~~Osler 20~~

WG.7

OSLER *contd.*

7664 Vol. II

MS. endorsed ' Univ. of Penna., Introd. 1885—Not published ? ', with a note to, and a criticism by, Miss J. Osler.

' The Powder of sympathy ', 1900 (on Digby, no. 2453).

' Auenbrugger on the art of percussion.'

' Acute pneumonic phthisis. Clinical lecture . . . 1912.'

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FROM
THE LIBRARY
OF
SIR WILLIAM OSLER, BART.
OXFORD

"Poesia ed Espressione" — Della Corte, 1946

Draft of an address
endorsed in Sir William Osler's hand
"Univ of Penna
Introd 1885, not published?"
followed by a note to his cousin Miss
Jennette Osler requesting her criticism
which she has added.

This announcement card, sent to me when I was 7, and inserted here, I find among his early letters to me, which I did not know that my mother had preserved, and which have just come to light.

W.W. Francis, 1930.

UNITED STATES
POSTAL CARD
Nothing but the address to be on this side.
PHILADELPHIA
SEP 29
430 PM
85
ONE CENT
Master Willie Francis
23 Pr. arthur ave
Toronto
Canada

Gentlemen You are gathered here at a medical school for the purpose of obtaining such a knowledge of diseases and accidents as will enable you successfully to
should
occupy and treat them. You have no other object, you have no other ambition. To practice medicine
and for us, your teachers, to
shall me and
[illegible] to
[illegible] the
[illegible] man who aspires to be a
[illegible] physician made
periods or stages the
preliminary, the scientific and the practical, each with special
relations to the other and mutually dependent in such a way
of time progress is to be made,
that a definite sequence is necessary ~~to avoid confusion~~
on this occasion
As I wish to deal more particularly with the methods and
shall
modes of teaching practical Medicine, I allude very briefly
to the first two stages.

The preliminary training is a matter of the highest importance. ~~for it is [illegible] for~~ necessarily ~~upon~~ it has a
~~[illegible]~~ the foundation ~~and~~ the character
largely That
of the superstructure will depend ~~very~~ much ~~upon it~~. A good
is
liberal education ~~may be regarded as~~ an essential pre-requisite
to the study of Medicine is everywhere acknowledged, but there are
range of subjects embraced under this
differences of opinion as to the ~~the meaning of this~~ hackneyed phrase

29. IX. 85

UNIVERSITY OF PENNSYLVANIA.

Departments of Medicine and Dentistry,

36th and Woodland Avenue.

THE Address introductory to the 120th Course of Lectures in the Medical Department, and the 8th Course in the Dental Department, will be delivered in MEDICAL HALL on Thursday, Oct. 1, 1885, 12 o'clock M., by

WILLIAM OSLER, M. D.,

Professor of Clinical Medicine.

You are cordially invited to be present.

JAMES TYSON, M. D.,

Secretary Faculty of Medicine.

This announcement card, sent to me when I was 7, and inserted here, I find among his early letters to me, which I did not know that my mother had preserved, and which have just come to light.

W. W. Francis, 1930.

"Proverbs of Experience" — Feb 6 1893 [illegible]

2

1

Gentlemen. You are gathered here at a medical school for the purpose of obtaining such a knowledge of diseases and accidents as will enable you successfully to recognize and to treat them. You have no other object, should
you have no other ambition. The practical aim for you is the chief. I need not therefore, at this time and for us, your teachers, the shall endeavor to assist you in so doing. The aim of an introductory lecture is, to lay before you as clearly as possible the plan of study which you must pursue, to explain the natural relation and order of the subjects which you are to
further
study, and to offer words of advice and encouragement to those of you who come among us for the first time.

The period occupied in the education of a man who aspires to be a physician may be conveniently divided into three periods or stages the preliminary, the scientific and the practical, each with special relations to the other and mutually dependent in such a way that a definite sequence is necessary if true progress is to be made.
to avoid confusion
On this occasion
As I wish to deal more particularly with the methods and modes of teaching practical Medicine, I shall allude very briefly to the first two stages.

The preliminary training is a matter of the highest importance. ~~For it is forming~~ for necessarily upon it has a ~~The foundation and the character~~ the foundation and the character of the superstructure will largely depend upon it. That liberal education is regarded as an essential prerequisite to the study of medicine is everywhere acknowledged, but there are differences of opinion as to the range of subjects embraced under the ~~meaning of this~~ hackneyed phrase

What was understood ~~first~~ 120 years ago by preliminary Education in connection with Medicine can be gathered from the well known address by Dr John Morgan, one of the founders of this school. After enumerating Latin and Greek as "very necessary to be known by a physician", he mentions French, as valuable for the works published in that language; & then goes on to speak of the importance of Mathematics and Natural Philosophy - "since we can go but small lengths in natural & medical inquiries without their assistance"; and he concludes in words which I would commend to your closest attention "There is no art yet known which may not contribute somewhat to the improvement of Medicine; nor is there any one which requires more assistance than that of Physic from every other science. Let young men therefore, who would engage in the pursuit of Medicine or Surgery make use of all their industry to possess themselves in good time of these acquisitions. They are necessary to facilitate a progress in the healing arts; they embellish the understanding, and give many peculiar advantages, unattainable without them" It will avail nothing to ask how it is that we have travelled so far from what was deemed essential in 1765, the practical question is as to the nature & extent of the preliminary education which should be demanded in 1885. In the interest of the students I think he should not be allowed to enter a medical school until he can show that he has received a fair English education, an elementary training in science - chemistry, Natural Philosophy & Botany and has enough Latin, to make medical terms intelligible to him. Greek and modern languages were well enough in a slower

generation but they must be dispensed with at present.
A Knowledge, even if elementary, of Chemistry & Natural
Philosophy, helps the student very much in his early studies
and a part of the Chemistry now taught in the Medical schools
might be dispensed with if one could be have proper instruc-
tion in these branches at Public to my surprise
the High schools & academies. But I learned the other day
in conversation with a first year student that although he
had a public-school certificate he had never passed through the entire course
any instruction in Chemistry. Shades of Franklin & Priestley!
Can this be so! and in this city!
Of Latin it is sufficient to say that
As to Latin, I say so long, As a large proportion of the terms which
are employed in Medicine are derived from the Latin it a
Knowledge of this language is indispensable. The study of Anatomy
without some acquaintance with it Latin however slight is rendered
extremely difficult, and many of the names appearing to be quite meaningless.

In the race, Gentlemen, upon which you enter today, to any
success or failure, as the case may be will depend, to the very much
life which is now behind you. It has passed by gone but its effects for good or evil
remain. If you have been idle & wasteful of your time at school it
will be hard to get industrious habits here. Bury the past &
start afresh today with the firm resolve to waste not a moment
of the short & precious time which is before you

~~The Scientific portion of the course which embraces~~ The study of the structure and composition of the body, the functions of the various parts, and the ~~application~~ properties & mode of preparation of medicines will first engage your attention. Anatomy, Physiology and Chemistry are the scientific ~~subjects~~ branches which must be thoroughly mastered before you can ~~really~~ truly enter upon the work of your profession. A knowledge of the body in health must precede an intelligent understanding of the simplest manifestation of disease. The first year is devoted almost exclusively to these subjects which ~~and they~~ are so extensive and so full of detail that with the closest application you will only be able to learn certain parts. ~~not get very deep into either of them.~~ To those of you who are beginning I would say, start slowly take one thing at a time and don't leave it until you have conquered a few facts regarding it. Learn the lesson of thoroughness at the outset or you will not learn it at all. Understand clearly that you cannot absorb Knowledge ~~in~~ continuously in large quantities, any more than you can take in an indefinite amount of food. You will find at first that your mental stomach cannot hold much and cannot digest much, but the secret of success lies in taking small but often repeated portions of Knowledge. ~~your energies, and not attempting too many things.~~

By far the most important study of your first year is Anatomy. ~~and for~~ A correct knowledge of the situation & relation of the various parts must be obtained before you can understand the functions of the body in health, and ~~any day of your professional life can~~ of every branch of the profession it is the groundwork & foundation. It is not too much to say that the future career of any ~~girl~~ will furnish you fresh material of the best kind. That difficult piece of anatomy the heart can be well studied in

student may be safely predicted from his behavior in the dissecting room. I have never known a careful observant, thorough dissector who was not in other respects as well an industrious man. Has a training, the work in practical anatomy, apart from the knowledge which it brings, is invaluable. It develops qualities in the student which stand by him in every subsequent position. He is taught at once the lesson, so hard to learn, that all true progress is slow and by successive steps. Youth Too often learneth not, as we are told it enjoyeth not, for haste. In the dissecting-room the student finds the advantage of practical over theoretical information and has early opportunities of seeing the usefulness of cramming and book knowledge. Time, patience and care are the three requisites in the dissection study of anatomy and of these there alone can the scalpel & the forceps & the book be profitably employed. (Without them you will certainly be bad dissectors as you will probably become worse students.)

In your second session the medical and surgical aspects of anatomy will specially engage your attention. For the Medical ward classes you should know thoroughly the relation of the thoracic and abdominal viscera. Much can be done by a careful study of the surface markings and on your own persons you can daily take a lesson in the position and boundaries of the heart & lungs. And let me advise you to keep up your anatomy when you go to your homes in the country. A weekly visit to the slaughter house will furnish you fresh material of the best kind. That difficult piece of anatomy the heart can be well studied in

in the sheep or the pig and to obtain a perfect Knowledge of its structure the student requires to dissect many more lean than the dissecting room can supply to any one man. In obtaining a Knowledge of the finer structure of the tissues in the study of Histology, you have the advantage of learning the use of the Microscope and those methods of preparation which will be of service to you in a more advanced period of the course.

Beautiful and enticing as is the study of Anatomy we cannot see its full beauty until in Physiology we study the relations of function to structure. It is a pity that the enormous development of the latter subject Physiology has necessitated a divorce in the teaching of what practically constitutes one science. Physiology is only Anatomy enlightened. What does it mean?

The laws of nutrition, of growth, and development

You have first to grasp the fundamental facts relating to cell growth and development. In the simple uni-cellular organisms we study life in its simplest manifestations and in such a body as the Amoeba the functions of the higher creatures are pourtrayed as in miniature. The laws of cell growth and development are at the basis of all Physiology and as those modifications of nutrition which are abnormal which we call disease also begin as perversions of cell life the you should early strive to get a clear idea of these principles. Your subsequent conception of the intimate processes of disease will depend very much on the knowledge you obtain of the laws of cell life. And in the next place you

sufficiently

has enough advanced to grasp the problems

8

7

Must
study the functions of the organs themselves and have
a thoroughly practical Knowledge of the ~~acts~~ way in which they perform
their work. The circulation Respiration digestion,
secretion innervation & all the great functions of the body must be
~~explored and~~ fully understood. There is a considerable
~~section of Physiology~~ which At the ward classes often we find
men defective in Knowledge of just the Physiology they
need - such an accurate acquaintance with the sounds of the
normal heart, the characters of the respiratory move-
ments & sounds, the action of the larynx & many other
points

The subject of chemistry will occupy a large share of your
time and attention during the first and second sessions
You have first to gain a knowledge of the general composi-
tion and properties of bodies and to learn the use of chemical
apparatus. A great deal of this is information which in a proper
system of preliminary Education you should bring with
you to a medical School. But under the present arrangement system
you must spend much valuable time in acquiring such
a Knowledge which will enable you to understand the
higher branches. The Laboratory work will be of special
value use in developing your powers of observation, in
teaching you accuracy and care, and above all by it you obtain practical
information ~~you will obtain~~ in the analysis of the reactions.
A great difficulty in a medical Course is to get students
sufficiently
~~far enough~~ advanced ~~in Chemistry~~ to grasp the problems

of physiological chemistry, among which are many of great practical importance to the physician. It is impossible to undertake the rational treatment of many forms of ~~do~~ indigestion, ~~without~~ or to arrange suitable dietaries in disease without a full knowledge of the subject. The group of urinary affections depend largely for their detection and proper management upon the information obtained by chemical analysis of the urine. For the solution of many questions in Pathology we have turned to physiological chemistry in the past - and not in vain. and from it we may expect the greatest advances in the future.

