

THE OLD CENTRAL PACIFIC HOSPITAL



Written by
J. ROY JONES, M. D.

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Eleven years before the discovery of gold in California, the first railway had become a reality in America. Even that early there were those who dreamed of a transcontinental program, and several in the 1830's claimed priority for this proposal. At this point John Marshall's discovery of gold resulted in a sudden influx of people from the States and from over the world. Economic changes resulting from this migration virtually demanded a railway system to the West.

Mail was slow, costly, as were express and freight. Human transportation to the West in 1850 averaged an estimated expense of \$400 and 120 days of dreary, fatiguing, and dangerous travel. Congress was not unmindful of the West's needs but asked whether a transcontinental railroad should be a federal project, and if not a governmental arrangement, what policy toward financial help, subsidies, and land grants should be considered. There was general agreement as to the need, but the accomplishment was disturbing, and, in view of the country's growing distrust there was political maneuvering for geographical position of a transcontinental route.

War between the States revealed suddenly how essential a transcontinental railroad would be to the preservation and development of our economic and political systems. Horace Greeley's journey from New York to San Francisco in 1859 and his New York TRIBUNE articles brought attention to the West's potentialities and pointed out the merits of a railroad through the central plain region. Free homestead lands with a railway system to the Pacific shore became a part of the Republican plank in 1860. It was inserted with the hope of bringing voters of the West into the Republican sphere.

February, 1863, brought together four gentlemen with compelling passions and with assets scarcely above fond hopes, dreams and long-sightedness. Stanford, Huntington, Crocker, and Hopkins began work in Sacramento on the future Central Pacific Railroad system. The building of this railroad is well known to all. The railroad and its hospital system grew as one and overcame, through cooperation and joint effort, the many adversities that so often confronted their passionate spirits and threatened their dauntless courage.

Sacramento was proud the morning of February 1, 1870, for it was then that the Central Pacific Railroad Company had completed the first railroad hospital in the world devoted exclusively to railroad employees. The Protestant Orphan Asylum had cooperated in the interval from November, 1868, to the time of the dedication of the hospital, February, 1870. City vans transported the bedridden sick; horse-drawn hotel buses transferred the ambulatory. There was general pride in so magnificent a structure — spoken of as the "Hotel Dieu" by the local French citizenry. All agreed

this structure was a "step ahead" in prosperous Sacramento, then a city of three flour mills; seven carriage and wagon manufacturers; eleven tailors; thirteen shoe and boot shops; two steam planing mills; two sash, blind, and door factories, run by horsepower; an iron door and shutter firm; one soap factory; ten millinery shops and fifteen dressmaking establishments; and one coffee and spice mill.

At the time medicine the world over was "on the move." It was the beginning of a progressive state — more so than even the older medical prognosticators dreamed possible. The microscope had begun to reveal baffling mysteries. Virchow's "Cellular Pathology" overturned an older philosophy and was the means of beginning a clarification of the etiology of disease. It was the introduction of investigation into rational observations of disease and the cultivation of medicine as a science, from which the science of pathology was to be vitalized. Use of the lancet in pneumonia, peritonitis, typhoid fever, and multiple other maladies was laid aside, though not without resistance. Headway appeared revolutionary — eruptive to the extent warning was given to not accept anything new without sufficient evidence of merit.

A new era of learning came from microscopical sources, which led to Pasteur's and Koch's bacteriological discoveries. Listerism in surgery was to follow the adaptation of these discoveries. During the final quarter of the nineteenth century, American medicine was making strides in paralleling European efficiency. The evolution of the progress of American medicine is fascinating and enjoyable. Medicine, like any science, has no mother country. Her disciples are found everywhere; in the civilized world she has her enunciators, and the Pacific Coast region was no exception.

Work was begun out of Sacramento on the great Central Pacific Railroad, February 1863, and at that time there were approximately twenty-five doctors practicing in Sacramento. These physicians were mature and seasoned; a majority had resided and practiced there since soon after the discovery of gold in 1848. From this coterie a minor segment sought understanding and friendly communion within the profession, and they selected those with good medical training backgrounds and professional and cultural stature to create an organized group for medical improvement. The association was created to stimulate study, promote research, and, in the main, to better the world of medicine. The group was responsible for the formation of the local medical society and influential in the establishment of a state-wide organization.

There was realization that the field of medicine was in the process of unfolding. There was definite progress in medical science, plus a great will to understand many of its laws not yet known in either Europe or America. General anaesthesia, antiseptics, and asepsis opened surgical fields

in which, up to then, no one had dared to perform. This came about through "Listerism," which was slow to take hold in America, and elsewhere too. Western doctors belonged neither to the old nor the new — they belonged to both; their journey West "might change their sky, though not their character." These doctors knew that the general tendency of disease was toward recovery, provided the patient was given proper care and nursing and was spared over-medication. Most of them had read something of Pasteur, Virchow, and Huxley; Koch as yet had not made his appearance before the medical world; germs as a cause of disease still was considered imaginery; heredity in connection with disease was given no thought; and micro-organisms' relation to disease had just commenced to be a subject of discussion. It was beginning to dawn that "The iron doors were shutting out the Past — the dead yesterdays," and there was a realization that Time would unfold its hidden treasures, step by step.

The Central Pacific Railroad began its construction from Sacramento in 1863. Considering the magnitude of the undertaking, accidents were of course to be expected. The road ran through a sparsely populated area. Here and there in mining towns over the course of the railroad were local practitioners of medicine, who were looked to for treatment of the employed sick and injured. Upon completion of the railroad to Promontory, Territory of Utah, some of these physicians were selected as railroad surgeons — Dr. Bergman of Reno, Nevada, was the first over-the-line selection (1870); Dr. Meigs of Elko, Nevada, was subsequently picked in that same year. The physicians were given the responsibility of attending employees and passengers traveling over the line.

As railroading was new in the Far West, it became necessary to gather from the East most of the personnel for the operation of the railroad. These recruits, away from home and family, were mostly single men. Sickness and injury, when it came to them, posed its problems, as those recruits were without the simplest comforts and depended mostly upon the friendliness and care of strangers, comrades, or employees. Few had sufficient money to carry them through a period of sickness; there were times when funds had to be solicited even from local employees. Exposure, climate, poor sanitation, and injuries resulting through building such a project made for a high health-accident ratio. The resultant inconvenience, physical pain, time loss, and lowered morale persuaded the company to build a hospital in Sacramento for the sick and injured, with or without means.

The Company's original hospital was located in "a large frame building at Thirteenth and D streets, formerly occupied by the Protestant Orphan Asylum." While this temporary hospital was in use the Company had under construction on the grounds a new hospital building. During construction Dr. S. P. Thomas, Chief Surgeon, acted as the chief hospital consultant. The first railroad hospital in the world for specific care of railroad

employees then became a reality. The cost initially was \$64,000.00, a sizeable sum in that day. According to description, it consisted of a main building, 60 by 35 feet; four stories and basement, with a veranda at each story; two wings 35 by 52 feet; and a kitchen 24 feet square, removed a few feet from the main building. There were six wards and eight private rooms; in all, accommodations for 125 patients. The six wards were each 45 feet wide. The ceilings were high, 14 feet on the first floor, 12½ feet on the second. The hospital occupied a quarter of a block.

All employees with the exception of Chinese were required to pay dues of fifty cents per month. Hospital funds collected were in that day sufficient to defray current expenses and pay interest on the original cost of the building. The collected fee had to be very carefully managed to afford the necessary services, though irregularly it was often heard that the Company was deriving a handsome profit from the hospital fund!

