

Annual report of the Collis P. Huntington Memorial Hospital for Cancer Research and of the laboratories of the Cancer Commission of Harvard University : 1912-13.

Contributors

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FIRST ANNUAL REPORT
OF THE
Collis P. Huntington Memorial Hospital
for Cancer Research

1912-1913

(FOR THE YEAR ENDING JUNE 30, 1913)



CANCER COMMISSION OF HARVARD UNIVERSITY
BOSTON, MASSACHUSETTS

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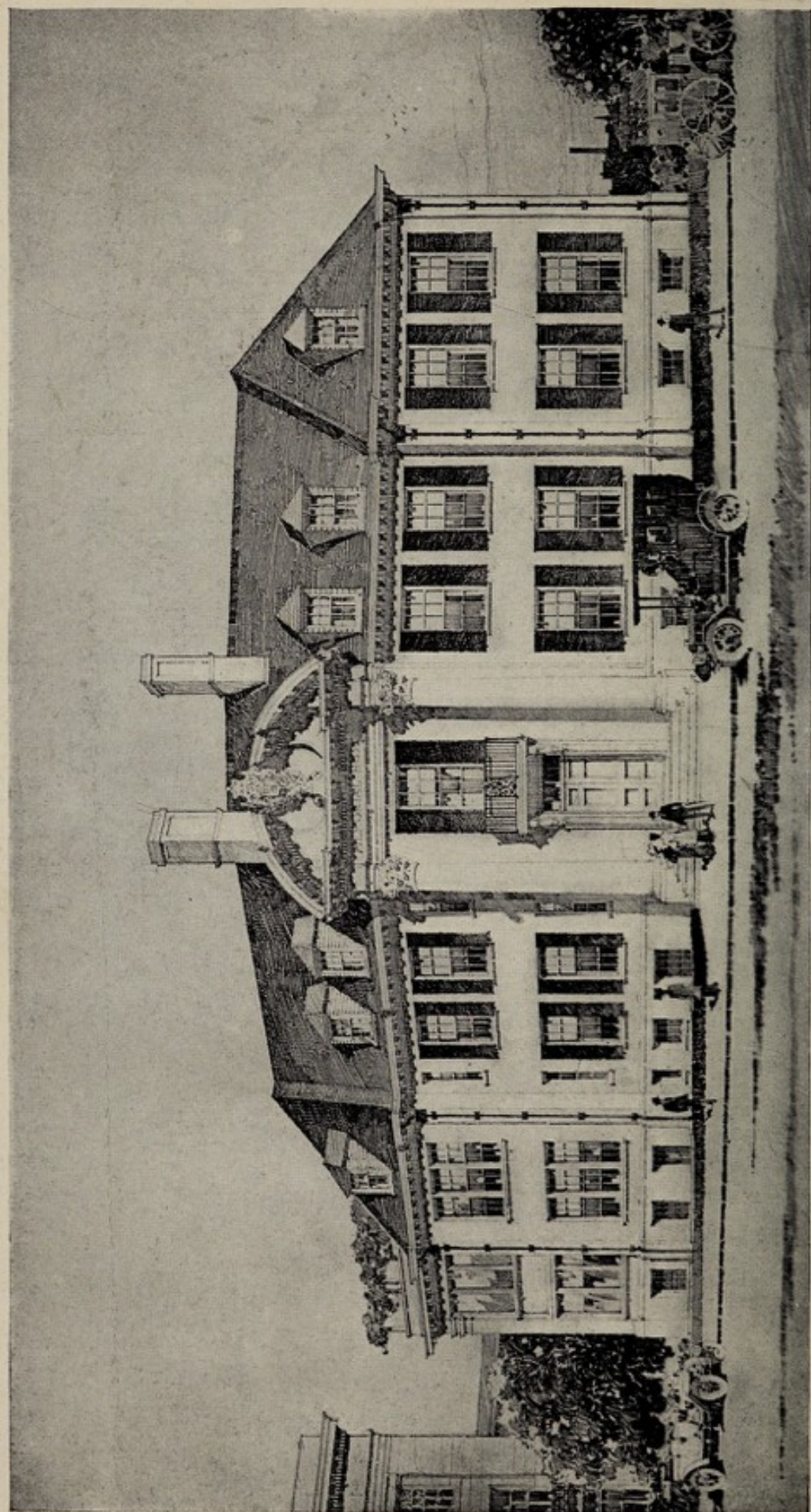


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COLLIS P. HUNTINGTON MEMORIAL HOSPITAL FOR CANCER RESEARCH.

THE MEDICAL SCHOOL OF HARVARD UNIVERSITY, BOSTON, MASS.

Shepley, Rutan & Coolidge, Architects.

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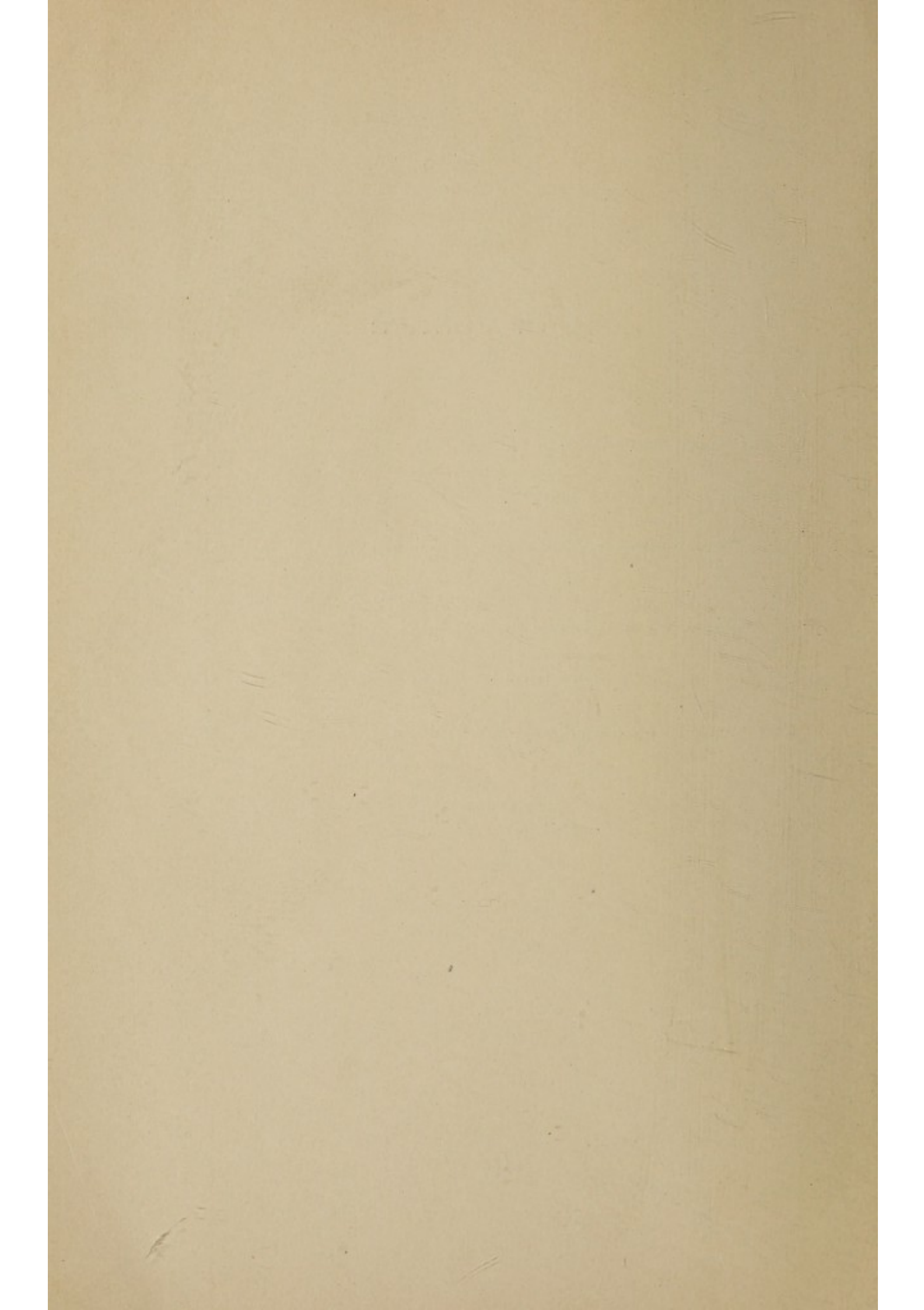


CANCER COMMISSION OF HARVARD UNIVERSITY
BOSTON, MASSACHUSETTS



TABLE OF CONTENTS

	PAGE
CANCER COMMISSION OF HARVARD UNIVERSITY	5
REPORT OF THE CHAIRMAN, J. COLLINS WARREN, M.D.	7
REPORT OF THE DIRECTOR, E. E. TYZZER, M.D.	13
REPORT OF THE PHYSICIAN IN CHARGE OF THE COLLIS P. HUNTINGTON MEMORIAL HOSPITAL, THOMAS ORDWAY, M.D.	15
REPORT OF THE MATRON, MISS IRENE W. MASON, R.N.	27
REPORT OF THE TREASURER, MR. ARTHUR ADAMS	29



THE CANCER COMMISSION OF HARVARD UNIVERSITY

FOUNDED BY CAROLINE BREWER CROFT

JUNE 16, 1899.

