~~N.N. supra 25.~~
W.G. 6.

7643. ' Methods of Teaching. J. H. H. '
Students' annual reports, tabulated and typewritten, of the cases shown to the 3rd year class, Johns Hopkins Medical School, 1900, 1904, and 1905, the last signed by Inslee Blair Greene, chairman of the committee. Used in the address on ' The Medical Clinic: a retrospect and a forecast ', Brit. M. J., 1914, i, pp. 10–16 (reprint *303* in no. 3576, a copy of which is inserted).

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THE MEDICAL CLINIC:

A RETROSPECT AND A FORECAST.

An Address

Delivered before the Abernethian Society, St. Bartholomew's Hospital, London, December 4th, 1913.

BY

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Reprinted from the British Medical Journal, *January 3rd, 1914.*

LONDON:

Printed at the Office of the British Medical Association,

429, Strand, W.C.

1914.

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ON

THE MEDICAL CLINIC:

A RETROSPECT AND A FORECAST.

Unrest and change are the order of the day, and it may be taken as a good sign that the medical profession is bestirring itself about many problems, one of the most important of which relates to the future of our medical schools. Those who have followed the discussions of the past few years will have noticed that two diametrically opposite opinions have been expressed. On the one hand, there is a group thoroughly satisfied with existing conditions—and with themselves—the teaching was never better, the students never more contented, and any change could not but be for the worse. On the other hand, there are those who say that the existing conditions in our large hospitals are inadequate to meet the modern needs of student and of staff, that the teaching is defective, that the rejections at the examinations are shockingly high, that there is inadequate provision for research, and that an entire change is needed in the organization of the clinical departments of our medical schools.

Upon one point all are agreed—that in these islands during the past century an admirable system of teaching medicine and surgery has been evolved. I wish there were time to trace its historical growth; but the practical outcome is that the medical student, in his last years, lives and moves and has his being in the hospital. But with this there has been no internal development of the hospital at all commensurate with the growth of the science of medicine. The century-old custom prevails of a group of physicians and surgeons whose individual "services" are organized neither for teaching nor for research. On the Continent there has grown up a different system. In the medical schools there has gradually been organized separate clinics, each with a head, a graded staff, laboratories, and an organization resembling in every respect that of any other scientific department of the university. The burning question to-day is whether these systems cannot be combined, whether the Continental cannot be safely grafted on the English system. Practically in the large clinics of Paris the two have been combined for more than a century. The medical student is as much at home in the

Paris hospital as he is in the English, but there is not everywhere the complete organization of the German clinics. My address this evening is a small contribution to this problem, as perhaps I am the only English speaking teacher who has combined successfully both systems, and I am going to give you my personal experience. I would not bother any audience with it did I not feel that, at the present moment, it may have a certain value. Montaigne somewhere remarks that to talk about oneself cannot possibly be done without detriment to the person talked about, but you will overlook, I am sure, the necessary personal element in the story.

When I began clinical work in 1870, the Montreal General Hospital was an old coccus- and rat-ridden building, but with two valuable assets for the student—much acute disease and a group of keen teachers. Pneumonia, phthisis, sepsis and dysentery were rife. The "services" were not separated, and a man for three months looked after medical and surgical patients, jumbled together in the same wards. The physic of the men who were really surgeons was better than the surgery of the men who were really physicians, which is the best that can be said of a very bad arrangement. The talk of the teachers was of the Royal Infirmary of Edinburgh, or of Glasgow, of the Meath Hospital, of the Rotunda, and of Bart's, of Guy's, of St. Thomas's; and in a town four-fifths French the lights of Paris medicine burned brightly. Scottish and English methods prevailed, and we had to serve our time as dressers and clerks, and, indeed, in serious cases we very often at night took our share in the nursing. There were four first-rate teachers of medicine on the staff—Howard, Wright, MacCallum and Drake—three of whom had learned at first hand the great language of Graves and of Stokes. The bedside instruction was excellent and the clerking a serious business. I spent the greater part of the summer of 1871 at the hospital, and we had admirable out-patient clinics from Dr. Howard, and a small group worked in the wards under Dr. MacCallum. An excellent plan, copied from an old custom of the *Lancet*, was for the clinical clerk to report the cases of special interest under *Hospital Practice* in the local medical monthly. My first appearance in print is in the *Canadian Medical and Surgical Journal*, reporting cases from Dr. MacCallum's wards. Our teachers were men in whose busy lives in large general practice the hospital work was a pleasant and a profitable incident. A man like Palmer Howard got all that was possible out of the position, working hard at the hospital, studying the literature, writing excellent papers, and teaching with extraordinary care and accuracy; naturally such a man exercised a wide influence, lay and medical. I left the old General Hospital with a good deal of practical experience to my credit and with warm friends among the members of the staff.

In the summer of 1872 after a short *Rundreise*, Dublin Glasgow, and Edinburgh, I settled at the Physiology

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Laboratory, University College, with Professor Burdon-Sanderson, where I spent about fifteen months working at histology and physiology. At the hospital across the way I saw in full swing the admirable English system, with the ward work done by the student himself the essential feature. I was not a regular student of the hospital, but through the kind introduction of Dr. Burdon-Sanderson and of Dr. Charlton Bastian, an old family friend, I had many opportunities of seeing Jenner and Wilson Fox, and my notebooks contain many precepts of these model clinicians. From Ringer, Bastian, and Tilbury Fox, I learned, too, how attractive out-patient teaching could be made. Ringer I always felt missed his generation, and suffered from living in advance of it.

The autumn semester of the next year was spent in Berlin, where I had my first introduction to the medical clinic on a large scale. Professor Burdon-Sanderson had given me a letter to Frerichs, who very kindly assigned places in the arena of his clinic to Dr. (afterwards Sir) Stephen Mackenzie, and to Dr. (afterwards Sir) Charles Hutchinson, and myself. To Hoffmann, Riess and Ewald, his assistants, we were under obligation for many attentions. The other clinic of the Charité was in charge of Traube. The experience of the semester was invaluable. Systematically, day by day, the more important cases of the wards were shown, the symptoms, pathology, and treatment discussed at length. To each case a student was called, who was supposed to take charge of the examination and to answer questions. Sometimes this was serious for the student, though very often quite formal. He was supposed to keep himself informed of the progress of his patient day by day. I remember one morning Professor Frerichs called down a student who had had a case the day before, and he asked, "How is your patient this morning, Mr. Schmidt?" To which the reply, "Very well indeed, very well; he is much better than yesterday." To which the professor replied in his slow, quiet way, "Very well indeed; he died this morning; you will see what was the matter shortly."

The wealth of material in each department, the systematic arrangement of the clinic, the graded assistants, all men of experience working at the problems of disease, was a striking contrast to the small hospital service of the London clinician, with his single house-physician and absence of all laboratory accommodation. Traube made a great impression upon me as an ideal physiological clinician, and to the three volumes of his *Gesammelte Beiträge* I still turn for clinical information.

The first five months of 1874 I spent in Vienna attending the clinics of Hebra, Bamberger and Widerhoffer. In Bamberger I found another ideal clinician—accurate, painstaking, devoting the whole morning to his teaching and "rounds."

When I returned to Montreal in September, 1874, the Professor of the Institutes of Medicine had had to retire on account of heart disease, and instead of getting, as I

had hoped, a position as his demonstrator, the faculty appointed me lecturer with the ghastly task of delivering four systematic lectures a week for the winter session, from which period dates my ingrained hostility to this type of teaching. Four years in the *post-mortem* room of the general hospital, with clinical work during the small-pox epidemic, seemed to warrant the governors of the general hospital in appointing me, in 1878, full physician, over the heads—it seems scandalous to me now—of the assistant physicians. The day of the election I left (with my friend George Ross) for London to take my Membership of the College of Physicians and to work at clinical medicine. For three months we had a delightful experience. Murchison, whom I had seen before in 1873, was most kind, and I do not think we missed one of his hospital visits. He was a model bedside teacher—so clear in his expositions, so thorough and painstaking with the student. My old friend Luther Holden introduced us to Gee, in whom were combined the spirit of Hippocrates and the method of Sydenham. Fred. Roberts, at University College Hospital, showed us how physical diagnosis could be taught. We rarely missed a visit with Bastian and Ringer, and at Queen Square I began a long friendship with that brilliant ornament of British medicine, Gowers. With my old comrade Stephen Mackenzie we went to Sutton's Sunday morning class at the London—his "Sunday School" as it was called—and we learned to have deep respect for his clinical and pathological skill. I mention these trivial details to indicate that before beginning work as clinic teacher I had at least seen some of the best men of the day.

In the summer session of 1879 I had my first clinical class. We worked together through Gee's *Auscultation and Percussion*, and in the ward visit, physical diagnosis exercises, and in a clinical microscopy class the greater part of the morning was spent. I came across the other day the clinical notebook I had prepared for the students with a motto from Froude. "The knowledge which a man can use is the only real knowledge, the only knowledge which has life and growth in it, and converts itself into practical power. The rest hangs like dust about the brain, or dries like raindrops off the stones." The next five years passed in teaching physiology and pathology in the winter session and clinical medicine in the summer. In 1884 I spent four months in Germany, chiefly at Leipzig, working at pathology with Weigert, and clinical medicine with Wagner, a model teacher who devoted the whole morning to hospital work, and whose clinic was splendidly arranged for post-graduate study. After a preliminary visit to the ward he would enter the amphitheatre with clock-like regularity, and day by day demonstrate the more important cases, always finishing the morning's work with a visit to the *post-mortem* room.

This year I accepted the chair of clinical medicine in the University of Pennsylvania, Philadelphia, the premier medical school of the United States, founded in 1789 by

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Morgan, Shippen, and Wistar, a group of men who had come strongly under the influence of John Hunter. The teaching of medicine was by lectures and the theatre clinic, which, with the large classes and short period of study, had become an important educational feature. In the hands of a man like William Pepper it resembled rather the larger French clinic, but all through it was an affair of the professor, who demonstrated three or four cases, and dwelt specially upon the diagnosis and treatment. Ward classes for physical diagnosis were in vogue, but clinical clerks were unknown and theoretical lectures occupied a large share of the student's time. The University Hospital and Blockley, the large city hospital, contained an abundance of clinical material which could be utilized for physical diagnosis and for general clinical instruction. I started a small clinical laboratory, which was in charge of Dr. George Dock, now Professor of Medicine in St. Louis. At the Infirmary for Nervous Diseases I became associated with that remarkable man, Dr. S. Weir Mitchell whose career illustrates how a great clinician may develop apart from academic influences or work. The pleasantest memories of five years' sojourn in the "Quaker city" are associated with my friendship with this modern Francesco Redi.

The opening of the Johns Hopkins Hospital in 1889 marked a new departure in medical education in the United States. It was not the hospital itself, as there were many larger and just as good; it was not the men appointed, as there were others quite as well qualified; it was the organization. For the first time in an English-speaking country a hospital was organized in units, each one in charge of a head or chief. The day after my appointment I had a telegram from Dr. Gilman, president of the university, who had been asked to open the hospital, to meet him at the Fifth Avenue Hotel, New York. He said to Dr. Welch and me: "I have asked you to come here as the manager is an old friend of mine, and we will spend a couple of days; there is no difference really between a hospital and a hotel." We saw everything arranged in departments, with responsible heads, and over all a director. "This," he said, "is really the hospital, and we shall model ours upon it. The clinical unit of a hospital is the exact counterpart of one of the subdivisions of any great hotel or department store."

Fortunately the university had not enough money at first to open the medical school, so that we had several years to wait, during which there was only post-graduate teaching, and we were able to complete our organization.

I am going to show you, illustrated by lantern slides, the method of work gradually adopted in the medical unit. But first let me say that we had the good sense to make a high standard for entrance to the school, either the B.A. or the B.Sc. Through the influence of Professor Newell Martin, to whom American biological science owes a deep debt, and Drs. Remsen and Welch, an

admirable three years' preliminary course to medicine was offered by the university.

By the time the first class of medical students had reached the final stage the hospital was in very good working order. The medical unit consisted of about seventy beds (the number gradually increased to above one hundred), a large out-patient department, and a clinical laboratory close to the chief wards. In charge was the head, *ex officio* professor of medicine in the university, a resident staff of first, second, and third assistants (nominated by the professor), a fourth assistant in charge of the laboratory; and in addition four house physicians, appointed annually. The first assistant, a man of experience, remained for some years, and in the absence of the chief was in complete control of the department. He had rooms in the hospital and was paid £200 a year, half by the hospital, half by the university. All of the assistants were engaged in teaching and were paid. The appointments were for no fixed period, and during the sixteen years of my control there were only five first assistants, Dr. Lafleur, now Professor of Medicine at McGill, Dr. Thayer, Professor of Clinical Medicine at the Johns Hopkins Hospital, Dr. Futcher, Associate Professor of Medicine at the Johns Hopkins Hospital, Dr. McCrae, Professor of Medicine at Jefferson College, Philadelphia, and Dr. Cole, at present Director of the hospital connected with the Rockefeller Institute. In each instance these men had lived as junior and senior assistants in the hospital for seven, eight, or more years. I had the good fortune to have in charge of the clinical laboratory for some years Dr. Emerson, now Professor of Medicine in the University of Indiana.

I have always felt that the success which followed this experiment—for such it was in hospital work in the United States, at any rate—was due to the type of men we had as senior assistants in the various departments. We chose the best that were to be had; the nomination was in the hands of the chief of the department; they were given responsibility, encouraged to teach, and to write, and their professional development was promoted in every way. An excellent plan, greatly favoured by the director of the hospital, Dr. Hurd, was to allow the senior assistants every couple of years a vacation of from four to six months to go abroad for study. The out-patient section of the medical unit was in charge of a separate staff, usually men who had been senior assistants and had gone into practice in the city. There were three; each took two days a week, and had his own staff of three or four assistants, and all were directly engaged in teaching. You may gather from this some idea of the size of a medical unit and of the number of men at work in it, at least twenty-three or twenty-four when I left the hospital. This may be said to be an impossible task for one man to control. Not at all; it is all a question of organization, of subdivision of labour, and of co-operation among workers, and the introduction into a department of modern business methods.

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To come now to the actual work. The first duty in the unit is the care of the patient. For the sake of hospital managers I would like to make a statement. If one wishes patients well taken care of, their diseases thoroughly studied, and their treatment in every detail up to date, have medical students in the wards and out-patient departments. They represent the suprarenal extract of the body medical, maintaining the tonus and furnishing the working stimulus. A man's attitude towards his fellow-creatures is largely temperamental. If naturally devoid of the milk of human kindness, to assume a kindly interest in the sick is impossible. This was the meaning of that striking remark of Hippocrates that to a proper love of the profession must be joined a love for humanity—or words to that effect. In any ward visit one can see immediately the spirit in a hospital—whether patients are regarded as just so much material, or as our brethren deserving under all circumstances of every possible consideration and kindness. I have always felt that in this respect we can all take a lesson from our French colleagues, whose gentle courtesy towards their patients has always made a deep impression upon me. In the wards of the Bicêtre, or of the Salpêtrière, where congregate the very dregs of humanity, the greetings of the old men and women show how they feel that in their physician one friend at any rate is left.

The second great function of the clinic is concerned with teaching—assistants, students, nurses. One of the special advantages of an organization of this kind is the progressive training of a group of young men who take part in the work and are taught progressively, often unconsciously, how to teach.

