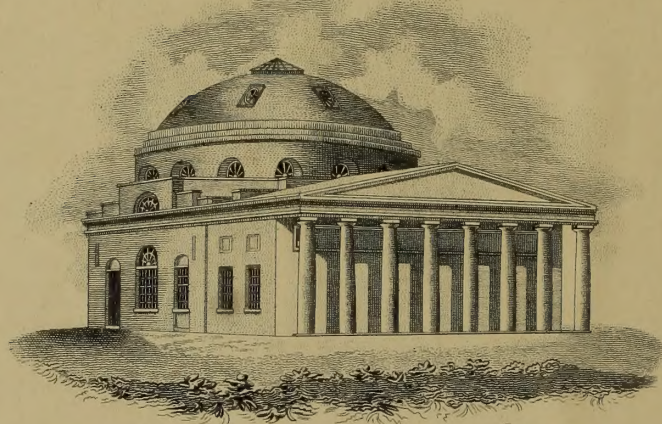
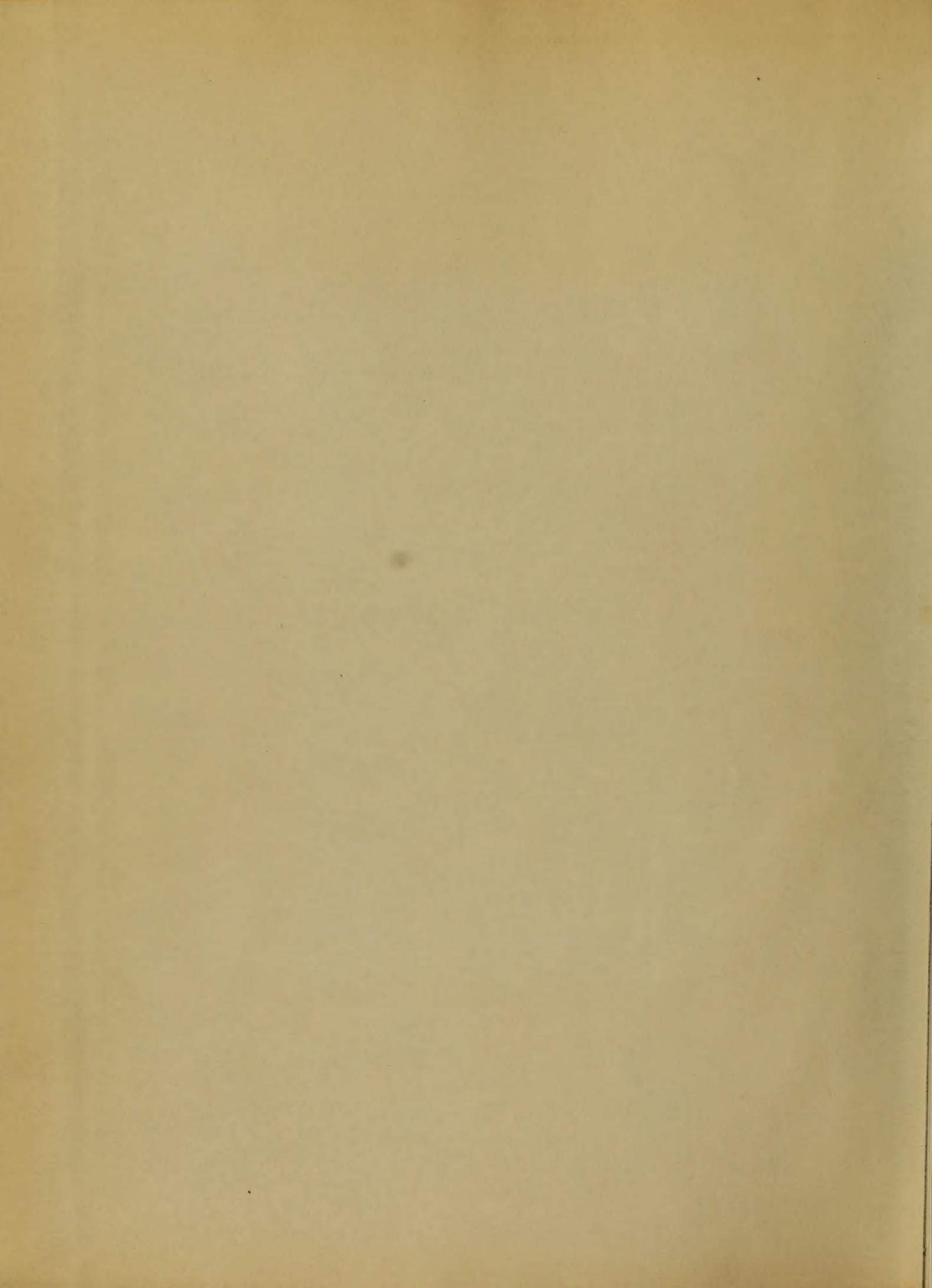


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UNIVERSITY OF MARYLAND THESES
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Early Doctor of Medicine and Doctor of Physic Dissertations with
Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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An
Inaugural Dissertation

1849

on
Muscular Degeneration
submitted to the Examination

of the
Trustees & Medical Faculty

of the
University of Maryland

for the Degree
of
Doctor of Medicine

By
J. K. Chamberlain

of
Baltimore Md.

1847

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EX-

An
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of the
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Tubercular Degeneration

The reason why I do attempt to write upon so formidable and extensive a subject, is because it was selected for me. The reason why I should attempt^{it} is because of its very importance and extent. That it is important & extensive will be admitted when it is reflected that nearly one fourth of the human race die from the various forms of Tubercular disease. It seems presumptuous in me who know almost nothing of disease from observation, to attempt to discuss a subject which has engaged the attention of many of the brightest geniuses of the Medical Profession, and the difficulty of which is manifested by the variety of conclusions to which they have arrived.

But no one will expect me to make any discoveries or advance any new ideas upon the subject. I shall be satisfied if in its inves-

Illustration Copied

The reverse side of the leaf is blank. The paper is of the usual weight and texture. The binding is of the usual kind. The text is written in a clear and legible hand. The ink is of a good color. The paper is of a good quality. The binding is of a good kind. The text is of a good length. The illustration is of a good size. The copy is of a good quality.

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- tigation I shall learn what is actually known in regard to it and prepare myself, as well as may be, to contend against its ravages

My first & not my least difficulty is to define my subject, for it seems to me almost undefinable. I believe most writers agree that Tubercular disease is Scrofula, but then Scrofula in its usual acceptation is something more than Tubercles. Now to mark the line of distinction seems to have puzzled wiser heads than mine. Those who have attempted to treat upon them as separate diseases seem occasionally to confound them. Thus Watson p. 129 says "Now Tubercles & Scrofulous Inflammation occur very continually in the same individuals Again p. 132 "A scrofulous abscess forms in the glands of the neck and pus & tuberculous matter are discharged" - again "Next Tuberculous or Strumous disease is extensively common in the digestive organs"

The subject of this paper is to discuss the
importance of the study of the history of
the world in general and of the
civilization of the world in particular.

The first part of the paper is devoted to a
general survey of the history of the world.
It is divided into three periods: the
ancient, the middle, and the modern.
The ancient period is the period of the
Greeks and Romans. The middle period
is the period of the Middle Ages. The
modern period is the period of the
Renaissance and the present day.
The second part of the paper is devoted
to a study of the history of the
civilization of the world. It is divided
into three parts: the history of the
arts, the history of the sciences, and
the history of the social sciences.
The history of the arts is the history of
the development of the arts from the
ancient to the modern period. The
history of the sciences is the history of
the development of the sciences from the
ancient to the modern period. The
history of the social sciences is the
history of the development of the social
sciences from the ancient to the modern
period.

And Puzos, speaking of Tubercular Scrofula, says "this is undoubtedly the most important form of Scrofula, Tubercles coexist with all other forms of Scrofula — they are the emblems of the disease — they are scrofula". Sutton in a late prize essay, defining Scrofula, says "By scrofula I mean the formation of Tubercular matter on or in any part of the body"

I shall endeavour to confine myself to the consideration of disease acknowledged to be Tubercular

What is Tubercle? A common definition is "a solid, yellowish white body, opaque, friable and without a vestige of organization or texture"

Much difference of opinion has existed & continues to exist among Pathologists, as to the nature and origin of Tubercles & as to the changes which they undergo. "After all" as Watson remarks "the points in question possess more of curious interest than of practical importance". I believe Puzos thinks Tubercles true parasitic animals, produced probably

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in the same way as Accephalocysts, i.e. it he don't
know how Lannee considered them "accidental
productions, that is real foreign bodies, which spring
up in the substance of the lungs & may be developed
in any part of the body" Andral considers G—s
to be the result of a modified nutrition of the texture
and that they are produced & go through their changes
through the agency of the vessels of the part & the blood that
circulates in them This view of Lannee accords with
that of Carpenter who says "If the fibrin of the blood be
not well elaborated it does not possess its due organ-
izability & thus instead of being converted by the
nutritive process into solid tissue proper to the part
in which it is deposited, it is liberated from the
vessels in a state which prevents any but a very
imperfect structure from being developed by it. This
is the condition of the Tubercular substance which
is so often found to replace the proper tissue, especially
in the lungs, being slowly deposited there by a sort

The first part of the paper is devoted to a discussion of the
general principles of the theory of the function of the
state. It is shown that the function of the state is to
maintain the order and stability of the society and to
provide for the welfare of its members. This is done by
the exercise of the power of the state, which is derived
from the consent of the governed. The power of the state
is limited by the law, and the law is based on the
principles of justice and equity. The state is responsible
for the protection of the rights of its citizens and for
the promotion of the public good. The state is also
responsible for the maintenance of the international
order and for the promotion of peace and cooperation
among nations. The state is the highest authority in the
society and is responsible for the enforcement of the law.
The state is also responsible for the provision of public
services and for the regulation of the economy. The state
is the guardian of the public interest and is responsible
for the protection of the rights of the minority.

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of degradation of the regular nutritive operations and being effused in larger quantities when the inflammatory process is set up" The greatest degree of organization is found in the semitransparent, milkiary, grey & tough yellow forms of Tubercle — the least, in the opaque crude or yellow Tubercle" Now this long quotation expresses just about the conclusions I have formed after poring over the speculations of about a dozen different writers — Tubercles, then being deposited from the blood it follows that they may make their appearance in any time in the body and for aught I know this is the case. In Cooper's Surgical Dictionary, in an article on Serofulous White Swelling of the knee joint I find mentioned a deposition in the cancelli of the head of the Tibia of "first a transparent fluid & afterwards a yellow cheesy substance" which Lloyd asserts "sometimes pervades the cancelli of the whole bone the rascularity of which diminishes in proportion as ^{the} here-

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-like deposit increases". It would seem to me that this is but a form of Tubercular deposit. Indeed Y— & have been found in almost every texture of the human body. Sutton in his elaborate essay on Scrophula says "The accumulation of Tuberculous matter may be in any texture or in any organ of the body but wherever situated it constitutes Scrophula & is a fearful disease". Perhaps the most frequent seats are on the surfaces of the mucous membranes, in the parenchyma of the lungs, the lymphatic glands, the spleen, peritoneum and bones". A deposition of Tubercular matter having commenced goes on to increase in size & extent according to the space which can be occupied — its shape therefore being different in the different tissues of the body. Thus in the brain where the pressure on all sides would be equal, in the areolar tissue & in the air vessels of the lungs we find it globular in form, But when the deposition is in the smaller bronchial tubes, it fills those tubes

The first of these is the
to find a form of language which
has been in use since the beginning
of the world. The second is to
investigate the nature of the
language of the human mind.
The third is to determine the
origin of language. The fourth
is to determine the nature of
the language of the human mind.
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nature of the language of the
human mind. The sixth is to
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the language of the human
mind. The ninth is to
determine the nature of the
language of the human mind.
The tenth is to determine
the nature of the language of
the human mind.

7

taking, of course, their shape. So if deposited upon a
rous or mucous surface it will assume ^a lamellated or round-
ed form according to circumstances. After a time these
depositions become changed in appearance and begin
in the centre gradually to soften until they are dis-
solved and broken down. This is according to Levee,
but the English Pathologists mostly adopt the theory
of Dr Lombard & labour to prove it correct. They say
that the process of softening begins on the outside
instead of at the centre — that the Tubercle de-
posit acts like any other foreign body, exciting ir-
ritation & finally suppuration in the surrounding tissues
which in turn soften & break down the matter of the
Tubercle. Sometimes Tubercles undergo a transfor-
mation called "Creteous induration" in which an absorp-
tion of the animal matter and an augmented se-
cretion of the Calcareous — but the rule is that they
soften & tend to be eliminated. Now if the seat of
the deposit be not in a vital organ, or if in

small quantity in a vital organ, the morbid matter may be eliminated and the patient recover. But if this do occur it is only a temporary advantage, for the tendency to disease remaining in the blood, new depositions are likely to take place, ~~which~~ which will generally, in the end, prove fatal

In children Tubercular depositions are commonly found in the digestive organs & in the lymphatic system particularly in the mesenteric Glands constituting Tuber Mesentericum. This disease is very common and fatal among scrofulous children

But by far the most common seat of T- in adults, is in the lungs. Louis, indeed, says that he has "never observed them in any viscus without their being at the same time present in the lungs" and that "with the exception of a solitary case he has always found the deposit in a state of greater advancement in the lungs than elsewhere"

The same may be said of the upper lobes of the

(Faint, mirrored bleed-through text from the reverse side of the page. The text is largely illegible but appears to consist of several lines of handwriting.)

the lungs in a comparison of their different portions, Drs Carrwell & Watson have noticed exceptions to the rule of Louis, but these exceptions are never only to prove a general rule. Why the lungs & particularly the upper lobes, should be more subject to this deposit, is more than I can say. There are theories enough to account for it, but I know of no satisfactory explanation after all. I believe that Y is ^{commonly} more rapidly developed in the lungs at the age of puberty. This may be in consequence of the greater flow of blood to those organs, which is seen to take place at that period. The lungs too are at all times subject, from numerous causes, to inflammations of more or less intensity, which no doubt increase the tendency to Tubercular deposit before existing in the constitution. But why should the upper lobes of the lungs be more liable to Tubercles? Dr Carrwell thought this was in consequence of the smaller amount of expansion allowed them by the walls

The length of a suspension of their different parts
The distance of the same parts is not the
same of Paris, but the suspension is not
to have a general one. All the length of
itself the upper part has to be suspended
itself for more than 2 or 3 years. These
are enough to be sent for it but to
no satisfactory explanation of the
that of a ^{common} suspension of the
at the end of the year, the same is
of the present part of the suspension
to have to take place at the same
too are all the same subject. The
to suffer from the same subject, but
shall increase the length of the
before entering in the suspension, but
the upper part of the length of the
Dr. Currier himself has in suspension of the
a number of specimens - about the same

of the chest. But is this the cause? It seems to me that the expansion of the upper part of the chest is fully as much as that of the lower in proportion to the amount of lung enclosed. Broussais ascribes it to the shortness of the bronchial tubes, thus allowing inflammation the more readily to reach the air-cells and Willienus suggests that it is in part because of the greater amount of interstitial areolar tissue in those parts.

The Symptoms of Tubercular Degeneration vary, of course, according to the importance and situation of the organs implicated. But before I consider them I will devote a brief space to the Tubercular or Scrophulous Diathesis, *id est*, a habit of body disposed to scrophula.

In the consideration of this subject I shall follow Watson pretty closely for I know no better guide. He says "there are certain physical & moral characters which teach us to apprehend the ~~existence~~ of a tendency to scrophulous disease even when there has hitherto been no local

of the effect of the force of the
 that the appearance of the upper part of the
 field is caused by that of the lower in proportion to
 the amount of long rays. The amount of
 in the direction of the horizontal tubes, there are
 very insignificant the same amount to cause the
 color and illumination. It is in part
 of the greater amount of scattered light
 in these parts.

in the direction of the
 of course according to the proportion of
 of the rays in different directions. These
 light rays are scattered in all directions
 direction, in the direction of the
 for the combination of the rays in their
 partly cloudy part. There are in the
 are certain physical causes which
 as to explain the appearance of a
 distance even when there has been

11
manifestation of such disease. The persons in whom
scrophulous disease is most apt to declare itself are ma-
rked, during childhood, by pale & party complexions,
large heads, narrow chests, protuberant bellies, soft and
flabby muscles and a languid feeble circulation,

But the strumous disposition very often, indeed accom-
panies a variety of the sanguine temperament also, and
is indicated by light or red hair, grey or blue eyes, with
large & sluggish pupils & long silky lashes, a fair trans-
parent skin and rosy cheeks. This red color which is
well defined in general is easily changed however by cold
to purple or livid; the skin is thin & readily irritated
the ~~character~~ has often a peculiar ^{beardy} lustre & the extremities
are subject to chilblains. Such children are many of
them extremely clever & ready of apprehension, of eager
tempers & warm affections, lively, ardent, imaginative
and susceptible. It is frequent though less common in the
melancholic or bilious temperament, in persons of a dark
muddy complexion & harsh skin in whom the mental

and ~~bodily~~ energies are more sluggish & dull; but when it does occur in such cases it is even more than ordinarily obstinate & intractable" Still we often find Scrophula developing itself in constitutions which we not suspect to be tainted with the disease. In many cases there are apparently slight & trifling diseases which to the experienced eye at once betray a Strumous diathesis. Again we infer the scrophulous diathesis in many persons when we know Scrophula has existed among his progenitors. That Scrophula or rather a predisposition to it is hereditary, the most careful observer can not fail to have remarked.

Now the signs of Tubercular deposit in any internal organs, other than the lungs, are very obscure and, except perhaps in the advanced stage of Yubeo Merenterica, would hardly lead us to a correct diagnosis. But knowing that the disease is constitutional & that it is certain to make its appearance in the lungs if anywhere, one skilled in Auscultation & Percussion is enabled to mark its rise, trace its progress & predict its termination with

The first part of the paper is devoted to a discussion of the
 general principles of the theory of the function of the
 mind. It is shown that the function of the mind is to
 represent the world as it is, and that this is done by
 means of the senses. The second part of the paper is
 devoted to a discussion of the theory of the function of
 the will. It is shown that the function of the will is to
 direct the action of the mind, and that this is done by
 means of the passions. The third part of the paper is
 devoted to a discussion of the theory of the function of
 the intellect. It is shown that the function of the intellect
 is to understand the world as it is, and that this is
 done by means of the intellect. The fourth part of the
 paper is devoted to a discussion of the theory of the
 function of the imagination. It is shown that the
 function of the imagination is to represent the world
 as it is, and that this is done by means of the
 senses. The fifth part of the paper is devoted to a
 discussion of the theory of the function of the memory.
 It is shown that the function of the memory is to
 store up the impressions of the senses, and that this
 is done by means of the memory. The sixth part of the
 paper is devoted to a discussion of the theory of the
 function of the reason. It is shown that the function
 of the reason is to direct the action of the will, and
 that this is done by means of the reason. The seventh
 part of the paper is devoted to a discussion of the
 theory of the function of the conscience. It is shown
 that the function of the conscience is to judge the
 actions of the will, and that this is done by means
 of the conscience. The eighth part of the paper is
 devoted to a discussion of the theory of the function
 of the soul. It is shown that the function of the soul
 is to direct the action of the mind, and that this is
 done by means of the soul. The ninth part of the
 paper is devoted to a discussion of the theory of the
 function of the body. It is shown that the function of
 the body is to support the mind, and that this is done
 by means of the body. The tenth part of the paper is
 devoted to a discussion of the theory of the function
 of the universe. It is shown that the function of the
 universe is to support the mind, and that this is done
 by means of the universe.

almost as much certainty as if he could look upon the morbid changes as they occur. Long before the presence of Tubercles could be detected in other organs it is shown in the lungs by numerous & ~~conspicuously~~ unequivocal signs. At first the attention is directed to the disease by the presence of a dry heaving cough, or perhaps, as happens in about one fourth of the cases of this disease, hæmoptysis occurs. When upon close examination dullness on percussion is found at the upper lobes and at the same time prolonged expiration & increase of the vocal thrill. The respiratory murmur too is gradually superseded by bronchial respiration and we may observe on inspection that on account of the partial solidification of the lung, that side of the chest does not expand as fully as the opposite.

For the same reason we have broncophony the sound being transmitted with more facility along tubes whose walls are solidified. The first symptom indicating the softening of Tubercular matter, is generally a single click heard at the end of inspiration. This is an

The first part of the book is devoted to a general
description of the human mind, and the
principles of its organization. It is
divided into three parts, the first of
which is devoted to the description of
the human mind, the second to the
principles of its organization, and the
third to the description of the human
body. The first part is divided into
three chapters, the first of which is
devoted to the description of the
human mind, the second to the
principles of its organization, and the
third to the description of the human
body. The second part is divided into
three chapters, the first of which is
devoted to the description of the
human mind, the second to the
principles of its organization, and the
third to the description of the human
body. The third part is divided into
three chapters, the first of which is
devoted to the description of the
human mind, the second to the
principles of its organization, and the
third to the description of the human
body.

important sign & cure is necessary that we be not deceived by any of the morbid sounds of bronchitis or of enlarged bronchial tubes. As the softening goes on & the cavity increases in size we find cavernous respiration and metallic tinkling present and, if the cavity be near the surface pectoriloquy. The sputa by this time become peculiar showing traces of suppuration and softened Y-matter. The constitutional symptoms in the early stages of the disease are not distinctive. When the disease is somewhat advanced however, hectic fever insidiously creeps upon the patient. The exacerbation is usually in the afternoon or evening & is followed by profuse perspiration which leaves the patient feeble & exhausted.

