stomach seem to produce changes not yet understood in the left lobe of the liver.

Now the one condition antecedent to disturbance in this tract is obstruction. The character of the obstruction may be either a temporary functional arrest from spasm of circular muscle fibers, or a permanent mechanical blocking, and yet a fatal result occurs in both instances. Probably most cases of pyloric obstruction are due to a combination of both conditions, the mechanical irritation leading to increased spasm. The result of this obstruction is a perversion of vital secretions, to the lasting and sometimes fatal injury of the individual.

In seeking the causes of pyloric stenosis we have a wide range, from the congenital spasm and hyperplasia of the infant to the cancer of the aged. Pylorospasm alone may have many causes, some in the alimentary tract, as ulcers, gallstones, appendiceal irritation, intestinal obstruction and ptosis; others remote in the brain, pelvic organs or possibly in the derangement of internal secreting glands. The importance attaching to this condition lies in the fact that its perpetuation by a constant cause (as chronic appendicitis) may so affect the health of the individual as to call for surgical intervention. In acute gastric dilation we may find the exciting cause in an operation on remote parts outside the abdomen, and yet the result may be rapidly fatal. Mechanical obstruction due to peritoneal bands, inflammatory exudates, growths, cicatrices, kinks, and in one case to a gallstone blocking pylorus, means lasting serious damage to the whole economy, covering long periods of time, and presents to the surgeon a large field. We think of the effect of obstruction as an interference with the digestion and assimilation of food, but it is far more than that; it is the retention of a vital secretion that is kept from playing its part in the common reservoir of the duodenum to become a toxic agent for the undoing of the individual, and the essential principle underlying treatment is the drainage of this toxic secretion from the stomach, just as we remove a gallstone or a prostate to release toxic secretions.

You wash out the stomach and you "cure" some of these patients temporarily — in acute dilation you do so permanently. As has been so aptly said, the cure of acute dilation should be made before its onset by washing the stomach at the first sign of post-operative vomiting. When you institute drainage from the stomach, whether by way of the pylorus or by the jejunum, the result will be good because retention is overcome. But one fact seems to me important, and that is that we should not wait till a history of twelve years' sickness or food remnants appear twelve hours after eating before operation. To say nothing of the prolonged suffering, the appearance of the patient often indicates the profound impairment of the economy — an impairment that is not fully recovered from. By refinement of diagnosis and education of doctors and patients it must be made possible to operate earlier for the relief of these patients.

DR. S. A. MAHONEY, Holyoke: As the writer remarked, the appearance of twelve non-malignant cases within two years in the practice of one man, in one of the smaller towns of the commonwealth, is, to a man also living in a city of about the same size, a remarkable thing, and particularly when he reports results so favorable in every case, it is still more remarkable. I know in our locality, looking back over a period of much longer duration, the results have been more in accordance with Dr. Codman's results. I do not remember, in an experience of ten years or so, having run across more than two or three cases which remained non-malignant up to time of operation. The majority of them at the time they come into our hands have

passed beyond the stage where a simple gastro-enterostomy can be done, with no mortality. But of course every man's experience differs, and with the education of the medical fraternity the cases are coming into our hands earlier, and probably the future results will be more in accordance with Dr. Goddard's experience.

Of course Dr. Goddard's experience of two years is too short to have any end results. Relative to the occurrence of cancer in these cases, when I was at Rochester, Minn., some years ago, the pathologist at St. Mary's Hospital showed us a series of cases of cancer, where the cancer was grafted on the base of the ulcer, removed at the time of operation.

DR. GODDARD: In reply to the remarks of the last speaker, I would say that I am perfectly aware that the sound of my paper is very optimistic, and brings with it the suggestion of exaggeration, of picking out good cases, and omitting the failures or fatal ones, but I can assure you that the cases that have been presented are the only ones of that type that have been treated, and that the records and statements of the patients themselves will bear me out fully in the results.