The first assistant is the understudy of the chief, the second of the first, the third of the second, and any one at a moment's notice is able to take the duties of the other. If Professor Halstead was absent at any time or during his summer vacation, the first assistant did the operative work and had charge of the clinic. If I was away, my first assistant took my place, and did my day's work in the hospital. In this way a group of men are educated who are fit to take teaching positions, and a source of the most legitimate pride in a teacher is to have his old associates scattered over the country in responsible positions. The organization of the university clinic exists primarily for the training of the student, who has a right to demand systematic, thorough, and punctual instruction, enough to give a working knowledge of his profession. With students in a hospital as part of its machinery, and if you do not try to teach them too much or lecture them too much, in two years, given a thorough preliminary training, they should get a very fair knowledge of medicine and surgery.

Junior Clinical Class.

We divided the classes into junior and senior, representing the third and fourth years. As our numbers were

limited we rarely had more than sixty to seventy in each. They were arranged in three groups in each year—medical, surgical, obstetrical and gynaecological—each of which spent about three months and a half in medicine and surgery and the rest of the time in obstetrics and gynaecology. Let us take first the junior class. A strong believer in the out-patient department for teaching purposes we utilized this almost exclusively for the junior students. The arrangement was as follows:

(a) Physical Diagnosis.

The three men in charge of the out-patients were demonstrators or associates in medicine, and responsible for the routine instruction in physical diagnosis. To each one a small group of students was assigned who day by day

Fig. 1.—Out-patient clinic.

helped in the work and were taught practically physical diagnosis. As the school grew this teaching fell into the hands of experienced men such as Dr. Thayer, Dr. Futcher, and Dr. McCrae, and it was with special satisfaction that I saw the full development of this work. The out-patient department was arranged with suitable teaching rooms and a small laboratory. When the Phipps Tuberculosis Dispensary was opened as an annex, each member of the junior class passed through it in the routine of training. The out-patient room offers much the best opportunities for the beginner. He sees the sick man or the sick child as he is, and he can be taught much more satisfactorily how to take the histories provided that he has plenty of time, numerous instructors, plenty of patients, and ample accommodation. In medicine the work of a junior student was to get a knowledge of

disease and of its methods of recognition in the out-patient department. To supplement this, three times a week, at the close of the out-patient hours, was held—

(b) A Systematic Out-patient Clinic.

I used to call this an observation class, as its primary function was to train men in the use of their senses. My instruction to the assistants was "send in anything the men can see or handle." The picture (Fig. 1) shows the out-patient clinic at work in a room large enough to hold thirty men comfortably seated. Students were taken in routine, and by this next picture (Table I) it is seen how

TABLE I.—*Cases for the Month of January, 1901.*

Date.	Clerk.	Case.
Jan. 3	Riggins	Periostitis, luetic.
,, 3	Oschner	Chlorosis.
,, 10	Wright	Haemachromatosis.
,, 10	Scholl	Enlarged liver, syphilitic.
,, 12	Simpson	Cancer of stomach.
,, 12	Steele	Lues, secondary.
,, 12	Talant (Miss)	Tachycardia.
,, 15	Silverberg	Aneurysm, carotid.
,, 15	Wight	Angiomata, nasal haemorrhage.
,, 15	Williams (Miss)	Dementia praecox.
,, 15	Williams	Lues, secondary.
,, 17	Arsdall	Phthisis.
,, 17	Browne	Aneurysm, thoracic.
,, 19	Auer	Haemoglobinuria.
,, 19	Briggs	Thickened pleura.
,, 22	Bruns	Epithelioma of lip.
,, 22	Bryan	Acute pleural effusion.
,, 24	Bush	Tuberculosis, pulmonary, pleural, and peritoneal.
,, 24	Churchman	Malignant disease of oesophagus.
,, 24	Clarke	Gout.
,, 29	Cook	Pleurisy, tuberculous.
,, 29	Coons	Tabes, mitral disease.
,, 29	Dolley	Polypnoea, neurasthenia.
,, 29	Duffy	Pulmonary tuberculosis.

the scheme worked. The clerk's name was put down, the name of the patient, and then the ward if he was admitted.

The clerk was expected "to keep track" of his case, and to report on it in a way that you will hear in a few minutes. Upon one strong conviction I have always tried to act—to make as far as possible the student participate in the teaching. The next picture (Table II) illustrates

TABLE II.—*1900-1901.*

Date.	Name.	Subject.	Read.
Oct. 6	Bryan	Pediculi and peliomata	x. 14
,, 9	Dohme	Method of healing of aneurysm	x. 16
,, 9	Bush	Fowler and Fowler's solution	v. 8
,, 9	Coons	Virchow's original description of leukaemia	x. 30
,, 11	Duffy	Huntingdon's paper on chronic chorea	x. 20
,, 16	Ferry	Lung stones	x. 15
,, 16	Frankenthal	Gastric ulcer at early age	x. 25
,, 18	Haynes (Miss)	Diagnosis of varieties of tape-worm	x. 25
,, 20	Hirshberg	Hippocrates's description of phthisical chest	xi. 12
,, 25	Lehr	Bronchiectasis, pathology of	xi. 1
,, 30	Reede	Round-up for October	xi. 8
Nov. 13	Briggs	Argyria, smallest amount of nitrate of silver to cause,	xi. 22
,, 13	Williams (Miss)	First description of mitral stenosis	xi. 22
,, 15	Wright	History of Peruvian bark	ii. 21
,, 17	Bruns	Nerve changes in herpes zoster	xi. 22
,, 17	Clarke	Visible peristalsis in pregnant uterus and in distended bladder	xii. 4
,, 22	Cook	Analysis of lithia waters	xii. 13
,, 24	Dolley	*Re* discovery of thyroid feeding	xii. 11
,, 24	Duffy	St. Vitus	xii. 24
,, 27	Ferry	Round-up for November	xii. 5
Dec. 4	Frankenthal	Subcutaneous fibroid nodules	xii. 6
,, 6	Erving	Glycosuria in tuberculosis	xii. 11
,, 6	Glenny	Who first described the *bruit de diable*	xii. 13
,, 6	Hardy	Weir Mitchell's paper on post-hemiplegic movements	xii. 20
,, 11	Lootz (Miss)	*Re* prognosis of diabetes in the young	i. 3
,, 13	Haviland	Acquired lues in congenital syphilis	i. 8
,, 17	Karsted	Necrosis in chrome workers	iii. 7
,, 20	Meisenhelder, J. E.	Round-up for December	i. 5

how this was carried out. At the top of the list you see the words "pediculi" and "peliomata." A case had come in with this association. It is an interesting point, and Mr. Bryan, the student who happened to be called up, was

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asked to report on the subject the next week. If you go down the list you will see what a motley group of subjects came under discussion. Take, for example, No. 3 on the list, Fowler. I would ask: "Who is Dr. Fowler who introduced Fowler's solution? Where was the article published?" Of course, Mr. Bush had not the faintest notion; but he was at once reassured when I told him that I also did not know. Nor could he give an affirmative to the next question: "Where will you look for it?" In such cases they were always referred to the *Index Catalogue* of the Surgeon-General's Library; sometimes to Neale's *Medical Digest*, and if the books were not in our own library they could be procured from the Surgeon-General's. Two things were required from the student who presented his report—brevity and lucidity—and, as far as possible, men were encouraged to speak, not to read from a MS. You see from the list how varied were the subjects presented during one semester. I got a great deal of instruction myself, we saw a great deal of valuable medical literature, it did not take very much time, and it was a great help in the education of the individual student.

On the table you will see at the end of each month the word "round-up," which we took from a practice of the Western cattle ranches. The last man called at the end of each month had to report the next week on the cases that had been before us during the month. In this way we kept in touch with them, and at the end of the session a complete report was presented by the eight or nine men who had had the monthly round-ups. Table III shows the

TABLE III.

(Cases, 230; deaths, 15; mortality, 6.5 per cent.)

	Cases.	Deaths.
1. Specific infectious diseases	61	6
2. Diseases of digestive system ...	35	7
3. Diseases of respiratory system ...	21	0
4. Diseases of circulatory system ...	32	1
5. Constitutional diseases	17	0
6. Diseases of blood and ductless glands	20	0
7. Diseases of kidney	5	1
8. Diseases of nervous system	22	0
9. Diseases due to animal and vegetable parasites	4	0
10. Diseases due to intoxications ...	6	0
11. Pregnancy	1	0
12. Anatomical and pathological curiosities	6	0

analysis of the session's work. You see that 230 cases were presented in 1899-1900, and I pass round a typewritten copy of the report which each student could procure. It illustrates the wealth of material available for teaching in the out-patient department of any large general hospital. You will be impressed with that first item on the list—61 cases of specific infections. It is a great advantage to see these in the unwashed, unprepared condition in which they present themselves at the hospital; and an analysis such as you see in the next figures could only be arranged by a great deal of co-operative work among the

TABLE IV.—*Specific Infectious Diseases.*

	Cases.	Deaths.
A. *Malarial Infection* (12 cases; 1 death).		
(*a*) Aestivo-autumnal	3	... 1
(*b*) Single and double tertian	9	... 0
October	5	
November	3	
December	2	
February	1	
(11 cases; history of chills and fever during summer.)		
April (tertian infection)	1	
(No history of chills and fever during previous summer.)		
Fatal case (aestivo-autumnal infection): Malarial nephritis.		
B. *Typhoid Fever and its Sequelae* (5 cases).		
(*a*) Abortive typhoid (October and November)	2	...
(*b*) Obliteration of femoral vein (ten years' duration	1	
(*c*) Hemiplegia with athetosis (two years' duration, developed three weeks after attack)	1	
(*d*) Peripheral neuritis (seen October, 1899, developed ataxia, at present greatly improved)	1	
C. *Sequelae of Diphtheria* (4 cases).		
(*a*) Peripheral neuritis (all in children developing during or from two to four weeks after attack	4	... 0
Pathological lesion—		
(1) Paralysis of palate in	4	
(2) Ptosis in	3	
(3) Paralysis of iris in	1	
(4) Paralysis of legs developing two weeks after paralysis of palate ...	1	
(All made complete but slow recoveries.)		
D. *Pneumonia* (1 case with extensive pleurisy) ...	2	... 0
E. *Varicella*	1	... 0
F. *Parotitis*	1	... 0
(The last two patients were both negro children.)		
G. *Febricula*	1	
H. *Amoebic dysentery*	1	
I. *Gonorrhoeal Arthritis* (five years' duration, girl 15)	1	
J. *Syphilis* (other than of the liver)	15	... 0
(*a*) Secondary (rash appearing five weeks to eight months after primary sore) ...	9	
(*b*) Tertiary	4	
(1) Perforation of palate	1	
(2) Periostitis	1	
(3) Arthritis...	1	
(All in women 25 to 40 years.)		
(4) Gumma of scalp	1	
(*c*) Congenital	2	... 0
(1) Girl, 18		
(2) Negro child, 3 months.		
K. *Tuberculosis*	18	... 5
(*a*) Pulmonary	15	... 4
(12 men, 3 women, about equally divided between negroes and whites. 10 under 3 years, 5 over 30 years, greatest number between 20 and 30 years.)		
(*b*) Peritonitis	1	... 1
(*c*) Ulcer of lip	1	... 0
(*d*) Lupus (5 years' duration)	1	... 0

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students. Table IV, a page of the report, shows the analysis of the cases of specific infectious diseases. Of course such a rich group of interesting cases could only be obtained through the keen co-operation of assistants

Fig. 2.—Clinical laboratory.

Fig. 3.—Clinical laboratory.

always on the look-out after suitable cases to show at this third-year clinic. For the teacher himself this type of class is ideal, only it must be thoroughly practical, theoretical discussions must be tabooed, and the student

must do as much work as possible. It is an ideal way in which to begin the study, as the young men are encouraged to look up the literature, and to visit their own cases whether in the homes or in the wards, and it gives good men an opportunity to show what they could do in the way of presenting the reports.

(c) *The Clinical Laboratory.*

The young medical student needs above all things method and technique, and to be trained early in the use of instruments of precision. In the physiological and pathological classes he becomes adept in the use of the microscope, etc., and when he comes to the hospital side he should have opportunities to apply this knowledge in the study of disease. He may get this haphazard, doing work in the out-patient rooms and in the wards, but it is very much better to have well-organized instruction extending throughout the entire session. In the scheme which we followed each student had his place in the laboratory with a microscope, always a good one, rented to him by the school for £1 a year. Here three afternoons a week throughout the entire session the junior class had routine instruction in clinical laboratory methods. The next two pictures (Figs. 2 and 3) represent the class at work. How much really good work may be done in classes of this sort may be gathered from Emerson's *Manual for the Clinical Laboratory*, which is largely based on material collected by the students. I was fortunate to have in charge of the laboratory such men as Lazier (who sacrificed his life in the yellow fever investigations), Camac, Emerson, and Cole.

In a laboratory of this type the student feels at home, with his own apparatus and reagents; here he can do his private work, always in reach of skilled assistance, and in a scientific atmosphere, as researches were always in progress.

The junior clinical student had plenty to do, with physical diagnosis classes the routine work of the out-patient department, the tri-weekly out-patient clinics, and three afternoons weekly in the clinical laboratory. He had one other class—

(d) *The General Clinic.*

The general clinic, which both the juniors and the seniors attended, and of the organization of which I will speak in a few minutes. You notice that the work of the junior student was almost exclusively in the out-patient department. There are those, I know, who feel that instruction may be better given to him in the wards, and that, as a senior, he appreciates more the out-patient department, but if the out-patient work is suitably arranged, and if teaching is made a predominant feature, there are many advantages in confining the work of the juniors to this section of the hospital. Of course, there is no objection whatever to the teaching of physical diagnosis in the wards, but one has to consider the patients.

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Senior Clinical Class.

In the three chief subjects the men were assigned for work in the wards as clinical clerks or surgical dressers in groups of 20 to 25.

(a) *Ward Work.*

Each morning until 12 o'clock was free for it ; the ward visit was made at 9 o'clock sharp. The number of beds assigned to each clerk varied—five, six, or eight, or even more. Under the direction of the house-physician, the clerk took the history and worked up the case, doing

Fig. 4.—Ward visit.

Fig. 5.—Ward visit.

himself the various analyses. For this purpose each clinical clerk had to have his own microscope, rented from the school, and his own place with the reagents, etc., in the clinical laboratory. The ward visit was on the plan with which you are so familiar. I show you a couple of pictures (Figs. 4 and 5) which illustrate its disadvantage—namely, the crowding round the bed—and in the next figures (Figs. 6 and 7) you may see the professor dictating a note or listening to a student making a report. Of a new case the clerk was encouraged to give orally a summary, not to read a full elaborate history. In this

way he was again made to help with the teaching, and, in fact, he was encouraged to do as much of the talking as possible. The Socratic dialogue is the ideal bedside

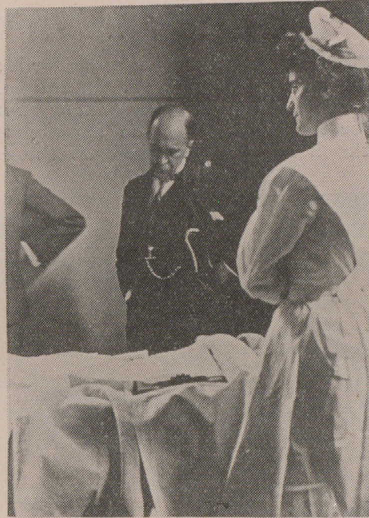

Fig. 6.—Ward visit.

