copeia was published in 1898, and 46,081 copies and 4,525 copies of the Indian and Colonial Addendum have been sold. The work of preparing a new edition has now been completed. One of the chief features will be that limits of impurity in drugs and medicinal chemicals—especially dangerous impurity—will be carefully defined. For instance, at present potassium carbonate containing arsenic will pass the test of the Pharmacopeia of 1898, but it will not pass the 1914 edition, which will limit the quantity to two parts per million. Again, in regard to lead contamination in tartaric acid—the importance of which has been recognized both by the government and by the local authorities—the limit of admixture is prescribed as ten parts per million as compared with a very indefinite limitation before. Another feature of the book is an extension of chemical standardization to drugs not at present standardized, but there is no recognition of physiologic standardization. Notwithstanding the advances that have been made in physiologic methods of testing the strength of drugs—especially of those drugs which do not admit of chemical standardization—it has been felt that the time is not yet ripe and knowledge not sufficiently perfect to adopt animal tests in this edition. The international unification of the quality of preparations of potent drugs, notably those of henbane, belladonna, aconite, nux vomica, etc., has received the endorsement of various nations through a Hague conference, and has due recognition in the forthcoming book, so that a person having the same prescription made up in, say, London, Brussels and Paris, will obtain a preparation of uniform strength.

Medical Education of an Earlier Day. The *Journal of the American Medical Association*[8] quotes the following from a copy of the *London Magazine* published in 1825:

"There are 3,500 medical practitioners in London, 900 in Paris, and not one in Jericho. If you ask aloud in the street in New York, How do you do, doctor? not fewer than nine passengers will answer you."

(8) November 21, 1914.

"Concerning medical education in the British Isles, it says:

"'We understand that there is a university called the University of Edinburgh, where ragged Scotch louts spend twenty or thirty pounds, and six months, in acquiring what is called medical knowledge. Others, richer and less ragged, spend three years, and twice as many hundred pounds; a few may occupy four or five. In Glasgow, they do pretty much the same. In both, they talk what is called Latin, and pay thirty pounds at the ends of these probations, have a velvet cap put on their heads, hear a speech from a man called a principal, and become M. D.—Doctors of Physic, or Medicine, for it is not absolutely agreed which (vide Term Reports, anno 1773. Boswell v. Johnson.)—At Aberdeen again, physic is studied, learnt, acquired, for thirteen pounds twelve shillings, in about half an hour; attendance, on account of its inconvenience, being excused. At St. Andrew's, the facility is about as great; and thus, for thirteen pounds twelve shillings, a man acquires the right of "*purgandi, seignandi, accidendi, et trucidandi, impune per totam terram.*" At Oxford and Cambridge, physic is acquired with the utmost certainty and facility, just as are other things in the same places at Paris, Leyden, Göttingen and elsewhere, in other modes too tedious to detail. In England, generally, a student labors for seven years in spreading plasters, tying labels on bottles and applying packthread; but, in London, they dig up dead bodies and carve them, walk about an hospital and pay fifty guineas a year for the privilage of guessing what a man called an apothecary means, and what becomes of the money. Added to all this, in times of war, they go to the Peninsula, hew down legs and arms, and bore holes in skulls with a center bit, or do the same thing on board of a frigate. Then a few privileged ones wear scarlet cloaks, make a Latin speech, or listen to one, once in two hundred years, and vote all the rest to be ignoramuses.' "

Increase in Sale of Nostrums. The London letter of the *Journal of the American Medical Association*[9] says:

(9) July 11, 1914.

"Last year in his budget statement, Mr. Lloyd-George stated that there had been a decline in the revenue derived from stamps which have to be affixed to nostrums. This, as stated in *The Journal*, he attributed to two causes: the insurance act, which provided free attendance and medicine for the whole industrial population, and the revelations made at the government committee of inquiry into nostrums. The figures for the present year show an increase. The receipts from the sale of medicine duty stamps amounted to $1,800,000, or $160,000 more than in the twelve months 1912-1913. This is the greatest advance in any one year, for the last fifteen years at least. The increase in 1912-1913 was only $2,300. Last year also witnessed a small rise in the number of the licenses, 43,156 being issued, against 43,118 in 1912-1913."

