

Annual report of the Collis P. Huntington Memorial Hospital for Cancer Research and of the laboratories of the Cancer Commission of Harvard University : 1924-25.

Contributors

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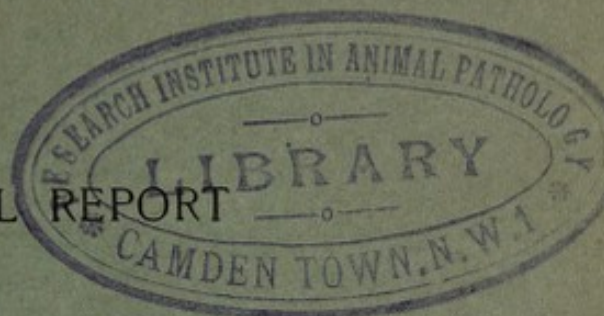
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Cancer Commission of Harvard University

THIRTEENTH ANNUAL REPORT



OF THE

COLLIS P. HUNTINGTON MEMORIAL HOSPITAL
FOR CANCER RESEARCH

AND OF THE

LABORATORIES

OF THE

CANCER COMMISSION OF HARVARD UNIVERSITY

1924-1925

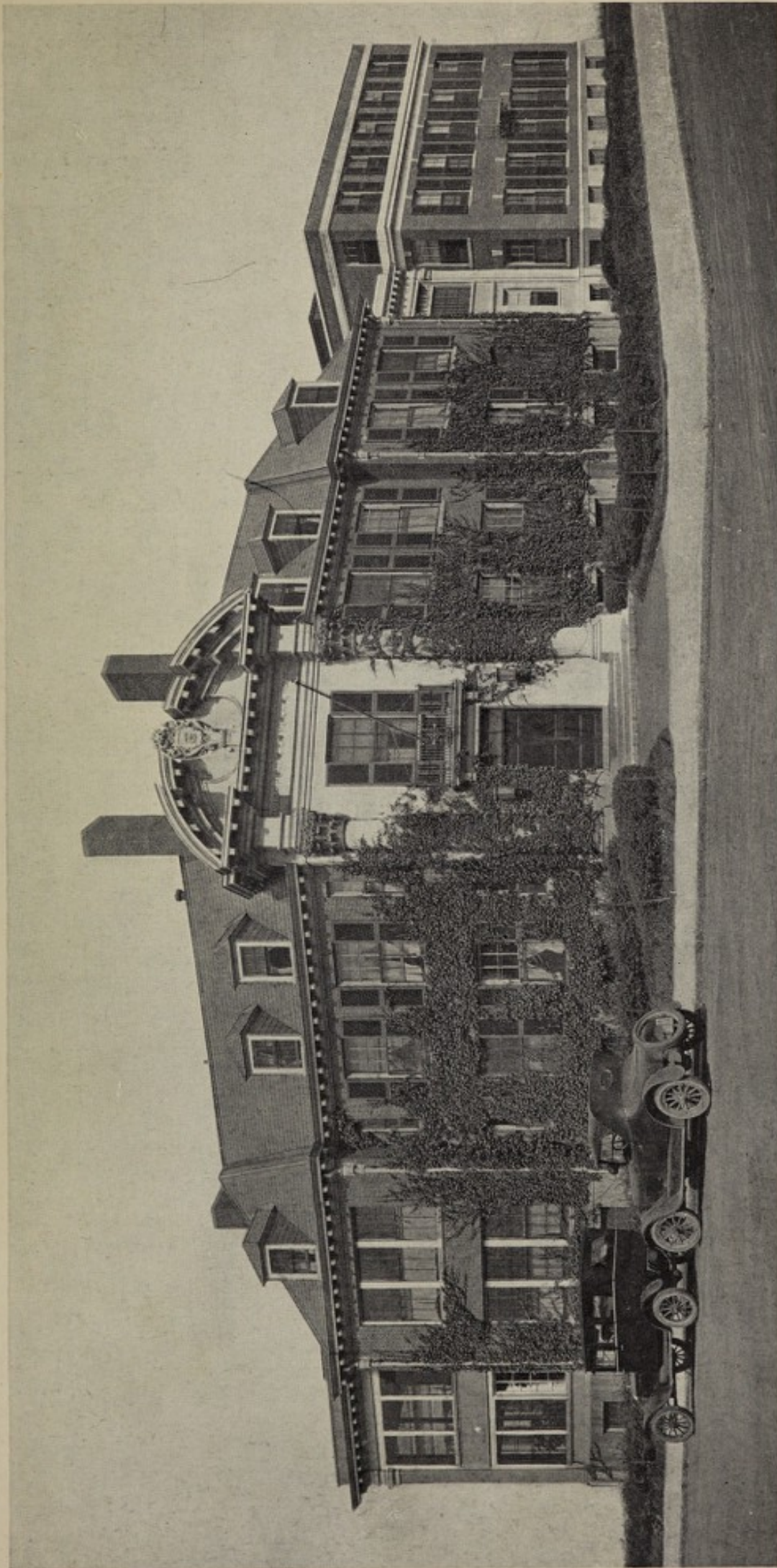
(FOR THE YEAR ENDING JUNE 30, 1925)

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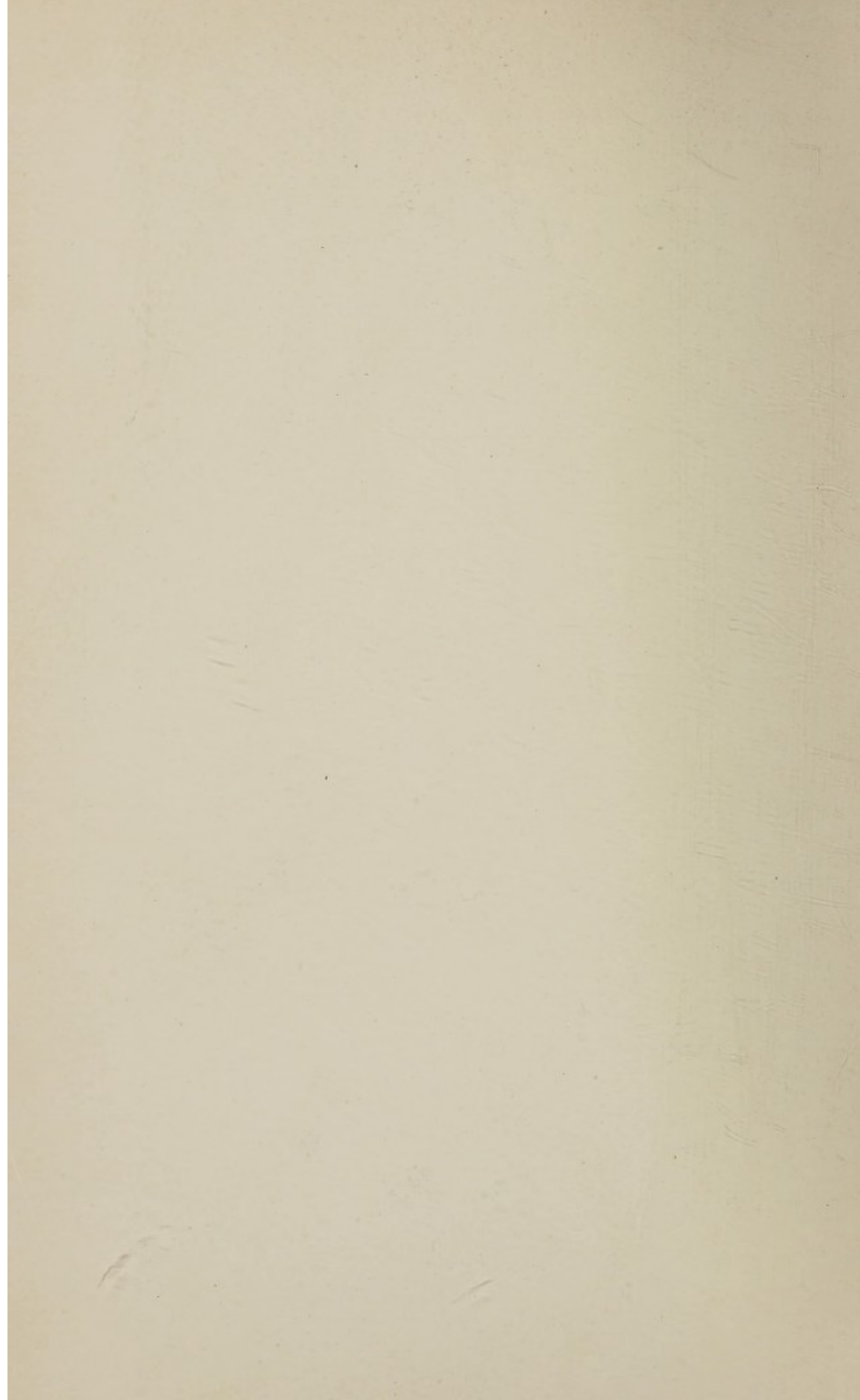


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THE COLLIS P. HUNTINGTON MEMORIAL HOSPITAL AND THE WARREN LABORATORY.

COOLIDGE & SHATTUCK, ARCHITECTS.



Cancer Commission of Harvard University

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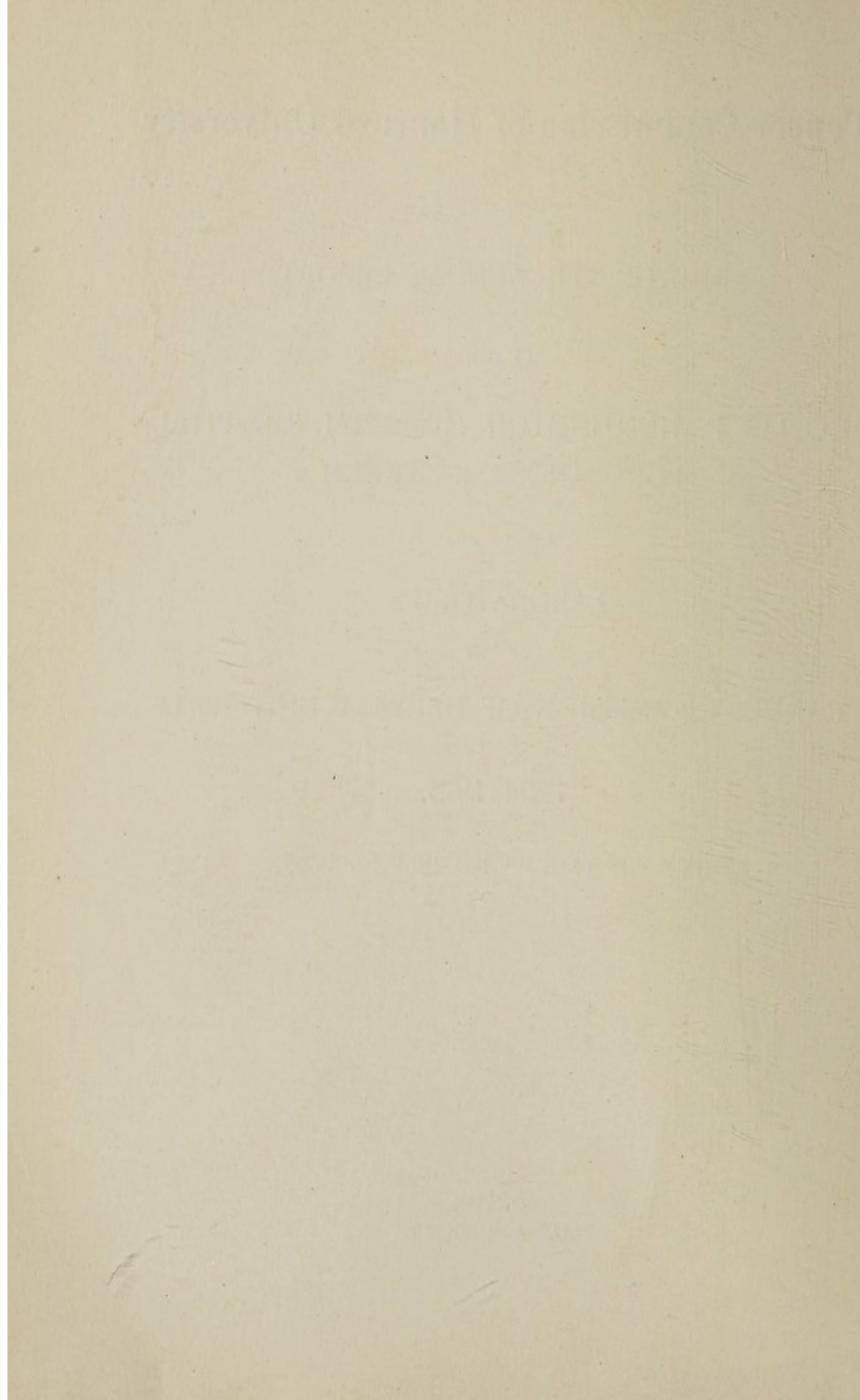


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FORM FOR DONATIONS AND BEQUESTS

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.

In case the Commission should decide at any time that the cause and treatment of cancer had been sufficiently determined I authorize them to devote this bequest to some other unsolved problem of medicine.