The hospital grounds were beautifully landscaped and well "groomed," and, so it was related, with the passing years their plant and tree growth revealed an enhanced charm and beatitude that materially aided both the mental and physical well-being of the bedsick and the walking convalescent. There were two day and two night nurses, all male, and, as related, S. P. Thomas was selected as the first Chief Surgeon. There seems a difference of opinion whether Dr. Thomas served as Chief Surgeon to February 1, 1870, when the new hospital began receiving patients, or whether he resigned the latter part of the year 1869. Twenty years later, however, Dr. James Parkinson stated in his OCCIDENTAL MEDICAL TIMES that Dr. Thomas resigned the latter part of the year 1869. As Dr. Parkinson always was most meticulous in his historical facts recorded, it would seem safe to accept his statement.

Why and by whom was Dr. Thomas given the assignment as Chief Surgeon? The Doctor practiced in Auburn, California (an early mining town), before removing to Sacramento in 1863, a short time before the western end of the transcontinental railroad was begun out of Sacramento. On first going to Sacramento Dr. Thomas had an office over 96 K Street building, at the corner of Fourth, and had his residence in the famous Orleans Hotel. The Orleans and the Union Hotels and the Saddle Rock Restaurant were, up to 1880, the focal points of all things of political consequence to California.

The first Chief Surgeon must have been selected by one or more members of "The Big Four." From whence came this attachment? Nothing can be found to determine the point. Had Dr. H. W. Harkness been chosen Chief Surgeon it would have been understandable, as Leland Stanford, Collis P. Huntington, and Mark Hopkins were his neighbors, friends, and patients, and the friendship "lasted during the lives of those of them who

remained in California." There seems little doubt but that Dr. Harkness might have been Chief Surgeon merely for the asking. It is more probable that he did not want the position, for Harkness was an astute business man and by 1863, when "The Big Four" started their cross-country railroad out of Sacramento, he was financially independent through real estate investments. The selection of a recent arrival (Dr. Thomas) creates wonder, but, here, as with the proverb, "wonder is the daughter of ignorance."

The Central Pacific Railroad Hospital was carefully designed, well and substantially constructed, and in that early era was equipped with everything available for the treatment of injury or disease. Too, it was, according to record, well supplied in the matter of drugs and surgical appliances, and the diet was considered to have been most liberal, allegedly surpassing that of the usual hospital management. Nonetheless, hospitals in 1870 — throughout both America and Europe — commonly revealed surgical wards full of infection, with a high mortality rate resulting. It was in this period that hospitals still were plagued with politics and had the "immortal smell of an alms-house"; an epoch when infection and the Potter's Field were boon companions. It was before the adoption of Listerism.

What was the type of medicine and surgery performed under Dr. Thomas' regime? Nothing is really known of the character of work done; nothing at all substantial regarding the Doctor's life throughout his few years in Sacramento can be found to allow one even to surmise the depth of his professional proficiency or his thoughts or the extent of his efforts in behalf of the new era in medicine. Though he came to Sacramento in 1863, he was not one of the original twelve physicians who organized the Sacramento Society for Medical Improvement (March 17, 1868). A dozen of the most substantial doctors — those selected for fidelity and proven consequence — cooperated to organize a "Medical Society for Mutual Improvement," a group inspired by a single prominent idea: mutual improvement! They were ever to be medical neighbors of the Central Pacific Railroad Hospital; together they were reared, and together they sought medical facts, double checked to better know, and refused thinking a man "must take physic because he is sick." To them, as was remarked, the zeal for learning was never out of date. Dr. Thomas entered this medical arena seven months after its formation, though he appears to have been a rather negative participant.

In late 1869, Dr. Alexander Butler Nixon was appointed Chief Surgeon, replacing or succeeding Dr. Thomas, and held the position for sixteen years, retiring in 1885 because of age and poor health. Dr. Nixon was an impressive person: tall, erect in carriage, and meticulous of personal appearance, "always wearing," said Dr. A. M. Henderson, Sr., "a Prince Albert coat and a silk hat." What was the medical and surgical standard maintained throughout those sixteen years? might well be asked. As

no hospital records have been left for survey, conclusions must be made by inference. What character of man was Dr. Nixon professionally? Was he student, bookminded, book collector, and/or medical essayist as were some of his medical society associates? Chief Surgeon Nixon had special opportunity, under exceptionally favorable conditions for that day, to observe and study many and varied medical cases. It was an era when an inquiring mind and an investigative spirit would be well served by keeping up with the stream of progressive science.

Dr. Nixon, born in Ohio, March 1, 1820, was educated in the common schools and at Miami University, and at the Ohio Medical College in Cincinnati, from which he was graduated in 1846. He arrived in California in 1849. Nixon cooperated in the organization of the Sacramento County Medical Society (formed April 30, 1855); and he, with local confreres, assisted in forming the California State Medical Society, March 12, 1856. He lived in this formative and trying period of the "make and break" of western medical societies, giving freely of his energy to support, maintain, and retain these organizations. It was with reluctance, then, that he "sat in" at the dissolution of one after another. Nixon was one of the original twelve to establish — March 17, 1868 — the present Sacramento Society for Medical Improvement, oldest medical society in consecutive years in California.

Dr. Nixon was a regular attendant at the meetings of his medical group, accepted the several officer responsibilities, including the presidency, and was a consistent and honorable member until death. It has been recorded that he was not an ardent talker at meetings but leaned rather to the side of a quiet listener. When, however, he participated in discussion he spoke briefly, knowingly and with dignity. Those medical essays the Doctor prepared for presentation to his society were mostly medical, few being on surgical topics. Generally, though, this tendency was also true of his contemporaries in the earlier years. Surgery in that era was for the most part emergency only; a period when infection was a nightmare . . . a time before Lister's concepts were accepted. Dr. Nixon was a fine, erudite gentleman; however, there is no evidence that imaginative and experimental medicine ever was in vogue — sane and conservative medicine, yes; creative or visionary, no. In 1883 Dr. Nixon stated that "for the last two years I have used carbolic acid dressing and do not know that I have had any better results with it than I would have had without it. With the alcohol and water dressing I once saw an amputation of the thigh heal by first intention. In badly contused and lacerated wounds the best treatment is to keep the wound open and use carbolized water. I have seen a number of cases where the wounds were severe, result favorably by keeping them open. To employ Listerism in all cases is a practice I do not endorse or believe necessary." Nixon's associate, Dr. Huntington, had begun to sanc-

tion antiseptic surgery — hence Nixon's remarks regarding Listerism. Everyone born to this life must naturally be of one faith or another, and Huntington at the time was carefully "ploughing" the surgical field, and it was through his medical society that he had begun to lash out against drowsing minds for their reluctance to evaluate Listerism.

As fine and erudite a gentleman as was Nixon, there is no evidence his regime at the Central Pacific Railroad Hospital associated itself with imagination toward the "how" and "why" of medical science. Review, inquiry, and research do not appear to have been Nixon characteristics, though a few associates within his medical society were actively interested in the microscope and examination of tissues in health and disease, these few urging others within the group to become practically acquainted with the instrument. Dr. Harvey W. Harkness was first with the microscope in the Sacramento area. His interest and study of Pacific Coast fungi and fresh-water polyzoa led him to the edge of histological pathology, and his spirited essays had great influence among his contemporaries, from the time of the formation of Sacramento's first medical society. Dr. Edward R. Taylor — later Mayor of San Francisco — in 1872 wrote verse regarding his old society associates; in one he said:

While WHYTE, CLUNESS and TRAFTON brightened
What'er they touched with learning's fullness;
When HARKNESS shed his microscopic
Developments on every topic,
Until we know not which to admire
The most, the man or magnifier . . .