Now in your studies of these subjects remember that these are simply means to an end. Ever try to think beyond them to the practical goal [illegible]

[illegible] the personal experience of the lecturer impresses the hearer gives a special value to [illegible] where cases which are generally delivered by men with a wide and varied acquaintance with disease

wrever it is impossible for the student to see all diseases in the wards & the systematic course gives occasion for the consideration of them

When a student knows the structure of the body, and the functions of the various organs, - so far as ascertained of the various organs, and the chemistry of the secretions in health and the properties and composition of drugs, item & item only is ready to enter upon the practical study of his profession.

Here this work is distributed in a triple field — the lecture Hall, the post-mortem room and the Hospital wards. In the didactic lectures on Medicine & Surgery and Midwifery the doctrines are presented in systematic order the principles of these two great departments; and the diseases are considered systematically, their relations explained and the lines of treatment indicated. So important is this latter portion of the subject that it is dealt with also in a more comprehensive manner from a separate chair. Of the precise value of the didactic lecture in a medical course there are differences of opinion. The time is not so far distant when the greater part of the instruction was given in this way but now, in the universal rage for the practical, we hear murmurs of discontent and the opinion is openly expressed that from the systematic lectures no more can be gathered than from a good text books. Perhaps in some instances this is the case, as the value of any course of lectures depends so much on the lecturer, but as a rule there can be no question of the superiority of the instruction given by the living man; the viva voce, over that obtained by the reading of a text-book. Even Emerson we have more faith in what is told us than in what we read. Then too the personal experience of the lecturer impresses the hearer and gives a special value to these which are generally delivered by men with a wide and varied acquaintance with disease

Moreover it is impossible for the student to see all diseases in the wards & the systematic course gives occasion for the consideration of them

The post-mortem room with the senior student takes the place of the dissecting room. As a thorough acquaintance with normal anatomy is essential in studying the functions of the body in health so is a knowledge of the organs & tissues of the body in disease an absolute necessity for the proper appreciation of the phenomena of disease during life. Morbid Anatomy is to the physician what normal anatomy is to the Surgeon. In its study you have first to accumulate a store of facts and second to ascertain their relation to those disturbances of function manifest as disease. In many respects the acquisition of the facts of Morbid anatomy is more difficult than of those of Normal Anatomy. For example, the task of thoroughly mastering the general and histological details of the structure of the liver is a light one in comparison with obtaining a practical Knowledge of the appearances, coarse & fine, of this organ in disease. You must know the cirrhotic the fatty, the amyloid, the cancerous & the syphilitic liver; the alterations in shape, in colour & in consistence, the effects upon the cells, the vessels & the ducts in each disease. Nor is this all; the cirrhotic organ is not always the same, sometimes it is large, at others small, in one case nodular, in another smooth and there are various minor histological differences. So numerous & so diverse are the modifications of structure in diseased organs that it requires careful and repeated observations before the chief facts become quite familiar. To be of service they must be with you as vivid mental pictures to be called up at will so that, for example, when cancer of the liver is mentioned

the condition of the other organs and tissues, symptoms, especially death, the dyspepsia hæmorrhages & effusions. Thus only can morbid anatomy be intelligently studied

is, in the beautiful Laboratory building that you are prepared for 10
work of your lives but across the road in the large Institutions devoted to
care of the sick

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The cabinet in your mind stored with facts relating to this subject, flies open and there in orderly arrangement are pictures of the specimens you have seen - the huge organ cancerous throughout, weighing 10 or 12 lbs, the cancerous liver small organ hard & firm, and the organ full of secondary scattered nodules. So important is the study of morbid anatomy that you are not only called upon to attend post-mortem examinations but special demonstrations are provided at which are shown series of specimens fresh and preserved; and furthermore almost at every didactic lecture you have presented to you specimens from the museum many typical illustrations of diseased structure. Take advantage then of every opportunity of collecting your facts in morbid anatomy; you cannot get them from the books, the best plates give but form and color, and wax models do no more. Painstaking careful observation in the Autopsy room, the Laboratory and the Museum can alone provide you with a sufficient number. To get them at all you must get them now; once in practice the chances of seeing specimens in morbid anatomy very rarely occur. But the separate facts alone will not be of much service to you unless they are studied in connection with others and with the phenomena displayed during life. They must become enlightened facts; thus the cirrhotic liver as a mere specimen has an interest anatomically in the changes in cells, connective tissue and vessels, but you must go beyond this and see the relation of these alterations in structure to the condition of the other organs, the congestion, the catarrh & the dropsy and to the symptoms before death, the dyspepsia hæmorrhages & effusions. In this way alone can morbid anatomy be intelligently studied

new is, in the beautiful Laboratory building that you are prepared for the work of your lives but across the road in the large Institutions devoted to the care of the sick

The objective point has been reached in ~~the student~~ your career when you enter the Hospital — all your previous training centres towards this; ~~at this point and here~~ it alone can you obtain your education. It is not here in the Medical Hall The question arises when shall ~~the student~~ you at once begin Hospital work? It is virtually settled for you, as the Roster puts attendance upon clinics in the first session, and in some respects it may be well for you ~~to leave~~ occasionally to exchange the dry bones ~~and the lifeless bodies~~ for the warm flesh and blood of the clinics, but I would warn you most earnestly against serious dangers in attending ~~clinics~~ these too closely at this early stage of your course. You know nothing of the structure or functions of the ~~organs~~ organs, nothing of the nature of disease, you cannot even understand the terms used, and yet there is a fascination in sitting on the benches and seeing cases of disease & watching skillfully performed operations. It is so much presented, so much easier than attention to other subjects which are full of detail & hard to master but the consequence too often is that the essential and necessary work is neglected and you finish your first session with a mind in a state of indescribable chaos in which anything like orderly mental development becomes an impossibility

In entering upon this Hospital work you will do well to remember regard the Hospital as a Laboratory, in which the each patients represents so many experiments of Nature which you must study and observe in a manner very similar to that which you have followed in the Biology & chemistry

Disease is not an entity as was thought of old but simply wards, to find the conditions of Laboratory work, up to this time you have been dealing with sciences, of more or less

a perversion of those conditions which obtain normal
human health. or "that course of nature in a living
body which is not according to its health". The facts of disease
are physical phenomena to be studied in the same scientific
way as facts in physiology and with the same means. Physi-
cians are strictly speaking naturalists — observers of the
phenomena of living beings, but as has been well remarked
there is this difference, that whereas the Biologist
studies his objects with the sole purpose of gaining
information upon their life and processes, the physician
while seeking to understand these, looks further to the
great object of his calling the accurate knowledge of the
modes of combatting those phenomena which we call abnormal,
or diseased

The facility with which you will undertake clinical work
depends entirely upon the thoroughness of your education in the
scientific branches. Well for you if you bring a knowledge which is
practical, senses which have been trained to exact obser-
vation, habits painstaking careful habits and above all an
appreciation of the value of method in work. Thus equipped
the labor will be easy and your progress rapid, but alas! for
the man who begins the study of disease with an imperfect
acquaintance with the facts of anatomy chemistry and
Physiology which he can be gained from books & lectures alone.
I have said that we may regard the Hospital as a Laboratory but
you must be prepared at the outset, on entering the
wards, to find a radical change in the conditions of Laboratory work. Up to
this time you have been dealing with sciences, of more or less

exact ~~science~~, and have become constancy ~~in~~ accustomed to uniformity and law and the constancy of results which follow certain known conditions but ~~in entering upon~~ in taking up the study of disease you leave the exact & certain for the inexact and doubtful and enter a realm in which to a great extent the certainties are replaced by probabilities. Medicine is not an exact science but is rather an art which we study by the aid of various sciences

Your
The examination of patient is directed to the ~~to the~~ detection of the nature and extent of the deviations from health. and to the discovery of the indications for treatment.
~~and the characters of the changes which have taken place~~

To be able to recognize abnormal states ~~these~~ you must bring ~~come with~~ a full knowledge of the normal situation of the organs ~~in health~~, their physical signs and the characters and composition of the excretions. Without these standards of comparison you cannot make the first step in the examination of your patient. ~~You have no standards of comparison~~ What possible meaning does a prolongation of the expiratory sound in the lung convey ~~to him~~, if you have not a clear ~~idea~~ conception of the normal relation between the inspiratory and the expiratory murmur? Or if you hear an accentuated second sound at the 2nd left costal cartilage? how meaningless if you do not know the position in which it is usually heard loudest in ~~health~~? But the sick man is before you. How shall you proceed in your examination? ~~Precisely as in the investigation of any other phenomenon~~. He represents a complicated experiment or problem and the first thing to do is to collect all the facts of the case. It is usual well to begin with the

~~same~~ intensity the rhythm, the direction of propagation &c.
These are the facts, but at this period to ~~you must not~~

history of the patient or what he can tell you himself about his ailment, the mode of its onset, the duration and the chief features. By means of intelligent questions you are enabled to get additional knowledge and sort out the important facts from the confused mass of information which a patient will usually give in his statement of his case. You next proceed to the physical examination, by means of which you ascertain the existence of disease, its extent, & the localities affected. In this part of your work, learn early to adopt a systematic method. It is best to follow the great physiological systems, interrogating each in turn, the digestive, the circulatory, the respiratory, the nervous &c so on. By so doing you are less likely to overlook important conditions and you obtain, in complete and orderly array, all the facts needful to form a judgment upon the case. In this part of the work you call to your aid the various instruments of precision, the stethoscope, the thermometer, sphygmograph, ophthalmoscope &c with the use of which you must be practically acquainted, as many important facts can be obtained by their help alone. At this stage of the examination there is a lesson which you will find it hard to learn viz the difference between fact and inference. You have to do with the former only describe as clearly as you can the conditions which are present. For example, in a case in which you hear a murmur over the sternum you should simply describe the characters, the point of maximum intensity the rhythm, the direction of propagation &c. These are the facts, but at this period you must not

term it an aortic murmur or a pericardial rub would be an unwarrantable inference. This is really one of the most serious difficulties which students have to overcome in clinical work - hasty inference from imperfectly or even well, observed facts. After having carefully noted all the phenomena connected with the case and having reviewed the history we can then proceed to an Explanation of the facts with a view of arriving at a conclusion concerning the nature of the disease. Thus in the case of a patient with a to & fro rub to be heard ~~over the heart down the sternum~~. we know from the previous study of the normal action of the heart that such sounds do not occur in health. Their character is such that you get the notion of two opposing surfaces, rubbing against each other and the sounds coincide with the systole and diastole of the heart. By your studies in morbid anatomy you have been made aware that the pericardium or sac of the heart is liable to become inflamed and rendered sticky by the exudation of fibrin, and the to & fro sound which you hear, of a a rubbing, grating character you connect with this condition and conclude that the case is one of pericarditis. But before making up your mind positively you must take other facts into consideration. You have heard a see-saw sound along the sternum under other conditions, and have ascertained by post-mortem examination that it may also be caused by disease of the aortic valves and you must carefully examine your facts again to determine which of these states probably exists in your patient. Your own [illegible] illustration to which we alluded from the character & situation of the to & fro murmur, from the general symptoms, the history and from all the possible circumstan