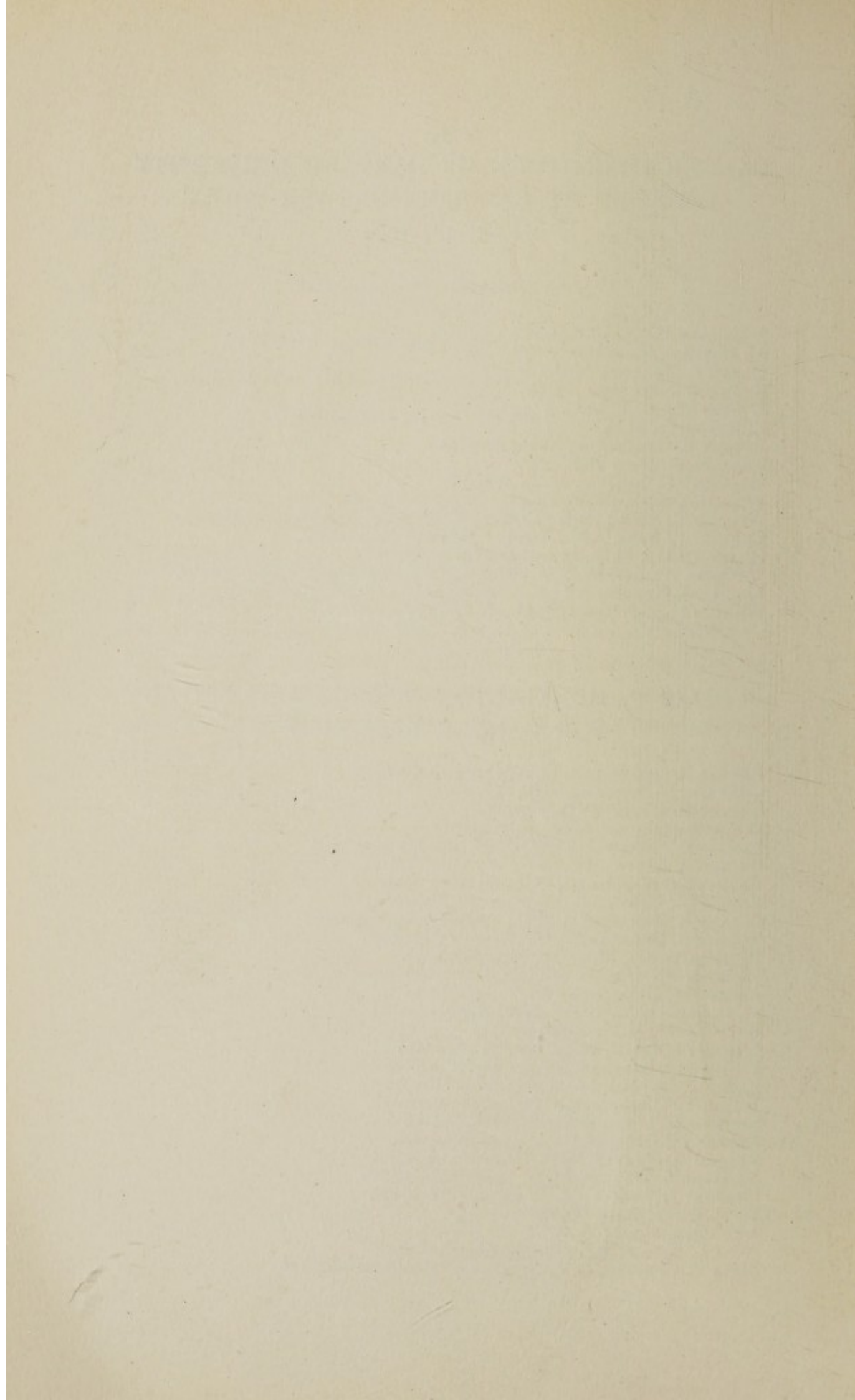
THE
CANCER COMMISSION OF HARVARD UNIVERSITY
FOUNDED BY CAROLINE BREWER CROFT
JUNE 16, 1899

HENRY P. WALCOTT, M.D., *Chairman*

J. COLLINS WARREN, M.D.	}	For the Caroline Brewer Croft Fund.
M. DOUGLAS FLATTERY		
HENRY P. WALCOTT, M.D.	}	For the Corporation of Harvard College.
EDWARD H. BRADFORD, M.D.		
S. BURT WOLBACH, M.D.	}	For the Harvard Medical School.
E. E. TYZZER, M.D.		
ROBERT B. GREENOUGH, M.D., <i>Director</i> .		
CHARLES JACKSON, <i>Treasurer</i> .		
CHANNING C. SIMMONS, M.D., <i>Secretary</i> .		
WILLIAM DUANE, PH.D., <i>Research Fellow in Physics</i> .		
WILLIAM T. BOVIE, PH.D., <i>Research Fellow in Bio-physics</i> .		
CHARLES E. BARR, A.M., <i>Research Fellow in Bio-physics</i> .		
HENRY LYMAN, M.D., <i>Research Fellow in Chemistry</i> .		
J. HOMER WRIGHT, M.D., <i>Pathologist in Charge of Free Diagnosis Service</i> .		
WALTER S. HUGHES, S.B., <i>Assistant Research Fellow in Bio-physics</i> .		
WILLIAM L. MCNAMARA, M.D., <i>Assistant in Pathology</i> .		

COLLIS P. HUNTINGTON MEMORIAL HOSPITAL
FOR CANCER RESEARCH

ROBERT B. GREENOUGH, M.D., *Surgeon in Charge*.
 CHANNING C. SIMMONS, M.D., *Surgeon*.
 GEORGE R. MINOT, M.D., *Physician*.
 D. CROSBY GREENE, M.D., *Laryngologist*.
 LAWRIE B. MORRISON, M.D., *Consulting Roentgenologist*.
 GEORGE A. LELAND, JR., M.D., *Assistant Surgeon*.
 GEORGE GILBERT SMITH, M.D., *Assistant Surgeon*.
 ERNEST M. DALAND, M.D., *Surgeon to Out-Patients*.
 LELAND S. MCKITTRICK, M.D., *Surgeon to Out-Patients*.
 THOMAS E. BUCKMAN, M.D., *Assistant Physician*.
 RAPHAEL ISAACS, M.D., *Assistant Physician*.
 EDWARDS W. HERMAN, M.D., *Assistant Laryngologist*.
 ARTHUR M. GREENWOOD, M.D., *Dermatologist*.
 M. C. SOSMAN, M.D., *Consulting Roentgenologist*.
 R. G. VANCE, M.D., *Roentgenologist*.
 WILLIAM L. DAVIS, M.D., *Surgical Assistant*.
 WILLIAM M. SHEDDEN, M.D., *Surgical Assistant*.
 EDWIN P. HAYDEN, M.D., *Surgical Assistant*.
 JOSEPH V. MEIGS, M.D., *Surgical Assistant*.
 STEPHEN G. JONES, M.D., *Resident Surgeon*.
 BEVERLY SIMPSON, M.D., *Resident Physician*.
 FRANCIS T. HUNTER, M.D., *Resident Physician*.
 STAFFORD L. WARREN, M.D., *Resident Physician*.
 HERBERT F. POYNER, M.D., *Resident Physician*.
 W. H. POTTS, *House Officer*.
 J. S. BARR, *House Officer*.
 ANNA L. GIBSON, R.N., *Matron-Superintendent*.
 MYRA B. CONOVER, R.N., *Assistant Matron-Superintendent*.



REPORT OF THE CHAIRMAN
OF THE
CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I transmit to you herewith the report of the Cancer Commission of Harvard University for the fiscal year ending June 30, 1925. This includes a detailed report of the work of the Commission from the Director, together with the reports of the various heads of departments, and the Treasurer's report.

We are glad to record the fact that the income available for the work of the fiscal year exceeded the expenditure by over \$13,000, thus enabling us to meet the deficit recorded in the 1923-24 report. This fact was due in large measure to the successful campaign for annual subscriptions, carried on by the Finance Committee, especially by the interest and activity of Mr. W. P. Homans, to whom the Chairman would express the cordial appreciation of the Commission.

The regular work of the Hospital and of the Laboratories has been continued during the fiscal year and some thirty-one reports of research work have been published by the Staff.

Respectfully submitted,

HENRY P. WALCOTT, *Chairman.*

July 1, 1925.

REPORT OF THE DIRECTOR
OF THE
CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit the following report of the work of the Cancer Commission of Harvard University for the year ending July 1, 1925.

The hospital and the laboratories have been in active operation throughout the year, the number of new patients (1,642) being thirteen more than in 1924. Without greater accommodation in the way of beds and examining rooms it is doubtful if any considerable increase in the total attendance at the hospital is possible or indeed desirable. It is of interest to note that two other excellent clinics for cancer patients will shortly be available in this community. One, an out-patient "Consultation Tumor Clinic," is already in operation at the Massachusetts General Hospital with an attendance of about 150 cases a month. The other, a projected Cancer Hospital of 65 beds adjacent to and under the control of the Deaconess Hospital, to be equipped with all resources for treatment and research. To both of these projects the Huntington Hospital has given its best assistance and support, on the ground that greater facilities are needed in this community than those now available for the treatment of cancer, and that the withdrawal of some of the routine cases from the Huntington clinic would make possible a greater selection of favorable material for investigative work. It is of interest to note also that a survey of the State's resources for the treatment of cancer cases has been authorized by the Legislature, and that the assistance of the Cancer Commission in this undertaking has been sought and has been obtained.

The report for the fiscal year 1923-24 was issued as usual in January and the Treasurer's report showed a deficit of \$9,688.64 on the year's operations. As the time did not appear propitious for the extensive drive to obtain a large endowment which has been discussed a number of times by the Commission, a committee, under the chairmanship of Mr. Jackson and aided ma-

terially by the enthusiasm and energy of Mr. William P. Homans, undertook by circular letters, newspaper publicity and personal interviews to increase the amount of annual subscriptions. This undertaking was so successful as to yield an increase of over \$20,000 in the annual subscriptions, and it is believed that many of the donors may be counted upon to continue from year to year.

In this connection the Huntington Hospital, as a member of the Boston Council of Social Agencies, was asked to contribute data to a Committee of the Boston Chamber of Commerce, on the Financing of Social Agencies, which made a study of this problem and published a report advocating the "Community Chest" plan. This report has been submitted to the Cancer Commission.

The Accounting system instituted in July, 1923, and carried on under the office of the Bursar of Harvard College, is this year proving of the utmost value. The accounts of each month's operations are shown, with comparison of the corresponding month of the year before. A review of the accounts for the fiscal year indicated that the expenses have been slightly reduced over the previous year, and that the hospital revenue has increased. The end of the year's operation showed a surplus of receipts over expenditures of \$13,686.68, which more than offsets the deficit of 1923-24.

After the fire at the Scobey Hospital in 1924, drastic regulations were issued from the Mayor's office in regard to the installation of sprinkler systems and fire alarms in all private hospitals in Boston. The University authorities were unable to obtain exact information in regard to the details of equipment, but assurance was given to the Building Commissioner that the regulations would be complied with and provisional contracts were signed for the installation. Another item of business interest is the decision of the President and Fellows to set up a "Maintenance Reserve" for buildings as a part of the annual budget of all parts of the University. In the case of the Huntington Hospital and Warren Laboratories this will amount to \$1,500 and is included in the budget for 1925-26 under "House and Property."

The maintenance of the hospital has been carried on on the same plan as heretofore. Miss Gibson, the matron-superintend-

ent, deserves great credit for her efficient and economical administration. The clerical department has been greatly strengthened since its reorganization with a chief clerk in charge, but additional clerical service is still needed to keep up with the extensive records of data which are demanded for satisfactory investigative work. The best review of the professional activities of the Commission is obtained by a consideration of the different departments.

Physics — Dr. Duane

The three departments of Radium, X-ray Diagnosis, and Short Wave-Length Therapy have functioned in a normal routine manner during the year. The breakage of X-ray tubes continues the greatest element of expense. The revenue from X-ray treatments has increased materially. New forms of apparatus designed and in part now manufactured by commercial companies promise to supplant the Duane apparatus, and installation of such a machine when perfected must be contemplated. No change at present is recommended. Investigation of the so-called "erythema" dose used in different clinics indicates wide variance in actual X-ray dosage as measured in ionization units. This subject is under investigation.

Interesting work has been done in the X-ray study of old pictures to determine underlying pigments for Professor Forbes of the Fogg Art Museum, and studies of the spectra of X-rays and of gamma rays have been made by Dr. Duane and his assistants.

Bio-physics — Dr. Bovie

Dr. Bovie has continued his instruction in the undergraduate department of the University in Cambridge and the course in Bio-physics has been extended from a half to a full course.

In the laboratory he has continued his work on ultra-violet light, and the mechanism by which the physiological effects of such radiations are produced. He has also studied and improved the method of application of this agent.

The new glass house which has been completed during the year affords much needed space and opportunity for investigative work upon plants and animals with these agents.

A valuable part of Dr. Bovie's work is the study of high frequency electric apparatus for cauterization, electro-coagulation-diathermy. Apparatus for these purposes has been widely used for the treatment of cancer as well as other diseases and with great variation in the results recorded. It is probable that the apparatus devised by Dr. Bovie will help to place these methods on a more reliable basis, and provide the surgeon with a more accurate knowledge of the immediate effects of his treatment than he has been able to obtain up to the present time.

Perhaps the most important part of the work in Dr. Bovie's laboratory has to do with the study of the minute physical and chemical changes in the normal cell-protoplasm, which occur with cell metabolism, growth and reproduction. This is a field in which little is known, but one in which there has been much speculation, and knowledge of these phenomena is perhaps the most important step at present by which to increase our knowledge of the nature and condition of cancer.

Medical Laboratory — Dr. Minot

This year has seen the more extensive development of the Medical Laboratory, and therewith a considerable extension of its demands upon the hospital for beds, apparatus for treatment, nursing, etc. It is a material fact that the medical laboratory service as now organized is productive of much valuable investigative work, and that it is of the greatest value in the stimulation and training of students and junior graduates, and contributes in no small part to the good repute of the institution. The most important contributions to medical literature have to do with blood diseases and their treatment by radiation.

Pathology — Dr. Wright

The Free Diagnosis Service, conducted by the Cancer Commission for the State of Massachusetts, brought in 1,654 specimens during the year, while 604 were examined from the Collis P. Huntington Memorial Hospital.

Dr. McNamara, Assistant in Pathology, assisted Dr. Wright in the diagnosis service and conducted experiments of his own on cancer production in animals by tar-products.

Both Dr. Wright and Dr. McNamara aided in critical study of large amounts of material from cases of cancer of the breast, lip, tongue, cervix and body of the uterus, in an attempt to co-ordinate clinical operative results with the pathological histology of the primary tumor.

General Service

The subdivision of the general service of the hospital into regional groups of cases has continued. Drs. Greene and Herman: Nose and Throat; Drs. Leland and Davis: Gynecological cases; Dr. G. G. Smith: Genito-urinary cases; Dr. L. S. McKittrick: Rectal cases; Drs. E. M. Daland, C. C. Simmons, Hayden, Meigs, Shedden and Jones: General Service; Dr. A. M. Greenwood: Dermatologist.

Under this system data of value have been collected and published of the results of treatment of cancer in its different situations.

As the work goes on the place of X-ray and radium in the treatment of cancer is becoming more clearly defined. The value of radiation as well as its limitations is becoming better appreciated. For the cure of serious forms of cancer, however, surgery remains, in almost all situations, the safest and surest method. If surgery or any other method is to succeed in curing cancer it must be applied in the early and favorable stages of the disease. To this end the education of the public and of the medical profession as well is greatly needed.

Respectfully submitted,

ROBERT B. GREENOUGH, *Director.*

July 1, 1925.

REPORT OF THE SURGEON TO THE CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: The work of the Collis P. Huntington Memorial Hospital was carried on during the fiscal year of 1924-1925 as usual by the regular staff, in addition to which members of several departments of the Harvard Medical School have given valuable aid in the capacity of consultants.

During the year, 1,642 new cases were examined at the hospital, 13 more than in the previous year. There were 7,178 outpatient visits as compared to 7,391 in 1923-24 and 6,150 inpatient days as against 6,342 in the last fiscal year.

Forty policy-holders of the John Hancock Mutual Life Insurance Company were examined for suspected carcinoma, of which eight were found to be suffering from the disease.

The following table shows the number of cases treated yearly since the foundation of the hospital:

<i>Year</i>	<i>Number Patients</i>	<i>O.P.D. Visits</i>	<i>In-patient Days</i>	<i>Operating Expenses</i>	<i>Total Hospital Earnings</i>
1912-1913	190*	482	5,372	\$23,358.41	\$4,053.19
1913-1914	360*	1,634	5,529	26,115.62	4,607.72
1914-1915	509*	3,676	5,725	25,278.78	9,811.08
1915-1916	508†	3,833	6,118	26,888.36	13,078.08
1916-1917	571†	4,488	6,602	29,266.00	15,176.46
1917-1918	767†	4,286	6,660	29,791.39	16,006.98
1918-1919	901†	4,420	6,484	33,692.45	20,744.18
1919-1920	1,286†	6,105	7,054	47,361.97	30,147.13
1920-1921	1,420†	6,820	6,511	66,157.03	39,143.41
1921-1922	1,636†	7,331	5,466	65,450.60	46,930.12
1922-1923	1,599†	7,748	6,115	72,332.09	47,714.00
1923-1924	1,629†	7,391	6,342	80,233.14	48,691.46
1924-1925	1,642†	7,178	6,150	82,438.18	54,401.99

*Old and new patients.