When Dr. Harkness retired from medicine in 1869 and left Sacramento to live in San Francisco with his library and avocation (Pacific Coast fungi) it became Sacramento's good fortune to have this vacuum immediately filled through the arrival of Dr. Joseph H. Wythe. Wythe, ordained minister, surgeon of consequence, microscopist, and author (1852) of the first complete American text on the subject of microscopy, in 1873 left Sacramento for San Francisco, there to become Professor of Microscopy in the Medical College of the Pacific.

In that atmosphere the first years of the Central Pacific Railroad Hospital and her doctors gathered personality, spirit, character, and professional accomplishment. The Sacramento Society for Medical Improvement exercised some beneficial influence over the railroad hospital: through its educational value to members, which included the railroad Surgeon and his assistants; its stimulation of individual energy, and the trading of knowledge and experiences. The Society was the oak tree under whose branches its membership arranged themselves: to listen, to agree and disagree, to follow the progress of medicine, to promote fellowship, advance culture,

and fulfill scientific aspiration. These special skills, plus faith of association, were transferred by Chief Surgeons and their assistants to the Central Pacific Railroad Hospital. The local medical society was the taproot which afforded sustenance to an extraordinary urge of endeavor to practice a more scientific medicine. This medical group was the center around which local scientific medicine made advancement. It continued to do so, and, as with the early Greeks, persisted in emancipating medicine from religion, mysticism, and superstition, as well as charlatanism and quackery. This fruitful medical communion was "part and parcel" of the character of the medical program of the developing railroad hospital and continued as long as the Central Pacific-Southern Pacific General Hospital remained in Sacramento.

On March 16, 1867, Joseph Lister reported his results on the use of carbolic acid as an antiseptic for the prevention of infection. In the same year, August 9, he read a paper on "The Antiseptic Principle of the Practice of Surgery," an essay that was the beginning of a great epoch. It was the international birth of "Listerism."

In 1876 an embryo surgeon — graduate of the University of Vermont and Harvard Medical School — went West as **locum tenens** for a relative who was a surgeon for the Central Pacific Railroad at one of its railway division points, Elko, Nevada. Dr. Thos. W. Huntington remained, however, for six years, and while at Elko he advanced and improved a cautious yet courageous surgical leaning, and there he first began using with some success, the principles of "Listerism." In 1881 Huntington had abstracted "the literature bearing upon antiseptics as applied to the surgical art." (Thos. W. H.) These abstractions were later presented to his society for medical improvement. Dr. Huntington was called to Sacramento in October, 1882, to become a member of the surgical staff of the Central Pacific Railroad Hospital (in 1887 the name was changed to the Southern Pacific Railroad Hospital). His new clinical facilities, added hospital bed space, and the possibilities for adventure into causes of infectious diseases and their relation to microorganisms provided great stimuli. Out of Europe came announcements of new discoveries: new experiments with pneumonia; Frankel described the pneumococcus; Loeffler give his resume on the diphtheria question and supported the Klebs bacillus as its cause; and Weigert introduced the use of aniline dyes in histological work. Not until 1880 did the results of Pasteur and Lister become known. By 1882 Huntington was a convert to the Lister theory and at once set in motion plans and experiments to prove an antiseptic method of dealing with open wounds. In his new locale, the CPRR General Hospital at Sacramento, Huntington was to establish the first antiseptic operating room on the West Coast.

Dr. Huntington progressed to his real stature at the Central Pacific Hospital at Sacramento and through the Sacramento Society for Medical Im-

provement, each playing an important part in developing his latent abilities, in revealing to him — through facilities for research, study, and experiment — the truths of Lister's teachings. The work of Lister was slow to "catch on," in spite of his international acclaim since 1880. By 1883, American medical students were not being taught Listerian procedure, though in a far western Sacramento railroad hospital Dr. Huntington had begun to attract the attention of California's medical societies, and of societies throughout the States. It was primarily through his efforts that the West adopted the full and complete Listerian procedure.

At Harvard Medical School, Huntington had listened to the course of H. P. Bowditch in practical physiology, E. S. Wood in chemistry, and J. B. S. Jackson in pathology. He enjoyed surgical anatomy under David Cheever, Sr., and, as seemed to be generally true of O. W. Holmes' students, came to know that Doctor well and loved to attend his richly enlightening courses in anatomy. How fortunate was Huntington being able to listen to men who had such inquiring and exploring minds! From that association, because of that persistent stimulation by men with many sides, Huntington took with him to the West a will to explore and a disposition to utilize his findings. Because of constant study, great effort, rigid self-discipline, and keen observation, his surgical accomplishments came to gain not alone local but national and international recognition.

The Hospital became Huntington's workshop, for he was an avid student. Four months after his arrival in Sacramento he presented before the local medical society a maiden essay, "Antiseptic Surgery." By now he had become a convert to the Listerian hypotheses. His essay told how Listerism had lent new inspiration to surgery and how it had left the trail of malodorous pus and misery-stricken patients behind. "The antiseptic method of dealing with open wounds would no longer be regarded experimental," he said. His results had been good. He was not using carbolic acid but rather, in the main, employed mercuric bichloride in solution, the strength varying from one in one thousand to one in five thousand; too, he told of the use of catgut. It was the first time this suture ever had been used in Sacramento. He gave as his opinion that "the advantages of catgut over silk for ligatures are self-evident." Huntington accentuated how important was the proper drainage of a closed wound or suppurating cavity, and discussed the use of perforated rubber tubing and horse hair as drainage media.

Dr. Huntington realized the majority of those listening to his essay — including his own senior associate, Dr. Nixon — were not adherents. He felt that some considered him no more than filibustering an "ism." His conjectures were true for the majority of the society membership, though he gave their doctrines no credence, asserting that dissenting voices were "but a parting shot from the enemy." He believed that "there was an un-

fairness of opponents of antiseptic surgery in instancing individual cases in which remarkable recoveries reported under one or another of the old plans for the purpose of verifying their own and throwing discredit upon the view of others. What the surgeon has until recently sought for, what the sufferer and society demand, is a method that will insure certain and rapid repair, not in exceptional sporadic cases, but with an unvarying accuracy, that strikes from the range of possibilities those disasters once frequent, but rarely recorded."

Huntington drew no fine distinctions in those remarks; he was not of that character to do so. He approached his work with great spirit, ever was confident of his assets, a man of discernment, with increasing professional capabilities, and who refused any the right to curb his rein.

The following year, November, 1884, Huntington gave conclusions on his practical research in a paper entitled "Notes on Antiseptic Surgery, with Reports of Cases Treated at the C.P.R.R. Hospital." He had proved to his own satisfaction a Lister aphorism: "a strict adherence to antiseptics effects a conversion of serious risk into absolute safety." The truism had been proved in the company hospital. "If there be those who will not cordially endorse these statements," he said, "persisting in methods long since obsolete if not disreputable, they will but prolong the era of sloughing, malodorous, infected wounds, until such time as a long-suffering public shall irrevocably demand that measure of relief from pain and immunity from danger which modern scientific research has happily awarded it."

Huntington was by now living satisfied. He knew the old adage that to live unsatisfied with self was cowardice. Being the first real and proved Listerian disciple in the West, he had no hesitancy speaking plainly of his results obtained through asepsis and antiseptics. The Sacramento railroad hospital had given opportunity, through Listerism, to salvage life and prevent human suffering. By 1897 he had performed over two hundred hernia operations, "with but two relapses"; four pyloric stenoses by September, 1890; and during the period (1885 to 1899) he did much of his best work, and "some of us," said Dr. Emmet Rixford, "as medical students, remember hearing of a surgeon in Sacramento who removed an inflated appendix on the diagnosis of appendicitis. This was the first operation for appendicitis done in California. It was about 1890, at a time when in our medical curriculum the word 'appendicitis' was not once heard." This "first operation for appendicitis" was an interval appendectomy, performed at the Southern Pacific Company's Hospital, Sacramento, August 20, 1891.