The last point mentioned by Dr. Codman, I think, is an important one and should not be overlooked, and so I ask for the opportunity to show my results in stomach surgery in general and in full. Gastro-enterostomy has been performed on two cases of ulcer without stenosis, with results similar to those noted, except that one was suffering from tuberculosis, and now his tubercular symptoms are worse. One case of perforated gall bladder, causing stenosis of the duodenum, was temporarily relieved by gastro-enterostomy seven months ago, and two weeks ago was operated on for gallstones, and is now convalescing. One man of forty-eight was operated upon two years ago for ulcer, having vomited blood profusely and presented most of the symptoms of ulcer. No ulcer or gross lesion was found, and the abdomen was closed. It was supposed to be a case of capillary bleeding. The patient got better, is now able to work, but is not free from distress and gas. I have explored one neurasthenic with stomach symptoms which had persisted for years, found no gross lesion and so closed the abdomen. On the whole she is some better, one and one-half years after the operation.

This is the extent of my stomach surgery, but these cases, some of which may be called failures, cannot be grouped under the head of pyloric stenosis. As has been remarked by Dr. Codman, the end results are as yet far off, but as was mentioned in the paper, as a class they appear good so far as we can now judge.

A REMINISCENCE OF MY PROFESSIONAL LIFE.

BY DAVID W. CHEEVER, M.D., BOSTON.

(Continued from No. 12, p. 439.)

ON coming on duty in my hospital service, I found a young man with a simple fracture of the femur just below the trochanter minor, wholly ununited. For four months he had laid on his back in the hospital, in extension and plaster-of-Paris dressings, with every care given him by my predecessor in the service.

He was flabby, weak, anemic and much disheartened. There was no union, and on removing the extension there was marked shortening and mobility but no crepitus. Having in mind a previous case, like this one in nature and like him also in the times *before* asepsis, I hesitated to do

any operation on the bone, and indeed no judicious surgeon would have thought him fit to undergo an operation. In the previous case, a fat and heavy beer-drinker had been operated on by me, by cutting down and wiring the bones together. Sepsis followed, and resulted in a high amputation, from which he recovered, and passed his life peddling pencils and shoestrings on the street corners.

For my patient I had made and fitted a very heavy Sayre's hip extension splint, with a broad and extra strong perineal band. The iron splint was fastened into the sole of a heavy shoe, the upper end was belted around the waist above the pelvis, a ratchet and screw made extension. Apparatus on, the leg well extended, the patient would walk on his perineum. Crutches were also furnished.

I took this patient out of bed, and on his crutches, first about the ward. I soon had him walking and sitting about the hospital grounds. I give him hearty food and tonics. Finally he was sent home and I saw him occasionally crutching about the street. At the end of a year, he had good union and a useful limb.

In one of my cases of esophagotomy to remove a fishbone from the esophagus of a sturdy, bull-necked young man, an abscess formed behind the pharynx. Failing to close, I found caries of the body of the sixth cervical vertebra. I attended this patient one year; he fully recovered, with a stiffened neck, but never any intraspinal symptoms. He lived an active life, as a stationary engineer, until advanced age.

It may seem vain to repeat it, but I venture to call attention to the fact that I had about 85% of final recoveries in my major operations. I cannot be absolutely sure, but I know that perhaps one half of these were done before asepsis.

Pyemia was a terrible scourge; many perished. The fortitude and patience of the pre-aseptic group of surgeons in both our large hospitals were something to be proud of. Pyemia, or sepsis and death, in my own sad experience followed amputation of a finger; removing a small epithelioma from the wrist; a ruptured perineum, — old quiet, requiring three stitches; embolism after simple fracture of the tibia; gangrene without external wound, in the bruises about a simple fracture. Hysterectomies fatal; five of my ovariectomies, by the Spencer-Wells method, recovered.

In these troublous times I did some bolder and some original operations. Wood's operation for the radical cure of hernia always suppurated. It was expected. I wired the external ring with subcutaneous silver wire, and the patient wore it six months and then the wire protruded through an abscess and was withdrawn.

Per contra, I wired the thyroid cartilages in a cut throat with silver wire and it healed over well. The next year this patient was fatally burned. I did an autopsy and I found the wires nicely encysted and in place.

I did some original operations at this time, with fair success: Displacement and replacement of

the upper jaw for pharyngeal polypus, removal of tonsil tumor by external incision, *et cetera*.

It is fair to mention these novelties and successes in that fatal period.

About 1866 I did, I believe, the first Cæsarian section in this community.

