MEDICAL EXHIBITS

At A Century of Progress
International Exposition

Chicago, June 1 - November 1, 1933

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The Chicago world's fair opens at 10 o'clock on the morning of June 1. The Hall of Science, dedicated last June, has 9 acres of space in which exhibits of physics, chemistry, biology, mathematics, geology and medicine—both scientific and industrial—are displayed. The medical sciences occupy 29,600 square feet of floor space net, and the industrial section occupies 35,000 square feet.

This is the first time in the history of international expositions in America that organized medicine, dentistry and pharmacy have presented to the public the story of their contributions to the progress of civilization.


The objectives of the exhibits on health education by the visual and auditory methods are: (1) to compare health conditions of a hundred years ago with those of today; (2) to instruct the public in the intricacy of the living human machine and to give warning not to meddle with it by dangerous self medication; (3) to interest the layman in the scientific story behind the physician's services and opinions regarding health and sickness; (4) to show that compassion for suffering humanity and not commercialism ruled the lives of the great discoverers and practitioners of medicine.

THE FOREIGN EXHIBITS OF MEDICAL SCIENCE

The name of the contact official only is mentioned after each institution.

England.—The Wellcome Research Institution of London (Sir Henry Wellcome): The Wellcome Historical Museum has dioramas that illustrate epoch-making events in British medicine and surgery. The Wellcome Museum of Medical Science demonstrates by models, charts, diagrams, and

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the like, the causes, methods of infection, symptoms, prevention and treatment of malaria, trypanosomiasis, kala-azar, leprosy, plague and bilharziasis. The Wellcome Bureau of Scientific Research has contributions from the departments of protozoology, helminthology, bacteriology and experimental pathology. Trypanosoma grayi in the tsetse fly, series of worms parasitic to man and animals and Rift Valley fever—a newly discovered disease in British East Africa—constitute part of the exhibit. The Wellcome Entomological Field Laboratories and Physiological Research Laboratories have exhibits that deal respectively with the mosquito and with the physiologic, pharmacologic and serologic problems on the production of diphtheria, tetanus and other antigens. Diseases in animals such as lamb dysentery, dog distemper, braxy in sheep, canine jaundice, bacillary white diarrhea in poultry, tetanus in horses and foul pox are presented by appropriate exhibits. The Wellcome Chemical Research Laboratories are contributing exhibits on five groups of drugs: antimalarial, antileprotic, amoebicidal, anthelmintics and antimonial drugs. A model of the Wellcome Research Institution in London, a model of the floating laboratory presented by Sir Henry Wellcome to the Sudan government on the Nile, and a model of the mobile field laboratory given to the British war office during the Great War are exhibited.

France.—Institut Pasteur (P. Lecomte du Nouy and W. Roux): An illuminated map of the world, 12 by 20 feet, shows the distribution of Pasteur institutes. By means of photographs, in a space 12 by 20 feet, are effectively presented the life of Louis Pasteur; his work on crystals, silkworm, fermentation in beer, wine and milk, and the relation of microbes in human and animal diseases, and the life and work of the pupils of Pasteur and their influence on human welfare.

Germany.—Robert Koch Institut (F. Neufeld): By means of models, photographs, portraits, drawings and charts are displayed the life and work of Robert Koch, who discovered the tubercle bacillus in 1882.

Public Health Exhibit of Berlin (von Drigalski): By means of models, charts and diagrams, the recent advances of public health in Berlin are portrayed.

The Deutsches Hygiene Museum, Dresden, Saxony (Exhibits purchased by A Century of Progress): The Transparent Man is a life-size model made out of cellon, a transparent material, to show all interior organs, illuminated in rotation, in their relation to the skin surface. Other dynamic models manifesting human structure and function, which may be motivated by the observer, are as follows: the different kinds of joints; nodding and rotating movements of the head; circulation of one blood corpuscle; cooperation of the diaphragm and lungs in respiration; abdominal breathing, showing the movement of the chest and diaphragm; movement of the rima glottidis; the larynx in a laryngopharyngeal mirror; formation of sounds; example of reflexion—knee jerk; torso of wooden man—sagittal section in eight parts; horizontal sections of wooden man, in fifteen parts.

Italy.—Medical exhibits from the Italian government (E. Bompani): By means of models, charts, photographs, apparatus, and the like, are indicated, the contributions of the fathers of medical science, such as those of Galvani, Malpighi, Morgagni, Spallanzani, Leonardo da Vinci and Vesalius.