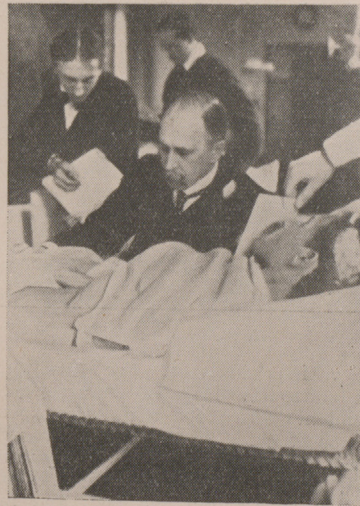

Fig. 7.—Ward visit

method, in which long harangues are out of place, and, after all, the priceless value of the system is not in the tongue of the teacher, but in the daily routine of personal

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contact with the patient, who is really the teacher. The assistants shared the ward work with me, and on alternate days, when I had the out-patient clinic, they made the visit with the clinical clerks.

Fig. 8.—Theatre teaching.

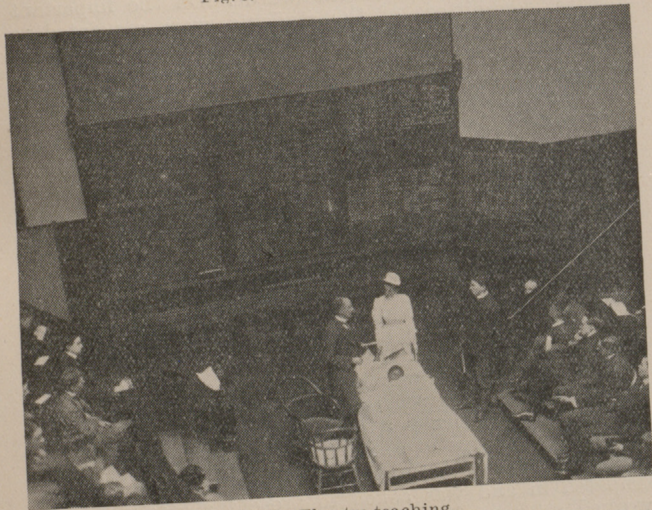

Fig. 9.—Theatre teaching.

(*b*) *The General Clinic.*

There are several methods of conducting what may be called the theatre clinic of a hospital. In the German method a series of cases is usually presented, on which the professor gives a more or less elaborate lecture. In

France, from the days of Corvisart, the ward visit has been the feature, after which the teacher lectures, usually without the cases before him, on special affections. Sometimes these lectures are extraordinarily complicated. I heard Dieulafoy lecture three successive Saturdays on the same case.

I utilized the theatre clinic largely to present to both the junior and senior students the general work of the wards. These next two pictures (Figs. 8 and 9) illustrate the theatre and the method of teaching. As far as possible we followed the seasons and their acute diseases; typhoid fever and malaria in the early autumn, then pneumonia as the winter progressed. Special emphasis was always laid on the more common affections. The clinical clerk described the main features of the case, if possible without his notes, talking, as I always insisted, to the back benches. This, again, was for a definite purpose —to teach the young fellows to control their vasomotors and to stand and think and talk simultaneously. In response to a question a keen student would give an answer that contributed not a little to the lecture itself. You notice on the second figure of the clinic (Fig. 9) the large blackboards. The lists of cases that you see represent an important feature of the clinic. As I mentioned, its special object was to present, week by week, to the third and fourth year students—all of whom were required to attend—the work of the wards. On the important diseases committees of the students were appointed to report. The tabulated lists on the blackboard represent the cases of typhoid fever and pneumonia entered week by week. Only the typhoid cases with complications were put up, but the entire experience of the clinic with pneumonia was presented. One of the first questions asked was for the chairman of the typhoid and pneumonia committees to report. In the longer list on the blackboard you see for the session 1900–1901 some 60 cases of pneumonia, very many of which were shown at the clinic, and all of which we reported upon. At the end of the session typewritten copies of these lists were circulated among the students. By the end of his fourth year a man could have a knowledge of at least 70 or 80 cases of pneumonia and of the complications of several hundred cases of typhoid fever.

Very special stress was laid upon this side of the work, and here again you see the important feature of making the student an active participant in the teaching. As far as possible groups of cases illustrating special features of disease were presented; very often an assistant participated in and was asked to present a case which he worked up specially. Sometimes we had a symposium conducted by the students. I remember on one occasion, when we had in the wards a number of cases of diabetes, the students held the clinic, and six of them presented the various features of the disease. Of course, they could not let the occasion pass without a joke, and on my table and in their buttonholes were sweet-peas! One last feature

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remains to be noticed. The concluding remark always was: What deaths? what *post-mortems?* If a *post-mortem* examination had been held, the clerk whose patient had died was responsible for the demonstration of the lesions. In making it as far as possible a student's affair the clinic may lack the dramatic unity of the French or the thoroughness of the German, but I claim for the method an educational feature of a high order; well arranged by the assistants and students, there is one thing it will not miss—the power to draw large and appreciative audiences.

(*c*) *Seminar Classes.*

In a very busy clinic there is neither the time nor is there the necessity for systematic lectures, but even in a rich hospital service it is impossible to show the student even types of all diseases, so that it is necessary to supplement in some way the teaching of the wards, the dispensary, and the theatre. We managed this in two ways. One of the assistants held each week what is called a "recitation" class, in which the students were examined upon set subjects given out previously. Sometimes textbook chapters were put down for study, sometimes journal articles, and, as far as possible, the important literature of the subject discussed was placed on the table. In this way one feels sure that the student gets at least some knowledge of the more obscure and less common maladies.

Then, a couple of years before I left, the assistants and the clinical clerks started a weekly *seminar*, in which, seated about a long table, the important recent contributions in the literature usually to the diseases under observation were reported upon and discussed.

(*d*) *Research.*

The third function of the clinic is organization for research, a side of the work which presents many difficulties. If a laboratory man, the professor may neglect patients and students, and if an old time bread-and-butter clinician he may neglect the laboratory side. He sets the pace, but one thing is certain, that in a university clinic the interest of the student should be paramount.

Every patient presents problems for research, and the clinical clerk should be able to carry out the necessary investigations. For this purpose there must be skilled assistants, directly attached to the clinic, who are able to advise and control his bacteriological, chemical and physiological studies. For example, in pneumonia and in typhoid fever the bacteriological work should be done under skilled supervision, and the clerk should be able to make his own blood cultures or to plate out a stool. In gout and diabetes he should carry out his own chemical studies with the help of a trained clinical chemist in a laboratory attached to the clinic; and in a case of heart-block he should have at hand all the graphic and electrical apparatus necessary for this study. The student should

himself carry out researches, particularly if he comes into the ward with a good chemical training. With reference to the arrangement of the laboratories one of two plans may be followed. In very large hospitals they may be concentrated in one building and even combined with pathology, but in the university medical clinic there are great advantages in having small laboratories of bacteriology, chemistry and pathological physiology associated directly with the wards.

In every university department the chief research must be done by the young assistants and special students under the direction of the chief, who fertilizes them with ideas. Here again it is a matter largely of organization, only I feel strongly that however important research may be every man associated with the clinic should take his share in teaching, and should be made to feel that the student is the pivot round which the machine works. Research becomes very absorbing, and in some men fosters a seclusive selfishness that is most deplorable. I can testify in an interesting way to the large amount of good work that may be done by the students and young assistants. When I left the Johns Hopkins Hospital, the graduates of the first eight years of the medical school presented me with twelve handsomely bound volumes containing just five hundred contributions they had made.

As briefly as possible this is a summary of my life as a clinical teacher. At a farewell dinner given to me by the profession of the United States and Canada, I expressed the pious wish that my epitaph should be, "He introduced routine bedside teaching into the United States"; and I think I may claim for my colleagues that in all the departments of the Johns Hopkins Hospital the English and Continental systems of teaching were combined with great advantage.

A Forecast.

Now, in a few concluding words, let me give you a forecast. I designedly took this subject for my address because the future is with you young men, who are certain to see within the next few years radical changes in the medical schools of this country. There are two important problems. Is it possible to organize in the English hospitals university clinics such as exist on the Continent, and such as those which we had at the Johns Hopkins Hospital? There are difficulties, of course, but they are not insuperable, and, once started, clinics of this type will be instituted in every school in the kingdom. Only let them be complete; the chief in full control, responsible for the teaching, responsible for the work of his assistants, and let them be well equipped with all modern accessories for research. The other problem is more difficult. Shall the director of such a clinic devote his whole time to the work, or shall he be allowed to take consulting work? For the former many advantages may be claimed, though the plan has nowhere yet had a practical trial. The amount of work in a modern clinic is

enormous—quite enough to take up the time and energies of any one man in conducting the teaching, treating the patients, and superintending the researches. Then it is attractive to think of a group of super-clinicians, not bothered with the cares of consulting practice, and whose whole interests are in scientific work. It is claimed that as much good will follow the adoption of the plan of whole-time clinicians as has followed the whole-time physiologists and anatomists. Against it may be urged the danger of handing over students who are to be general practitioners to a group of teachers completely out of touch with the conditions under which these young men will have to live. The clinician should always be in the fighting line, and in close touch with the rank and file, with the men behind the guns, who are doing the real work of the profession. The question, too, is whether the best men could be secured; whether academic and scientific distinctions would satisfy these men. Then for the hospital itself, would it be best to keep our best in clinical seclusion? Would there not be the danger of the evolution throughout the country of a set of clinical prigs, the boundary of whose horizon would be the laboratory, and whose only human interest would be research? I say frankly that I am not in favour of the whole-time clinical teacher. This is not surprising, as my life has been largely spent in association with my professional brethren, participating in the many interests we have had in common. At the same time let me freely confess that I mistrust my own judgement, as this is a problem for young men and for the future. I know how hard it is "to serve God and mammon," to try to do one's duty as a teacher and to live up to the responsibility of a large department, and at the same time to meet the outside demands of your brethren and of the public. And if added to this you have an active interest in medical societies, and in the multifarious local and general problems, the breaking point may be reached. I had had thirty-one years of uninterrupted hard work. William Pepper, my predecessor in Philadelphia, died of angina at 55; John Musser, my successor, of the same disease at 53! After listening to my story you may wonder how it was possible to leave a place so gratifying to the ambitions of any clinical teacher: I had had a good innings and was glad to get away without a serious breakdown.

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Methods of Teaching J.H.H. — Osler

