hour.

During the past year over 2000 slides of tissues and organs, and gross mounts of chick embryos have been prepared and arranged in the form of permanent loan sets to be used by the students in their work. These sets will be completed during the present year and will form an invaluable aid to both students and instructors in their work. Some thirty additional wall charts will also be made during the coming year. In addition, descriptions of the sections belonging to the laboratories and to the members of the staff are being made on cards and these are being indexed and cross-indexed for reference.

Still another model is to be added. This too, will, we feel, be of great value in the study of histology of the central nervous system. The financial outlay in the preparation of this model has been considerable, but the immense amount of time and the patient labor expended are far in excess of the monetary cost and represent an earnest effort on the part of the members of the staff to better the teaching equipment and raise the standard of efficiency of the department. This 14-foot model will be ready for use in a very few weeks. There are only three or four such models in the country.

We cordially invite and welcome the College to join with us in enjoying our new pleasures. Again we thank all those who have aided us by their generous help. Just as soon as arrangements for the darkening of the laboratory are completed, we will be glad to show you just what the Edinger means to us.

HERBERT HOWARD CUSHING.
Mae LICHTENWALNER-MYERS.

A Falling Off in Medical Students.

From the Journal of the American Medical Association.

The number of medical students in the United States for the year ending June 20, 1913, was 17,015, a decrease of 2,771 below 1911, a decrease of 4,511 below 1910 and a decrease of 11,127 below 1904, when the highest number of students was enrolled. In fact, it is the lowest number since 1900. Of the total number of students, 15,909 were in attendance at the so-called regular colleges, 850 at the homeopathic and 256 at the eclectic colleges. The attendance at the regular colleges shows a decrease of 1,368 below that of last year and 2,505 below 1911. In the homeopathic colleges there was an increase of 23 above the attendance of 1912, but a decrease of 40 below the total for 1911. The eclectic colleges show a decrease of 52 below 1912 and a decrease of 177 below 1911.

The State furnishing the largest number of students this year was New York, with 2,098. Pennsylvania contributed 1,375 and Illinois 1,314. The next States in the order of the number of students contributed are: Ohio, 795; Massachusetts, 680; Texas, 594; Missouri, 562, and Tennessee, 436.
Two Caesarean Sections.

On the morning of November 11th, at about 4 o'clock, everybody was aroused to the fact that a "Caesarean" was about to happen. With great joy we sallied forth Maternity. Ho! Most of us arrived from two to three hours too soon, but the time was well spent getting awake.

At 7.06 A. M. Dr. Tallant made her initial incision through the abdominal wall; then, through the uterus, and at 7.07 presented to Miss McIntyre a very nice 7½-pound girl. The young person was rather off-color and quite out of breath, but considering the distance she had come in ninety seconds we were not surprised. After much coaxing and some oxygen she consented to stay a while, on sufferance.

There was considerable hemorrhage, since the placenta was attached anteriorly. The wound was sewn up in the usual way.

The indication for operation was a generally contracted rachitic pelvis, measuring spines, 21.5, crests 22.5, trochanters 29.5, ext. conjugate 17.5.

The patient is making a good recovery.

A little more than a week later we were again summoned to Washington avenue for a second Caesarean. This time the operation was begun about 1 A. M., abdominal incision, uterine incision, placenta again anterior, thrust aside and the child delivered. Again things went with most uninteresting smoothness; the baby was not even asphyxiated. The wound was sewn up in the usual way.

The indication for this operation was a generally contracted pelvis, measuring spines 23.25, crests 25, trochanters 27.25, ext. conjugate 18.5, Baudelocque 17.5.

This patient, as well as the first, was given the "test of labor" before the operation was done. In this age of blood-pressures our record would be incomplete without some mention of them. Below are the records made during and before the two operations:

First patient.

Systole. Diastole.
During Pain ..... 162 138
Between Pains ... 150 128
Ether begun ..... 124 102
Trendelenburg .. 142 120
Peritoneum opened ..... 124 108
Baby born ..... 114 98

Second patient.

Systole. Diastole.
Between Pains ... 130 108
Ether begun ..... 138 90
Under ether ..... 140 106
Peritoneum opened ..... 140 96
Baby delivered .. 146 104
Closing of wound 144 80
Subcuticular stitches ..... 120 50
Patient in bed.... 138 80

R. M. DOWNS.

The Survey, of November 1, 1913, prints this poem, by Carrie Weaver Smith, W. M. C., 1910, who, since her graduation, has been serving as resident physician at a rescue home in Dallas, Texas.

The Cry of Christ to the Daughters of Shame.

"Crucified once for the sins of the world. O fortunate Christ!" they cry.
"With an Easter dawn in thy dying eyes, O happy death to die!
"But we—we are crucified daily. With never an Easter morn; But only the hell of human lust. And worse—of human scorn.
For the sins of passionless women, For the sins of passionate men, Daily we make atonement: Golgotha again and again.
"O Happy Christ, who died for love. Judge us, who die for lust. For Thou wast man, who now art God. Thou knowest. Thou art just."
Graduate Council.