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17

or that of others

& others experience, has taught you certain differences between the see-saw murmur of pericarditis and that of aortic valve disease, and you carefully weigh the facts and come to a decision. If in doubt from the local facts alone, you must take the general information into consideration and your knowledge of the conditions under which pericarditis and aortic incompetency respectively occur. From the history, the general symptoms and the local physical signs you arrive at the judgement or diagnosis as we say, ~~the case as one of pericarditis~~ It is only by the methodical examination of every system and organ that we get those comprehensive facts from which we can draw reasonably safe inductions. Above all things Gentlemen come to the study of the diagnosis of disease with all the modesty at your command. ~~Certainty~~ Positiveness and dogmatism are inevitable associates of superficial knowledge in medicine. Certainty, we long so for, we long after so in this changing world, ~~that it exists~~ and the younger we are the more we seem to need it, so that it seems hard for me to tell you that you must not look for it in diagnosis. Various degrees of probability we may attain to and do reach daily, but in the busy round of teaching & practice we are apt to forget that positive certainty "ist Keinem Erdischen zum Theil" until we have a rude awakening and a useful lesson in the folly of over-confidence. In the very case ~~which~~ used in illustration in which we decided from the character & situation of the to & fro murmur, from the general symptoms, the history and from all the possible circumstan

that there was inflammation of the pericardium could there be any ~~mis~~ error? could ~~de~~ we not reach certainty ~~even~~ in this? well, we might be inclined to be dogmatic and ~~be~~ positive in such a subject as a well marked pericardial ~~friction~~ friction, but if you had demonstrated such a case, pointed out the destructive of the to. & fro rub, lectured on it, taken your friends to see it and ~~of~~ ^ ~~at the end~~ the patient had died & at the autopsy your Brutus, the pathologist had coolly pointed out a local pleurisy of a tappet of lung over the heart. ~~and~~ with the serous lining of the pericardium as smooth as a billiard ball, you would agree in the humility of your spirit, with the axiom of Asterleu that "as in the living body no occurrence or effect ever does take place constantly, or in the same manner at all times; we can never with perfect certainty predict any occurrence or effect whatever". ~~.~~ You will soon learn ~~in~~ however in practice to be satisfied with probabilities. After you have arrived at a conclusion which seems warranted by all the facts ~~of the case~~ you take into consideration the probable course of the disease or form what is known as the prognosis. To anticipate the results of any disease correctly will depend very much on the correctness of our diagnosis. If this is erroneous our forcast of the case may be very much astray as in a case in the wards, ~~which~~ last week which many of you saw. The expectation of life was placed at eight or ten months but the poor fellow was called to his account the same night. Could we have had all the facts at our disposal, ~~we might have~~ the pro-

how can I recognize and how can I best treat disease, ~~into~~ to the principles ~~lying~~ the application of remedies. This is not the place to speak. but I would ~~you~~ upon you to remember that they lie at the foundation of successful practice of your profes-

gnosis would have been much more guarded. Then, too, we must know the natural course and tendencies of disease and be able to estimate the importance of complications and the indication of special symptoms which may arise. Experience alone can teach you this and among the most trying duties of your early years in practice will be the weighing for anxious friends the probabilities of life & death in this respect. Even, year of careful study will add to your prognostic skill and strengthen your powers of estimating the chances of life and death

One element must always be taken into account in prognosis and that is the personal equation of the patient. No two cases of the same disease are ever exactly alike. The constitution of the person, his individuality, stamps each case. the disease with certain peculiarities, which and no experience will enable us to predict meet the ever changing. Each case stands alone, to be judged by itself, and it is only by the arrangement of a large number that a composite and correct general view of the disease can be obtained.

The important question then remains what are the indications for treatment? What are the appropriate remedies for the case? This is the final act for which your entire education is a preparation and towards which all your studies tend. Two thoughts should ever be in your mind How can I best recognize and how can I best treat disease. Into the principles of applying the application of remedies. This is not the place to speak. but I would impress upon you to remember that they lie at the foundation of the successful practice of your profes

In your dealings with patients, public or private there is but one law to regulate your conduct "whatsoever ye would that men should do unto you even so do unto them". Kindliness of disposition and gentleness of manner are qualities essential in a ~~physician~~ Practitioner. If they do not exist naturally they are virtues which must be assumed ~~cultivated if not~~. The rough voice, the hard sharp answer, and the blunt manner are as much out of place in the hospital ward as 'my lady's' boudoir. There is a tendency among young men about Hospitals to study the cases not the patients and in their interest they take in the disease lose sight of the individual. Strive against this. The motto of each one of you as you undertake the examination and treatment of a case should be "Put yourself in his place". Realize so far as you can the mental state of the patient, and enter into his feelings; bear with his complaining and scan gently his faults. The kindly word, the cheerful greeting, the sympathetic look, trivial as they may seem, help to brighten the paths of the poor sufferers ~~committed to our care~~ and are often as "oil and wine" to the bruised spirits intrusted to our care

Surgery can be obtained [illegible]

explanations

ward class, the lecture and the conference from the usual

[illegible] of instruction

Your duties in the Hospital may be summed up in them
one sentence, - to learn to recognize and to treat disease,
and the problem for us, your teachers, is how shall best
best give you this part of your education.
A well regulated system of clinical instruction must
afford opportunities of studying the phenomena of
disease in the same practical manner as the facts of
chemistry and anatomy. The student and the patient
must stand in the same relation as the anatomist and
his subject, the chemist & his solution. He must be put in a
position to get for himself, under supervision, the facts
relating to the patients' malady, which he must collect, record &
~~record & reason upon them~~, he must be taught to reason
correctly upon them, to weigh the evidence in any given case
and to prescribe the appropriate remedies. Now in this all,
under a proper system he must see that patient from day
to day, note the progress, the various phases of the disease, the complica
tions that arise and the action of the medicines. ~~He has been~~ He must watch
~~that case as a student, just as carefully as if he was in practice &~~
~~in Nature's laboratory watching after experiment, in life~~
had sole charge of it. This is clinical medicine. One or
two such cases followed by the student in detail are worth
a dozen lectures, but unfortunately in most Hospitals there are insuperable
objections to this plan. I mention it, because I am convinced
that by a system of clinical clerks & dressers who daily see their special
patients ~~and~~ a better practical education in Medicine and
Surgery can be obtained than in any other way. Under present
regulations
in the ward class, the lecture and the conference form the usual
methods of instruction

The ward class will furnish the chief part of your practical education. Divided into small sections, you take care ~~all the~~ in turn the examination of the patients ~~cases~~ and in this way all can see and inspect the chief features of any particular case patient. The physical signs of disease, the practice of auscultation & percussion, the clinical examination of sputum & urine, the modes of surgical dressings, the recognition of fractures & wounds, ~~the practical the~~ and the practical use of ~~Spec~~ the instruments employed in the various specialties are demonstrated and taught. These are things which must be practiced to be learned and much of the time of the ward classes is devoted to the personal supervision and instruction in the details of case taking and the use of instruments A single case carefully studied by a few men together under the supervision of an instructor gives much more information than a series of cases more hurriedly visited. The teaching in the wards to be successful must be in small groups, so that each one can have an opportunity of taking a ~~part~~ share in the examination. With a large class there is a difficulty is in demonstrating the successive daily phases of a case so important ~~to be studied~~ in acute disease.

Murchison

[illegible] the subject of clinical lecture

~~2~~

2 3

The Clinical Lecture supplements but cannot take the place of the ward work. Personally, ~~in Medicine~~, I have not a high estimate of its value as a mode of teaching Medicine. In Surgery it is different, the clinical demonstration and operation are very suitable for the amphitheatre. But in the average clinic in Medicine the student is simply told not taught, though in ~~many~~ certain cases he may learn much by the use of his eyes. The clinical Lecture has its value, in enabling the lecturer to bring before the class series of cases illustrating special features in disease, or rare & unusual, forms maladies requiring particular treatment. In the lecture theatre, better than in the ward, before patients, we can speak freely of the probabilities in a case, & of the success or failure in the use of any medicine, and it is the place in which to lay before the class the results of the autopsy in fatal cases, to explain the morbid appearances & the relation of the symptoms to the condition of the organs.* Of course you see the clinical lecture has its uses, important uses, but what I want you to understand is that you cannot prepare yourselves for the work of life by sitting on the benches, no matter how interesting and varied the cases or how instructive the Professor.

* This seems to have been the method followed by the Father of American Med the great Dr Rush, ~~the Father of Osler~~ for in a lecture introducing the Course of lectures in this University in 1791 he speaks of the public examination and treatment of the patients cases, and when the issue of the cases was known they were made the subject of clinical Lecture

The Clinical Conference takes a high position among methods of practical instruction. In it the teacher & the students confer together over a case in the theatre, the report of which has been prepared by one or two men who are more particularly engaged in the examination. Criticisms are offered on the statement of the case, on the diagnosis & on the treatment; the Professor takes part as a consultant and adviser or as referee in doubtful points. They form most stimulating and suggestive exercises for the senior students and as they have been a feature in the mode of instruction in this School I trust we may be able to continue them as suitable opportunities arise. They seem to have originated with the celebrated Louis of Paris, whose pupils from Boston and Philadelphia brought back as not the least valuable of many things, carried away this, among the lessons taught them by their great master. With time and plenty of material, the benefit to the student is incalculable. A system could be arranged in some places whereby the seniors might in turn take charge of interesting cases among the out-door patients, visiting them at their homes, and preparing full notes of the history & treatment & then in conference submitting the cases to their colleagues & the Professor in full session. The late Calvin Ellis of Harvard carried out this plan in an admirable manner as I had several occasions of witnessing and not only were the reports criticised by the class but he made a careful examination of the report, and returned it with marginal corrections & notes to the student.

