from the fairs is not that which is carried to them; that the new growth may acquire powers beyond those of ordinary Indian cholera, capable of spreading rapidly and certainly over country where cholera is comparatively seldom seen and of being the origin of European pandemics. The corollary of this hypothesis would be the gradual attenuation of new growths in less favorable culture media, under less favorable climatic and meteorologic conditions, until there resulted the entire loss of morbid potency and the dying out of the pandemic.

CORRESPONDENCE.

Letters to my Hospital Internes, Past and Present.

By CASEY A. WOOD, M.D., OF CHICAGO.

LONDON, July 1, 1895.

Gentlemen:—Undoubtedly there are some forms of service which must ever leave the recipient in the debt of the donor. In looking back at the work done for me by you, during my attendance at Cook County Hospital, the Alexian Bros., the Emergency Hospital and the Hospital of the Post Graduate Medical School it occurred to me that I might at least acknowledge certain obligations of this kind by recounting some of my experiences during a short trip abroad. I shall endeavor to avoid the style of the medical guide book and beg to assure you that I will speak only of those men and those things that came under my own personal observation. I might also explain that, although this visit to the English and continental clinics has been a hurried one, its value to you is possibly somewhat enhanced by the fact that I had gone over more leisurely on two previous occasions, and at an interval of several years, practically the same ground.

The London hospitals have not altered much since my last experience of them. The student has not much to gain from a short stay in the British capital, partly on account of the great distances that must be covered in going from hospital to hospital, and partly because the average Englishman does not take kindly to the stranger until he has become acquainted with him after a proper introduction. But for the man who will settle down for six months or a year and work hard, excellent teaching and numerous opportunities are at the disposal of the visitor. There are admirable post graduate courses, conducted by the best men in London, on all medical and surgical subjects, but it is rather fatiguing to hurry about from one hospital to another, miles apart. Some day these isolated teachers may come together, as with us or as in Vienna, at a common center, and then London will compete on more than even terms with her continental rivals.

These objections do not apply with the same force to ophthalmology or otology. The student, advanced or otherwise, can hardly wish for more or better opportunities than are to be had at the Royal London Ophthalmic Hospital (Moorfields, E. C., three daily clinics, 9 A.M. to 3 P.M., operations eleven to seventeen and Westminster Ophthalmic, Charing Cross, 3 daily clinics, 1:30 to 4, operations two to three). I do not say that other excellent institutions do not also furnish numerous opportunities for work, because large daily clinics are held at the Central London Ophthalmic Hospital (Gray's Inn Road, W. C.) South London Ophthalmic Hospital (near the Elephant and Castle) and in connection with many of the general hospitals, but at the two special institutions first mentioned from forty thousand to

fifty thousand new patients are yearly admitted. In that overwhelming tide of ophthalmic disease, fed by the whole country round about, every possible type and variation of ocular trouble can be studied. It is a comparatively easy matter to attach one's self at Moorfields to the service of Nettleship, Lang, Silcock, Morton, Gunn, Lawford or Couper, or at the Westminster Hospital to the clinics of Jaler, Hart-ridge, Cowell, Dodd, Donald, Gunn, Griffith and several others. After a month or two of probation it is possible to obtain almost complete charge of patients, to do minor operations and to discuss with the chief of the clinic, matters that arise in connection with the conduct of their cases. At Moorfields, instruction on the use of the ophthalmoscope (unusually good, each course six weeks, plenty of cases, fee 2 guineas) is given three times weekly by Gunn, Silcock and Lawford. Classes in refraction are conducted by Mr. Lang (excellent, one month each, 2 guineas) while Mr. Morton gives an instructive course (six weeks, 1 guinea, material from all the clinics) on external diseases of the eye every Friday at 1 P.M. These courses are held during the winter season and tickets are to be had from the secretary at the hospital.

For beginners, Mr. Phillips, the refraction assistant, conducts, when requested, private classes which are, in my opinion, superior to anything to be had on the continent. Indeed, all the continental clinics—especially those in Vienna—are conspicuously weak in courses devoted to the study of refractive errors and muscular anomalies. Mr. Morton also gives an excellent operative course (private, six lessons, 2½ guineas) which is very popular with students. Pigs' eyes and the mask are employed for operations on the globe; pigs' heads for operating on the extrinsic ocular muscles and the lids.

These excellencies in the way of instruction are completed by work in the laboratory under the supervision and help of a very genial man, Mr. Marshall. His predecessor, Treacher Collins, has done and is still doing a great deal of valuable original work and, mainly in consequence of his efforts, the museum possesses by far the best anatomic collection in the country.