†New patients only.

The classification of new patients presenting themselves at the clinics during the year is presented below in tabular form, arranged according to the classification of diseases adopted by the Boston hospitals and based on the numbers in the International List of Causes of Death.

	<i>Male</i>	<i>Female</i>	<i>Total</i>
CARCINOMA			
Breast.....7-47a	1	90	91

Buccal Cavity.....7-43a			
Cheek.....	21	1	22
Jaw, lower.....	17	0	17
Jaw, upper.....	7	4	11
Lip.....	27	1	28
Palate.....	8	2	10
Parotid.....	2	0	2
Tongue, floor of mouth.....	59	2	61
Tonsil.....	9	0	9
Total.....7-43a	150	10	160

Female Genital Organs.....7-46a			
Cervix uteri.....	0	150	150
Ovary.....	0	10	10
Uterus.....	0	19	19
Vagina.....	0	9	9
Vulva.....	0	12	12
Total.....7-46a	0	200	200

Male Genital Organs.....7-49a			
Penis.....	3	0	3
Prostate.....	4	0	4
Scrotum.....	1	0	1
Total.....7-49a	8	0	8

Peritoneum, Intestines, Rectum, etc.....7-45a			
Intestine.....	1	1	2
Peritoneal carcinomatosis.....	0	1	1
Rectum.....	23	10	33
Sigmoid.....	2	1	3
Total.....7-45a	26	13	39

	Male	Female	Total
CARCINOMA (Continued)			
Skin.....7-48a			
Arm.....	0	1	1
Axilla.....	1	0	1
Back.....	3	1	4
Cheek.....	50	39	89
Chin.....	4	3	7
Ear.....	15	6	21
Eyebrow.....	1	0	1
Eyelid.....	14	12	26
Face.....	10	8	18
Finger.....	3	0	3
Forearm.....	0	2	2
Forehead.....	13	21	34
Hand.....	4	1	5
Leg.....	1	0	1
Lip.....	21	2	23
Mastoid region.....	2	0	2
Neck.....	3	12	15
Nose.....	41	45	86
Orbit.....	1	0	1
Scalp.....	1	2	3
Toe.....	1	0	1
Total.....7-48a	189	155	344

Stomach, Liver, etc.....7-44a			
Epiglottis.....	2	1	3
Esophagus.....	6	7	13
Pharynx.....	2	1	3
Nasopharynx.....	1	1	2
Stomach.....	4	1	5
Total.....7-44a	15	11	26

Urinary Organs.....7-49a			
Bladder.....	8	2	10

Other Sites			
Antrum.....7-49a	4	2	6
Branchial cleft.....7-49a	4	0	4
Ethmoid.....7-49a	1	1	2
Larynx.....7-49a	6	1	7
Lung.....7-107	1	0	1
Thyroid gland.....7-49a	2	0	2
Total.....	18	4	22

	<i>Male</i>	<i>Female</i>	<i>Total</i>
SARCOMA			
Antrum.....7-43f	2	1	3
Groin.....7-49f	1	0	1
Jaw.....7-155	1	1	2
Nose.....7-49a	1	0	1
Tonsil.....7-43f	1	0	1
Angiosarcoma			
Thigh.....7-48f	0	1	1
Fascial Sarcoma			
Thigh.....7-48f	2	2	4
Leg.....7-48f	0	1	1
Fibrosarcoma			
Abdomen.....7-49f	0	1	1
Foot.....7-49f	0	1	1
Labia.....7-48f	0	1	1
Leg.....7-48f	1	1	2
Parotid.....7-43f	1	0	1
Rectus muscle.....7-45f	0	1	1
Scalp.....7-155	0	1	1
Melanotic Sarcoma			
Ear.....7-48f	1	0	1
Groin.....7-48f	0	1	1
Neck.....7-48f	0	1	1
Myosarcoma			
Uterus.....7-46f	0	1	1
Osteogenic Sarcoma			
Clavicle.....7-49f	1	0	1
Femur.....7-49f	1	0	1
Jaw.....7-49f	0	3	3
Vertebra.....7-49f	1	0	1
Pelvis.....7-49f	1	1	2
Total.....	15	19	34
HEMANGIO-ENDOTHELIOMA			
Orbit.....7-49b	0	1	1
GLIOMA			
Eye.....7-49m	0	1	1
HYPERNEPHROMA			
Kidney.....7-49e	0	1	1
MALIGNANT DISEASE (Unspecified) ...7-49	1	3	4
MALIGNANT LYMPHOMA.....7-65.2	22	5	27
MIXED MALIGNANT GROWTH			
Parotid.....7-49g	1	1	2
Tonsil.....7-49g	0	1	1
NEUROBLASTOMA			
Adrenal.....7-131	0	1	1
Total.....	24	14	38

	Male	Female	Total
NON-MALIGNANT TUMORS			
Adamantinoma			
Jaw, upper.....7-49f	0	1	1
Adenofibroma			
Breast.....7-142	0	1	1
Angioma			
Pharynx.....7-109	0	1	1
Skin.....7-154	12	5	17
Tongue.....7-108	1	2	3
Uterus.....7-139	0	1	1
Angioma Cavernosum			
Axilla.....7-154	0	1	1
Cheek.....7-154	1	2	3
Neck.....7-154	0	1	1
Cyst-adenoma papillary			
Breast.....7-142	0	1	1
Cyst, dentigerous.....7-154	1	1	2
Cyst, nabothian			
Cervix.....7-137	0	1	1
Cyst, Mucous			
Lip.....7-108	3	2	5
Epulis			
Jaw.....7-155	1	0	1
Fibroma			
Cheek.....7-154	1	0	1
Larynx.....7-98	1	0	1
Fibromyoma			
Uteri.....7-139	0	30	30
Keloid			
Arm.....7-154	0	1	1
Neck.....7-154	2	0	2
Multiple.....7-154	1	1	2
Leiomyoma			
Skin.....7-154	0	1	1
Lipoma.....7-154	0	3	3
Lymphangioma			
Tongue.....7-108	0	1	1
Mucocele			
Frontal Sinus.....7-154	1	0	1
Neurofibroma			
Thigh.....7-154	0	1	1
Papilloma			
Bladder.....7-133	1	2	3
Jaw.....7-155	0	1	1
Larynx.....7-155	1	0	1
Mouth.....7-108	1	1	2
Palate.....7-108	2	0	2
Skin.....7-154	5	7	12
Tongue.....7-108	1	2	3
Polyp			
Cervix uteri.....7-139	0	7	7
Polyp			
Nasal.....7-97	1	0	1
Rhinophyma			
Nose.....7-97	1	0	1
Teratoma			
Testicle.....7-136	1	0	1
Wen.....7-154	11	3	14
Total.....	50	81	131

	Male	Female	Total
SPECIAL SKIN DISEASES			
Cheilitis.....10-154	0	1	1
Clavus.....10-154	0	2	2
Comedones.....10-154	0	1	1
Cornu.....10-154	1	1	2
Dermatitis.....10-154	1	1	2
Eczema.....10-154	3	1	4
Granuloma.....10-154	2	1	1
Intertrigo.....10-154	0	1	1
Keratosis, unqualified.....10-154	78	46	124
Keratosis, arsenical.....10-154	2	0	2
Lichen planus.....10-154	0	1	1
Lupus.....10-154	0	1	1
Lupus erythematosus.....10-154	2	3	5
Mycosis, fungoides.....10-154	0	1	1
Nevus.....10-159	1	5	6
Nevus, papillaris.....10-159	4	4	8
Nevus, pigmentosus.....10-159	1	6	7
Nevus, pilosus.....10-159	0	2	2
Nevus, vascularis.....10-159	2	2	4
Onychia.....10-154	0	1	1
Psoriasis.....10-154	0	2	2
Sarcoid.....10-154	0	1	1
Sycosis.....10-154	3	0	3
Verruca.....10-154	13	12	25
Total.....	113	96	207

OTHER CONDITIONS**SECTION I. SPECIFIC INFECTIOUS DISEASES,
GENERAL DISEASES.****Abscess**

Breast.....1-142	0	2	2
Alveolar.....1-108	3	0	3
Cheek.....1-108	0	1	1
Peritonsillar.....1-109	0	1	1
Chancroid			
Penis.....1-40	1	0	1
Epidermophytosis			
Hand.....1-154	0	2	2
Furuncle.....1-152	1	0	1
Infection, superficial.....1-25	1	5	6
Lupus vulgaris.....1-36.1	2	0	2
Onychomycosis.....1-30	0	1	1
Syphilis.....1-38	7	10	17
Tuberculosis.....1-36	11	10	21

SECTION III. DISEASES OF METABOLISM.

Diabetes, mellitus.....3-57	0	1	1
Forward.....	26	33	59

	Male	Female	Total
OTHER CONDITIONS (Continued)			
<i>Brought forward</i>	26	33	59
SECTION VIII. CONGENITAL MALFORMATIONS.			
Branchial Cyst.....8-159	2	1	3
Hirschsprung's Disease.....8-159	1	0	1
Pilonidal Sinus.....8-159	1	0	1
Thyro-glossal Cyst.....8-159	1	0	1
Fingers.....8-159	1	0	1
Supernumerary Breast.....8-159	0	2	2
SECTION IX. INJURIES.			
Injury to scalp.....9-187	1	0	1
SECTION XI. DISEASES OF THE CIRCULATORY SYSTEM.			
Arteriosclerosis, general.....11-92.2	0	1	1
Mitral insufficiency, stenosis.....11-90	0	1	1
Neurosis, cardiac.....11-90	0	1	1
Telangiectases.....11-95	1	1	2
Varicose Veins.....11-83	0	1	1
SECTION XII. DISEASES OF THE LYMPHATIC SYSTEM.			
Adenitis, cervical.....12-94	0	1	1
Lymphadenitis.....12-94	1	3	4
SECTION XIII. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS.			
Anemia, pernicious.....13-58	2	0	2
Leukemia, aleukemic.....13-65.1	0	1	1
Leukemia, lymphatic.....13-65.1	4	1	5
Leukemia, myelogenous.....13-65.1	7	10	17
Methemoglobinemia.....13-84	0	1	1
Polycythemia.....13-69	4	0	4
Splenomegaly.....13-64	1	0	1
SECTION XIV. DISEASES OF THE DUCTLESS GLANDS.			
Hyperthyroidism.....14-60.2	0	3	3
Goitre, adenomatous.....14-60.2	0	1	1
SECTION XV. DISEASES OF THE NERVOUS SYSTEM.			
Coccygodynia.....15-82	0	1	1
Glossodynia.....15-82	1	8	9
Herpes Zoster.....15-154	1	0	1
Mastodynia.....15-82	0	1	1
Asthenia, neuro-circulatory.....15-84	1	0	1
Psychoneurosis.....15-84	1	3	4
<i>Forward</i>	57	75	132

	Male	Female	Total
OTHER CONDITIONS (Continued)			
<i>Brought forward</i>	57	75	132
SECTION XVI. DISEASES OF THE BONES, JOINTS, MUSCLES, TENDONS AND FASCIA.			
Arthritis, infectious.....16-156	0	1	1
Bursitis, subdeltoid.....16-156	0	1	1
Exostosis, subungual.....16-155	0	1	1
Osteomyelitis.....16-155	3	0	3
SECTION XVII. DISEASES AND INJURIES OF THE EYE AND EAR.			
Deafness.....17-164	1	0	1
Conjunctivitis, vernal.....17-85	2	0	2
Infection, lacrimal gland.....17-85	0	1	1
Otitis, media suppurative, chronic.....17-86	0	1	1
SECTION XVIII. DISEASES OF THE NOSE AND ACCESSORY SINUSES.			
Inflammation.....18-97	1	1	2
Deviation of nasal septum.....18-97	0	1	1
Rhinitis, chronic.....18-97	0	1	1
Ulcer.....18-97	0	1	1
SECTION XIX. DISEASES OF THE MOUTH, LIPS, CHEEKS, PHARYNX, TONSILS AND PALATE.			
Hypertrophy of tonsil.....19-109	2	1	3
Inflammation, chronic.....19-109	0	3	3
Leukoplakia.....19-108	11	3	14
Pharyngitis.....19-109	2	1	3
Tonsillitis.....19-109	2	3	5
SECTION XX. DISEASES OF THE JAW, TEETH AND GUMS.			
Impacted tooth.....20-108	0	1	1
Pyorrhea, alveolaris.....20-108	1	0	1
SECTION XXI. DISEASES OF THE TONGUE.			
Hypertrophy, papilla.....21-108	1	0	1
Glossitis.....21-108	3	1	4
Leukoplakia.....21-108	3	1	4
Ulcer.....21-108	0	2	2
SECTION XXII. DISEASES OF THE ESOPHAGUS.			
Diverticulum.....22-110	2	0	2
Esophagismus.....22-110	1	1	2
Stricture.....22-110	1	1	2
SECTION XXIII. DISEASES OF THE STOMACH.			
Hyperacidity.....23-112	2	0	2
Pylorospasm.....23-112	2	0	2
Ulcer.....23-111	0	1	1
<i>Forward</i>	97	103	200

	Male	Female	Total
OTHER CONDITIONS (Continued)			
<i>Brought forward</i>	97	103	200
SECTION XXIV. DISEASES OF THE INTESTINES.			
Colitis.....24-114	0	2	2
Constipation.....24-119	0	2	2
Enteroptosis.....24-119	0	3	3
Ulcer, duodenal.....24-111	4	0	4
SECTION XXV. DISEASES OF LIVER AND GALL DUCTS.			
Cholecystitis.....25-124	2	3	5
Cholelithiasis.....25-123	0	2	2
Cirrhosis, liver.....25-122	0	1	1
SECTION XXVIII. DISEASES OF THE RECTUM AND ANUS.			
Fissure in ano.....28-119	1	0	1
SECTION XXIX. DISEASES OF THE LARYNX.			
Laryngitis.....29-98	2	0	2
SECTION XXX. DISEASES OF THE TRACHEA AND BRONCHI.			
Bronchitis.....30-99	1	0	1
SECTION XXXIII. DISEASES OF THE KIDNEY AND URETER.			
Hydronephrosis.....33-131	0	1	1
Nephritis.....33-129	1	0	1
Nephroptosis.....33-131	0	1	1
SECTION XXXV. DISEASES OF URETHRA (Male and Female).			
Caruncle, urethra.....35-134	0	1	1
SECTION XXXVI. DISEASES OF THE MALE GENERATIVE ORGANS.			
Fibrosis, penis.....36-136	1	0	1
Hypertrophy, prostate.....36-136	1	0	1
Inflammation glans penis.....36-136	1	0	1
SECTION XXXVII. DISEASES OF THE FEMALE GENERATIVE ORGANS.			
Endocervicitis.....37-141	0	5	5
Endometritis.....37-141	0	6	6
Erosion cervix uteri.....37-141	0	4	4
Fibrosis cervix uteri.....37-141	0	3	3
Hyperovarianism.....37-141	0	2	2
Laceration cervix uteri.....37-141	0	1	1
Menopause.....37-141	0	2	2
Menorrhagia.....37-140	0	1	1
Pruritis vulvae.....37-154	0	1	1
<i>Forward</i>	111	144	255

	Male	Female	Total
OTHER CONDITIONS (Continued)			
<i>Brought forward</i>	111	144	255
Salpingitis.....37-138	0	3	3
Valginitis.....37-141	0	2	2
SECTION XXXVIII. PUERPERAL STATE.			
Miscarriage, incomplete.....38-143.3	0	1	1
Pregnancy, extra-uterine.....38-143.2	0	1	1
Mastitis, lactation.....38-150	0	1	1
SECTION XXXIX. DISEASES OF THE BREAST (Male and Female).			
Cystic Disease.....39-142	4	10	14
Hypertrophy.....39-142	0	1	1
SECTION XLI. ILL-DEFINED AND UNCLASSIFIED DISEASES.			
Apprehension.....41-	1	0	1
Debility.....41-205.1	0	1	1
Exhaustion.....41-205	0	1	1
Malnutrition.....41-205	0	1	1
No diagnosis.....41-205	14	25	39
Wound of operation.....41-205	0	1	1
No disease.....41-	5	2	7
Total.....	135	194	329
CARCINOMA			
Breast.....			91
Buccal Cavity.....			160
Female Genital Organs.....			200
Male Genital Organs.....			8
Peritoneum, Intestines and Rectum, etc.			39
Skin.....			344
Stomach, Liver, etc.....			26
Urinary Organs.....			10
Other Sites.....			22
Total.....			900
Carcinoma.....			900
Sarcoma.....			34
Other Malignant Tumors.....			38
Non-Malignant Tumors.....			131
Special Skin Diseases.....			209
Other Conditions.....			330
Total.....			1,642

Five hundred and five operations were performed at the hospital during the year. Many of them were of a minor nature but a large number were major and were cases which required treatment by surgery and radiation combined. The proper radiation treatment of certain cases is in the nature of a major surgical

operation, and it is becoming recognized that a combination of the two methods is the treatment giving the best results in certain groups of cases. Cases requiring purely surgical treatment were usually referred to other institutions.