These are the chief means by which we shall offer you practical instruction in the work of your profession

[illegible] and it goes without saying that in practical Medicine & Surgery a practical examination should be exacted. Of what possible advantage

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And then Gentlemen when the end has come when you have finished your course and have ~~had~~ received ~~obtained~~ a fair practical ~~knowledge~~ instruction in of your profession, the labors of your teachers is ~~almost~~ not over. The heavy responsibility is thrown upon them of saying whether you are fit to receive the warrant of your Alma Mater and fit to undertake the care of the lives of your fellow creatures. Men are differently constituted and take the burdens of life in various ways. So it is with this matter of examinations. There are men on whom the responsibility sits lightly and whose mental equilibrium is much more disturbed by the rejection, than the acceptance of a doubtful candidate. In their goodness of heart they see only the poor fellow before them and they think of blighted hopes, of friends disappointed and time wasted. It is so easy to pass a man, so hard to reject him! I have had such colleagues - peace to their ashes! - dear estimable in every relation of life except as examiners in a Medical School. Kindly men, ~~but shortsighted out of place in the examiners chair.~~

~~And~~ Our duties were as your ~~teachers~~ instructors, we became as examiners guardians in a double trust - the honor of the University and the well-being of the citizens and to these we must be as faithful as we have endeavored to be in our capacity as your teachers. The errors of incompetency, the fatal mistakes of culpable ignorance may be morally laid at the door of men who allow graduates to go forth incapable of meeting the common accidents & diseases of life

How shall the examination be conducted? ~~It~~ To be fair it should test the nature, extent & character of the previous training and it goes without saying that in practical Medicine & Surgery a practical examination should be exacted. Of what possible advantage

Is your education ~~been~~ if you cannot stand the test examination in cases such as you have seen & studied and such as you may, within a few weeks of your have under your own care. The day of theoretical examinations ~~is~~ is past — long past, ~~and~~. The apprentice to get his certificate, the engineer to get his engine the pilot to get his boat must show practical Knowledge and so too must the candidate for the degree in Medicine. I do not know any stimulus so healthy as a Knowledge on the part of the student that he will receive ~~a practical~~ such an examination at the end of his course. It gives sharpness to ~~the~~ his ~~scalpel~~ dissecting Knife, heat to ~~the~~ his Bunsen burner a well worn appearance to his stethoscope and a peculiar nattiness to his bandaging. The Quiz-master becomes a burden, pet-tips are ~~neglected~~ at a discount, the "points" of the various Professors are neglected with the prospect of an hour or so in the wards and ~~the~~ an opportunity of showing what he really Knows of disease as manifested in John & Elizabeth and not as he has been able to cram it from books

State Examin

Faculty of the dental department.
Dental Student

1. Scientific - comprehensive.
2. Practical
3. Importance of the Profession upon the teeth of the next generation
4. Position of american dentistry.

After ~~Nearly~~ New York eighteen centuries the conclusions of the great man of Pergamos come to us clear and bright as

Gentlemen. I have been urging upon you the importance of scientific training and of the value of practical work in our profession. It is the same old refrain; teachers have thus talked to students in all ages, and though in many respects we may agree that the thoughts of even the wisest have widened with the process of the suns. yet in this particular we have not got beyond the ancients. Listen to the needful qualities and attributes of the physician as laid down by Galen. He says the future range of Philosophy should be at the command of the Physician who should possess moreover seven fundamental qualities. First a keen Nature capable of readily following every science; secondly he must have had from his youth a constant training and education in the essential sciences, particularly Mathematics and Geometry. To which Knowledge he must add thirdly the best of everything which his age affords. Fourthly he must possess enduring industry, so that day & night he may work at his profession alone science only; fifthly he shall have even in the smallest matters strive for the truth, seek it all his days, esteeming all else but slightly. Sixthly he must learn a method by which he can distinguish the true from the false, that he may attain to a perception of truth not only in what he learns but in what he investigates. Add thereto the seventh, so to exercise this method that he possesses not merely the capability of acquiring knowledge but also the power of using it.

After nearly Nearly eighteen centuries the conclusions of the great man of Pergamos come to us clear and bright as

Nov. 1941. I come across his later use of this → quotation, where he attributes it to FROUDE, viz. in "The Medical Clinic", B.M.J., 1914, ii, p. 11, col. 1. (C.R. 303, p. 11).

L.W.T.

lessons which I have attempted today to inculcate
You may as student haste to rise up early and late take
rest, you may eat the bread of carefulness and yet it
will be but lost labor if you have not when you so among
at the end of your
fellow men
course the practical information needful for the success-
ful recognition and treatment of disease. As I said at
the outset
first you are gathered here for this purpose and should
have no other object, no other ambition. And if you
remember nothing else of this address of the work of the
week try to bear away with you to your work the spirit
take away with you the ~~sense~~ of my text
which I give you last in purpose:-

"The Knowledge which a man can use is the only
real Knowledge, the only Knowledge that has life and
growth in it and converts itself into practical power.
The rest hangs like dust about the brain or drops like
rain drops off the stones"

Mr President permit me before we adjourn to allude to one personal matter
I am a young man, a stranger, I came among you I cannot
ever hope and on opportunity, the first which I have had of public
address to thank you, & with and express to you all my grateful thanks at the
kind manner exceeds I have been received. The Transplantation of man is
that is a serious act

the brotherly, with the word of warm friend
among my confreres the spirit of earnest
in the welfare of this

Ulmer Petrus
Anno 1885
Pfr Hallstadt

For Dr. Penfield.

From Osler's address at Phila. 1885.
MS. # 7864, 11, leaves 29-30.

30

Tuesday, Eve.

Dear J. Add anything in that address that you think advisable, particularly in that section dealing with the relation of the Doctor student to the patient

Smooth over that set of qualifications from Yates - Straus - Coted them from the German & they read stiffly

The concluding sentence I expect is illegible but I said was about this - which modify to suit your taste -

And now Mr Provost & Gentlemen let me refer in conclusion to a personal matter. Nearly a year ago I came among you a stranger & I cannot refrain in this my first public appearance in the University from expressing my warmest appreciation of the kindness & manner in which I have been received among you. The transplantation of a man as of a tree is a risky process & not always successful. Under the changed conditions of residence from the tropical to the temperate zone it is not unnatural that in my case if the flowers & fruit are not yet apparent you can at any rate see the tender leaves of hope. I do not like this, you were beyond all they could hope for when you came, & to speak of "tender leaves of hope" in your case savours of the pride that apes humility though I know nothing is farther from your nature, but everyone does not know you so well. - "I am like a tree transplanted into a kindly soil where I trust to take root downwards & bear fruit upwards; to the [illegible] & to the world of warm friends in the welfare of this University the fruits of earnest

students, well equipped for their work in
life.

For Dr. Penfield.

From Osler's address at Phila. 1885.
MS. # 7664, 11, leaves 29-30.

Leaf 29: Osler concluded his address with the unidentified quotation:

"The knowledge which a man can use is the only real knowledge, the only knowledge that has life and growth in it and converts itself into pratical power. The rest hangs like dust about the brain or dries like rain drops off the stones"

Leaf 30, ~~has the~~ is a draft of the end of the address, concluding as follows:

"The transplantation of a man as of a tree is a risky proceed and not always successful. Under the changed conditions a fresh growth does not inevitably take place. I trust, Sir, that in my case, if the flowers and fruit are not apparent, you can at any rate see "the tender leaves of hope".

(This is scored through, and under it his cousin, Miss Jannette Osler [1859-1936], 10 years his senior, to whom he used to give his writings for criticism, has written thus:)

I do not like this, you were beyond all they could hope for when you came, and to speak of "tender leaves of hope" in your case, savours of the pride that apes humility though I know nothing is farther from your nature, but everyone does not know you so well:-"I am like a tree transplanted into a kindly soil where I trust to take roots downwards and bear fruit upwards: the root of warm friendship among my confrères and a hearty interest in the welfare of this University and the fruit of earnest students, well equipped for their work in life."

X. Nov. 1941.
find he used it also
in C.R. 303, b.4.
B.M.J. 1914, i, p.11,
ed.: + attributed
it to FROUDE.
W. W.F.

W.W.F.
23.1.41.

Per M.M.L. messenger
now.

[1] "The Powder of Sympathy"
[not published]

followed by

[2] two and a half pages of transcript on the same subject in the hand of Dr. W. W. Francis.

THE POWDER OF SYMPATHY.

by

William Osler, M. D., Professor of Medicine, Johns Hopkins University.

The history of the progress of the human mind is a history of struggle with its delusions. Man is indeed a fine piece of work, noble in reason, infinite in faculty, "in action how like an angel! in apprehension how like a god!", but there is another side to this flattering picture, which makes us feel that even at his best he is a poor, feeble creature, as little fitted, in the words of Johnson, for feeling as for thinking. Compassed without by powers of nature benign and malign, he has tormented himself with gods of his own making--on the one hand stern powers, malignant dieties, whose sole care is to embitter human life; on the other hand kind gods, who would make perfect man's vain attempts. The great delusions, usually of a religious character, have been of inestimable service in the progress of the race, though they have burnt more martyrs at the stake, and in unholy wars have sent more souls to Hades than plague, pestilence and famine. Of minor delusions life has been full to overflowing; each century and country presents scores for our consideration. In no one particular is man more prone to be deluded than in matters relating to his body, about which to the uneducated--indeed to all--there are subtle mysteries, awakening at once the keenest apprehension and the liveliest wonder. Every generation has had its own special medical delusions, some outside, some within our ranks, and they appear to diminish neither in number nor in folly as the race grows older. Appearing to recur in waves, they have often a leaven of truth sufficient to keep them alive for a period of years. Even to enumerate them during the present century would take too long. To those of you interested I would refer you to

From Apollonius of Tyana to Mother Eddy, these arch deluders have

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"Powder of Sympathy" — talk corrected ab.!!6

found man a gullible, easy victim, ready to be duped and fleeced.

In the seventeenth and eighteenth centuries two popular delusions arose of special interest to us, as connected with the names of men of distinguished position and merit, and both of single minded purpose to be helpful to man without any thought of pecuniary profit, which latter stamps them as singular in their class. I refer to the Powder of Sympathy of Sir Kenelm Digby, and to the Tar-water of Bishop Berkeley. ~~I refer~~ you to the excellent Historical Introduction in Paris's Pharmacologia, where he deals with the subject of superstition.

To the former I wish to direct your attention this evening. And first a few words about Sir Kenelm himself

Kenelm Digby, Born in 1603, was the son of Sir Everd Digby, who was executed for complication in the Guy Fawkes plot in 1607 when his son was only four years old. The main facts of his life may be first stated quite briefly. devoted mother, the grace of favor on his own behalf and influenced relatives compensated for the loss of a fathers kindly guidance

At the age of fourteen he visited Spain with his kinsman, the embassador, Sir John Digby. In 1618 he entered Worcester College, Oxford, and left it in 1620 without having taken a degree. When there he came under the influence of the celebrated Allen, who no doubt introduced him to the studies of philosophy, both natural and mental. In 1620 and 1621 he lived on the Continent in France, and mingled with courtiers and philosophers in the gay society of the Court. It is stated that the Queen Mother herself played Mrs. Potiphar with him, but in vain, but he had to flee and he fled from France to Italy. In 1622 he revisited Madrid, where he was enrolled in the suite of Prince Charles, afterward Charles I. There he seems to have impressed everybody with his mental abilities, and his great bodily prowess. Returning to England in 1623 he was knighted by James I. From his boyhood he appears to have been deeply in love with a Venetia Stanley--the Stelliana of his Memoirs--a young woman who was equally renowned for her beauty and for her reputation, or, as some would put it, her want of reputation. His Autobiography, the manuscript of which was found early in this century, and printed in 1827, gives an account of his devotion to her. She seems to have been a very remarkable woman in many ways. After bearing several children, she died in 1633 of consumption. It was on her account that Digby became so much interested in receipts for various cosmetics, and for the preparation of different articles of food. He also brought edible snails from France and used them as a cure for her wife's consumption. In 1627 he sailed on a privateering expedition against the French and Venetians, and in the harbor of Scanderoon he gained a really brilliant victory over their united fleets. This added greatly to his reputation, and he seems to have occupied subsequently a prominent place in the Court circles.