J. COLLINS WARREN, M.D., *Chairman.*

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J. COLLINS WARREN, M.D. } For the Caroline Brewer Croft Fund.

HENRY P. WALCOTT, M.D. }
EDWARD H. BRADFORD, M.D. } For the Corporation of Harvard College.

WILLIAM T. COUNCILMAN, M.D. }
THEOBALD SMITH, M.D. } For the Harvard Medical School.

ARTHUR ADAMS, *Treasurer.*

E. E. TYZZER, M.D., *Director.*

ROBERT B. GREENOUGH, M.D., *Secretary.*

THOMAS ORDWAY, M.D., *Physician in Charge of the Collis P. Huntington
Memorial Hospital.*

WILLIAM DUANE, PH.D., *Research Fellow in Physics.*

CLARENCE C. LITTLE, A.B., *Research Fellow in Genetics.*

COLLIS P. HUNTINGTON MEMORIAL HOSPITAL FOR CANCER RESEARCH.

E. E. TYZZER, M.D., *Director.*

THOMAS ORDWAY, M.D., *Physician in Charge.*

ELLIS KELLERT, M.D., *House Physician.*

IRENE W. MASON, R.N., *Matron.*

ANNA L. GIBSON, R.N., *Assistant Matron.*

HENRY A. CHRISTIAN, M.D., *Consulting Physician.*

ROBERT B. GREENOUGH, M.D., *Consulting Surgeon.*

THE MEDICAL SCHOOL OF HARVARD UNIVERSITY
LONGWOOD AVENUE, BOSTON, MASSACHUSETTS.



REPORT OF THE CHAIRMAN OF THE COMMISSION
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY.

GENTLEMEN: I have the honor to submit to you the First Annual Report of the Collis P. Huntington Memorial Hospital, covering the period from the opening of the Hospital, March, 1912, to the end of the College fiscal year, June 30, 1913.

The Collis P. Huntington Memorial Hospital is under the control of the Cancer Commission of Harvard University. In 1899, by the will of the late Caroline Brewer Croft, a sum of money was left in trust for the study of cancer. In 1901 additional funds became available, and the Cancer Commission of Harvard University was established by the President and Fellows of Harvard College. In 1911 it was felt by the Commission that an opportunity to study cancer in the human being by the use of systematic laboratory methods, such as are used in the study of animal tumors, was essential to the further progress of the cancer problem, and efforts were made to procure funds for the erection and endowment of a hospital, under the Commission. Through the generous gift of Mrs. Collis P. Huntington an amount sufficient to build the Hospital was secured, and many additional gifts from those interested in this branch of medical science made possible the establishment of an Endowment Fund for the Hospital, in addition to the Caroline Brewer Croft Fund, which was already available.

The Hospital building was designed by Shepley, Rutan and Coolidge, and stands on the corner of Huntington Avenue and Van Dyke Street, in close proximity to the Harvard Medical School. The following description of the Hospital is taken from the Harvard Graduates' Magazine, Vol. XXI., 1912:

"The Hospital is a three-story building of brick, with limestone trimmings. The east wing fronts on Huntington Avenue; the west wing on Van Dyke Street, the entrance hall facing the corner of the two streets. On the street floor, to the left of the entrance, in the west wing, there is the men's ward for the accommodation of ten patients, with serving and duty-rooms and a reception and dining-room for ambulatory patients. In the east wing, to which another door at the end of the corridor admits, is a waiting-room for out-patient cases, an examining-room, and a small, but well-equipped, operating-room where emergency operations can be performed when necessary. This wing contains, also, the administrative offices and two laboratories, one for chemical and microscopical work, the other for biological investigations. The second floor is arranged in a manner similar to the first with a ten-bed ward for women in the west wing with necessary serving-rooms. The east wing contains five private rooms for patients, and the matron's room. The third floor is given up to rooms for the nurses at one end, and for the servants at the other end. On the west end of the building there are large solaria on the first and second stories, entirely screened and partially walled with glass. These open by wide doors into each of the two wards, so that the patients' beds may be wheeled out of doors when conditions are suitable. The uppermost piazza serves as a roof garden. In the basement there are the necessary store-rooms, a dining-room, kitchen, and laundry, a dark room for photographic work, pathological laboratory, room for radium and X-ray apparatus, and a suite of rooms for the resident physician. The Hospital is equipped with an elevator, two stairways, and a fire-escape. Heat, light, electricity, and refrigeration are obtained from the Medical School plant, and the wires and pipes enter the sub-basement through a tunnel. The building is heated chiefly by the indirect system — air is washed, warmed, and forced from the sub-basement into all of the rooms. An accessory direct steam-heating system is also installed in case of need. All of the Hospital refrigerators are cooled by brine coils from the Medical School system."

The staff of the Hospital is as follows: Dr. E. E. Tyzzer, director, has general supervision over the research work of the Commission; Dr. Thomas Ordway is the physician in charge of the Hospital; Dr. Ellis Kellert is



WEST END OF MEN'S WARD, SHOWING DOORS TO SOLARIUM.



MEN'S WARD; DOOR TO SOLARIUM. BUILDINGS OF PETER BENT BRIGHAM HOSPITAL IN DISTANCE.

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OF
THE
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CHICAGO, ILL., U.S.A.
1914

CONTENTS
ORIGINAL ARTICLES
SYMPTOMS OF
TUBERCULOSIS
IN THE
LUNG
AND
SPLEEN
BY
J. H. HARRIS
M.D.
PHILADELPHIA
THE
SYMPTOMS OF
TUBERCULOSIS
IN THE
LUNG
AND
SPLEEN
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J. H. HARRIS
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THE
JOURNAL
OF
THE
AMERICAN
MEDICAL
ASSOCIATION
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resident house-physician; Miss Irene W. Mason is matron, and Miss Anna L. Gibson is assistant matron. These officers are under salary to the Cancer Commission and are thus free from any obligation to private practice. In addition to the regular staff, Dr. Henry A. Christian is consulting physician, and Dr. Robert B. Greenough, consulting surgeon.

The first year's work of the Hospital has shown that certain modifications of the original plan were necessary, but in the main the purposes of the Hospital have been satisfactorily served by the building as it was designed.

An account of the problems studied, and of the patients cared for, will be found in the Report of the Director, and of the Physician in Charge. It is sufficient here to say that three great objects can be served by such a hospital as this. First, a study of cases of human cancer by the same laboratory methods as have been applied to the tumor problem in animals. Second, the grouping of certain special classes of cases of cancer to procure more adequate material for investigation than is available in the general hospitals. Third (but by no means least), provision for the continuous attendance and nursing of incurable cases of cancer, of whatever class of life, in the terminal stages of their disease when they can be but inadequately cared for elsewhere.

During the past year an additional sum of money was contributed by many benefactors, for the purpose of establishing in connection with the Hospital a radium clinic. Reports from other institutions with regard to the efficacy of the radio-active treatment of cancer have been extremely inconclusive, but it was believed that the resources of the Cancer Commission of Harvard University were particularly suited to the accurate scientific study of radio-active treatment for cancer patients, for the reason that the close relation of the Commission to the University in Cambridge, as well as to the Medical School and its surrounding hospitals, made possible the concentration upon this problem of such authorities in physics, chemistry, and physiology as would be needed for the control of the work. In the heads of the clinical departments of the Medical School, moreover, clini-

cians of the highest standing are available to the Commission for purposes of consultation. With the funds secured a certain amount of radium has been purchased, and William Duane, Ph.D., formerly Professor of Physics in the University of Colorado, and later Research Fellow in the Curie Laboratory in Paris, was appointed a Research Fellow of the Commission, and began work on the preparation of radium and its products for therapeutic use. The reports from the various institutions for the treatment of cancer by radium, in this country and abroad, indicate that an accurate estimate of the value of radium therapy is not at present available. Dr. Duane has devised certain special methods of preparation of radium salts and their products for application to cancer cases. These methods involve the employment of radium emanation, and of deposited activity, and of concentrated solutions of these radio-active substances. It is the purpose of the Commission to investigate the clinical and biological effects of these products in the Huntington Hospital on cancer patients, and in the Laboratories of the Commission.