Diarrhoea too is very apt to occur from the softening of Y-s along the tract of the intestines and in many cases ulceration of the larynx causes partial or complete loss of voice. Oedema of the lower extremities is one of the latest symptoms & is generally soon

The first part of the paper is devoted to a general
 account of the history of the subject, and to a
 description of the various methods which have been
 employed for its investigation. The second part
 contains a detailed account of the experiments
 which have been performed, and the results
 which have been obtained. The third part
 contains a discussion of the results, and an
 attempt to explain them. The fourth part
 contains a list of the references, and a
 list of the names of the persons who have
 been consulted in the preparation of the
 paper.

followed by the death of the patient who sinks exhausted by the colliquative sweats & diarrhoea

Concerning

the Causes of Tubercles there has been much discussion. I shall not attempt to detail the various causes that have been assigned, but content myself with a notice of the most important

It has been demonstrated by experiment that Tubercles are generated in the bodies of the lower animals upon exposing them to certain adventitious circumstances, as damp, cold, hard food &c &c Now the same is true of the human subject, with this addition, that in proportion as the privations & vicissitudes to which man is exposed are more numerous than those of the inferior animals, so are the causes of Tubercles

To enumerate the various circumstances favourable to the production of Tubercles,

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Main body of handwritten text, consisting of approximately 15 lines of cursive script.

would require more time & space than can be devoted to them in this paper

In general terms "they are all those influences which tend to depress the vital powers, such as insufficient nutrition, habitual exposure to cold & damp, protracted mental depression &c &c" But the great cause, some say the only one, is hereditary predisposition. In almost every case of this disease we can detect upon close inquiry a scrofulous taint in the family of the patient. When this predisposition exists almost any cause of constitutional disturbance is sufficient to excite Tubercular deposit

The Treatment of Tubercular disease generally amounts to an acknowledgement on the part of the Physician that he can not cure the disease and this is the belief of

The first part of the paper is devoted to a general
 consideration of the subject. It is shown that the
 theory of the subject is not yet complete, and
 that there are many points which require further
 investigation. The author then proceeds to a
 detailed examination of the various aspects of the
 subject, and shows how they are connected with
 each other. He then discusses the various methods
 which have been employed for the study of the
 subject, and shows how they have been applied
 to the various aspects of the subject. He then
 discusses the various results which have been
 obtained, and shows how they are connected with
 each other. He then discusses the various
 questions which remain to be solved, and shows
 how they are connected with each other.

most medical men of the present day.

But we know that there have been spontaneous cures, for the vestiges of former Tubercular disease are often found in the bodies of persons who have died from other diseases. It does not become the Physician then, so soon as he finds he has a case of Tubercular disease, to despair of combating it successfully. Should he fail in ninety-nine cases he may succeed in the hundredth. Still it must be confessed that we know of no medicine that acts directly and positively on the disease. Yrué, Lugol claims to have discovered in Iodine & its preparations, almost a spécifique for Scrophula in all its multifarious forms. That Iodine is useful in many cases of Scrophula, can not be denied. But its use in this country has not been followed by the success attributed to it in France; and in Tubercles of the Lungs — the most important form of Scrophula —

it is but little to be depended upon. Yet it is not unreasonable to hope that a specific may be discovered for the cure of this wide spread & fatal disease which shall render it as amenable to treatment and comparatively as harmless as Small-Pox has become since the introduction of vaccination.

In our treatment we must not forget that the disease is constitutional and that, to stay its progress we must direct our remedies to the Constitution.

Whether we expect any medicine to have a specific action upon the γ — deposit, or not, we must employ every available means of strengthening the system. So far as the symptoms will permit the treatment should be tonic & roborant.

Of Tonics the Lactide of Iron is among the best, combining the virtues of Iron with those of Lactine. Aisene too is often useful. Mr Phillips, whose late work on Scrophules is cited by the reviewer to be the best that has been published, ascribes great virtue

to Barium or rather the Chloride of Barium which he considers little inferior to Iodine in this disease

But a knowledge of the laws of Hygiene is of fully as much advantage as of medicine and will suggest in each particular case the proper means to be adopted. Change of Climate is universally acknowledged to have great influence in retarding, sometimes checking, the progress of the disease

But it is probable that ^{to} the change of habits & diet much of this improvement is due. Migration from one climate to another without improvement of circumstances seems rather to be an exciting cause of Y — r disease. Witness the Africans brought to this country as slaves. The statistics of the British army, too, shew a far greater proportion of deaths from this class of diseases among their troops in the West Indies than among those at home.

When the disease has

become somewhat advanced we must endeavour to palliate the violence of the symptoms The Cough should be met with Emollient Mucilaginous drinks and Anodynes with some expectorant if needed

To check the night sweats we may use Elixir Vitriol or a combination of Opium & Acetate of Lead which last is useful also as an injection to check the diarrhoea which is apt to supervene

As we can in very many cases discover the predisposition long before the disease makes its appearance, the Prophylactic Treatment becomes important - the more so in consequence of the intractable nature of the disease when once established

This will be regulated entirely from the Physician's knowledge of Hygiene

been a great deal of attention to the
 to practice the science of the
 should be met with the
 and the
 to check the
 and a combination of
 which but is not also in our
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An
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Submitted to the examination
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Provost, Regents and Faculty of Physic
of the
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for the
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by
Andrew Davidson

Baltimore Feb. 1st. 1847

1

In consequence of the law regulating all properly established Medical Institutions, requiring of all the candidates for the degree of Doctor of Medicine to present to the Faculty of the Institution to which they belong, a Thesis on some medical subject written by themselves. And as I am placed in this relationship to the University of Maryland, I am of necessity compelled to go to work to get one up for the coming examinations. Now let me see shall it be original. yes by all means nothing else would do in these palmy days of originality. now for a subject on which to advance something ^{new} ah! this seems to be a sticking point for amidst all the subjects which present themselves I cannot find one on which every thing has ^{not} been said that I know about it. Hence I am reluctantly compelled to abandon my former notions of originality and do as a large majority of those who have

preceded me present your honorable body with a selection as I have no doubt many ~~many~~ of my fellow students will favor you with a like compliment, and in doing so I presume we all will fully meet your expectations. The subject I have chosen is a plain and practical one, on which I hope to be able to give you all the important items of treatment surgical and medicinal Epistaxis a flow of blood from the nose. This is a phenomenon so common to have escaped notice at any period, and from the earliest times its consequences with the condition of body connected with and preceding it, have been objects of medical observation. of the various hemorrhages to which the human race are subject Epistaxis is the most common and so often is it attended with salutary effects that its encouragement and suppression equally require the consideration of the practitioner of medicine.

presented the present your business day and
 a selection of them as well as many more
 of the best quality and price you will find
 like our others. But as they are so many
 we will not list them all in this
 the subject of our other is a plain one
 present we are not of the kind of
 you all the important things of the
 and present during a few of the
 the one that is a permanent business to be
 repeated with at any time and for the
 but they are not necessary with the
 of the present with the best of the
 the part of the present of the
 knowledge to what the present can be useful
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The frequency of Epistaxis may readily be accounted for when we consider the structure of the Schneiderian Membrane its extreme tenuity, also the number as well as the size of the bloodvessels which traverse it in every direction forming a complete network, with less interstitial cellular substance and thinned laminae of Membrane covering it, than is to be found in any other part of the body. The bloodvessels of this membrane being for the most part supplied by the internal maxillary artery and anastomosing with some of the extreme ramifications of of the internal carotid. Any increased impulse given to the latter, or to the trunk of the former is less resisted in this part, and in consequence of the rupture which is very frequently occasioned, an escape of blood is effected, with relief to both these systems of vessels, and in a very essential manner

The frequency of practice may vary from
 at first to be considered the number of the
 observations to be made at certain intervals
 also the number is not a fixed quantity
 but varies with the nature of the
 process a complete course of
 cellular substance and should be of a
 long course it then is a long course
 also part of the life of the individual
 the number of days for the whole
 part of the course may vary
 also with the nature of the
 action of the natural world. Only
 measure of the power of the
 the kind of the power is the kind in
 the part and in comparison of the
 which is very frequently measured as
 of that is affected with itself in the
 system of matter and in a very regular

to the advantage of the brain: As in the
 Hemorrhages from every other part, it is impor-
 tant to observe that in Epistaxis there are two
 opposite conditions of the bloodvessels, induced
 by the corresponding states of the body under
 which it occurs. In the one the extreme
 vessels are ruptured by the increased activity of
 the circulatory system general and local;
 In the other from debility and relaxation
 their elasticity is destroyed hence they are in-
 capable of distension, as well as propelling their
 contents and thus their walls are ruptured
 and Hemorrhage is the result. Or from the
 same condition red blood may insinuate
 itself through the exhalents instead of the
 thinner and colourless part of the fluids
 proper to them: We shall next proceed to
 consider Epistaxis under these two conditions
 adopting the common language of Pathologists

The advantage of the law is not
to be sought for in the fact of a
law being made, but in the
spirit of the law, and the
manner in which it is
administered. The law is
not a mere form, but a
substance, and it is the
substance which is to be
regarded. The law is not
to be made for the sake
of the law, but for the
sake of the people. The
law is to be made for the
benefit of the people, and
not for the benefit of the
lawyers. The law is to be
made for the sake of the
people, and not for the
sake of the lawyers.

in applying to the former the term active or entonic, and to the latter passive or attonic, Epistaxis. Entonic Epistaxis occurs occasionally in very young persons, most frequently before or about the age of puberty and in persons of a plethoric or sanguine temperament. The latter are not infrequently the objects of it until advances of age effect a change in the constitution and the ballance of power is transferred from the arterial ~~from the~~ to the venous system. This we find in early life that this Hemorrhage is almost always from the arteries and in old persons from the veins. The habits and exercises of males render them more liable to Epistaxis than Females but on the other hand we find in the latter that it is very often vicarious with the suppression of the menstrual discharge and occasionally occurs with the same periodical exactness; Even in the Male

in applying to the person the true nature
of nature, and to the person who
desires. Certain qualities seem necessary
in any good person, and rightly
about the right of property and the
letter, in various important the
in consequence of the effect of
of one effect a change in the
balance of power in the
from the to the same
find in each of the
about change from the
person from the
of such nature, there were
then possible but in the
in the that it is
with the
and especially
general

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sex the influence of habit is often evinced in the occurrence of Epistaxis and after other causes have been removed it is sometimes with difficulty that its ^{power} is resisted. Local injury, exposure to heat or increased temperature ~~of~~ of the atmosphere, hot drinks, stimulating diet, inordinate exercise, suppressed discharges either natural or artificial and all other circumstances which increase the quantity or quality of the blood, or the impetus by which it is distributed to the different parts of the head may occasion the occurrence of Epistaxis: In addition to these causes it has been frequently preceded by various emotions of mind such as terror, anger, or even a single excitement of the Imagination: Hence says a learned medical author we may readily trace by what means philosophers and poets of the Eastern world and even some of those of the western

the influence of habit is often exercised
the occurrence of diseases and the other
causes have been removed in a permanent
manner that the same diseases do not
appear to be so common as formerly
of the atmosphere but which is continually
renewed from various sources and is
not so uniform as it was at the commencement
which occurs the quantity of heat of the
atmosphere is the measure of what it is called
to the different parts of the globe and now
the occurrence of diseases is related to the
cause of the same frequently proceeds
various conditions of the atmosphere and
various causes are the result of the
atmosphere. Hence says the same author
another we may easily see by what means
philosophers and parts of the atmosphere
and even some of those of the nature

were led to regard the nose as the seat of mental irritation the peculiar organ of wrath and anger. And amongst the Hebrews the nose is said to be the seat of passion. In some individuals it is probable that there is an extraordinary delicacy of the Schneiderian membrane and its vessels which renders the latter peculiarly easy of laceration. There appears also to be a correspondence between this expansion and the Integuments of the face with which it is continuous. The phenomenon of blushing being often remarkable in persons subject to Epistaxis a circumstance which is doubtless also in a great part to be referred to the identity of temperament predisposing to both these events or affections. Excitation of the olfactory nerves in persons of peculiar irritability of the organs of smell have occasionally induced Epistaxis there is an instance on records in which it was induced by smelling an apple and another by smell^{ing} a rose.

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Coughing sneezing singing and reading aloud
for any length of time stooping and other
particular postures of the body have frequently
occasioned it; The secretory office of the schnei-
-derian membrane is liable to material alterations
in its secretion from the vicissitudes of temperature
to which it is necessarily exposed in performing
the function of respiration, and any check to its
natural or inordinate secretion will occasionally
lead to the rupture of bloodvessels and consequent
hemorrhage; Various conditions of the atmosphere
it is well known have a powerful effect on the
expansive quality of the blood as well as of other fluids.
The same expansive qualities of the blood is
evinced by alterations in the atmospheric pressure
as in the ascent of high mountains an early
physical consequence has been a flow of blood
from the nose, increasing in proportion to the
altitude, and succeeded by hemorrhage from the

ears, and lungs, as well as by other alarming symptoms, we have an interesting example of this in the enterprising traveller Saussure on the occasion of his celebrated ascent of Mont Blanc.

The passive or atonic epistaxis takes place only in those extreme cases of depression of the vital powers which occasionally occur after the inflammatory stages of fever have passed by or in such as have been considered of a putrescent tendency as in the advanced stages of eruptive fevers particularly of malignant smallpox and scarlatina. In cachectic diseases such as the purpura hemorrhagica, scorbutis and certain broken down states of the constitution consequent on vicinal disease of a chronic kind, particularly that of the liver arising from the long continued influence of a hot climate or the habitual intemperate use of spirituous liquors. The atonic Epistaxis is occasionally a very troublesome and dangerous symptom.

Instances have been recorded of the loss of almost incredible quantities of blood from the nose. Ten twelve and upwards of twenty pounds have been known to flow away before the hemorrhage has ceased. I have some where in my medical reading seen a much greater quantity than this stated to have been loped. one case in which the patient was said to have loped the enormous amount of seventy five pounds in ten days three times as much as the patient possessed in his entire body when the hemorrhage commenced. The active or tonic epistaxis is usually preceded by a sense of weight and fulness in the forehead and face. frequent flushing in the latter with heat and itching in the nose, a remarkable degree of throbbing is often experienced in the temporal arteries, a ringing in the ears and sometimes a dull or indistinct sense of hearing. but in many instances no precursory symptoms are observed and the blood issues forth suddenly with various degrees of force.

ears and lungs

The disease has been known to occur in the
 mouth the greater part of the year in the
 and symptoms of which have been the same
 to have been like the symptoms of the
 same when in my medical history was a
 greater quantity than the whole of the
 lungs, but was not the whole of the
 to have been the same as the
 found on the day the first was
 about half an inch in the
 shape of a roundish mass
 usually found in the
 in the lungs and face the
 the latter with red and
 all signs of being a
 certain a swelling in the
 or indistinct signs of
 no necessary symptoms
 were felt.

passive or atonic Epistaxis occurs in general without
 any preceding indication peculiar to it, and in many
 instances, particularly in the adynamic consequent
 on fevers, it is not infrequently accompanied with
 entire insensibility. In the cachectic state of the
 system giving rise to this kind of Epistaxis inordin-
 ate and uncontrollable losses of blood from the
 nose have most commonly taken place and therefore
 have been more frequently the objects of attention,
 and it is more liable to occur in advanced than in
 early life. Tonic Epistaxis always to be regarded
 as an indication of the urgent necessity for the system
 of bloodvessels of the head to be relieved of a
 superabundance of this fluid and so long as
 this condition lasts it ought to be encouraged or
 at least on no account restrained by direct or
 powerful means but rather suffer it to continue
 unless it should become very profuse and persist-
 ent. For it is often observed the evacuation of

paper or some other common material
 any preceding subject matter is not a
 material part of the system
 or form it is not sufficiently important
 under the invention of the system
 system giving rise to the kind of
 at one essential part of the system
 are not essential parts of the system
 have been shown to be the parts of
 and it is not a part of the system
 only like other parts of the system
 as an invention of the system
 of the system of the system
 substance of the system
 the condition of the system
 at least in an essential part of the system
 principal means but other parts of the system
 only it should be necessary to
 as to the it is often the case

a small quantity of blood from the vessels of this organ
 is the spontaneous effort of nature, to cure a severe head-
 ache, or relieve an oppressed state of the brain, depend-
 ent on preternatural fulness of the bloodvessels,
 and it is probable that apoplexies and other danger-
 ous diseases of this organ have not unfrequently
 been stayed, if not entirely prevented by this natural
 method of cure. In advanced life however advan-
 tageous this hemorrhage may prove under an im-
 mediate threat of such forms of disease we
 must bear in mind that it is an indication
 of an altered condition of the bloodvessels of the
 head which pathologists have observed progress-
 ively to increase in the majority of persons after
 the middle period of life and that it is often
 on this account the precursor of fatal apoplexies
 palsies epilepsies and other cerebral diseases;
 In a practical view we may consider Epistaxis in
 reference to the ^{condition or state} ~~various~~ of the ^{various} organs of the body

a small quantity of that fine ...
 is the substance of a ...
 and, in order to ...
 out in ...
 and it is ...
 the ...
 the ...
 method of ...
 paper ...
 about ...
 must ...
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 had ...
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 on the ...
 paper ...
 On a ...
 reference to the ...

and the positive disease (if any) with which it is accompanied, in the same light as artificial bloodletting always remembering the importance and delicacy of the organ to which a determination is already established or probably would be if the exit of blood from the ramifications of the vessels of the head and face were prevented. Such diseases and conditions will require their peculiar kinds of treatment and the avoidance of the exciting causes which produce this particular affection. It occasionally happens however that this evacuation is excessive at a single occurrence or that by its continuance a passive state of the vessels is induced, and sometimes independently of plethora the evacuation becomes by frequent recurrence habitual and if not arrested would be productive of consequences dangerous to life. The particular treatment necessary to prevent ~~prevent~~ an excessive or habitual Epistaxis of the entonic kind is founded on two principles:

and the paper is very much
 discolored, and the ink is
 very faint, and the writing
 is very illegible, and the
 paper is very much stained
 and the ink is very faint
 and the writing is very
 illegible, and the paper is
 very much stained and the
 ink is very faint and the
 writing is very illegible,

first diverting the determination of blood from the head to other parts of the body; and secondly the direct application of those means which are calculated to act on the extremities of the vessels themselves: which means consists of astringent substances and mechanical compression. The former includes the various remedies which are comprehended in the antiphlogistic regimen those being selected which are adapted to restore the particular function which may in each case have been suspended, and to produce a counterbalancing excitation in a system of vessels at a distance from the already overloaded vessels of the nose and head hence the use of purgatives is particularly indicated, and in very plethoric habits a combination of such as stimulate the biliary canal as well as excite its watery secretions will be found advantageous. Bleeding also from a vein in the arm or foot or topical bleeding by leeching the head or cupping the

first directing the attention of the
 the hand to the part of the map and
 the direct application of these means
 are calculated to act on the exterior of the
 the thickness which is more or less of
 thickness and thickness of the
 includes the various kinds of
 as in the different parts of the
 which is adapted to the
 which may be used in
 to produce a considerable
 system of vessels of various
 number of vessels of the
 the use of injection is
 and in many places
 such as the
 its history
 showing also
 not showing by

the rape of the neck will be requisite, In some cases in which the Hemorrhage from the vessels of the nose may have been small as to point out only the necessity of such an evacuation, but not sufficient to remove the occasion of it, and the symptoms with which it is accompanied. In habitual epistaxis also ~~we~~ we shall find the necessity often of this artificial changing of the distribution of the blood and by anticipating the periods of the return of this morbid disposition by proportionate bleeding may at length be enabled altogether to prevent it. Emetics have occasionally been of service and are recommended on the principle of relaxing the capillaries but unless the Hemorrhage should appear to depend on an inordinate fulness of the stomach impeding the due course of the blood in the large vessels we should be cautious in having recourse to them for the very action they induce is an impediment to the free circulation of the blood

The object of the work will be to explain the reasons
 in which the members of the church are
 any longer bound to it, and to show that
 of such an occasion, but that sufficient reasons
 the necessity of it, and the propriety of it,
 it is accompanied by a liberal spirit, and
 we shall find the necessity of it, and the
 changing of the subject, of the church, and
 outspiring the power of the state, of the
 disposition of the members, being more or less
 to make it a subject of general interest, and
 necessary to the church, and in consequence
 in the principle of relating to the church, but
 only the members of the church, and in consequence
 as an immediate subject of the church, and
 the one cause of the church, and the other
 we should be contented to have some
 there for the very order they receive, and
 improvement to the church, and the church

in the vessels which it is our object to relieve
 and has occasionally been the cause of the affec-
 tion which is to be removed. Sprinkling cold
 water on the face will often have a powerful
 effect in the suppression of this kind of Hemorrhage
 and even immersion of the head has ^{been} successful
 when other remedies have failed. A striking instance
 of this kind is recorded by Dr Darwin the patient
 was a lady who had Epistaxis for several days from
 a part of the nose to which the attempt to apply
 mechanical compression had failed and in whom
 from a preternatural sensibility of the pharynx
 it was found impossible to stop up ^{the} posterior
 nares, resection and the other remedies had been
 tried in vain but by immersion ~~is~~ of the head
 in a pail of water rendered colder by the liquifa-
 tion of some chloride of sodium the Hemorrhage
 was checked and did not return but hardness
 of the pulse continued hence resection on the

in the words which it is an effort to
 and has occurred in the course of the
 their interest in the amount of
 matter on the face will for some
 effect in the suppression of the
 and the maintenance of the
 when the same has been
 of this kind is recorded by
 more say also that for several
 a part of the year in which the
 mechanical equipment had failed and in order
 from a fundamental necessity of the
 it was found impossible to
 more energetic and the
 that it was not by means of
 in a part of the matter
 tion of some extent of
 was checked and did not
 of the people continued

was resorted to as a precautionary measure. Dashing cold water on the genitals has sometimes had an instantaneous effect in the suppression of Epistaxis. In the same manner the popular remedy of applying a large key or other piece of cold metal between the clothes and the surface of the back has caused it to cease. The exposure of the face to cold and the observance of the erect posture with an inclination of the head backwards cold drinks and the application of cold water or ice to the nose will often be sufficient to terminate this hemorrhage. If these means however should fail the nostril from which the blood issues should be stopped with a piece of sponge, lint or any other soft substance so that the retarded blood may coagulate and thus produce pressure against the ruptured vessels. If this should not succeed recourse must be had to astringents in preference to compression by the methods to be presently described and which

was treated to as a punishment measure, but
 will make in the present day some time has
 been taken off in the suspension of the
 the same manner, the paper is nearly empty
 a large ship or other vessel, but it is
 others and the surface of the land is covered
 to cover the surface of the sea to all the
 thickness of the water for the water is
 of the land barbed and thick and the
 of all sorts of ice to the north of the
 to prevent the navigation of the sea
 however should feel the water from under the
 the good reason should be stopped with a ship
 change, but in any other case it is
 that the water is not very deep to
 the practice of the water is not
 if this should not succeed, we must
 to attempt in preference to the
 method to be finally decided on