Austria.—Medical exhibits from the Austrian government (Miller zu Aichholz): Photographs, drawings, models and charts are used to show the work of Austrian scientists, with emphasis on the work of Semmelweis.

Holland.—Central Institute for Brain Research, Amsterdam (C. U. A. Kappers): With the aid of specimens, models, casts, charts and drawings, the structure and function of the nervous system are demonstrated.

Canada.—McGill University Faculty of Medicine, Montreal (C. F. Martin): Through the help of murals, transparencies and photographs are portrayed the history of James McGill and his university; the founders of the Montreal Medical Institution in 1823, and the development of the Montreal General Hospital and Osler's work there in 1881. A picture of the world's first surgical roentgenogram, taken at McGill University two months after Roentgen announced his discovery in 1895 is displayed. The life and work of Sir William Osler is represented. In the center of the booth is an illuminated panoramic view of McGill University of today.

United States Exhibits of Medical Science

American College of Surgeons (Franklin Martin): By means of transparencies, models, dioramas, illustrated maps, photographs and replicas, the progress of hospitals and surgery in America during the past century are depicted. A replica of the Lister exhibit in the Wellcome Historical Medical Museum is displayed. This consists of a diorama of the Lister Ward at the Glasgow Infirmary; photographs of Lister, his family, his degrees, letters patent, records, and the like; in showcases are displayed his pioneer experimental work on antisepsis and appliances used by him, and also replicas of furniture used by him.

American Committee for the Control of Rheumatism (Ralph Pemberton and R. B. Osgood): Specimens, photographs, models, apparatus, roentgenograms and charts are displayed on the causes, treatment and prevention of arthritis.

American Library Association, Hospital Division (C. B. Roden): A model hospital library in miniature is shown under the auspices of the Hospital Libraries Committee. An electrically operated book wagon, guided by a "hospital librarian,"
makes the tour of a “ward” so that visitors to the exposition may see just how book service to patients is given.

**American Medical Association (T. G. Hull):** Dioramas, mechanical displays and transparencies are used to demonstrate progress in (1) medical practice, (2) medical care, (3) medical education, and (4) health education. Bas-relief statuary portrays Aesculapius, the god of medicine; Hygeia, the goddess of health, and Hippocrates, often called the father of medicine. There are contrasted the difficulties of the saddle-bag doctor with those of the physician of today with his numerous facilities. The many medical discoveries of the past century shown in brief review emphasize this point. It is also portrayed how a frequent physical examination tends toward good medical care and how self diagnosis and self medication result in poor medical care. A relief map of the United States has actual reproductions in miniature of the medical schools of the country. The rôle of the modern hospital as a place to which people now go to get well or to maintain their health is contrasted with that of a century ago.

**American Pharmaceutical Association (H. C. Christensen):** This exhibit is divided into historical, educational and professional aspects. In the center is a replica of the famous Ebers papyrus, 1550 B.C., and consists of 110 pages describing about 700 different remedies for human diseases. There are several displays of actual specimens illustrating the development of natural forms of materials of mineral, vegetable and animal origin to the finished medicinal products. There is a reproduction of an old-time pharmacy. A museum type of display of utensils, show globes, shelf bottles, crude drugs, primitive drugs and drug materials is presented. A model of the pharmacy headquarters building, the National Institute of Pharmacy, now being erected in Washington, D.C., is exhibited. An actual demonstration of prescription compounding, assays, chemical tests, and the like, showing the professional service which pharmacy renders to the public, is provided. A modern, completely equipped combination prescription and chemical laboratory is contrasted with a replica of the 1842 pharmacy of Philo Carpenter at 143 Lake Street, Chicago, known as the “Checkered Drug Store.”

**American Society for the Control of Cancer (A. H. Estabrook):** The purpose of this exhibit is to demonstrate the fact that cancer, if discovered and treated in the early stages of the disease, is to a great extent curable. In a mechanical unit, cancer is compared to a fire: Cancer in its earlier stages, like a small fire, can be controlled; but in its late stages, like a huge conflagration, there is little hope for control. Material on the nature, incidence, prevention and treatment of cancer is presented in four dioramas. Models, drawings and charts are used to present the need of attention to all the early symptoms of cancer. The history of the treatment from ancient times and the present methods of treatment by surgery, x-rays and radium are depicted.