In the death of Dr. Arthur Tracy Cabot the Commission has lost one of its most active members. Studying cancer for many years from the clinical point of view, Dr. Cabot was strongly impressed with the importance of the problem, and the field it presented for medical research. It is gratifying to know that one of Dr. Cabot's most cherished desires, the institution, under proper control, of the treatment of cancer with X-rays and radium, is now accomplished.

A statement of the various generous contributions to the resources of the Cancer Commission of Harvard University appears in the Treasurer's report. Research of this character, however, cannot stand still, and other lines of investigation are constantly opening up which require additional sums of money for their support. There are several purposes for which additional contributions are greatly needed. It is much to be desired that a laboratory building should be constructed in close physical relation with the Hospital, where investigations along different lines of science can be pursued.

At a cost of about \$50,000.00 such a building could be provided, with ample accommodation for laboratory work in pathology, chemistry, physics, and other sciences. In such a building adequate and safe rooms for the storage and study of radium would be obtained. A work-shop suited to the needs of the physicist of the Commission, and equipped with sufficient apparatus to supply the needs of the different departments in the Harvard Medical School, could also be included. It is extremely probable that the development of the science of physics in connection with cancer research and other medical sciences (bio-physics, as this branch of science is called) will assume a place of great importance in the next few years, and this Commission is extremely fortunate in its close relation to the scientific departments of the University in Cambridge, as well as in having secured, already, the services of Dr. William Duane as physicist.

A certain amount of chemical research on cancer problems has already been carried on in the laboratories of the Huntington Hospital, and in the Department of Bio-chemistry in the Medical School. Much more could be done if better facilities were provided in a chemical laboratory in close relation with the Hospital. With the development of the Out-Patient-Department of the Hospital, especially by reason of the number of applicants for X-ray and radium treatment, increased facilities for handling this work could be obtained on the ground floor of such a laboratory building as is contemplated.

The study of heredity in animals in relation to the cancer problem is another branch of the work of the Cancer Commission, which could to great advantage be given improved facilities in such a building. This work is already under way, and Mr. C. C. Little, of the Department of Genetics, Bussey Institution, is engaged with Dr. Tyzzer in this investigation for the Cancer Commission. It is necessary to have sufficient space for breeding large numbers of mice in these experiments, but they cannot well be accommodated, at present, in the Medical School.

To construct a laboratory building such as is here described

must of necessity involve the increase of our Endowment Fund, in order to make its occupation possible. For this purpose, and to provide for the inevitable and natural growth of the work of the Commission, itself, and of the Hospital, at least \$100,000 more is needed for the endowment. As the work of the Hospital increases more clinical assistants will be necessary, and in fact their need is already apparent. Other laboratory assistants and technicians are also necessary, and funds must be secured if these wants are to be filled.

The fact that the resources of Harvard University are available for the work of the Cancer Commission, places the Commission in an unusually favorable position for cancer research along the broadest lines. It is extremely probable that no other organization for cancer research is more favorably situated, and it is equally true that the field of tumor investigation is of such breadth and importance to the public health that it calls for liberal support. It is to be hoped that the generous support which has been given to the work of the Commission in the past will be continued and augmented, in order to make possible the fulfilment of these more recent projects of development.

From the point of view of the Chairman of the Commission one fact stands out preëminently in the work of the first year of the Hospital — this is, the spirit of cordial coöperation which has been demonstrated by all the participants in the work of this Commission. Not only have the Staff of the Hospital and of the Laboratory shown their fitness and their ambition to carry out the plans of the Commission, but also from the members of the other departments of the University, and from the members of the Staffs and the Administrative officers of the Hospitals associated with the Harvard Medical School, the most kindly assistance has been secured. For this assistance the Commission would here express its grateful recognition.

J. COLLINS WARREN, M.D.,
Chairman.

REPORT OF THE DIRECTOR OF THE COMMISSION
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY.

GENTLEMEN: The Director has the honor to submit the following report on the Collis P. Huntington Memorial Hospital for the year ending June 30, 1913. I respectfully transmit to you the report of the Physician in Charge of the Hospital, Dr. Thomas Ordway, who is responsible to the Director for the administration of the Hospital, and the care of patients.

The location of the Collis P. Huntington Memorial Hospital on the grounds of the Harvard Medical School makes possible a close affiliation with this institution as well as with other departments of the University. This is true for the entire organization of the Commission as well as for the hospital staff, as will be seen by the positions held by the various active members of the Commission. The Director is an Assistant Professor of Pathology, the Physician in Charge is an Instructor in Medicine, one of the Research Fellows is an Assistant Professor of Physics, and another is connected with the Department of Genetics at the Bussey Institution. The Hospital is also in a position to avail itself of the services of the various departments of the Medical School and of the University with respect to consultation in special branches of medicine and science. Association with eminent scientific men, such as the relationship with the University affords, is also of great importance to the Commission, for not only is this stimulating to research in general, but assistance is also often obtained in the form of precise information on various subjects. The greater part of the laboratories are furnished to the Commission by the Medical School, and this institution offers also excellent Library and Museum facilities. There is every reason to believe that the relation-

ships of this character give to the work of the Commission advantages which are possessed by few other institutions for Cancer Research.

By the establishment of the Huntington Hospital under such conditions, the Commission is able to serve the public more efficiently since on the one hand it brings the laboratory investigator into direct touch with practical medical problems, and on the other hand it gives to the public (through the medical profession) the benefit of the combined work of its staff. Thus it is possible to test the properties and value of various remedial agents or procedures, to furnish diagnosis and advice in such unusual or difficult cases as may present themselves, and after a time, through the systematic accumulation and study of reliable data, to speak authoritatively with regard to various phases of the tumor question.

ERNEST E. TYZZER, M.D.,

Director.



PATIENTS' SITTING ROOM, FIRST FLOOR.



PATIENTS' DINING ROOM, SECOND FLOOR.



REPORT OF THE PHYSICIAN IN CHARGE OF THE
HOSPITAL

TO THE

DIRECTOR OF THE CANCER COMMISSION OF
HARVARD UNIVERSITY.

DEAR SIR: I have the honor to submit the First Annual Report of the Collis P. Huntington Memorial Hospital for the year ending June 30, 1913.

The organization of the Commission places the responsibility for the administration of the Hospital and the care of the patients on the Physician in Charge. The House Physician, Dr. Ellis Kellert, lives in the Hospital, works with and under the direction of the Physician in Charge, and assumes his duties when he is absent. The Matron, Miss Irene W. Mason, is responsible for the administration of the Hospital, including the supervision of nursing and the housekeeping. The Assistant Matron, Miss Anna L. Gibson, assumes these duties in the absence of the Matron. These include the immediate supervision of the inventories and the work of the nurses, including their instruction in clinical laboratory work; for the latter instruction she is directly responsible to the Physician in Charge.

In addition to this staff, the following are employed by the Hospital: a stenographer, nurses, a cook and helper, a laundress and assistant, maids, and a man of all work.

This method of hospital organization with fixed responsibility has proved successful, and is regarded as most important, for in case of the absence of any member of the staff from sickness, vacation, or retirement, such vacancy is filled at once and the work of the Hospital is carried on uninterruptedly.

The records of the cases differ considerably from those of many other hospitals, particularly in respect to the very

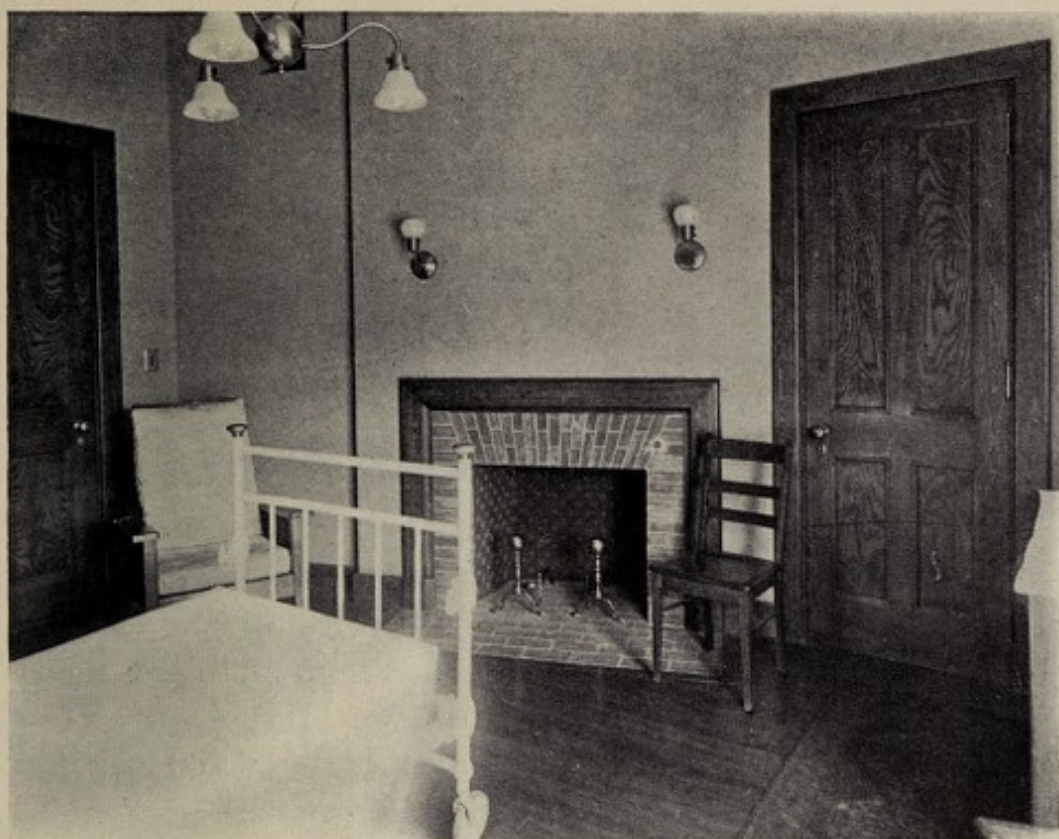
limited number of printed forms. The records are typewritten with record ink on ledger paper of the largest letter size. The so-called clinical and laboratory data are differentiated by fine blue or pink lines with which the margins are ruled. Although there are very few printed forms, a definite order is used for the histories and physical examinations. On the first page of each case record is a summary or remarks emphasizing special points of interest in the case. There is also a list of all cross reference numbers, including those of surgical specimens, negatives of photographs, radiographs, lantern slides, etc. This facilitates the subsequent assembling of all original data. Descriptions are illustrated by numerous photographs.