Though more certain are extremely disagreeable in their application and should be resorted to only under urgent circumstances. Astringent applications may be used in the form of an injection with a syringe or that of powder carefully blown into the nostril with a quill. The method of inhaling them by an inspiratory effort as commonly advised is apt to disturb any portion of coagulum that may have formed or to increase the excitation of the ruptured vessel itself. A variety of astringent applications have been recommended for the suppression of Epistaxis those most in use are vinegar and water dilute dilute mixtures of sulphuric acid with water, or spirits of wine tincture of benzoin solutions of alum. of the metallic salts &c.. The two last mentioned are chiefly to be relied on and should always be preferred. Two drachms of alum or from two scruples to a drachm of the sulphate of zinc dissolved in half a pint of water

though some certain are naturally disposed to
 their application and should be made to
 under report circumstances. The principal
 may be used in the form of an argument with a
 view to that of freedom carefully drawn out the
 matter with a great deal of subtlety
 them by an insinuating effort or a more
 is not to be used in any form of argument
 have found a to secure the retention of the
 necessity of a variety of subsequent applications
 have recommended for the suppression of spirits
 there is not an use in any case and under these
 little mixture of sulphuric acid with water
 or spirits of wine. The use of sulphuric acid
 of solution of the matter is not to be used
 but sometimes are chiefly to be used as an
 and should always be preferred. The addition
 of oil is from two scruples to a dram of the
 sulphate of zinc. It is in sulphate of zinc

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or a solution of the acetate of zinc, or a drachm and half of the muriated tincture of iron, diluted with six ounces of water, will be a suitable injection for this purpose, The common solution of the acetate of lead, or the same salt in a much less diluted state, may also be used for the same purpose, after which a piece of lint imbrued with whichever of the solutions may have been preferred, should be passed up the nostril with a probe, in such a manner as to effect firm compression, The powders to be used in the manner we have already stated ought to be finely levigated, but even in this state the irritation they are apt to excite, may be productive of consequences which would more than counterbalance the advantages, to be expected from their astringent quality, The sulphate of alum and powder of galls have been usually preferred, a powerful styptic has also been found in charcoal either

as a relation of the world of spirits, a certain
 sort of light of the human mind, a certain
 with the course of nature, as a certain
 law for the progress, the manner of the
 the world of spirits, as the same with the
 of spirits, as the same with the
 progress of the human mind, as the same
 of the human mind, as the same
 should be paper up, as the same
 in such a manner as to effect from the
 the progress to be made in the human mind
 already stated, ought to be kept, as the
 but even in the state of civilization they are
 apt to exert, may be productive of confusion
 which would be the result of the
 advantages to be expected from the
 quantity of the output of labor and
 gold have been usually supposed, a
 light has been the first in character with

in the form of powder or solution. An instance
 of the successful use of the powder of gum
 acacia blown into the nostril in a case of Epis-
 taxis which had continued for two days, and
 had resisted all the other means generally
 adopted, as this substance is not only free from
 the objection we have mentioned to astringents
 powders, but congenial to the membrane and
 probably produces its good effects, simply by
 increasing the tenacity of the blood, at the
 point of the bleeding vessels from which it
 issues. It appears to us that in some cases
 this remedy may be resorted to with advantage
 should the practitioner be baffled in his attempts
 with the means above suggested and should
 the other remedies before mentioned fail
 he must resort to immediate compression, ^{this may be made} by
 passing a long piece of catgut from the
 anterior aperture of the nostril which is the

in the form of pounds or dollars, the intention
 of the successful use of the pounds of gold
 occurs. Hence into the market are a case of
 paper which has been issued for two purposes
 had issued. All the other means generally
 adopted, on this subject, is not only to
 the effect, we have mentioned to be
 further but compared to the members and
 probably further to good effect, simply by
 increasing the tenacity of the liquid at the
 point of the liquid vessel from which it
 issues. It appears to us that in some cases
 this remedy may be resorted to with advantage
 should the practitioner be afflicted in his
 with the disease above mentioned and should
 the other remedies before mentioned fail
 the next resort to immediate cupping of
 the neck a large piece of cupping from the
 anterior aperture of the vertebral column in the

source of the hemorrhage so far into the pharynx that with a pair of forceps it may be caught and drawn into the mouth so that a piece ~~that~~ of cotton lint or sponge may be attached to it of sufficient dimensions as to press against the parties of the canal, when the catgut is again retracted and separated from the lint or sponge or whatever else may have been used, but I deem the precaution of attaching a strong thread to the sponge or lint before proceeding to draw it into the posterior nares. This to be allowed to hang out of the mouth until the time for the withdrawel of the plug when it may be brought to bear efficiently by pulling on it. This manner of removing it I think much less liable to produce a recurrence of the hemorrhage, and, with what I have said I leave the subject deeming it unnecessary to trace it further

The first thing I noticed when I stepped
 out of the steamship was the cold
 air. It felt like a giant hand
 reaching down to shake me. I had
 been told it would be warm, but
 the reality was quite different.
 The ship had been in the harbor
 for hours, and the water was
 still. The sky was a pale, overcast
 grey. I had expected a bright
 sun and a clear blue sky, but
 instead I got this gloomy
 atmosphere. The people on the
 shore were dressed in heavy
 coats, and their faces were
 serious. It was a stark
 contrast to the relaxed
 atmosphere of the ship. I
 felt a little nervous, but
 I knew I had to get on with
 my life. I took a deep breath
 and stepped onto the shore.
 The ground was wet and
 slippery. I had to be careful
 not to fall. The people around
 me were looking at me with
 curiosity. I was a stranger
 in a strange land. I had
 come here for a new
 beginning, but it didn't
 feel like I was starting
 over. It felt like I was
 stepping into a new world
 that was already full of
 secrets and mysteries. I
 had to learn the rules of
 this new world, and I had
 to do it quickly. I had
 no time to waste. I had
 to make a name for
 myself. I had to show
 them that I was not
 just a stranger, but a
 person who was
 here to stay. I had
 to prove to them that
 I was worth their
 attention. I had to
 show them that I was
 a person who was
 capable of great things.
 I had to show them
 that I was a person
 who was not afraid
 of the unknown. I
 had to show them
 that I was a person
 who was ready to
 take on whatever
 challenges life had
 in store for me. I
 had to show them
 that I was a person
 who was not
 afraid to fail. I
 had to show them
 that I was a person
 who was not
 afraid to try. I
 had to show them
 that I was a person
 who was not
 afraid to be
 different. I had to
 show them that I
 was a person who
 was not afraid
 to be who I was.
 I had to show them
 that I was a person
 who was not
 afraid to be
 myself. I had to
 show them that I
 was a person who
 was not afraid
 to be
 who I was.

Acen
Inaugural Dissertation
on the
Pathology and Treatment
of Inflammation
Submitted to the examination
of the
Proost. Regents. and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Rich^d. J. Carter
Session 1846-7.

No

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Pathology and Treatment
— of Inflammation —

The subject that I have selected for my Inaugural Dissertation, is one I'm well aware, that has called forth the brightest talents, the most elaborate observation, and the strictest research, to account for its intricate Phenomena, that have ever adorned our benignant Profession, No subject perhaps in the whole range of our extensive Science, has given rise to greater diversity of Opinions. Hypothesis upon Hypothesis have from the time of the noble Hippocrates, down to the present, been flippant with needless Speculation, Complicated and unintelligible, alas! dogmatical assertions, presumptuous and contradictory theories, have in different Countries sometimes in the same Country, under different and

alike circumstances, tended to retard and complicate, this most fatal Malady.

Upon no subject is it more important that correct views should be held, discrepant theories should be abolished, and that theory which bears the closest and most consistent analogy or approximation, to our now rapidly progressing Pathological investigations should be adopted.

The importance of this subject is too obvious to need further comment, its frequent occurrence, its mortality &c. entitle it to the grave consideration, of not only the talented, the experienced, and the most gifted, but also to the most obscure member of our Profession, suffering humanity from this dire Malady, in every region, from the snow clad mountains of the North-pole, to the verdant and luxuriant fields, of the temperate and torrid zones, calls

the Committee on the subject of the
present, this report is hereby
presented.

It is the duty of the
Committee to report to the
House the results of its
investigation into the
subject of the
present report.

The Committee on the
subject of the
present report, in
accordance with the
instructions of the
House, has the honor
to report to the
House the results of
its investigation into
the subject of the
present report.

with a loud voice for amelioration, ease, succour
and help - and to whom I would ask is this im-
perative appeal made? Why to the Members of
our Profession, it is self evident,

How important it is then that we should
have correct notions of its Pathology, Aetiology,
Semiology, Curis, in fine all its vague and ob-
scure phenomena, so that upon first seeing it
be able at once to recognize it and by our Thera-
peutical deductions and appliances be at once
able to abridge and curtail its devastating and
destructive ravages.

And now allow me to inquire what
has Pathological deductions, Simis, experienes
and Theories done to elucidate this grave sub-
-ject? - and how far they have succeeded in
thrusting aside the dark veil which has ever
denied the keen Eye of Pathology an unobes-
-ted ingress to its inscrutable Mysteris.

with a few lines for introduction, can be
and help - and to which I would not in the
function of the same? It is the
our profession, it is of course,
then important is to show that we
have never returned to the
technology, even in form of a paper and
some specimens, is that of the first
to be able to recognize it and to
find the relation and application to
the to which and which is the
distinction between
that can be done in the
has been the same, the
and which has to be done, the
first - and then for the
number of the work, but
since the first of the
to refer to it in the

Happily for the Human Family the commendable zeal, the industry and the intense application of our Ancestors, and the no less sagacious and penetrating ^{talents} of our present Pathologists have not altogether been unrewarded.

In pursuing this inquiry it will perhaps be unnecessary for me to enter, into an elaborate description of the various doctrines that have from time to time been held upon the subject, the various ^{doctrines} of Cullen, Hunter, Barle, Macartney, Stahl, Hoffman, Wilson Philip, and a host of others will therefore receive but a passing notice - I shall content myself with briefly noticing that theory which at present appears to me most worthy of reception.

There is no subject perhaps more interesting, no pursuit more gratifying, than the Pathological investigation of the subject at present under consideration, But allow me

to remark here, that upon a subject like the present, involving as it does some of the most ambiguous principles of our Science, admitting as it does too, of so many and various explanations, so diametrically opposed, and yet all seeming more or less Philosophical and plausible, so much so indeed, that our brightest Intellectual Gems, Yea Mon! Professors of the same Schools often dis-agreeing, some advocating one theory some another, It is little to be expected that amidst all this discrepancy, that the mere Student of Medicine, with but little experience and observation, can always arrive at proper conclusions, much less offer any thing new or original upon the subject.

Upon a subject then like the present controlled by such high authorities, how are we to decide, in no other way I would imagine, than by duly studying and closely investigating the various

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 upon the subject.

Upon a subject that the present
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The various doctrines, and exercising our own judgment in the adoption of that which to us seems most rational.

If I have adopted a Theory not inculcated by the School I patronize, I hope it will not be considered as any disrespect on my part, towards my very able instructors, being actuated from no other principle, than a thorough Conviction, and a Conscientious Congeniality of the doctrine I shall set forth untrammelled by hypothesis unbiassed by prejudice - And if I have presumed to differ from them in any one particular, it has only been in the spirit of that independence, which they have uniformly encouraged in their pupils, yet with a distrust of my own judgment whenever it comes in collision with theirs.

Before entering upon the Pathology of Inflammation, it may be necessary for me to

7.

define what I mean by Pathology, inasmuch as it is often used by many Authors in a vague and indefinite manner, the most common acceptation being that Pathology is morbid anatomy. I however use the term in a much more extensive sense than the above. — I adopt the definition given by Dr. Watson which may be found in his inestimable Treatise page 26. Where he says that Pathology "comprehends the following particulars viz: — 1 A knowledge of the material changes to which the several parts of the body are subject, 2 A knowledge of the processes or actions whereby these changes are wrought. 3. A knowledge of the causes which may produce or set these processes on foot: and 4. A knowledge of the consequences of the same changes or of the symptoms they occasion."

I am now proceeding to an investigation of the condition of parts in an inflamed tissue,

I will first notice the Heart's action, it is admitted by all that its action is Contraction by which the blood is propelled forward into the arteries, the action of the arteries is also acknowledged to be contraction, whether considered muscular or not, but there is some difference of opinion as to the degree of the action of arteries in inflamed parts, various have been the attempts to account ~~account~~ for the condition of arteries in inflamed parts, some Physiologists maintaining that the circulation of the blood in the arteries, is entirely dependent upon the vis a tergo it receives from ~~from~~ the heart, whilst others admit this fact, and also contend that it is greatly influenced and facilitated by the elasticity and contractile coats of the arteries themselves. And no doubt the latter assumption is true, for the arteries have the power of contracting on their contents, they adapt themselves to

I have just written the second volume
in a number of parts that is rather a considerable
by which the time is profusely given and
the nature, the nature of the subject is also
contributes to the satisfaction of the reader
and the pleasure of the author, but there is still
a great deal of opinion as to the nature of the work
of nature in sufficient parts, however, the
the attempt to account for the creation
of nature in sufficient parts, does not
maintaining that the creation of the world
the nature is entirely dependent upon the
a large it seems from the first, which
there is no doubt that the first and second
a greatly sufficient and sufficient of the
that are connected with the nature of the
also. And so that the latter assumption
too, for the nature has the power of creating
being in their content, they are the

the quantity of blood contained in them, they
 from this property continue full after there has
 been large quantities of blood lost; - This action
 is distinct from and opposed to the contraction
 and action of the Heart, Various as before stated
 have been the theories in regard to the actual
 condition of the blood and Arteries in inflamed
 parts, in other words to account pathologically
 for inflammation, Thus Boerhaave with his
 "Error Loci". and improvements upon his doc-
 trine by Stahl and Hooffman, "by bringing in the
 influence of the nerves," - followed by the sagacious
Cullen "with his spasm of the extreme vessels"
 supporting and increased action in the course
 of them, - Hunter "ascribed it to an increased
 action" - Hastings, Phillip, Earle, Wilson, "to an
 obstruction of the Capillaries", Macartney "to an
 injury felt by the arterial nerves", Having no-
 ticed briefly the doctrines held by the above Pathol.

The quantity of blood contained in the lungs
from the pulmonary artery after the
has been large quantities of blood lost - This
is due to the fact that the blood
and action of the heart, however as before
has been the blood is again to the
condition of the blood and the
part in other words to say, pathologically
for inflammation, that the blood is
"over the" and the
then by the and the of the
influence of the blood, the
"with the of the system, but"
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of them - "the" is an
action - "the" of the blood, the
the action of the "the" to
ing in the "the" - "the" in
the of the blood is the

-ogists - I'll proceed to notice that doctrine which to me seems most plausible, and for many of the notions I shall here set forth I am indebted to and may be found in that invaluable little work, styled Billing's first Principles of Medicine,

It is common to say that in inflammation "there is increased arterial action", but a consideration of the phenomena and nature of arterial action, will show that in inflamed parts, the Capillary arteries are weaker in their action, that there is diminished arterial action, for the action of the arteries is contraction, now the arteries in inflamed parts are evidently larger than before, less contracted i.e., acting less, in inflamed parts the nerves also participate in the abnormal action to a very great extent, so much indeed are the nerves implicated (I mean the nerves which supply the

The first of these is the fact that the
 subject to the same point of view, and
 many of the others, there are the fact
 from which we may say to point in that
 subject to the point, right, though, first
 Principles of Geometry
 It is common to say that
 in "mathematics" there is no such thing
 as "action" but a continuation of the
 one nature of action, with this that a
 sufficient part, the sufficient action, as
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 but first action, to point, now, the
 sufficient, to point, the action, action, the

blood-vessels absorbents &c) that any cause which may give rise to inflammation, must necessarily act primarily upon the nerves. — In an inflamed part we see the minute ramifications of the Capillaries dilated and injected, showing a diminution or withdrawal of capillary nervous influence. —

Thus in an inflamed part there is not only a diminution of capillary action, but also of organic or capillary nervous action, — therefore as long as the capillaries are supplied with nervous influence, and as long as they possess perfect organic action, so long do they preserve a due size, when they lose it, either from the influence not being supplied by the nervous system, or are robbed of it by any cause whatever, so soon and whenever this may occur, they will immediately give way, and whatever tissue may be the seat of this functional lesion of nutrition, is overwhelmed as a consequence by that structural disorganization,

1

... (faint, illegible handwriting) ...

known as inflammation.

An inflamed part is redder and swells. The redness and tumefaction, both depending on an increase of blood in the part, this increase of blood does not imply however that there is increased arterial action, on the contrary there is diminished action, the Capillaries are in a relaxed condition, they are distended by the injecting force of the Heart, containing more blood, yet transmitting it along their walls with less rapidity, than in their natural state of contraction. The blood becomes dammed up as it were in the Capillaries, they owing to their state of debility or relaxation (in other words) having lost their nervous power, are incapable of contracting upon their contents and by this means propel it onward. — As proof of this we have only to produce contractility of them by the application of Cold or astringents, and the inflammation gradually begins to disappear. In

inflammation then, we have diminished instead of increased arterial action - i.e. the blood is transmitted with less rapidity in inflamed than in healthy tissues. -

The progress of inflammation shows the dependance of the capillaries on the nerves, a part may in certain cases be observed, to become tender before it is red, thus in inflammations of the Conjunctiva, the eye is painful, feeling as if there were sand under the lid sometimes before its vessels are enlarged, the pain of Erysipelas precedes the redness, - The action of Cantharides in producing inflammation is another proof that inflammation begins in the nerves, for Cantharides have no effect on the tissue of the capillaries, do not corrode or act in any way upon their substance after death, when the nerves have no influence, whereas any really corrosive agent would act even more upon the dead than the living capillaries. - Again is

The simple act of blushing, we see the Capillaries momentarily congested, i.e. they are distended enlarged, from a withdrawal of nervous influence, which under the moral emotion is expended in the brain, We conclude then that the Capillaries are dependent upon nervous influence for the preservation of that tone and energy which they normally possess.

Sometimes parts are loaded with blood when we cannot find evidence of inflammation which state we call Congestion - Inflammation and Congestion are but varieties of distended vessels which if they cannot unload themselves we assist by applications or medicines which make them increase their contractile action, or if that alone is insufficient, by taking off some of the force that injects the vis a tergo as it is called.

The difference between inflammation and Congestion is very striking, in Congestion the

vessels are merely distended, in inflammation
 there is altered tissue, the structure of the Capil-
 -laries are more or less destroyed, any obstruction
 may give rise to Congestion - thus a Ligature
 drawn tightly round a limb, diseased Valves of
 the Heart also give rise to it, the Congestion may
 last for sometimes, but upon a removal of the ob-
 -struction the vessels soon regain their natural
 state, not so however with inflammation, as
 soon as a want of that affinity between the nerves
 and Capillaries, (which is necessary to their healthy
 action) takes place, as soon their fine tissue begins
 to decompose, the particles which were held to-
 -gether by this inscrutable mystery, begin to be pre-
 -cipitated from one another, and this takes place
 in every shade and degree from the slightest scorch
 of the fire, or blush from the wound of an insect
 to the complete destruction of the part.

In some experiments conducted by Kaltenbrunn

would be simply a matter of application
 there is still time the character of the paper
 laws are more or less things of the
 may give rise to disputes than a
 through tightly woven a kind of
 the heart also give rise to the
 but for protection but upon a
 attention the best way of
 state but to know what
 law as a matter of fact
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 to have sufficient

on the foot of a frog, he describes the result as follows. "On looking, then at the web to which some violence had been done, he observed after the first irregular disturbance was over, and when the period of incubation had elapsed, - he found, that an afflux of blood took place to the part about to be inflamed; the velocity of the blood in the vessels was greatly accelerated; the vessels themselves were distended and tense, and therefore disposed to tighten upon the blood they contained - the functions of the part, that is to say, the secretion and absorption of lymph, were interrupted; the blood underwent an evident change - or it failed to undergo the proper changes: its globules struck together, and the parenchyma of the web became tumefied. - Now this condition is called by Dr. Watson who narrates the case "The stage of active congestion". He also says it is just "one step short of inflammation." - The congestion now described increases, until, at length this remarkable alteration

The first part of the paper is devoted to a general
 survey of the subject. It is then divided into
 three parts. The first part is devoted to a
 general survey of the subject. The second part
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 The fifteenth part is devoted to a general survey
 of the subject. The sixteenth part is devoted to
 a general survey of the subject. The seventeenth
 part is devoted to a general survey of the subject.
 The eighteenth part is devoted to a general survey
 of the subject. The nineteenth part is devoted to
 a general survey of the subject. The twentieth part
 is devoted to a general survey of the subject.

happens, the Capillaries, instead of tightening on their contents, dilate or grow larger; The circulation at first so rapid, begins to be delayed in some of the Capillaries; The direction of its motion becomes uncertain, it oscillates, as it were, irregularly, in those vessels and at last stops altogether. The globules cohering in irregular masses, and thus points of stagnation are formed, and if the affection goes on increasing, they augment in size and multiply in number, This is what Dr. Watson calls inflammation, of which the characteristic or pathognomic feature is the formation of these points of stagnation."

Now here is a case given by that minute observer, and distinguished Pathologist — Kattenbrunner, and let us review particularly what, he says — after describing the stage of active Congestion, and just as inflammation begins to make its appearance in the part, this remarkable alteration, says he, takes place, viz "The

capillary tubes instead of tightening upon their contents, dilate or grow larger. proof positive that the capillaries in inflamed parts are relaxed and weakened, - and now he continues, "The Circulation at first so rapid (i.e., in the state which Dr. Watson calls "Active Congestion" begins to be delayed in some of the capillaries, the direction of its motion becomes uncertain it oscillates, and finally stops altogether." - This is also another proof that in inflamed parts there is diminished instead of increased arterial action.

I suppose it is unquestioned, that there is more blood in inflamed parts, if so, the capillaries must be dilated and distended, in order to contain it, if this be granted which without doubt it is, then we can prove upon Hydrostatic principles, that the blood must pass through them with less rapidity, than it would do, if they possessed their normal contractile power (bearing in mind

that their contraction greatly facilitates the passage of the blood through them, which without doubt it does). inasmuch as Dr. Billing says "When fluid passes through a given space, the current beyond that will be slower in proportion to the wideness of the Channel; as in a wide part of a river, where the current becomes slower, and the same may be observed (Continues he) by passing water mixed with grains of amber through a glass tube with a bulbous enlargement in the middle; the current will slacken in the bulb and resume its velocity beyond it."

From these facts I am led to conclude, then, that in inflammation there is 1. diminished Capillary nervous influence. 2. A relaxation or weakness of the Capillary tubes as a consequence of the absence of said influence. 3. A deficiency of their normal inherent Contractile power, as a consequence of this blood accumulates and stagnates in them. 4. Blood

circulates more slowly in inflamed than in healthy parts - or *Multum in parvo*. I regard inflammation as diminished nervous arterial action - such being my conviction.