Following the death of his wife he was irreconcilable for several

"Powder of Sympathy" — title corrected ab.!!!

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years, and returned to Gresham College, where he spent his time studying chemistry. At the outbreak of the Civil War he took the side of the Crown, and was imprisoned as a Catholic by Parliament at Winchester House, in 1642-43. While here, during the night between the 22nd and 23rd of December, he wrote the observations upon Sir Thomas Browne's Religio Medici, the chief claim of which, according to Dr. Johnson, is that it was written in twenty-four hours. For the next twenty years he lived a life of restless uneasiness. He was appointed Chancellor to the Queen Mother, and resided a large part of the time on the Continent, where he became intimate with the prominent philosophers of the day. In 1644 appeared his large treatise on the Nature of Bodies, which brought him no small reputation as a philosopher and thinker. The Discourse on the Sympathetic Powder was published in Paris in 1657. In 1653 he was allowed to return to England, and he became intimate with Cromwell. At the Restoration he seems to have been in favor with Charles the II again. He took part in the foundation of the Royal Society. He died of in 1665.

His character seems to have been very enigmatic. Few men of his day and generation seem to have been a more striking figure in the world. He evidently was a smatterer and a dabbler in many things, without being a deep or profound thinker, This, however, was a characteristic of the age. Unscientific credulity was mingled with an intense enthusiasm for observation and experiments of all sorts. Butler, in Hudibras, ridicules the learned speculations of the members of the Royal Society, and their hope, credulity and faith, in his well known passage:

"These were their learned speculations,
And all their constant occupations;
To measure wind, and weigh the air,
And turn a circle to a square;
To make a powder of the sun,
By which all doctors should be undone;
To find the northwest passage out,
Although the farthest way about;

"Powder of Sympathy" — title corrected ok.!!!

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To stwe th' elixir in a bath,
Of hope, credulity and faith;
To explicate by subtle hints
The grain of diamonds and flints;
And in the braying of an ass
Find out the treble and the bass."

He has been called the arch amateur of all history, and by Dr. Stubbs, a contemporary, the Pliny of our age for lying. Evelyn, who knew him intimately, says, "but Sir Kenelm was a teller of strange things," and in another place, "but the truth is Sir Kenelm was an arrant mountebank."

"Powder of Sympathy" — title corrected ab.!!!

6

The discourse on the powder of sympathy was published in Paris in 1657. The privilege for the printing of the same is dated the 21st of December, ~~1657~~. An English translation by R. White, Gent., was issued in 1658, and is entitled, "A Late Discourse Made in a Solemne Assembly of Nobles and Learned Men at Montpellier in France; by Sr. Kenelme Digby, Knight, &c., Touching the Cure of Wounds by the Powder of Sympathy; With Instructions how to make the said Powders; whereby many other Secrets of Nature are unfolded." There is a delightful dedication to Sir Kenelme's son John by the translator, in which he states that besides the ordinary relation of father and son there was never, he dare boldly say, such a perfect and exact similitude betwixt any two since the world began, and calls it one of the greatest wonders of these times. Not only outwardly, but he adds "it may be well presumed, that you are also like him in the ideas of your soul, and the intern motions of your mind, and consequently in his sublime speculations." T

There are those who hint that the discourse was never delivered at Montpellier. The writer of the article in the Dictionary of National Biography remarks

The little work opens with a ~~sort~~ Darwinian illustration drawn from Plutarch, as to whether those horses which while colts, had been pursued by the wolf, and saved themselves by force of running, are more fleet than other horses, ~~or~~ and whether ~~they have~~ became they escaped the wolf ~~because~~ they are the more fleet, or is it their natural swiftness which has saved them. Plutarch judiciously ~~concludes that it may be~~ quaere the thing ~~is~~ may be not true! And so Sir Kenelme states he should be very sorry, after having done his uttermost to make it clear how the powder of sympathy doth naturally, and without any magic, cure wounds without touching them, yea, without seeing of the pa-

tient; he says he should be very sorry indeed if it should be doubted after all this whether such a cure may be effectually performed or no. Then he gives the celebrated and oft-quoted case of of Mr. James Howel. Several Writers on the powder of sympathy have overlooked, ~~so far as I can gather, one~~ an very important point here; namely, that the cure in this celebrated case was effected at the instance of King Kames. The date is not given, but it must have been between Digby's return with Prince Charles in 1623 and the death of James the I in 1625. The following is the narration of the case, and Digby's statement of how he had obtained the powder.

The rest of the little book, from page 15 to page 152, is taken up with a discussion upon how the cure is made, and he proceeds according to the method of geometrical demonstrations to lay down ~~six or~~ seven principles as foundation stones upon which to erect his structure. These principles, he says, shall be like the wheels of Archimedes, by the advantage whereof a child might be capable to hale ashore the biggest carack of King Hierōn, which a hundred oxen, with all the ropes and cables of his arsenal, were not able to stir; so by the strength of these principles I hope to waft my conclusions to a safe port.

First Principle. That the whole orb or sphere of the air is filled with light.

The second principle "shall be that the light glancing so upon some body.....and which rebound upon the superficies of the body, loosen themselves, and carry with them some small particles or atomes," just as a ball which strikes against a wall carries with it some of the moisture, or of the paint if the paint be not dry. And these small atomes being cut and loosened from their trunk, ~~being~~ are composed of the four elements, and he compares them to cavaliers mounted on winged coursers. He has a long digression on the atomes that are present in winds which partake of the qualities of the places from which they come; hot from the south, cold from the

north, dry off the earth, humid and moist from the marine, wholesome and pleasing from Arabia Felix, etc., "as also those that come from infected places bring the contagion along with them."

"My third Principle shall be, that the air is ful throughout with small bodies or atomes, or rather that which we call our air, is no other than a mixture, or confusion of such atomes, wherein the aereal parts do prodominate." Under this he has a great many illustrations of the pleasant effects and injurious effects of the mixture of atomes in the air, which are drawn from bodies by means of the light which reflects on them, or which sally out by the interior natural heat of bodies which drives them forth.

The extreme divisibility of matter is, I ~~suppose~~, the fourth principle, and his fifth is that these small atomes filling and composing the air were oftentimes drawn to a road altogether differing from that which their universal causes should make them hold, and under this he discusses the attraction in the siphon, the attraction in filtration, the magnetical attraction in iron, the electrical "when the Jett-stone draws unto it straws." There is a long dissertation on the divisibility of matter, on the physics of filtration, on the attraction of air to fire, and in this he tells a good story which illustrates his attitude of mind. "But me thinks that all this is but little compared to the attraction of air, which was made by the body of a certain Numme at Rome, whereof Petrus Servius, Urban the Eighth's Physitian makes mention in a book which he hath published, touching the marvailous accidents which he observed in his time. Had I not such a vouchy, I durst not produce this History, although the Nunne herself did confirm it unto me, and that a good number of Doctors, of the faculty of Physick at Rome, did assure me of the truth thereof: There was a Nunne, that by excesse of fasting, of watchings, and mental orisons, was so heated in her body, that she seemed to be all on fire, and her bones dryed up, and calcind. This heat then, this internal fire drawing the air so powerfully: this air did incorporate

within her body, as it useth to do in salt of Tartar, and the passages being all open, it got to those parts, where there is most serosity, which is the bladder, and thence she rendred it in water among her urine, and that in an incredible quantity, for she voided during some weeks more, than two hundred pounds of water every four and twenty hours."

"Powder of Sympathy" — title corrected ab.!!6

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His sixth principle was that when fire attracts the air and that which is within it, the dispersed atomes of the same nature with the body are attracted more powerfully than atomes of a different nature, owing to the resemblance and sympathy they have one with the other. He discusses these resemblances in weight, rarity and density and in figure. This touches upon the important part of his discourse, and he gives a number of illustrations as, "when one finds himself burnt as in the hand, he holds it a good while as near the fire as he can, and by this means the ignited atomes of the fire, and of the hand mingled together, and drawing one another, and the strongest of the two, which are those of the fire, having the mastery, the hand finds it self much eased of the inflammation which it suffered." So also the head of a viper held over the bitten place, the poison by a kind of filtration way returns back to its principles and leaves the party well recovered. He speaks at some length of the popular notion that wine in the cellar makes a kind of fermentation and puts forth a little white lee during the season that the vines are in flower, from a sympathy of the atomes with each other. By a similar sympathy of the atomes he explains the attraction of gold and mercury, and explains in the same way the influence of imagination. He explains by this and gives an illustration of the contagious character of hysteria and the maternal impressions. He gives at length one of the most interesting illustrations. "Permit me, my Lords, to enlarge my digression a little further in one word, to raccount unto you a Marvailous accident, known all over the Court of England, in confirmation of the activity and impression which the imagination which the imagination of the mother makes upon the body of the Infant, whereof she was big. A Lady that was my Kinswoman,(she was the neece of Fortesou, the Daughter of Count Arundel) came to give me visits sometimes in London; she was fair, and of a good feature, and she knew it well, taking great complacency, & not only to keep her self so, but to adde that which she could further: thereupon

"Powder of Sympathy" — title corrected ab!!!

she was perswaded that the patches and flies which she put upon her face, gave her a great deal of ornament, therefore she was carfull to wear the most curious sort: but as it is very hard to keep a moderation in things which depend more upon Opinion than Nature, she wore them in excesse, and patched most of her face with them; although that did not much adde to her beauty, and that I took the liberty to tell her so accordingly, yet I thought it no opportunity then to do any thing that should give her the least distast, since with so much civility and sweetnesse she came to visit me. Nevertheless, one day I thought good, in a kind of drolling way,(so that she might not apprehend any discontentment) and Ridentem dicere verum quis vitat? to tell her of it; so I let fall my discourse upon her big belly, advising her to have a care of her health, whereof she was somewhat negligent, according to the custom of young vigorour women, which know not yet what it is to be subject to indispositions; she gently thanked me for my care herein, saying, That she could do no more for the preservation of her health than she did, though she was in that case: you should at least, I replyed, have a care of your child, O for that, said she, there is nothing that can be contributed more. Yet, I told her, see how many patches you wear upon your face, are you not afraid that the Infant in your womb may haply be born with such marks on his face? But said she, What danger is there that my child should bear such marks, though I put them on artificially? Then you have not heard, I replyed again, the marvelous effects that the imaginations of Mothers work upon the bodies of their children, while they are yet big with them, therefore I will raccount unto you some of them: so I related unto her sundry stories upon this subject, as that of the Queen of Ethiopia, who was delivered of a white boy, which was attributed to a Picture of the Blessed Virgin, which she had near the teaster of her bed, whereunto she bore great devotion. I urged another of a woman who was brought to bed of a child all hairie, because of a pourtrait of Saint John Baptist in the Wildernesse, when he wore a

"Words of Sympathy" — Tells correct tale!!!

coat of Camels hair. I raccounted unto her also the strange antipathy which the late King James had to a naked sword, whereof the cause was ascribed, in regard some Schotch Lords had entered once violently into the bed-chamber of the Queen his mother, while she was with child of him, where her Secretary, an Italian, was dispatching some letters for her, whom they hacked, and killed with naked swords before her face, and threw him at her feet, and they grew so barbarous, that there wanted but little but that they had hurt the Queen her self, who endeavoured to save her Secretary, by interposing her self, at least her skin was rased in divers places. Bucanan makes mention of this Tragedy. Hence it came that her son King James had such an aversion all his life time to a naked sword, that he could not see one without a great emotion of the spirits, although otherwise couragious enough, yet he could not over-master his passions in this particular. I remember when he dubbed me Knight, in the ceremony of putting the point of the naked sword upon my shoulder, he could not endure to look upon it, but turned his face another was, insomuch, that in lieu of touching my shoulder, he had almost thrust the point into my eyes, had not the Duke of Buckingham guided his hand aright.