There were fourteen deaths in the hospital during the year. Nine autopsies were performed.

The general conduct of the clinics has been the same as in former years and it is gratifying to see that more patients are referred for precancerous lesions or very early cancer than was the case a few years ago. The clinics are held as follows:

Monday afternoon.	Rectal cases. Diseases of the blood and lymph glands.
Tuesday afternoon.	General surgical clinic.
Wednesday morning.	Diseases of the blood and lymph glands.
Wednesday afternoon.	Carcinoma of the nose and throat.
Thursday morning.	Carcinoma of the genito-urinary organs.
Thursday afternoon.	Carcinoma of the female genital organs.
Friday afternoon.	General surgical clinic.

During the year the Boston Radium Club held its monthly meetings at the hospital to which members of the staff were invited and took an active part in the discussion of the papers.

Several papers have been published, and the policy of the hospital assigning to some member of the staff a definite group of cases has been continued. At the present time, in addition to the usual assignment, the cases of cancer of the lip are being studied by Dr. Shedden with particular reference to the results of treatment in the various forms as determined by the amount of differentiation of the cells found on microscopic examination.

It has been found necessary to assign a special day to the rectal cases and these are now examined and treated on Monday afternoon. This clinic is in charge of Dr. L. S. McKittrick.

Work is being undertaken in conjunction with the laboratory of bio-physics on the use and measurement of the amount of heat generated in the treatment of malignant diseases by diathermy.

The surgeon wishes to express his thanks to the nursing and clerical force of the hospital as well as to the staff, whose willingness and devotion to duty have made it possible to conduct the clinics in a satisfactory manner.

Respectfully submitted,

CHANNING C. SIMMONS,
Surgeon.

July 1, 1925.

REPORT OF THE PHYSICIAN
AND
CHIEF OF THE MEDICAL LABORATORIES
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: The modern laboratory does not supply something absolute which does away with the necessity for careful clinical study. Work emerging from it aids our understanding of disease. However, the care of the sick is the fundamental function of any hospital and the teaching of medicine and research are important additional functions of a University hospital. Such is the nature of the work of the medical service and its laboratories.

The past year has seen a continued increase of routine work, leaving less time to devote to research. An increased comprehensive study of each patient has not only benefited the individual, but has served to train young men to do thoughtful work and to make records that will enable a useful survey of groups of cases. The training of students and young physicians to become wise physicians, investigators and students of men has been a pleasurable duty. This demands a rather constant changing of resident physicians and students, which slows up progressive work. These young men cannot, of course, undertake work of a profound nature. To enhance investigation the addition to the personnel of a trained worker would be a step in advance and such a man could aid the development of one or two younger men each year.

There are numerous investigations being undertaken depending on the accumulation of data. Among these are studies on: (1) The arthritic and neuritic manifestations of leukemia. (2) The basal metabolic rates in leukemias and "lymphomas". (This test is becoming of increasing importance in determining the amount of irradiation to administer.) (3) The benefits of short wave-length roentgen-ray therapy in leukemia. (The data being accumulated for these patients probably will make a pleasing contrast to that published heretofore.) (4) Certain aspects

of "malignant lymphoma." A prolonged statistical survey of over 400 cases is in the process of completion by Drs. Minot and Isaacs. (5) The beneficial effects of phenylhydrazin in erythremia. (6) The effect of irradiating a large area of blood in contrast to a local diseased tissue, especially in "lymphoma." (7) The formed elements of the blood in various forms of lymphoma and the frequency of leucopenia from roentgen-ray therapy.

The fifteen papers published during the year are given in the list at the end of this report. They indicate the progress of the scientific work as do the following papers that are in the press.

- (1) The Effect of Heat on Immature Erythrocytes.
Jour. of Clinical Investigation. Isaacs, R.; Brock, B.; and Minot, G. R.
- (2) The Effect on Paramoecia of Blood Sera, Especially from Patients with Carcinoma.
Arch. Int. Med. Deland, G. A.
- (3) The Effect of Roentgen Ray and Radium Irradiation on Red Blood Cell Production in Cancer and Leukemia.
Am. J. Med. Sci. Isaacs, R.
(On July 15, 1925, the Philadelphia College of Physicians awarded the Alvarenga Prize to Dr. Isaacs for this original essay.)
- (4) The Influence of Position on the Vital Capacity and Percentage of Supplementary Air in Normal Persons and in Patients with Large Spleens.
Boston Med. and Surg. Jour. Hunter, F. T.
- (5) The Effect of pH on the Oxygen Consumption of Tissues.
Jour. Biol. Chem. Koehler, A. E.; and Reitzel, R. J.
- (6) The Effect of Lead and Radium on Mature and Immature Red Blood Corpuscles.
Arch. Int. Med. Pearse, H. E.

Some of the special activities of different members of the staff are shown by the list of publications and above titles. The following notes give additional information.

DR. ISAACS has continued studies on the effect of irradiation on the maturation of red blood corpuscles and the influence of certain other substances on this process. He has begun observations on certain properties of sera that may be influenced by cancer. Dr. Isaacs fills a most important position, one requiring many diversions and interruptions, yet in spite of this, the work has been well done.

DR. BUCKMAN continued to conduct the small pediatric clinic until February 1st. It was discontinued then because he accepted a position in Florida. The service intends to continue the

care and study of children, but it is planned not to have any one individual in charge of such work. Dr. Buckman is completing with Dr. Minot studies concerning the white blood-cells in leukemia. His supervision of Dr. Cohen's work has taken time.

DR. JOHN COHEN, as a volunteer worker, began studies concerning the metabolism of tissues. He soon realized a new form of apparatus was necessary. Before he left, February 1st, to accept a position in New York he had devised with Dr. Buckman a preliminary model of a microspirometer. The remodelling and testing out of this apparatus is being undertaken by Miss Daland under Dr. Buckman's supervision. The former, with Dr. Wilbur, will continue to try to perfect this instrument. This will require some months of work before useful observations can be anticipated on the metabolism of the formed elements of the blood, the effect of sera on the respiration of tissue and other similar fundamental problems of cellular biology, such as the character of the metabolism of cancer tissue.

DR. FRANCIS T. HUNTER served as resident physician September 12 to February 15. Besides his work in press, he obtained data on the vital capacity in leukemia and when more is accumulated the results should be of interest.

DR. STAFFORD L. WARREN, resident physician January 15 to July 15, is completing investigations he has begun on protein extracts of cancer and the influence of bacteria as "irritative" agents leading to the development of tumors.

During the year it became evident that the resident physician could not undertake investigative work and also conduct in the best manner the increasing routine clinical work. As an important object of the service is to train men in investigative ways and to advance knowledge, the position of second resident physician was created. Thus since March there has been, and in the ensuing year there will be two men, rather than one, to conduct the routine and each will have some time for special studies. This arrangement is advantageous, but does not permit work of a type that might be made by a trained full-time investigator.

DR. H. E. PEARSE worked during the year as a tutorial student investigator. His work bearing on chemo-therapy is noted in the list of publications and he is collaborating with Dr. Warren. He made other interesting studies on chemo-therapy of cancer in the department of pharmacology under Dr. Reid Hunt and his asso-

ciates. Dr. Pearse has taken charge of the collection of data concerning the formed elements of the blood in "malignant lymphoma", which work will be continued by Mr. Stetson.

MR. RICHARD STETSON of the third-year class has studied the normal basal differential white cell count. He is evaluating the mass of accumulated data regarding the white cell count as effected by irradiation. As a tutorial student, 1925-26, he is to spend some time undertaking investigations.

The teaching of medical students by Drs. Minot and Isaacs has been conducted as in 1923-24, with the addition of a volunteer course in June and one for naval graduate students during the spring.

The service is most fortunate in having DR. CYRUS C. STURGIS accept the position of Associate Physician for the ensuing year. He will conduct and supervise the formulated problems concerning the metabolism of tissues and patients and aid the service in a general manner, as did Dr. Buckman.

In the ensuing year more special students than heretofore have been promised opportunity for work, in spite of the very limited amount of laboratory space for them and the added resident physician. The service could use additional quarters for many purposes.

Besides Mr. Stetson, Messrs. C. E. FORKNER and M. C. RIDDLE as special fourth-year students are to undertake investigations. Mr. Forkner is to work by means of vital dyes on problems concerning living cells. Mr. Riddle, in the eight months before he becomes resident physician, will conduct with Dr. Sturgis metabolic studies. His work will be correlated directly with Dr. Wilbur's on the respiration of tissue.

Messrs. D. N. MEDEARIS and E. L. PERSONS, both resident third-year student house officers, have elected their "elective time" for special studies with the medical service, and Mr. A. C. Danielian of this class has done the same.

Dr. Minot has continued to give not less than half his time to work pertaining to the hospital. The time taken for supervision of the work indicated above, formulation of problems, editorial revision of manuscripts, etc., is considerable. Dr. Christian has most kindly made it possible for liason with the Peter Bent Brigham Hospital and Dr. Minot has been appointed "Associate in Medicine" at that institution. The geographical location

of this hospital enables him to keep in touch with a general medical clinic in a way that he could not do at the Massachusetts General Hospital. Through the kindness of the Trustees of the latter institution Dr. Minot retains a special position on its staff. It is believed that the association with the Peter Bent Brigham Hospital will be an advantage to the development and unity of the medical service of the Huntington Hospital.

As in the past, many of the new studies anticipated will concern problems of cellular biology. A close correlation between research and the clinical care of patients will be continued and constantly the natural history of disease will be studied. The changes in size of red blood corpuscles, the significance of the stroma index, the fate of the leucocytes, etc., as bearing on the rate and character of growth, are topics under consideration. There is considerable work to be completed and many problems to initiate directly related to the treatment of cancer.

The financial aid given by the Proctor Fund has been a very real benefit and the grants for the past year and the ensuing year are acknowledged most gratefully. The helpful advice and courtesies extended by members of various departments of the hospital, of the medical school and allied hospitals are recognized and appreciated.

The work of this second year of the present medical service has been progressive. Even so, there are numerous matters, given in the complete report of which this is a summary, to consider in order to organize an investigative service of the most useful type. Ambitions exceed accomplishments. Success will follow in proportion to the intensity of study by wisely selected persons enabled to work calmly, but deliberately. Expansion by duplication or with addition of routine does not lead to progress. The foundations of the advances in the cure and prevention of disease have been laid in basic scientific studies made in combination with the clinic. Money alone accomplishes nothing, but it is the medium by which the proper men can be made free to devote themselves whole-heartedly to the search for knowledge toward the defeat of cancer.

Respectfully submitted,

GEORGE R. MINOT.

July 1, 1925.

REPORT OF THE MATRON-SUPERINTENDENT
TO THE
DIRECTOR OF THE CANCER COMMISSION
OF HARVARD UNIVERSITY

DEAR SIR: The past year has seen increasing activity in all departments of the Hospital, although the number of new cases and the number of days' treatment remain about the same.

It is interesting in showing the growth of the hospital to make comparisons, and in doing this we have taken the year 1912-1913 and the year 1923-1924. This comparison demonstrates the service the hospital is rendering.

<i>Year</i>	<i>Number Patients</i>	<i>O.P.D. Visits</i>	<i>In- patient Days</i>	<i>Operating Expenses</i>	<i>Total Hospital Earnings</i>
1912-1913	190	482	5,372	\$23,558.41	\$4,053.19
1923-1924	1,629	7,391	6,342	80,233.14	48,691.41

CHARITY WORK OF THE HOSPITAL — The free beds have been in constant demand. The eligibility of patients for free treatment is carefully questioned and determined by the social history.

A large percentage of the protracted cases who are obliged to have more or less of the hospital charges omitted pay so little that they should be classed as free patients.

During the fiscal year, 1,184 patients were admitted as in-patients, and there were 7,178 out-patient visits. Of the 1,184 in-patients, 204 were treated free, 800 paid \$21 per week or less, and 180 paid more than \$21 for private room.

The humanitarian aspect of the hospital work has been forcefully emphasized by the large number of deserving persons, pitifully afflicted with cancer, who have been cared for at the hospital, some for prolonged periods of time.

We are very grateful to the Community Health Association for their coöperation and interest in our out-patients. The efficient care given and their efforts in getting patients to keep their appointments has aided materially in hastening the patient's recovery.

Believing that nurses can make themselves reliable sources of authentic information with respect to the prevention, recognition and care of cancer, cordial invitations have been given to nursing associations to visit our clinics, and many nurses have availed themselves of this opportunity.

Public Health Nurses have an unusual opportunity of detecting early cases which would otherwise escape recognition until they had passed to an incurable stage, and, by exerting an intelligent influence on those who have cancer in its early stages, they are able to induce patients to seek immediate and competent treatment. It has been interesting to note the many early cases which have been referred by District Nurses.

Miss Conover, the assistant Matron-Superintendent, has continued the intensive follow-up work with gratifying results. She reports that Town Clerks have been most courteous and helpful in assisting her to obtain data. Satisfactory replies have been received from eighty-five per cent of the letters sent out.

RECORD DEPARTMENT — There has been a decided improvement in our Record Department due to the activities of the medical service. This will mean an additional stenographer as the present clerical force is unable adequately to take care of the increased volume of work. It has already been necessary to engage a part-time stenographer to copy papers and reports. It is obvious that efforts to perfect this department will be of material benefit to the physicians and the patients, as well as the Hospital.