The system of accounting introduced, unusually detailed for a Hospital of this size, has proved very satisfactory. The expenditures during this first year, shown in the Treasurer's report, include much primary equipment, for it seemed advisable to add equipment and supplies from time to time as needed rather than to procure much at the outset which might not be necessary. It is probable, also, that the cost of maintenance of the Hospital itself, which this year includes many adjustments of new machinery, may be reduced.

As is to be expected in a hospital of this kind the receipts have been small, owing to the nature of the cases which have been received during the year.

Cancer patients have been received in the Hospital in all stages of the disease. It seemed advisable to admit a certain number of cases for differential diagnosis, and occasionally for operation, as well as the more advanced and inoperable cases. The greatest number of patients, however, were cases of cancer, recurrent after operation. With the consent of the Chairman of the Commission the courtesies of the Hospital were extended to Dr. Harvey Cushing, who made use of the Hospital for a few weeks while the Peter Bent Brigham Hospital was being equipped. The privileges of the Hospital were also granted to Dr. Richard P. Strong of the Department of Tropical Medicine.

As an adjuvant to other forms of treatment, arrangement



A PRIVATE ROOM.



A PRIVATE ROOM.



is made to provide for patients' instruction in invalid occupation work, which shortens tedious hours and has a beneficial therapeutic effect.

Although the large screened piazzas leading from the wards afford abundance of sunlight and fresh air, an old-fashioned garden closed in from the street, with opportunity of caring for flowers and vegetables, is much to be desired, and it is felt that this would meet an urgent need for outdoor exercise and recreation for the patients.

The cases observed and treated during the past year are detailed in the accompanying tables :

TABLE I.
Carcinoma.

	Out-patients.	In-patients.	Total.
Head and Neck :			
Face	12	1 (3)*	13 (3)
Neck.....	6	2 (1)	8 (1)
Tongue.....	3	0 (2)	3 (2)
Nose	4	0	4
Tonsil.....	1	0	1
Eyelid.....	2	0	2
Lip	3	0	3
Trachea	1	0	1
Antrum.....	2	0 (2)	2 (2)
Larynx	2	2	4
Ear	1	0	1
Jaw	3	1	4
Total.....	40	14	46 (8)

* The figures in parentheses indicate that a certain number of in-patients were also treated and recorded as out-patients, and so should not be included in the total number of cases observed.

TABLE I. — *Continued.*
Carcinoma. — Continued.

	Out-patients.	In-patients.	Total.
Chest:			
Breast.....	21	8 (5)	29 (5)
Mediastinum	1	0 (1)	1 (1)
Abdomen:			
Stomach.....	3	4 (3)	7 (3)
Peritoneum (ovary)	1	3	4
Sigmoid	1	0	1
Kidney.....	1	1 (1)	2 (1)
Pelvis:			
Uterus.....	6	2 (1)	8 (1)
Testicle	1	0	1
Rectum	2	0	2
Sacrum.....	0	1	1
Bladder	1	1	2
Extremities:			
Hand	1	0	1
Total.....	39	31	59 (11)
Total carcinoma	79	45	105 (19)

Sarcoma.

Face	0	1	1
Pelvis	1	0	1
Eye (liver)	1	0	1
Abdominal wall.....	1	0	1
Thumb	1	0 (1)	1 (1)
Neck.....	1	1	2
Humerus	1	0	1
Femur	0	1	1
Total.....	6	4	9 (1)

TABLE I. — *Continued.*
Special Tumors and Tumor-like Conditions.

	Out-patients.	In-patients.	Total.
Hodgkin's disease	3	4 (2)	7 (2)
Leukemia.....	0	4	4
Lymphoma	0	1	1
Pituitary tumors	0	4	4
Cerebellar tumor (glioma)	0	1	1
Total.....	3	16	17 (2)

Border-line Growths:

Parotid	1	0	1
Face	1	0	1
Nose.....	1	0	1
Breast (adenocystoma)	0	1	1
Total.....	3	1	4

Benign Growths:

Uterus (cyst and polyp).....	1	0	1
Scalp (sebaceous cyst).....	1	0	1
Breast:			
Chronic mastitis.....	1	0	1
Adenocystoma.....	1	0	1
Simple cysts.....	1	0	1
Skin (keratosis)	1	0	1
Eye (caruncle)	1	0	1
Leg (lipoma)	1	0	1
Total.....	8	0	8

TABLE I. — *Concluded.*
Miscellaneous Conditions other than New Growths.

	Out-patients.	In-patients.	Total.
Apprehension of cancer	6	0	6
Syphilis (gumma of clavicle)	1	0	1
Wounds:			
Laceration of arm	1	0	1
Contused finger	1	0	1
Contused hand	1	0	1
Edema (feet)	1	0	1
Chronic glossitis	1	0	1
Umbilical hernia (strangulated)	0	1	1
Appendicitis	0	2	2
Angina pectoris	0	1	1
Herpes zoster	1	0	1
Hematoma (organizing)	1	0	1
Psychasthenia	1	0	1
Sprue	1	0 (1)	1 (1)
Deformity (jaw)	0	1	1
Concussion (brain)	0	2	2
Hypopituitarism	0	1	1
Total	16	9	24 (1)

TABLE II.
Summary.

	Out-patients.	In-patients.	Totals.
Carcinoma	79	45	105 (19)
Sarcoma	6	4	9 (1)
Special tumors and tumor-like conditions	3	16	17 (2)
Border-line growths	3	1	4
Benign growths	8	0	8
Miscellaneous conditions other than new growths	16	9	24 (1)
Total	115	75	167 (23)

Total number of out-patient visits — 482.

In addition to the usual symptomatic therapeutic measures study has been made of several special forms of treatment.

After the opening of this Hospital the patients were sent here from the clinic which had already been established by Dr. E. H. Risley, for the Cancer Commission, at the Massachusetts General Hospital. Other cases were also treated by "resistant" serum for the first eight months. Although many patients showed temporary improvement in the general or local condition, and relief from pain, it is probable that such changes cannot be attributed to the direct effect of the serum, but rather to the great fluctuations in the natural course of the disease, and emphasized in certain individuals by the encouragement due to a change of living conditions and to hope of cure. Hemorrhage in certain instances was relieved to a varying degree, this serum acting as do the various heterologous sera used in hemophilia, purpura, etc. No curative results were obtained by the use of "resistant" serum.

In certain instances hemorrhage which was not checked by this serum, or by the local application of adrenalin, was con-

trolled by the cautious application of the so-called Zeller's paste — arsenic and mercury mixture of Sir Astley Cooper.

Owing to the encouraging reports of Loeb, who had used colloidal copper in the treatment of cancer, certain cases were selected for treatment by this method. The number of cases was small but they were of the same type as those in which Loeb reported the greatest improvement. The great amount of time required for the preparation and administration of the colloidal copper, which required the coöperation of the entire working force of the Commission, made it seem best to select a small series of cases. Aside from such temporary improvement as was noted in the use of "resistant" serum, and in one case a drop in temperature, which was probably only a coincidence, no favorable results were obtained. Thrombosis, phlebitis and periphlebitis were common and interfered with but did not interrupt the completion of the entire schedule of treatment. While no curative results were obtained it is believed that this method of frequently repeated intravenous injections over a long period, and the fact that such comparatively large amounts of fluids are well borne, may be of value in the administration of other remedies.