Tooth Detergents. The *Journal of the American Medical Association*[1] discusses the principles involved in the use of tooth powders and other preparations for cleansing the teeth. One of the constituents of many tooth-powders is soap, and this ought to be a harmless substance except for the objection to its alkalinity. The reason for employing an alkaline substance seems to be that it is recognized that dental decay is due to the effect of acids formed by fermentation. These acids, however, do not accumulate on the teeth in the free state but unite with the lime-salts of the enamel or dentine as soon as they are formed. The alkalinity of the ordinary tooth-powder can be of little service because its occasional application can do nothing to check the action of acids which are continuously formed during the intervals. Moreover, the use of an alkaline application to the teeth may be a positive detriment by depressing the secretion and alkalinity of the saliva on the principle that a secretion which is no longer needed ceases to be formed. Pickerill ("Stomatology in General Practice," p. 100) has shown that alkalies applied to the teeth and gums reduce both the amount and alkalinity of the saliva secreted subsequently to the application of the alkali,

(1) July 4, 1914.

while the reverse effect is produced by acids. Hence he recommends a weakly acid application rather than the alkali. Another reason for the use of acid has been advanced by W. J. Gies (*Household Arts Review*, May, 1913, p. 12; *The Journal*, Nov. 8, 1913, p. 1719), who found that alkaline applications did not readily dissolve the mucus which retained the fermenting food on the teeth and hence were not efficient cleansers. He also advocates the substitution of acid solutions. Pickerill has found that daily rubbing the teeth with a weak solution of tartaric acid did not remove any appreciable amount of the material of the tooth. It seems, therefore, that tooth detergents should be made of weak acids rather than weak alkalies.

An antiseptic is usually added to these preparations with a view to hindering the proliferation of the numerous microörganisms which are found in the mouth or introduced with the food. It is time that physicians should have clear ideas as to what can be expected from antiseptics applied to the oral cavity. To disinfect the mouth would be a difficult matter, and in practice is not worth attempting, unless by the direct work of a skilful operator. To give the patient an antiseptic with which to treat the mouth is worse than useless. If the object is to prevent putrefaction or fermentation it is much simpler to remove mechanically the fermentable material than to attempt to preserve it with an antiseptic. Pickerill suggests that not only is an antiseptic which is in contact with the organisms not more than three minutes a day of no use, but not improbably it has the reverse effect—that of producing a more vigorous and resisting strain of organisms due to the *slight* and *intermittent* opposition to their growth and to the survival of the fittest. This author states that for a chronic and slowly progressing lesion like caries of the teeth, the intermittent use of antiseptics is of no value. Their use should be limited to acute conditions and then they should be used frequently and in full strength, that is, as strong as can be tolerated, with the object of rapidly reducing the number and virulence of the organisms.

Practical Eugenics.[2] The extent to which the good and bad qualities of one generation are transmitted by heredity to another generation is an unsettled question; but there is no doubt that the conditions surrounding the fetus *in utero* have much to do with the vigor with which it enters on its extra-uterine life. Prenatal care of the mother is a logical extension of the philanthropy which is seeking to conserve the vital resources of the nation by the care of infants. Provision for such antenatal care has been made for the past four years by the Committee on Infant Social Service of the Women's Municipal League of Boston, and its example has been followed in a number of other cities. The committee now has made its report for the first four years of its existence with statistics for a part of the fifth year. The work of the committee has been restricted to the visiting of pregnant women once in ten days by a competent nurse, who takes blood-pressure, examines urine and advises regarding diet and regimen, but gives no drugs, with the exception of cascara. The success of the work is judged by the decreasing frequency of eclampsia, stillbirths, premature births, and by the increase in the weight of the babies. In all these particulars they record a steady improvement as the result of prenatal care. Thus the figures for percentage of cases of threatened eclampsia for the first four years are, respectively, 10.2 per cent., 4.8 per cent., 1.7 per cent. and 0.0 per cent. The percentage of stillbirths fell from 2.6 per cent., the average for three years, to 1.7 per cent. for the fourth year. The corresponding figures for the premature births were 1.7 per cent and 0.7 per cent. A slight increase in the average birth-weight is also recorded. These figures, the committee believes, present sufficient evidence of the effectiveness of prenatal care to justify the continuance of such work. The expense is slight, amounting to about three dollars a year for each patient. It is intended to extend this treatment to private patients, the nurse reporting to the family physician instead of to the hospital, as is the case with the public work.