The operation went well. The patient was exhausted by long efforts at forceps extraction. She died of sepsis.

Prior to asepsis, in the first twenty-five years of my practice, three important new aids to medicine were added: The subcutaneous syringe; the clinical thermometer; the trained nurse.

From its inventor, Dr. Wood, of Edinburgh, Dr. Sinclair and also Dr. Ruppauer, both of Boston, brought here the subcutaneous syringe. I well remember the caution, not to say timidity, with which it was received.

The fact that what you put in could not be got out was the cause of most dread. The rapidity and profoundness of its action were also novel. Its free adoption for giving narcotics has led to abuse. It is too easy for the night nurse, or the tired doctor, to obtain quiet somnolence in this way. For the sensitive stomach it is invaluable. Think of the quick relief of pain.

Formerly the doctor was called by a messenger, went by horse power, gave laudanum by the mouth, — half an hour for the messenger, at least; half an hour to go; half an hour for absorption of the opium; for a short call in the city, one and a half hours to reach the relief in acute pain.

Now he is called by telephone; he goes by an automobile; he injects morphia, and one-half hour might cover all this.

The old way of giving liquid opium by the mouth or rectum still has the advantage of gradual and tentative absorption, and of local effect, in the latter.

The morphia syringe has much increased the morphia habit; and it has robbed suicide of its terrors. The subcutaneous syringe has also enabled us to give strong stimulants with rapid absorption.

All this we older doctors lacked.

When Dr. Brown-Séquard was lecturing in our medical school, I carried to consult him a lady with epilepsy. I looked with secret contempt on his thermometer; it was a flat disk and he held it to the forehead of the patient. To take temperature was new to me; that any accuracy could be got by a thermometer in simple contact with the skin, I did not believe.

One day the real clinical thermometer was brought into the wards of the City Hospital. I remember we sat about and tried it and discussed it. Dr. C. E. Buckingham said, "Some time, by and by, this will come of use and be adopted." Now the clinical thermometer is an indispensable part of every doctor's outfit.

It is of more use in diagnosis and as a guide to the course of disease than in treatment. Fever *per se* is probably salutary, provided disease calls for its aid in a chemical combustion of bad products and of germs. Degrees of fever are

lacking in chronic disease; and they are exaggerated in the child. As a guide to the existence and the progress of continued fever (typhoid), for example, it is of vast assistance. It enlightens the onset and the crisis of acute disease. It may carry infection from mouth to mouth. It may deceive us, if we rely on it alone.

The trained nurse is since my time. No young woman could be a good old-fashioned nurse — that was a matter of years of experience. There were a few very competent, middle-aged, old-fashioned nurses, especially obstetric and baby nurses. A young nurse had no training and nothing to rely on but kindness and toughness in enduring fatigue. In two or three years in a hospital a modern nurse sees more than most old-fashioned nurses in a lifetime. If she is intelligent, and if she loves her calling, she will succeed. The personal equation here plays a greater part than in any pursuit in life.

If she loves her calling, if she is patient and adaptable, she will succeed.

She is well trained, but she must retain and be able to use her knowledge, be quick and ready, be modest and kind. If she is not all this she is a nuisance, an encumbrance, and she will fail. There is a prejudice against trained nurses among the laity. It has been engendered by poor samples of this class. The very great expense also is deterrent; prohibitory to those of moderate means; and the infallible economic law of supply and demand has led to the coming forward of a new class of imperfectly trained and cheaper attendants, who supplant the trained nurse in chronic cases.

The trained nurse is of great assistance to the doctor; many things are left for her to do habitually which once were entrusted to the doctor's hand alone.

Her *dicta*, if she be dictatorial, carry weight, undue weight, with the patient and family. She may share overmuch the responsibility of a case. The relative attitude of doctor and nurse depends on the *personnel* of each.

The doctor is less constantly needed; fewer visits are required.

Per contra, the doctor is relieved of an immense amount of anxiety when he feels he has a steady substitute at the helm. She is at the helm, in his absence, if the old-fashioned nurse was not.