**American Urological Association (R. H. Herbst and H. S. Kretschmer):** With the assistance of drawings, charts and models is emphasized the need of consulting a physician when blood and pus are in the urine. Tuberculosis, tumors, stones of the urinary tract and disease of the prostate gland are developed in a general way with a panel devoted to each disorder. The development of urologic instruments is presented, with the aid of Mueller of Chicago.

**Cleveland Clinic Foundation (George Crile):** Motion pictures present the discovery of the circulation of the blood by Harvey in 1628, the development of modern methods of transfusion and the formation of autopsynthetic cells. The history of blood transfusion is shown by the use of actual instruments, with the aid of Mueller of Chicago and Kimpton of Boston. The physiologic interrelations of the thyroid, suprarenal, pituitary and sex glands are illustrated by specimens, charts, models and drawings. The history of the roentgen ray consists of an x-ray apparatus and tube used in 1896 and a number of roentgenograms, books and tubes made within a few weeks after the discovery of the x-rays in 1895. On a mechanical device, a number of pictures are shown in succession which will contrast early and present day x-ray tubes, apparatus and pictures.

**Chicago Board of Health (H. N. Bunjesen):** With apparatus, stereopticon lantern slides, charts and diagrams, the history of the control of preventable diseases in Chicago during the last hundred years is disclosed. Health educational work along various lines is indicated.

**Chicago Centennial Dental Congress (Arthur Black):** The dental exhibit is divided into historical, scientific and educational sections. With the aid of motor-driven mechanical devices, motion pictures, charts, models, transparencies, and actual specimens, the progress of dentistry in the past hundred years is portrayed. Dental development is illustrated by an exhibit of the equipment of the itinerant dentist of 1833 and a fully equipped operating room of the period of 1883. Conditions at these early times are contrasted with those of today. The interesting relationship of Paul Revere and George Washington to dentistry will be presented. Progress in the manufacture of dental equipment is displayed. Dental conditions in relation to general health are a prominent feature. The cooperation of the S. S. White Dental Manufacturing Company and the Ritter Dental Manufacturing Company makes possible an extensive and popular presentation of dentistry. The education of the dentist is illustrated on a large electrically illuminated panel.
CHICAGO GOODWILL INDUSTRIES (W. C. Loague): The equipment consists of a large floor loom, table loom, bicycle saw, work bench and table. These pieces are arranged in a semicircle and will constitute the major part of the display to demonstrate treatment. Patients from the Goodwill Workshop receive this treatment under supervision two hours daily.

CHICAGO MEDICAL, DENTAL AND ALLIED SCIENCE WOMEN’S ASSOCIATION (Lena K. Sadler and Bertha Van Hoosen): By means of an automatically operated book 6 feet high and 4 feet wide, there are questions and answers on maternal hygiene. With the aid of artistic paintings and models, the relation of food, clothing and appropriate environment for the expectant mother is shown.

CHICAGO MUNICIPAL TUBERCULOSIS SANITARIUM (A. J. Hruby): The central object of the exhibit is a mural in oil, 8 by 5 feet, of the “Sower of Seed.” The sower is represented as an individual with advanced tuberculosis who spreads this disease to all with whom he comes in contact. The theme of the whole exhibit portrays tuberculosis as an infectious and contagious disease. Charts, models, roentgenograms and bacteriologic specimens are used to emphasize this theme.

CHICAGO TUBERCULOSIS INSTITUTE (MRS. T. B. Sachs): The history of the fight against tuberculosis is represented in this display.

CHICAGO MEDICAL SOCIETY AND WOMAN’S AUXILIARY (C. H. Piiber and Sophy Brumbach): The history of the Chicago Medical Society and related medical progress in Chicago is presented. Desks for registration of visiting physicians and members of the medical auxiliary are provided.

HARVARD UNIVERSITY and the MASSACHUSETTS GENERAL HOSPITAL (Reginald Fitz): The historical contributions are: the beginning of Harvard Medical School, 1782; the contributions of Oliver Wendell Holmes; the introduction of physiology to the Harvard Medical School by Professor Bowditch, and the discovery of appendicitis by R. H. Fitz. The use of ether by Warren and Morton in 1846 is represented by a small diorama. Contributions from the Massachusetts General Hospital from 1822 to 1930 are displayed on the development of abdominal surgery, the high caloric treatment of typhoid, introduction of social service, the discovery of the blood platelets, the origin of cardiac surgery and the liver diet treatment of pernicious anemia by Minot and Murphy. The exhibit is composed of portraits, monographs, prints, photographs, books and instruments.