While abstracting surgical literature for Dr. James H. Parkinson's OCCIDENTAL MEDICAL TIMES, which Dr. Huntington did for several years, he studied and submitted Reginald Fitz's important paper of August, 1885, on "Perforating Inflammation of the Vermiform Appendix"; Frederick Treve's

elaborate writings on the surgical anatomy of the appendix vermiformis, 1885; R. F. Wier's article on laparotomy for perforation of the appendix, 1887; and Dr. Charles McBurney's description of McBurney's point, in 1889. Through the study of these articles, and others too, Huntington reflected over the loss of cases dying from "Intestinal Inflammation." He concluded such cases were surgical problems and thenceforth determined to treat them accordingly. His first adventure in this surgical field was, as previously related (a railroad brakeman) operated at the S.P.R.R. Hospital.

Primarily Huntington directed his inquiries toward the prevention of wound infection. By now Listerism had created for him a new thing of surgery by disclosing the principle that was for all time to govern wound treatment. He gave it tireless effort and eternal vigilance. Herniotomy, appendectomy, use of the Murphy button, tenorrhaphy (union of divided tendons by suture), and many other minor and major surgical operations followed in the wake of his having become a convert to a theory of the "Lister ritual." Its practicality lent new inspiration to surgery. It was a marked shift from that too recent day when the surgeon operated in his ordinary clothes, perhaps in collar and cuffs, and often in a frock coat.

Tuberculous spine and tuberculous affections of the hip, knee, and ankle joints too regularly were presenting themselves for care at the C.P.R.R. Hospital in Sacramento. Such affections ran a chronic course, and little was then known regarding their effective treatment. Tubercular disease could appear in any part of the body, and its possible distribution, after being introduced into the system, was guided by no law. Huntington, however, was interested especially in those constant or recurring, intermittent purulent draining joints for which there was as yet no apparent satisfactory therapy. A proper diagnosis was being made, but the then great problem was how such chronic affections were to be coped with. His report on psoas abscess in 1891 revealed an enlightening progress, and before the year was out he gave a paper on "Tuberculous Affections of the Knee and Ankle Joints."

In the beginning of the nineteenth century, auscultation and percussion first were used in physical examinations, but not until near the end of the century did the X-ray appear as a diagnostic medium. Koch made his discoveries known in 1882, the year Dr. Huntington arrived in Sacramento as Assistant Surgeon at the C.P.R.R. Hospital. 1882 was the beginning of nearly a decade of renaissance for the Hospital, with Huntington the restless spirit. It meant progress, and in the wake of this came surgical pronouncements which resulted in the reputation the Hospital and surgeon came to enjoy.

Huntington kept abreast of advancements in surgical science and art; usually, too, abstracts from everything read were made. He was a note

taker; his scrap books accentuate this so-important trait. R. T. H. Laennec's writings on the curability of phthisis were noted; Kochs' discoveries and recordings were followed; and the adaptability of Roentgen rays to the diagnosis of many surgical lesions was made use of. In his general practice — specialties were just beginning to enter the practice — he too was experiencing those tubercular cases with a sudden hemoptysis, and, as so commonly resulted, "a long lingering progress to the grave." With a mind scientifically and surgically adapted, Huntington was given, by the Central Pacific Railroad Hospital, a desirable base where he was afforded opportunity to study what he thought to be a relationship between tuberculosis and the so-called strumous and scrofulus joint affections, then too often seen. Huntington advised, and carried out, immediate radical measures. His experience taught him rest therapy in itself was generally without favorable progress. An extensive arthrectomy was his preference, his theory being that this radical surgical method was more effective than the simpler one of immobilization of joints through use of splints and casts. He continued to observe, record, and publish. The published statements brought letters of inquiry, of criticism, of laudation. He gave no heed to critics. "Curiously enough," he later stated, "I have rarely **failed** to demonstrate tubercle bacillus from osseous and joint tuberculosis."

The Doctor was ever obedient and observing in surgical technique as well as surgical after-treatment. His beliefs were employed to an unbelievable minuteness, and his assistants were held to a like exactness. This tall, slender, erect practitioner gave an appearance of being cold and austere, especially when he arched his heavy eyebrows, a favorite habit of his. There was warmth and courtesy in this surgeon, though his stern and dignified countenance often revealed conclusiveness and portrayed great determination.

Huntington's surgical accomplishments brought him favorable attention from doctors throughout the West, nationally too. His workshop, the C.P.R.R. Hospital, was the associate and companion used to prove his formulae as well as to meet the challenge from a minority group within his medical society. Some of these challenged with sincerity, while others criticized without justification. There were those who were possibly jealous of this scientific and well organized mind — this zealous, versatile, and ever self-confident student. Perhaps, and understandably, they were resentful even of his superior educational background — for that day — and of his infinite wisdom and logic that could belong only to one destined to lead, not alone in his profession but in the community as well.

Huntington was blessed with a faculty both for writing and extemporaneous speaking. He was comprehensive, concise, and factually correct in the story he had to tell, and his facts and statistics were presented in such an interesting and positive way that his audience would hold and

listen. His excellent diction and outstanding ability to express his profound thoughts with clarity and without effort were instrumental in giving great impetus to western surgical advancement. His capacity as an essayist also played an important part in explaining his work at the railroad hospital and in bringing, to the profession, understanding of its then disturbing problems.

Typhoid fever and malaria were prevalent diseases and, naturally, the Hospital gave refuge and attention to many, many cases. What a tragedy the hospital records were not preserved! We do know that the typhoid fever cases were treated with the Leiter coil — using a cap and abdominal pad —, and at times the cold tubbing was popular with some. The cases were fed mostly on a milk and lime water diet, and calomel, salol, and phenacetin were prescribed. The ice for the hospital was cut from Cold Creek Lake in the Sierra Nevada Mountains and was packed in sawdust in an ice house for storage. Ice blocks were shipped in this manner to the Hospital. When the ice was in transit there was some melting, and with this melting, sawdust was frozen into deeper layers of the ice. As the ice melted in the Leiter coil, the sawdust would often block the coil. Constant vigilance by an attendant was required to avoid this complication and thus assure proper results from the coil. Today the Leiter coil, ice water baths, and typhoid fever have virtually vanished, as have malaria and its carrier, through a clarification of the then unknown, and the adoption of sanitation.

A study of discussions within the Sacramento Society for Medical Improvement throughout this period reveals how direct was the thinking of a few of its members regarding both typhoid fever and malaria. Those few had a taste for public health problems. One or two held views approximating the relation of typhoid bacillus to the disease, and hinted at the intermediary host in the transmission of malaria. There was, at that early period, a superior coordination and harmony among the railroad and other local hospitals, their medical practitioners, the Sacramento Society for Medical Improvement, and the Sacramento Board of Health. Their energy pioneered organized health legislation in California. Sacramento's Board of Health, through the energy of Thomas M. Logan, was the second board of health formed in the United States, but three months after the first was formed. A year earlier the City Council had refused Logan's plea for such an association in Sacramento.

The General Hospital Department of the Central Pacific Railroad was first established in Sacramento (1867) in a temporary structure. In 1869 its new three-story hospital was completed and occupied. For that era and locale, it was a huge hospital structure, and the building was afforded a beautiful setting, with grounds landscaped in grace and symmetry. Its doors were opened before the adoption of Listerism; there were no laboratory facilities; and the Roentgen-ray did not make its appearance for an-

other five years; however, the hospital had a large drug department and well-packed storerooms. The year 1869 was a period when physicians too generally gave therapy the greater interest and too little attention was shown to fundamental pathological facts. Nonetheless, this frailty is excusable when one considers the fact that nearly twenty years later Pasteur's work on rabies was being attacked in the Paris Academy, and Koch was meeting a volume of opposition. Osler, in 1887, told of such protests in Germany and France and also of a remnant in this country who opposed the germ theory. He stated that "the younger generation of workers, to a man, have stained fingers," a fact that caused him to be optimistic for the future.