I speak freely of these semi-professional relations, from a long experience of both kinds of nursing. If the trained nurse is not paid too much, then the doctor is paid too little. The long and expensive education of the doctor, his free services in charity, his position and his responsibility prevent any just parallel between the value of his services and those of the nurse. Their functions are distinct: in my opinion the relative valuation should be more justly graded.

Let us not seem to depreciate, however, the worth of the trained nurse's services. The right nurse is invaluable in a critical case.

It used to be that the doctor, in the country, remote from his patient, had to provide for twenty-four hours: and often did much nursing

himself. He had to foresee the crisis of acute affections. In surgery he could count on the fateful thirty-six hours, at the end of which the little cloud of adverse symptoms inevitably obscured the sky, if evil days were coming.

These early days and critical days are where the trained nurse fits in and helps the doctor.

To call back life, or to avert impending death, two methods have come in; the first modified, the second original.

First, the transfusion of blood. I did it, in old times, drawing blood by venesection, whipping out the clot, warming and infusing it into a vein through a tunnel and glass tube. The entrance of clots, or of air, was the peril. Direct transfusion from living to living person is modern and is of very great importance. The other method is the salt solution, to fill up the rectum and colon, or to be absorbed slowly under the skin, in large quantities; to fill up depleted blood vessels with a saline water resembling the serum of the blood.

It is curious to recall that an artificial serum was used long ago, in ovariectomies, to fill up the peritoneal cavity, by Dr. Peaslee, of New York.

To recur to the introduction of anesthesia is somewhat stale; its stages of progress were laudanum, the ligature, sulphuric ether, chloroform, rhigolene, nitrous oxide, cocaine.

But it may be worth while to indicate the struggles upward from sepsis to asepsis. In dressings and in operative technic, as follows: the actual cautery, the ligature, plaster strapping, salves, the poultice, exposure of wound to the air, the cold-water dressing, alcohol, dry cotton (bathing), sponges cleansed with muriatic acid, compound tincture of benzoin, the opium and chlor. soda wash, the liquor sodæ chlorinatæ, *carbolic acid* solution and *spray*, bichlor. hydrarg. solution and douches, permang. potash, green soap and shaving, gauze sponges, *dry heat*, instruments in carbolic solution, instruments boiled or steamed, gloves, aseptic ligatures and sutures.

Turning from the miracle of asepsis in surgery, if I were asked what were the greatest modern triumphs of medicine, I should say the treatment of diphtheria, of malaria, of yellow fever and of tuberculosis. In every case a germ-theory, a germ-origin, a germ destruction, by antitoxins, by prevention of infection, or by elimination by sunlight, dry air and strong food and rest. Add to these the conquests of hygiene and we may claim that medicine is a science.

During the half century I have been personally acquainted with some one hundred and thirty-six physicians of Boston who have dropped out, changed residence or died; very many of them have died.

I wish I could do justice to their memories; but, obviously, I must speak of but few of them.

When just beginning practice I was honored with the friendship of Dr. James Jackson, then at an advanced age. He put a patient under my care, with his supervision. He walked with me to the case; and he told me that in his latter years he had given up his horse and walked for his health. He is credited with other sayings:

"No matter how short your visit is to be, always take off your overcoat, as if preparing for a lengthy one. Thus the patient will think you are making a deliberate visit."

"Always try to see a long case at about the same hour every day."

"Carry your overcoat into the warm rooms, and do not leave it in the cold hall."

"I take a light meal at two o'clock daily, and I insist that I am not to be interrupted."

These wise sayings show a deliberate and careful age. Dr. Jackson was famous for guarding his health. Quite less wise was the curious *dictum* of one of our chief clinicians: "All patients should be told that their calls must be in at the doctor's before twelve noon, or they cannot be attended to that day."

I was much struck with the wisdom of Dr. Jacob Bigelow in fencing with the inquisitive female friends of a patient: people who had no right to ask questions.

Again, with a *dictum* of Dr. W. H. Thorndike: "I say little, and then I have little to take back"; i. e., when a diagnosis or prognosis went wrong.

There is, however, such a thing as too much reticence. One prominent consultant, after several consultations, in which he would give out nothing in the way of definite opinion to the friends, I had to cease calling, for my own protection. This owl-like wisdom is liable to be misinterpreted, to the damage of the younger man.