BUILDINGS AND GROUNDS — There has been the usual amount of painting and minor repairs, but nothing has been done for several years in the way of improvement to the grounds, and the urgent necessity along this line is keenly felt. The lawn needs a good quality of top soil, fertilizing, rolling, and grass seed sown. The barberry hedge needs pruning. It would add to the attractiveness of the grounds adjoining the annex to have a similar hedge planted on the lawn facing the street. The parking space in the rear of the hospital should be enlarged, and the setting out of shrubbery next to the tennis court would make a more pleasing outlook.

LAUNDRY — Extensive repairs to the mangle have been made and new set tubs of stone installed to replace the worn-out wooden tubs. Some method should be devised to take care of the

excessive heat coming from the numerous steam pipes running through the laundry.

KITCHEN AND DINING ROOM — Considerable new equipment is needed for the kitchen. Much time and material can be saved by installing steam kettles and an electric ice-cream freezer.

There have been fourteen deaths in the hospital. Autopsies were performed on nine cases. Five hundred and five operations were performed during the year as follows: —

OPERATIONS FOR 1924-1925

CARCINOMA

Breast	
Amputation and dissection of axilla.....	8
Buccal Cavity	
Cheek	
Excision and cauterization.....	6
Plastic operation.....	2
Jaw	
Excision and cauterization with or without radium treatment.....	4
Lip	
Excision.....	18
Excision and dissection of neck.....	4
Nose	
Radical rhinotomy and cauterization.....	1
Palate and floor of mouth	
Excision, curettage and cauterization.....	8
Septum	
Excision and cauterization.....	1
Tongue	
Excision and cauterization.....	8
Tonsil	
Radium treatment.....	1
Female Generative Organs	
Cervix	
Curettage and radium treatment.....	153
Colostomy for obstruction.....	1
Ether examination, exploratory laparotomy.....	1
Ovary	
Curettage and radium treatment.....	1
Uterus	
Curettage and radium treatment.....	18
Vagina	
Curettage and radium treatment.....	9
Vulva	
Vulvectomy.....	4
Curettage and radium treatment.....	6
Male Generative Organs	
Penis	
Amputation.....	1
Excision of gland of groin.....	1
Peritoneum, Intestines and Rectum	
Epiglottis	
Curettage and radium treatment.....	2
Gastrostomy.....	1

Esophagus	
Esophagoscopy and radium treatment.....	7
Gastrostomy.....	3
Larynx	
Laryngoscopy and radium treatment.....	5
Laryngectomy and tracheotomy.....	1
Tracheotomy.....	3
Nasopharynx	
Curettage and radium treatment.....	1
Pharynx	
Radium treatment.....	1
Rectum	
Curettage and radium treatment.....	4
Urinary Organs	
Bladder	
Cauterization and radium treatment.....	2
Cystoscopy.....	1
Regions not elsewhere mentioned	
Antrum	
Excision and radium treatment.....	6
Orbit	
Excision and cauterization.....	4
Exenteration.....	3
Eyelid	
Plastic.....	2
Ethmoid	
Excision and curettage.....	4
Skin	
Excision.....	44
SARCOMA	
Esophagus	
Esophagoscopy.....	1
Palate and Tonsil	
Radium treatment.....	3
Angiosarcoma	
Excision.....	1
Fibrosarcoma	
Excision.....	2
Melanotic Sarcoma	
Excision.....	1
Osteogenic Sarcoma	
Jaw	
Radium insertion.....	1
NON-MALIGNANT TUMORS	
Adamantinoma	
Jaw	
Excision.....	1
Angioma	
Excision.....	3
Cyst, Excision of	
Dentigerous.....	2
Mucous.....	1
Thyro-glossal.....	2
Cystic Disease	
Breast	
Excision.....	1
Epulis	
Excision and cauterization.....	2
Fibroma	
Excision.....	4

Fibromyoma uterus	
Curettage and radium treatment.....	22
Keloid .	
Excision.....	2
Lipoma	
Excision.....	2
Papilloma	
Jaw, Palate	
Excision.....	3
Larynx	
Laryngotomy.....	1
Laryngoscopy.....	1
Skin	
Excision.....	4
Polyp	
Cervix	
Curettage and radium treatment.....	5
Wen	
Excision.....	6
SPECIAL SKIN DISEASE	
Keratosis	
Excision.....	8
Lupus	
Excision and cauterization.....	1
Nevus	
Excision.....	2
Verruea	
Excision.....	2
OTHER CONDITIONS	
Abscess	
Incision and drainage.....	4
Caruncle, urethral	
Curettage and radium treatment.....	1
Exostosis, subungual	
Excision.....	1
Menorrhagia	
Curettage and radium treatment.....	1
Fibrosis	
Uterus	
Curettage and radium treatment.....	2
Diverticulum	
Esophagus	
Esophagoscopy.....	1
Stricture (benign)	
Esophagus	
Dilatation.....	2
Nasopharynx	
Dilatation.....	1
Leukoplakia	
Mouth	
Cauterization.....	2
For Diagnosis	
Removal of specimen.....	30
Fistula	
Vagina	
Repair.....	1
Endometritis and endocervicitis	
Curettage and radium treatment.....	10
Granulating wound	
Skin grafting.....	12
Transfusion.....	3
Total.....	505

The Directors of the Central Directory for Nurses held their annual meeting here in April. The Radium Club of Boston held its usual number of meetings.

We are indebted to the following friends for gifts to the hospital: —

Dr. Robert B. Greenough.....	Money for Xmas.
Dr. Channing C. Simmons.....	Books and magazines.
Dr. William M. Shedden.....	Books and gramophone records.
Dr. William L. Davis.....	Flowers.
Mr. Roland Thorpe.....	Flowers.

Respectfully submitted,

ANNA L. GIBSON, *R.N.*

July 1, 1925.

REPORT OF THE SOCIAL SERVICE WORKER
TO THE
DIRECTOR OF THE CANCER COMMISSION
OF HARVARD UNIVERSITY

DEAR SIR: As part-time social worker I herewith submit my annual report for the fiscal year ending June 30, 1925.

As heretofore, patients were referred to the Department by members of the Staff, the Superintendent, Assistant Superintendent and outside agencies.

This year 149 cases were handled by the Department — 51 continued and 98 new cases — 120 home visits were made; employment was secured for one, vacation was arranged for one.

Among the many problems with which this Department has to deal, one of the most difficult is the placing of patients for permanent or even temporary care, for at present institutions admitting them are few in number and have long waiting-lists. During the year we were able, however, to place 21 patients — 18 for permanent and 3 for temporary care, as follows: —

PERMANENT CARE

House of the Good Samaritan.....	12
Holy Ghost Hospital.....	1
Palmer Memorial Hospital.....	1
Chelsea Naval Hospital.....	1
Private Hospitals.....	3

TEMPORARY CARE

Jewish Convalescent Home.....	1
Lawrence General Hospital.....	1
*Boston Sanatorium.....	1

*The patient placed in this institution had tuberculosis as well as a malignant disease.

To help solve other problems that confront many of our patients we are indebted to the Committee of the Permanent Charity Fund, Incorporated, for a gift of \$500 that has made it possible for us to administer such needs as proper food in cases where a certain diet has been prescribed, medicines, gauze, and in some instances a nurse; arranging transportation by taxi, ambulance, or supplying fare for patients who otherwise would

be unable to report to the hospital; assisting financially, and supplying little luxuries such as delicacies, flowers and magazines.

This year, as several cases presented intricate and time-consuming problems, we found it greatly to our advantage to improvise a new and more complete type of record for each patient.

The Department appreciates the coöperation of members of the Staff, the Superintendent and Assistant Superintendent. We also wish to express our thanks to the outside agencies who have coöperated with us so admirably, and to the American Red Cross Volunteer Motor Corps for their assistance in transporting patients to and from the hospital.

We are indebted to the following for gifts:

Benevolent Fraternity, Fruit and Flower Mission	
(Boston Branch of the National Fruit and Flower Guild)	Flowers
Mr. R. F. Daughters, Boston Manager, Leslie Judge	
Co.....	Subscription to "Judge"

Respectfully submitted,

EMILY G. PHILPOTTS,
Social Worker.

REPORT OF THE
RESEARCH FELLOW IN PHYSICS
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY

DEAR SIRs: I have the honor of presenting the following report:

The departments of X-rays and radio-activity have been functioning in a routine manner during the past year and I would not suggest any immediate fundamental change in their organization.

The commercial companies have been developing X-ray plants and have produced such plants that are considerably more powerful than that which we now possess. The average life of X-ray tubes operated by these plants appears to be somewhat longer than the average life of the tubes that we use. For this reason, it may become desirable in the future to replace our old X-ray plant by one of these commercial machines. I have recently purchased an essential part of the plant constructed by one of the commercial companies and I hope to test it in the X-ray Laboratory at Cambridge. I shall not be prepared to advise any material change in our X-ray plant until these tests have been made and until I have had an opportunity of examining the X-ray departments in other institutions, which I hope to do in the near future. I have been planning some experiments, also designed to test a method of increasing the life of the tubes.

During the last five months, the average number of treatments given by our old X-ray plant has been twenty-four per week. The maximum possible number, with our present organization, is thirty-four per week. Thus, the number of treatments might be increased by forty per cent, if desired. This increase would provide for the carrying on of some experiments that have been suggested on the effects of X-radiation.

Since we began X-ray treatments, we have been using ionization methods of measuring X-ray dosage, the dose being expressed in terms of a certain unit, usually designated by the

letter e. This appears to be the most scientific method of measuring dosage that has been suggested so far. We have been collecting data from our own as well as from other institutions on the exact value of what X-ray specialists call an erythema dose, when this dose is expressed in e units. The results indicate that the values of the erythema dose, as estimated by different individuals, vary from 500 to about 1,500, our own estimate being in the neighborhood of 1,200. Thus, the erythema dose as estimated by some roentgenologists is three times as large as that estimated by others. This large variation is doubtless due, to some extent, to differences in what is regarded as an erythema dose by different individuals, to differences in the sensitivity of different patients to the treatment and also to the desire of certain conservative roentgenologists to use a dose that is well below the radiation that could possibly produce, even in the most sensitive patient, anything that could be construed as an X-ray burn.

Mr. Hudson and Mr. Bohn have been carrying on researches in the spectra of X-rays and of gamma rays with the ultimate purpose of obtaining a more accurate idea of the fundamental physical differences between the two forms of radiation.

The X-ray Department has completed arrangements with Mr. Forbes for the taking of X-ray photographs of old paintings to see if other paintings lie under the visible ones. We took such a photograph of a map belonging to the Boston Public Library and found a coat-of-arms underneath. This appears to be an important method of examining certain old paintings.

Respectfully submitted,

WILLIAM DUANE,
Research Fellow in Physics.

July 1, 1925.

REPORT OF THE
RESEARCH FELLOW IN BIO-PHYSICS
TO THE
CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: During the year I have given seventeen addresses in eight cities of the United States and Canada.

My beginning course in Bio-physics was extended by the University this year from a half to a full course, running throughout the year. The time of Mr. Hughes and Professor Barr has been quite thoroughly taken up with this class. In addition, Professor Barr has given a course in Comparative Anatomy to members of the laboratory staff. He has also been of very great service in an editorial capacity in preparing for publication the papers that have been published, as well as others that are not yet complete.

Last year Professor Barr made some very interesting observations on the influence of photocytolytic products on amoebas. Mr. Belkin has been continuing this line of work.

Another observation of Professor Barr on the reaction of amoebas to light has led to a concept of the relation of light to growth and form and to physiological changes that I believe to be of fundamental importance.

The eye apparatus, under the care of Mr. Guillemin, has been completely reconstructed. It has an entirely new electrical circuit and I have devised a new amplifying unit that is simpler and more dependable than heretofore. In the prosecution of the researches on vision it will be necessary at times to transport this apparatus to places where the animals to be experimented on can be obtained alive. It is not practicable to transport them to the laboratory. The apparatus has, therefore, been so constructed that it is easily portable. It is much more convenient and is decidedly cheaper to maintain. It is proposed to extend these researches on the physiology of vision to include also hearing.

The outstanding results of the scientific work in my laboratory during the year have been as follows:

Researches into the changes produced by the absorption and transmission of ultra-violet through quartz applicators. As a result of these investigations we have been able to design applicators whose qualities and dosage are known.

Researches on cauterization and the transmission of heat through living tissues and its measurement that for the first time have placed cauterization as a surgical procedure on a safe and sane basis. This research opens up a new method of attack upon cancer, as regions can be reached that were before inaccessible, hemorrhage is obviated and the danger of metastases resulting from operation is completely removed. This method of "controlled diathermy" has been tried out in a number of successful operations on cancer of the bladder.

Researches on cauterization by radiation and the development of new sources of ultra-violet radiation and of radiant heat best suitable for such employment.

Research on the spreading of films — an investigation fundamental to an understanding of the conduction of stimuli and of physiological processes.

Researches on the physiological effects of ultra-violet light (as in rickets, for example) leading to generalizations concerning the mechanism through which the physiological effects of ultra-violet are produced. These are sufficiently broad to include all living things. The conclusions from these investigations, if our theories are correct, constitute the outstanding contribution to the physiological action of rays for the year.

Mr. Gast has continued his researches at the Harvard forest at Petersham and is now obtaining automatic, coincident records of the conditions of light, heat and moisture that exist in selected regions of the pine forest. At the request of the United States Bureau of Forestry he has prepared an extensive and intensive plan for coördinated effort in ascertaining the bio-physical conditions that determine forest growth.

THE NEW GLASS HOUSE AND LABORATORY

The most conspicuous development of the department has been the addition of two stories over the nurses' rest-room. This will provide the needed opportunity for applying our investigations to living organisms. This is of the utmost importance, for the study of problems of growth and development which

are of fundamental importance in the study of neoplasms cannot be solved by the study of any one species of animal or of animals alone. We can now use both animals and plants for our basic investigations.

One room has been set aside for the treatment of patients or for a small lecture room for the meetings of the Cancer Commission. It is so equipped that at other times it can be used as a laboratory.

Another room will be kept permanently dark. A continual and rapid circulation of air between this room and the glass house above provides identical conditions of heat and moisture in the two rooms, the only difference being in their relation to light. This will provide an opportunity for radiation experiments of a kind that are urgently needed.

The other room on this floor is to be fitted up as a machine shop, where the delicate and precise instruments that are needed in our work will be constructed. The attempts to have this work done outside have not proved practicable on account of the necessity for continued personal oversight and the delays encountered. We have been fortunate in securing the services of an expert instrument maker.

The upper story of this addition is enclosed in glass. Though glass does not transmit all of the ultra-violet of sunlight, pronounced physiological effects are produced by the light that does pass through. There are, moreover, areas in the glass roof that can be opened to receive direct radiation from the sky. Quartz windows can be installed but we wish first to test out the feasibility of substituting a flat current of air for the expensive quartz.