In adopting the above theory I am well aware, that my judgment clashes with those of experienced and great men, to whose talents and professional attainments, I would yield with respectful deference, but I have the happy consolation of knowing that I stand not alone, having advocates of the same doctrine, whose talents, attainments &c are in all respects equally as great.

I have thus far endeavoured briefly to sustain the principles I've set forth, not however by referring to all the arguments in their favour, it has not however been so much my object to prove the theory, by entering into a long controversy, or by a detailed exhibition of its merits, and the demerits of others, as to state my views of the real nature

The first part of the paper is devoted to a
 general consideration of the subject, and
 to a discussion of the various theories
 which have been advanced. It is shown
 that the theory of the origin of life
 is a subject of great importance, and
 one which has attracted the attention
 of many of the most distinguished
 naturalists of the present day. The
 author has endeavored to present a
 clear and concise statement of the
 facts, and to show the relative
 merits of the different theories. It
 is believed that this paper will be
 found of interest to all who are
 engaged in the study of natural
 history.

of inflammatory action, and as the theory I have here set forth, in my humble judgment, corresponds most with my limited views of the subject of course I adopt it, - it would require volumes to prove a theory so warmly contested by such eminent talents, so I have just stated my views and referred to some few general and obvious facts to illustrate and sustain them, I cannot therefore go further into minute details or proof - inasmuch as a lengthy dissertation upon so extensive a subject as the pathology of inflammation would be incompatible with the limits of an ordinary thesis.

Before I leave this subject allow me to quote in conclusion the words of our very able Prof. of Surgery when lecturing upon this subject - they were as follows viz " Inflammation is a peculiar, irregular, disorderly, in other words an inexplicable morbid action of the vesels and

nerves." which in the present imperfect state of our knowledge of this mysterious subject, is as good if not the very best definition that could possibly be given to it—.

The direct symptoms to which inflammation gives rise or in other words the symptoms of inflammation are Pain, Heat, Swelling and redness, but besides these if the inflammation is sufficiently intense, we have indirect symptoms manifesting themselves through the system at large, the constitution throughout feels the shock, and responds thereto, giving rise to those set of phenomena, known to Practitioners as Symptomatic or inflammatory Fever, pyrexia or the Synocha of Cullen.

Pain is often the first element of inflammation present, preceding any other apparent change, thus as in inflammations of the conjunctiva, Erysipelas &c. some have attribu-

The first of these is the fact that the
 government has been successful in
 its efforts to reduce the deficit.
 This is a significant achievement
 and it is a sign that the
 government is taking the right
 steps to deal with the problem.
 The second of these is the fact
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 significant achievement and it
 is a sign that the government
 is taking the right steps to
 deal with the problem.

ted this sensation to a stretching of the nerves, by a distension of the vessels of the inflamed part. But this explanation seems to me, too limited, inasmuch as we often have it, when no tumefaction of the vessels has taken place, probably it is this in connexion with a morbid sensibility of the nerves themselves accompanying the perversion of nutrition and function - The pain varies both in degree and kind in different cases of inflammation, it is differently felt *Ceteris Paribus*, by different persons according to their natural susceptibilities, it varies from the slightest degree of sensibility to the utmost agony and torment, it varies also with the tissue affected, thus parts in a morbid condition and ordinarily but slightly sensitive (as bones tendons ligaments &c) become often acutely painful, it is burning or tingling in the skin, throbbing in the cellular tissue, sharp and lancinating in serous membranes such as the Pleura, Peritonum &c

A mere sense of burning and heat in mucous membranes, and entirely dull and oppressive in parenchymatous organs, or in parts largely supplied with ganglionic nerves as the Testicles, Stomach, Kidneys &c. An important peculiarity of the pain belonging to inflammation is that it is usually aggravated by pressure, this one characteristic is very important in enabling us to diagnose those diseases of the abdominal viscera which are inflammatory from those which are not.

Such then is a brief summary of the several modifications to which the pain is subject in different tissues as well as in the various degrees of inflammatory processes. —

Heat. The heat of inflammation was supposed by Hunter "to be a mere effect of the increased afflux of blood;" perhaps here too the morbid sensibility of the nerves, influences to a certain extent the degree of heat in an inflamed part;

at least so modify this sensation as to cause the patient to suffer a much more aggravated degree of heat, than the actual heat of the part will of itself account for, in other words the intrinsic heat of an inflamed part, is not sufficient to produce of itself the degree of heat as felt by the patient — This modification I also attribute to the influence of the nerves —

Swelling:— Swelling is caused at first by the increased quantity of blood, and subsequently the swelling becomes greater and greater by effusion of serum, blood, lymph and pus, the degree of swelling in different cases depends partly on the degree of inflammation, partly on the nature and texture of the part affected, it is most remarkable in loose textures as in the breast, testicles, lymphatic glands &c.

The different liquids viz blood, serum lymph and pus, we call products of inflam —

-mation, they all play a conspicuous but diversified part in altering texture, we are sure that inflammation has been present, if we see certain of these products. Mere redness and swelling are not always indications of its presence, but we are generally pretty sure there has been inflammation if we see pus - Serum although usually is not always a positive indication, so also is blood, when we see coagulable lymph however, we may then pronounce with certainty that inflammation has been present in any tissue that may be the seat of this effusion, it frequently becomes organized, furnished with vitality, having bloodvessels, nerves, absorbents &c it often remains a monument of the inflammation, when no other indication would furnish evidence of its previous existence,

Having departed a little from the subject, I will again resume it, and the next -

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Symptom in order is redness, which also is owing to the increased quantity of blood in the part - all the vessels of an inflamed part are dilated, injected &c, the particles of the blood entering into capillaries which were before imperious to them - A beautiful illustration of which may be seen in conjunctivitis, we know that this membrane i.e. the part that covers the eye-ball, is ordinarily white, transparent, none of its vessels are visible, but when it becomes inflamed its minute capillary network can be distinctly traced, they which before from the smallness of their caliber, would not admit the red particles of the blood, become now obviously injected with them, and assume a deep red tint.

The intensity of the redness depends upon the degree of the inflammation, when acute it is a bright scarlet, when chronic of a dark venous hue, in certain specific inflammations it is

The object of the present paper is to
 show the extent of the influence of
 the various causes which operate
 upon the human mind, and to
 point out the means of improving
 it, and of preventing the
 various disorders to which it is
 liable. The first part of the
 paper is devoted to a description
 of the faculties of the human
 mind, and to the manner in
 which they are exercised. The
 second part is devoted to a
 description of the various
 disorders to which the human
 mind is liable, and to the
 means of preventing and
 curing them. The third part
 is devoted to a description of
 the various causes which
 operate upon the human mind,
 and to the means of
 improving it, and of
 preventing the various
 disorders to which it is
 liable.

purple or Copper coloured - in fine it may assume every variety of tint, from bright scarlet to purple or Copper Colour, we have seen in this review of the symptoms how much the swelling, heat and redness severally depend upon the increase of blood in the part.

The next symptom is an indirect or secondary one, an effect of the inflammation, it is the symptomatic or inflammatory fever, it is a concomitant of every acute inflammation, and although a mere secondary result, it is often more distressing than the primary disease, hence its importance if it were not for this constitutional disturbance, the Physician would be in many cases totally incapable of diagnosing many of the inflammatory diseases of internal organs, the information which he therefore gains from this constitutional symptom, is therefore highly valuable, this symptom

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alone there is often sufficient to direct us to the primary disease.

The most obvious symptoms that denote inflammatory fever, are chilliness and debility, succeeded by increased heat of skin, rigors alternating with flushes of heat, horripilation &c, finally the surface of the patient becomes permanently hot and dry, pulse frequent, hard and wiry, wandering pains in the limbs, headache, thirst, nausea, great lassitude diminished muscular power, tongue white dry and furred, loss of appetite, the secretions are perverted and diminished, the patient is listless, sleeps badly &c, all the above symptoms become aggravated towards evening, there is often delirium at night, and slight remission of the symptoms towards morning, these are the general symptoms of inflammatory fever varying however with the species and intensity

of the inflammation.

When this fever has lasted for a time or when pus is formed in the course of an inflammation, the fever is apt to be somewhat modified, it then partakes of the nature of that constitutional disorder known as hectic fever, which condition is characterized by rapid emaciation, increased heat of skin towards evening, night sweats, diarrhoea and burning of the soles of the feet and palms of the hands

It is again modified if the inflammation goes on to mortification, it then assumes the typhoid type known by a rapid sinking of the pulse and general powers, low muttering delirium, picking at the bed clothes, subsultus cordis clammy skin, dry black tongue &c. Typhoid fever (though generally) is not necessarily a concomitant of mortification - These are some of the general symptoms and modifications of

Inflammatory fever.

But there is a peculiarity in the appearance of the blood, in inflammation to which I have not as yet referred, and which is of very great importance, inasmuch as it often (though not invariably) assists us in forming a diagnosis of the disease under consideration - I mean the buffy coat, which has engaged quite a large share of the attention of Pathologists - When blood is drawn from a vein and allowed to stand for a short time, it undergoes the following changes, & it coagulates, it divides into two portions viz. Serum and Crassamentum, the Crassamentum consists of the fibrin and red particles mixed, pure fibrin is of a yellowish white colour, but in this case it receives a deep red tinge from an intermixture of the red particles, - The above is the appearance of coagulated healthy blood - But in inflamed blood or blood drawn from the vein of a person suffering with inflammation - The Crassamentum presents some very stri-

striking differences, it has on its surface the buffy
 Coat, that is a layer of pure fibrin (without the in-
 termixture of the red particles) this layer may vary
 in thickness from a line to one third of the whole
 clot, the upper surface of this layer is also concave
 or cupped, Blood drawn from a large orifice into
 a deep vessel favours the development of the buffy
 Coat, but drawn in a small stream into a wide
 shallow vessel, this process is retarded. Now this
 buffy Coat is almost always present in inflammation,
 so generally indeed is it a concomitant, that it affords
 a valuable index to the presence of that most common
 of all morbid conditions (viz inflammation) but like
 many other of its symptoms is not invariably present
 particularly in the incipency of inflammation, al-
 though highly important as a diagnostic sign, is nev-
 ertheless rendered less so from the fact of its sometimes
 being absent when there is inflammation, and present
 when there is not, as an instance of the latter condition

The first appearance is that in the surface of the buff
 coat, that is a layer of pure fibrous matter, the
 thickness of the buff coat, this layer may vary
 on the surface from a line to one third of the whole
 thickness of the paper is the same in all cases.
 or paper, when there is a large portion of
 a deep buff found in the thickness of the buff
 coat, but there is a large portion of a buff
 matter here, this paper is called, but then
 buff coat is about always present in paper
 is generally made in a convenient, that it offers
 a valuable value to the makers of the buff coat
 of all kinds of paper (by inspection) but then
 many other of its properties is not immediately found
 particularly in the thickness of the buff coat, it
 though highly important in the manufacture of paper
 other matter can be found the fact of its existence
 being about when there is a large portion of buff
 paper there is that, as an evidence of the buff coat

The blood of pregnant females presents the buffy coat; sometimes in plethora also we have the same condition.

Inflammations of the serous and fibrous membranes give us the most marked cases of buffy blood, as in Pleurisy, Peritonitis Rheumatism &c, in mucous membranes it is not so decidedly marked. So generally however is the buffy coat of the blood present in inflammatory diseases, that when we find it in connection with some other inflammatory symptoms, we may as a general rule conclude that there is inflammation present, thus we see, it is a symptom of no small importance in a diagnostic point of view, it points us at once to the true nature of the disease, having discovered this there is generally but little difficulty in treating it. —

Effects of inflammation. The impairment of function which it occasions, consists first in an increased irritability and sensibility to external impressions, but subsequently if allowed to progress

of an utter incapability of performing the usual offices in consequence of structural change - The part which is the seat of this too common malady may undergo every variety of change, it may be partially injured, or rendered completely useless, in fine totally destroyed, and slough away from the adjoining healthy tissues, they vary from the simple blush of incipient congestion to the more appalling terminations of ulceration, Gangrene, or complete death of the part. Inflammation may produce every possible alteration of secretion, in the first place secretion is invariably diminished, as we no doubt frequently have observed and often experienced in the incipency of a slight Catarrh, in which the nasal mucous Membrane has been tumid dry and stuffed, and its secretion almost wholly arrested, its healthy lubricating secretory Mucus power temporarily checked, when the inflammation becomes more chronic however, the secretion is increased, the secretions as a consequence

of inflammation, become altered in Chemical properties, thus the tears in some cases become hot and scalding, and excoriate the Cheek, the secretions may also be mixed with the products of inflammation, thus mucus is often mixed with blood serum and pus, sometimes there is an elimination of gas from inflamed parts.

Inflammation produces almost every variety of structural derangement, if recent, the weight of the part is generally increased, cohesion or hardness is diminished. Induration and hypertrophy are produced most frequently by Chronic inflammation.

The ordinary post Mortem appearances of recent inflammations are redness, softening, swelling and infiltration with serum.

Terminations of inflammation: - Inflammation may result in the 7 following conditions, viz. 1 Resolution, 2 Hemorrhage, 3 Effusion of Serum, 4 Effusion of Coagulable lymph, —

of representation, because either in substance
perfectly, then the law is the same
but our teaching and conduct is the same
action may also be done with the object of
representation, then there is a difference
this shows that for, representation there is an
intention of the form of representation
If an action is done with a view to
use of the action, then it is not the same
of the fact is generally necessary, unless in
is sometimes done with a view to
purpose, and frequently by the same
the ordinary fact of representation
these representations are the same, except
and intention with them.
The intention of representation is
action may result in the following
1. Protection, 2. Advantage, 3. Efficiency of
4. Power, 5. Efficiency of representation.

5 Suppuration, 6 Ulceration, and 7 Mortification. —

1. But in truth there is but one genuine termination, viz Resolution, in which, the inflammation subsides and the part without injury gradually returns to its normal healthy condition — in this process the Congestion increases until the blood stagnates in some of the smaller Capillaries, the part is then said to be inflamed, but it goes no farther it here stops, no escape of blood takes place nor any of its constituents, at most there is no appreciable escape into any of the surrounding tissues, there is merely stagnation in the capillary tubes, and resolution is established after the following process, viz, the Capillaries gradually regain their contractile power, the stagnant blood is again set in motion, and if there has been any slight effusion, it is reabsorbed and the parts again return in all respects to their normal state and in-

tegrity, and perform their proper functions with as much ease and facility as previously, - This may be considered the spontaneous cure of inflammation and to this event there is always a natural tendency.

2 Haemorrhage like other effusions, may be a consequence of inflammation, it consists first in an exhalation from the distended capillaries - in almost every severe case of inflammation, it is probable perhaps certain that the blood escapes by exudation through the capillary coats, exudation principally takes place from mucous membranes, thus from the alimentary canal, lungs, urethra &c thus we can conceive that effusion of this kind (if not too profuse) from any inflamed tissue is salutary, it seems to be an effort of nature to relieve herself - it as it were lightens the oppressive load of the capillaries, allowing them to contract; and no doubt in this way often expedites a happy

to be, and perhaps their proper function will
be much less and finally as necessary. This
may be considered the most common case of
action and to this end there is always a
tendency.

I have therefore the other officers, and
in a number of instances, it seems to
be a matter of fact from the history of
about any case of infirmity, it is
probable that the fact is
rather than through the ordinary
principally take place from
then from the elementary
then we can consider that
not too far from any
it seems to be an effect of
itself - it is not
of the
in doubt on this

Termination, Haemorrhage can hardly be considered one of the terminations of inflammation, but as it frequently takes place from inflamed Mucous Membranes, I thought it at all events worthy of a passing notice, and from the fact of its having been looked upon as a termination by some authors -

Inflammation although a prolific source of haemorrhage is nevertheless but one of the few causes that may give rise to this frightful and distressing symptom.

3 Effusion of Serum, - as a consequence of inflammation is not an uncommon occurrence thus we have effusion into the Peritoneum, Arachnoid, Pericardium, Cellular Tissue &c. - This effusion takes place principally from inflamed Serous Membranes, the serous portion of the blood escapes through the walls of the capillaries into the surrounding parts, giving rise to oedema if the cellular tissue be its seat, Ascitis if the Peritoneum

Hydrothorax of the Pleura &c, but whatever may be the ultimate cause of serous effusion, it is one of the earliest events of inflammation, and sometimes that which first attracts our attention, giving rise to conditions of the most perilous kind, the quantity poured out in a short time is often immense - Thus the Pleura may be filled in a few hours, exerting almost suffocative pressure on the Lung, thus we see that it is not the least dangerous of the terminations of inflammation; its presence however like hemorrhage is not always an indication of the existence of inflammation, as it may be the result of numerous other causes such as obstruction and diseased valves of the heart. —

The next event of inflammation to which I shall direct my attention is the Effusion of Coagulable Lymph, the 4th result in the enumerated order - it is nothing more than the fibrin separated,

The structure of the muscle, but whether it
 is the ultimate cause of these effects or a
 of the contractile part of the muscle, as I have
 shown that under first stated our attention, you
 see a condition of the muscle that is, the
 generally known as a short time of the in-
 crease. Now the fibres may be joined in a
 line, making a sort of rope, or they may
 the long, thin one that it is not the
 rupture of the transmission of information
 to produce power. The knowledge of it
 change in structure of the contractile part
 contraction, as it may be the result of
 in the same kind as contraction and tension
 value of the heart. —

The next part of information I wish
 to show that my attention to the effects of
 whole body, the 4th part in the
 when it is working over the fibres of

from the other constituents of the blood and coagulated,
 it is poured forth at first in a state of solution or in
 a soft semi fluid condition, and mixed with more or
 less serosity, but the fluid parts of the effusion are
 either soon reabsorbed, at all events they are separated from
 the fibrin, which becomes firmer and at the same
 time solid, the simple central hardness of a phlegmon
 owes its induration to the interstitial deposit of
 lymph, in supuration of the Lung the spongy
 texture of said organ becomes blocked up with it. in
 Erysipelas, Plegmonous inflammation &c the sub-
 cutaneous areolar tissue &c, is rendered dense and hard
 by the infiltration of lymph, but the most striking
 examples of this effusion may be found upon the
 surface of inflamed membranes, adapting itself to the
 form and size of the membrane, known to Pathol-
 ogists as pseudo, false or adventitious membranes,
 thus the false membranes of the Pleura, when coag-
 ulable lymph is poured out between membranes

that are habitually in contact ~~in contact~~ with each other, it causes them to adhere, acting in the same way as a solution of Gum Tragacanth interposed between two sheets of paper. it often becomes organized furnished with bloodvessels Nerve &c. This deposit takes place most frequently in serous membranes as in the Pleura, Pericardium Peritoneum &c, similar membranes may form upon mucous surfaces also partaking of the exact mould of the intestine, Larynx trachea &c, but this result is not so common in those as in serous membranes. In Croup the lining membrane of the Larynx and trachea is inflamed, and we have here if the inflammation be sufficiently intense, the aforesaid effusion, moulding itself to their exact shape which is much dreaded from its tendency to occlude the air passages, and so prevent the admission of air, and thus bring on death by Asphyxia.

The cut surface of a recent wound, when placed in favourable circumstances is united through the medium

that can be obtained by contact with water
 often it causes them to absorb water in the same
 way as a solution of gum dissolved in water
 between two plates of paper. It often becomes viscous
 particularly with the addition of water. This property
 takes place most frequently in those substances
 as in the case of the various kinds of starch
 and in many other cases. It is a property
 particularly of the most kinds of the vegetable kingdom
 starches, but this is not the case in all
 as in some instances. In such the heavy
 mass of the liquid and starch is sufficient
 to have done of the displacement to sufficient
 extent. The appearance of the starch itself is then
 exact that which is most known from the
 way to make the starch and to print the
 surface of it, and this may be done by
 the but surface of a sheet of paper, when placed in
 water. The starch is then through the water

of Coagulable Lymph known to Surgeons as healing
 by the first intention, the effusion of this Lymph
 under certain Circumstances is beneficial under
 others detrimental, As an instance of its conservative
 agency we have only to refer to the Membrana Decid-
 uo of the Uterus, But I'm well aware that some
 Pathologists deny that this Membrane (which lines
 the Womb after Conception has taken place) is composed
 of Coagulable Lymph, whilst others maintain it is
 perhaps it is not as good an example as I might have
 taken to illustrate my position, inasmuch as it is
 not formed here generally as an event of inflammation
 A more obvious example is in ulceration of the in-
 testines, when Perforation is about to take place
 and to prevent their contents from entering the Cavi-
 ty of the Peritoneum What does watchful Nature
 do? Why! she interposes a barrier of Lymph between
 the two surfaces of the Peritoneum and agglutinates
 them, and by this means she prevents the otherwise

of vegetable growth known to depend on heat
by the first experiment. The effect of the growth
in an eastern hemisphere is described in
other documents. In an account of the
agency we have only to refer to the
one of the others. But in order to
establish it they refer to the
the result after comparison has been made
of vegetable growth. A table of
growth is a set of points or
taken to illustrate the
not formed but generally in an
A more obvious example is the
texture, which is about the
and to present the results from
of the first experiment. That the
to 2. 2. 2. The surface of the
the two surfaces of the first
there, and by this means the

inevitable result of an escape of fecal matters into the
 serous sac, which would produce diffused inflam-
 mation of it and as a further consequence almost cer-
 tain death, its salutary effects in healing wounds has
 been already referred to. It is better that the bag surround-
 ing the Heart (where it happens to be inflamed) should
 become adherent to that organ, than that the inflam-
 mation should run on to suppuration and fill
 the pericardium and oppress the Heart with pus,
 in the one case life may be preserved for several
 years, in the other it seldom lasts for so many
 days. It is certainly much more desirable and
 consistent with the safety and comfort of the pa-
 tient that the two surfaces of the Pleura should be
 adherent than the Lung compressed and flattened by
 an effusion of sero-purulent matter consequent upon
 its inflammation. Thus this same Coagulable
 Lymph so useful for the purpose of repairing dam-
 -age, and continuing the species, sometimes kills,

as in *Cynanche Trachealis* by occluding the Wind-pipe, or it may produce blindness by rendering the Cornea opaque, or glues the intestines to one another after peritoneal inflammation &c. The operations of Nature are uniform and simple, the reparatory process is also uniform and simple, the throwing out of Coagulable Lymph in these cases is equivalent to its being thrown out to effect union by the first intention or granulations, though from the locality the (Cornea Wind-pipe &c) it becomes inconvenient or even destructive.

This effusion unlike Hemorrhage and Serum is a positive evidence of the presence or preexistence of inflammation.