REPORT OF MEDICAL CASES

SHOWN BY

PROFESSOR WILLIAM OSLER

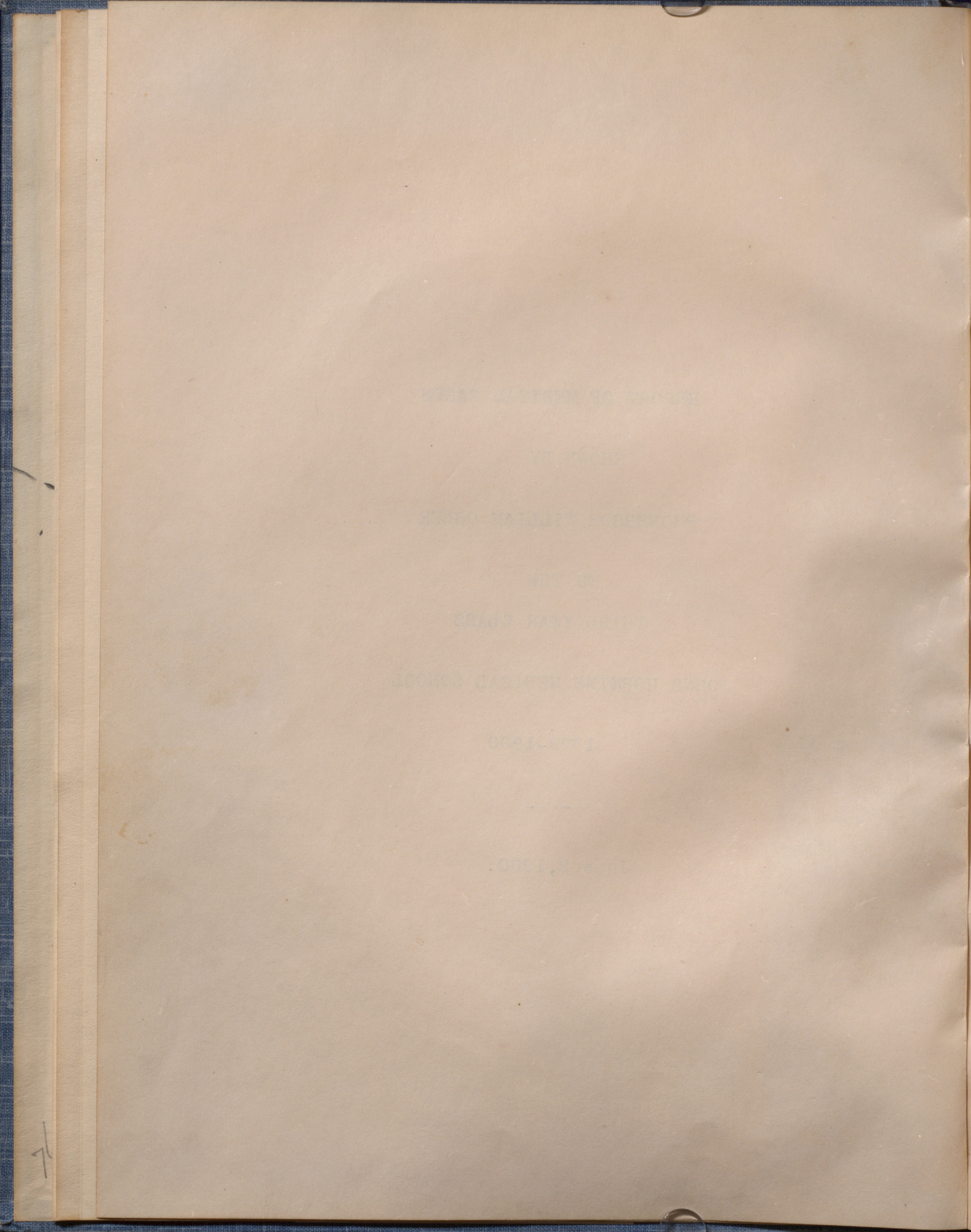
TO THE

THIRD YEAR CLASS

JOHNS HOPKINS MEDICAL SCHOOL

1899-1900

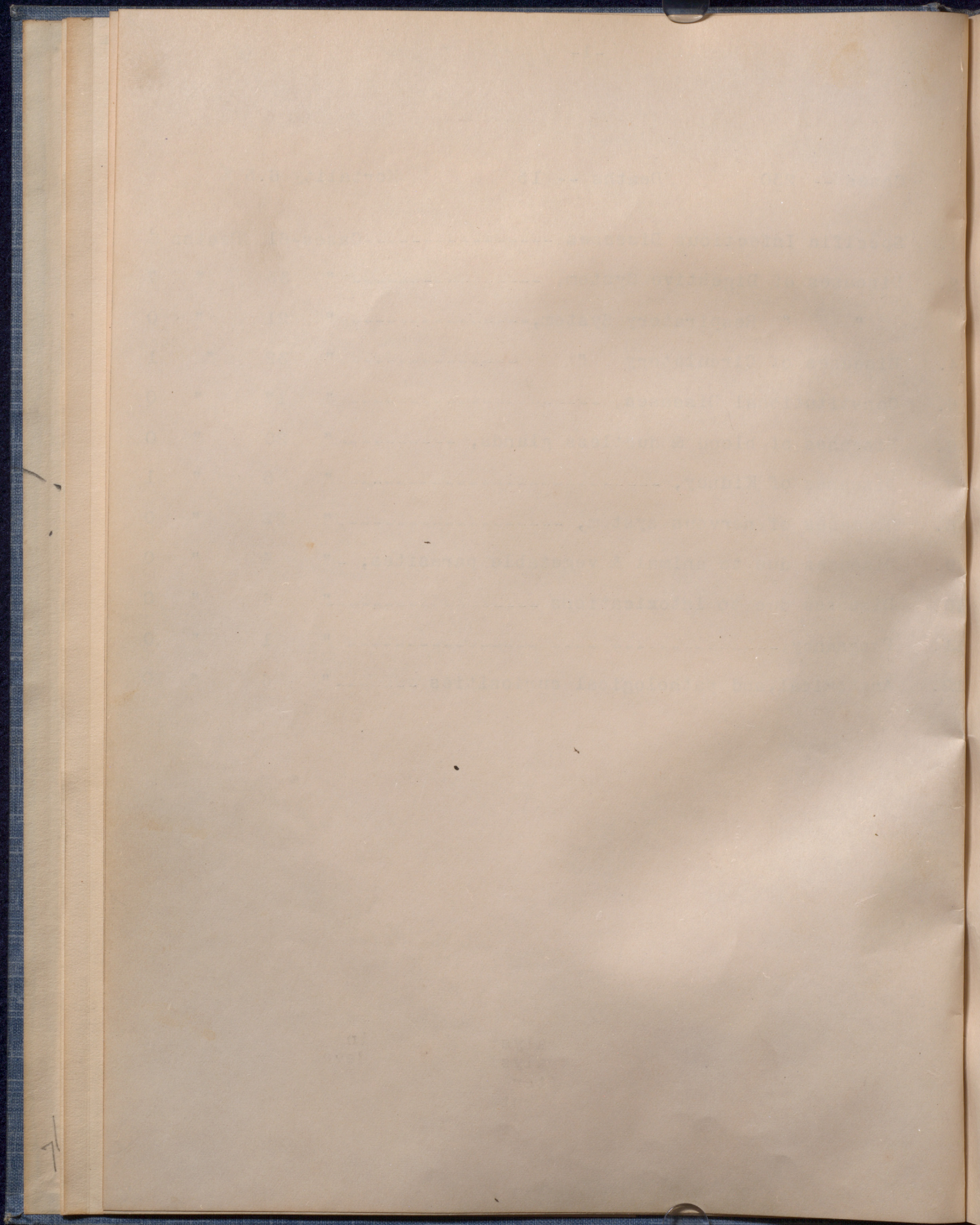
June 2,1900.



 1899-90

Cases -- 230 Deaths -- 15 Mortality 6.5 %

1.	Specific Infectious Diseases ------------------	Cases-61	Deaths 6
2.	Diseases of Digestive System, ----------------	" 35	" 7
3	" " Respiratory System,----------------	" 21	" 0
4.	Diseases of Circulatory " --------------	" 32	" 1
5.	Constitutional Diseases, -----------------------	" 17	" 0
6.	Diseases of blood & ductless glands, -----------	" 20	" 0
7.	Diseases of Kidney, --------------------------	" 5	" 1
8.	Diseases of nervous system, ------------------	" 22	" 0
9.	Diseases due to animal & vegetable parasites, -	" 4	" 0
10	Diseases due to intoxications ------------------	" 6	" 0
11.	Pregnancy,--------------- --------------------	" 1	" 0
12.	Anatomical,and pathological curiosities --------	" 6	" 0
		230	



1. Specific Infectious Diseases,----------------Cases 61 Deaths 6

A. Malarial Infection, ----------------- " 12 " 1

(a) Aestivo-autumnal,--------------- " 3 " 1

(b) Single & double Tertian,-------- " 9 " 0

October,------------------------" 5
November ------------------- " 3
December -------------------- " 2
February, ----------------- " 1

Total 11 cases, history of chills & fever during summer.

April (Tertian infection) " 1

No history of chills and fever during previous summer.

Fatal case; (Aestivo-autumnal infection) Malarial Nephritis.

B. Typhoid fever and its suquelae,----- " 5 " 0

(a) Abortive typhoid, (Oct.& Nov.) " 2 " 0

(b) Obliteration of fem.vein,----- " 1
Ten years duration.

(c) Hemiplegia with athatosis, -----" 1
Two years duration,developed 3 weeks after attack.

(d) Peripheral neuritis, --------- " 1
Seen Oct.,1899,developed ataxia, at present greatly improved.

C. Sequelae of diphtheria, ------ ----Cases 4 Deaths 0

(a) Peripheral neuritis,--------- " 4 " 0
All in children developing during or from two to 4 weeks after attack.
Pathological lesion,
(1) Paralysis of palate in " 4
(2) Ptosis in " 3
(3) Paralysis of iris in " 1
(4) Paralysis of legs developing 2 weeks after paralysis of palate, cases 1.

All made complete but slow recoveries.

D. Pneumonia - ---------- -------Cases 2 Deaths 0
One case with extensive pleurisy

E. Varicella,-------------------------- " 1 " 0

F. Parotitis,-------------------------- " 1 " 0
Both negro children.

G. Febricula--------------------------- " 1

H. Amoebic Dysentery ------------------ " 1

I Gonorrhoeal Arthritis---------------" 1
Five years duration, girl 15

J. Syphilis (Other than of the liver)--15 " 0

(a) Secondary,-------------------" 9 " 0
Rash appearing 5-weeks to 8 months after primary sore.

(b) Tertiary ------------------- " 4

(1) Perferation of palate " 1

(2) Periostitis ------------" 1

(3) Arthritis ----------- " 1

All in women, 25-40 years

(4) Gumma of scalp " 1

(c) Congenital " 2 " 0

(1) Girl,18

(2) Negro child 3 months

K. Tuberculosis,------------------ " 18 " 5

(a) Pulmonary,---------------- " 15 " 4
12 men, 3 women, about equally divided between negroes and whites.
10 under 3 years, 5 over 30 years, greatest number between 20-30 years.

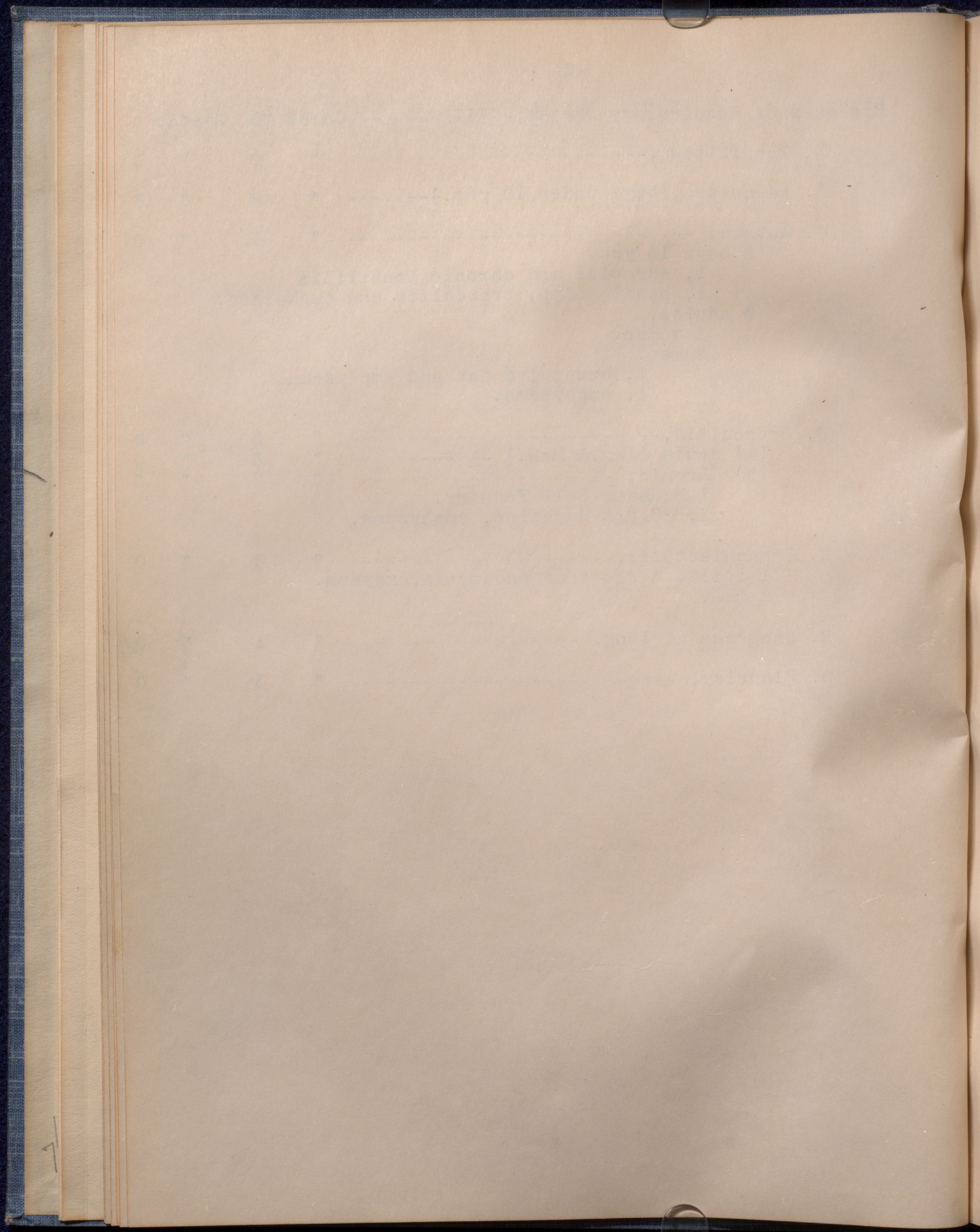
(b) Peritonitis,--------------Case 1 Death 1

(c) Ulcer of lip -------------- " 1 " 0

(d) Lupus,(5 years duration)--- " 1 " 0

		Cases		Deaths
2.	Diseases of Digestive System.----------------	Cases 35		Deaths 7
A.	Diseases of stomach,----------------------	" 10	"	1
(a)	Dilated stomach with dyspepsia ------	" 2	"	0
(b)	Carcinoma of stomach,----------------	" 8	"	1
	7 men, 1 woman 2 before 50 years, 6 after 50 years, greatest number between 50-60 years.			
B.	Diseases of intestine,-------------------	" 10	"	2
(a)	Carcinoma of caecum,(operation)	1		1
(b)	Mucous colitis,(In alcoholic) -------	" 1	"	0
(c)	Diarrhoea,------------------------------	" 2	"	0
(d)	Stricture of small intestine, (5 months)	1	"	1
(e)	Ileo-caecal intussusception,(7 months)	" 1	"	0
	Operation.			
(f)	Chronic appendicitis,----------------	" 2	"	0
	One case successful operation			
(g)	Idiopathic dilatation of colon,------	" 2	"	1
	Boy of 13 yrs., died after operation. Boy 4 yrs. improved			
C.	Diseases of the liver.,-----------------	" 15	"	3
	12 men, 3 women 9 before 50 yrs., 6 between 50-70 yrs.			
(a)	Catarrhal jaundice,(8 weeks)---------	" 1	"	0
(b)	Gall stone,-------------------------	" 5	"	0
	3 men, 2 woman 4 over 50 yrs.			
(c)	Suppurative cholecystitis,(abscess of liver)	1	"	1
(d)	Cirrhosis of liver,------------------	" 6	"	0
	(1) Syphilitic,--------------------	" 5	"	0
	4 men, 1 woman, 4 between 30-40 yrs, 1 between 50-60 yrs.			
	(2) Alcoholic,--------------------	" 1	"	0
(e)	Carcinoma of liver,-------------------	" 2	"	1
	(1) Primary,-----------------------	" 1	"	1
	(2) Secondary,-------------------	" 1		

3. Diseases of Respiratory System,-------------	Cases 20	Deaths 0
A. Tonsilitis ,-------------------------	-" 2	" 0
B. Adenoids ,(boys under 10 yrs.)-------	" 2	" 0
C. Asthma, ----------------------------	" 5	" 0
2 boys 15 yrs.		
1, adenoids and chronic tonsilitis		
1, nasal polyp, bronchitis and emphysema.		
3 adults,		
1 woman,		
2 men.		
1, excessive fat and emphysema,		
1, emphysema.		
D. Bronchitis,-- -----------------------	" 5	" 0
(a) Acute (Jan.& Mch.) ------------	" 3	" 0
(b) Chronic, ----- ---------------	" 2	" 0
1 McShane Bell Foundry,		
1, 20 yrs duration, emphysema, "		
E. Bronchiectasis,--------------------	" 3	" 0
1 child, history of pneumonia,empyema.		
2 men,		
F. Gangrene of lung, ------------------	" 1	" 0
G. Pleurisy, ---------------------------	" 3	" 0



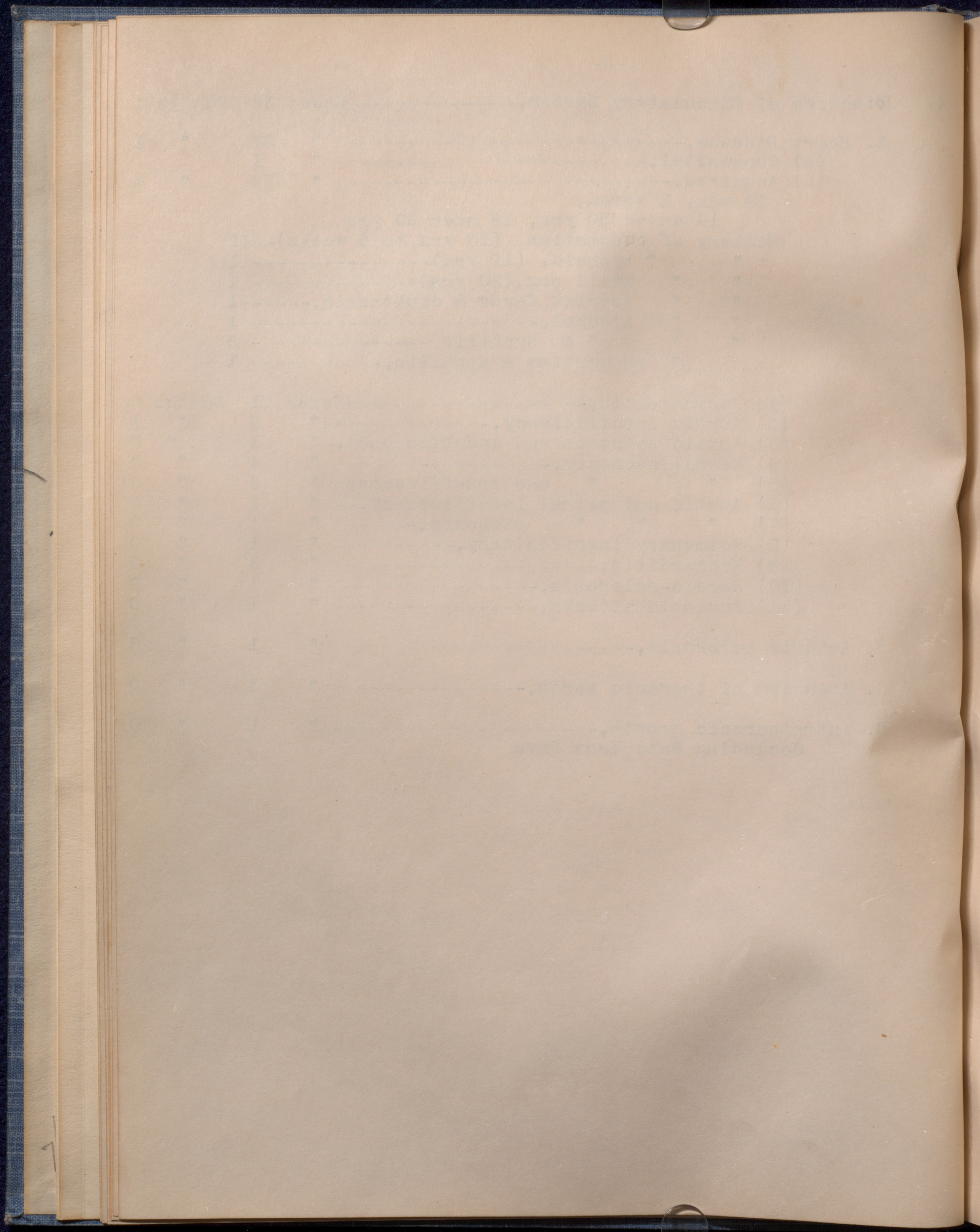
4. Diseases of Circulatory System,--------------Cases 32 Deaths 1