I alleadged her divers such stories to make her apprehend that a strong imagination of the mother might cause some notable impression upon the body of her child to his prejudice. Moreover, I pray consider how attentive you are to your patches, and that you have them continually in your imagination; for, I observed, that you have looked upon them ten times since you came to this room, in the looking-glasse. Have you therefore no apprehension that your child may be born with half-moons upon his face; or rather that all the black which you bear up and down in small portions, may assemble in one, and appear in the middle of his forehead, the most apparent and remarkable part of the visage, and may be as broad as a Jacobus, and than what a grace would it be to the child, Oimee, said she, rather then that should happen,

I will wear no more patches while I am with child: Thereupon at that instant she pulled them all off, and hurld them away. When her friends saw her afterwards without patches, they demanded how it came to passe, that she who was asteemed to be one of the most curious beauties of the Court, in point of patches, should so suddenly give over the wearing of them: she answered, that her Uncle, in whom she had a great deal of belief, assured her, that if she wore them, during the time she was with child, the Infant would have a large black patch in the midst of his forehead. Now, this conceit was so lively engraven in her imagination, that she could not be delivered of it: And so this poor Lady, who was so fearful that her child might not bear some black mark in his face, yet she could not prevent, but it came so into the World, but that he had a spot as large as a crown of gold in the midst of his forehead, according as she had figured before in her imagination: it was a daughter that she brought forth, very beautiful throughout, this excepted. And tis but few moneths agoe, that I saw her bearing the said mole or spot which proceeded from the force of the imagination of her mother."

14

His seventh and last principle "is the last turn of the engine, and as I hope will batter down quite the gate which hindred us an entrance to the knowledge of this so marvailous a mystery." "That the source of those spirits or of the bodies which attract them to it selfe, draw likewise after them that which accompanies them, as also that which sticks, and is glued, and united unto them."

Then follows a narration of three or four popular superstitions, which have not yet entirely disappeared, illustrating this principle. The first is that if in boiling milk it swells so high that it sheds over the brim of the pan and comes to fall into the fire, "the good woman or maid, doth presently give over whatsoever she is adoing, and runs to the pan which she drawes off the fire and at the same time she takes a handful of salt, which useth to be commonly in the corner of the chimney to keep it dry, and throws it upon the cinders where the milk was shed; Ask her wherefore she doth so, and she will tell you that it is to prevent that the Cow which gave this milk may not have some hurt under her udder." The malady of the cow is often supposed to be supernatural or the effect of sorcery, but in reality is due to the fiery atomes consequent upon the milk falling upon the candent coals, which, dispersing through the circumambient air, extending its sphere of activity, reaches the place where the cow is, and her udder, the source whence the milk proceeded, attracts unto it the malignant vapour. The salt remedies all this because it is of a nature clean contrary to the fire, cold and fixed, and the atomes which are in train to accompany the vapour of the milk are precipitated and killed by the atomes of the salt; "and if any do chance to scape, and save themselves by the great struglings they make, and go along with the said vapour, they are nevertheless accompanied with the atomes and spirit of the salt which stick unto them, which like good wrastlers never leave their hold untill they have got the better of their adversary." Then he gives two or three other remarkable illustrations, one of which is unique as a cause of dysentery in a child.

"Powder of Sympathy" — title covered up!!!

15

"He had a very pretty and delicate child, and because he would have his eies alwaies upon him, he entertained the nurse at his house, I saw him often, for he was a pragmaticall man, and of good addresses, and I had occasion to use such a man; One day I found him very sad, and his wife a weeping, whereof demanding the reason, they told me that their little child was very ill, and that he had a burning feaver, which inflamed all his body over, which appeared by the rednesse of his face, that he forced himself to go to stool, but he could do little, and that little which he did was covered with bloud, and that he refused also to suck; And that which troubled them most, was that they could not conjecture any cause how this indisposition should befall him, for his nurse was very well, her milk was as good as could be wished; and in all other things there was as much care had of him as could be; I told them that the last time I was with them, I observed one particularity whereof I thought fit to give them notice, but something or other still diverted me, It was, that their child making a signe that he was desirous to be set on his feet, he let fall his excrements on the ground, and his nurse presently took the fire-shovell, and covered it with embers, and then threw all into the fire, the mother began to make her excuses, that they were not so carefull to correct this ill habit of the child, saying that as he advanced in yeares, he should be corrected for it, I replied, that twas not for this consideration that I held this discourse with her, but I was curious to know the reason of her childs distemper, and consequently to find some remedy,.....I.and I made reflections unto them upon that which they had often heard, and what is often practised in our Countrey, which is that within the villages which are alwaissdirty in the winter, if it happens that there be a Farmer which is more proper than others, and who keeps more neatly the approaches to his house than his neighbours do, the boyes use to come thither in the night time, or when it begins to be dark, to discharge their bellies there, because that in such villages there is not much commodity of easements, besides that in such places so

fitly accommodated these gallants, the boyes are out of danger to sink into the dirt, which otherwise might rise up higher than their shooes, but the good houswifes in the morning when they open their doores, use to find such an ill favoured smell that transports them with choller. But they who are acquainted with this trick go presently and fire red hot a broach or fire-shovel, and then they thrust it into the excrements all hot, and when the fire lessens, they heat it again oftentimes to the same purpose; In the meantime the boy which made the ordure feels a kind of pain, and collick in his bowells, with an inflammation in his fundament and a continuall desire to go to stool, and he is hardly quit of it till he suffer a kind of fever all that day, which is the cause that he returns thither no more; And these women to be freed from such affronts do passe among the Ignorant for sorceresses, and to have made a compact with the divell, since they torment people in that fashion without seeing or touching them. This Gentleman did not disallow those things which I have already told you but was confirmed farther when I told him that he should look farther into the fundament of his child, for without doubt he should find it red, and inflamed; and that visiting him, he should find that it was full of pimples, and excoriated; It was not long after that this poor child fell into a languishment, and with much pain and pittifull cries he voyded some small matter which in lieu of casting it into the fire, or to be covered with embers, I caused to be put into a bason of c,ld water which was put in a fresh place, which was continued to be done every time that the child gave occasion, and he began to amend the very same hour, and within four or five daies he became perfectly well recovered."

"Powder of Sympathy" — title corrected by Hooke

17 48

These were his wheels, but he doubted whether put together and mounted they would make the engine go.

He then proceeded to explain on these principles the effect of the powder of sympathy upon Mr. Howel's wounded hand, which was sured by steeping his garter in a basin of water where vitriol was dissolved, and the basin kept in a closet at moderate heat of the sun. The explanation is rather long, but it must be read to appreciate his position. "In the first place the Sun, and the light will attract a great extent, and distance off, the spirits of the bloud which are upon the garter, and the moderate heat of the hearth, which acts gently upon the composition (which comes to the same thing, as if one should carry it dry in his pocket to make it feel the temperate heat of the body) I say the moderate heat of the hearth doth push out the said atoms, as the water which gathers it selfe round in the filtration or strainings use to drive on that which mounts up to make it go faster, and more easily, making it also to dilate it self, and distill, and so march of themselves a good way in the air, to help thereby the attraction of the Sun, and of the light.

Secondly, the spirit, of the Vitriol being incorporated with the bloud cannot chuse but make the same voyage together with the atomes of the bloud; Thirdly, the wounded hand expires, and exhales in the meantime continually abundance of hot fiery spirits which gush forth as a river out of the inflamed hurt, which cannot be but that the wound must consequently draw unto it the air which is next it; Fourthly, this air drawes unto it the other air which is next it, and that the next to it also, and so there is a kind of current of air drawn round about the wound. Fiftly, with this air come to incorporate at last the atomes, and spirits of the bloud, and the vitriol which were diffused, and shed a good way off in the air by the attractions of the light, and the Sun. Besides, it may be that from the beginning the orb, and sphere of these atomes, and spirits did extend it self in so great a distance without having need of the attractions of the air, or of the light to make them come

"Powder of Sympathy" — title corrected ab. 1670

thither. Sixthly, the atomes of bloud finding the proper source, and originall root whence they came do stay, and stick there, and so reenter into their naturall beds, and primitive receptacles, whereas the other air is but a passenger, and evapourates away as soon as it comes, as when it is carried away through the funnell of the chimney, as soon as it is drawn into the chamber by the doore. Seventhly, the atomes of bloud being inseparably with the spirits of the Vitrioll, both the one, and the other, do joyntly imbibe together within all the corners, fibres, and orifices of the veines which lye open about the wound of the party hurt, which herby are comforted, and in fine imperceptibly cured."

Weapon Salve of Paracelsus. — Lockhart

among the Arcana Famosa (fac simile of 1890) p 61 Here is given

A medicine to cure by the weapon published amongst other things by. Rodolphus Goclenius Professor of Physicke at Wittemberge in the year 1608. Instituted the Magneticall cure of a wound. p 264

Take of the moss of the skull of a strangled man 2 ounces of the mumia of mans blood, one ounce and a half of Earth worms washed in water or wine & Dryed one ounce & a halfe, of Hmetites (?) 2 ounces. of the fat of a boar ——— fresh 2 drams. of oil of turpentine two drams, pound them and keep them in a long narrow pot. Make this when the sunne is in Libra dip into the ointment the arme or wood or some fallow shell made red with blood in opening the wound. Let the patient wash the his wound in the morning with his own urine or clear water and bind it with a clean cloth always wiping away the matter

"Powder of Sympathy" — title corrected ab. 1/6

pg

He finally gives a statement about the composition of the powder, which is vitriol, (Oleum ferrous sulphate) either alone or mixed with the gum of tragaganth. He says the same cure is performed by applying the remedy to the blade of the sword which wounds a body. And he concludes that all this mystery is guided and governed by true natural ways and circumstances, although by the agency and resorts of very subtile spirits. It would be a poor kind of pusillanimity and faintness of heart, or rather a gross ignorance of the understanding, to pretend any effects of charm or magic.