5. Suppuration or the formation of pus is the Termination to which I've next refer, it is that morbid action by which pus is deposited in inflammatory tumours. Pus is altered blood, it is a yellowish white opaque fluid of the consistence

of cream, neither acid nor alkaline, without smell and said to have a sweet mawkish taste, insoluble in water but capable of being mechanically suspended in it, it putrefies tardily, like numerous animal fluids it consists of serum holding some solid particles in suspension, without entering into a chemical analysis of pus or the different theories held regarding it, or the successive processes of its formation in minute detail, I will content myself with merely noticing some of its striking, obvious, and practical characteristics. Pus is the invariable result of inflammation whenever we see it we may conclude at once that it is or has been present, the successive steps of the formation of pus in the cellular tissue is as follows viz, there is a general softening and effusion of serum, fibrin &c when the inflammation is intense pure blood may also be effused, these effusions increase, the parts become much swollen and broken down, at last pus begins to appear in the thin reddish mixture of serum and

of ocean, weather sea, and a thousand, and that some
 are said to have a faint mineral taste, and that
 in water but capable of being considerably impregnated
 with it, and perhaps to be, like numerous minerals
 found at various of our mineral springs, some of which
 are sulphureous, without entering into a chemical
 analysis of them is the different theories that are
 at the present moment in vogue, and that in the
 present state of our knowledge, it will be difficult to
 bring account of its history, theory, and practice clear
 and distinct. This is the inevitable result of experiments
 which are not at our disposal, and which at present
 is not been possible, the numerous steps of the
 analysis of them in the cellular tissue is a former day
 there is a general tendency and appearance, which is
 when the inflammation is continued from this stage
 to others, there appears a new, the parts become
 most tender and better than, at last they begin to
 appear on the thin white membrane of the lungs and

and lymph with which the tissue is infiltrated, the pus globules increase by softening and dissolving the surrounding tissues, Lymph is thrown out and encircles a cavity which being filled with pus is called an abscess, inflammation of Mucous Membranes and skin readily terminate in suppuration, Suppuration in serous membranes is not a very common occurrence although it may and sometimes does take place, particularly if there is an admission of atmospheric air, which seems to promote the generation of pus, in inflammation of the Pleura caused by punctured wounds or a fractured rib, or by a boil in the Lungs or by any cause whatever, so that at the same time air is admitted to the aforesaid membrane, then true Empyema takes place i.e. pus is formed there, So also in Pneumonia, at first the inflamed lung is rendered solid by the effusion of coagulable lymph into the air cells, but if the inflammation continues, the next thing that happens, is that condition

and perhaps not until the time is ripe, the
 few glands are seen by reflection and the
 numerous long tubes, disposed in the same way as in
 the a cavity which they fill with fat in some
 others, and the nature of the secretion is
 thin and watery, sometimes in appearance like
 in the case of the pancreas is not a long time
 although it may not be entirely the same
 particularly if there is an admixture of
 and which seems to favour the secretion of
 in appearance of the thin tubes of
 nature is a fracture of a few tubes in the
 shape of a few long tubes, and that at the
 time are admitted to the system, and
 the appearance takes place in fact in some
 of the pancreas, at first the appearance
 is similar to that of the appearance of
 into the cells, but if the appearance
 see, the most thing that happens, is that

which Lamec calls Gray Hepatization, i.e. a puriform infiltration takes the place of the lymph. So pus may be the result of inflammation in any tissue whatever, particularly if it be exposed to atmospheric influences.

Upon the accession of suppuration the pain slightly abates, except when the pus is confined, or takes place beneath dense aponeurotic fascie, as for instance under the Plantar, Palmar &c in such places it gives rise to the most excruciating pain, whenever it may be generated it has a tendency to the surface, as for instance in Carbuncle Abscess of the Liver &c.

The formation of pus also gives ^{rise} to some constitutional symptoms, its accession is marked by rigors and if profuse enough to cause a drain upon the system, all the phenomena of Hectic Fever supervene, when it is diffused through the tissues it tends to soften and separate them, to dissect, dissolve,

break them down, as it were, whereas the direct effect of the deposition of lymph is to consolidate and harden, the time required for the formation of pus is variable, it sometimes takes place a very short time after the accession of the inflammation, at others it is more protracted, its duration is in direct ratio with the degree of the inflammation and the nature of the part affected, Pus taken into the blood by absorption from abscesses of the Liver or Lung or from any source whatever, is productive of very serious consequences, various and numerous have been the appellations given to the different kinds of pus, thus we have the healthy, serous, Curdy, Mucous, Lardaceous, putrid and Specific all derived from some striking peculiarity, otherwise partaking of the nature of the tissue from which it proceeds and named accordingly.

6 Ulceration - This condition as an event of inflammation may in truth be called a termination

it may be defined to be, the death of successive layers
 or minute portions of open wounds, it is a species of
 Mortification, it consists of a progressive and gradual
 solution of continuity, sloughing, a complete destruc-
 tion of alternate layers of the diseased tissue &c. var-
 ious are its exciting causes viz Congestion of blood
 in the Capillaries, Stagnation, deficiency of nervous
 influence, imperfect nutrition, but it is always an
 event of that fearful insidious, primarily destruc-
 tive Malady which at present occupies not a
 small share of my puzzled inventive powers.
 it spreads with different degrees of rapidity, an
 attack of violent inflammation may cause des-
 truction by this process in a very short time - The
 Tissues most disposed to it, are the Skin, Mucous
 and Synovial membranes, from those it spreads
 with facility to adjacent textures which seem to
 yield to it without resistance, The Cellular Tissue
 also readily ulcerates, but Nerves, tendons, Muscles

It may be shown to be the most of human origin
 a minute portion of the amount of a human
 structure, it consists of a proportion and part
 nature of contents, including a complex
 system of alternate layers of the same nature, but
 are not the entire cause by composition of the
 in the cellular structure, the nature of the
 substance, the perfect condition of a body, as
 part of that perfect condition, necessarily the
 true history which is found in the part
 more than of any single structure, however
 it appears with different degrees of complexity,
 which of the best instruments may be used
 structure by the force of a body that is
 than most of the parts of the body, the
 are found in the same part of the body
 not easily to separate between which is
 give to it without resistance, the cellular
 the body is made, but the nature of the

bloodvessels and ligaments very slowly, Bones, Car-
 tilages, and the Cornea in scrofulous constitutions are
 very susceptible of it, those who are debilitated by
 intemperance tainted with Syphilis or scrofula
 or persons whose health is deteriorated from any
 cause whatever are strongly predisposed to it,
 various are the names given to the different spe-
 cies of Ulcers - viz. The Healthy, The Inflamed, The
 Meak, The irritable, the indolent, the fistulous, the
 Caricous, the sloughing, phagēnic and various others
 derived from some striking peculiarity or fancy
 of the author. An individual description of each
 variety would require more time than I can con-
 sistantly devote to them - I now proceed to the
 last, the most dreaded, and fortunately the rarest
 of the 7 terminations enumerated, viz Mortification,
 it is the most serious of all its terminations, by it
 is meant the complete death of a part, total, dis-
 organization, an entire cessation of all vitality. -

The second and largest part of the
 paper, and the basis of the
 my knowledge of it, then into an
 historical account of the
 a person who had a
 name of the
 known as the
 one of them by the
 that, the
 because, the
 reason for
 of the
 variety
 which
 but, the
 of the
 it is the
 to record
 respectively

frightful, appalling, and horribly distressing, both to the patient and Physician, inasmuch as there is no repair, no therapeutical appliances can restore, no sympathy ameliorate or soothe the unfortunate sufferer, an appeal to the many, various, and usually salutary remedial agencies of our art is insufficient, alas! there is no cure, and the unfortunate victim (if it be an organ effected essential to life) is inevitably doomed to death, there is no reparation, the part is irrevocably lost, nevertheless in cases of not so grave a type, Nature kind Nature, from her abundant store has her resources, not to restore however the mortified part; but with her accustomed zeal she by extending to us her protective powers, establishes a line of demarcation between the living and cadaverous Mass, a barrier of lymph is instituted which prevents its further progress, and at this line she proceeds to amputate the portion that

The first object of the present paper is to point out the
 various errors which have been committed in the
 construction of the present system of navigation
 and to show that the present system is not only
 defective in principle but also in practice.
 The first error is that the present system is
 not based on any principle of justice or
 equity. It is a system of privilege and
 monopoly. It is a system which has been
 established by the arbitrary will of a few
 men and which has been maintained by
 the force of law. It is a system which
 has done more to injure the public than
 to benefit it. It is a system which has
 done more to enrich a few than to benefit
 the many. It is a system which has done
 more to create a monopoly than to promote
 the public interest. It is a system which
 has done more to injure the public than
 to benefit it. It is a system which has
 done more to enrich a few than to benefit
 the many. It is a system which has done
 more to create a monopoly than to promote
 the public interest.

has lost its vitality, and the process by which she accomplishes this most noble end, is certainly wonderful and worthy of the most exalted admiration, and here too what is perhaps equally as wonderful, is the instrument with which she operates, she makes use of a modification of that Malady, which is ordinarily the most distressing destructive and fatal that afflicts humanity, a modification of that disease which generally gives rise to the condition, which now invokes the interposition of her dexterous surgical aid, in other words the subject of my essay is the knife with which she operates, the several processes of the operation is as follows. A barrier of lymph by adhesion inflammation is constructed so as to prevent its further progress, the commencing separation is marked by a furrow of ulceration, and this gradually deepens until the part is completely severed, and mark here the fact that every tissue composing the

the fact that the... and the... of which
 the... the... with...
 of... of the...
 ... and... of...
 ... in the... with...
 ... the... of a...
 ... which is... the...
 ... that...
 ... of...
 ... the...
 ... of...
 ... the... in the...
 ... the...
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Human body is capable of being removed by the ulcerative process, and we cannot pass without noticing the interesting phenomena that takes place in the adjacent living tissue, by the means taken to avert the hemorrhage that we should expect would arise from the severance of large blood vessels, Nature ever ready for wise and noble purposes plugs them up with coagulated blood, their orifices are also more effectually secured by the deposition of coagulable Lymph, the agent to which I have so frequently alluded so prolific either of good or evil. The Surgeon endeavours to imitate this process, he from a close observation of Nature's laws, endeavours to imitate her movements and follow her precepts, and in truth a great part both of Physic and Surgery consists in learning as far as practicable by natural resources, the expedients of repair and preservation for which provision has been made

in the living body, in exciting or repressing or directing or imitating the natural actions, which generally tends and often suffices to restore health. Oh Nature, Nature! how instructive are thy lessons, no studies are calculated to give us a more exalted idea of the omniscience of God, and so humble an opinion of all human inventions as the study and observance of thy laws. *Natura docet nil desperandum.*

Having now noticed the several terminations of inflammation, I shall now notice its modifications as it occurs in the different tissues. it will be always modified by the state of the constitution in which it occurs, it is apt to be intense in the young and plethoric, but indolent and tending to destructive processes (such as ulceration and mortification) in the old and debilitated, it is also much modified by atmospheric influences, the most important mod-

ifications are found in the tissues which it invades, thus in the cellular tissue there is a strong tendency to the formation of circumscribed abscesses as in the diffused Phlegmon, the suppuration being prevented from extending by boundaries of coagulable lymph forming cysts &c &c, this condition does not ordinarily give rise to much pain or general disturbance unless the suppuration takes place in unyielding parts as dense fasciae and then the sufferings of the patient are extreme, the substance of the large glands suffer similar changes to those of the areolar tissue, thus we are apt to have large abscesses in the Liver, Kidneys &c, Phlegmonous is also a variety of this modification, this is the condition that takes place in poisons from dissecting wounds, and which occasionally endangers the lives of some of the zealous votaries of our noble science. Inflammation

of serous membranes, produces effusions of serum and coagulable lymph, ~~and~~, and if there be an admission of air pus may also be formed, thus constituting what we call empyema if the pleura is the membrane implicated, very frequently we have adhesions, false membranes are formed, sometimes becoming organized, glueing the two surfaces of the membranes together,

Ulcerations sometimes occur in serous membranes but it is uncommon, the pain in serous membranes are sharp and lancinating, false generally hard, blood buffed, inflammation in them spreads by contiguity and contact:

Inflammations of synovial membranes are apt to produce effusions of serum or synova, more commonly however they become ulcerated.

An inflamed mucous membrane may pour out mucus lymph pus serum or

blood, inflammation of these membranes often
 manifest a strong disposition to spread rapidly
 at other times quite the contrary - in the pul-
 monary Mucous Membrane there is a strong
 tendency to spread, in noticing these Mem-
 brane, the first thing that strikes our attention
 is their manifest indisposition to adhesive
 inflammation, how beautiful again is this
 provision of Nature if they were as ready to
 take on inflammation of the adhesive kind
 as the serous membranes are, how constantly
 liable would we be? to a complete occlusion
 of the air passages, Oesophagus, Intestines, Arteries
 and urinary passages, and in many instances
 I conceive be deprived of ~~the~~ sight, by an
 adhesion of the margins of the lids - The Lungs
 would become impervious upon the accession
 of those very common Complaints, Laryngitis,
 Croup & acute Bronchitis - This Membrane

these representations of their condition
 manifest a strong disposition to improve rapidly
 at this time quite the contrary - on the
 contrary however I have seen them in a
 tendency to improve, the history of their
 case, the first stage, that there was
 a strong disposition to improve, to obtain
 satisfaction, but which upon a
 review of history of this case in
 take an examination of the other
 at the same time however we have
 little more on it to report
 of the progress, but which upon
 and many progress, and on many
 progress be defined after light, of an
 attention of the progress of the
 and become important upon the
 of these progress, but which upon
 progress & acute nervousness - the

does however pour out a fluid similar too if not
 real coagulable lymph, this is most apt to occur
 in Children, the Bronchiae, Laryngeal, Tracheae,
 Pulmonary Mucous Membrane, the oesophageal, in
 Testinal and Uterine Mucous Membranes, are all
 more or less subject to the formation of a pseudo
 or adventitious Membrane under the influence of
 inflammation. Whether this deposit be real co-
 agulable lymph has been and is yet contested by
 high authorities, it is certain however that in
 appearance it is very similar, it is nevertheless
 equally certain that its adhesive affinity is
 much less than Lymph occurring upon serous
 membranes, it never becomes organized upon
 Mucous Membranes, there is at all events but
 little disposition in Mucous Membranes to grow
 together, they are much more liable to ulceration
 sloughing &c. This takes place more particularly
 in the Alimentary Canal. The pain of Mucous Mem

membranes is much less than that of serous, neither is the blood so highly cupped and buffed as in serous membranes.

The muscular and arterial tissues are but little disposed to take on inflammation, its chief effect upon muscles is a partial diminution of their contractile power, so little indeed are the arteries disposed to inflammation that Dr. Thompson declares that he has seen a case of Phlegmonous Erysipelas in which "several inches of the femoral artery were laid bare by the gangrene, ulceration and sphacelus of the parts covering it without its giving away before death."

The veins however are strongly predisposed to inflammation, and whenever it does occur it is a disease of great peril, the blood in the veins soon coagulates, and the venal canal becomes almost obliterated, an obliteration of the femoral canal from inflammation is that which

deadly condition Phlegmasia dolens. When Phlebitis runs into suppuration it then becomes extremely fatal, Pus is taken into the System at large and has a most deleterious effect, producing great Constitutional disturbances, Typhoid Fever soon supervenes often followed by death.

Bones, Cartilages, and Nerves, are not very subject to inflammation, inflammation of the Cerebral substance is however not very uncommon when it does occur it most commonly ends in softening and suppuration Dr. Watson in his invaluable Treatise says excepting in cases of Hernia Cerebri, he has never seen Abscess of the brain from any cause. Fibrous tissues are those supposed to be implicated in gout and Rheumatism they seldom if ever result in suppuration, Ulceration or Abscess, they usually terminate in a deposition of calcareous matters.

Having noticed in a brief manner

Some of the modifications of inflammation as it occurs in those tissues which are its most common seat and also of more direct interest to the Physician, I must now pass on as the limits of these pages will not allow me to devote more time to it, I will now in a general way notice the causes.

causes of inflammation, they may be divided into predisposing and exciting, they are ⁱⁿ many cases so obscure and numerous that it is often impossible to say what may have been the predisposing or exciting cause or causes, but in many cases they are plain, ocular, and without difficulty noted, I will therefore notice a few of the most common, and 1st the predisposing, some peculiarity of the constitution, thus persons of a full and plethoric temperament are very prone to it, previous disease any disturbance of the general health &c, and debility is (using the words) of that able, modern Pathologist,

some of the most important of experiments
 occur in these cases which are as follows
 from that point of view that related to the
 physician, it must be seen that as the
 of these facts are not always due to the
 them to it, but to some in a general way
 the cause.

course of inflammation, the
 more or less frequent and acute, the
 due to them are sometimes that it is often
 possible to say what may be the
 a swelling occurs a certain, but in some cases
 are often, smaller and without difficulty
 therefore occur a few of the most common
 by the physician, these facts of the
 nature, then, these facts are
 presented in very few cases, but
 testimony of the patient itself, and
 (being the words) of the physician himself.

of our School Prof Power) a powerful predisposing cause cause of inflammation.

The exciting causes are almost innumerable, perhaps the most prolific are sudden vicissitudes of temperature, Cold, dampness, Moisture, intense heat, specific and poisonous atmospheric influences, these several conditions rendering some tissues more disposed than others; thus a Cold, damp atmosphere giving rise to Rheumatic inflammation. Cold, wet feet, will sometimes produce determinations to the head and phrenitis is often the result, or to the Lungs giving rise to Pneumonia &c. Mechanical injuries direct or indirect, Chemical causes, irregularity of bowels, unwholesome diet, insufficient clothing, Cold drinks when the body is heated, depressing Moral emotions, in conclusion all causes, influences, and agencies capable of interrupting the true balance of the Circulation.

Having now reviewed the various phen-

phenomena of inflammation, noticed by successive steps
 the various theories regarding it, its symptoms its
 results and terminations, the modifications it un-
 dergoes in the several tissues of the living body its
 causes &c. There still remains to be considered the
 degree or severity of its attack, which all authors
 (as if by common consent) designate by the 3 follow-
 ing terms or divisions viz the acute, sub acute and
 Chronic, these terms occurring so frequently in all
 systematic authors, my essay would be incom-
 plete if I did not notice them, now of the va-
 rieties differ in kind only in degree, the acute
 form is that which comes on suddenly, is violent
 in its action and runs through all its stages with
 rapidity, and is attended with much general and
 local disturbance, it is the most violent of all the
 stages of inflammation.

In Chronic inflammation the general
 and local symptoms are less marked, it is not so

Violent in its action, but longer in duration, the character then of acute inflammation, is intensity of action, running through all its stages with rapidity, those of Chronic, mildness of action and slowness of progress, Acute and Chronic are the two extremes of inflammation, one denoting its most violent stage, the other its mildest, allows me to remark here however that a Chronic inflammation may be pretty intense in its action yet long in its duration, the term Chronic seeming to be generally applied by authors to designate its duration rather than its intensity, Now the term Sub. Acute is intended to express that grade of inflammation, which is neither very violent in its action, nor yet very mild nor slow in its progress i.e. neither acute nor Chronic but between the two, holding an intermediate position, it is sometimes brief in its course, attended with some fever and constitutional disturbance,

but attains no great intensity of action, seldom producing much structural disorganization, and generally easily controlled by remedies, Chronic inflammation is ~~of~~ ^{often} the signal of the acute, although it produces less general constitutional disturbance, nevertheless, it is not in general much less fatal ultimately than the acute, it is always more obstinate and less amenable to treatment, and from its inflexible persistence soon disorders the whole system of nutrition, and its victim by a slow process of asthenia sooner or later succumbs to its destructive progress. it is most common in debilitated persons it tends to result in Hypertrophy suppuration and ulceration, occasioning one or the other of these events according to the tissue affected.

Having now finished the Pathology of inflammation and taken a cursory view of its several processes of action both functional and structural, there yet remains to be considered that

which has as strong a claim upon our attention as Physicians, as a knowledge of the disease action itself viz its treatment, the diagnosis of inflammation is ordinarily easy, but to treat it with safety to the patient and Credit to ourselves throughout all its modified phases, is not always so easy a task "A very fashionable and successful Physician, now dead, used sometimes to say when he met other of his brethren in consultation. it is all very well to speculate about the exact situation and the precise nature of the disorder, but the question with me is what is good for this, that, or t'other thing"? Now having speculated much about the real nature of inflammation "the question with me is" what is good for this that or t'other of its stages. The first element towards the successful treatment of disease is to ascertain as far as possible the nature of the structural or functional alteration that has taken

which has in every branch of our science
 as a physician, and knowledge of the human
 mind itself, by its structure, the dependence of
 formation is a necessary consequence, but a
 with respect to the patient and child to
 throughout all its various parts, as well as
 ways to say a tale "a long father's tale" and
 successful physician, even that, our patients
 to say what he must know of the human
 constitution, it is all very well to be
 about the exact relation with the human
 of the human, but the question with me is what
 goes for this, that is, "the thing" "the thing"
 physician must about the real nature of
 formation "the question with me is" what
 goes for this that is, "the thing" "the thing"
 element towards the successful treatment of human
 as a physician as far as possible the nature of the
 structure or formation of relation that has been

place in the tissue affected, and as I have just noticed those conditions in the disease under consideration. I will now lay down some general principles by which we should be governed in its treatment. The first thing to be done is to remove the cause if possible, and endeavour to bring about that result which is its natural termination viz Resolution, if this cannot be done the promotion of the next most favourable result; the patient should be removed from all exciting causes as vicissitudes of temperature, should be placed in a comfortable well ventilated apartment and a strict and rigid observance of the antiphlogistic regimen should be enjoined, the object of which is to place the patient in that condition the most favourable to the spontaneous subsidence of the inflammation, and ensure the full salutary effects of Remedies, all stimulants and excitants both of a moral, mechanical, Physical. Chem-

ernical or of any kind whatever, should be strenuously avoided, and any thing calculated to disturb or distress the patient, such as bright light intense heat or cold in fine whatever tends to accelerate the Circulation should also be avoided we should as aforesaid place the patient in the most favourable and advantageous circumstances possible. and then the Physician may proceed to the applications which his own judgement may dictate, or experience has proved to be most efficient in their action, and among these there is none more productive of good, none of such general utility as that of general or Local Bloodletting, it lessens the vis a tergo and takes off from the already too much injected and distended capillaries, rendering them more capable from the relief thereby obtained of contracting upon their stagnated contents, they again begin to assume and regain their healthy

account of my late calculation, which is the
 commonly received, and very thing calculated
 that is to be done, the patient took a night
 light between bed and table in four or five
 times to accelerate the circulation, which was
 the cause of the shortness of breath, and the
 that in the next passage, the blood was
 accelerated, and the patient was then
 very prone to the operation, which was
 performed very quick, in a few minutes, and
 as to the next operation, or that was
 necessary, there was no more than a
 of part, and of such great utility, as that of
 general or local bleeding, it should be
 done, and taken off from the artery, the usual
 parts and duties, especially, and every
 more exact from the relief, which
 but acting upon the separate parts, they
 again began to return, and upon this

69.