THE NEW LABORATORY AT CAMBRIDGE

It has always been inconvenient and my class work has suffered from the inadequate accommodations afforded in the Jefferson Physical Laboratory. The Department of Physics at the University has also been considerably inconvenienced by my occupancy of these rooms. Dr. Lyman has therefore coöperated with me in securing the use of Randall Cottage in Cambridge for the work in bio-physics, and with his assistance I expect to have it fitted for my use during the coming year. This will necessitate an assistant to care for the laboratory in Cambridge and to have partial charge, at least, of the laboratory work there.

For the coming year, Professor Barr and Mr. Belkin will continue their investigations and a successor to Mr. Guillemin will be provided by the Conservation Bureau.

Miss E. E. Jones comes to us on a Fellowship from Radcliffe College and will be engaged on a tumor problem. Her salary is provided for by the Fellowship but the Commission will need to provide for the expense attendant upon the care of her mice.

There have been nine publications from the laboratory during the year and others are already in process of publication.

Respectfully submitted,

W. T. BOVIE,

Research Fellow in Bio-physics.

July 1, 1925.

REPORT OF THE STATE DIAGNOSIS SERVICE FOR THE YEAR ENDING JUNE 30, 1925

The number of specimens received for examination and diagnosis during the year ending June 30, 1925, was 2,258. Of this number, 604 came from the Huntington Hospital, and 1,654 from outside.

Of the 1,654 specimens from outside, a large proportion were marked as originating in certain hospitals, but others undoubtedly came from operations in hospitals without this being indicated. Also, many specimens came from hospitals without indicating the surgeon's name. For these reasons the data given below are necessarily approximate.

The hospitals from which specimens were marked as originating, other than the Huntington Hospital, are as follows:

- Addison Gilbert Hospital, Gloucester
- Alley, Mary G. Hospital
- Beverly Hospital
- Brockton Hospital
- Burbank Hospital, Fitchburg
- Cable Hospital, Ipswich
- Cape Cod Hospital, Hyannis
- Choate Memorial Hospital
- Clinton Hospital
- Cooley Dickinson Hospital, Northampton
- Emerson Hospital, Jamaica Plain
- Fairlawn Hospital, Worcester
- Farren Memorial Hospital, Montague City
- Faulkner Hospital, Jamaica Plain
- Gale Hospital, Haverhill
- Good Samaritan Hospital, Boston
- Groton Hospital
- Hahnemann Hospital, Worcester
- Hale Hospital, Haverhill
- Harley Private Hospital, Dorchester
- Henry Heywood Hospital, Gardner
- Hillcrest Hospital, Pittsfield
- Holden District Hospital
- Holyoke City Hospital
- Homeopathic Hospital, Newburyport
- House of Providence Hospital, Holyoke
- Jordan Hospital, Plymouth
- Lawrence Memorial Hospital, Medford
- Leominster Hospital
- Lynn Hospital
- Malden Hospital
- Middlesex Hospital, Cambridge
- Milford Hospital

Millers River Hospital, Winchendon
 Morton Hospital, Taunton
 Municipal Hospital, Lawrence
 New England Sanitarium, Melrose
 Newton Hospital
 Norfolk County Hospital, South Braintree
 Quincy City Hospital
 Q. M. Hospital
 St. Luke's Hospital, New Bedford
 Salem Hospital
 Somerville Hospital
 State Infirmary, Tewksbury
 Sturdy Hospital, Attleboro
 Symmes Hospital, Arlington
 J. B. Thomas Hospital, Peabody
 Union Hospital, Lynn
 Union Ave. Hospital
 Weymouth Hospital
 Whidden Hospital, Everett

The number of surgeons, or other persons whose names were given as senders of specimens, exclusive of specimens from the Huntington Hospital, is 371.

The great majority of the senders of specimens are located outside of Boston and adjoining towns. From this it would seem that the facilities of the Diagnosis Service for the microscopical examination of surgical material reach communities which it is especially desirable to serve.

Respectfully submitted,

J. HOMER WRIGHT, M.D., D.Sc.,
Pathologist in charge of Free Diagnosis Service.

REPORT OF THE TREASURER

TO THE

CANCER COMMISSION OF HARVARD UNIVERSITY

GENTLEMEN: I have the honor to submit to you my report for the year ending June 30, 1925.

Contributions to the funds of the Cancer Commission have been received by the Treasurer of Harvard College between July 1, 1924, and June 30, 1925, amounting to \$73,056.50. Of this amount \$56,369.82 was used for current expenses and \$16,686.63 was added to the invested funds.

The excess of income over expenses was \$13,686.68. This was added to the Hospital Endowment Fund. The net increase in the funds of the Commission during the year was \$16,857.13.

The Treasurer of Harvard College on July 1, 1925, held the following funds for the benefit of the Cancer Commission of Harvard University:

EXHIBIT A

Memorial Cancer Hospital Endowment.....	\$117,746.08
Memorial Cancer Hospital New Endowment.....	500.00
Francis Bartlett Free Bed.....	5,000.00
T. Jefferson Coolidge Fund for Cancer Research.....	2,000.00
Caroline Brewer Croft.....	92,025.00
William Endicott.....	25,000.00
Charles S. Fairchild.....	5,000.00
Dudley B. Fay Memorial.....	2,000.00
Lawrence Carteret Fenno — Free Bed.....	5,000.00
Albert Geiger.....	2,078.89
Franklin H. Hooper Free Bed	5,000.00
Amos Lawrence Hopkins Free Bed	5,000.00
Maria D. Lockwood Memorial.....	50,728.58
James Ewing Mears.....	9,295.01
George von L. Meyer	2,500.00
Elizabeth Worcester Mills.....	203,500.00
Julia M. Moseley.....	23,250.00
Alice C. Moulton.....	2,000.00
Clara Endicott Payson Free Bed	5,000.00
Henry O. Underwood.....	10,000.00
Lawrence Carteret Fenno — Treatment by Light Rays.....	20,000.00
Emily J. Proctor Gift.....	3,386.43
Gift for Research in Genetics.....	320.00
F. D. Moulton Gift for Social Workers.....	400.21
	<hr/>
	\$596,730.20

This amount is to be compared with the total of \$579,873.07 in last year's report.

The list of subscribers to the Cancer Commission of Harvard University in 1924-1925 is as follows:

GIFTS AND FUNDS FOR CAPITAL

George A. Peabody.....	\$1,000.00	
To be added to the Endowment Fund of the Collis P. Huntington Memorial Hospital		
Estate of Miss Alice C. Moulton.....	2,000.00	
Bequest "to the Huntington Memorial Hospital of Boston."		
		<hr/> \$3,000.00

GIFTS AND FUNDS FOR IMMEDIATE USE

"A Friend".....	\$1,980.00
Salaries.....	1,000.00
Anonymous	
Glass House — Bio-Physics Laboratory.....	10,000.00
Rental Boston Conservation Bureau	
Appropriation by State of Massachusetts for support of Free Diagnosis Service.....	2,500.00

Current Expenses:

Arthur Adams.....	10.00
Charles F. Adams and Mrs. Adams.....	100.00
Karl Adams.....	10.00
Rodolphe L. Agassiz.....	25.00
Mrs. Leonard D. Ahl.....	50.00
Edward B. Alford.....	25.00
Miss Martha A. Alford.....	100.00
Charles W. Allen.....	100.00
Mrs. Charles Almy.....	5.00
William Almy.....	25.00
Mrs. F. Lothrop Ames.....	100.00
John S. Ames.....	50.00
Mrs. Harcourt Amory.....	25.00
Roger Amory.....	25.00
William Amory.....	100.00
Anonymous.....	500.00
Anonymous.....	200.00
Anonymous.....	25.00
Anonymous.....	25.00
Anonymous.....	10.00
Anonymous.....	5.00
Anonymous.....	25.00
Anonymous.....	1.00
Anonymous.....	100.00
Henry R. Andrews.....	10.00
Mrs. Nathan Anthony.....	5.00
Francis H. Appleton, Jr., and Mrs. Appleton ..	20.00
Miss Maud E. Appleton.....	100.00
Samuel Appleton.....	100.00
Mrs. Harrison O. Apthorp.....	5.00

<i>Carried forward</i>	<hr/> \$1,881.00
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<i>Brought forward</i>	\$1,881.00
Edmund K. Arnold	10.00
Mrs. Edwin F. Atkins, Jr.	5.00
Percy Lee Atherton	25.00
Edward W. Atkinson	50.00
James W. Austin	10.00
Charles F. Ayer	50.00
Louis Baer	10.00
Alfred T. Baker	100.00
Mrs. Horatio L. Baker	5.00
Mrs. Charles H. Baldwin	5.00
Ira J. Banash	10.00
Charles G. Bancroft	500.00
Hugh Bancroft	25.00
Solomon J. Barnett and Mrs. Barnett	25.00
Mrs. John W. Bartol	10.00
Mrs. Gregory P. Baxter	10.00
Mrs. Charles H. Bayley	100.00
Mrs. Walter C. Baylies	500.00
Thomas P. Beal	20.00
Mrs. Thomas P. Beal	10.00
Mrs. Horace L. Bearse	10.00
Mrs. Junius Beebe	10.00
Belmont Woman's Club	25.00
Albert F. Bemis	10.00
Frank B. Bemis	100.00
Harry Berger	5.00
Mrs. John K. Berry	2.00
William Sturgis Bigelow	100.00
Charles S. Bird	25.00
Mrs. Reginald W. Bird	100.00
George Nixon Black	100.00
Mrs. Arthur W. Blake	100.00
Mrs. Francis Blake	50.00
Mrs. J. A. Lowell Blake	100.00
William Power Blodget	10.00
Mrs. Daniel M. Bonney	100.00
Roland W. Boyden	50.00
Mrs. Frederick T. Bradbury	2,000.00
Mrs. Edward H. Bradford	5.00
Miss Mary G. Bradford	2.00
Henry G. Bradlee	100.00
J. D. Cameron Bradley and Mrs. Bradley	50.00
Edward D. Brandegee and Mrs. Brandegee	1,100.00
Miss Sarah F. Bremer	50.00
Theodore G. Bremer and Mrs. Bremer	25.00
Miss Fannie R. Brewer	25.00
Miss Florence N. Bridgman, in memory of her mother	50.00
A. Brightman and Sons	5.00
Samuel Brilliant and Company	1.00
Gorham Brooks	100.00
Mrs. Shepherd Brooks	100.00
Clinton C. Brown	5.00
Miss Elizabeth B. Brown	25.00
George W. Brown	100.00
Mrs. Gus Brown	5.00
Mrs. J. Nicholas Brown	200.00
<i>Carried forward</i>	\$8,206.00

<i>Brought forward</i>	\$8,206.00
Mrs. Horace D. Brush.....	5.00
Mrs. Joseph S. Bryant.....	50.00
Mrs. John A. Burnham.....	10.00
Allston Burr and Mrs. Burr.....	25.00
I. Tucker Burr.....	50.00
Mrs. Henry G. Byng.....	25.00
Mrs. Arthur Tracy Cabot.....	250.00
Godfrey L. Cabot.....	100.00
Henry B. Cabot.....	100.00
Mrs. Richard C. Cabot.....	50.00
Walter M. Cabot.....	5.00
Miss Caroline S. Callender.....	5.00
Gerald I. Carper.....	5.00
<i>"In Memory of Samuel Carr"</i>	
Samuel H. Batchelder.....	50.00
Mrs. Robert E. Brewer.....	25.00
Mrs. Charles F. Leland.....	25.00
Richard B. Carter.....	10.00
Miss Georgina S. Cary.....	25.00
Miss Louisa W. Case.....	50.00
Miss Marian R. Case.....	15.00
Cash.....	5.00
Miss Anna Harvey Chace.....	25.00
Proctor Chandler.....	25.00
Walter Channing.....	5.00
Mrs. Henry B. Chapin.....	10.00
Mrs. Theodore Chase.....	25.00
A. B. Cibel.....	5.00
Mrs. B. Preston Clark.....	25.00
Mrs. Frederic S. Clark.....	50.00
Mrs. Charles K. Cobb.....	25.00
Hugh Codman.....	10.00
Charles U. Cogswell.....	10.00
Committee of the Permanent Charity Fund, In-	
corporated.....	1,000.00
Charles J. Connick.....	10.00
Mrs. Costello C. Converse.....	500.00
Harold J. Coolidge.....	50.00
Mrs. T. Jefferson Coolidge.....	1,000.00
Harry D. Cooper and Company.....	5.00
Mrs. Charles Cotting.....	100.00
Miss Elizabeth A. Cotton.....	200.00
Francis A. Countway.....	50.00
Mrs. David R. Craig.....	100.00
Mrs. Alvah Crocker.....	100.00
Mrs. George G. Crocker.....	100.00
George Crompton.....	25.00
Miss Anne C. Crosby.....	25.00
Charles F. Cross Company, Incorporated.....	10.00
Miss Eunice M. Cruft.....	10.00
Miss Frances C. Cruft.....	10.00
Charles P. Curtis.....	100.00
Charles P. Curtis, Jr., and Mrs. Curtis.....	10.00
Mrs. Francis G. Curtis.....	10.00
Mrs. Horatio G. Curtis.....	125.00
Miss Isabella Curtis.....	20.00
John S. Curtis.....	50.00
<i>Carried forward</i>	\$12,916.00

<i>Brought forward</i>	\$12,916.00
Louis Curtis and Mrs. Curtis.....	25.00
Louis Curtis, Jr., and Mrs. Curtis.....	25.00
Frederic Haines Curtiss and Mrs. Curtiss.....	25.00
Mrs. Tucker Daland.....	20.00
Henry R. Dalton.....	25.00
Richard H. Dana.....	10.00
Mrs. Ernest B. Dane.....	100.00
Mrs. John Dane.....	10.00
Mrs. Richard E. Danielson.....	100.00
Mrs. Joseph E. Davis.....	50.00
Mrs. Stephen B. Davol.....	25.00
Mrs. Frank A. Day.....	5.00
Mrs. George L. De Blois.....	25.00
Philip Y. De Normandie.....	25.00
Robert L. De Normandie and Mrs. De Nor- mandie.....	100.00
Thomas S. Derr.....	5.00
Edward Devlin.....	10.00
Miss Miriam Dewey.....	5.00
Mrs. George P. Dike.....	10.00
Miss Evelyn Dix.....	10.00
Robert G. Dodge.....	25.00
Carl Dreyfus.....	25.00
Dennis Driscoll.....	10.00
Miss Ethel Lincoln Drowne.....	2.00
J. Robertson Duff and Mrs. Duff.....	50.00
Mrs. Marietta Dugan.....	25.00
Mrs. Frank E. Dunbar.....	100.00
Norman E. Dupee.....	25.00
Mrs. Ella L. Eddy.....	1.00
Horton Edmands.....	5.00
Mrs. Hannah M. Edwards.....	100.00
Julius Eiseman.....	10.00
Albert W. Elliott.....	25.00
Mrs. Laura P. Elliott.....	3.00
Mrs. William Emerson.....	50.00
Nathaniel H. Emmons.....	100.00
Mrs. Robert W. Emmons, 2nd.....	200.00
H. Wendell Endicott.....	25.00
Frederic Augustus Eustis.....	25.00
Henry C. Everett, Jr., and Mrs. Everett.....	5.00
Richard M. Everett.....	5.00
Charles S. Fairchild.....	500.00
Herbert E. Fales.....	25.00
Charles A. Falvey.....	10.00
John Wells Farley.....	5.00
John W. Farlow.....	25.00
William Farnsworth.....	100.00
Miss Fannie M. Faulkner.....	50.00
Mrs. Henry H. Fay.....	25.00
Friend.....	100.00
"Friend".....	100.00
"A Friend".....	5.00
A Friend.....	15.00
A Friend.....	200.00
"A friend".....	10.00
"From a friend".....	5.00
<i>Carried forward</i>	\$15,517.00