	Cases	Deaths
A. Heart Disease,---------------------------	27	1
(a) Congenital,-------------------------	1	
(b) Acquired,--------------------------	26	1

24 men, 2 women,
14 under 30 yrs, 12 over 30 yrs

History of	
rheumatism (18 yrs. to 6 weeks)	12
" typhoid, (12 yrs)	1
" small pox, (20 yrs)	1
" scarlet fever & diphtheria,	1
" alcohol,	1
" " & Syphilis	3
" rheumatism & syphilis,	1

	Cases	Deaths
(1) Pericarditis,-------------------	1	0
(2) Aortic insufficiency,---------------	5	1
(3) Aortic stenosis and insufficiency,-	3	0
(4) Mitral stenosis,---------------	4	0
(5) " " and insufficiency	3	0
(6) Aortic and mitral insufficiency,--	3	0
(7) " " " stenosis,------	1	0
(8) Pulmonary insofficiency,---------	1	0
(9) Myocarditis,--------------------	3	0
(10) Cardio-sclerosis,---------------	1	0
(11) Angenoid attacks,----------------	1	0
B. Arterio sclerosis,----------------------	1	0
C. Aneurism of thoracic aorta,--------------	3	0
D. Intrathoracic growth,-------------------- Occluding Sup. Vena Cava	1	0



5. Constitutional Diseases. ---------------------Cases 17-Deaths 0

A. Spondylitis deformans,-------------------- " 1 " 0
Woman, 72 years old. Grew gradually worse.

B. Arthritis deformans,---------------------- " 3 " 0
All women between 40 and 60 years.

C. Polyarthritis deformans, ------------------ " 3 " 0
(General glandular enlargement)
Girl 19, 9 years duration,
Girl 9, 3 years duration,
Boy 15, 5 years duration.

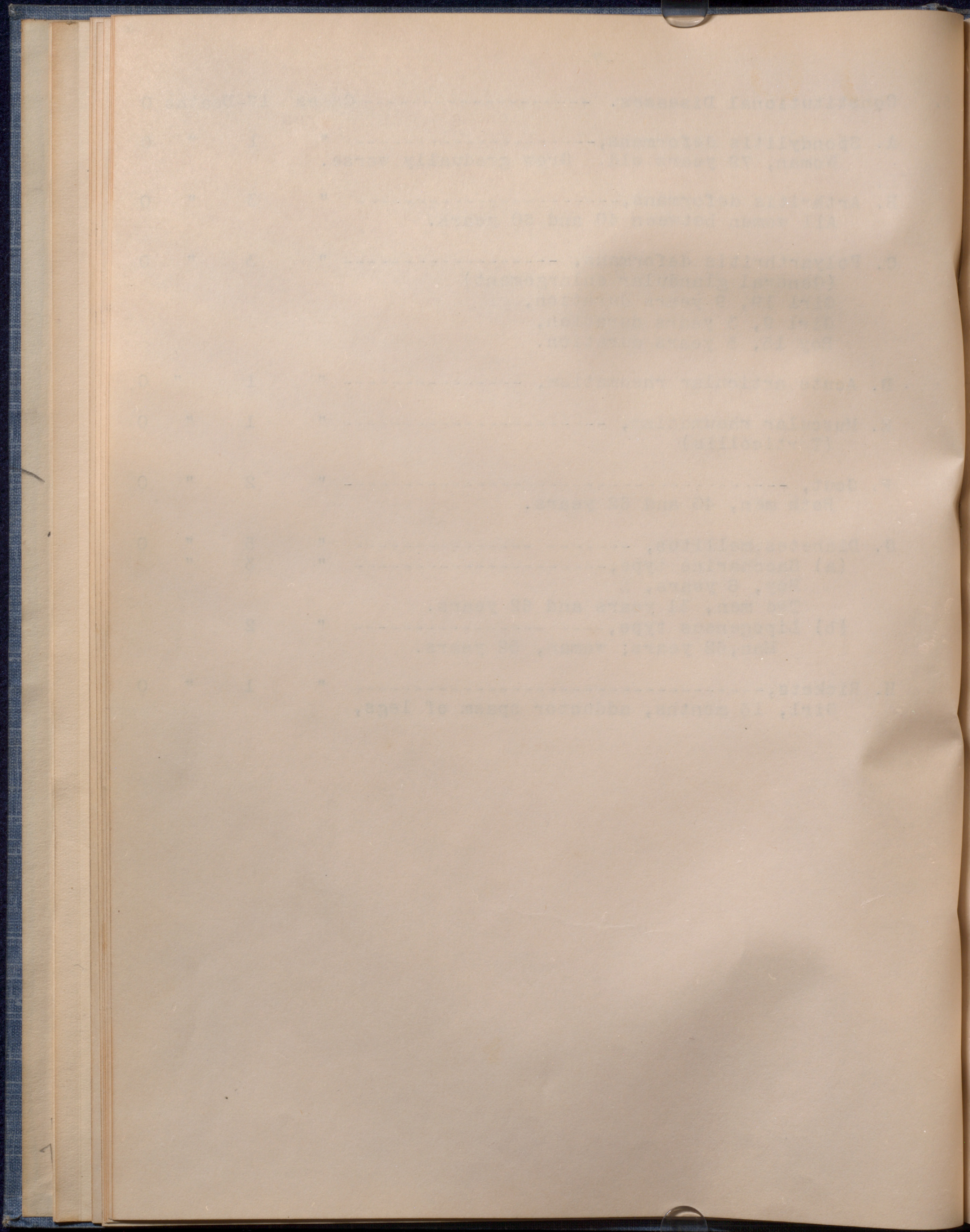
D. Acute articular rheumatism, -------------- " 1 " 0

E. Muscular rheumatism, --------------------- " 1 " 0
(Torticollis)

F. Gout, ------------------------------------ " 2 " 0
Both men, 43 and 62 years.

G. Diabetes mellitus, ------- --------------- " 5 " 0
(a) Saccharine type,-------------------- " 3 "
Boy, 8 years,
Two men, 31 years and 62 years.
(b) Lipogenous type,---- ---------------- " 2
Man, 62 years; woman, 52 years.

H. Rickets,---------------------------------- " 1 " 0
Girl, 16 months, adductor spasm of legs,



		Cases		Deaths
6.	Diseases of the blood and ductless glands, --	20	-	0
	A. Epistxis,---------------------------------- "	1	"	0
	Man, 62 years,			
	B. Haemophilia,-------------------------------- "	1	"	0
	Negro, 23 years,			
	C. Purpura,------------ ----------------------- "	3	"	0
	(a) Henoch's purpura,--- ---------------- "	2		
	Both bøys, very little improvement			
	(b) Arthritic purpura,------------------- "	1		
	Man, 24 years.			
	D. Hodgkin 's Disease,------------------------ "	1	"	0
	Man, 44 years, seen Oct., pressure symptoms in May.			
	E. Diseases of spleen,----------------------- "	2	"	0
	(a) Splenic anemia,---------------------- "	1		
	Woman, 44 years.			
	(b) Primitive splenomegaly,-------------- "	1		
	Man, 35 years.			
	F. Chlorosis,---------------------------------- "	3	"	0
	G. Goitre,----------------- ----------------- "	2	"	0
	Both women, one with slight exopthalmos.			
	H. Sporadic cretinism,----------------------- "	3	"	0
	I. Addison's disease,------------------------- "	1	"	0
	J. Haemachromatosis,------------------------ "	2	"	0
	Man, 45 years; boy, 12 years.			
	K. Leukaemia,--------------------------------- "	1	"	0

7. Diseases of the kidney, ---------------------Cases 5 Deaths 1

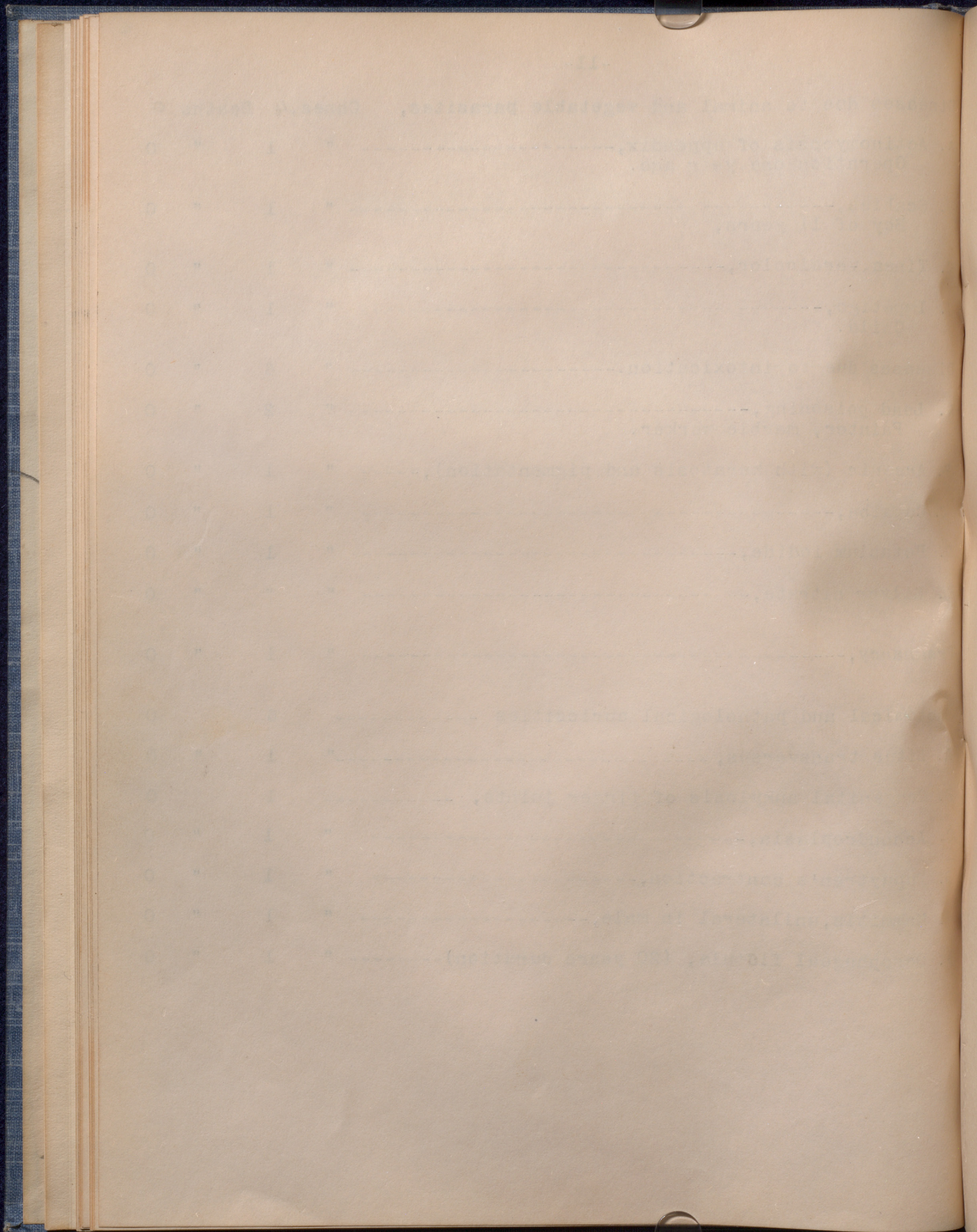
A. Nephritis,--------------------------------- " 3 " 1
(a) Acute, ---------------------------- " 1
Girl, 15 years,developed chronic nephritis.
(b) Chronic,--------------------------- " 2 " 1
Man, 36 years,,
Woman, 110 years, died bronchitis.

B. Pyonephrosis,------------------------------ " 1 " 0
Man, 35 years, operated on doing badly.

C. Floating kidney,--------------------------- " 2 " 0
Woman, 30 years, history of trauma;
Woman, 50 years, lax abdominal wall.

		Cases		Deaths	
8.	Diseases of Nervous system. ------------------	Cases	22	Deaths	0
	A. Ataxia, loss of sensation, hemiplegia, Man, 35 years, pulmonary tuberculosis. Sensation and much of muscular power returned.	"	1	"	0
	B. Tremor, intentional and during rest,------- Both men.	"	2	"	0
	C. Spastic paralysis,------------ ----------- A man 30 years, unaffected by KI. Three children, two with athetosis, 1 negro boy 5 years, crossing of legs.	"	4	"	0
	D. Chorea, ----------------------------------	"	5	"	0
	(a) Chronic, -------------------------- White man, sent home demented; Negro.	"	2		
	(b) Acute, ---------------------------- All children, history of rheumatism and valvular lesions.	"	3		
	E. Facial paralysis,-------------------------	"	2	"	o
	(a) Double,----------------------------- Negro girl, recovered.	"	1		
	(b) One side,--------------------------- Man, tubercular middle ear disease, pulmonary tuberculosis.	"	1	"	0
	F. Dementia paralytica, 8 months duration, ---- Man 41 years.	"	1	"	0
	G. Hysteria,---- ----------------------------	"	3	"	0
	(a) Cough, ----------------------------- Man 34 years, boy of 10 years.	"	2		
	(b) Torticollis, -----------------------	"	1		
	H. Congenital torticollis, facial asymmetry--- Girl, 7 years, slightly improved by operation.	"	1	"	0
	I. Raynaud's disease (fingers)--------------- Woman, syncope; Woman, asphyxia.	"	2	"	0
	J. Megalocephaly,--------------------------- Man, 45 years.	"	1	"	0

Diseases due to animal and vegetable parasites,	Cases,	4	Deaths	0
A. Actinomycosis of appendix,-------------------- Operation one year ago.	"	1	"	0
B. Scabies,-- Boy of 11 years,	"	1	"	0
C. Tinea versicolor,--------------------------------	"	1	"	0
B. Impetigo,-- Child.	"	1	"	0
Diseases due to intoxication.----------------------	"	6	"	0
A. Lead poisoning,---------------------------------- Painter, marble worker.	"	2	"	0
B. Arsenic (with keratosis and pigmentation),-----	"	1	"	0
C. Copaiba,--	"	1	"	0
D. Potasium iodide,----------------------------------	"	1	"	0
E. Silver nitrate,-- ------------------------------	"	"	"	0
Pregnancy,---	"	1	"	0
Anotomical and pathological curiosities ------------		6		0
A. Situs transversus, -------------------------------	"	1	"	0
B. Congenital ankylosis of finger joints, -----------		1		0
C. Achondroplasia,-----------------------------------	"	1	"	0
D. Dupuytren's contraction,--------------------------	"	1	"	0
E. Mammitis,unilateral in male,----------------------	"	1	"	0
F. Oesophageal fistula, (20 years duration)--------	"	1	"	0



A REPORT OF CASES

SHOWN IN

MEDICAL CLINIC

TO THE

THIRD YEAR CLASS

JOHNS HOPKINS MEDICAL SCHOOL.