It is as yet impossible to draw any conclusions regarding the result of X-ray treatment. The variation in the natural course of the various forms of this disease, and in the resistance of patients may account for apparent improvement in certain cases. The method of application of the X-ray with particular reference to dosage, needs further study. A so-called unfluctuating voltage apparatus is in use, and a study of dosage is now being made, and also the effects of the X-ray on the anatomy and physiology, including the chemistry of man and animals, are being studied. It is particularly gratifying to report that distinct progress has been made in this work, as one of the last requests of Dr. A. T. Cabot was that certain questions outlined by him should be studied, and if possible answered, for a better understanding of the X-ray as a therapeutic agent.

The laboratories of the Hospital are small, but are now well

equipped for investigation as well as for the routine work; the latter includes the so-called clinico-pathological laboratory procedures, the more strictly chemical, the X-ray and the pathological work. The Director, the Physician in Charge and the House Physician have united or alternated in doing the pathological work, which has consisted of "rush" diagnoses, examination of surgical specimens, post-mortem examinations on the hospital cases and elsewhere at the request of private physicians.

During the absence of the Director on the expedition for the Department of Tropical Medicine to South America, the hospital staff carried on the routine work of Dr. Tyzzer's laboratory. Much of the so-called clinical laboratory work, which includes the examination of blood, urine, sputum, etc., has been done by the assistant matron, who has shown great interest in this work, and after becoming proficient has taught certain of the nurses these methods and those of gross metabolism, so that there is opportunity for the nurses to acquire a working knowledge of these procedures. This work leads a nurse to more careful observation of the patient, and also fits her for a position in a physician's office, or in special instances for practical teaching in a training school for nurses.

By the courtesy of the Massachusetts General Hospital and the kindness of Dr. Walter Dodd and Dr. G. W. Holmes, our House Physician, Dr. Kellert, spent some weeks in the X-ray Department of the Massachusetts General Hospital, learning the technic of radiography. Since the installation of our own apparatus, a constant voltage transformer, Dr. Kellert has in a most able manner taken complete charge of this work, including the routine radiographic diagnosis and treatment. During a few months of the year the radiographic work of the Peter Bent Brigham Hospital was done at our Hospital by Dr. Kellert and by Dr. Luger, who is in charge of the newly equipped X-ray Department of the Brigham Hospital.

This first year of the Hospital has been devoted in large part to matters of administration, organization, finances,

records, and equipment in preparation for future work. Notwithstanding this a certain amount of research has already been accomplished. The blood in cancer and leukemia has been studied by Drs. Ordway and Kellert, with particular reference to the amount of complement, a substance which is concerned in the destruction of red corpuscles and in other processes. Although the complement is believed by some to be formed by the white blood cells the amount present in the blood in leukemia (in which the white cells of the blood are enormously increased), and in different stages of cancer was not greater than that found in the blood of normal persons.

A study by Dr. Ordway and Mr. Morris on the metabolism of rats showed that when an implanted malignant tumor is growing rapidly the output of uric acid in the urine is greatly increased, and that certain other products of nitrogenous metabolism are altered.

These two papers were presented at the annual meeting of the American Association for Cancer Research in Washington, in May, 1913, and have been published as follows:

The Complement Content of the Blood in Malignant Disease, Thomas Ordway, M.D., and Ellis Kellert, M.D., *Journal of Medical Research*, July, 1913, p. 287.

The Protein Metabolism in Certain Tumor-bearing Rats, Thomas Ordway, M.D., and J. Lucien Morris, *Journal of Medical Research*, July, 1913, p. 301.

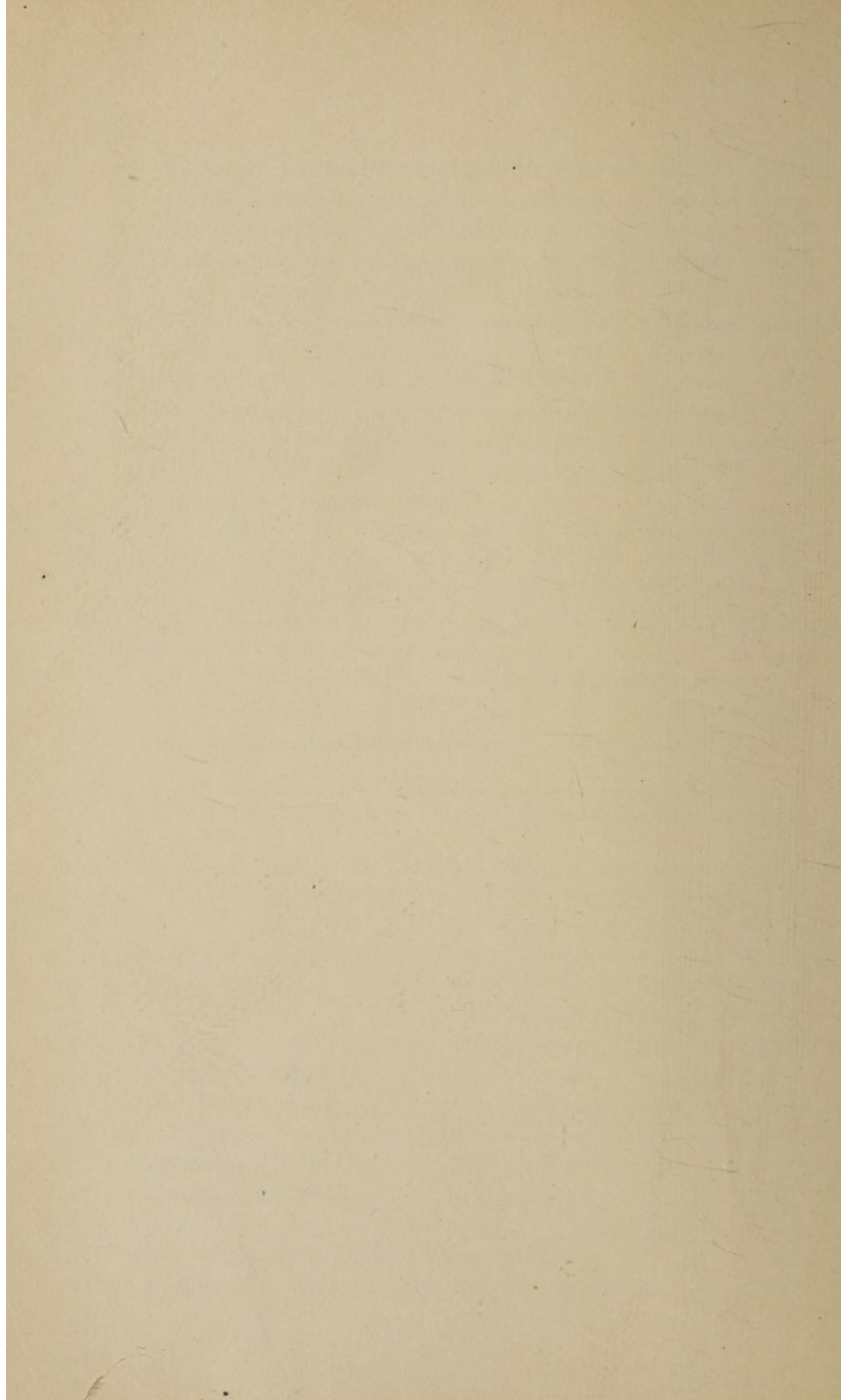
During the year the Hospital has received from or referred patients to the Massachusetts General Hospital, the Boston City Hospital, the Eye and Ear Infirmary, the Boston Dispensary, the Free Hospital for Women, the Peter Bent Brigham, and other hospitals and charity organizations. Material or assistance has also been received from or given to various departments of the Medical School — notably those of pathology, neuro-pathology, bio-chemistry, anatomy, histology, bacteriology, physiology, tropical medicine, medicine, and surgery. To the members of the departments of the Medical School representing the so-called specialties of medicine — otology, ophthalmology, dermatology and gynec-

cology — who have served the Hospital in the capacity of consultants, we are also greatly indebted. To the members of the house-staff of the Hospital, the house physician, the matron and the assistant matron, and to the nurses and employees of the institution, I would also express my grateful appreciation for their devoted service and coöperation.

Respectfully submitted,

THOMAS ORDWAY, M.D.,

Physician in Charge.



REPORT OF THE MATRON OF THE HOSPITAL
TO THE
PHYSICIAN IN CHARGE OF THE HOSPITAL.

DEAR SIR: I herewith submit my first annual report as Matron of the Collis P. Huntington Memorial Hospital, for the year ending June 30, 1913.