<i>Brought forward</i>	\$15,517.00
"From a friend".....	50.00
"A friend of the cause".....	5.00
William H. Fearnside.....	10.00
Edward N. Fenno.....	25.00
Bennett S. Ferguson.....	5.00
Frank M. Ferrin and Mrs. Ferrin.....	10.00
Sewall H. Fessenden.....	50.00
Mrs. Richard T. Fisher.....	250.00
Mrs. Reginald Heber Fitz.....	25.00
Mrs. W. Scott Fitz.....	25.00
Desmond FitzGerald.....	5.00
M. Douglas Flattery.....	100.00
Frederick C. Fletcher.....	100.00
Allan Forbes.....	10.00
Miss Grace B. Forbes.....	10.00
Mrs. Waldo E. Forbes.....	50.00
Thomas A. Forsyth.....	25.00
Miss Helen C. Frick.....	250.00
Lee M. Friedman.....	25.00
Mrs. Louis A. Frothingham.....	250.00
Alvan T. Fuller.....	100.00
Mrs. Alvan T. Fuller.....	50.00
Homer Gage.....	50.00
Mrs. William Tudor Gardiner.....	25.00
William Amory Gardner.....	100.00
Basil Gavin.....	100.00
Mrs. Adolph Giesberg.....	5.00
Miss Ellen A. Gilman.....	5.00
Samuel Gold.....	5.00
Maurice E. Goldberg.....	5.00
William N. Goodnow.....	25.00
Augustus F. Goodwin.....	50.00
Mrs. Harry M. Goodwin.....	30.00
Robert E. Goodwin.....	25.00
Nathan H. Gordon.....	25.00
John L. Grandin.....	25.00
Morris Gray.....	20.00
Mrs. Reginald Gray.....	50.00
Mrs. Henry V. Greenough.....	200.00
Malcolm S. Greenough.....	25.00
Morris Greenspan.....	5.00
Roger Griswold.....	27.50
John Grundy.....	100.00
Frank P. Gurney.....	2.00
Mrs. Magnus S. Haas, In Memory of Colonel Abraham U. Loeb.....	10.00
Frank W. Hallowell.....	25.00
N. Penrose Hallowell and Mrs. Hallowell.....	70.00
Paul M. Hamlen.....	10.00
Mrs. William H. Hart.....	10.00
Mrs. Arthur W. Hartt.....	10.00
Winthrop A. Harvey.....	100.00
Miss Blanche G. Harwood.....	100.00
Miss Ellen R. Hathaway.....	100.00
Horatio Hathaway, Jr.....	25.00
Mrs. M. Graeme Houghton.....	100.00
Mrs. Ella M. Hawkridge.....	25.00
<i>Carried forward</i>	\$18,436.50

<i>Brought forward</i>	\$18,436.50
Augustus Hemenway	50.00
Mrs. Joseph M. Herman	5.00
The Misses Hersey	10.00
Miss Hersey's Bible Class, Trinity Church	12.00
Charles Higginson	15.00
Miss Frances A. Hill	25.00
Donald M. Hill	25.00
Mrs. George E. Hills	10.00
Conrad Hobbs	10.00
Franklin W. Hobbs	25.00
Amor Hollingsworth	50.00
The Misses Holt	100.00
Mrs. Edward J. Holmes	10.00
Mrs. John Homans	50.00
Robert Homans	25.00
William P. Homans	100.00
Mrs. Arthur H. Hood	10.00
Donald T. Hood	10.00
William Hooper	50.00
Mrs. A. Lawrence Hopkins	100.00
Henry Hornblower	100.00
Ralph Hornblower	10.00
Miss Alberta M. Houghton	50.00
Clement S. Houghton	50.00
Miss Elizabeth G. Houghton	25.00
Mrs. Horace M. Houser	25.00
Henry S. Howe	100.00
Mrs. Charles W. Hubbard	50.00
Mrs. Eliot Hubbard	25.00
Mrs. Henry V. Hubbard	5.00
The Humane Society of the Commonwealth of Massachusetts	500.00
Arnold W. Hunnewell	50.00
Miss Gertrude Hunnewell	100.00
Henry S. Hunnewell	1,500.00
James M. Hunnewell	50.00
Miss Louisa Hunnewell	100.00
Mrs. John C. Hunt	5.00
Mrs. Charles L. Hutchins	20.00
Mrs. Constantine F. Hutchins	5.00
Mrs. Oscar Iasigi	50.00
Mrs. Henderson Inches	10.00
Miss Katharine Choate Ireson	50.00
Miss Charlotte D. Irish	250.00
Charles Jackson	100.00
Charles C. Jackson and Mrs. Jackson	1,000.00
Henry Jackson	45.00
James Jackson	50.00
Ellerton James	20.00
Miss Helen L. Jaques	25.00
Bernard Jenney	10.00
"M. K. J."	5.00
Arthur S. Johnson	25.00
Miss Edith Morse Johnson	5.00
Edward C. Johnson	25.00
Mrs. Reginald M. Johnson	25.00
Mrs. Helen L. Jordan	25.00
<i>Carried forward</i>	\$23,618.50

<i>Brought forward</i>	\$23,618.50
Albert W. Kaffenburgh and Mrs. Kaffenburgh..	50.00
Mitchell B. Kaufman.....	15.00
Keystone Manufacturing Company.....	5.00
Nathaniel T. Kidder.....	100.00
Mrs. Benjamin Kimball.....	10.00
Thatcher R. Kimball and Mrs. Kimball.....	10.00
The Misses King.....	25.00
Louis E. Kirstein.....	50.00
Abraham Koshland and Mrs. Koshland.....	25.00
Jesse Koshland.....	25.00
Robert J. Koshland and Mrs. Koshland.....	100.00
Mrs. Shepard Krech.....	25.00
Mrs. William E. Ladd.....	25.00
Miss Aimee Lamb.....	100.00
Horatio A. Lamb.....	125.00
Mrs. Horatio A. Lamb.....	200.00
Thomas W. Lamont.....	300.00
Mrs. Gardiner M. Lane.....	1,000.00
Mrs. Amory A. Lawrence.....	50.00
Mrs. Edward Lawrence.....	10.00
Lawrence Model Lodging Houses, Trustees of .	500.00
Walter B. Leach	5.00
Joseph Lee.....	1,000.00
Amory Leland.....	100.00
Dudley R. Leland.....	100.00
Mrs. Lester Leland.....	500.00
Mrs. Horace P. Lindsay.....	25.00
David M. Little.....	100.00
Mrs. Percival H. Lombard	50.00
Miss Alice M. Longfellow	25.00
Mrs. Augustus P. Loring.....	25.00
Augustus P. Loring, Jr.....	10.00
Mrs. Caleb Loring.....	10.00
Mrs. Lindsley Loring.....	15.00
William Caleb Loring.....	10.00
Mrs. Thornton K. Lothrop.....	100.00
Jacob Lourie.....	5.00
Mrs. Charles T. Lovering.....	110.00
Stephen B. Luce.....	50.00
Mrs. Herbert Lyman.....	20.00
Miss Mabel Lyman.....	100.00
Mrs. William H. McElwain.....	100.00
James MacNaughton.....	500.00
Mrs. George E. McQuesten.....	10.00
M. Lester Madden.....	25.00
Edward Mallinckrodt, Jr.....	500.00
Mrs. George S. Mandell.....	15.00
Walter M. Marston.....	25.00
Austin B. Mason.....	10.00
Mrs. Charles E. Mason.....	1,000.00
Miss Fanny P. Mason.....	25.00
Miss Ida M. Mason.....	50.00
Massachusetts State Federation of Women's Clubs, Public Health Department.....	10.00
Albert Matthews.....	25.00
Miss Margaret Matthews.....	1.00
Howard J. Meadows.....	25.00
<i>Carried forward</i>	\$31,049.50

<i>Brought forward</i>	\$31,049.50
James H. Means	25.00
Miss Sarah A. Mellen	5.00
Mrs. C. H. Sayre Merrill	10.00
Miss Emma L. Merrill	5.00
Mrs. Daniel Merriman	25.00
Leonard Metcalf	20.00
Arthur N. Milliken	100.00
Mrs. George R. Minot, 2nd	10.00
James J. Minot, "In Memory of Constance W. Zerrahn"	100.00
George W. Mitton	100.00
Mrs. John F. Moors	50.00
Moors & Cabot	50.00
J. Pierpont Morgan	100.00
George B. Morison	15.00
Alan R. Morse	5.00
Miss Frances R. Morse	50.00
Mrs. E. Preble Motley	100.00
Mrs. J. Lothrop Motley	25.00
Warren Motley	10.00
William A. Muller	50.00
Mrs. Edward W. Nash	10.00
Mrs. Frank King Nash	10.00
Louis W. Nash	20.00
Mrs. Nathaniel C. Nash	10.00
Jacob Nathan	5.00
New England Women's Club	10.00
Miss Gertrude E. Newhall	2.00
Mrs. Samuel J. Newman	10.00
Adnah Neyhart	20.00
Grenville H. Norcross	50.00
Mrs. Otis Norcross	200.00
Miss Annie Anthony Noyes	2.00
George R. Nutter	10.00
Robert Lincoln O'Brien	25.00
Patrick A. O'Connell	25.00
William H. O'Connell	25.00
Miss Carolyn Olmsted	30.00
Mrs. John B. Osborn	5.00
John B. Paine	50.00
Richard C. Paine and Mrs. Paine	10.00
Robert Treat Paine	25.00
Mrs. Robert Treat Paine, 2nd	50.00
Miss Anna C. Palmer	5.00
Miss Eleanor S. Parker	100.00
Miss Euphemia M. Parker	2.00
Mrs. Henry Parkman	50.00
Mrs. Henry Parkman, Jr.	25.00
Miss Amelia Peabody	25.00
George A. Peabody	500.00
Mrs. John E. Peabody	20.00
Mrs. W. Rodman Peabody	10.00
Silas Peavy	5.00
Miss Charlotte Peirce	50.00
Miss Annie L. Penfield	3.00
Mrs. Charles E. Perkins	50.00
John F. Perkins	5.00
<i>Carried forward</i>	\$33,358.50

<i>Brought forward</i>	\$33,358.50
Franklin T. Pfaelzer.....	10.00
James J. Phelan and Mrs. Phelan.....	100.00
Howard G. Philbrook and Mrs. Philbrook.....	10.00
Mrs. George Philler.....	10.00
Miss Mary W. Phillips.....	1.00
Dudley L. Pickman.....	50.00
Dudley L. Pickman, Jr.....	25.00
Arthur S. Pier.....	5.00
John R. Post.....	10.00
Mrs. George H. Powers.....	25.00
Mrs. Joseph O. Procter, Jr.....	25.00
Miss Emily Dutton Proctor.....	1,500.00
Mrs. John L. Proctor.....	10,000.00
Lewis I. Prouty and Mrs. Prouty.....	50.00
C. Phillips Purdy.....	10.00
Mrs. James J. Putnam.....	5.00
William A. Quigley.....	5.00
Francis M. Rackemann and Mrs. Rackemann..	100.00
Mrs. Neal Rantoul.....	100.00
Benjamin F. Raphael.....	15.00
Miss Helen S. Reed.....	5.00
Mrs. John H. Reed.....	5.00
Miss Barbara M. Reynolds.....	50.00
Harrison G. Reynolds.....	50.00
Alexander Hamilton Rice and Mrs. Rice.....	500.00
Miss Louisa C. Richardson.....	15.00
William L. Richardson.....	100.00
Miss H. G. Ricker.....	2.00
Charles E. Riley.....	50.00
Russell Robb and Mrs. Robb.....	50.00
Miss Jeannie D. Robinson.....	5.00
C. P. Rockwell.....	100.00
Miss Emma Rodman.....	25.00
Charles A. Rome.....	2.00
Bernard J. Rothwell.....	25.00
Joseph Rudnick.....	5.00
Arthur J. Rutledge.....	5.00
Mrs. Gustav Salomon.....	5.00
John L. Saltonstall.....	100.00
Leverett Saltonstall.....	10.00
Miss Muriel G. Saltonstall.....	15.00
Mrs. Richard M. Saltonstall.....	100.00
Robert Saltonstall.....	100.00
Miss Lucy S. Sampson.....	5.00
Gabriel Sanger.....	5.00
Sabin P. Sanger.....	50.00
Mrs. Francis W. Sargent.....	125.00
Henry B. Sawyer and Mrs. Sawyer.....	25.00
Mrs. William D. Sawyer.....	25.00
Robert W. Sayles and Mrs. Sayles.....	25.00
Benjamin Schellenberg.....	2.00
Miss Annie L. Sears.....	50.00
Miss Evelyn Sears.....	50.00
Herbert M. Sears.....	100.00
Mrs. J. Montgomery Sears.....	100.00
Mrs. Knyvet W. Sears.....	200.00
Miss Mary P. Sears.....	50.00
<i>Carried forward</i>	\$47,550.50

<i>Brought forward</i>	\$47,550.50
Richard D. Sears	100.00
Mrs. Willard T. Sears	5.00
Mrs. Samuel Shapiro	5.00
Mrs. Quincy A. Shaw	200.00
Mrs. Quincy A. Shaw, Jr.	500.00
William L. Shearer and Mrs. Shearer	100.00
Miss Emily Blanchard Shepard	10.00
Thomas H. Shepard	10.00
Henry R. Silberman and Mrs. Silberman	5.00
William Simes and Mrs. Simes	50.00
Max Singer	5.00
Stanley H. Sinton and Mrs. Sinton	25.00
Isaac M. Slocum and Mrs. Slocum	3.00
Mrs. H. Monmouth Smith	10.00
Miss Elisabeth P. Sohler	20.00
Mrs. Horace H. Soule	25.00
Mrs. Philip L. Spalding	25.00
John T. Spaulding	100.00
William S. Spaulding	100.00
Abraham P. Spitz	10.00
"State Theatre"	50.00
Charles H. Stearns	10.00
Miss Mildred B. Stearns	5.00
Louis H. Steinberg	10.00
Robert H. Stevenson	50.00
James A. Stillman	100.00
Philip Stockton	50.00
Miss M. Louise Stockwell	5.00
Miss Edith Storer	50.00
Miss Emily L. Storer	25.00
Robert W. Storer	25.00
Galen L. Stone	500.00
Malcolm B. Stone	15.00
Nathaniel H. Stone	100.00
Mrs. Robert G. Stone	20.00
Charles E. Stratton	10.00
Aaron L. Strauss	10.00
Miss Evelyn R. Sturgis	25.00
Mrs. John H. Sturgis	25.00
Mrs. T. Russell Sullivan	5.00
John Osborne Sumner	10.00
Henry N. Sweet	10.00
Miss Vivian H. Taber	5.00
Miss Alice P. Tapley	100.00
Miss Alice P. Tapley, "In Memory of Effie Ellis"	100.00
Henry F. Tapley	50.00
Mrs. Frank W. Taussig	100.00
Mrs. Stephen L. Taylor	25.00
Louis B. Thacher	10.00
Thomas C. Thacher	10.00
Mrs. Nathaniel Thayer	100.00
Mrs. Ezra Ripley Thayer	50.00
John E. Thayer	200.00
John E. Thayer, Jr., and Mrs. Thayer	50.00
Mrs. Washington B. Thomas	25.00
Albert W. Thompson	10.00
Elihu Thomson	20.00
<i>Carried forward</i>	\$50,823.50