LOYOLA UNIVERSITY OF CHICAGO (J. M. Eisenberg): This exhibit is designed to show the make up of the most complicated of all organisms, the human body. Sections through all parts are displayed, and there are three series of these representing planes at right angles to each other. Every organ of considerable size is shown, and colors are added to make structures easier to distinguish. Each section is mounted in a specially designed aluminum case with glass on both sides.

MAYO FOUNDATION (Walter Alvarez): This institution is developing three themes; namely, diseases of the digestive tract, the thyroid gland, and the sympathetic nervous system. The information is presented with the help of transparent photographs, wax models, charts, motion pictures and lantern slides. A model of an x-ray laboratory and of Dr. Cannon of Harvard, in 1896, making the first x-ray studies of the stomach are shown. A collection of roentgenograms, wax models and actual gallstones illustrates the commoner lesions of the digestive tract, and a diagrammatic model of the stomach and the intestine indicates the situation of these lesions in the body. A large model of the thyroid gland in wax and seven life-like wax masks display the appearance of patients with the different types of goiter and thyroid gland deficiency. The successive stages are shown in the extraction of a few grains of thyroxine, the active constituent of the thyroid gland, from 25 pounds of raw material. Large transparent photographs of dissections of the sympathetic nervous system are presented so as to orient the lay visitor. A large electrical thermometer enables visitors to measure the temperature of their hands and an electric thermometer enables them to see how steady their nerves are.

MILWAUKEE PUBLIC MUSEUM (S. A. Barrett): A large central diorama showing the lodge of an Indian medicine man in the midst of a ceremonial scene emphasizes the ritual among the Indians of primitive medicine. Samples of Indian herbs used for medicine and the charms and amulets indicate the esoteric medicine of the Indians.
NEW YORK CITY CANCER COMMITTEE (Ella H. Rigney): With the help of charts, diagrams and drawings, the cause, treatment and prevention of cancer are presented.

OTTO S. A. SPRAGUE MEMORIAL INSTITUTE, University of Chicago (Maud Slye): The general aim of this exhibit is to reveal that it is possible for genetics to be of tremendous value in relation to cancer. By means of charts, models and diagrams, the results of a twenty-three year study on more than 110,000 necropsies on mice are described. There are genealogical charts of families of mice which are the model for charts for human families. A projection lantern shows slides of the cancer tissues of various types and of various organs.

U. S. PUBLIC HEALTH SERVICE, Federal Building (J. G. Townsend): This extensive exhibit, occupying more than 2,500 square feet, shows the progress made in public health and sanitation since the establishment of the service and is presented in divisions as follows: the Marine Hospital Division; Division of Scientific Research; Division of Interstate Quarantine; Foreign and Insular Quarantine; Mental Hygiene; Venereal Diseases; Charts and Graphs; Miscellaneous. There is exhibited an old style medical kit and a modern ship’s medicine chest. There are models of a modern milk plant and of an approved school room with all modern facilities. The recent work on pellagra, tularemia, undulant fever, typhus fever, spotted fever and psittacosis (parrot’s disease) are clearly presented. The brilliant control of smallpox by vaccination since the time of Jenner, 1796, typhoid by inoculation and diphtheria by toxin-antitoxin are shown by charts, models and posters. There will be models of the septic tank and water purification plant, and of evolution of water containers on common carriers made by Dr. Crowder of the Pullman Company. By wax models, charts and photographs, the recent work on trachoma is presented. There are models of a disinfecting plant, rat-proof wharf, a rat-proof warehouse, a rat-proof vessel, and a large map of the Western Hemisphere showing airplane routes to the United States, time of flight and infected yellow fever areas. There is a large illuminated world map showing the incidence and death rate of smallpox and the practical obliteration of this disease by vaccination.

UNIVERSITY OF CHICAGO (E. L. Compere): The object of this exhibit is the rehabilitation of the crippled child. The scientific part emphasizes the development, structure, function and derangement of the human spine, with particular emphasis on the disks found between the vertebrae. With the aid of models, photographs, roentgenograms and photomicrographs, the scientific evidence is presented. In a diorama are shown the surgical procedures that are practiced by the southwest Indians of the United States. In another diorama, a modern orthopedic ward of six beds is presented. By motion pictures, the results of treatment of acute anterior poliomyelitis are projected for the observer.