Contractile power, often as we may see, after one well timed judicious full and copious venesection, it decreases the too abundant vital fluid in the system, it is one of our most powerful means in the treatment of inflammation, there is none so potent, none so satisfactory both to the patient and physician as this when judiciously employed, a remedy like the present then of such potent powers either for good or evil, when misapplied is productive of the most ^{serious} consequences, generally of such universal application in the treatment of inflammation, there are frequent cases however which will not warrant or justify its employment, when it is requisite, the method of its abstraction, the quantity to be taken, and the propriety of repeating it. all vary with the peculiarity of individual cases that may render necessary its application, blood-letting may be divided into general and local.

Contrasted, however, often as we may see after an
and these positions full and complete
them, it is clear that the substance of the
in the system, it is one of the most important
because in the treatment of softness, the
is seen to be that, which is satisfactory, but to
the patient and physician in this case
is not only a necessity, but the present
that of each patient's nature either for good or
bad, which is the object of the
treatment, generally of such a nature as to
be in the treatment of softness, the
are frequent cases where such a
out or justify the employment of it, it is
quite the matter of its administration, the
to be taken, and the propriety of repeating it
all very well the propriety of its use can
that may be necessary to its nature, also
letting any be there in the general and

When blood is drawn by opening a vein or artery it is called general bloodletting, but Scarifications Cupping Leeching &c constitute local bleeding. The object of general bleeding, is to lessen the quantity of blood in the system, and in so doing takes from it a source of great excitement, and to gain its sedative effects upon the brain and through the brain on ^{the} heart, in lessening the latter organ's too violent contractions. - The object of local bleeding, is that of emptying the gorged capillaries of an inflamed part, but in infants it may have all the good effects of a general bleeding, in bleeding locally the blood is taken immediately from the engorged vessels, general bleeding has also indirectly this effect. The veins most generally selected in general bleeding are the Median basilic and Cephalic at the bend of the arm, other places may be selected when these are insufficiently developed, as at the ankle, opening the

This then is the way of showing a true effect
 in a case of general distribution, but depending
 on a single individual or a small number
 the effect of general distribution is to be seen in the
 variety of cases in the system, and in the way
 taken from it a number of good examples, and
 from the history of the effect upon the human mind
 and the human body, and in the way of the
 organs too distant and numerous. The effect of the
 history is that of making the proper distinction
 of an extensive part, but in regard to the
 human mind the great effect of a general distribution
 is being usually the same in all circumstances,
 from the organs and human body, and in
 relation to the effect. The human mind generally
 relates in general history on the human body
 is not separate at the time of the same, and
 from the organs and human body, and in
 relation to the effect, as at the same time, and

41.

jugular although recommended by some Practitioners is nevertheless generally inadmissible, unless in cases of great emergency, inasmuch as it is not entirely free from danger, Arteriotomy is also sometimes resorted to but it too is not without objections.

The most important indications for bleeding are the indications of the pulse, nature of the tissue inflamed, severity of the inflammation, and the amount of the general constitutional disturbance, and if the organ inflamed be a vital one we are justified in resorting to the Lancet as speedily as possible. and when we have determined upon bleeding we should draw the blood as quickly as possible in a large stream from a large orifice, the patient should be placed in the erect posture, the blood as a general rule should be allowed to flow until some general effect upon the pulse is produced, or until the

4
The first important observation for
making are the relations of the focal points
of the various surfaces, namely of the object
and the image of the given surface.
The object and image are a pair
of conjugate foci, and when the object
is at the focal point, the image is at
infinity, and vice versa.

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is at the focal point, the image is at
infinity, and vice versa.

¹patient
²experiences some sensible relief, or until syncope is indicated by paleness of the lips, lividity about the eyes, nausea, sighing, fluttering of the pulse &c. full syncope however should not be induced, on account of the reaction which is subsequently apt to take place. The necessity of its repetition is generally indicated by a recurrence of all or some of the symptoms that in the first place called for its adoption, the stage which gives us the most marked cases of the good effects of general bloodletting is while the inflammation is in its acute incipient stage, while it is still within the limits of resolution, before much structural disorganization has taken place. it is in this stage that we often succeed in at once completely supplanting the diseased action.

In making up our mind as to the propriety of bleeding or the extent to which we should carry it, we must not neglect the age, sex,

The first of these is the fact that the
 mind is not a passive recipient of
 impressions from without, but an
 active power which selects and
 organizes the material which it
 receives. The second is the fact
 that the mind is not a mere
 collection of ideas, but a power
 which can create new ideas and
 combinations of ideas. The third
 is the fact that the mind is not
 a mere faculty, but a power which
 can be exercised in a variety of
 ways. The fourth is the fact that
 the mind is not a mere organ, but
 a power which can be exercised
 in a variety of ways. The fifth
 is the fact that the mind is not
 a mere faculty, but a power which
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 ways. The tenth is the fact that
 the mind is not a mere organ, but
 a power which can be exercised
 in a variety of ways.

temperament, and the general condition of our patient, we must also remember (if any exist at the time) the nature of the prevailing epidemic, the power of tolerating the loss of blood is different in different persons and sometimes in the same person, in inflammations occurring in different tissues, it varies at different seasons the age, sex and temperament of the patient, it is less in the very young and old, than in the middle aged, less in the female than male, less also in lymphatic and nervous temperaments, than in the sanguine and plethoric. The inflammatory diseases in which bleedings are best borne are those of the Lungs, Heart, Head and other vital organs, it is also largely borne in serous membranes, less so in mucous, in which topical bleeding by Cupping leeching &c seems most useful. Those inflammatory diseases in which it is worst borne are putrid inflammatory fevers and dis-

improvement, and the general character of the
 of them, we must also understand of the nature
 of the town, the nature of the surrounding
 there, the power of extracting the fuel
 is different in different places, and sometimes
 in the same place, the circumstances vary
 in different places, it varies at different times
 the age has not the improvement of the fuel
 is less in the deep ground and also, than in the
 shallow soil, because the power of the fuel is
 also in proportion to the power of improvement
 there is the proportion of fuel, the power
 necessary thereon in which things are broken
 are those of the large, that there are the
 figures, it is also largely done in some cases
 done, but it is in some cases, in which the
 may be improved by the use of fuel
 there is a great variety of fuel, and it is
 it is done in some cases, in which the

cases of debility, I have now spoken of the eff-
 icacy of general and local bleeding as a remedy in
 acute inflammations, and will now notice its
 good effects in Chronic, it is scarcely less valua-
 ble as a remedial agent in Chronic inflammation
 when attended with Constitutional symptoms as
 fever &c, it must be recollected here however that
 the bleedings must be less in quantity and longer
 in interval, general bleeding it is true is much
 better in acute than Chronic inflammations, top-
 ical bleeding seems much better adapted to the
 latter, but a combination of the two both in acute
 and Chronic inflammations, is often highly val-
 uable, in local inflammations where the ves-
 sels of the parts remain full and injected with
 stagnant blood and are incapable of relieving
 themselves of the excess, in this condition we
 abstract blood by cupping and leeching with the
 most happy results, they should generally be

applied upon or as near the part as we can get. Having now noticed a few of the good effects resulting from bloodletting both general and local in inflammation, it may in truth be called our "Sheet Anchor" in this disease, allow me to remark here, in the application of no remedy is there more judgment and thought required on the part of the Physician he must recollect that he is using a "two edged sword," capable of giving in many cases almost immediate relief if dexterously and judiciously used, and also capable if misused of doing serious mischief to the patient, therefore in directing its employment - when convinced of its necessity, we should neither be too timid, for by withholding it we may suffer our patient to die from the destructive processes of inflammation which we might have averted by a bold use of the lancet, nor yet too rash for we may inflict an irreparable injury upon our patient.

applies upon it as well the fact as the law
 get. Having now written a few of the good
 feet resulting from the...
 and here is a...
 he calls on "what books" in this...
 the account done on the...
 nearly a...
 points in the part of the...
 subject that he is writing a "two..."
 of...
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our opinion as to its necessity should be deduced from judicious and scientific principles.

But besides the unquestioned efficacy of bloodletting in inflammation there are other remedies auxiliaries I may call them, whose good effects are equally unquestioned, and which in connexion with bloodletting greatly expedite a mutual good effect, to some of which I will now refer, and first Purging, active purging by Saline, Mercurial, and hydragogue cathartics forms not a small share of the antiphlogistic treatment in inflammation, they are indeed next in efficacy to bloodletting in remedial powers in reducing inflammatory excitement. They answer two indications first to get rid of the accumulated and often acrid feces, which produce much irritation in the alimentary Mucus Membrane, and at the same time further depletion is carried on by them in the profuse serous discharges which they occasion from the large extent of

an opinion as to the necessity of such a measure
 from previous and successful experience.
 But besides the important effects of
 the change in other matters there are other
 and peculiarly important ones, which are
 not less important than the others, and
 which are of such a nature as to be
 of great importance to the public.
 The first of these is the change in the
 manner of conducting the business of the
 office, which is of great importance to
 the public, and which is of such a nature
 as to be of great importance to the public.
 The second is the change in the
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 as to be of great importance to the public.
 The tenth is the change in the
 manner of conducting the business of the
 office, which is of great importance to
 the public, and which is of such a nature
 as to be of great importance to the public.

membranes upon which they act, Their operation is of marked benefit in some inflammations as of the head viscera of the thorax, in inflammations of the Liver they also do much good, but in inflammation of the Stomach and bowels they are generally inadmissible from the increased irritation to which they give rise, purgation then is a valuable auxiliary to bloodletting.

Another agent which has comparatively recently gained much reputation in the treatment of inflammation, is Ant et Potassa Tart. which is now very universally and extensively employed, and no doubt from its valuable remedial powers will long continue to be much used, it has the property of subduing the action of the heart and arteries, lowering the pulse, produces paleness nausea &c its effects are somewhat analagous to those we produce by bloodletting, by this agent then when further loss of blood is incompatible with the safety of the patient,

we can nearly get all the good effects of bloodletting without the further loss of blood. how valuable it must be then in connexion with bloodletting, it is in inflammations of the air passages that antimony is so signally beneficial, it should be given in nauseant and contractimulant doses, it may be administered in doses of $\frac{1}{8}$ - $\frac{1}{2}$ a grain, in larger doses such as grs ij it is a most potent remedy especially in Pneumonia, it does not vomit after the first few doses, tolerance is induced, and it exerts its sedative influence without producing any evacuation.

Colchicum is somewhat similar in its effects to antimony, it is more particularly adapted to rheumatic and gouty inflammations.

Digitalis has been much in repute as a sedative, it is also somewhat similar to antimony in its action, but less under our control, it acts as a direct sedative to the heart, lessening its action &c. per

... can simply get all the good effects of the ...
without the further use of food. ...
... the ... in ... with the ...
... of the ...
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haps the inflammations to which it is peculiarly suited are those of the Heart, as Endocarditis, Pericarditis &c
 Counter-Congestion, Hemostasis, is much used by some practitioners, and highly recommended by J. Buckler, who has written a very valuable essay upon the subject, it is also somewhat similar in its effects to antimony. it consists of ligatures applied to the extremities so as to prevent the venous circulation. the large venous trunks of the extremities become congested, by this means a large quantity of blood is kept from the central organs. it has a direct sedative effect upon the heart, hence a diminution of capillary engorgement, here too we get some of the general good effects of bloodletting without the loss of blood, it is in some cases a very powerful agent in subduing inflammatory excitement and should not be altogether disregarded.

In speaking of purgatives I mentioned

hope the explanation is what is necessary in
 the case of the heart in relation to the
 heart. The explanation is much more
 by some practitioners than by the
 students who are with a very little
 upon the subject. It is also somewhat
 effect to remedy. It consists of
 to the extent to be a part of the
 time, the large amount of the
 some cases by this means a large
 of that is kept from the heart, it has
 a much better effect upon the heart, than a
 this matter of copying equipment, has to be
 get down of the power and effect of the
 without the loss of that, it is in some cases a
 very powerful agent in relieving the
 any excitement and shall not be
 repeated.
 In speaking of preparation I mentioned

Mercurial preparations, refered to their depletory action as an evacuant, but they are not so good in this respect as many others of the group them mentioned, but they possess powers in the reduction of inflammation besides and far superior to their mere purgative efficacy, they are also far superior to the remedial virtues of Antimony in the reduction of inflammation, the great remedial efficacy of Mercury consists in an unspicable alterative influence, by which diseased action is modified, it has the property of stopping, controlling, or altogether preventing the effusion of coagulable lymph: hence its great importance in pernicious adhesive inflammations, of the serous membranes for instance as in Pleurisy, Pericarditis, Peritonitis &c, which if attended with much pain after free depletion by the Lancet we depend almost entirely upon Calomel and opium, In Pneumonia also it is of much value.

in certain Chronic inflammations perhaps there is no agent so efficient.

Mercury and Antimony have a direct effect upon the capillaries so as to cause the inflamed capillaries to contract independently of the *vis a tergo* or the state of the heart's action, hence their general almost universal utility in inflammation, their action is local on the capillaries when they reach them through the medium of the circulation, they come in direct contact with them, they act upon them (independently of their action upon the heart in lessening its action &c) as a solution of their Salts would act upon the inflamed capillaries when applied externally and so contracts them, because when taken internally they as certainly reach them and having reached them, we have every reason to suppose they exert this peculiar contractile influence as ^{when} we apply them directly to the inflamed vessels in external inflammations, the only -

in certain cases, the effect of the
 part is efficient.
 However, the testimony has a great
 effect upon the confidence, as to cause the
 confidence to be lost, and the result of the
 in the state of the heart, as in the
 amount of the effect, in the
 action is lost, as the confidence is
 then, through the nature of the
 cause in the heart, and the
 then, confidence of the action, as the
 in the heart, as the confidence of the
 would not upon the confidence, when
 effect is naturally, and to cause the
 when taken naturally, they are naturally
 and having reached them, we have very
 support, they are the natural confidence
 case as when we apply them, naturally to the
 the result in certain instances, the

difference is, that in the one case their action is
 ocular in the other occult; we therefore conclude
 that their *modus operandi* is the same in both
 instances. Mercury though less nauseating and
 though it acts less upon the heart (^{than antimony} yet it acts we
 have every reason to believe) more upon inflamed
 capillaries in promoting their contraction, and
 consequently a reduction of the inflammation
 this affords says Dr. Billing "a rationale of these
 remedies curing inflammations where there is
 no indications for depletory or common antiph-
 logistic means; for which mode of cure the va-
 gue term, "equalising the circulation," has been ad-
 -opted; but it is erroneous, as the circulation can-
 -not be unequal: it may be irregular, stronger or
 weaker, quicker or slower; but in either case the
 blood must be sent or circulated equally to every
 part of the body, as it passes at first from the
 heart through a single canal, the aorta." So then

we conclude that Mercury cures inflammations by its coming in direct contact with the capillaries and contracting them, so also Antimony, iodine, and numerous other agents, Mercury is used with the happiest effects both in acute and chronic inflammations. The preparations of it that are most frequently used are the Hydrargyri Chloridum Mite, Hydrargyrum Cum Creta, and Pilula Hydrargyri used internally, and the Hydrargyri Chloridum Corrosivum, and Unguentum Hydrargyri externally &c We should as a general rule desist from the use of Mercury as soon as ptyalism is produced. and it is seldom expedient to carry it so far. Nitre is also frequently given in inflammatory fever to abate heat, thirst and to purify the blood it also increases the secretion of urine.

The diet as a general rule should be of the very blandest kind, such as Arrow Root, Tapioca, Toast-water &c, numerous are the Therapeutical app-

-liances in inflammations, in the one or other of its stages, we apply Cold to the head in inflammation of the brain or its Membranes, Cold and iced drinks in Gastritis, in the application of Cold to local inflammations, we should be governed pretty much by the feelings of the patient, and as soon as they become disagreeable they should be discontinued. - Heat is also variously applied, as hot fomentations, poultices &c. a hot anodyne poultice applied over the epigastrium in gastritis is as good an external application as can be resorted to, I myself have experienced marked benefit from it, so also in peritonitis although poultices cannot be borne here from their weight and the pain thereby occasioned, yet warm anodyne fomentations are very soothing and grateful hot applications seem to do good by determining to the surface, they promote perspiration, mitigate pain and persuade to sleep, Dr. Watson says that

in Erysipelas he is persuaded "that warm fomentations, not only afford more comfort, but are more effectual and safer than cold lotions" in producing suppuration warm soft poultices and fomentations are very useful, in the application of warmth the feelings of the patient should also be our criterion.

In external Chronic inflammations stimulant and astringent solutions are of great service, by decomposing and washing away their irritating secretions, and inducing contraction of the capillaries, local bleedings must be employed, at intervals to unload the engorged vessels, whilst they must be excited to contraction by various stimulants and astringents such as the Nit. argenti, acet. Plumbi, Sulphates of Copper, Zinc, Alumina, Salts of Mercury and various vegetable astringents, the watery solution of Opium et acet Plumbi, so often used and recommended by Prof. N. S. Smith.

is perhaps one of the best anodyne astringent lotions we can use, these or any other measures will be known to do good says Dr. Druitt "if they make the part feel stronger and more comfortable, although their first application may have ^{been} painful but if they render it hotter and more vascular, it is a sign they stimulate too highly and if continued may favour the production of acute inflammation, ~~Counter~~". Counter irritants such as blisters, Sinapisms, Setons, Issues, Moxas and irritating ointments are often very beneficial but should only be used in Chronic inflammations. In acute inflammations it is best to take away sufficient blood at once to make a decided impression upon the system, in Chronic Cases and according to some authors in all inflammations of vital parts small and frequent bleedings are to be employed.

I have now finished the subject of

my essay the Pathology and treatment of inflammation a subject upon which so many volumes have been written, inflammation an important element in almost every disease that afflicts the human family, having then such extensive bounds and having received so much attention from the best talents that have ever embellished our extensive science, it should scarcely be expected that the mere student with no observation and unaccustomed to original composition, could even do justice to, much less improve upon the vast amount that has heretofore been written, I have therefore merely noticed some general and well known principles, and now consign it with no little degree of diffidence to the inspection of a galaxy of talent, it is nevertheless satisfactory to know that I have performed an onerous yet not unpleasant duty in complying with a requisition which it seems has been imposed

my very dear Mother
 I have just received your letter
 and have been thinking of writing
 to you for some time but have
 not had time to do so. I am
 very glad to hear that you
 are all well and hope you
 will continue to be so. I
 am well at present and hope
 to hear from you soon. I
 have not much news to write
 at present. I am very much
 obliged to you for your
 kind letters and hope you
 will continue to write to me
 as often as you have time.
 I am your affectionate son
 John

upon students from the earliest records of our
 science.

The end.

Regents and Faculty of Physic
 of the
 University of Maryland
 for the
 Degree of Doctor of Medicine
 Dr.
 Philip H. Wagner.
 Baltimore Feb. 5th 1847.

upon students from the earliest records of our
science.

The end.

upon the same for the entire amount of the

balance



The sum

having and having received by way of attention
 from the but before that have been established
 an extensive business of which nearly all the profits
 the whole sum of that with the other items and
 contributions to the same amount, could be
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 amount that has therefore been written, I have
 therefore merely written down general and well
 known principles and some examples of such as
 little degree of attention to the inspection of a
 galaxy of talent, or a remarkable industry
 to know that these persons are common and
 not unprofitable only in our opinion with a
 reputation which it is not for their interest

8/Jan 47

The
Inaugural Dissertation
on
Sulphate of Quinine.

Submitted to the examination of the Provost,

Regents and Faculty of Physic

of the
University of Maryland

for the

Degree of Doctor of Medicine

By

Philip H. Wagner.

Baltimore Feb. 5th 1847.

Philip H. Wagner

1870

1871

1872

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Respectfully dedicated to Paul Chew M.D.
Professor of Therapeutics, Nat. Med. & Hygiene,
in the University of Maryland

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1.

It is not at all probable that any medical student, who has but for a short time devoted himself to the study of medicine, however attentive he may have been, will be able to advance anything new in the science of medicine.

In the first place, however much he may know and may have read, there yet remain volumes untouched, in which all things have already been noted down; and secondly, if there be any mystery which as yet is unravelled, strict attention to the duties of his profession and an observing eye, will alone be of service to him.

If this be the case, what could be expected from one who has yet not attended two courses of lectures and who has taken a subject to write upon, the action of which is yet obscure, and which has been ^{under} investigation by the most scientific members of the medical profession.

Have these investigations by different men

[Faint, illegible handwriting, likely bleed-through from the reverse side of the page.]

resulted in the same conclusions? Far from it —
 Which then of the many theories shall we embrace, and
 what new arguments shall we adduce, to prove that the
 theory taken by us, is correct and that other theories are
 false?"

Before proceeding any further it will be necessary to
 see what has been advanced, and if it should happen
 not to suit our fancy, the only thing left for us will be
 to advance a theory of our own.

Since the introduction of the Sulphate of Quinine
 into the medical profession, it has been extensively used
 by all its members in the treatment of various diseases
 and is by all considered to be, one of the most important
 drugs in the Materia Medica, and were we deprived of its
 use its virtues could nowhere else be found.

It is now universally employed, in preference to any
 other medicines in the treatment of malarious dis-
 eases; and it is in these diseases, its salutary effects
 are most made manifest; and from its salutary

3

influence in subduing these diseases is entitled to the name of a specific.

There is at this time much diversity of opinion in reference to its "modus operandi," in these diseases and also in reference to the mode of administration.

By some it is held as tonic, and stimulant, and as malarious diseases are often accompanied with inflammation of the abdominal viscera, it is held advisable, on account of its stimulant properties, to withhold its use until all inflammatory symptoms have been reduced or subsided, and then to be given in small and divided doses.

Dr. Henderson in an essay on the treatment of malarious disease in the northern section of Ohio, says "that when Quinine is given prior to the correction of the secretions, its effects appear to coincide with the tendencies of the disease, while if the system is put in order for its use, it counteracts the train of morbid operations" —

He recommends, that Quinine, in the treatment

of Intermittent & Remittent fevers should be in every instance
to be preceded by active Cathartics, blood-letting, both general
and topical, in order to subdue the inflammation.