1903-1904.

-:-

✓

1903 - 1904

Cases - 187 Deaths - 22 Mortality 11.2%

	Cases.	Deaths.
Specific Infectious Diseases, ...	45	6
Diseases due to Animal Parasites, ...	3	0
Intoxications, ...	4	0
Constitutional Diseases, ...	16	1
Diseases of Digestive System, ...	26	4
Diseases of Respiratory System, ...	9	0
Diseases of Blood and Ductless Glands, ...	12	3
Diseases of Circulatory System, ...	38	3
Diseases of Kidneys, ...	12	2
Diseases of Nervous System, ...	13	0
Curiosities, Anatomical and Pathological, .	6	1
Undiagnosed, ...	3	2

Specific Infectious Diseases.	Cases. 45	Deaths. 6
1. Typhoid Fever and Sequelae		
(a) Typhoid, ...	1	0
(b) Abortive Typhoid,................	1	0
(In bed 6 days and recovered practically without treatment.)		
(c) Typhoid Periostitis, ...	1	0
(Boy aged 10, did not show fever and diagnostic signs of the general disease till over 1 week after the bone-lesions were well developed.)		
(d) Peripheral Neuritis, ...	1	0
(Steppage gait.)		
2. Varicella, ...	1	0
3. Epidemic Parotitis, ...	2	0
4. Influenza, ...	1	0
5. Lobar Pneumonia, ...	1	0
6. Rheumatic Fever, ...	2	0
(One case recurrent, one sub-acute with mitral endocarditis.)		
7. Malarial Infection, ...		
(a) Aestivo-Autumnal, ...	2	0
(b) Tertian, single and double,......	4	0
(2 of these were spring recrudescences.)		
8. Tetanus, ...	1	1
(Patient, a stable-boy, was infected through large syphilitic ulcers on legs.)		
9. Syphilis.		
(a) Secondary, ...	6	0
(b) Tertiary, ...	1	0
(c) Congenital, ...	1	1
10. Acute Dysentery, ...	1	1
(Etiological factor not found.)		
11. Tuberculosis.		
(a) Pulmonary, ...	11	1
(One a sequel of chalicosis)		
(b) Peritonitis, ...	2	2
(following pulmonary involvement)		
(c) Periostitis,.....................	1	0
(following pulmonary involvement)		
(d) Arthritis, ...	1	0
(doubtful)		
(e) Abscess of Sternum, ...	1	0
(f) Of Lymphatic System, ...	1	0
(Cervical glands)		
(g) Parotitis, ...	1	0
(Probably not of parotid but of overlying lymph gland)		

	Cases.	Deaths
Diseases due to Animal Parasites.	3	0
1. Oxyuris, ...	1	0
(History of pin-worms discharged through nose,-- doubtful)		
2. Taenia saginata, ...	1	0
3. Scabies, ...	1	0
(Girl aged eleven, infected her whole family and another family.)		
The Intoxications.	4	0
1. Morphinism, ...	1	0
2. Lead-poisoning, ...	2	0
(Ship-joiner : china decorator)		
3. Argyria,.................................	1	0
(Patient treated 2 yrs. with $AgNo_3$ for epilepsy. Pigmentation has lasted 22 yrs.)		
Constitutional Diseases:	16	1
1. Arthritis Deformans.		
(a) Polyarthritis deformans, ...	2	0
(Woman aged 34, man aged 32)		
(b) Spondylitis deformans, ...	1	0
(Woman aged 26, has had the disease 13 years.)		
(c) Heferden's Nodosities, ...	1	0
(Woman aged 63. No other manifestation of the disease.)		
2. Chronic Rheumatism, ...	1	0
(Monarticular)		
3. Muscular Rheumatism, ...	1	0
4. Gout, ...	4	1
(2 cases chronic, of whom 1 with tumors, "chalk-stones," etc., died; 2 cases diagnosed from tophi just developing.) (Pts. all white, 1 woman, 3 men.)		
5. Diabetes Mellitus, ...	5	0
(White men from 41-62 yrs. old; 1 a "fat diabetic," 1 with a history of "sugar sprees.")		
6. Diabetes Insipidus, ...	1	0
(History of polyuria that appeared first after patient had been overcome by heat; multiple fibro-ligomata without a history of rheumatism.)		

Diseases of Digestive System:	Cases. 26	Deaths. 4
1. Pneumoparotitis, ... (Patient when a small boy learnt to inflate the glands at will.)	1	0
Of Oesophagus.		
2. Carcinoma, ... (Both middle aged men; the patient who died showed on section a ruptured diverticulum above the stricture with resulting purulent pericarditis.)	2	1
3. Oesophageal Fistula, ... (Following bruise, duration 21 yrs.)	1	0
4. Stricture, ... (Post-typhoid.)	1	0
Of Stomach.		
1. Carcinoma, ... (In all the tumor was palpable and the stomach dilated; one, a woman, had been operated on for a growth in the breast.)	3	1
Of Intestines.		
1. Catarrhal Enteritis, ...	1	0
2. Appendicitis, ... (Mild and chronic, clearing under medical measures.)	1	0
3. Enteroptosis, ...	1	0
Of Liver.		
1. Catarrhal Jaundice, ... (In men, oldest 57.)	3	0
2. Cholelithiasis, ... (Stone in cystic duct; history of typhoid 27 years previous; operation and recovery.)	1	0
3. Cirrhosis, ... (Alcoholic, one atrophic, one in hypertrophic stage.)	2	0
4. Abscess, ... (Rupturing into lung and probably amoebic.)	1	0
5. Carcinoma of Common Duct, ... (Men aged 63 and 58; one dead, one recent case.)	2	1

	Cases.	Deaths.
6. Neoplasm of Liver.		
(a) Carcinoma, ...	2	0
(One primary, one secondary.)		
(b) Sarcoma, ...	1	1
(Female 2 mos. old; tumor was from primary node in adrenal.)		

Of Peritoneum.

7. Neoplasm, ...	3	0
(Peritoneal lipoma, retroperitoneal sarcoma and probable retroperitoneal sarcoma.)		

Diseases of Respiratory System:	9	0
1. Bronchiectasis, ...	2	0
(Duration of disease 6 and 9 yrs. respectively, both following pneumonia; one shows hypertrophic pulmonary osteo-arthropathy.)		
2. Emphysema, ...	1	0
3. Pleurisy,		
(a) Acute Fibrinous, ...	3	0
(b) With Effusion, ...	3	0
(All of slow onset and probably tuberculous, and one certainly with opposite apex involved.)		

Diseases of Circulatory System:	38	3

Heart Disease.

(1) Chronic Valvular Disease (19)

(History of:

rheumatic fever,	6
" " and chorea	2
" " " trauma	1
chorea	2
alcohol and syphilis,	2
	13

(a) Aortic Insufficiency,	3	
(b) " " and Stenosis,	1	
(c) " Stenosis,	1	
(d) " and Mitral Insufficiency,	5	1
(e) Mitral Insufficiency,	6	
(f) " " and Stenosis,	2	
(g) " Stenosis,	1	
	19	

	Cases.	Deaths.
2. Hypertrophy and Dilatation, ... (One case had alcoholic history, one alcoholic and luetic, and one a history of electric shock with disease developing thereafter.)	6	1
3. Angina Pectoris, ...	1	0
Of Arteries.		
4. Arterio-sclerosis, ... (1 with induced myocarditis.)	2	0
5. Aneurism. (History of syphilis, alcohol, or hard work in all but one case.)		
(a) Of Thoracic Aorta, ...	7	1
(b) Of Abdominal Aorta, ...	2	0
6. Dilatation of Arch of Aorta, ...	1	0
Of Veins.		
7. Tumor of Jugular Vein, ... (Haemic tumor of tricuspid regurgitation.)	1	0
Diseases of the Blood and Ductless Glands:	12	3
1. Chlorosis, ... (Two cases practically identical in symptoms and course.)	2	0
2. Pernicious Anaemia, ... (Men over 44 yrs. old.)	3	2
3. Leukaemia.		
(a) Spleno-myelogenous, ... (One has arsenical pigmentation as result of treatment.)	2	0
(b) Lymphatic, ... (With 1% myelocytes and a huge spleen; this was perhaps a mixed form.)	1	0
4. Purpura, ... (1 died with multiple ecchymoses into brain 1 with erythema nodosum following rheumatic fever.)	2	1
5. Exophthalmic Goitre, ...	1	0
6. Tumor of Thyroid, ... (Probably a cyst.)	1	0

	Cases.	Deaths.
Diseases of Kidneys:	12	2
1. Nephritis.		
(a) Acute, ...	4	1
(One case followed quinsy, and one developed double pneumonia and recovered, and one died of uraemia.)		
(b) Chronic, ...	7	1
(Two were parenchymatous, and the remainder of interstitial type. Of the latter one had both kidneys decapsulated 3 yrs. ago and came into the clinic with an acute cystitis and only slight kidney symptoms.)		
2. Hydronephrosis, ...	1	0
(Tumor disappeared after aspiration of a small part of the contents and has not returned.)		
Diseases of the Nervous System:	13	0
1. Meningitis, ...	1	0
(Local, secondary to otitis media.)		
2. Meniere's Disease, ...	1	0
(Pt. showed chronic otitis media.)		
3. Intercostal Neuralgia, ...	1	0
4. "Waking Numbness,"	1	0
5. Neurasthenia, ...	1	0
6. Hysteria, ...	2	0
(Young girls, one with hysterical hiccough, one with shouting cough and tremor. The latter did badly at home and was in bed 3 mos. with at last abrupt recovery.)		
7. Chorea (Sydenham's), ...	1	0
(Woman 58 yrs. old; recovery)		
8. Tetany, ...	2	0
(Infants with carpo-pedal spasm. One developed pneumonia, during which the spasm subsided to return again on recovery.)		
9. Scleroderma, ...	2	0
(One, girl age 13, had local scleroderma; the other, a man age 52, showed general scleroderma with sclerodactylism.)		
10. Osteitis Deformans, ...	1	0

	Cases.	Deaths.
<u>Curiosities</u>, <u>Anatomical</u> <u>and</u> <u>Pathological</u>:	6	1
1. Gynaecomastia, ...	1	0
2. Dextrocardia, ...	1	0
3. Cryptorchidismus, ...	1	0
4. Epigastric Hernia, ... (Associated gastric disturbances.)	1	0
5. Skin Metastases of Malignant Disease,....	1	1
6. Ovarian Cyst, ... (Pronounced fluctuation shock.)	1	0
<u>Undiagnosed</u>:	3	2
1. A case in which the diagnosis lay between carcinoma of the stomach and primary pernicious anaemia. (No autopsy.)	1	1
2. Ascites, with signs of cirrhosis of liver. (On section there was no cirrhosis and no sufficient cause of death was found.)	1	1
3. Recent case with dyspnoea, pain in left hypochondrium and much enlarged spleen.	1	0

-o PNEUMONIA REPORT, OCT. 1904 - OCT. 1905. * o-

Coming within the scope of this report there are 67 cases of pneumonia grouped as follows:

I. Acute lobar-pneumonia occurring in previously healthy persons:-
55 cases. 19 deaths.

II. Cases of acute lobar-pneumonia in previously sick persons:-
9 cases. 4 deaths.

III. Cases occurring after etherization and surgical operations:-
2 cases. 0 deaths.

IV. Terminal acute lobar-pneumonia:-
1 case. 1 death.

V. Cases admitted with sequellae of acute lobar-pneumonia: None.

VI. Cases at first diagnosed acute lobar-pneumonia but proving to be other diseases:-

Tubercular pneumonia, 2 cases. 0 deaths.

Broncho-pneumonia, 2 cases. 2 deaths.

The death rate for all cases of acute lobar-pneumonia was 36%, and for cases of group I was 34.5%.

In the following statistics cases of group I, II, III, and IV are considered, also, one case of acute lobar-pneumonia at first diagnosed broncho-pneumonia.

Incidence and Mortality and Different Ages.

	White race.			Colored race.			Combined.		
	Cases.	Deaths.	Mort.	Cases.	Deaths.	Mort.	Cases.	Dth.	Mort.
1st yrs.	5	2	40%	3	0	0%	8	2	25%
10 - 20	2	0	0%	4	3	75%	6	3	50%
20 - 30	12	2	16.6%	15	6	40%	27	8:	30%
30 - 40	6	3	50%	4	2	50%	10	5	50%
40 - 50	6	3	50%	4	1	25%	10	4	40%
50 - 60	3	2	66.6%	1	0	0%	4	2	50%
60 - 70	2	0	0%	0	0	0%	2	0	0%

* See Last page.

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20 - 30	12	2	16.6%	15	6	40%	27	8	30%
30 - 40	6	3	50%	4	2	50%	10	5	50%
40 - 50	6	3	50%	4	1	25%	10	4	40%
50 - 60	3	2	66.6%	1	0	0%	4	2	50%
60 - 70	2	0	0%	0	0	0%	2	0	0%

* See last page.

	Cases.	Deaths.	Mortality.
Males	50	15	30%
Females	17	9	53%
Total	67	24	36%

	White cases	Deaths.	Mortality.	Black cases.	Deaths.	Mortality.
Total	36	12	33.3%	31	12	38.7%

Incidence According to Months:

Month	Race. White. Cases.	White. Deaths.	Black. Cases.	Black. Death.	Total. Cases.	Total. Deaths.
Oct.	2	1	0	0	2	1
Nov.	3	1	1	0	4	1
Dec.	1	1	5	3	6	4
Jan.	3	2	3	1	6	3
Feb.	4	0	6	2	10	2
March.	10	3	7	1	17	4
April.	7	1	6	3	13	4
May.	3	2	1	0	4	2
June.	2	1	0	0	2	1
July.	1	0	1	1	2	1
August.	0	0	1	1	1	1
Sept.	0	0	0	0	0	0
	36	12	31	12	67	24

Exposure to Wet and Cold.

Black.		White.		Total.	
Living 3	Dead 0	Living 2	Dead 1	Cases 6	Death 1.

Alcoholic Indulgence.

	Black		White		Total	
Light	12	1	10	5	28	6
Heavy	3	1	1	1	6	2

Previous Pneumonia.

1	3	1	4	9	7

Operation (Surgical). Black 2 cases, no deaths.
(Note that these two cases came together, Nos. 19 and 20).

Involvement.
Whole lung was involved 15 times with nine deaths.
Right side (whole lung) 4 cases with 2 deaths.
Left side " " 8 " 5 "
Whole lung, one side, and part of other side 3 cases, 2 deaths.

Right lung was involved in 36 cases with 13 deaths.
Left " " " " 22 " " 6 "
Both were " " 9 " " 5 "

Lung Involvement in All Nine Cases.-

Right lower and left lower	2	
Right lower and left upper	1	
Right lower and whole left	2	
Right upper and left lower	1	
Right upper and lower, left lower	1	
Right middle and lower, left lower	1	
Right lung, left lower	1	In nine cases
Right lung whole	4	
Right lung upper lobe only	4	
Right lung middle lobe only	0	
Right lung lower lobe only	10	
Left lung whole	8	
Left lung upper lobe only	3	
Left lung lower,lobe only	11	
Right upper and middle lobe	4	
Right upper and lower lobes	5	
Right middle and lower lobes	9	
	67	

Clinical Signs.-

Chills.	Black.		White.		Total.	
	Living	Dead	Living	Dead	Living	Dead
Onset with chill	5	2	5	1	13	3
Sometime during course	11	4	7	1	23	5
Onset, pain in side	9	3	7	2	21	5
Onset c headache	2	3	5	2	12	5
Fever at onset	2	0	2	0	4	0

Pain present in 53 cases, absent in 14 cases.