"You need never expect people to be satisfied with a death," a saying exemplifying the common sense of Dr. Charles Homans.

"Never give up a case in your own mind, for then you will cease trying." This showed well the character of Dr. C. E. Buckingham.

When I was a senior in college, Dr. James Walker, the professor of mental philosophy (as it was called) said this: "Young gentlemen, remember that you will be appreciated in the world not for what you know, but for what you can communicate."

Somehow that influenced my whole life: and, as a teacher, and lecturer *ex tempore*, I owe what success I have had to that saying.

There was time enough to think in the older, slow order of life; now we hasten, but when we arrive, have we thought? As a student, I was impressed with the very great difference in results of operations as to whether subsequent care had been used.

One, I recall, was clumsy in operating, but absolutely skillful in care afterwards; and his blundering incisions usually got well. Another was an elegant operator but less patient in care, and his cases did not do so well. Students, like children, are merciless critics.

We all have our favorites, and I mention three of mine: Dr. O. W. Holmes, Dr. J. B. S. Jackson, Dr. C. E. Buckingham.

Personally in contact with Dr. Holmes for eight years, I count those years as among my most pleasant ones. Wit, gentleness, keenness of intellect, made Dr. Holmes a delightful master.

Dr. Jackson was the embodiment of sincerity and truthfulness. He was a prime observer. I venture to repeat what I have said before as to the appendix. Many times Dr. Jackson showed me a ruptured appendix in a morbid specimen and said, "This was the cause of the peritonitis which killed this patient"; "there is no such thing as idiopathic peritonitis"; and no one could yet venture to operate on appendicitis — taphlo-enteritis it was called. Dr. R. H. Fitz later made it all plain.

Dr. C. E. Buckingham I likened to Carlyle. He was a shrewd observer, he looked far ahead, his outward show was rough, but he was full of kindness. Devoted to his patients and his friends, he was the opponent of all fraud and pretense. He was prone to feed his patients well, and he had great faith in opium. He was a good friend to the young doctor. He worked very hard, and he died, as I think, before his normal limit. I was thrown in with him very closely. He was a fine physician and obstetrician.

Dr. Silas Durkee, at the period of 1858, for ten years was one of the best grounded in the early study of the microscope. He was a good friend to me. He made the City Hospital his residuary legatee. I owe to Dr. R. M. Hodges the inception of my studies in anatomy. Dr. Hodges was a very fine dissector, and a neat and successful surgeon and operator. He was alert, ready, active, cheerful and cheering to his patients. For steady persistence in duty I never saw one surpassing Dr. Henry W. Williams. It was said of him, "Wherever he ought to be, there you would find him."

Dr. B. E. Cotting, long identified with the life and progress of The Massachusetts Medical Society, was professional to the core. He was a tactician and an organizer; and yet he was, in some senses, not in harmony with all his fellow physicians. He was a shrewd and benevolent man, skeptical of drugs.

About this time, some doctors had started a new medical school. It was called the Boylston Medical School. Drs. E. H. Clark, H. G. Clarke, Buckingham, Williams, G. H. Gay were its professors. It gave instruction in summer. I joined it. Instruction was personal and extremely good. I got a great deal from it. This did not interfere with the winter lectures of the Harvard Medical School, which I attended.

In 1863 a new hospital was agitated; in 1864 it was opened under municipal control — the Boston City Hospital. It was extremely fortunate in its early trustees, such as T. C. Amory, Otis Norcross and Theodore Metcalf. Competitive examination of its house-officers, and nomination by the staff to the trustees of its physicians and surgeons were two important measures which contributed largely to its success and its character. Growing with the city's growth, it has now become one of the leading hospitals of the country. Clinical teaching was at once begun in this hospital by Drs. Williams, Buckingham, Borland and Cheever; and has always been maintained by their successors.

Another valuable feature was the publication of

Medical and Surgical Reports, at intervals, which have now been continued forty odd years and have received favorable consideration here and in Europe. When these reports were begun, there was only one hospital (in Philadelphia) which published professional reports. In these four features of a new hospital, namely, competitive examinations, nominations by its staff, clinical teaching, medical and surgical reports, I feel great pride that my good fortune gave me a position as surgeon, and long president of its staff, which enabled me to devote my best efforts to forwarding these measures (some of them novel), so important for the good of our profession, and for the character of the hospital itself. It would be unjust to the long line of faithful trustees and to the present very sagacious incumbent, their chairman, not to say, and it cannot be said too strongly, how much the material success of this great hospital has depended on their care, and on the unstinted liberality of the municipal government.