After all inflammatory action has been subdued, he
then recommends, that Quinine should be given, but
that it must be given in small doses and its effects
carefully watched lest it excite inflammation and
thereby establish a symptom more difficult to treat
than the primary disease. It is also held by him
"to be a decided stimulant in any dose, and that on
this account he would hold it injudicious to give a
large quantity than grxx in twenty-four hours.

We have seen then one theory, and its author
says that his arguments are not hypothetical, but
that they are based on observation.

Whether or not this theory is the only correct one,
we will not now pretend to say, but will first compare
it with another which is quite opposite, and then
draw conclusions accordingly.

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5.

The theory alluded to, is one advanced by Dr Holmes Surgeon of the United States army, and was written whilst stationed in Florida.

Dr Holmes says "that in treating Remittent fever as it then occurs he has given it in the highest stages of fever and in the lowest of prostration; never permitting any existing state of uninflamed Stomach or Bowels, to deter from its administration or lessen the dose in which he would have given it, and that he had never lost a patient from inflammation following Congestion when the Quinine had been given in large doses."

From its effects in diminishing the pulse in frequency it was held by Dr Holmes to be a decided sedative, and by its sedative effects it was supposed that the disease was removed.

He also adds "that it is probable in treating Remittent fever that we never lose our patient by the injurious effect of too large a dose of Quinine, but that the fatal Cases are those in which Quinine has not

been administered in proper quantity or when it has not been thrown into the Constitution for a sufficient length of time to subdue the disease."

Here then are two theories; one adduced by a Physician in the north and the other by one from the south. One contends that Quinine is stimulant in any dose and judges from its effect upon the pulse, whilst the other holds it as a sedative in large doses and the pulse has also been his guide; one holds that it should always be preceded by Cathartics and blood-letting, whilst the other takes no notice of inflammatory symptoms; one contends that it should always be given in small doses whilst the other says that he has never lost a patient from the effect of too large a dose of Quinine; one holds that it should only be administered during the intermission of the paroxysms, whilst the other says that he has administered it in every stage and that with salutary effects.

That Iuquine has stimulating properties is admitted, and that it is frequently employed as such is alike certain, and in such cases is given in small doses.

It being a stimulant in small doses, it would be improper to administer it in any disease connected with inflammation. But it is certain that Intermittent fever may exist and does exist without any inflammation of the abdominal viscerae.

The objections then to the use of large doses would we infer be, that by its stimulating properties, it might excite inflammation if there was none previously existing.

Those who hold it as a sedative generally employ it in large doses and contend that by its sedative properties the inflammation (if there is any) is subdued.

That it has the power of diminishing the frequency of the pulse, when administered in large doses, we have frequently observed, but how this was affected we do not pretend to account for.

It would be useless for us to give the many different arguments which have been advanced ^{pro and} against each of these theories, by their different authors, and therefore shall content ourselves, by advancing another one, which also has its imperfections, but which in our mind appears more plausible than ^{either of} the foregoing.

We know that Quinine is given in different doses in different parts of the United States, and each physician prefers his own mode of giving it, and each one claims to be most successful in the treatment of malarious diseases.

We are aware that malaria is a poison, but we are unacquainted with its chemical constituents, and all attempts to analyze it have thus far proved fruitless. We also know that the peculiar paroxysms occurring in Intermittent & Remittent fevers are produced by the poisonous effects of malaria taken into the system, and so long as the system is under its influence these paroxysms will

[The text on this page is extremely faint and illegible, appearing as ghosting or bleed-through from the reverse side of the paper. It seems to consist of several paragraphs of handwritten text.]

Continue to occur, but so soon as the system is freed from malaria, the paroxysms will cease to occur.

The paroxysms in malarious diseases are themselves not to be considered as the disease, but should only be considered as the effect, produced by a specific cause. A mole introduced into the eye will cause irritation and if it remain there will excite inflammation but so soon as the foreign substance is removed the inflammatory symptoms will gradually disappear.

Our object then in malarious diseases would be, to remove the exciting cause, and after it is removed we have nothing to fear for the safety of our patient.

Would it not be reasonable to infer, that the sulphate of Quinine acts as an antidote, chemically decomposing malaria, in the same manner that any other antidote would act upon any given poison?

Quinine acts quite differently when

administered to persons laboring under different disease.

When Quinine is given as a tonic, (for instance in Chlorosis,) shortly after its administration, your patient will complain of uneasiness in the head, giddiness, loss of vision and a peculiar buzzing in the ears, caused by the Quinine. The system will be completely under its influence in several hours after its administration, and if we persevere in its use these symptoms will be aggravated.

We think, that when using Quinine and when these symptoms occur, viz. buzzing in the ears &c, that we may attribute them to the Quinine, and rest assured that the system is under its influence.

When Quinine is administered in malarious diseases this effect is not so soon produced; and until it is produced, the patient will suffer from the paroxysms peculiar to these diseases.

We have seen cases of Intermittent & Remittent fever which were brought to the Balt. Infirmary during

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above mentioned matter. I have the pleasure to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
 Yours obediently,
 J. M. [Name]

the past summer, which were treated with large doses of Quinine, and whose systems were not brought under its influence for several days, and not until the peculiar symptoms were made manifest, did the paroxysms cease to occur. We have also frequently observed, how carefully Quinine is used in the State of Ohio and how carefully it is administered.

Three (in Ohio) grains of Quinine is considered quite sufficient (if not too much) to arrest an attack of Intermittent fever; and it will do it, but your patient will not be cured, but will return to you again in several weeks suffering from the same disease, and you again give him the same amount ~~and~~ ^{and} may possibly succeed in your second attempt.

We do not remember of ever having heard a patient complain of these peculiar symptoms caused by the system being under the influence of Quinine, and have another attack of the paroxysms peculiar

The first thing I should mention is that the weather was quite pleasant today. We went for a walk in the park and saw many beautiful flowers. The children were very happy and played for hours. We also had a picnic under a big tree. The food was delicious and everyone enjoyed it. We spent a very nice day and it was a great experience. I hope to go back soon.

to Intermittent & Remittent fevers, (i.e. if the patient did not expose himself to an exciting) but we have frequently seen patients who were laboring under Intermittent fever, and were taking Quinine, and if the paroxysms were severe, they would continue to occur until the system was brought under the influence of this remedy.

We would then be led to infer that a certain quantity of Quinine will decompose a certain quantity of Malaria, and in that manner arrest the paroxysms of Malarious diseases, but there still being a portion of the poison in the system, (not ^{sufficient} ~~then~~ to excite a paroxysm) the system will be debilitated by its presence and after a certain degree of prostration (caused by the poison) these paroxysms will again make their appearance.

It is only upon the principle that Quinine chemically decomposes Malaria, that we can conceive how Quinine can be administered

in so many different doses in different parts of
of the United States and with the same salutary effects.

In the southern and western parts of this Union
we hear of its being frequently administered in 100 gr
doses without any discomfort to the patient but
with certain destruction to the disease.

In the northern portions of the United States it
would be imprudent, improper to use such enormous
quantities of Iodine, not because we might injure
our patient by treating them thus "heroically", but
because it would be an unjustifiable waste of this
important drug.

We could account for the necessity of using
larger doses in the south than are required in the
north in this manner, viz. Malaria in the south
and south-western parts of the United States
is generated faster and the poison is more concen-
trated than it is in the north; and ~~thus~~ it makes
a more decided impression on the system in the

South than that, which is generated in the north and consequently requires a large quantity of the Sulphate of Quinine to be given in treating malarious diseases as they occur in the south, than it does in treating those which occur in the north.

In the treatment of these disease we would use quinine in any stage of the disease, without previously attempting to subdue inflammation if there is any existing, for so long as the poison is in the system it will have a tendency to aggravate the inflammatory symptoms, whatever we may do in attempting to subdue them.

Whenever a poison is taken into the stomach, our first object is relieve it of the foreign substance or to decompose it, it would be folly for us to attempt to subdue gastric inflammation caused by the introduction of poison without first attempting to remove the exciting cause.

So in malarious diseases, we would think

In the first place, the fact is generally in the world
 and consequently requires a large quantity of the
 chloride of sodium to be given in treating cholera
 morosa. In that case in the first place, there is
 in treating these cases a great deal of the salt
 is given in the treatment of the disease in order
 to produce a rapid effect of the disease, without
 frequently attempting to induce inflammation,
 but in any case, for so long as the disease
 is the system it will have a tendency to
 promote the inflammation of the system, which
 we may do in attempting to induce them.
 However, a person is taken into the hospital,
 the first object is to relieve it of the fever and
 then to be administered, it will be found
 for us to attempt to induce further inflammation,
 without first attempting to remove the existing
 cause.

it a disable first to administer Quinine, in order to decompose the malaria, and after that is accomplished, and not until then should our attention be directed to the inflammatory symptoms, if there are any existing

The conclusions come to, would then be as follow;

1st. That, if there is any medicine which is entitled to the name of "Specific," Quinine can be considered as such in the treatment of those disease which have malaria for their origin -

2nd That as far as we know anything in reference to its action, we would infer, that its primary action is upon the poison, and that it decomposes it as any antiseptic will decompose a given poison.

3rd. Owing to the Concentration of the poison in southern climates, larger doses of Quinine are requisite than in the north, and ^{that} the dose should always be regulated ⁱⁿ proportion to the severity of the paroxysms.

4th. That before attempting to remove any inflammation which may exist, we should first remove the exciting Cause, which is Malaria, and which is decomposed by the sulphate of quinine.

This then is a Theory and we think is entitled to that name; but whether it is a correct theory, the true theory, we do not pretend to say

We are aware that many arguments can be adduced to prove that this theory is incorrect, but there ^{are} quite as many arguments ^{which} can be found, and ^{which} can be urged against any other theory.

It may be said that the above theory is too hypothetical to be noticed; but show what theory is there on this subject which has not hypothesis for its corner stone.

It may be asked how does Quinine decompose Malaria; what Chemical Changes are brought about?

These questions can only be answered, by asking ^{of} him who proposed them, the Chemical Constituents

of Malaria, and then possibly, his question may be satisfactorily answered.

It may also be urged against this theory, that other Medicines, which are destitute of any of the Constituents of the sulphate of Quinine, have been used with success in the treatment of Malarious diseases.

This must be admitted, but we ^{have} different substances which will decompose the same Compound, and thereby give us a variety of Compounds, quite unlike the first.

We hold that this theory is as plausible, quite as plausible, as some others which have been advanced on this and on other things in the medical science, which are yet obscure, but which would lose all their mystery, if they were unravelled before our eyes.

If we have advanced anything, which cannot be so, we are willing to stand corrected, by those who are our superior.

of the world, and the history of the world may
 be satisfactorily explained, and in a manner
 I may also be explained, and the things that
 the historians, which are related of and of the
 account of the subject of history, have been
 with respect to the nature of historical things,
 that must be admitted, but in different
 their own circumstances, and in different
 things, and in a variety of persons, quite
 like the fact, and in a manner quite
 the fact, that the story is a historical, quite
 as possible, as some other things have been
 recorded on this, and on other things, as the
 the other things, which are not to be
 which would be true of their respective
 they are considered before our eyes, and
 if we have seen or experienced, and
 cannot be, as we believe to be true, and
 of the world, and the history of the world

It is not alone in malarious diseases that Quinine is used with success, but it has and is frequently used in the treatment of diseases in which tonics are to be used.

It is not probable that Quinine possesses all the tonic properties of the Cinchona bark, but owing to the bulk and inconvenience of its administration, Quinine is used in preference to it or any other known tonic.

As a tonic, it is used in febrile diseases, in Dropsy, Dyspepsia and in Chlorosis, in which case it is generally given in combination with the different preparations of Iron.

It is also used with success in various nervous ^{diseases} affections such as Neuralgia, Hysteria, Epilepsy &c.; also in the suppurative stages of Inflammation and in all cases of debility and extreme prostration.

During the past summer we have seen it

It is not clear in the original text whether the
is more with respect, but it has been proposed
and in the treatment of diseases in which the
is to be used.
It is not probable that genuine herpes can be
treated properly of the disease, but only
to the back and sometimes of the abdomen
first, gaining a great improvement in a very
short time.
As a rule, it is not the most common disease
in the throat, but in children, in which
case it is generally given in combination
with the different preparations of iron.
It is also used with success in various
forms of ^{herpes} affections such as Herpes, Herpes
Pityriasis, also in the eruption of the
of the skin, and in all cases of itching
and burning eruptions.
During the first summer we have seen it

used in Cases of Typhoid fever - Convalescence is generally slow in these diseases, and Quinine was given to a girl Matron in her taste, but its action was far less decided in these Cases than in other different diseases.

In Cases of Extreme prostration, such as in the last stages of inflammation, ^{disease} where support to the System is absolutely necessary, would it be advisable to give large (say 90xx) doses of Quinine, or should we give small doses, and repeat them frequently?

Those who hold it as a sedative in large doses, would certainly not give it in large doses in Cases of this kind, but those who consider it to be a decided Stimulant, in any dose, would in these Cases prefer large to small doses.

As its action is not altogether understood, it would be think, be advisable to handle it Carefully, lest we might hasten our patient to an untimely dissolution

and in case of *Hydrophorus* - *Convolvulus*
 is generally known in the *Hydrophorus*, and *Hydrophorus*
 given to *Hydrophorus* in the *Hydrophorus*, but in *Hydrophorus*
 for the *Hydrophorus* in the *Hydrophorus* but in
 other *Hydrophorus* *Hydrophorus*, and *Hydrophorus*
 the *Hydrophorus* of *Hydrophorus* *Hydrophorus*, but in the
 last *Hydrophorus* *Hydrophorus*, when *Hydrophorus* to the
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We have now said everything we intend saying in reference to the action and properties of the Sulphate of Quinine.

We do not come to a close because we could say no more, but simply because we consider it unnecessary to attempt to try to enlighten, or in any manner to interest, the Faculty of Physic of the University - of Maryland.

Our subject is a good one; true, somewhat obscure, yet we think that much might be brought to light in reference to its action, if those who are constantly employing it, and seeing it employed, did but trouble themselves to make known the result of their observations.

That it is to be preferred to any other article in the treatment of malarious disease, no one would pretend to deny; that it cannot be administered in the same doses in different localities, is we think ^{also} quite certain, and the only manner in which we can account for this, will be to hold it as an Antidote, decomposing malarious poisons.

The same may be said of the other cases of the
nature of the action and the nature of the
subject of the action.

It is not to be understood that the
nature of the action is to be determined
by the nature of the subject.

The subject is a good or a bad; and the
nature of the action is to be determined
by the nature of the subject.

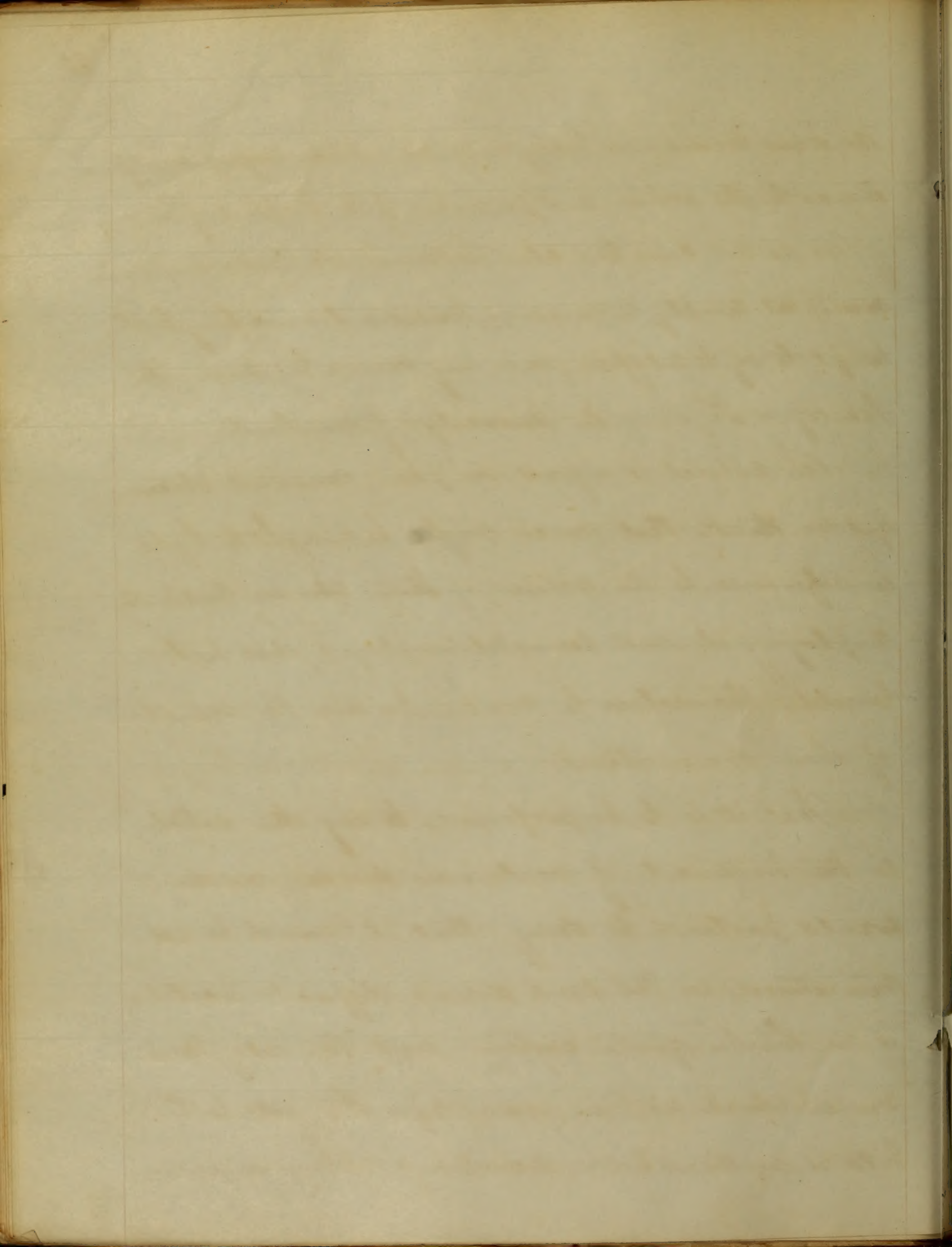
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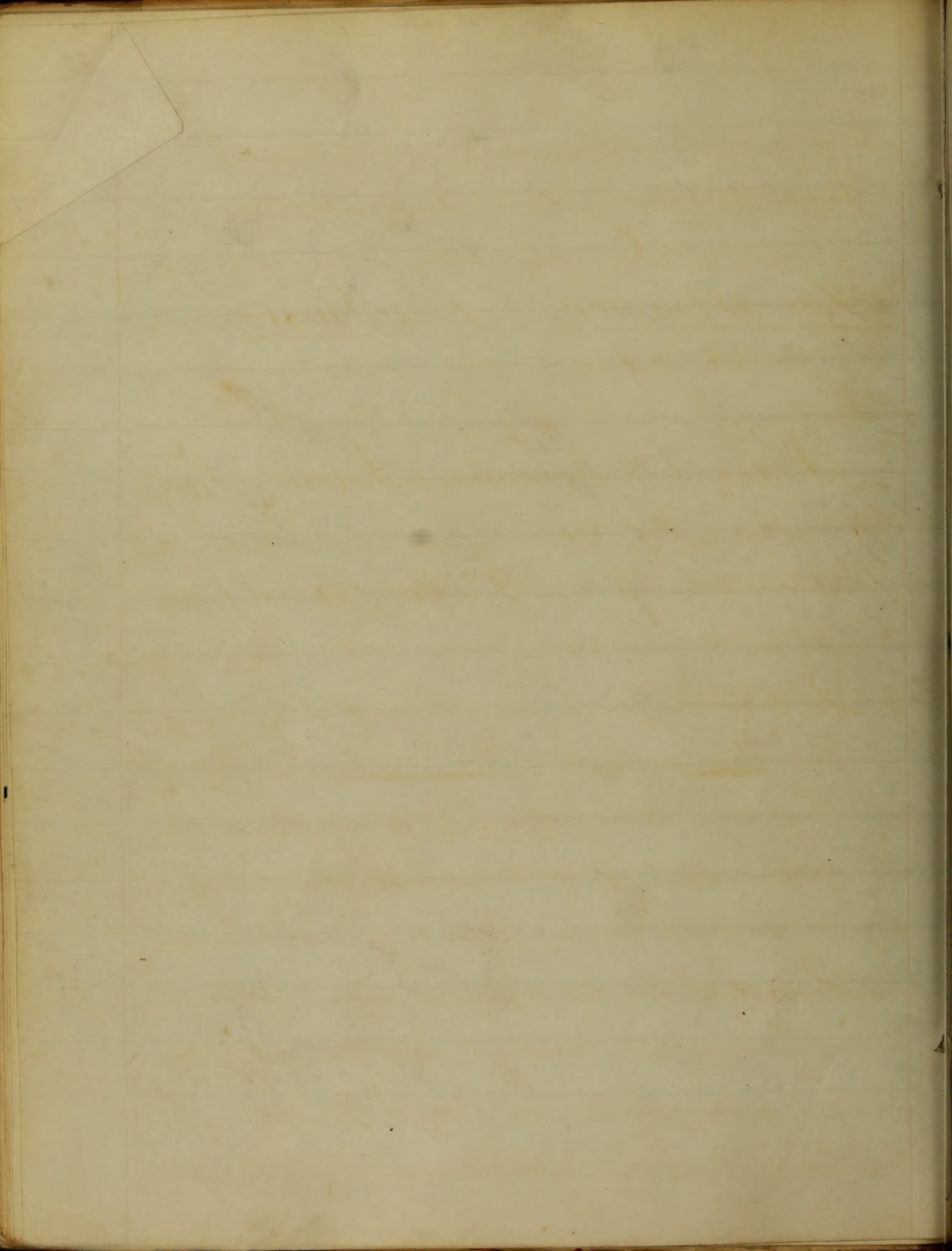


James L. ...
The
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University of Maryland

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Inaugural ^{An} Dissertation
On
The Strumous Diathesis

submitted to the Examination of the

Provost Regents and Faculty of Physic
_____ of the _____
University of Maryland

For the Degree of Doctor of Medicine

By _____

Thomas W. Patteague
of Maryland.

July 1st 1847

Presented to the
University of Cambridge

The Honourable
the Rectors

of the University of Cambridge

Presented to the
University of Cambridge

the Rectors
of the University of Cambridge

of the University of Cambridge

the Rectors

of the University of Cambridge

The Honourable
the Rectors

The Strumous Diathesis

The subject which the writer has chosen for his Thesis he fears has long since been exhausted of all the interest which the charm of novelty would naturally throw around it.