I was interested in a plan for using the electric light in the examination of eye patients. As you are aware, my objection (which I had vainly endeavored to remove by various devices) to this light was the difficulty of quickly regulating its intensity so that it could be lowered or raised like gas. Mr. Lang has perfected a plan whereby this can be accomplished and we can now dispense with gas—a decided advance, especially on a hot summer's day in a stuffy dark room.

The study of otology and laryngology is not so satisfactory to the student in London as that of ophthalmology. The London Throat Hospital (Golden Square, clinics every afternoon and evening) with Wolvenden, Hovell and Bond, is perhaps the best known and where, all things considered, one gets nearest the patients—whose name is simply legion. To obtain privileges of any value in this direction it is, however, necessary to take out a ticket of attendance (3 guineas for six months, 5 guineas perpetual, from the secretary) and to wait for a vacancy on the staff of clinical assistants, if there be none at the time of registration.

Dr. Dundas Grant, Mr. Lennox Browne and others hold daily clinics, (beginning at 2 P.M. and lasting until evening, fees 1 guinea a month) where the student may see a large number of ear, throat and nose cases. At irregular intervals lectures are given on otologic and laryngologic subjects. I fear it will be a long time before London is able to hold out inducements to students of otology, and the kindred specialties, equal to those so freely offered by Vienna or, though in a less degree, even by Berlin.

I regret that I was unable to attend the clinic of Mr. Jonathan Hutchinson—a name claimed equally by all departments of medicine and surgery. I am told that every London hospital, whether devoted to general surgery, ophthalmology, diseases of the lungs or what not, furnishes its quota of obscure cases for review by this truly remarkable man. Such fathers of our art should live forever, and one may well wish for a continuance of a life already so replete with useful years.

One of my missions in England was to investigate the subject of the color sense. In my opinion we have as yet, no theory that satisfactorily accounts for all the color phenomena, physiologic and pathologic, commonly met with, and I hoped to find light upon this obscure matter in the work of Mr. Lovibond of Salisbury, who has been engaged in investigating color values and "chromometry" for twenty years past. I have long felt the absurdity of scientific men using such terms as "canary yellow," "magenta," "grass green," "Prussian blue," etc., as their most definite expression of a color sensation. In his search for universal color standards, Mr. Lovibond was confronted with the difficulty of finding a pure white, but at last settled upon a compressed surface of finely powdered lime sulphate as giving the nearest approach to white. When colors are viewed through a tube or box, from which all light is excluded, the slightest difference between them can be readily observed if the colored objects be uniformly illuminated. This, the principle of Chibret's chromophotometer, enables the observer to add, in Mr. Lovibond's instrument uniformly graduated yellow, red and blue tinted test glasses to the white side of the apparatus until it exactly resembles the colored object under examination. When both objects appear exactly alike, the glasses added to the white side are the color measure of the color or shade under examination. The result is always given in, and every color can be resolved into, terms of red, blue and yellow—according to the Lovibond scale. Thus a colored powder is found to be composed of 1.4 standard units of red, 0.9 standard units of blue and of yellow 3.7 units, or a certain fluid (beer, drinking water, oil) is found to be 0.8 red and 0.50 yellow.

Not only have we in this scheme a universal standard of color, but other uses to which the "tintometer" is put ought to interest every medical man. It has been found that the amount and kind of adulteration in most foods and commercial products, as well as the impurities commonly found in drinking water and other fluids can be determined by the deviation, measured by the tintometer, from the normal tint of the pure article. Instead of making a laborious and complicated *chemic* examination of the suspected compound, its color value is determined in a few minutes. Such a chromometric examination is usually found to answer all the purposes of a quantitative analysis. In this way the tintometer is now employed in England and to some extent abroad, by all sorts of commercial houses and it is also used with great success by the health departments of cities for the ready detection of impurities and adulterations in milk, water, beer and other foods. *The slightest departure from purity whether in food or in any other product, is at once shown by a measurable and corresponding variation in color.*

As scientific men the subject of color-music ought to interest you. The July number of the *Nineteenth Century* contains an article dealing with this matter—an attempt to convert musical tones into corresponding color harmonies. I remained one day longer in London than I might attend a concert in St. James' Hall where upon a large canvas beautiful displays of color combinations were given as an interpretation of the music rendered by a good orchestra. Just how this was accomplished I could not discover but, *a priori*, it does not seem opposed to our idea of the conservation of energy that sound waves and the cerebral sensations they produce should be convertible into those of color.

PARIS, July 14.

Owing to my acquaintance with the American medical colony in Paris, I was able with their courteous help, to gather many items of interest which would otherwise have taken a much longer time to collect. Drs. Evans of Chicago, Bergeson of Merrill, Wis., and Jehm-Prume of Montreal, are at work here and express themselves as greatly pleased with the opportunities for study in all departments of medicine and surgery. The fees, unlike Vienna, are quite nominal (often excellent courses are free) and every stranger (in contrast to London and Berlin) is welcomed without the least introductory formality.