(2) Editorial in Jour. Amer. Med. Ass'n., February 21, 1914.

Old-Time Medical Humor.[3] It has been said that there are altogether only twenty-nine jokes in the world, and that most of these can be found in the specimens of Roman humor which have been preserved for us by the satirists and wits of the classical and post-classical periods. How far this may be true is a question, but an excellent illustration of it is afforded by Dr. Raymond Crawfurd's recent article or "Martial and Medicine." Martial was the acutely observant satirist and critic of a city that in the course of a little more than a century had risen in population from less than a hundred thousand to nearly two million. Into that city the wealth of the world was being poured, and to it came men of all nations seeking to get into the center of things; and his epigrams come home to us with greater force from the fact that many of us live under circumstances much resembling those in which Martial lived and wrote. Some of the oldest jokes known to medicine and dentistry are found in these satires. Pathologic conditions that are usually thought of as having been much more recently noted, were humorously and satirically touched on by Martial nearly two thousand years ago. All of the references are distinctly modern in flavor, and as this is the time of social reunions and banquets which physicians must often attend and at which they sometimes make addresses, a few of these old jokes may be useful.

The old saying, "The surgeon buries his mistakes," which probably first arose through medical jealousy, has its exemplification in Martial's pun on the surgeon turned undertaker.

> Diaulus undertook of late
> the operator's art:
> but now prefers to operate
> the undertaker's part.

The fact that there was clinical teaching and that patients complained of abuses in it is shown by one of Martial's epigrams. The lines contain history and a

(3) Editorial in Jour. Amer. Med. Ass'n., January 31, 1914.

warning that the patient's feelings must be considered if the really great good that should be secured from clinical teaching is to be obtained.

I lay ill; but soon Symmachus sought me
With a class of a hundred young men
Whose hundred cold paws have brought me
The fever I lacked till then.

Martial ridicules the false adornments worn by the women of his time. He originated the quip that "they lie who say that Phoebe dyes her hair black—she buys it black." His couplet on the teeth belongs in this class.

Laecania has white teeth, Thais brown.
How comes it? One has false teeth, one her own

Unfortunately, there were no means of replacing the eyes lost through the many eye diseases of Martial's time. Ambroise Paré, in the sixteenth century, was the first to make a regular use of false eyes. Martial says of one of the fair ladies of Rome:

False teeth and hair flaunts Laelia shamelessly
but not false eyes, for these she cannot buy.

Crawfurd quotes epigrams from Martial concerning two affections that are of special interest at present. While the poet pokes fun at the oculists and indeed seems to have a little grudge against specialists, he pictures one of them as warning his patient that if he continues to indulge in liberal potations he will surely lose his sight, as dimness of vision has already begun. The craving is too strong for the patient and his sight is lost. Dr. Crawfurd has suggested that the verses should be labeled "Albuminuric retinitis."

Aulus, there's Phryx, that fine old winebibber
Blind of one eye and of the other blear:
His doctor Heras said, "Drop alcohol
For if you take it, you'll not see at all."
Laughing, Phryx wished his eyes a last good-bye

And ordered cups to be mixed frequently:
D'You want to know the consequences? Why,
'Twas wine to Phryx, but poison to his eye.

Martial seems to suggest that chronic constipation played a large part in the illnesses of Rome and that it could be told from the appearance of a man that he was suffering from this disorder. The ordinary remedies included lettuces, mallows and other vegetables having a large residue. The use of prunes was evidently a favorite recommendation for this condition. Martial's two epigrams are thus quite up to date.

Use mallows and use lettuces
That soften defecation:
For you present the facies
Of chronic constipation.
Try prunes, they're sold wrinkled and old
Brought from some foreign nation:
They'll be of use in setting loose
Thy belly's constipation.