The powder of sympathy had a remarkable vogue throughout the seventeenth century, and even physicians of great repute felt compelled, yielding, no doubt, to popular pressure, to use it. In an account which I have given ~~recently~~ of the illness of Lord ~~Clarendon~~ Shaftesbury, in the consultation held by Locke and Sydenham and Glisson, in 1666, the powder of sympathy was noted to have been used three times. As the weapon salve it had probably a use much older than Sir Kenelm Digby's powder. The practice is alluded to very frequently by the poets; thus in the Lay of the Last Minstrel—

> "But she has ta'en the broken lance,
> And wash'd it from the clotted gore,
> And salved the splinter o'er and o'er.
> William of Deloraine, in trance,
> Whene'er she turn's it round and round,
> Twisted, as if she gall'd his wound,
> Then to her maidens she did say,
> That he should be whole man and sound."

In Dryden's Enchanted Island Ariel says:

> "Anoint the sword which pierced him with this
> Weapon salve, and wrap it close from air
> Till I have time to visit it again."

There were two elements at work in promoting the cure in these cases — first the ~~[illegible]~~ influence of Suggestion which is a most powerful factor in promoting recovery, and which we use every day; and secondly the treatment of the wound itself which was to be wrapped from the air & left undisturbed — a great improvement on the meddlesome interference of the Surgery of the time

The powder of sympathy & Tar water are now to the limits of probability, and Pooling's Pratus & Pratella — Therapy serve only to illustrate phases of folly through which we pass, but as I said at the outset each generation has its own special affliction — thus (Lord) we are in the midst of two weird strange delusions — Socialism & Christian Science & find that medical students are often worried about the prevalence of these fond & foolish fancies let me in conclusion give you a bit of advice: —

"Powder of Sympathy" — title covered w. ink

[Marty-Laveaux's note on the Powder of Sympathy in connection with Corneille's Le Menteur is in vol. 4, p. 204 (Paris 1862) in the "Grands Ecrivains de France" ed. of Corneille. (L.L.M.'s note on source of passages till below)]

Monsieur Marty-Laveaux in a note on the lines:

"Has no one told you of a source of life
which our warriors call the powder of sympathy!"

makes certain comments, with which we are unable fully to agree. The general opinion, he says, is that it was Sir Kenelm Digby who brought this pretended remedy to France. He disclosed its principles before the Académie de Montpellier in an undated discourse, which, however was licensed to be published Dec 21st 1657, and a lively controversy sprang up on the subject. But we can see that the powder of sympathy was talked about at a much earlier date. A special treatise had already been published in 1647 under the title; Jacobi Papinii ---- de pulvere sympathico dissertatio. We can go back still farther, adds M. Marty-Laveaux; the 1644 edition of the Abrégé Chirurgical by Honoré Lamy is augmented by a "Discourse on the powder of sympathy" by M. G. Lauvagen. In it we find a reference which brings us back to the exact time when Corneille makes Dorante speak. "You must know," says the author, "that it is some two or three years since this powder began to be used in this Kingdom; but it was first duly introduced in the year 1642 in the army of Roussillon." The formula had been bought for fifty Spanish pistoles.

But is it not more probable that this powder, by reason of its date, would be the sympathetic powder of François Valory (1643), mention of whom Dr A. Chéreau, librarian of the ~~Académie~~ Faculté de Médecine de Paris, has found at page 209 of Vol XIII of the Commentaires de la Faculté de Médecine de Paris, Commentaries, the twenty four volumes of which comprise "a curious collection of Charlatans of all shades and categories, illicite practicantes, Agyrtes, Nebulones, and other poisonous animals of the same kind." In fact, the Montpellier discourse is not dated, and its publication was licensed only on Dec. 21st 1654. I know for sure that the discourse was reproduced from 1647 by Nicolas Papin in his ~~De~~ pulvere sympathico dissertatio. But we know on the other hand that it was only in his last years that Sir Kenelm Digby gave himself up to alchemy. After all, it seems quite probable that Valory's method was not taught until after the excitement about that powder "openly introduced in the year 1642 in the army of Roussillon", that is to say, at the very period when the comedy, Le Menteur, seems to have been presented for the first time.

However, if the powder of sympathy "as our warriors call it" is indeed that of François Valory, on the other hand the remark of Dorante to Cliton,

"The powder you tell me of is but a common thing
we no longer set store by it,....."

referring again to the same Valory, would we not be right in admitting that when Dorante adds:-

"But, Cliton, I know one
which recalls men even from the gates of death"

he alludes to the discovery, or better the invention of Sir

"Pour" of Scapedus" — title corrected w. ink

Kenelm Digby, whose quite recent fame would be supplanting Valory's.

Although this interpretation seems to us probable enough, yet we do not dare, for ~~at~~ the present ~~time~~, at least, to put anything but a mark of interrogation after it. We will only add before closing, that M. Ch. Marty-Laveaux, to whom we lately imparted our doubts, asking his advice, has answered us in these words:-

"Le Mercure, printed ~~th~~ Oct. 31st 1644, had been acted, according to the most widely accepted opinion, in 1642, but perhaps only in 1643; ~~that~~ therefore it is very probably François Valory whom Corneille had in view in the third scene of the fourth act.

"Power of Expression" — title corrected ab. 1910

A draft of an article entitled

"Auenbrugger on the Art of Percussion"

[written at Baltimore; not published. Leaves are consecutive but possibly one or more missing at the end]

"Pond of Symphony" — title covered up !!!

Auenbrugger on the Art of Percussion.

It is strange that two of the greatest discoveries in practical medicine should have been so slowly received by the profession. Laennec lived to see the ~~use~~ almost universal adoption of auscultation ~~universally adopted~~, but the discoverer of the art of percussion, Leopold Auenbrugger, though he lived long beyond the allotted period, went to his grave unhonored, so far, at least, as this special part of his work was concerned. Before the middle of the ~~last~~ 18th century, when Auenbrugger began his studies, percussion had ~~doubtless~~ been practised ~~even from early times, but it was used~~, so far as we know, ~~exclusively~~ only by the old Greek physicians and their successors to distinguish tympanites from ascites.

Auenbrugger who placed the art on a sure and scientific basis,

~~Leopold Auenbrugger~~ was born in Graz, November 19th, 1722. He pursued his medical studies in Vienna, and at about his twenty-ninth year became physician to a Spanish military hospital in that city, in which position he served until about 1768, after which he lived and worked as a general practitioner in Vienna. He was ~~evidently a man~~ widely respected and beloved, and was ennobled in 1784 by Kaiser Joseph II. He died in 1809 in the eighty-seventh year of his age. He was by no means a voluminous writer, ~~and~~ in addition to the work in which he describes his new discovery the only papers from his pen relate to the discovery of a supposed specific remedy for mania, ~~and~~ one on suicide, and a method of cure in epidemic dysentery. He also wrote a drama. The work which has made him famous was ~~a small publication~~ issued in 1761, ~~entitled~~ Inventum Novum ex Percussione Thoracis Humani ut Signo Abstrusos Interni Pectoris Morbos Detegendi.

This was no rash, hastily prepared monograph, but a work over which, like a true Pythagorean, he had brooded in silence the prescribed seven years.

~~A~~The second edition of the work was issued in 1763. In the preface Auenbrugger says that he was prepared to suffer the envy, jealousy, and hatred, which never fails to attend those who endow the science of medicine, but he would not be denied the fruit of his careful observations. It

"Pond of Symptoms" - title covered up!!

does not appear that he was subject to any of these indignities, but he suffered from what was much more serious, simple neglect. With the exception of a warm recommendation from Stoll, the Inventum Novum made no progress whatever, and may be said, indeed, to have aroused no special interest during the rest of the century.

In 1808 Corvisart discovered Auenbrugger, translated the Inventum Novum, ~~and in giving~~ gave it all the credit of a great discovery, and what was more ~~so~~ even important, lent to it the weight of his ~~great~~ authority. As Auenbrugger did not die until 1809, we may reasonably hope that he had received Corvisart's translation ~~of the Inventum Novum~~, and had realized that at ~~length~~ last his ~~great~~ discovery was to be recognized perhaps

Through the labors of the French physicians the art of percussion came into general use. The Inventum Novum was reissued in 1843 with a preface by Skoda, who supported the doctrines of Auenbrugger, which had been called in question.

The little work is somewhat remarkable in its arrangement, and consists of a preface, a monition, and a synopsis of observations. The preface begins quaintly with the request: "Dear reader give your kind attention to a new sign discovered by me for the detection of diseases of the chest." "This sign consists in the percussion of the thorax, and in the judging of the condition of this cavity by the variations in the resonance." ~~He then states that~~ After making the discovery ~~of this~~ he had no "pruritus scribendi, but ~~that he~~ spent seven years in observation and study. He everywhere speaks with a positiveness, born of long and accurate experience of the great value of ~~his discovery~~ his invention ~~of the~~. Following the preface there is a very quaint "Monitorium ad omnes medicos", in which he assures his brethren that the sign about which he treats is of the utmost moment, not only in the recognition, but also in the cure of disease, and that it is deserving of a place immediately after the exploration of the pulse and respiration.

The work itself consists of fourteen sections, in which are found forty-eight propositions or texts, each one of which is followed by an explanatory scholium. The first of these is the statement that the thorax of a healthy man when struck gives out a note or sound.

Then follow statements as to the limitation of the regions of the chest in which this sound is obtained. The method of percussion recommended was the immediate; that is, directly with the fingers upon the chest. His directions are "let the chest be percussed by the tips of the fingers, which are placed side by side, and stretched out straight." He advises that the chest should be covered, or a glove used on the hand to obviate the smack which occurs when the naked chest is struck. Percussion should be made slowly and softly, and he notes the differences in thin, stout, and muscular persons. He speaks also of what is known as respiratory percussion; that is, ~~noticing~~ the difference between the note in full inspiration, and full expiration. Auenbrugger gives the excellent advise to get the ear accustomed to the normal note by frequently percussing healthy chests.

The eleventh proportions contains the important and fundamental statement that in a region of the chest which in health gives out a ~~clear sound, when percussed and this clear sound is not elicited~~, it is an indication that there is disease within the chest. Auenbrugger recognized three changes in the percussion note; the sonus altior, which was higher in pitch; the sonus obtusior, which was duller, and the sonus carnis percussae, or the thigh-tone, similar to that when the thigh muscle was struck, and which is the equivalent of our flat note.

He was not content with the clinical observations alone, but he controlled the study at the bed side with experiments, and noted the changes in the percussion when the pleural cavity of a cadaver was injected with fluid. He had carefully studied the changes in the percussion note in the various acute and chronic diseases of the lungs and pleura, more particularly, of course, of the latter as associated with large exudates. In acute inflammatory diseases of the chest he states that the flatter the percussion note, and the nearer it approaches the sound of the thigh, the greater is the danger. Left-sided flatness is more dangerous than the right, and flatness in the upper and anterior parts of the chest are less dangerous than the lower part. Almost fatal is it when one half of the thorax is flat. Extensive flat-

"Pond of Sagredo" - to be covered with

ness in the heart region is also very fatal.