We are very grateful to many friends for the following gifts to the Hospital:

Flowers and plants: Mrs. Moses Williams, Mrs. Henry P. Bowditch, Mrs. Charles G. Weld, Mrs. William Spaulding, Mrs. Rollins, Mrs. G. H. Perkins, Mrs. C. C. Converse, Mrs. G. H. Shaw, Mrs. Francis Blake, Mrs. George D. Wildes and Miss Wildes, Mrs. C. Millard Koopman, Miss Emily K. Ide, Miss Blair, Dr. J. Collins Warren, Dr. E. E. Tyzzer, Mr. W. H. Elliott, Mr. Roland E. Thorpe.

Old linen and back-rest: Miss Jane W. Bucklin.

Old linen and magazines: Miss Emily K. Ide.

Books, worsteds, picture puzzles, concert tickets for nurses: Mrs. Alex. Whiteside.

Check for \$25.00 for patients' amusement, with which a Victrola was bought: Mrs. Henry P. King.

Three bags of apples: Mrs. Joseph Curtis.

Picture puzzles: Mrs. C. G. Weld.

Old linen, books, and magazines: Mrs. Ives.

Clothing and blankets: Miss Fisher.

Linen: Mrs. J. Collins Warren.

Magazines: Mrs. F. S. Moseley.

Books and magazines: Mrs. George D. Wildes.

Twelve dozen fresh eggs: Mrs. Philip L. Spalding.

Vegetables: Dr. E. E. Tyzzer.

A system of accounting has been installed which gives in detail the running expenses of the Hospital, monthly and yearly.

For the household work it has been necessary to employ a man of all work, a cook and one assistant, two laundresses, a waitress, a ward maid, and a chamber maid.

Although an incinerator has proved itself to be of great value in the destruction of waste, dressings, and such mate-

rial, it has not satisfactorily destroyed the garbage, and it has been necessary to place garbage cans in the back yard. This emphasizes the necessity for a service house, which would likewise be useful for the storage of garden implements, which now take up much valuable space in our store-room.

The nursing staff consists of a graduate head nurse, four or five graduate nurses for regular duty, each nurse in turn serving a period of night duty for one month. There is a certain amount of routine work in the wards which can be done by attendants, therefore it seems practical to employ one or two young women who can be taught to do the less important ward duties, such as making of beds of ambulatory patients, sweeping and dusting, care of linen, and making of supplies.

Owing to the nature and duration of the illness with which our patients are suffering, they gratefully receive any light work or entertainment to help shorten the tedious hours. A teacher of invalid occupation work has spent from two to four hours a week giving instruction to patients in such work as has seemed most fitting to their needs, with gratifying results.

Although the sun-rooms afford a splendid opportunity for patients to enjoy fresh air, many of the less handicapped would greatly appreciate a yard or enclosure where they could do light gardening work and play out door games.

IRENE W. MASON, R.N.,

Matron.

REPORT OF THE TREASURER, MR. ARTHUR ADAMS,
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY.

GENTLEMEN: I have the honor to submit to you my report for the year ending June 30, 1913.

Generous contributions to the funds of the Cancer Commission of Harvard University have been received by the Treasurer of Harvard College, from December 12, 1910, to June 30, 1913, by which the construction and maintenance of the Collis P. Huntington Memorial Hospital have been made possible. \$138,110.36 has been devoted to construction and equipment, and the remainder, \$116,513.51, has been retained in the form of an Endowment Fund. A number of gifts for special purposes have also been received.

During the past two years annual subscriptions for immediate use have been received from a number of subscribers, to carry on the work of the Commission.

On the books of the Treasurer of Harvard College, June 30, 1913, the following special funds were listed, the income of which is available for the purposes of the Cancer Commission of Harvard University:

Cancer Hospital Endowment Fund.....	\$116,513.51
Proctor Maintenance Fund *	22,477.31
(\$25,000 given by Mrs. Redfield Proctor.)	
Clara Endicott Payson Free Bed.....	5,000.00
(Given by Louisa P. Loring and Fanny P. Mason.)	
Franklin H. Hooper Free Bed.....	5,000.00
(Given by his mother and family.)	
Amos Lawrence Hopkins Free Bed	5,000.00
(Given by Mrs. Amos Lawrence Hopkins.)	
Lawrence Carteret Fenno Free Bed.....	5,000.00
(Given by an Anonymous donor.)	
Lawrence Carteret Fenno Light Rays Fund.....	5,390.13
(Given by an Anonymous donor.)	
Caroline Brewer Croft Fund.....	92,025.00
(Bequest of Caroline Brewer Croft.)	
Cancer Hospital Laboratory Research Fund *.....	20,159.40
	<hr/>
	\$276,565.35

* Principal as well as income available for current expenditure.

The list of subscribers to the Endowment Fund, and the Fund for Construction and Equipment, is as follows :

Anonymous.....	\$7,816.97
Gordon Abbott.....	1,000.00
George R. Agassiz.....	2,000.00
Miss Mary S. Ames	5,000.00
John S. Ames.....	5,000.00
Edwin F. Atkins	1,000.00
Miss Ellen Andrews.....	100.00
Mrs. C. W. Amory.....	1,000.00
C. W. Amory	1,000.00
Miss Sarah F. Bremer.....	1,000.00
Peter C. Brooks	500.00
Mrs. Shepherd Brooks	1,000.00
Shepherd Brooks.....	1,000.00
Mrs. John L. Bremer.....	500.00
George N. Black	1,000.00
Mrs. W. W. Blackmar.....	150.00
Miss F. R. Brewer	150.00
Samuel N. Brown.....	1,500.00
Thomas P. Beal	100.00
Curtis C. Bushnell	116.00
(In memory of Curtis S. Bushnell.)	
Mrs. Walter C. Baylies	500.00
Mrs. D. M. Bonney	250.00
C. C. Bushnell	50.90
(In memory of Margaret A. Bushnell.)	
Francis Bartlett.....	1,000.00
Mellen N. Bray	} Trustees of Mellen Bray Estate
William C. Bray	
Joseph B. Warner	
Mrs. J. B. C.....	2,000.00
Mrs. T. Jefferson Coolidge, Jr.....	1,000.00
Miss E. F. Cary	50.00
Mrs. C. H. Crafts.....	150.00
Mrs. Theodore Chase.....	100.00
Mr. and Mrs. George G. Crocker.....	500.00
Miss Ellen G. Cary	500.00
Mrs. C. C. Converse	500.00
Mrs. J. F. Curtis.....	25.00
Mrs. C.....	1,000.00
Mrs. J. Randolph Coolidge	200.00
T. Jefferson Coolidge	2,000.00
Alexander Cochrane	1,000.00
Miss Georgina S. Cary	500.00
Charles A. Dean.....	100.00
<i>Carried forward,</i>	<hr/> \$47,358.87

<i>Brought forward,</i>	\$47,358.87
Miss Hannah M. Edwards	500.00
William Endicott	1,000.00
Miss Grace Edwards	500.00
Mrs. George R. Emmerton	1,000.00
Mrs. W. C. Endicott	500.00
F. W. Fabyan	3,000.00
F. P. Fish	500.00
Mrs. W. Scott Fitz	500.00
T. B. Fitzpatrick	10.00
"A Friend"	500.00
Mrs. Henry S. Grew	1,000.00
G. A. G.	1,000.00
Miss Harriet Gray	200.00
William A. Gaston	500.00
Robert H. Gardiner	25.00
Mrs. Collis P. Huntington	100,000.00
Charles Hayden	1,000.00
Henry S. Howe	1,000.00
F. W. Hunnewell	1,000.00
J. J. Higginson	50.00
Henry S. Hunnewell	500.00
Miss Julia W. Holt	1,000.00
Mrs. John E. Hudson	200.00
Miss E. R. Hatheway	100.00
Mrs. Ellen Hammond	10.00
Miss E. M. Iasigi	25.00
Dr. Henry Jackson	100.00
Edward C. Johnson	500.00
David P. Kimball	1,000.00
Mrs. H. P. King	2,000.00
Mrs. G. P. King	1,000.00
Charles A. King	1,000.00
Kidder, Peabody & Co.	10,000.00
Mrs. Theodore Lyman	1,000.00
Mr. and Mrs. Lester Leland	5,000.00
Arthur T. Lyman	1,000.00
Miss Georgina Lowell	50.00
James Longley	1,000.00
Thomas W. Lamont	250.00
Hon. William C. Loring	500.00
Mrs. H. P. McKean	2,500.00
Mrs. Charles E. Mason	500.00
Dr. S. J. Mixter	500.00
F. S. Moseley	1,000.00
E. J. Mitton	500.00
J. W. Maguire	500.00
Mr. and Mrs. S. P. Mandell	1,000.00
<i>Carried forward,</i>	\$193,878.87