The new railroad hospital in Sacramento became "the talk of the town," and was admired by the company executives and the employees alike. All took pride explaining that their establishment was a world's first: the first hospital ever built for the exclusive use by railroad employees. Health was a principle to which all these citizens were loyal and faithful. Their past experience had taught that health was the most important essential to happiness, for epidemics, floods, and fires had taken their toll.

This western railroad hospital system and the local medical society were vitalized within months of each other, the former in 1867 and the latter in March, 1868. The second Chief Surgeon, Dr. Nixon, of the railroad hospital (one of the founding fathers of the Sacramento Society for Medical Improvement) and his successor, Dr. Huntington, were valued members and used the society as a forum to expound, interpret, and promote the advanced and orderly medical ideas just then being propounded within a railroad hospital workshop. Hospital records of that early institution have long since been dissipated, though the Minutes of the medical society are full, informative, and reveal that the members were not romanticists — rather that they were seekers after wisdom and looked and grasped for anything in the way of medical discovery or advancement. They gave stubborn and critical consideration to every medical claim confronting them — this, though, with sincere optimism for scientific improvement. The medical society was composed of progressive gentlemen; individuals aiming to impartially and philosophically review, evaluate, and study any scientific claim reported in the national and international medical and surgical journals.

The INDEX MEDICUS, monthly index of the world's medical literature, afforded them a good bibliography, and several of the doctors had excellent private libraries. The private library was a requisite for the student doctor in those earlier days; there were no public or society medical public libraries to which a physician might turn. Some students of the profession were liberal spenders for medical magazines and books, both national and international. Medical discussions and essay presentations then were more

generally and regularly participated in than today, for such participation was a requisite to membership. The medical society was a local forum of medical thinking, and for a time the Sacramento Society for Medical Improvement was the single society medical group in the western empire. The Society came into existence at a time of dire need. It was the local center for medical thinking and medical progress, and held its members to a stricter and sterner medical code as well as more rigorous social and ethical standards.

The Hospital, of course, existed primarily to serve railroad employees; however, its accomplishments and progress as a hospital were secondary to the performance of its chief surgeons. The progressive Society group of practitioners explored and studied new medical techniques and made great strides in the field, through remarkable self-urge, will to study, and hearty enthusiasm for research. Their capability of grasping, orienting, and developing new knowledge was outstanding and could only serve to promote higher ideals in the art — in any art. It was not through following **Jewett's Introductions** (Dialogues of Plato) that Dr. Huntington brought special attention and acclaim to the C.P.R.R. Hospital; however, everyone would do well to read and reread Jewett's remarks for guidance and inspiration — even warning.

The want of energy is one of the main reasons why so few persons continue to improve in later years. They "never try an experiment" or look up a point of interest for themselves; they make no sacrifice for the sake of knowledge; their minds, like their bodies, at a certain age become fixed. Genius has been defined as "the power of taking pains"; but hardly anyone keeps up his interest in knowledge throughout a whole life. The troubles of a family, the business of making money, the demands of a profession destroy the elasticity of the mind. The waxen tablet of the memory, which was once capable of receiving "true thoughts and clear impressions," becomes hard and crowded; there is no room for the accumulations of a long life. The student, as years advance, makes an exchange of knowledge than adds to his store.

After more than twenty years of gratefully received service to sick and injured, the new Central Pacific Railroad Hospital of 1869 came to be looked upon as obsolete. When San Francisco replaced Sacramento as general headquarters for the railroad company, the future railroad hospital center, quite naturally, would follow general headquarters. To build a new hospital in Sacramento, even to consider a costly rehabilitation program for the old institution, was unjustified.. By now the old hospital was irreparably **passé**. The Crocker Home, 13th and F Streets, Sacramento, was presented by the Crocker family to the Southern Pacific Company for conversion into General Hospital usage. It was a temporary arrangement,

an arrangement made before the Division point was extended to Oakland and before San Francisco became general headquarters, though in full knowledge that before long San Francisco would become headquarters for all major departments.

In 1869 the Central Pacific Railroad Company owned a line from Sacramento to Ogden only, and its employees numbered about 5,000. This included construction workers as well as the operational force, Chinese excluded. In 1889 the Pacific system of the Company (in 1887 the title Southern Pacific Railroad was taken) extended from El Paso, in the south, to Portland, Oregon, in the north, and from San Francisco, in the west, to Ogden, Utah, in the east, while branch lines and feeders extended in every direction. The employees working these railroads and paying hospital dues had jumped to 13,000. This increase in branch lines, shops, roundhouses, wood sheds, and such, multiplied the sources of injury. In consequence, the medical system was of necessity greatly extended, to the point that the hospital fund barely met obligations. Local surgeons along the line of the various roads had increased to fifty-five. Their duties were to render medical and surgical aid to any person injured or sick, whether employed or being transported by the Company. When the amount of practice warranted, surgeons were paid a salary by the Company; others saw few patients and were granted pass privileges.

At the turn of the 1890's the Company conducted no hospital except that at Sacramento, though arrangements had been made with non-company institutions in San Francisco, Oakland, Los Angeles, Tucson, and Portland for admitting and treating employees at those points. Medicines furnished by druggists or medical attendants were paid for from the hospital fund. On October 1, 1888, Dr. F. J. Huse was appointed Superintendent of the Hospital Department at Sacramento. Soon after his appointment Dr. Wm. Ellery Briggs became the Southern Pacific Hospital Department's first oculist.

When the hospital service was established for Oakland and vicinity, the Fabiola Hospital was used for emergency cases and any other type of case needing hospital attention. Dr. J. J. Meigs and Dr. Theodore Olmsted were the first railroad surgeons in the Oakland area.

By 1897, through the labor of boards of health, the general mortality rate had fallen to half its former figure; even in a decade the rate in such cities as Berlin, New York, and New Orleans had declined from twenty to thirty per cent. The great epidemics that formerly ravaged were losing their terrors because of a knowledge of their character and the exercise of efficient quarantine. The principle of serum therapy in diphtheria had been established, and it was gaining favor in other directions: in hydrophobia, tetanus, cholera, pneumonia, and typhoid fever. The serum test

(Widal) for early diagnosis of typhoid fever was a most important discovery. Up to then the physician was dependent on Wuenderlich's clinical work on the "Thermometer," performed thirty years previously, wherein he showed temperature curves unmistakably proved the presence of typhoid fever.

Chief Surgeon Thos. W. Huntington, as Chairman of the California State Medical Society's Surgical Section for 1897, told of the surgical progress over the former decade. He stated that anaesthesia (1846) — term coined by Oliver Wendell Holmes — "broadened the horizon a thousand fold." The dream of the anaesthetist, however, did not become a reality until asepticism was adopted, a principle that opened the field for safer surgery. This, then, had been the situation in 1887. With the passing of this decade, wound infection was no longer a dire threat, and a new era in medical achievement was on its way.

From out of the decades of wound infection, Listerism guided her earlier partisans into a golden era of surgical accomplishment. One refinement began succeeding another. Huntington began substituting sterilized catgut for silk in buried sutures and ligatures and thus assured rapid and permanent closure of wounds. Catgut afforded a plan whereby the various tissue layers might be united through the tier method and thereby reestablish normal tissue relation and insure a firm cicatrix.

It was in this period that sterilized normal saline solution was first injected into the veins or beneath the skin into the cellular tissues for shock and blood loss, to sustain the cardiac action during periods of profuse exhaustion.