<i>Brought forward</i>	\$50,823.50
Albert Thorndike	20.00
Miss Alice A. Thorp	5.00
Joseph G. Thorp and Mrs. Thorp	50.00
Joseph J. Tillinghast	10.00
Frederic Tillotson	1.00
Miss Ednah B. Tilton	15.00
Mrs. Arthur Tirrell	25.00
Miss Elizabeth P. Train	25.00
"The Eugene Tompkins Memorial"	1,000.00
Miss Sarah B. Train	25.00
Charles H. Traiser	50.00
Mrs. Alanson Tucker	25.00
Miss Clara M. Turner	5.00
Miss Mabel W. Underwood	5.00
Miss Mary P. Underwood	5.00
Miss Sophia A. Underwood	5.00
William Lyman Underwood	10.00
William W. Vaughan and Mrs. Vaughan	20.00
Miss Eva Von Blomberg	2.00
Miss Margaret E. VonPaulsen	5.00
Mrs. George A. Vose	10.00
Mrs. Alexander F. Wadsworth	15.00
Eliot Wadsworth	50.00
Charles C. Walker	50.00
Mrs. Frances K. Wallburg	100.00
Henry E. Warner	50.00
Mrs. Bayard Warren	100.00
J. Collins Warren	200.00
Samuel D. Warren	30.00
Mrs. Thomas A. Watson	5.00
Frank G. Webster and Mrs. Webster	200.00
Arthur H. Weed and Mrs. Weed	10.00
Charles F. Weed and Mrs. Weed	25.00
Warren B. P. Weeks	25.00
Mrs. Charles G. Weld	1,000.00
Miss Mary Weld	1,000.00
Welfare Fund, through George F. Larcom, Trustee	100.00
Albert B. Wells	100.00
Mrs. Barrett Wendell	25.00
William P. Wharton	100.00
Miss Helen Wheeler	25.00
Joseph H. Wheelock and Company	25.00
Miss Lucy Wheelock	10.00
Mrs. Howard Whitcomb	10.00
Miss Gertrude R. White	25.00
Mrs. William Marshall E. Whitelock	100.00
Alexander Whiteside	10.00
Mrs. William Whitman, Jr.	100.00
Miss Alice F. Whitney	5.00
Edward F. Whitney	200.00
Gardner A. Whitney	25.00
Homer F. Whittemore	10.00
William R. Whittemore	5.00
Charles W. Whittier	50.00
Edward Wigglesworth	25.00
George Wigglesworth	50.00
<i>Carried forward</i>	\$56,001.50

<i>Brought forward</i>	\$56,001.50	
David W. Williams.....	25.00	
Miss Elizabeth A. Williams.....	5.00	
Mrs. Jeremiah Williams.....	25.00	
John D. Williams.....	50.00	
Joseph S. Williams.....	50.00	
Mrs. Ralph B. Williams.....	100.00	
Mrs. Daniel G. Wing.....	100.00	
Robert Winsor, Jr.....	15.00	
Mrs. Roger Wolcott.....	25.00	
Mrs. S. Huntington Wolcott.....	10.00	
Orrin G. Wood.....	100.00	
Mrs. William M. Wood.....	10.00	
Henry D. Woods.....	500.00	
Mrs. Philip W. Wrenn.....	25.00	
Miss Beatrice Wright.....	5.00	
William S. Youngman.....	20.00	
Maurice Yozell.....	10.00	
	<hr/>	\$57,076.50
Grant from the Medical School for work in the laboratory of the Cancer Commission, Flattery Research Fund.....		\$750.00

The balance sheet for June 30, 1924, is as follows:

EXHIBIT B

<i>Assets</i>		<i>Liabilities</i>	
Cash.....	\$65.00	Accounts Payable.....	\$611.80
Accounts Receivable:		Reserve for Expenses....	84.00
Current.. \$8,934.12		Reserve for Doubtful Ac-	
Suspended 12,361.76	21,295.88	counts.....	12,361.76
		Funds and Gifts (Exhibit	
Inventories:		A).....	596,730.20
Food.... 148.22		Net Profit for the Twelve	
Medical and		Months Ended June 30,	
Surgical		1925.....	13,686.68
Supplies 312.93	461.15		
Prepaid Liability Insurance	72.00		
Due from University:			
Reserve for			
Doubtful Ac-			
counts..... 12,361.76			
Less Advances			
made by Uni-			
versity..... 7,511.56			
	4,850.21		
Investments in hands of			
Treasurer of Harvard			
University.....	596,730.20		
	<u>\$623,474.44</u>		<u>\$623,474.44</u>

The statement of income and expense for the year ended June 30, 1925, as supplied by the Bursar's Office of Harvard University is as follows:

EXHIBIT C

Expenses

Hospital Departments:

Salaries	\$15,100.00
*Administration	22,355.65
Care of Patients	21,166.48
Housekeeping	9,128.58
Kitchen and Dining Room..	3,700.58
Laundry	3,120.00
Photography	80.04
Steward's Department	10,745.12
General House and Property	10,770.89
State Diagnosis	1,197.37
Sundries	1,379.84
	<hr/>

\$98,744.55

Research Laboratories:

Salaries	15,800.00
Bio-Physics	6,722.64
Medical	3,270.75
Pathological	404.82
Radium Plant	1,863.26
Short Wave-Length Therapy	4,755.66
X-ray Diagnosis	2,741.96
	<hr/>

\$35,559.09

Restricted Income not used
and added to Funds

170.45

Excess of Income over Ex-
penses

13,686.68

\$148,160.77

*Includes Reserve for Doubtful Accounts and Corrected Accounts charged off — \$5,948.92

Income

Received from Patients:

Board and Care:	
Ward Patients	\$10,484.09
Private Room Patients	6,857.40
Out-Patients: Fees and Dressing	6,516.25
Radium Treatments	16,599.75
Operations	4,542.00
Special Nursing	679.00
Board of Special Nurses	282.00
X-ray Treatments	6,983.00
X-ray Diagnosis	1,200.00
Discounts Earned	195.46
Sundries	63.04
	<hr/>

\$54,401.99
2,500.00

Commonwealth of Massachusetts

Income from Funds:

Unrestricted

29,221.83

Restricted:

Flattery Research (Salaries)

750.00

L. C. Fenno (Short Wave-Length Therapy)

1,060.00

Emily J. Proctor

170.45

\$31,202.28

Gifts:

For General Purposes

53,576.50

For Special Purposes:

Salaries

1,000.00

Wages Technician

1,980.00

Expense of Medical Laboratory

3,500.00

\$60,056.50

\$148,160.77

July 1, 1925.

Respectfully submitted,

CHARLES JACKSON,
Treasurer.

LIST OF COMMUNICATIONS

CANCER COMMISSION OF HARVARD UNIVERSITY

1. Statistics of Cancer — W. F. Whitney.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, p. 33.
October 23, 1900.
2. On the Etiology of Cancer — E. H. Nichols.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 34-58.
October 23, 1900.
3. Report of the Presence of "Plimmer's Bodies" in Carcinomatous Tissue
— R. B. Greenough.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 59-62.
October 23, 1900.
4. Tumors and Sporozoa of Fishes — E. E. Tyzzer.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 63-68.
October 23, 1900.
5. The Reconstruction of a Nodule of Cancer — E. A. Locke.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 69-71.
October 23, 1900.
6. Report of Culture Experiments made with Carcinomatous Tissue, 1889-
1900 — Oscar Richardson.
Boston Society of Medical Sciences, Journal, Vol. 5, No. 2, pp. 72-80.
October 23, 1900.
7. Coccidium Infection of the Rabbit's Liver — E. E. Tyzzer.
Journal of Medical Research, Vol. 7, No. 3, pp. 235-254. April, 1902.
8. Molluscum Contagiosum — Charles J. White and W. H. Robey, Jr.
Journal of Medical Research, Vol. 7, No. 3, pp. 255-277. April, 1902.
9. Culture Experiments with Malignant Tumors — Oscar Richardson.
Journal of Medical Research, Vol. 7, No. 3, pp. 278-279. April, 1902.
10. Four Pathogenic Torulæ (Blastomycetes) — Joseph D. Weis.
Journal of Medical Research, Vol. 7, No. 3, pp. 280-311. April, 1902.
11. The Relation of Blastomycetes to Cancer — E. H. Nichols.
Journal of Medical Research, Vol. 7, No. 3, pp. 312-359. April, 1902.
12. Cell Inclusions in Cancer and in Non-cancerous Tissue — R. B. Greenough.
Journal of Medical Research, Vol. 7, No. 3, pp. 360-380. April, 1902.
13. A Contribution to the Classification of Tumors — F. B. Mallory.
Journal of Medical Research, Vol. 13, No. 2, pp. 113-136. January,
1905.
14. On the Nature of the Cell Inclusions of Cancer — R. B. Greenough.
Journal of Medical Research, Vol. 13, No. 2, pp. 137-166. January,
1905.
15. The Effects of the Roentgen Ray upon Cancer — Robert H. Vose and
Walter C. Howe.
Journal of Medical Research, Vol. 13, No. 2, pp. 167-185. January,
1905.
16. Implantation of Tissue and Its Relation to Cancer — E. H. Nichols.
Journal of Medical Research, Vol. 13, No. 2, pp. 187-232. January,
1905.
17. The Inoculable Tumors in Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 137-153. November,
1907.
18. A Series of Twenty Spontaneous Tumors in Mice, with the Accompanying
Pathological Changes and the Results of the Inoculation of Certain
of These Tumors into Normal Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 155-157. November,
1907.

19. A Study of Heredity in Relation to the Development of Tumors in Mice — E. E. Tyzzer.
Journal of Medical Research, Vol. 17, No. 2, pp. 199-211. November, 1907.
20. A Transmissible Cancer of the Rat Considered from the Standpoint of Immunity — F. P. Gay.
Journal of Medical Research, Vol. 20, No. 1, pp. 175-201. January, 1909.
21. The Lesions of the Skin and the Tumor Formations in Xeroderma Pigmentosum — W. T. Councilman and G. B. Magrath.
Journal of Medical Research, Vol. 21, No. 3, pp. 331-355. October, 1909.
22. The Surgical Treatment of X-ray Carcinoma and Other Severe X-ray Lesions Based upon an Analysis of Forty-Seven Cases — C. A. Porter.
Journal of Medical Research, Vol. 21, No. 3, pp. 357-413. October, 1909.
23. The Pathological Histology of Chronic X-ray Dermatitis and Early X-ray Carcinoma — S. B. Wolbach.
Journal of Medical Research, Vol. 21, No. 3, pp. 415-449. October, 1909.
24. Chronic Pancreatitis with Tumor-like Nodules in the Cat — Thomas Ordway.
Journal of Medical Research, Vol. 21, No. 3, pp. 451-458. October, 1909.
25. Tumors in the Common Fowl — E. E. Tyzzer and Thomas Ordway.
Journal of Medical Research, Vol. 21, No. 3, pp. 459-477. October, 1909.
26. A Series of Spontaneous Tumors in Mice with Observations on the Influence of Heredity on the Frequency of Their Occurrence — E. E. Tyzzer.
Journal of Medical Research, Vol. 21, No. 3, pp. 479-518. October, 1909.
27. A Study of Inheritance in Mice with Reference to Their Susceptibility to Transplantable Tumors — E. E. Tyzzer.
Journal of Medical Research, Vol. 21, No. 3, pp. 519-573. October, 1909.
28. The Nature of the Reaction of the Tissues of Susceptible and Non-Susceptible Mice to an Inoculable Tumor — A. M. Burgess.
Journal of Medical Research, Vol. 21, No. 3, pp. 575-590. October, 1909.
29. The Effect of Trypsin on Cancer and on the Germ Cells in Mice — Stephen Rushmore.
Journal of Medical Research, Vol. 21, No. 3, pp. 591-596. October, 1909.
30. The Treatment of Cancer with Body Fluids and Cancerous Ascitic Fluid — E. H. Risley.
Journal of the American Medical Association, Vol. 56, pp. 1383-1389. May 13, 1911.
31. The Hemolytic Skin Reactions in Carcinoma — E. H. Risley.
The Boston Medical and Surgical Journal, Vol. 165, No. 4, pp. 127-128. July 27, 1911.
32. The Gilman-Coca Vaccine Emulsion Treatment of Cancer — E. H. Risley.
The Boston Medical and Surgical Journal, Vol. 165, No. 21, pp. 784-788. November 23, 1911.
33. The Huntington Hospital and the Scope of Its Work — E. E. Tyzzer and Thomas Ordway.
Boston Medical & Surgical Journal, Vol. 166 No. 2, pp. 887-889. June 13, 1912.

34. Tumor Investigation — A General View of Various Lines of Activity — E. E. Tyzzer.
Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.
35. The Collis P. Huntington Hospital for Cancer Research — Robert B. Greenough and Thomas Ordway.
Harvard Graduates' Magazine, Vol. 21, No. 82. December, 1912.
36. Factors in the Production and Growth of Tumor Metastases — E. E. Tyzzer.
Journal of Medical Research, Vol. 28, No. 2, pp. 309-332. July, 1913.
37. The Complement Content of the Blood in Malignant Disease — Thomas Ordway and Ellis Kellert.
Journal of Medical Research, Vol. 28, pp. 287-299. July, 1913.
38. The Protein Metabolism in Certain Tumor-bearing Rats — Thomas Ordway and J. Lucien Morris.
Journal of Medical Research, Vol. 28, No. 2, pp. 301-308. July, 1913.
39. The Use of Radium in Cancer and Allied Conditions at the Huntington Hospital — Illustrative Cases. A report of the Cancer Commission of Harvard University, presented by Thomas Ordway.
Boston Medical and Surgical Journal, Vol. 171, No. 21, pp. 771-781. November 19, 1924.
40. Carcinoma, Syphilis, and Tuberculosis Co-existent in the Same Patient, with Report of a Case — Ellis Kellert.
Journal of the American Medical Association, 1914, Vol. 63, p. 1819.
41. The Importance of Inflammation in the Immunity of Mice to Implanted Tumor — E. E. Tyzzer.
Journal of Medical Research, Vol. 32, pp. 201-223. May, 1915.
42. Radioactive Substances in the Treatment of Cancer — William Duane.
Harvard Graduates' Magazine, June, 1915. (No reprints.)
43. The Tumors of the Japanese Waltzing Mouse and of Its Hybrids — E. E. Tyzzer.
Journal of Medical Research, Vol. 32, pp. 331-360. July, 1915.
44. On the Extraction and Purification of Radium Emanation — William Duane.
Physical Review, N. S., Vol. 5, pp. 311-326. April, 1915.
45. Cancer Research. Problems and Methods of Investigation — E. E. Tyzzer.
St. Paul Medical Journal, Vol. 17, pp. 481-487. July, 1915.
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