<i>Brought forward,</i>	\$193,878.87	
Grenville H. Norcross.....	100.00	
Mrs. Otis Norcross, Jr.....	200.00	
James M. Prendergast.....	1,000.00	
Charles J. Paine.....	2,000.00	
Dudley L. Pickman....	500.00	
Mrs. A. S. Porter, Jr.....	25.00	
Wallace L. Pierce	500.00	
Miss Eleanor S. Parker.....	500.00	
William A. Paine.....	2,000.00	
Theophilus Parsons	500.00	
Mr. and Mrs. George Putnam	100.00	
Miss Emily Dutton Proctor.....	10,000.00	
Frank E. Peabody.....	2,500.00	
David Pingree	1,000.00	
"Proctor Fund," Harvard University	4,000.00	
John Parkinson	100.00	
Mrs. Neal Rantoul.....	1,000.00	
Mrs. R. S. Russell....	500.00	
Miss Marian Russell	300.00	
J. P. Reynolds	25.00	
Dr. W. L. Richardson.....	1,000.00	
Quincy A. Shaw	2,500.00	
John L. Saltonstall	2,500.00	
Galen L. Stone.....	1,000.00	
Stone & Webster	2,000.00	
Dr. F. P. Sprague	1,000.00	
Henry S. Shaw.....	500.00	
Mrs. G. H. Shaw.....	1,000.00	
Francis Skinner.....	1,000.00	
J. T. Spaulding.....	1,000.00	
Mrs. R. H. Stevenson	200.00	
Miss Abby M. Storer	}.....	1,000.00
Miss Mary G. Storer		
Robert W. Storer		
Mrs. Amos P. Tapley.....	1,000.00	
Miss Alice P. Tapley.....	100.00	
Mrs. E. R. Thayer	25.00	
H. O. Underwood	1,000.00	
Dr. Charles G. Weld	5,000.00	
Mr. and Mrs. W. B. Walker....	1,000.00	
George R. White	7,500.00	
Mrs. Henry C. Weston	200.00	
General and Mrs. Lucius H. Warren	100.00	
Grant Walker	500.00	
Joseph S. Williams	250.00	
George Wigglesworth	1,000.00	
Mrs. Charles T. White.....	300.00	

Carried forward,

\$253,403.87

<i>Brought forward,</i>	\$253,403.87
Dr. James C. White.....	100.00
George W. Wheelwright, Jr.	20.00
Miss Fanny Young	100.00
X.Y.Z.	1,000.00
Total	<u>\$254,623.87</u>

The list of subscribers for current expenses for the past two years is as follows:

Mrs. Charles W. Amory	\$50.00
Charles W. Amory.....	50.00
George R. Agassiz.....	750.00
Mrs. W. W. Blackmar.....	5.00
Mrs. Arthur W. Blake.....	40.00
Mrs. John L. Bremer.....	100.00
Miss Sarah F. Bremer.....	50.00
Miss F. R. Brewer.....	10.00
Owen Bryant.....	5.00
Mrs. W. S. Bullard.....	50.00
Miss G. S. Cary	50.00
Miss H. O. Cruft	100.00
Miss Mary Curtis.....	5.00
Samuel Carr	25.00
Herbert L. Clark.....	100.00
Miss Emma F. Cary.....	25.00
J. Randolph Coolidge.....	50.00
Mrs. Theodore Chase.....	25.00
Mrs. F. S. Clark	5.00
Mrs. Arthur E. Davis.....	100.00
Hon. George H. Doty.....	25.00
Charles A. Dean.....	50.00
A. F. Estabrook.....	100.00
Humane Society of Commonwealth of Massachusetts.....	200.00
Mrs. John E. Hudson.....	10.00
Miss Harriet Gray.....	50.00
Mr. and Mrs. H. P. King	200.00
Gardiner M. Lane	50.00
Thomas W. Lamont.....	250.00
Mrs. C. E. Mason	100.00
Mrs. H. P. McKean.....	100.00
George B. Morison	50.00
Miss E. S. Parker.....	25.00
Mrs. Alexander S. Porter, Jr.....	40.00
David Pingree	100.00
Colonel C. L. Peirson.....	100.00
Mrs. R. S. Russell	25.00
<i>Carried forward,</i>	<u>\$3,070.00</u>

<i>Brought forward,</i>	\$3,070.00
Dr. W. L. Richardson.....	200.00
Wallace F. Robinson.....	50.00
Mrs. J. M. Sears.....	100.00
Miss Mary G. Storer.....	100.00
Miss Abby M. Storer.....	100.00
Robert W. Storer.....	100.00
John L. Saltonstall.....	100.00
Francis Skinner.....	200.00
Galen L. Stone.....	200.00
Dr. F. P. Sprague.....	100.00
John E. Thayer.....	500.00
Miss Alice P. Tapley.....	100.00
Mrs. Ezra R. Thayer.....	50.00
Henry O. Underwood.....	200.00
Mrs. Charles Van Brunt.....	100.00
Dr. J. Collins Warren.....	100.00
Mr. and Mrs. W. B. Walker.....	100.00
Mrs. H. C. Weston.....	100.00
Mrs. C. G. Weld.....	50.00
George W. Wheelwright.....	50.00
Charles A. King.....	50.00
Daniel G. Wing.....	50.00
Anonymous.....	745.00
	<hr/>
	\$6,515.00

The list of subscribers to the Research Laboratory Fund is as follows:

George R. Agassiz.....	\$1,000.00
Miss Mary S. Ames.....	5,000.00
Mrs. Charles W. Amory ..	1,000.00
Anonymous.....	500.00
Mrs. Walter C. Baylies.....	3,000.00
George N. Black.....	500.00
Mellen Bray Estate, Trustees of.....	3,000.00
Walter M. Briggs.....	25.00
Shepherd Brooks.....	500.00
Mrs. Shepherd Brooks.....	500.00
Godfrey L. Cabot.....	100.00
Henry B. Cabot.....	1,000.00
Alexander Cochrane.....	250.00
Mrs. C. C. Converse.....	2,500.00
W. Murray Crane.....	250.00
Mrs. W. Scott Fitz.....	1,250.00
A Friend.....	250.00
George A. Gardner.....	500.00
	<hr/>
<i>Carried forward,</i>	\$21,125.00

<i>Brought forward,</i>	\$21,125.00
Mrs. Henry S. Grew	500.00
Augustus Hemenway	1,000.00
Mrs. H. S. Hunnewell.....	250.00
Walter Hunnewell.....	500.00
E. C. Johnson.....	500.00
George G. Kennedy.....	100.00
Kidder, Peabody & Co.	2,500.00
David P. Kimball.....	1,250.00
F. Peabody, et al., Trustees.....	500.00
Arthur T. Lyman.....	500.00
Henry Lyman.....	500.00
Theodore Lyman	1,000.00
C. W. Macfarlane.....	100.00
Frederic Parker	50.00
Dudley L. Pickman	250.00
J. M. Prendergast.....	200.00
Mrs. Neal Rantoul.....	1,000.00
Wallace C. Sabine	100.00
Mrs. K. W. Sears.....	500.00
Dr. F. C. Shattuck.....	200.00
Mrs. G. Howland Shaw	100.00
James A. Stillman	50.00
Galen L. Stone.....	500.00
Nathaniel H. Stone.....	500.00
Eliot Wadsworth	100.00
Mrs. J. Collins Warren	250.00
Mrs. William G. Weld.....	500.00
Edward F. Whitney	500.00
George Wigglesworth	500.00
William Woodward	100.00
Accrued interest.....	309.37
	<u>\$36,034.37</u>

To all of these contributors the Commission extends its cordial thanks.

I also have the honor to submit to you a report upon the finances of the Cancer Commission of Harvard University, and of the Collis P. Huntington Memorial Hospital, for the year ended June 30, 1913. This report has been prepared and audited by Gunn, Richards & Company, Certified Accountants.

ARTHUR ADAMS,
Treasurer.

MR. ARTHUR ADAMS, *Treasurer*, Cancer Commission of Harvard University, Boston, Mass.

DEAR SIR: In accordance with your instructions we have supervised the accounting of all funds received or disbursed for your Commission. We have also summarized the transactions of the Commission as submitted by the assistant comptroller of Harvard College, and disclosed by the books and accounts maintained by your treasurer.

We submit the following exhibits for your consideration:

Exhibit A. — Statement of Funds for the year ended June 30, 1913.

Exhibit B. — Condensed Statement of Funds and Cash for the year ended June 30, 1913.

Exhibit C. — Statement of Revenue and Expenses for the year ended June 30, 1913.

Exhibit A:

This exhibit was compiled from statements furnished us by the assistant comptroller of Harvard College, who has verified and approved the same as correct.

Exhibit B:

In order to present a condensed statement of funds and cash we have combined the total of funds as set forth in Exhibit A, and the total cash transactions as disclosed by the books of the treasurer.