Martial seems to have known the pathologic disturbances which result from excessive use of rich food and free indulgence in wine. Dr. Crawfurd suggests that the poet actually seems to hint in one passage that purin bodies are a cause of gout and that hepatic inadequacy is associated with the disease.

Of hares, and mullet, and sow's teat
What's the termination?
Bilious color and the feet
Racked with inflammation.

Diseases due to the disturbances of metabolism consequent on luxurious habits had multiplied greatly in Rome. What was called gout, that is, pains and aches in joints and muscles, the various forms of arthritis and the vague conditions that we now call rheumatism, had also greatly increased. Pliny, who was an older contemporary of Martial, says: "Gout used to be an extremely rare disease, not in the times of our fathers and grandfathers only, but even within my own memory."

Although the gouty were usually rich and of luxurious habits, some of them, evidently, were not good pay.

> Diodorus, while he sues in court,
> On gouty feet can stand:
> But when the lawyer's bill is brought
> The gout sets fast his hand.

Evidently many counterparts of the men and manners of Martial's time could be found to-day.

Alfonso Corti, a Submerged Histologist.[4] The name of Marchese Alfonso Corti is permanently associated with his great discovery of the spiral "organ of Corti," containing the terminal auditory apparatus of the cochlea, and its component parts, eponymically known as the cells, ganglion, membrane, rods, teeth and tunnel of Corti. Beyond this fact and the titles of his works, nothing whatever has been known of his life to date. Hyrtl, it is true, designated him as his prosector, and Corti's epoch-making monograph of 1851, a milestone in the history of otology, gave him the widest reputation. His brother Luigi, a prominent Italian statesman and diplomatist, known during his term of residence in nearly all the embassies of the greater cities, became Minister of Foreign Affairs under Cairoli in 1878. But the elder Corti himself, although living and working in the full current of modern science, suddenly and mysteriously sank out of public recognition about the middle of the nineteenth century and became as one submerged.

In 1907, Dr. Joseph Schaffer of Vienna applied to Prof. Max Neuburger for biographic information about Corti, and received the significant reply, "Corti belongs among those whose names are on every lip and of whose lives one knows nothing." The distinguished medical historian was able, however, to put Dr. Schaffer in touch with various Viennese archives of documents, thus starting him on a train of research the results of which

(4) Editorial in Jour. Amer. Med. Ass'n., November 7, 1914.

have been recently published. A brief abstract of these may be of interest to our readers.

Alfonso Corti, the son of a Piedmontese marquis of the name. was born on one of his father's estates at Gambarana, Sardinia, June 15, 1822. After completing a course of philosophical studies at Pavia, he entered the medical school there in 1841, mainly, as he himself said, through a particular liking for anatomy, human and comparative. For four years he devoted himself to the subject, under the direction of Panizza and Rusconi, and during the time made many preparations for the Royal Museum of the city. His industry and his special aptitude soon gave him the position of actual, if not nominal, assistant at the university. This post, however, was soon abandoned for the attractions of the New Vienna School, of which Hyrtl, just called from Prague and perhaps the greatest anatomic teacher of his time, was then the bright particular star. Reaching Vienna in 1845, Corti appears to have first matriculated at the university about 1846-1847, and shortly after was assisting Hyrtl in the preparation of lecture specimens. Twelve human and twenty-four comparative preparations of Corti's handiwork are still in the Anatomical Museum at Vienna. During his vacations home, he made collections of marine zoology on the Italian coast, some of which he took back to Hyrtl. He soon mastered the German language, but his inaugural dissertation, on the vascular system of *Psammosaurus griseus* (Vienna, 1847), dedicated to Hyrtl and illustrated with six original drawings, was written, as then usual, in Latin. Dec. 16, 1847, Corti was chosen as Hyrtl's second assistant (without emolument), after an official demonstration of his practical skill in which his fluency in German was amply displayed. Hyrtl and Czermak both spoke in glowing terms of this demonstration (on the neck), of which Corti's holographic report still exists at Vienna. During the March revolution of 1848, the university buildings, containing the anatomic institute, were turned into a barrack, and Corti's