Dr. Huntington was versatile. He spoke from experience acquired through the performance of several years of research work and judgment gained through cautious though progressive practical application of surgical principles at the Southern Pacific General Hospital in Sacramento. Huntington was one of the medical profession's originals in the West, a bearer of the torch for antisepticism and asepticism — an advancement he continued to urge both verbally and in writing upon contemporaries. He hoped to have them take advantage of such enlightening achievements, and thereby help those patients needing surgical attention. He took caution and proceeded without misgivings; he kept anticipation alive through feeding it by spoken word and essay; he had the ability to follow the apparent, to pursue the unknown.

In 1898 the Southern Pacific Railroad Company resolved to move its General Hospital from Sacramento to San Francisco and to erect a new, up-to-date institution, an establishment that would meet the Department's needs for many years. The move was practical and it was inevitable the General Hospital should follow the Company's general headquarters to California's metropolitan center.

Since 1867 the Central Pacific-Southern Pacific General Hospital at Sacramento had well served its purpose — for employees and medical science. Its chief surgeons were chosen because of special characteristics. Dr. S. P. Thomas, first Chief Surgeon, did not seem to be a disciple of the medical sages. He belonged to the practical rather than to the progressive medical science, a science on the threshold of a period of scientific discoveries and progress. Dr. A. B. Nixon, Thomas' successor, crossed the plains in 1849 and again in 1852, thereby revealing a background of rugged determination. As man, physician, and Chief Surgeon he gave high attention to both medical and social interests. He always tried to protect the public from quackery and unsound medical practices. He was recognized by his followers as an able surgeon. Nixon's extra-medical interests were local, state, and national, to which he gave lifelong attention. As President of the California State Medical Society, it was he who cast the deciding vote admitting women to the State Society.

Dr. Nixon was admired by both the profession and the public. He gave diligent and careful attention to his patients in and out of the railway hospital and laid down the railway hospital cares only because of a failing health. The Doctor's social force and influence appear to have been superior; yet, he did not lean toward being a scientific observer, recorder, and publisher, although the essays he presented to the medical society and to the State Society were well constructed and well written from a practical standpoint. His writings revealed a reasoned judgment. As Chief Surgeon he gave solidity and a substantial base to the beginning of a new medical era.

Dr. Thos. W. Huntington left the Harvard Medical School in 1876, a time when President Charles Eliot was in the process of making sweeping changes in the medical school matriculation requirements and teaching methods for doctor training. A regrettable laxness throughout the states was generally recognized. The training was acknowledged an imperfect system; few, if any, medical schools were university supported. Dr. James F. Montgomery, Sacramento, Chairman for the Committee on Medical Education, of the California State Medical Society, 1876, was well aware of the plight and appealed to the medical profession to stop merely observing and discussing this lack of proper standards for medical education and to take action for improving the system.

Huntington came west by chance, as a medical replacement for an uncle then practicing in the county seat and railroad center at Elko, Nevada. When Huntington removed his coat, to begin what was to be an unfading surgical career, one can but conjecture as to his visions, dreams, and hopes. We know, though, there was great curiosity, boundless youthful energy, and a never-faltering confidence in self. Too, as is so typical of every young graduate in medicine, Huntington carried with him to the West an

adoration, tenderness, and respect for his medical school professors. Their memory was now a daily joy, and scarcely a day passed that he did not wonder how Oliver Wendell Holmes, Bowditch, Sr., J. Collins Warren, Henry J. Bigelow, John Homans, David Wm. Cheever, J. B. S. Jackson, and Reginald H. Fitz would approach a particular case he had under consideration and what their treatment would be. In any event his professors' teachings and philosophy were imitated — his constant source of wisdom. Their printed articles and their letters were of great value to him in his scientific pursuits.

Oliver Wendell Holmes was a veteran Huntington loved. He was also an admirer of Cheever, whose radical cure of herniae undoubtedly influenced Huntington, to the point that later in his career, after he had performed two hundred herniotomies at the Southern Pacific General Hospital, Huntington turned to Cheever's findings and his own results for the compilation of a most successful historical paper on the cure and treatment of herniae. He carefully studied pathologist Fitz's classical paper, printed in 1887, on perforated appendicitis, where was explained those cases dying from inflammation of the intestines. Fitz had gained this knowledge of coecal and appendiceal inflammation as a pathologist rather than as a clinician. A few began to realize that more and more, even if perhaps too slowly, pathology was coming to constitute the scientific basis of clinical medicine.

Huntington's training for professional life antedated the general adoption of Listerism. Through the teaching of Jackson and Fitz he had received a beginner's glimpse into physiology and pathology, though in his earlier railway hospital life, surgery and laboratory pathological study was not done in conjunction with the operation. Nonetheless, Dr. Huntington was a devout student of all medical literature of the era, became editor of surgical literature for the OCCIDENTAL MEDICAL TIMES (formerly the SACRAMENTO MEDICAL TIMES), and kept up a continued letter contact with former school confreres — especially those who were making progress —, and, too, with many prominent national and international surgeons. He was a follower of the progressive and outstanding and showed little tolerance for the unambitious and the ordinary.

Near the turn of the century the West had entered its great progressive span. Western industrialism was rapidly spreading, not unlike an infectious disease. John C. Fremont had earlier told Eastern readers of the West's fertile acres — in California, in Oregon —, and as a consequence restless spirits began seeking this region of new destiny. "The Big Four," in the '60's, conjured that when their transcontinental railroad became active hundreds of new towns and thousands of cultivated acres would be dependent neighbors on their many, many miles of trackage.

It was a western land that President James K. Polk's war broke open to those with an adventurous nature-spirit. It was a day when farm life was in the ascendancy, and settlers were traveling toward a potentially rich wilderness — toward this nation's last frontier.

By midyear 1899, the Southern Pacific Company's railway construction work was delayed because of inability to get laborers. The Santa Fe Railroad was paying Japanese laborers \$1.10 a day and was constantly increasing the number of such employees. The Southern Pacific Company increased its stock from \$150,000,000 to \$200,000,000, pending the reorganization of the Central Pacific Company and its consolidation with the Southern Pacific Company.

It was 1842 before any railroad was opened in America: from Boston to the Hudson, and from the Hudson to Albany to Lake Erie at Buffalo. Up to 1848 railroad progress throughout the nation had been slow and unpromising. As soon as California was annexed, the discovery of gold deposits of inspiring richness created great excitement. The first movement in railroad construction can be registered from the time of that discovery. From 1849 to 1857, 17,138 miles of railway were constructed throughout the country. Then came the great commercial rebound, which, commencing in the United States, swept around the world. The continued construction of railroads to all important portions of this country gave high commercial value to its products. By December 31, 1898, the length of our railroads had reached 186,809 miles, not counting siding, trunk lines, spur trackage, switches, et cetera. Labor everywhere was then enabled to reap a remunerative return, even in the midst of the great depression that prevailed.

The New Year of 1899 began with the opening of this country's Oriental possessions. On the borders of the Orient were several regions destined to radically change American commerce, and particularly was this true of California trade. The whaling at Guam had fallen off, though already the Island was slated to be a coaling station because of the location of its principal harbor.

At the time, railroads were being accused by some of the public of being a monopoly, guilty of exacting high rates that were based on inflated indebtedness and greed. At the beginning of 1899, San Francisco's Mayor, James D. Phelan, regarded Admiral Dewey's achievement a cause for San Francisco to once again look to the sea, which, prior to the railroads, had been the great highway of commerce. Phelan spoke out on the "Pacific opportunity" and declared it must be heeded. Commercial trade with Alaska, Hawaii, and the Philippines; the dismemberment of China and the establishment of the "open door" policy; the awakening of Japan; the construction of the Siberian railroad; and the Nicaragua Canal, prompted his belief that the city was granted a certain future, that San Francisco

would then have to prepare for its manifest destiny, and that its development and trade would of necessity go hand in hand.