Location of Pain.

Side alone	31 cases	Side and abdomen	4 cases.
Abdomen	6 cases	Throat and chest	3 "
General	5 "	Back	4 "
	42		11

Total 53 cases.

Expectoration Present in 43 cases.

Character of Sputum.

Rusty mainly	11 cases	Mucolurulent	12 cases
Streaked with blood	9 "	Clear	2 "
Prune-juice	2 "	Yellowish-green	7 "

Total 43 cases.

Herpes present in 16 cases and absent in 51 cases

Fever.- Highest temperature 106.6° and lowest temperature 94°.

Defervescence.	Males		Females.		Total.	
	White	Black	White	Black	White	Black
Cases	26	25	10	6	36	31
Deaths	6	10	6	2	12	12
Lysis	12	9	2	1	14	10
Crisis (by empyema	6	5	0	3	6	8
Resolution delayed	1	1	2	0	3	1
Delayed resolution	1	2	0	0	1	2
Termination in Tb	1	0	0	1	1	1

Leucocytosis.- Highest 66.800, lowest 3.600.
In recovered cases average highest 26,757, average lowest 9.220
In fatal cases " " 23.365, " " 11.196
In fatal cases where only one count was made average 12.777.

Albuminuria. Present in 49 cases, absent in 13 cases, not noted in
Trace of albumin 40 cases, large amount in 9 cases.

Cerebral Symptoms. Delerium present in 19 cases, absent in 48 case
Mild in 11 cases, moderate in 5 cases, violent in 3 cases.

Complications.-

Empyema	6 cases
Empyema and pericarditis	1 case.
Acute endocarditis and septicaemia	1 case.
Jaundice	2 cases
Acute artic. rheum.,D, T., Acute peri- and endocarditis	1 case.
Pericarditis, acute	1 case.
Cerebral abscess	1 case.
Pleural effusion	2 cases
Meningitis and subcutaneous emphysema (following aspiration)	1 case.
Pregnancy with premature labor and emphysema	1 case.
Delayed resolution	4 cases
Pulmonary oedema	1 case.

Complications according to number.

Empyema	8 times.	Pericarditis	3
Jaundice	2 "	Endocarditis	2
Carebral abscess	1 "	Pleural effusion	2
Pulmonary oedema	1 "	Premature labor	1
Delayed resolution	4 "	Extra-uterine pregnancy	1
Septicaemia	1 "	Subcutaneous emphysema	1

Sepcial and Atypical Cases.-

Riskin. Had onset with severe headache, nausea, vomiting, loss of appetite and severe cramp-like pains in abdomen, the pain being reffered chiefly to the iliac region. The patient was admitted to Ward D as an appendicitis case. The abdomen was tender to touch but there was no rigidity or muscle spasm.

Jeff. A little child came in complaining of fever and cough. The chi[ld] had wakened its mother with crying, was restless, feverish, coughed and vomited occasionally. The bowels were irregular. It was very sensitive to touch and gave symptoms of meningitis. On the 16th day of the diseas[e] a needle was inserted under the angle of the right scapula. Immediately after there developed a small area of subcutaneous emphysema which gradually increased in size until it reached from the clavicle to the pelvi[s]

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Septicaemia	1 "	Subcutaneous emphysema	1

Special and Atypical Cases.-

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and from the mid-line anteriorly to the spine posteriorly. On the 17th day the temperature arose to 106°F. and was not reduced by a sponge. The patient had violent convulsions. There was a lumbar puncture and pneumococci wer found in the spinal fluid. At noon the child died.

Washington was of especial interest because of the early and rapid development of pulmonary oedema. He was admitted on the 4th day. On examination there was tubular breathing over the right upper lobe, blowing over the middle lobe and moist rales of all kinds heard over the entire right side and over the left lower lobe. There were no heart lesions. On the 6th day, (the patient having passed a comfortable night and sleeping most of the time) the conditions seemed good at 9 A. M. At 10 A. M. he began to get cyanotic, tongue and finger-nails became quite dark, his lungs rapidly became oedematous until he spat up large quantities of frothy sputum with increasing difficulty. The blood pressure rose to 225 m.m. of Hg. At 12 M. he was bled which gave relief and he became easier and less cyanotic. 600 cc. of blood was withdrawn which was very black in color. At 1 O clock the patient was apparently sleeping but it was impossible to arouse him. The pulse was rapid but of good volume and the blood pressure had fallen to 155. Foam and 'prune juice' fluid were running from mouth and nose. At 2 P. M. the pulse suddenly became small, disappearing from the wrist entirely. In ten min. the patient was dead.

[1]Jones, [2]Jenkins, Johnson and [3]Hughes. Three were discharged with lungs still impaired on the 26th, 36th and 44th days respectively of the disease, Johnson's case is of especial interest, delayed resolution and acu endocarditis occurring together. The patient came in on the 5th day complaining of pain in right side, cough, and dyspnoea. On examination the right, middle and lower lobes were involved. Heart clear. There was steady improvement and on the 11th day the fever was gone by lysis but

and from the mid-line anteriorly to the spine posteriorly. On the 17th day the temperature arose to 106°F. and was not reduced by a sponge. The patient had violent convulsions. There was a ~~dry~~ lumbar puncture and pneumococci wer found in the spinal fluid. At noon the child died.

Washington was of especial interest because of the early and rapid development of pulmonary oedema. He was admitted on the 4th day. On examination there was tubular breathing over the right upper lobe, blowing over the middle lobe and moist rales of all kinds heard over the entire right side and over the left lower lobe. There were no heart lesions. On the 6th day, (the patient having passed a comfortable night and sleeping most of the time) the conditions seemed good at 9 A. M. At 10 A. M. he began to get cyanotic, tongue and finger-nails became quite dark. His lungs rapidly became oedematous until he spat up large quantities of frothy sputum with increasing difficulty. The blood pressure rose to 225 m.m. of Hg. At 12 M. he was bled which gave relief and he became easier and less cyanotic. 600 cc. of blood was withdrawn which was very black in color. At 1 O clock the patient was apparently sleeping but it was impossible to arouse him. The pulse was rapid but of good volume and the blood pressure had fallen to 155. Foam and 'prune juice' fluid were running from mouth and nose. At 2 P. M. the pulse suddenly became small, disappearing from the wrist entirely. In ten min. the patient was dead.

[1] Jones, [2] Jenkins, Johnson and [3] Hughes. Three were discharged with lungs still impaired on the 26th, 36th and 44th days respectively of the disease. Johnson's case is of especial interest, delayed resolution and acu endocarditis occurring together. The patient came in on the 5th day complaining of pain in right side, cough, and dyspnoea. On examination the right, middle and lower lobes were involved. Heart clear. There was steady improvement and on the 11th day the fever was gone by lysis but

there was tubular breathing over the impaired area which remained the same. On the 18th day there was a rise of temperature to 102°, again on the 20th a chill and rise also on the 21st day. The impairment reached on to the angle of the scapula with a tubular modification extending into in. scapular region. On the 22nd day a needle was inserted without result. The temperature remained irregular and on the 26th day reached 106.6°, the febrile paroxysms lasting 22 hours. On the 28 day the impairment did not reach the 6th rib in the Mm. l., and the breath sounds were enfeebled. On examination of the heart the first sound was a snapping followed by a very faint, soft, short systolic bruit. On the 35th day the impairment was slight while the heart lesion became an intense, rough systolic murmur. Pneumococci were found in the blood on the 46th day. The patient continued with a hig irregular fever, at times delirious and gradually decreasing impairment of the right lower lobe until the 56th day when he died.

Katovich was a case of cerebral abscess or tumor following a definite pneumonia with crisis on the 9th day. The patient was then bright for two days following, but on the 13th day began complaining o f severe headache. On the 15, 16, and 17th days he began to vomit which increased in severity. During the acute illness and even afterwards the patient was greatly constipated and after the 15th day it was almost impossible to move his bowels. Since the 13th day he had taken water and nourishment freely. On the 20th day the patient was in curious dull condition complaining of headache in both frontal regions. The eyes were equal but reacted sluggishly. Ophthalmic examination revealed a double optic neuritis, the disc 0.6 m.m. in height. On the 23rd day haemorrhages were found on both discs; on the 26th day choked discs with veins very large and tortuous; Haemorrhages on the retina and on the discs of both eyes; Swellin

of the nerve to 5 diameters. On the 27th day and area of bone under left temporal muscle was removed. When the dura was opened the tempora-spenoidal lobe bulged markedly into the wound. The veins were much dilated, the brain injected and an abundance of cerebro-spinal fluid escaped. The brain pulsated. There was some yellow streaks on the vessels in the sulci, but these could not be rubbed off with the blunt end of a scalpe The escaping fluid did not seem turbid. Lumbar puncture was performed, a perfectly clean fluid arising to the height of a few m.m. above the level of the head and about 20 cc. were withdrawn. Much more might have been collected. The diminished tensions was explained by the previous operation. The patient was discharged well.

Hampton and Mullin. These were two cases of abdominal distension. In the case of Mullin the abdominal distensions was extreme. It came on the 8th day and remained until death (3days), which due to the distension with gas.

Linzey is interesting because of the large amounts of water that he passed. On the 2nd day with the fever at its height his urine was 1040 c The third day, the day before the fever began to subside, it was 3500 cc then with falling temperature the daily amount was;-

4th day 5060 cc. 5th day 8440 cc. 6th day 5490 cc.
7th day 8400 cc. 8th day 8750 cc. 9th day 7060 cc.
On the 10th day when the temperature was normal there were 1360 cc. and the 11th day 930 cc.

Bogan was operated on for extra-uterine pregnancy. The day after she had a slight cough, on the second day the respirations were labored and rapid and at the angle of the right scapula the sounds approached tubula: but the patient did well until the 10th day when there was pain in the shoulders and tubular breathing. The temperature was irregular and by th 21st day there was still a little impairment to percussion and ausculta-

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7th day 8400 cc. 8th day 3750 cc. 9th day 7060 cc.

On the 10th day when the temperature was normal there were 1560 cc. and the 11th day 950 cc.

Bogan was operated on for extra-uterine pregnancy. The day after she had a slight cough, on the second day the respirations were labored and rapid and at the angle of the right scapula the sounds approached tubular but the patient did well until the 19th day when there was pain in the shoulders and tubular breathing. The temperature was irregular and by th 21st day there was still a little impairment to percussion and auscilta-

tion. The patient discharged on 41st day with a slight impairment to percussion.

Starkes complained of pain in the left side and 14 days later definite signs of pneumonia were made out consisting of consolidation of the left lower lobe with extreme toxemia, low fever and leucocytosis. The patient was very until the 26th day when the mental condition cleared and respiratory distress decreased. Consolidation began to clear and the temperature came down to normal but the w.b.c. did not fall. Premature labor took place on the 29th day. This greatly relieved and improved the condition of the patient. Then The patient suddenly became restless and her temperature run up to 105° in 24 hours with chill and sweat. The signs were not especially changed in the left back but there was nothing definite made out. On the 38 and 39th days delirium and toxemia were present. At last on 39th day after several aspirations turbid blood-stained fluid was obtained. Operation performed after which patient was delirious for several days. The skin around the wound became oedematous and swollen and thick grey pus was discharged from the wound. Over the right side of the thorax was an abscess running up beneath the right breast. Three or four days after the operation there was stiffness of the elbows which were not tender and contained no fluid. The patient refused second operation and was discharged.

Handy. A case with marked mental features and symptoms of meningitis. P. I. commenced with violent attacks of vomiting, short giddy spells during which she complained of being blind and next morning fever and pain in abdomen low down on the right side. She came in with typhoid fever. On the 10th day a slight impairment was noted in the right subscapular region and on the 13th day distinct tubular breathing was made out. The abdomen was not distended and on light palpation the walls were soft but on deep palpation the recti muscles were drawn up tightly, the right more so but

the patient did not complain of much pain on pressure, although she complained of continual pain throughout the abdomen. The patient from the time of admission on the 8th day was in an active toalkative delitium. There was no subsultus, no stiffness or retraction of neck. The head was retracted on the day of death. She resisted passive movements to some extent. The legs were rather stiff on attempting to extend them but not a typical Kermig's sign. The temperature was irregular and high reaching 105.4o. Cultures from lumbar puncture were negative. Death on 18th day.

Cases of mistaken diagnosis

In one case (Dolan) the physical signs were of interest as the patient was thought to have an almost complete consolidation of the right lung. There was tympany above and flatness below but owing to the intense tubular breathing at the apex of the axilla and in front, the whole condition was thought to be a massive consolidation. At autopsy it was found that the signs were due to a broncho-pneumonia, compressed lung above fluid.

Two cases were suspected to be pneumonia which proved to be Tuberculosis

(1) Lavinia Jones. The temperature dropped to normal on the 16th day but went up again. The apex had not cleared up on the 126th day when on the lower left side of jaw Tubercular adenitis was noted. Sputum was negative.

(2) Dougherty. Diagnosed Tuberculosis on 3rd day from the sputum.

Summary.- First, a larger number of cases for the past year then for any of the 3 preceding years. Second, the death rate is much higher than any of those years, 26% 1903 - 4; 20.3% 1902 - 3; 22% 1901 - 2. The high death reate may be partially explained by the greater number of complications which greatly exceed those of the two preceding years.

Reported before the Saturday clinic, Oct. 1905. I. B. G.

Inslee Blair Greene
Chairman of The Pneumonia Committee.

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[signature, illegible]
Chairman of the Pneumonia Committee.

List of Cases Studied in the
PNEUMONIA REPORT
for 1904 - 1905.

NUMBER.	NAME.	SEX.	COLOR.	AGE.	DATE OF ADMISSION.	DURATION.	INVOLV.	DEFV.	LEUCOCYTES.	COMPLICATIONS AND REMARKS.
1	Pue	M	W	60	10/21	7	Ll	Crisis.	23000	Albumonuria.
2	Townsend	F	W	53	10/31	7	Ru	DEATHS.	33800	Delirium, Herpe
3	Johnson	M	B	6	11/7	9	R um	Crisis.	8500 34600	Alb.
4	Mullin	F	W	47	11/9	11	R ul	DEATH.	12100 16000	Abdominal diste Del. Jaund. Alb
5	Susar	M	W	3.5	11/13	9	L	Lysis.	15500 27300	Herpes. Herpes EMPYEMA. Alb.
6	Sterner	M	W	22	11/26	5	L u	Crisis.	18600 25200	Alb.
7	Scott	M	B	21	12/20	18	L	DEATH.	8800 34400	Delirium. Jaund. Alb.
8	Evans	M	B	22	12/11	5	R ml	Lysis.	6500 26800	
9	Washington	M	B	27	12/9	5	L l R ul	DEATH.	20160	Pul. oedema. Alb.
10	Peskovitz	F	W	46	12/16	13	R l	DEATH.	15300 39000	Delirium.
11	Lane	M	B	27	12/23	15	L	Lysis.	8600 32300	Alb.
12	Jones	M	B	48	1/1	23	R um	Lysis.	8900 13100	Delayed resol.Al
13	Williams	M	B	40	1/3	24	R ml	DEATH.	13800 25200	Terminal. Alb.
14	Hasskamp	M	W	34	1/6	8	L	DEATH.	13500	
15	Hampton	M	B	30	1/7	7	R um	Crisis.	7400 46600	Abdominal disten Delirium. Alb.
16	Harback	M	W	33	1/13	3	Ll	DEATH.	4000 13800	Typhoid F. Del. Intest. Haem. Al
17	Bodris	F	W	18	1/21	9	Lu	Lysis.	10100 30800	Alb.
18	Blumberg	M	W	3	2/10	16	Lu	EMPYE.	20200 38400	EMPYEMA. Alb.
19	Webb	F	B	20	2/8	9	R ul L	Lysis.	--	Ether pneumonia. Operation.
20	Ross	F	B	35	2/6	19	Ll	Crisis.	-- ~~2500~~	Ether pneumonia. Operation. Alb.