A reprint has been sent to all members of the Alumnae Association of the paper which Dr. Catharine Macfarlane presented to the meeting in June, entitled "Presentation of a Plan Whereby the Alumnae May Assist the College." This is a proposal for the establishment by the Alumnae of a Graduate Council, whose function is to further the best interests of the College. That the students, as well as the Alumnae, may know of this work of the Alumnae Association, a copy of the paper has been placed on the bulletin board at the College.

A list of the requirements necessary to move the College from Class A to Class A plus is included in the letter to the Alumnae:

Higher entrance requirements.
More full-time professors and instructors.
Control over a larger amount of clinical material, both dispensary and hospital.
More complete equipment.
Medical research departments.

Dr. Eleanor Stephenson, 1904, was a guest of the Woman's Hospital on the 18th of November. She will return to the American Mission at Ahmednagar, India, about the first of January.

Dr. Grace Burnett, 1912, who since her graduation has held the positions of assistant physician at the State Insane Hospital, Staunton, Va., and at Skillman, N. J., has now returned to her home in Brattleboro, Vt., to enter into private practice.

Dr. Mary Lewis, 1911, has been recently appointed one of the Philadelphia medical inspectors of schools.

Dr. Gertrude Minthorn, intern in the College Hospital 1910-'11, was operated on for appendicitis in a hospital in London, in November.

Dr. Vera Schectman, 1912, has acquired an automobile for use in her practice in Newark, N. J.

The meeting of the Medical Society of the Woman's Hospital, on November 17th was addressed by Mrs. Martha J. McGee, in charge of the Social Service Department at the Pennsylvania Hospital, on "The Organization of a Hospital Social Service."

A recent Materia Medica quiz brought forth this prescription:

B
Sodii salicylatis ........... dram i
Sodii bicarbonatis ........... dram ii
Olei ricini .................. m xx
Spiritus myricae q. s. ad. fl. 32. iv
M. Sig.—One teaspoonful in water t. i. d.

Another imaginative junior suggested that it might have been intended for the treatment of a dermoid cyst.

"What is the name of this article?" asked a shopper.
"I really don't know," replied the clerk. "I think it is intended to be sold as a Christmas present."

"'What a piece of work is a man!' and he has been reduced to his essentials. A German, needless to say, has worked it out. A 150-pound human being is worth £1 11s 3d—that is, in terms of his constituent elements. 'His fat is worth 10s 5d; of the iron there is hardly enough to make a nail an inch long. There is sufficient lime to whitewash a pretty good-sized chickenhouse. The phosphorus would be sufficient to put heads on 2,200 matches, and there is enough magnesium to make a pretty firework. The average human body contains enough albumen for 1,000 eggs. There are possibly a teaspoonful of sugar and a pinch of salt.' Of such material is our clay compounded, plus—the unknown quantity. —Illustrated London News
THE IATRIAN

England's First Coffee.

Coffee, like tea, was from an early date welcomed as a rival to alcoholic liquors. Writing in 1659, shortly after its introduction into England, Howell makes the comment "that this coffa drink hath caused a great sobriety amongst all nations. Formerly clerks, apprentices, etc., used to take their morning drafts in ale, beer or wine, which often made them unfit for business. Now, they play the good fellows in this wakeful and civil drink. The worthy gentleman, Sir James Muddiford, who introduced the practice thereof first in London, deserves much respect of the whole nation."

With the Movies.

A soldier of the legion lay pierced by foemen's steel.
As things betell, The lad got well.
It made a lovely reel.
Maud Muller in the meadow lot was busy raking hay.
Young people go To such a show.
Such nearly always pay.
The boy stood on the burning deck; de-
fied a hostile realm.
He knew his trade And really made
A most exciting film.
The village blacksmith plied his sledge; a scene of peaceful bliss.
And now and then The worst of men
Like pictures such as this.

Scientific Cooking.

"Give me a spoon of oleo,
And the sodium alkali,
For I'm going to make a pie, mamma,
I'm going to make a pie;
For John will be hungry and tired,
And his tissues will decompose;
So give me a gram of phosphate
And the carbon and cellulose,
And give me a chunk of casein,
To shorten the thermic fat,
And give me the oxygen bottle,
And look at the thermostat.
And if the electric oven is cold,
Just turn it on half an ohm,
For I want to have the supper ready
As soon as John comes home."—Ex.

Intuition has been defined as a quick method of arriving at a totally incorrect conclusion.

"You are very young to be a registered pharmacist," said the lady with the massive jaw. "I wish the proprietor to wait on me, and not any young clerk."

"Where is your prescription?" inquired the proprietor, coming forward.

"I have no prescription. What I want is five two-cent postage stamps."

Scot Free.

The expression "scot free," which is in use every day, harks back to the times of Scottish romance and tragedy so luminously described by Sir Walter Scott in "The Antiquary" and "Rob Roy." In these stirring tales we are told of one form of Scottish trials given certain offenders of justice. He who had broken the law was divested of all of his clothing and placed at a certain distance from archers, who had bows and arrows ready, waiting the command, "Fire!" When the command was given the man under indictment would begin running and the archers would commence firing, and if in running this gauntlet none of the arrows hit him he was allowed to go scot free.