Having been associated as vice-president and then president for a number of years of the Boston Medical Library, I feel at liberty to speak of it.

Beginning as a book club (the Society of Medical Observation), under the presidency of Dr. Oliver Wendell Holmes, and the untiring efforts of its librarian, Dr. James R. Chadwick, the library was founded and has now become the third in the United States, the Army Medical Museum Library in Washington and the College of Physicians and Surgeons in Philadelphia being its only superiors in number of volumes. I was instrumental in securing for it \$50,000; but Dr. Clarence J. Blake did better and secured for it a legacy of \$150,000. It now owns and occupies a fine building, has a very commodious reading room, numerous halls for society meetings, and takes every medical periodical worth reading, and in several languages. It is freely open to its four hundred and fifty Fellows, many associate fellows and to medical students. Its convenience and benefits to the busy doctor are beyond compute.

(To be continued.)

Clinical Department.

BATH REICHENHALL. A HEALTH RESORT OF SOUTHERN GERMANY.

BY HORACE PACKARD M.D., BOSTON.

In this little Bavarian village, hidden away from the great world, a casual tourist would wholly miss the charms of the natural environment, the wonders of geological formation, the marvelous health-giving qualities of the air and waters, and the atmosphere of romance and tradition.

Well-known is this secluded retreat to the outdoor-loving Saxons, who have flocked here for many decades for the healing effects of the saline springs which yield never-ending volumes of water heavily charged with earth salts. Commercially, sodium chloride is the most important ingredient, and for the recovery of this alone an enormous evaporating plant covering acres sends

out into the world annually eight thousand tons of pure table salt.

The chance observation, many years ago, that persons suffering from otherwise incurable chronic (non-tubercular) pharyngitis, laryngitis and bronchitis were speedily relieved and cured, gradually brought the place into local prominence. At present each summer brings thousands of people from the neighboring provinces of Germany and Austria, and not a few from Russia, in search of the healing, health-giving influences of Bath Reichenhall.

Just what conditions conspire to bring about these happy results it is difficult to specify. There may be something especial in the altitude combined with the pure air which rolls down from the pine-clad mountain sides laden with aroma, or the invigorating tonic of the saline baths.

This southeastern portion of the great Alpine mountain region is a geological curiosity, for the reason that nowhere else in the known world is there such an enormous deposit of mineral salt — literally, mountains of it are piled up here, some portions showing as high as 95% pure sodium chloride.

The waters of the mountain glaciers and streams percolate down through and over the deposits of salt, licking it up to the point of saturation, finally emerging in an exhaustless and priceless spring of salt brine. This bears other mineral salts in lesser proportion, and also shows a considerable degree of radio-activity. So great is the output of the Reichenhall spring that in addition to the immense quantities used here in the recovery of commercial salt, and for therapeutic purposes, millions of gallons are pumped through conduits to neighboring towns.

The tonic effect of the saline baths evidently holds a high place in the estimate of the physicians who direct the medical affairs of the place. Artificial means have been introduced to intensify the natural healing qualities of the various agencies, and there is a great outdoor vaporizing structure which is supposed to charge the whole surrounding atmosphere. A covered promenade around this gives opportunity for out-of-door exercise and saline inhalation treatment even in inclement weather. In high season more than sixteen thousand bathers resort to the various bath establishments. Very much capital has been expended in establishing and fitting up these bath places. For example, one of the finest and most completely equipped has cost approximately two hundred and fifty thousand dollars, and includes interesting features characteristic of all of them, as follows:

The healing qualities of the air, supposedly enhanced by the aroma of the pines, are artificially elaborated by the equipment of inhalation chambers into which a fine spray of a combination of the natural saline water with an ethereal extract of pine is forced, completely saturating the atmosphere like a thick mist.

The therapeutics of atmospheric pressure has also received much attention here, and at present every bath place is fitted with pneumatic cabinets