A students' number of the *Presse médicale* is issued every December and is the best medical guide to Paris I could find and, although intended for undergraduates, is a help to the visitor.

The *Institut Pasteur* (Rue Dutot, 25, open to visitors at 11 A.M., apply to the concierge) was, as you know, built and endowed by subscriptions from all parts of the world and its most useful work, it seems to me, is done in the fine laboratories and research rooms of the main building. There are half a dozen of the former under the care of salaried chiefs of departments who also instruct students, and over twenty-four of the latter given up to advanced workers who are conducting original investigations. The general laboratory courses (50 francs for two months, most of the material free) are said to be the best in Europe. The research rooms are let for the insignificant sum of 50 francs a month and the Institute furnishes all the ordinary apparatus and materials.

The animal rooms contain over one thousand birds, guinea pigs, rats, rabbits, etc. In this appropriate way does France make a generous return to those foreign countries that subscribed money for building the Institute. Pasteur has his private apartments in the buildings, but since the illness of the chief the management of the Institution has fallen entirely into the worthy and competent hands of Dr. Roux. The city of Paris presented them both with medals and a sum of money a few days ago.

Among the most important work done at the Institute and the Children's Hospital is that in connection with diphtheria—by Marmarek. He finds that the disease is not always the result of the diphtheria bacillus, so-called, alone, but that that microorganism is, in many cases, associated with others, notably the streptococcus, and the symptoms may be mixed phenomena due to a composite infection. In certain instances the systemic poisoning may be chiefly a streptococcus intoxication. If this be true, we have an explanation of the irregular action of Behring's heilserum; antitoxin is powerless in a case of diphtheria largely due to poisoning by the streptococcus. Marmarek consequently proposes not only to regulate the dose of antitoxin by the proportion of diphtheria bacilli present in the exudation, but to give doses of streptococcus toxins when that coccus is found. He expects to have the antidote ready for general use in a month or two.

Marmarek is of opinion that the chief danger to which the tubercular patient is exposed is a secondary infection of his lesions by streptococci.

I was also interested in the investigations of Cenarelli in typhoid fever. Most animals can not, under ordinary conditions be inoculated with the disease, but he found that this immunity practically disappears and that they exhibit all the characteristic lesions of enteric fever when they are ill-fed, kept in filthy, badly ventilated quarters or exposed for some time to sewer gas before receiving the typhoid poison. The inference is that human beings are much more likely to resist this form of intoxication if they live hygienically and in a healthy neighborhood—a doctrine taught by our fathers before the days of bacteriologic laboratories. There is a public hydrophobia clinic connected, as an outdoor department, with the Institute, where from eighty to ninety patients are daily treated; the average treatment lasts fifteen days and the method is just the same as that carried out in Chicago by our own Dr. Lagorio. By the way, Chicago is the only Pasteur station except, I think, Havana and New Orleans, marked on the large map of North America at the Institute. I could not discover why New York, with Gibier's station, had been omitted.

I saw the original Pasteur filter, invented by Chamberland, one of the department chiefs at the Institute, and am inclined to think more highly of it than I did of those put on the Chicago market. It is used here for the separation (under pressure) of their toxins from the various microbes. As you are aware, the filter is practically a porcelain cup, dense enough to separate—to a bacteriologic demonstration—even the smallest organism from contaminated drinking

water. I suspect, however, that regular boiling and cleansing of the porcelain cylinder and its attachments would be a useful proceeding in the case of a filter daily employed in the purification of Chicago water.

Some Remarks on Alleged Degeneracy.

ORAN, SCOTT CO., MO., July 27, 1895.

To the Editor:—This word does not apply to the profession at large (or as a whole). Doubtless there are many physicians who have lost their standing and good name and have ceased to study and improve, but the profession, as a whole, is on gaining ground. Doctors are wiser than ever before. There are more great men in our ranks to-day than ever before, and there are men who know more of medicine than was ever known to physicians of the past. Some of our wisest men undertake to write after their mental powers have begun to weaken, and in this sense may be called "decaydents." Others through sickness or disease may have lost their balance—but to say the profession is losing ground, and that our predecessors were a long way ahead of us is a mistake.

Many of us follow strange gods, but as a whole we are all right. There are many cranks among us on many different subjects, but this is not new; it was always so. Our ability to see ourselves as we are, shows strength instead of degeneracy. Our ability to correct past errors shows mental growth. Our greater control over disease and our ability to cure many maladies that were considered incurable by our fathers also shows progress. Oh, yes; we are all right. No need of the calamity howler in our midst. We are in line with our brethren in other avocations. We are keeping up with the times. Some of us may belittle ourselves by playing hog or dog, but the grand old army marches steadily along, conquering enemy after enemy.