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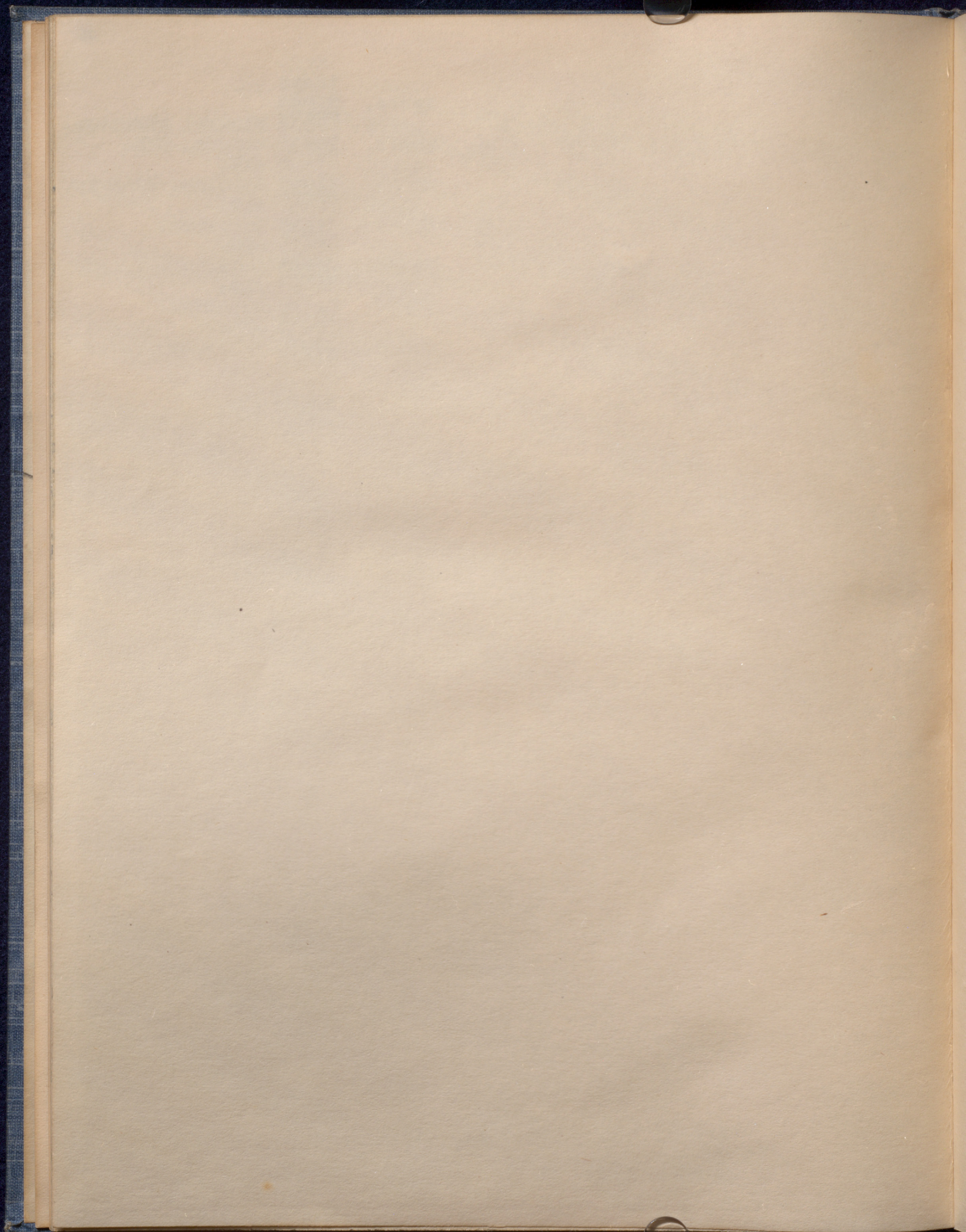
4	Mullin	F	W	47	11/9	11	R ul	DEATH.	16000 15500	Del. Jaund. Alb Herpes. Herpes
5	Susar	M	W	3.5	11/13	9	L	Lysis.	27300 18600	EMPYEMA. Alb.
6	Stermer	M	W	22	11/26	6	L u	Crisis.	25200 8800	Alb. Delirium.
7	Scott	M	B	21	12/20	18	L	DEATH.	37400 6500	Jaund. Alb.
8	Evans	M	B	22	12/11	5	R ml	Lysis.	26800	
9	Washington	M	B	27	12/9	5	L l R ul	DEATH.	20160 15500	Pul. oedema. Alb.
10	Peskovitz	F	W	46	12/16	13	R l	DEATH.	39000 8600	Delirium.
11	Lane	M	B	27	12/23	15	L	Lysis.	32900 8900	Alb.
12	Jones	M	B	48	1/1	23	R um	Lysis.	15100 13900	Delayed resol. Al
13	Williams	M	B	40	1/3	24	R ml	DEATH.	25200	Terminal. Alb.
14	Hasskamp	M	W	34	1/6	8	L.	DEATH.	13500 7400	Abdominal disten
15	Hampton	M	B	30	1/7	7	R um	Crisis.	46600 4000	Delirium. Alb. Typhoid F. Del.
16	Harback	M	W	33	1/13	5	Ll	DEATH.	13800 10100	Intest. Haem. Al
17	Bodris	F	W	18	1/21	9	Ru	Lysis.	30800 20200	Alb.
18	Blumberg	M	W	5	2/10	16	Lu	EMPYE.	38400	EMPYEMA. Alb.
19	Webb	F	B	20	2/3	9	R ul L	Lysis.	--	Ether pneumonia. Operation.
20	Ross	F	B	35	2/6	19	Ll	Crisis.	--	Ether pneumonia. Operation. Alb.

No.	Name	Sex	Race	Age	Date	Day	Lobe	Termination	Leucocytes	Remarks
21	Boss	M	W	42	2/16	10	Ll	Lysis.	8500 15000	Alb.
22	Riskin	M	W	40	2/15	12	Ll	Lysis.	8700 16500	
23	Fisher	M	B	23	3/16	9	R lm	Lysis.	5800 18300	
24	Coard	M	B	25	2/21	3	R l	DEATH.	33000	
25	Lorenz	M	W	28	2/25	10	R um	Lysis.	9600 39000	Herpes. Alb.
26	Spence	F	B	30	2/26	6	R	DEATH.	10500 16000	Acute pericarditis Alb.
27	Watson	M	B	20	2/26	14	L l	Lysis.	12400 27700	EMPYEMA. Alb.
28	Stanley	M	B	42	2/27	9	R u	Crisis.	11200 42600	
29	Starkes	F	B	19	3/2	15	L l	Crisis.	5100 16200	EMPYEMA. Del. Alb. Premature labor.
30	Bogan	F	W	33	3/2	19	R l L l	Lysis.	7300 20900	Extrauterine Preg. Herpes. Alb.
31	Mulleski	M	W	36	3/3	7	L	DEATH.	9000 10300	Delirium. Alb. Acute pericarditis
32	Housman	M	W	22	3/4	26	R l	Lysis.	9000 23200	Acute artic. Rheum
33	Jenkins	M	B	28	3/6	27	R	Lysis.	4500 34000	Alb. Delayed resolution
34	Crapper	M	B	29	3/15	9	R l	Crisis.	5000 26000	Alb.
35	Merrieweather	M	B	56	3/15	13	R	Lysis.	8000 62600	Alb.
36	Nies	M	W	47	3/16	10	R l L u	DEATH.	14400 30700	Acute peri-& Endoc Delirium tremens. Acute artic. Rheum
37	Pfitzner	F	W	28	3/16	12	R l	EMPYE.	13200	EMPYEMA. Herpes.
38	Pfarr	M	W	20	3/20	14	R l L l	Lysis.	9400 27000	Herpes. Alb.
39	Clark	M	B	28	3/21	16	R lu	EMPYE.	22000 53400	EMPYEMA. Alb.
40	Watkins	M	B	16	3/22	20	R l L	DEATH.	10000 27600	Pericarditis. Alb. EMPYEMA. DEATH on (day
41	Kane	M	W	21	3/23	8	L l	Lysis.	10000 23800	Alb.
42	Schane	M	W	52	3/25	11	L l	Lysis.	8800 11300	Alb.
43	Drinks	F	W	20	3/27	7	R l L	DEATH.	10900 19100	Alb.
44	Linzey	M	W	32	3/31	9	R u	Lysis.	9000 25200	Alb.
45	Scott	M	B	17	4/3	10	R ml Ll	DEATH.	10000 21100	Delirium. Alb.
46	Lockett	F	B	6	4/4	7	L l	Crisis.	6700 19600	
47	Lloyd	M	B	1	4/10	13	R ml	Crisis.	8800 31800	
48	Jewer	M	W	61	4/13	14	R L l	Lysis.	7830 29870	Alb.

									10400	
49	Madden	M	B	43	4/17	10	L 1	Lysis.	31000	
									8600	Pleural effusion.
50	Pavlavic	M	W	27	4/19	10	R ml	Lysis.	23600	Herpes. Alb.
									7400	Alb.
51	Booze	F	W	19	4/19	16	L	EMPYE.	62800	EMPYEMA. Delirium.
									8000	Alb.
52	Sikes	M	W	28	4/26	7	R ml	Crisis.	15500	Delirium.
									3600	Alb.
53	Bunch	M	B	23	4/26	5	R ul	DEATH.	20400	Delirium.
									10700	Alb.
54	Harris	M	B	38	4/26	5	R	DEATH.	14300	Delirium.
									5600	Alb.
55	Presti	M	W	21	4/27	7	R 1	Crisis.	10600	Delirium.
									7800	Alb.
56	Sneider	M	W	29	4/27	7	R 1	Crisis.	28300	
									10400	Alb.
57	Fazio	M	W	28	5/3	9	L	DEATH.	15400	Herpes. Delirium.
										Terminal Pneu. Alb
58	Garland	M	W	56	5/4	1	R 1	DEATH.	6600	Arth. Deform. Del.
									9370	
59	Hughes	M	W	42	5/11	19	R ul	Lysis.	14200	Delayed Resol. Alb
									10200	
60	Pendelton	M	B	22	5/15	14	R 1	Lysis.	13100	Alb.
									10800	Herpes.
61	Katovich	M	W	30	6/9	9	R u	Crisis.	16400	Cerebral abscess.
									6600	
62	Jeff	F	W	2	6/24	17	R ml	DEATH.	14400	Meningitis. Emphys
63	Jacobson	M	W	7	7/30	9	R ml	Lysis.	22600	
64	Waters	M	B	27	8/6	5	R ul	DEATH.	9600	Herpes. Alb.
									22600	
65	Wild	F	W	11/12	4/10	17	L	DEATH.	46100	Mistaken Diag. Del
									6400	Delayed resolution
66	Johnson	M	B	26	7/5	57	R ml	DEATH.	16800	Acute endocarditis
									11800	(Septicaemia. Deli
67	Handy	F	B	10	12/8	18	R 1	DEATH.	16000	Typhoid. Delirium

Note. The case of Wm. Wilson, No. 18869 Admitted Sept. 22 '05 is not included in this report.



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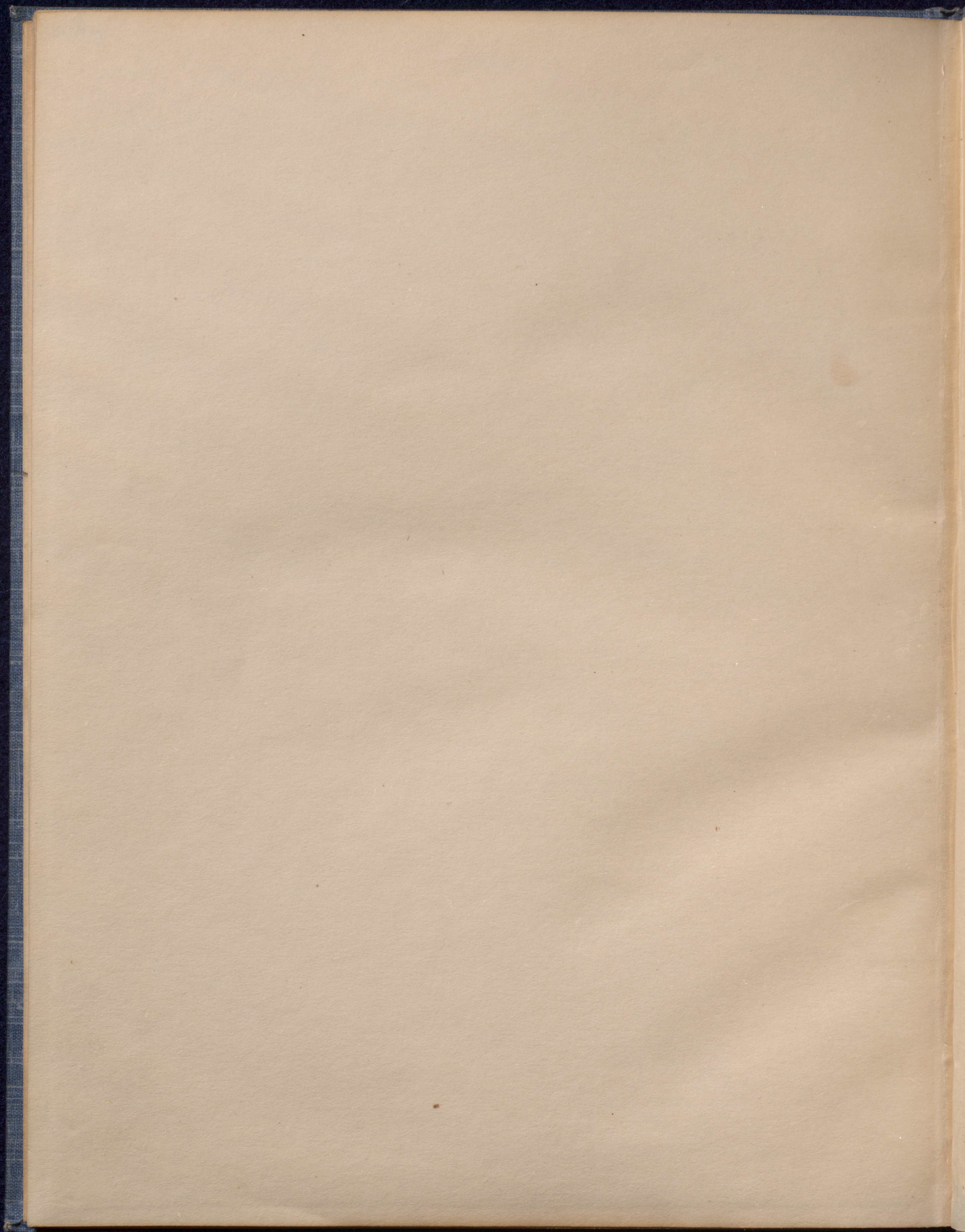

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