Special sections deal with scirrhus of the lung, the percussion signs of various cavities, of empyema, and of hydrops or water in the chest on one or both sides. Hydrops of the pericardium, extravasation of blood into the chest, and aneurism of the heart are also considered.

When we think that ~~at~~ in 1761 the time of the appearance of this book ~~in 1761~~, the art of physical diagnosis had not really advanced very much beyond that practised by Hippocrates, we can appreciate the enormous ~~advance~~ import of the Inventum Novum of Auenbrugger. As Skoda has remarked, so important is his position in this respect that he may well be called the founder of modern diagnosis.

From the various somewhat scanty accounts which we know of his life, all of which have been collected by Professor ~~Doctor~~ Clar of Graz, we learn that he was a man devoted to the care of his patients, and ready always to aid the poor and suffering, and not only so, but his kindness of heart extended to many poor students who were recipients of his bounty.

The concluding sentence of the Inventum Novum speaks for his good heart, as the material in it attests the clearness of his intellect. "Cedant haec miseris aegris in solatium, veris autem medicinae cultoribus in incrementum artis: Quod opto!"

Corvisart's advocacy of the practice of percussion popularized it immediately, but in the hands of certain French observers it was carried to somewhat fantastical extremes.

Piorry in 1828 published a monograph on Immediate Percussion, and brought forward the view that every organ yielded its own special and peculiar percussion sound. He had femoral, jecoral, cardial, pulmonal, intestinal, stomacal, osteal, humorique, and hydatid. Piorry also invented the plexímeter, which in various forms is in common use. He states on page 17 of his work that it was the English and American physicians attending his lectures who showed him the use of the finger as a plexímeter. The invention by Wintrich some years later of a special hammer completed the mechanical accessories to the art.

In the library of the Surgeon-Generals office. Washington Here is a very complete text of the Editions of the Inventum. That of Professor Clar (1867) is not difficult to obtain.

"Powers of Expansion" — table compared at 11

56

"Acute Pneumonic Phthisis
Clinical Lecture at the Radcliffe Infirmary
May 28th, 1912."

[not published]

"Pdwdr of Sympathy" — title crossed out

59

ACUTE PNEUMONIC PHTHISIS.

CLINICAL LECTURE AT THE RADCLIFFE INFIRMARY

MAY 28th, 1912.

The boy, Frederick H. with acute pneumonic phthisis, in whose case we have been so much interested, died last week at his home, and by the kindness of Mr. Harold Thompson and Dr Stobie we are able to see this remarkable lung.

Let me first refresh your memory as to the main features of the case. He was aged 19, had a good family history, and he had himself been a healthy lad. The only suspicious feature in the history was that last autumn he spat up a little blood. Lately he has not been feeling so well and has had a slight cough. The onset of the present illness was with a severe chill which came on while he was at work. He was seen by Dr. Proudfoot, who sent him at once to the Infirmary. On admission he looked pale and somewhat delicate; the temperature was 102 and rose that night to 103.4. There was pain on the right side, but the physical signs were not ~~very~~ definite - a few crepitant râles in front and behind, slight impairment of resonance in the right axilla, but no bronchial breathing. The following day there was a well marked friction, ~~the flatness had increased~~ with impaired resonance in the right axilla, ~~and there was~~ bronchial breathing, ~~with~~ and increase in the vocal fremitus. The cough was slight, not troublesome, the expectoration was thin and not rusty. I saw him on the third day after admission. The right side moved much less than the left; the percussion note was impaired from the second rib in front extending into the axilla, and in the scapular region behind ~~it~~ was quite flat; there ~~was~~ was well marked friction ~~and~~ with tubular breathing and many fine râles, and the vocal fremitus was greatly increased. The expectoration was blood-stained, tenacious, with many pneumococci but no tubercle bacilli.

There was no question that he had an acute, rapidly extending consolidation involving a large part of the right lung. From the mode of onset, the physical signs, & the character of the expectoration it seemed ~~most~~ probable that he had ordinary pneumonia; but a reservation was made ~~on~~ as to the possibility of tuberculosis; ~~as~~ the boy looked delicate, ~~and~~ there ~~was a history of a~~ had been slight cough, and, what was more important, he had spat up a little blood last year.

From this time on the disease extended, involving the greater part of the lung, with physical signs of a most typical character. The sputum was scanty, tenacious and occasionally blood-stained. The temperature ranged from 101° to 103°; he wasted rapidly, sweated a good deal and looked very ill. On December 7th, the day, tubercle bacilli were found in the sputum. During the third week of the illness the temperature range was not so high, not once reaching 103; the respirations were about 28; the pulse rarely went above 100. The physical signs were very remarkable - more particularly on percussion. Upon and beneath the clavicle the note was never absolutely flat, but always had a tympanitic quality; from the 2nd rib there was flatness, except at the extreme base near the spine, where there was an area which gave a typical Skodaic resonance. Over the middle lobe close to the sternum the note was never quite so flat, and it became exquisitely tympanitic. The breath sounds were intensely bronchial, and in the scapular region and extending into the arm-pit they had an amphoric quality very suggestive of cavity, but the breath sounds were dry, without large râles and without metalic tinkling. The sputum was scanty, not greenish in colour, only a few tubercle bacilli were present and no elastic tissue. For ~~these~~ three weeks the patient looked very ill; he lost rapidly in weight, sweated a great deal and his condition ~~looked~~ was serious.

Then in the fourth week he began to improve; the temperature fell and in the evening was usually below 99°. The physical signs

remained the same, though the remarkable tympanitic note at the base was less evident.

During the 5th and 6th weeks the improvement in the general features continued; the evening temperature was only a little above 100°, and he began to gain in weight. There was a very slight cough; the sputum was scanty, purulent, contained only a few tubercle bacilli and no elastic tissue.

We saw him together last when he was in the 8th week of the illness. He had gained 8 lbs. in weight, looked even better than on admission, though still pale. The temperature was rarely above 99°, respirations about 24, the pulse about 90. The lad had improved remarkably, but the local condition in the lung persisted. I went over his chest carefully with Dr. Kemp the day before he went out. The right side scarcely expanded, the intracostal spaces were visible; the right side measured 16 the left 16½ inches, (but he was left-handed) The fremitus was everywhere felt, over the right lung in places much increased. Over the entire right side there was impaired resonance shading from the 4th rib into flatness which extended over the back, except the vertebral half of the intrascapular space, in which the resonance was simply impaired. Along the right sternal margin too there was a flat tympany. The breath sounds were bronchial in character, in places intensely so; at the sides and in front dry, at the extreme base with a few râles; in the postero-lateral region intensely amphoric in character suggestive of cavity formation. The fremitus everywhere was of extraordinary intensity. There was thus a singular antagonism between the general and the physical features of the case. The temperature had fallen, he had gained in weight and in strength and yet the physical signs indicated that the greater portion of the right lung was still consolidated. One other point of interest was the fact that at the left apex in front the breath sounds were harsh with a few crepitant râles on deep inspiration.

-4- Acute pneumonic phthisis.

For the subsequent history we are indebted to Mr. Thompson, under whose care the boy came. He left the hospital on March 8th For some weeks at home he remained pretty well; his appetite was good and he was able to get about. Then he began to have more fever with profuse sweats, losing weight, and all through April he lost ground rapidly. He was still up and about till one day in the last week of April he had a profuse haemorrhage, bringing up very large amounts, so that he was with difficulty got to his home Then for a month until his death the condition was very remarkable. The cough was troublesome, there was a great deal of expectoration with dirty purulent matter and always blood-stained. For a few days he coughed up bright blood, sometimes as much as a bowlful at a time, so that he became extremely prostrated and anaemic. I saw him about ten days after the bleeding started, and he was very blanched and much prostrated. He died on the 24th May in the 26th week from the onset of the attack. The condition of the lungs is briefly as follows:-

The left lung is large, everywhere crepitant, but shows at the apex a puckering with a small calcified area surrounded by fibrous tissue and near by a caseous nodule the size of a cherry also partially incapsulated and surrounded by numerous small granule tubercles. ~~You can see~~ a few small ~~scattered~~ nodules are scattered through the lung, and there are one or two spots of fresh ~~broxxkus~~ tuberculous broncho-pneumonia. In the right lung the pleural membranes ~~have~~ are thickened ~~through~~ and universally adherent; ~~everywhere~~ the organ is firm, airless, but in the postero-lateral region it feels soft and baggy. Laid open by an incision along the whole length of the lung ~~behind~~ at the postero-lateral region a cavity, 5 x 3 inches, is opened, filled with blood and large firm clots, some of which are old and firm, partially decolorized and in places laminated; indeed it looks almost as if an aneurism had been cut into. The walls of the cavity are in place ragged and necrotic, presenting the ends of blood-vessels and bronchial tubes. No open vessel is seen and no aneurism. At the top of the lung is a smaller, also recent cavity with ragged walls. The greater part of the upper lobe,

"Pond of Suppuration" - table covered with

the whole of the middle, and the part of the lower unoccupied by the cavity are in a state of cheesy infiltration with here and there small areas of softening.

To two points in particular ~~xxxx~~ I would call your attention - in the section ~~passing through the anterior portion~~ The greater portion of the upper and middle lobes ~~the wide spread,~~ & all the lower unoccupied by the cavity is in dry, cheesy ~~condition which in places is uniform, while in other parts~~ cheesy state, but near, ~~near~~ the edges the cheesy areas are separated from each other by a translucent gelatinous tissue. The bronchial glands are not enlarged; one or two present cheesy tubercles and one is calcified. There was nothing in the heart or pericardium, and nothing of moment in the other organs.

"Power" of Symphony" - talk covered ab!!!

"Powers of Imagination" - to be corrected up!!!

Written in 1900.
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by

William Osler, M. D., Professor of Medicine, Johns Hopkins University.

The history of the progress of the human mind is a history of its struggle with delusions. Man is indeed a fine piece of work, noble in reason, infinite in faculty, "in action how like an angel! in apprehension how like a god!", but there is an obverse to this flattering picture, which makes us feel that even at his best he is a poor, feeble creature, as little fitted, in the words of Johnson, for feeling as for thinking. Compassed without by powers of nature benign and malign, he has tormented himself with gods of his own making--on the one hand stern powers, malignant dieties, whose sole care is to embitter human life; on the other hand kind gods, who would make perfect man's vain attempts. The great delusions, usually of a religious character, have been of inestimable service in the progress of the race, though they have burnt more martyrs at the stake, and in unholy wars have sent more souls to Hades than plague, pestilence and famine. Of minor delusions life has been full to overflowing; each century and country presents scores for our consideration. In no one particular is man more prone to be deluded than in matters relating to his body, about which to the uneducated--indeed to all--there are subtle mysteries, awakening at once the keenest apprehension and the liveliest wonder. Every generation has had its own special medical delusions, some outside, some within our ranks, and they appear to diminish neither in number nor in folly as the race grows older. Appearing to recur in waves, they have often a leaven of truth sufficient to keep them alive for a period of years. Even to enumerate them during the present century would take too long. To those of you interested I would refer you to

From Apollonius of Tyana to Mother Eddy, these arch deluders have

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