Sacramento ceased to be the hub of medical operations for the Southern Pacific Company once the General Hospital was removed to San Francisco. Time was necessary, however, before all preparations could be made and the structure for the new General Hospital, at 14th and Mission Streets, completed. Costing initially \$114,284.00, the new structure was better, larger, and, in addition to its hospital facilities, there were three separate and complete buildings (to the rear of the hospital on line with Woodward Gardens) to house nurses, internes, and the general help.

Here, on the 25th day of May, 1899, the first patients were admitted to this new hospital; received in a building thoughtfully planned and thoroughly equipped with every modern improvement then known to the medical world. It was certainly the finest establishment the Southern Pacific Company had conceived during its thirty-two years of care of sick and injured.

The old railroad hospital at Sacramento, truly proud of her past accomplishments, gave way to this new Mission Street establishment. With this transition all major components of the broadening and extending railroad system were close to its central headquarters, in the California metropolitan city. However, it was only natural that after thirty-two years of effort toward medical enlightenment there should have been created a tender and motherlike adoration for the **Old Structure**. Reflection on her accomplishment of having afforded thousands of hospital days to the Central Pacific-Southern Pacific Company's sick and injured gave solace and gratification. Few, today, can conceive of her trials throughout her pre-antiseptic era! — before the knowledge of the work of Pasteur and Lister, and before there was a proper realization of microbes. In the first days of the **Old Structure**, when surgeons too commonly operated in their street attire, with not the least concept for instrument, sponge, and towel cleanliness, the hands more often were washed after rather than before surgery. Nationally and internationally all hospitals up to nearly two decades of the twentieth century were little more than hotels.

A review of the study of the Company's hospital and her doctors discloses an intelligent professional and hospital care, dating back to its inception. This conclusion is arrived at by considering the standards of the day, the generation, and its contemporaries — the only equitable balance wheel. How might the Chief Surgeons of the Central Pacific-Southern Pacific Railroads from 1867 to 1900 be evaluated? How can one today assess men of an era when both medicine and hospitalization were so much "on the move"? The Hospital, the Society for Medical Improvement, and the Hospital's surgeons made California medical history — each in a particular way; but, most important, all contributed to the progress of medicine as a whole. The original Southern Pacific Hospital at Sacramento and its doctors were

benefited through the medium of a local medical society — both the hospital and the medical society having come into being within a few months of each other. For more than thirty years the Society for Medical Improvement and the Chief Surgeons together followed national and international progress in medicine, hospitals, and in hospitalization; and the problems were generously discussed in open forum. As a result the Society became the Chief Surgeons' keep-abreast-with-medicine center. The sick and injured of this railroad system reaped a very material benefit therefrom.

Too little is known of the first Chief Surgeon, S. P. Thomas, to grant a fair judgment of his capabilities and any, if any, legacy he left after nearly two years of his medical and hospital railroad experiences. The minutes of the local medical society, of which he became a member in 1868, show that the Doctor tendered his resignation March 30, 1869. The letter expressed his reasons, though they were never recorded; neither was his resignation then accepted. However, the records reveal that he was at a later date dismissed from membership for non-attendance and non-participation. Attendance and essay participation were primary requisites, and seemingly Dr. Thomas' personal characteristics were not attuned with his society membership, and in consequence he apparently gave no attention toward deriving benefits from that association.

Thomas, Massachusetts born, was a graduate from Harvard University, 1846, and it was in that year, at the Massachusetts General Hospital, that ether was first used. He came to know Dr. John Collins Warren, professor of anatomy and surgery, who, with Dr. Joseph Bigelow and Dr. Enoch Hale, had formed a society for medical improvement, a title his western society copied.

It would appear Dr. Thomas lacked the essential qualities, when his great opportunity presented itself, to grow into a full mastery of his God-given potentials. However, he had a resourceful mind and though, if indeed it was not one given to research there seemed no challenge of his care of the sick and injured in the railroad hospital. Dr. Thomas, the first Chief Surgeon, passed away January 11, 1878.

The second selection to head the hospital staff for the fast extending Central Pacific Railroad System, Alexander Butler Nixon, was Ohio born and of English, Irish, and Welch parentage. Nixon graduated from the Ohio Medical College at Cincinnati in 1846. At this time the population of California was about two hundred thousand Indians, six thousand Mexicans, and perhaps two hundred Americans. War against Mexico had been declared in May, 1846; in 1848 California and New Mexico were ceded to the United States; and on January 24, 1848, gold was taken from a mill-race at Coloma, California. New life to trade and industry was almost immediate — everywhere. It was at this time that the city of Sacramento became the West's mining center, the hub of a great El Dorado and the center

of activity for all those interested in mining and those traveling to and from the mines. Too, this youthful city became the medical center of a new West.

There was a great influx of gold seekers to this dawning, fruitful land. Sacramento City extended her greetings, outfitted those adventurers for their invasion of many mountain streams, blessed them as they left, continued to serve them after they had arrived, and again greeted them on their return from the "diggings."

Slowly, gradually, the Federal Government comprehended the importance of fulfilling obligations to this territory, which had suddenly stretched to the shores of the Pacific Ocean. The primary get-rich-quick-and-return-home philosophy of tenderfoot miners was hastily dismissed, and within a few years a mixture of thousands from the world over remained to form and stabilize a western empire. Opportunity beckoned; requisitioned the young, the healthy, the courageous; nature and disease granted no charity toward those physically or mentally weak.

How very natural that Alexander Butler Nixon, recent graduate in medicine, should accept the challenge of this new West. He made the overland trek in 1849 and played an important role in the evolution of organized medicine in California. He was from the first a leader in this endeavor, continued as such for over thirty-six years, and in 1856 took an active part even in the organization of the Republican party. During his sixteen years as Chief Surgeon of the C.P.R.R. Hospital, he labored long and tirelessly and was a medical progressive, who refused to accept many of the old dogmas of medicine.

Nixon confined his medical essays to a practical trend, but even though to him medicine was a craft, here and there in his writing one could discover modern, scientific light. A few of his medical society associates were medico-historians, whose influence afforded him a rendezvous with humanism, a so important element in American medicine. This humanitarian, astute in sociology, shrewd and clear of mind, and blessed with a skilled, though cautious, hand for traumatic surgery, was granted sixteen years' tenure as Chief Surgeon for the C.P.R.R. The Nixon era was before the relationship between bacteria and suppuration was fully appreciated, and Listerism was being both challenged and supported toward the end of his period of service with the Hospital. Surgery was confined almost exclusively to traumatic cases, though the Railroad Hospital was fast coming to terms with progress and was about to enter into a period of surgical **renaissance**, with Dr. Huntington as the moving spirit.

There seems no doubt that a promise of superseding Dr. A. B. Nixon as Chief Surgeon of the Central Pacific Railroad brought Dr. Thos. W. Huntington in 1882 from the Nevada desert to the General Hospital in Sacramento. In 1885, Huntington became Chief Surgeon. From the moment of

his arrival the railroad hospital acknowledged a new era in medicine. While performing his duties in the small emergency hospital in Elko, Nevada, Huntington developed a desire to devote more time to general surgery; his talents led him in that direction. He was happy to have this innate guide to his life's ambition. He gave of body, mind, and soul to the study and care of those emergency surgical cases that daily presented themselves at the station hospital. Young Huntington was especially appalled by the secondary infections, the so-called "laudable pus." As Lister had used the bacteriological discoveries of Pasteur and Koch to adopt them to surgery — soon to be spoken of as "Listerism" — so Huntington began to reflect over the one or two Harvard lectures he had received prior to graduation — lectures his professors borrowed from Lister and Lister's recent work at Edinburgh.