Let not the editor of our JOURNAL join with those who would try to discourage us. Lend your aid in another direction. Never allow yourself to think we are degenerating. The apparent degeneracy is among those who have lost sight of duty and have made medicine a trade. These fellows are not so much degenerates as knaves—they never looked upon medicine as other than a species of merchandise. They, to some extent, have lowered our standing with the laity but have not taken, nor can they take, our lofty and well-earned position from us, and as Dr. Pusey says: "Medicine is not the poor relation of any scientific family."

I am glad the editor joins me in my theory of inebriety, and has a proper appreciation of the so-called *gold cures*. When I was spreading myself out, condemning this fad, only a few men said to me, "you are right;" but if the editor joins me, I shall not feel that I am so much in the minority.

Another source of joy to me is the fact that the AMERICAN MEDICAL ASSOCIATION is beginning to set down on the proprietary medicine man. I have had my say on this subject, but somehow editors are a little tenderfooted along this line. These parasites have a firm hold and are hard to unloose, but they will finally have to go. Truth, right and honest dealing must prevail. Secret methods of preparing medicines have no place with us, and the man who refuses to tell anything he knows that would benefit humanity can not last. His time is short. The patent nostrum vender can "hoodoo" the laity and swindle them out of their money, but no man nor set of men can continue swindling us without being exposed. We are "on to" the ready remedy maker's racket, and ere another decade shall pass, his name shall be "Dennis" or "Mud" in "box-car" letters. Very respectfully submitted,

W. D. HOWLE, M.D.

The Nu Sigma Nu Fraternity.

CHICAGO, Aug. 7, 1895.

To the Editor:—Any one who has read the scholarly and very entertaining address published in last week's issue of the JOURNAL, pages 177-180, delivered at Minneapolis, Minn.,

June 3, by Dr. John L. Irwin, President of the Grand Council of this honorable order, can not but sincerely applaud and at heart, at least, extol every sentiment uttered by that worthy gentleman.

For one, I have personally been much interested and delighted at reading his able address; and while I have not the pleasure of knowing Dr. Irwin, nor the honor of being a member of the Nu Sigma Nu, yet knowing something of this fraternity and the character of its members, I am free to state that I am a staunch advocate of its cardinal principles and teachings. It is my misfortune, perhaps, that my name has not, long ere this, been enrolled in this noble brotherhood of our profession. But after all, is it not our duty as honorable men and conscientious physicians, while we live, to follow the precepts of the order of Nu Sigma Nu, whether we are members of this honorable order or not? To sum up the ritual of this order—or rather to summarize Dr. Irwin's address—we should observe and live up to the Golden Rule; to practice charity without ostentation, educate ourselves in our profession, and observe toward each worthy professional colleague and toward all mankind the virtues of brotherly love, purity, honesty, justice, a laudable ambition, temperance and fidelity. As I understand it, these are substantially the teachings in the ritual of Nu Sigma Nu.

If we courteously observe these principles in our professional career, to my mind it does not seem that we have left much undone to "worry" about in the discharge of our duty toward our fellow man.

In Chicago, there are at least three Chapters of the Nu Sigma Nu Fraternity, and I am personally acquainted with nearly every "frater" of the order in this city, for all of whom I entertain high personal esteem. To these gentlemen, and to the members of the Nu Sigma Nu everywhere, I extend my sincere congratulations in having so able and efficient an executive of the Grand Council of their fraternity.

In conclusion, I thank the Great Physician of us all, as well as Dr. Irwin and the JOURNAL for publishing the address, and for being privileged to read it.

I remain sincerely,

LISTON H. MONTGOMERY.

PUBLIC HEALTH.

Subsidence of Smallpox in Chicago.—There were only 2 deaths from smallpox in Chicago during the month of July last, as against 51 for the corresponding month of 1894. There were three cases remaining in hospital at midnight of the 6th inst., as against 117 on August 6 last year.

The Odors of Paris.—The prefect of police has given orders to have a certain number of his inspectors detailed to investigate the sources and causes of the disagreeable smells which incommode the Parisians, especially during the evening. As the number of establishments to be inspected is estimated at 8,000 the work is not yet done. However, from the evidence accumulated it seems probable that most of the noxious odors are caused by the manufacture of bone black.¹

Anti-Vaccinists Not Popular with Politicians.—Before the recent elections in England, the Bristol Anti-Compulsory Vaccination Society approached the various parliamentary candidates for Bristol and the adjoining divisions to ascertain their views on the vaccination question. It is reported that the "cold shoulder" which they received was so unanimous that they could fix on no candidate whom they could support and so abstained from any participation in the campaign and in the election.

¹ Le Progres Medical, No. 25, 1895.