laboratory was transferred to the narrow confines of the Josephinum. He therefore went up to Berlin to follow the lectures of Johannes Müller, who seems to have spurred him to the study of the higher sense organs, as shown by Corti's next publication, on the anatomy of the retina (1850). In this he discovered the origin of the optic nerve fibers of the retina from the multipolar cells of its inner layer. In the early autumn of 1850, Corti was in Utrecht, but it is inferred that he began his studies on the cochlea at Wurzburg prior to this visit, since he had already lent drawings to Kölliker and studied the retiform arrangement of cardiac muscle with him. Kölliker, in his work on miscroscopic anatomy (1850), already mentions Corti's work on the lamina spiralis. June 30, 1851, Corti published his *opus magnum,* on the auditory organ of mammals, in particular the cochlea, in Kölliker's *Zeitschrift.* Kölliker gives a full account of Corti's work in his "Handbook of Histology" (1852), and in the second volume he characterizes it as the starting point of any exact knowledge of the cochlea. It is interesting to note that Corti appears to have employed the carmine stain before Gerlach. His confirmed Corti's discovery that the spinal ganglion of the cochlea nerve contains bipolar cells, in the embryo, and Retzius, by means of Golgi preparations. The second part of the monograph, which was to deal with the human cochlea and the vestibule of mammals, and incidentally to extend morphologic investigation to a great variety of animals and apply the laws of acoustics to the elucidation of auditory functions, was never completed. Shortly after the publication of the memoir, Corti disappeared, "like a meteor from the horizon line," and was never heard from again as a contributor to scientific literature. What was the cause of the mystery?

In 1852, he returned to Italy, sending to Kölliker from Turin what was to be his last communication, on a dissection of an elephant in the Royal Museum at Stupinigi, made at the instance of Professor de Filippi.

About this time he began to suffer from a severe arthritis deformans, acquired in early youth, which involved his hands and feet to the extent that he could neither move nor eat without assistance. Confined to his chair by increasing pain and absolute helplessness, he was forced to give up his scientific and social activities and retire to his estate, the Villa Mazzolino, near Casteggio, where he took up wine culture with the same zeal and skill which he had hitherto devoted to histology. The improvements and novelties introduced by him are said to have been of great benefit to the peasants of the country round, the Corti estate being virtually a school of agriculture. In 1855, he married Maria Bettinzoli, a lady of noble birth, by whom he had two children. His son married a Countess Sanseverino (whose name suggests Stendahl's famous heroine) and continued his father's enologic activities at Corvino San Quirico, where the eminent histologist himself died, Oct. 2, 1876.

In connection with the foregoing the following letter sent by Dr. Joseph Leidy to the *Journal of the American Medical Association*[5] will be of interest:

Turin, August 1, 1852.

My Dear Sir:—Having seen from your interesting observations on the microscopic structure of cartilage that you occupy yourself with microscopic anatomy—I am not aware of any one else doing so in America, I avail myself of the very kind offer of Mrs. White, returning home from here, to send you a copy of the first part of my research on the organ of hearing of mammalia. I was obliged to make my studies principally on domestic animals because it is very difficult in Europe to obtain wild animals, which will be easier for you in America. As you will see that my discoveries on that subject are not without interest to physiology—I wish I might induce you to repeat my observations and extend them over a larger number of wild animals.

I should be very happy to keep up a scientific correspondence with you on physiology and microscopic anatomy. I am at the beginning of my scientific career, and I will direct all my endeavors to the physiological anatomy of animals.

My already long letter will perhaps have annoyed you. Excuse me for it; but science and more than any other the study of nature brings men near to each other and will probably later

(5) November 21, 1914.

bring me on a visit to your native country, the most wonderful both for its political institutions and for its natural productions.

You will greatly oblige me with an answer [and], believe me, My dear sir,

Your obedient servant,

ALPHONSO CORTI,

at Turin, Kingdom of Sardinia.

I enclose two short German articles of mine and two Italian ones of my friend Dr. d. Filippi, Professor of Zoology and Director of the Zool. Mus. here.

To Dr. Joseph Leidy,

Philadelphia Academy of Sciences.

Unfortunately the answer of Professor Leidy to this letter could not be obtained.

INDEX.