Within the confines of a small surgical room at the Elko Emergency Hospital, Huntington had an opportunity to experiment and conduct research on Lister's theories. The results of his efforts there in the field of asepsis and antiseptics were important, so successful and gratifying, that the theory was carried with him to the General Hospital at Sacramento. The gradual acceptance of the antiseptic method of dealing with open wounds brought with it both hope and encouragement and increased the area of scientific accomplishment that up to that time had been limited by the seemingly eternal incidence of secondary infections. How fortunate, for the patient as well as practitioner, that Dr. Huntington and, ultimately, his disciples, became staunch supporters of this theory that might be said to have revolutionized the field of surgery.

This General Hospital was the focal point for Huntington's greatest observations and accomplishments in research; both the local and State medical societies served as centers from which he was to disseminate information about his experiences on aseptic and antiseptic surgery and the conversion of serious risks into those of relative safety. His perceptions, impressions, and results marked him a leader in western major surgery. A few historians have claimed for others the first use in the West of Lister principles; however, those mentioned might be said to have only dabbled. Huntington was indisputably the first disciple of Listerism in the West.

It must be admitted that medicine can attribute its greatest progress to those who had courage to experiment with boldness and without fear. Bacteriological training in 1881, even the cultivation of organisms, was little known, and few were giving it attention. On February 20, 1883, Huntington's excellent paper on "Antiseptic Surgery" was the first notification of the dawn of a most important period for western surgery. It was the beginning of Huntington's awakening of confreres to a new learning through adaptation of Listerism to surgery.

Dr. Huntington, primarily through his father's insistence and influence,

was first graduated from the University of Vermont and then Harvard Medical School. Huntington's study of pathology, physiology, and histology at Harvard, though meager, left a positive impression on him and helped establish the background that was to play such an important part in his eventual pursuit of a medical career. This was the era when America was stretching and flexing her muscles; when her industrial framework was becoming larger and more impressive. It was a busy era, when her men reveled in an active and changing life. Doctors, too, seemed to prefer the accelerated pace, to the point of avoiding laboratory careers; few, it was said, were "going for the bacteria."

Dr. Huntington continued to follow the Lister trail — to explore, to record, and to give detailed accounts of the valuable experiences gained by him at a larger clinic of a general railroad hospital. He found the trail rich in surgical results, and the gratifying relief of pain, and immunity from danger through adherence to the antiseptic and aseptic principles. Huntington held strong attachments, and although he faced non-agreement among a majority of those in his profession, he was not disturbed at all, for he leaned on the security of excellent results. He was adamant in his stance that surgeons no longer could pursue a middle course; that strict adherence to proved scientific and medical principles was the only sound basis for successfully giving medical service to mankind.

Huntington played an important role in furthering medical education and became the western force for the betterment of medical and surgical procedures. He was soon recognized as an authority on abdominal surgery, which then (1884) was still in its infancy. His recommendation for use of catgut rather than silk for sutures, and his suggestions on the proper drainage of a closed wound or suppurating cavity, were among the "first's" for discussion with his medical group. It was he, too, who first gave statistics to point out the challenging and impressive reduction, through the application of Listerism, in fatalities from amputation and compound fractures. Huntington, the student and leader of western medicine, never ceased to be grateful to the one who emerged with that revolutionary concept in wound treatment. He was beholden also to the railroad hospital clinic, whose wards, with their varied surgical and accident cases, invited the application of his outstanding knowledge and skill. It was not hard to understand that Huntington's admission to the Hospital was the beginning of a progressive friendship with surgery, and although, to that time, he had always classified himself as "physician and surgeon," it was surgery he courted and to which he was to give almost exclusive attention for the remainder of his life.

In five years he was Chairman of the Committee on Surgery of the State Medical Society and gave, as his chairman address, "The Disasters of Surgery." That production was his experience put into words. It was

filled with merit; and its diction, impersonality, and objectivity personified the efforts of this cold, calculating, military-like surgeon of the first railroad medical center. Those who listened to Dr. Huntington commonly used phrases of the day: that "he was up," that is, he knew his subject. "Failure to guard against wound infection," he said, "must subject the operator to humiliation and an arraignment before the bar of conscience."

Huntington was an excellent as well as a prolific writer and an able extemporaneous speaker — a calm, courageous, inspiring, and statuesque-like individual, who was quite capable of turning on and off a glow of warmth or leaving a draft of ill-humor. A man of discernment and of good judgment, this exceptional student revealed courage both of spirit and of body. He was quick to provoke discussion and was capable of decision in defending his evaluations.

Ten years after the presentation of Huntington's first paper, "Antiseptic Surgery," before the Sacramento Society for Medical Improvement, he reviewed, for the surgical section of the State Medical Society, the surgical achievements over those ten years, pointing out the great strides that had been made through the tireless exploratory efforts of those select few who pursued research, who aimed toward — and established — higher standards, and who assumed greater responsibility in the field. It must have been gratifying to Huntington to realize the inspiration and accomplishments that flowed from his extensive labors and outstanding leadership.

It was in 1898-9 that the consumptive patient was followed to his home and that the investigation of his living conditions began. Huntington had kept abreast of all this preliminary work, because he was shocked by the increasing incidence of the disease, presenting itself in every stage, and in multiple organs. It was estimated that at least a million persons in America were suffering with consumption and that at least 150,000 were dying annually from this "white plague." As early as 1890 Huntington had been encouraged to persist in the operative measures of the treatment for psoas abscess.

Dr. Huntington possessed the power, as Clifford Albutt once said, of "inseminating other minds." He was a diligent observer, a constant traveler toward the surgical unknown. In his essays and discussions he was capable of separating the effectual from the ineffectual and forbidden. He was a fountain of inspiration. Because of his professional and literary prowess, he was invited, in 1899, to become Professor of Clinical Surgery at the University of California Medical School, San Francisco.

From his workshop in Sacramento (at the Southern Pacific General Hospital) Huntington had advanced to fame and had become perhaps the most outstanding general surgeon in the West. The old hospital was reluctant to loosen its hold on this young surgeon, the surgical clinician it

had companioned for seventeen years; yet took pride in the fine surgical stature he had attained. It joined the medical society in claiming some credit for the success of this great man, who, in the words of Sir Thomas Brown, had "mingled the waters of science with the oil of faith." Even after separation, Huntington and the Hospital both realized that their major accomplishments had been conceived, given birth and reared to an unusual eminence in the confine of the old mining center city beside the Sacramento River. The mutual affection never lessened, and both were quietly proud for having left to their former companionable City the residue of a fine inheritance. The one — the hospital — wore out and disintegrated; the other — the surgeon — continued to enjoy bright rays of accomplishment, continued to read and write much, but, too, traveled life's trail enjoying warm friendships and the social activity of his club life. At journey's end there was satisfaction in having lived the good hours, of having kept pace and proper cadence.

When the Big Moment beckoned Dr. Huntington, a gracious compliance was shown, and the wish to make final settlement in his City of Opportunity was granted. There, the Spirit has continued to relive the old Central Pacific-Southern Pacific Hospital era, has enjoyed warm expressions and reflections, the currents and cross-currents of fellows of his early society for medical improvement; and there in rest he has been free of that "dyspepsia" which seems forever present among actively responsible practitioners of medicine. Now the Spirit rather accepted "potluck" and relished comparing notes with former confreres and friends at Sacramento's Sutter Club. It was Peace to again live afresh, and rest anew. He had met life with the deftness of a skilled mariner. He was now back again with the **Old Structure**, and together they seemed to exemplify the thought so beautifully expressed by Kipling:

"Ships sail east,
Ships sail west —
With the self-same winds that blow —
It is not the gales
It's the set of the sails
That determines the way ships go."