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, COLLEGE OF DENTISTRY, DEPARTMENT OF ANIMAL HUSBANDRY, and the ILLINOIS DEPARTMENT OF PUBLIC HEALTH (D. J. Davis and Tom Jones): This exhibit constitutes 2,200 square feet and is composed of dioramas, models, transparencies, charts, drawings and specimens showing the relation of focal infections to systemic diseases, hay fever, tuberculosis, pneumonia, hemophilia and rabies. The Illinois Department of Public Health has dioramas on milk production and distribution, contrasting insanitary methods with modern sanitary ones. Health conditions of 100 years ago are shown in contrast with those of today, bringing out the effective means employed of purifying the water supply and of the disposal of waste material.

UNIVERSITY OF WISCONSIN (C. R. Bardeen): Beaumont exhibit of books, photostats, photographs and charts of the epoch-making work on gastric digestion published in 1833. This is the centennial of the publication of the work of the first American physiologist, conducted on the French voyageur Alexis St. Martin, who had a permanent gastric fistula, the result of an accidental gunshot wound. This investigation was conducted in the territory of Wisconsin and Michigan.

MEDICAL INDUSTRIES

The medical industries of the United States are telling stories of the scientific advancement of medicine rather than a mere display of products. This type of exhibit is interesting and profitable in the long run to the exhibitor as well as to the observer. A few of the themes that will be developed by the exhibiting firms are: the story of the control of pain; the story of the doctor’s service to the sick, shown by a large diorama; the story of antisepsis and asepsis in surgery, or the control of infections; the story of extension and clarification of man’s vision, by means of the microscope and eye glasses; the story of the vitamins or the accessory food substances that man needs to prevent and cure deficiency diseases; the story of the chemical messengers in the blood stream, or the hormones that regulate the body by chemical means and which in normal amounts prevent certain diseases and maintain health; the story of the saddle-bag doctor of a hundred years ago; the story of the x-ray discovered by Roentgen; the story of infections of the teeth and the production of general diseases of the body; a complete medieval pharmacy. The medical industries that have signed contracts to date are: Abbott Laboratories; American Optical Company; Baker and Company; Bausch and Lomb Optical Company; Burroughs and Wellcome of New York; Bauer and Black; Bechstein Aircraft; Chappel Brothers; Chicago Pharmacal Company; Crupper
Manufacturing Company; Dentists Supply Company; Drucker Company; Eastman Kodak Company; Foxboro Company; Gaertner Scientific Company; General Electric X-Ray Corporation; Gerber Products Company; Hanovia Chemical Company; Heyden Chemical Company; Hild Company; Hynson, Westcott and Dunning; Iodent Chemical Company; Keuffel and Esser; Long Company; Mallinckrodt Chemical Works; Merck & Co.; Petrolagar Laboratories; Ritter Dental Manufacturing Company; G. D. Searle Company; Simoniz Company; Squibb & Sons; Taylor Instrument Company; Union Carbide and Carbon Company; Victor Chemical Works; Vitamin Food Company; S. S. White Dental Manufacturing Company.

MEDICAL WEEK AT THE WORLD'S FAIR

The week following the annual session of the American Medical Association in Milwaukee has been designated as Medical Week by the officials of A Century of Progress. During this week the convention of the American Association for the Advancement of Science meets in Chicago. There is an exceptional opportunity, therefore, for those physicians who attend the Milwaukee session of the American Medical Association to devote two weeks to the opportunities presented by two scientific medical conventions and the exhibits at the Chicago world's fair. The following foreign medical scientists have accepted invitations extended by A Century of Progress to read papers in the medical section of the American Association for the Advancement of Science: A. V. Hill, University College, London; R. Goldschmidt, Kaiser Wilhelm Institut, Berlin; August Krogh, University of Copenhagen; Joseph Barcroft, Cambridge University, England; Filippo Bottazzi, University of Naples; C. U. A. Kappers, Central Institute for Brain Research, Amsterdam; Constantin Levaditi, Institut Pasteur, Paris.

ATTRACTIVE RAILROAD RATES

Beginning May 25, all railroads will have round trip fare to Chicago for the rate of one fare plus 10 per cent from both Atlantic and Pacific seaboard and from the South.