Exhibit C:

This exhibit is a condensed statement of revenue from all sources and all items of expense. The following revenue was received by the treasurer of Harvard College on account of the Cancer Commission:

Interest on funds.....	\$10,563.71
Gifts	43,284.37
Annual subscriptions.....	4,355.00
	<hr/>
	\$58,203.08
	<hr/>

The balance of \$4,554.72 represents the revenue from the Collis P. Huntington Memorial Hospital.

Of the expenses set forth in this exhibit, \$811.87 represents annual charges of the College, such as

Proportionate expense of telephone	\$242.31
Insurance for the year.....	261.68
University charge, purchasing agent	21.85
Inspector's office	138.05
Treasurer's office	84.20
Bursar's office.....	63.78
	<hr/>
	\$811.87
	<hr/>

Sundry bills and charges amounting to \$992.99 were paid by the treasurer of Harvard College and charged to the Huntington Hospital during the first three-quarters of the year; radium to the amount of \$15,000.00 was purchased with funds advanced by the treasurer of Harvard College, which we are informed by the assistant comptroller was charged to the Cancer Commission. This amount of \$15,000.00 together with sundry equipment amounting to \$525.77 are included under Primary Equipment, Physical Laboratory, on this exhibit.

Salaries of Dr. Tyzzer, Director, Dr. Ordway, Physician in Charge, and Dr. Duane were paid by Harvard College and charged to the Commission as corporation appointments; and \$4,341.29 was disbursed by the treasurer of the College on account of construction. The balance of expense for the year amounting to \$28,559.39 was incurred and billed direct to the treasurer of the Cancer Commission. Such portion of this amount as has been paid during the year was drawn from funds advanced by the treasurer of Harvard College to the treasurer of the Cancer Commission for maintenance purposes, and money received as income from the Collis P. Huntington Memorial Hospital.

General:

It will be observed from the following tabulation taken from Exhibit A, and a statement of patient and employee

days, submitted by the accounting department of the Hospital that the cost of food per patient and employee day for the year ended June 30, 1913, was \$0.48, and the entire cost per patient day, exclusive of research expense and corporation appointments, was about \$4.05.

In-patient days.....	5,372	Provisions.....	\$5,100.22
Out-patient days	401	Kitchen and dining-room..	1,080.76
Total patient days	5,773		<u>\$6,180.98</u>
		Deduct :	
Employee days.....	7,095	Board night nurses.....	27.85
Total patient and employee days	12,868	Net cost	<u>\$6,153.13</u>

Care of patients	\$5,967.35
Provisions	5,100.22
House-keeping.....	5,054.01
Administration	3,700.73
General house and property.....	1,079.64
Kitchen and dining-room.....	1,080.76
Laundry	798.91
X-ray and photography.....	576.79
Total maintenance cost.....	<u>\$23,358.41</u>

In considering the above figures it should be remembered that the following income was received as a result of the foregoing expenditures :

Board and care of ward patients.....	\$2,060.84
Board and care of private room patients	1,517.29
Board and care of out-patients.....	292.14
Special nursing.....	44.78
Board of night nurses.....	27.85
Occupation supplies.....	1.15
Gross photography.....	10.00
X-ray supplies.....	99.14
	<u>\$4,053.19</u>

Although a charitable institution it appears from this tabulation that of the \$23,358.41 expended for maintenance purposes, \$4,053.19 was received as income as a result of this expenditure, approximately 17 per cent.

As a result of our supervision and examination of the books and records of the treasurer of the Cancer Commission of Harvard College,

WE HEREBY CERTIFY:

1. That the balance of cash with treasurer showing an overdraft of \$215.31 is correct.
2. That the cash shown to have been received has been accounted for and that we have seen satisfactory evidence supporting all disbursements.
3. That the following exhibits, A, B, and C, subject to the foregoing comments are in agreement with the treasurer's record and the statement submitted by the assistant comptroller of Harvard College.

Very truly yours,

GUNN, RICHARDS & Co.

EXHIBIT A.

THE CANCER COMMISSION OF HARVARD COLLEGE, BOSTON, MASS.

Statement of Funds for the Twelve Months Ended June 30, 1913.

	July 1, 1912.			Receipts.	Disbursements.	Increase or Decrease. [¶]	Transfers.	June 30, 1913.		1913-14 Income Estimated @ 4.75%.
	Amount.	Principal.	Income.					Principal.	Income.	
Cancer Hospital endowment	\$100,876.27	\$100,460.24	\$416.03*	\$5,788.05	\$6,204.08	\$416.03	\$16,053.27	\$116,513.51	. . . . .	\$5,534.39
Cancer Hospital maintenance	6,287.72	6,287.72	†	1,077.43	7,365.15	6,287.72	. . . . .	. . . . .	. . . . .	4,371.19
Caroline Brewer Croft.	93,568.52	92,025.00	1,543.52†	3,322.47	4,865.99	1,543.52	. . . . .	92,025.00	. . . . .	237.50
L. C. Fenno free bed	5,063.55	5,000.00	63.55*	250.67	314.22	63.55	. . . . .	5,000.00	. . . . .	237.50
F. H. Hooper "	5,247.50	5,000.00	247.50*	259.73	507.23	247.50	. . . . .	5,000.00	. . . . .	237.50
A. L. Hopkins " . . . . .	. . . . .	. . . . .	\$	5,113.90	113.90	5,000.00	. . . . .	5,000.00	. . . . .	237.50
C. E. Payson "	5,247.50	5,000.00	247.50*	259.73	507.23	247.50	. . . . .	5,000.00	. . . . .	237.50
Cancer Hospital Proctor maintenance	25,000.00	25,000.00	*	1,237.50	3,760.19	2,522.69	. . . . .	22,477.31	. . . . .	1,007.67
L. C. Fenno Memorial — treatment by light rays	5,135.90	5,000.00	135.90*	254.23	. . . . .	254.23	. . . . .	5,000.00	\$390.13	256.03
Cancer Hospital research . . . . .	. . . . .	. . . . .	||	36,034.37	15,874.97	20,159.40	. . . . .	20,159.40	. . . . .	957.57
Collis P. Huntington Memorial Hospital — construction	17,394.56	17,394.56	. . . . .	. . . . .	1,341.29	1,341.29	16,053.27	. . . . .	. . . . .	\$13,136.85
Total	\$263,821.52	\$261,167.52	\$2,654.00	\$53,598.08	\$40,854.25	\$12,743.83	. . . . .	\$276,175.22	\$390.13	\$276,565.35

Note: * Interest.

† Interest, \$77.43; Gift, \$1,000.

‡ Interest, \$2,322.47; Gift, \$1,000.

§ Interest, \$113.90; Gift, \$5,000.

¶ Increases are in italics, decreases in black face type.

This schedule submitted to Gunn, Richards & Co. by the assistant comptroller of Harvard University.

EXHIBIT B.

THE CANCER COMMISSION OF HARVARD COLLEGE,
BOSTON, MASS.

Condensed Statement of Funds and Cash for Year Ended June 30, 1913.

Balance of Funds July 1, 1912.....	\$263,821.52	
“ Cash with Treasurer July 1, 1912	3,712.98	
	<hr/>	
Total Funds and Cash July 1, 1912....		\$267,534.50
Receipts for year	\$62,624.01	
Disbursements for year.....	53,808.47	
	<hr/>	
Excess Receipts		8,815.54
		<hr/>
Balance of Funds June 30, 1913	\$276,565.35	
“ Cash with Treasurer June 30, 1913 (over- drawn)	215.31	
	<hr/>	
Total Funds and Cash June 30, 1913 ..		<u>\$276,350.04</u>

C.

OF HARVARD COLLEGE,
MASS.

for the Year Ended June 30, 1913.

REVENUE.

Accounts receivable July 1, 1912.....		\$206.07
Board and care of ward patients	\$2,060.84	
Board and care of private-room patients.....	1,517.29	
Board and care of out-patients.....	292.14	
Pathological examinations	385.00	
Post-mortem examinations	35.00	
Chemical examinations	15.00	
Gross photography.....	10.00	
X-ray supplies	99.14	
Special nursing.....	44.78	
Laboratory supplies.....	12.85	
Board and care of two monkeys	22.00	
Sale three monkeys.....	18.00	
Gas and anæsthetist	12.00	
Board of night nurse	27.85	
Occupation supplies.....	1.15	
Miscellaneous	1.68	
Interest on funds	10,563.71	
Gifts.....	43,284.37	
Annual subscriptions	4,355.00	
	<hr/>	
Total revenue		62,757.80
		<hr/>
Total revenue and accounts receivable		\$62,963.87
Deduct: Receipts	\$62,624.01	
Worthless accounts receivable and dis- counts allowed.....	92.57	
	<hr/>	
		62,716.58
		<hr/>
Accounts receivable June 30, 1913		\$247.29
		<hr/>

FORM FOR DONATIONS AND BEQUESTS.

I give, devise and bequeath unto the President and
Fellows of Harvard College, the sum of \$.....
to be used for the work of the Cancer Commission of
Harvard University.