But in compliance with the time honoured custom of our Medical School the Author of this has put together in as good order as his time and attainments would admit, his own thoughts as well as the information for which he is indebted to Authors on the subject that he has chosen.

If in writing this brief essay a single idea has been suggested to the Author which will add a particle to the aggregate of human happiness, or tend in the slightest degree to mitigate human suffering, he will feel himself amply repaid for the time he has bestowed on its composition.

From a new Tyro in Medicine nothing is expected the Author is aware but a statement of his own views substantiated by such Authorities as may be accessible to him on the subject. But as a child may find a diamond in the dust, which the more lofty being with his head above the

Mrs. Thomas P. Williams

The enclosed is a copy of the
report of the committee on the
subject of the proposed
amendment to the constitution
of the State, as passed by the
Legislature at its last session.
It is respectfully submitted
to you for your consideration.
Very respectfully,
Your obedient servant,
John P. Williams

clouds may now see, so it may happen that the diligent, and humble student may stumble on a truth which would now occur to the more lofty devotee at the shrine of science. Had the writer the privilege of the Poet, the Orator, or the Divine, Volumes might be written upon the subject that he has chosen and it would still remain unexhausted, but as a mere student of medicine he is aware that it must be viewed in another and a more practical light, and without any further preface he will proceed to its consideration.

The terms Scrofula and Thuma being used as convertible terms the writer will so use them as he has occasion during the course of this essay. The term Scrofula is derived from the Latin word "Scrofa" and was originally used by Vegetius to denote a peculiar disease in Cattle which strongly resembled the scrofulous glandular swellings which occur in the human subject. The Latin Author first adopted it in their Nosological Tables, using it to indicate the swellings which are known to be Scrofulous. Cullen defines Scrofula to be "Tumors of the glands, chiefly

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the purchase of the land for the purpose of building a school house for the use of the colored people of the city of New York. I am glad to hear that you are so interested in the welfare of the colored community, and I am sure that the Board of Education will be pleased to see that you are so active in their behalf. I have the honor to enclose herewith a copy of the report of the Board of Education, which will give you a full and complete view of the state of the school system in this city. I am, Sir, very respectfully,
 Your obedient servant,
 J. M. Smith, Secretary of the Board of Education.

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in the Neck, upper lip and soft part of the nose tumid, face
florid, skin soft, and abdomen large" It is now however generally
thought that Scrofula consists in a peculiar morbid deposit
called "Tubercle" and that Scrofulous swellings of the Neck,
Pleurisy, Tuberculous Meningitis, Enlargements of the joints,
Eruptions &c owe their appearance to this peculiar deposit of
Tuberculous matter - The Physical signs of this Dia-
-thesis are numerous and some of them are spoken of as
being Pathognomonic. They are stated to be "an extreme
whiteness, fairness and softness of the skin, light hair, blue
eyes, a soft and rounded form of the body, and a generally
mild and pleasant expression of the face". The countenance
is for the most part full and rounded, the cheeks tinted of a
bright rosy hue, the teeth of a pearly whiteness but subject to
early and rapid decay, The skin is very easily wounded and
difficult to heal. The Limbs are disproportioned to the
size of the Trunk and are generally slight and well
formed, sometimes those who are of this Diathesis are above
and they are often below the Medium stature -

The powers of the body are feeble and there is but little endurance
 of fatigue. The circulation is generally weak and but feebly
 carried on in the extremities, we have generally torpor of the bowels
 and indigestion connected with this Diathesis. There is a
 great disinclination for exertion or any kind of active labour
 among its possessors and this feeling early in life often influ-
 = ences them in choosing some sedentary and light occupation
 which tends to develop the latent disease that exists within
 them, and accelerate the formation of Tubercle, instead of choos-
 = ing such an active and exposed life as might retard or perman-
 = ently prevent its appearance. But though these individuals
 are thus deficient in physical power they appear to be pecu-
 = liarly gifted in mind or the "God part" of man. They are
 generally of keen perceptions, a great deal of Fancy and
 imagination, warm feelings, and of a sanguine turn in their
 undulations. In early life they are generally distinguished
 for the brilliancy of their minds but this appears to be at the
 expense of their future greatness. They are generally
 nervous and impulsive in their movements. but want

5

In the application, firmness and steadiness of purpose which is necessary to insure success. In fact this Diathesis resembles in some degree the Sanguine Temperament of the older writers. We have another species of constitution belonging to this Diathesis. Now who possess it are of a dark bilious complexion. We have in them round limbs and generally full bellies, muscular weakness, coarse skin, large feet, and hands &c with great apathy or indifference of manner, absence of mind, often intractability of manner, and great obstinacy of character. In fact we have here several of the attributes of what has been called the Lueso-phlegmatic temperament. That intellectual Colick the late Dr Samuel Johnson of England, is the best illustration of this class that at present occurs to the writer. Scrofula sometimes appears in persons who possess none of the signs of the Strumous Diathesis that I have named but this is the exception. The rule is, that it should occur to such persons as those I have described. Conjectivitas, Cervical Swellings, and various Tumors and enlargements

6

of the Glands occur among them who do not apparently
possess this Diathesis, but when any disease of this kind shows
itself in any one notwithstanding his apparent health we may
safely infer from it that he is of the Strumous Diathesis and
that if not cut off by accident or some acute disease that
he will one day die of Tubercular Affairs. Our treatment
in these cases should be prophylactic and of such a chara-
-cter as to prevent the development of Tubercles or such
other disease as we may be led to fear the accession of from
this. Scrofulous disease appears to pervade all the
tissues of the body. It is found in the subcutaneous and
cellular system, and is frequently found eating its way
through the integuments and leaving ghastly wounds exposed
on the surface. This is a form difficult to heal or
treat and on its recovery it leaves Scars or Cicatrices of a
very ugly character. The mucous membranes are often
the seat of its ravages, the Mucous membrane of the
Nose is destroyed, and the Bones become spongy and carious.
The Mucous membranes of the Eye are also attacked

and then we have Conjunctivitis and the several forms of Ophthalmia
 Also the mucous lining of the Bowels and then we have perforation.
 The serous membranes also suffer from this disease. The
 Pleura, the Peritoneum, the Arachnoid are each at times, the
 seat of Tuberculous deposit. It sometimes invades the serous
 Membranes of the brain and causes all the symptoms of Acute
 Hydrocephalus. The Synovial Membranes and lastly
 the osseous system are liable to this disease. When it
 attacks the Bones we have a slight increase of vascularity in
 them, which is followed by absorption of the earthy matter in conse-
 -quence of which they become so much softened that we can
 cut them with a knife. After a time this state of softening
 is followed by exfoliations of the Bone which comes away in
 large flakes. The spinal column is more apt to suffer
 from this disease than any other part of the osseous system.
 When we have softening and caries of the Bones from sitting
 of the Spine angular curvature is produced. The
 Pinworm when attacked by it falls off and without the
 Bone suffering but it (the Bone) becomes covered with large

masses of Adipose tissue, which lay around and enclose it. The
Mesenteric, the Mesocoracica, the Mesocolic and Lumbar
Glands, the Proctid, Vesicular and Glands of the groin are
all liable to and at times attacked by this disease. The
Pancreas is often found scrofulous, the Spleen often in children
but seldom in adults. The Liver though so often function-
ally deranged is seldom the seat of this Disease. The Organs
of generation in both Male and Female, the Bladder and
Prostrate gland in the Male, and the lining membrane of
the Uterus and Vagina in the female, are often attacked by it.
And lastly but the most important, of all the seats of this
disease is the Lungs in *Pthisis Pulmonalis* or "Scrofula
of the Lungs" as Louis calls it. This disease which appears
to be common to our race in all parts of the world but most
common perhaps in our own happy country than any other
possesses such startling magnitude as to make it worthy of
the most serious and earnest consideration of the Physician.
The writer cannot let this occasion pass without taking a
brief glance at this awfully interesting disease.

The Causes which predispose to it are in the writer's opinion
 nearly always hereditary. In some cases however the disease may be
 owing to more immediate exciting causes, acting either in infancy or
 in adult age, these causes acting on the hereditary predisposition pro-
 duce the disease - Again it is the writer's opinion that the disease
can be produced without this hereditary predisposition but then cases
 are rare, while on the other hand when this predisposition exists the
 odds are vastly in favour of the individual, having Tubercular
 disease produced by some one of the thousand causes which are always
 at work to the detriment of human health. And - Again - an
 individual may have the predisposition to it by birth and yet by
 taking proper precautions may pass through life without ever
 having the disease - There is no other disease that is so generally
 prevalent among us as this and none other that so often ravages
 among its victims the "loveliest of Earth", the young, the beauti-
 ful as this - Thousands who now crowd the Court, the Camp,
 the Grove and the busy marts of trade, carry within them
 the incipient seed of this disease which is one day to
 check their career. Nothing that Science can do will

avail to avert the doom of them. The faintness of Beauty
 and the morbidly active mind and sensitive feelings which accom-
 -pany wealth and Talent too often mark them possessed as belong-
 -ing to this peculiar Diathesis. In this disease we are often com-
 -pelled to stand idle but not indifferent spectators of a doom
 we cannot avert. Now the language of Truth and Candour
 often compels us to blast the fond but fallacious hopes that
 appear to characterize this disease to its latest stages. Here
 every word said by us relative to the disease if we are properly
 informed regarding it can be relied up as oracular and is
 dwelt upon by the sufferer as the "Vox dei". For so
 plain is the Thoracic Cavity now made to us by Auscult-
 -ation that its contents can almost be read like an open
 Book. The Causes which give rise to this Disease
 or to this Diathesis are numerous and scarcely well defined,
 Langstaff, Musson, Ohler, Louis, and Andral, have
 all detected Tubercles in the lungs of the Foetus. Though
 there can be little doubt but that both the predisposition and
 the disease itself can be derived from the parents, there is

also reason to believe that it is not exclusively so derived but that
 certain causes, to which we are subjected through life can produce
 the same effects. That it is not communicated by direct
 contact or by any intercourse, every days observation must
 teach us. The writer about a year since slept for some
 weeks in the same bed with a friend, a young man who was
 then and is now suffering from confirmed Pthisis. This gentle
 man is now in the W. Indies in the last stage. Yet the
 writer cannot believe he is infected with this disease. But
 it is due to the very respectable authorities who are in doubt,
 as to the contagiousness of this disease to state, that had the
 writer known at that time that there was any doubt on
 this subject, he should certainly have allowed himself
 the benefit of said doubt. Baudelocque quotes the fact,
 that in the Hospital des Enfants 150 Beds are occupied by
 children many of whom are scrofulous yet the disease
 was never known to be communicated from one to another,
 Also at the Hospital of St. Louis observations
 confirms the same fact. Bad air, bad diet,

and exposure in fact, bad Hygiene generally no doubt tends to produce it. - Altho' we find it unfortunately very common among those who are subject to none of these influences. - We find that this Diathesis prevails to as great an extent among the children of the wealthy as among the poor. - Among those who are reared in affluence and luxury as among those who are reared in Poverty and Want, - In fact we often find those who are well fed and clothed extremely liable to these diseases while the hardy sons of Poverty enjoy a comparative immunity from their effects. - Still there is no doubt but that as a rule the poor who are condemned to a life of not only toil but exposure in many cases to pernicious exciting influences, are more liable to its visitations than those in the higher ranks whose wealth will allow them to select that pursuit in life which they find most congenial to health. - As regards location, we find that this Diathesis is as prevalent about in one location as in another. - And we often find that if there is any difference

and upon in fact has appeared himself in that time
 however. Little in fact, in fact, in fact, in fact
 among them into our subject, a man of this nature
 the fact that the Doctor's power is a great one
 without among the children of the world, among the
 fact. Among them, and our mind in appearance and
 among as among them, into our mind in fact, and
 In fact we often find that we are not the only
 without doubt to the children of the world, and
 I must enjoy a comparative immunity from this
 fact. Little then, in fact, in fact, in fact, in fact
 who are confined to a life of out-of-door appearance
 may come to find their evening of leisure, and
 little to be undertaken than that in the high world
 when we shall with others, thus to allow the fact
 in life which they find most congenial to health.
 The regular location, in fact, that the Doctor is a
 somewhat about in the location or in another. The
 we often find that of this is any appearance.

it appears as though those parts of the country which should be considered the most healthy are often most liable to it. "In mountainous districts where from the scarcity of population there necessarily follows a great deal of intermarrying this Diathesis prevails to a great extent." This fact which is confirmed by the writer's personal observation goes a great way to prove its being hereditary. Luyol whose work on Scrofula the writer has read with a great deal of interest appears to lay great, perhaps too great stress on the fact of its always being hereditary. Most persons of this Diathesis if it develops itself in early life die young. Those who reach the period of puberty are much infatuated in health and if they marry and have families they always beget Scrofulous Children, or Children in whom in a few years this Diathesis develops itself, they have occasional remissions but they never possess the fine constitutions that belong to those who were originally well made. Although such persons appear temporarily to be cured they never possess the power of procreating vigorous children as do those who

are of a more vigorous frame. We find scrofulous individuals
 who appear to be relieved from "Tubercles" and yet die from their effects
 a longer or a shorter time after their apparent cure. This
 Pulmonalis often appears at the age of Puberty and is
 apparently relieved at this period to again recur for a
 number of years when by some error in dress or improper
 exposure a relapse is brought on which in a short time proves
 fatal. The same thing occurs with the scrofulous di-
 -eases generally. Among the most prominent causes of
 this Diathesis are ranked the syphilitic Virus in the parents,
 the abuse of Venereal pleasures and precocious marriages in
 all claps of Society. Onanism has been named as a cause
 but Lugeol thinks that it is rather an effect of this
 Diathesis. Weakness, or imbecility on the part of the
 parents either the father or the mother, who are epileptic,
 paralytic or deranged. Sometimes the cause are with
 one of the parents, sometimes with the other and sometimes
 it owes its origin to both. In fact its being hereditary is
 almost indisputed and such being the case our

and a more vigorous frame. The first stage in this
 the object to be attained is to be able to
 a degree of a distinction in the nature of the
 of the mind of the object of the eye of the
 apparently distinct in the first stage of the
 number of years which it may live in the
 known a certain number of years in a certain
 fatal. The same may be said of the
 - and generally. During the first stage of
 the matter in which the object is seen in the
 the object of the mind is known and perceived
 also part of the object. The same may be said
 let the object be that which is seen in the
 position. The object is in the first stage of
 cannot see the object in the matter and in the
 position or change. The object is seen in the
 one of the first stages in the other stages
 the same is seen in both. The first stage of
 the object is seen in the first stage of the

Lawgivers should frame and pass such laws as would put
 a stop to the marriages by which this evil is perpetuated.
 It belongs to Science to prepare the way for legislation on
 this subject. Apart from the horror of perpetuating disease
 there can be no doubt but that marriage is almost always
 fatal to those persons who are predisposed to Tubercular disease.
 In Italy and the South of Europe it is still believed that
 these diseases are contagious but experiments made by
 Lugol both by inoculation and in various other ways
 prove that it cannot be conveyed by contagion and that it
 is always transmitted or is a sporadic disease. A
 meagre and scanty diet, bad Water, sleeping in badly venti-
 -lated apartments have each been named as among
 the causes of this Diathesis, but the writer cannot lay
 too much weight on them, inasmuch as it must be evident
 to all that the disease is as rare among those who possess
 all the Comforts and even the Luxuries of life as among
 other classes. There is no doubt in the writers mind
 but that the active, exposed life which Poverty inflicts

upon his sons, often acts rather as a Prophylactic than otherwise,
 as we seldom find it prevalent among Sailors, Drivers, Butchers,
 Farmers, Towns, &c. &c. which an inactive or sedentary life
 often leads to the development of this class of Diseases -
 where the predisposition to them exists. As to the influence
 of Climate on them we cannot say much. In all parts
 of the World, from the Snow clad mountains of Siberia to
 the sunny plains of Italy this deathly appears to prevail.
 "The northern Pich and fiery Nunn" appear alike
 subject to its influences. The Temperate Zones are
 perhaps now subject to its visitations than any other.
 The moist Climate of Great Britain appears to be
 much subject to it. And our own Country suffers
 more from its ravages than any other class of diseases.
 It is the writer's opinion that two thirds of our national
 mortality leaving out of the calculation those deaths
 which are the result of infancy, of Old age or of
 accident, is caused by diseases belonging to this Class
 or more strictly speaking to this Diathesis.

Now does Tubercular disease appear to be confined to the Human
 species. Almost all animals when subject to its fondisposing
 influences appear to be subject to its ravages. This has been
 particularly observed in those denizens of the Forest who
 transplanted from their native wilds are condemned to
 perpetual imprisonment in our menageries. Among these
 nearly every death which occurs has been found to be attri-
 -butable to Tuberculous deposits. In Monkeys particu-
 -larly this Diathesis prevails to a great extent. It must be
 apparent then that this Diathesis is confined to no locality
 or to no race, but that from "Greenland to the bound Coast
 to Africa Terra deserta" from the regions of almost perpet-
 -ual night to where the Dog star always rages all
 Nations and People are subject to its influences.
 Having then spoken of its Physical and Diagnostic
 signs, of its cause and of its locality we must now
 devote a short space to its treatment. Of this unfa-
 -tunately for humanity not much can be said.
 Our main means must be prophylactic or Hygienic,

The main reason for the
 delay in the completion of
 the work is the lack of
 funds. It is necessary to
 raise more money to cover
 the expenses. The committee
 has decided to hold a
 public subscription. It is
 hoped that the public will
 be generous and contribute
 towards the work. The
 committee will be glad to
 receive any contributions
 at any time. The work
 will be completed as soon
 as possible.

Children who are born of scrofulous parents should be
 always warmly clad, and every means as regards Diet, Air
 and avoiding exposure should be put in requisition to counter-
 = act the hereditary tendency. - And through life, the strictest
 attention should be paid to such hygienic rules as will
 improve the general health and increase the physical
 stamina. - Its development cannot be retarded by
 the mere exhibition of Medicines. - Here we must rely
 entirely on the "vis medicatrix naturae" and the use
 of such Hygienic means as has been hinted at above. -
 The Treatment, if any, should be mild and of the
 expectant character. - Blood letting occasionally when
 there is any febrile accession. - Strong Purgatives as a
 general rule should be avoided and aperients given. -
 Quinine and Conium, and the preparations of Iron
 have all been highly spoken of, and are doubtless of
 great service. - The Liqueur Potassae, the employ-
 = ment of Acids and Alkalies, the Carbonate of Soda,
 and Rhubarb have all been recommended and in

many cases are doubtless of some value - of all the Agents however that have been used in these Diseases, now appear to have been more successful than the preparations of Iodine and its compounds. The most common form appears to be Iodine in combination with Hydriodate of Potassae. This taken internally or Iodine in Baths appears to be Legol's grand remedy, and from the number of cases which he reports of Strumous Tubercular diseases that he has cured with it, together with the testimony of other respectable writers leaves us but little room to doubt its efficacy. Legol with all the enthusiasm of a Frenchman speaks of it as almost a Panacea for all the diseases of this Diathesis. The class of diseases embraced under this head however are so numerous that no one remedy can be expected to cure them all. His treatment must be general and varied of course to suit the different cases. Our Hygienic treatment must commence towards the inheritors of this Diathesis during infancy. For early education

should be prevented, and every appearance of precocity in
 intellect should be frowned down, raving, thought, solitude
 displays of feeling and pensive disposition should be
 discouraged, while cheerfulness, gaiety, exercise in sun light and
 in the open air, and whatever tends to procure a healthy state
 of mind and body should be attended to. The wearing of
 comfortable clothing and avoiding all improper exposure as well
 as all exciting moral emotions, particularly those of a depressing
 character, together with the selection of such a pursuit in life
 as will embrace a proper portion of out of door labour in fine
 weather, say the life of a Farmer, are among the means which
 we must use towards those individuals in whom this Diathesis
 prevails to prevent its development. In short our course
 must be entirely Hygienic or more of that than any other
 character. By such a course the direct access of the
 disease of this Class may be averted we may even hope pre-
 -vent it, while by their neglect the seeds of Disease may be
 more speedily developed. No class of disease deserve the
 Physicians most serious attention more than this and

I have the honor to acknowledge the receipt of your letter of the 14th inst. in relation to the above mentioned matter. I am sorry to hear that you are not satisfied with the result of the investigation. I have been unable to obtain any further information from the authorities in this regard. I will continue to endeavor to obtain the information you desire and will keep you advised of any progress. I am, Sir, very respectfully,
 Yours obediently,
 J. M. [Name]

in none can his advice be of more value. By a proper
 exercise of his skill and influence he can here prevent a great
 deal of suffering and it is his imperative duty to do so. By
 preventing if possible the intermarriage of scrofulous people
 he can prevent the entailing of these diseases on a progeny who
 from the very nature of things must be short lived and feeble.
 His duty to Society should induce him to do so. And altho'
 we do not expect his opinions in these matters to have the weight,
 to which they are entitled, still as a conscientious man he can
 do no less than express them. Altho' these diseases are looked
 upon in the most cases as incurable still it does not become the
 Man of Science and the well read Physician, to stand
 idly by with folded arms without making an effort to put
 off for a time the evil day, or to assuage and alleviate
 the pangs that accompany them. It is our duty as well as
 is our privilege to do on such occasions all that our art
 will suggest to lighten the pangs which suffering flesh is heir
 to and adopting a firm but moderate course between the
 rash boldness of empiricism on the one hand and ill

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above mentioned matter. I have the pleasure to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
 Your obedient servant,
 J. M. [Name]

timid scepticism and timidity on the other, armed with the shield and Buckler of humanity and Science stand boldly in the breach and by a skilful and judicious course prevent his Patients hopes or fears yielding a golden harvest to those Vampires, the Students of quack Medicines - who are always willing to take him on their charge and "Coim his blood to Zechins". There is no obligation assumed in the duties of a Physician either expressed, or implied the weight of which the Writer feels more deeply, or responds to more cordially than this, our duty to frown down and expose such nostrums - When all human means fail and we can "no longer hope against hope" then and not till then we can pronounce the doom of our patient. But how careful we should be that the circumstances of the Case are such as to justify our prognosis - How cautious we should be in pronouncing it - And when we are satisfied that our patients doom is irrevocably registered in the Book of Fate still we are to be the friend and Physician. Many are the symptoms to be watched, the pains to

be alleviated and the consolations to be given as our patient
 approaches the "dark valley of the shadow of death"
 Now we have the noble privilege of acting after the day
 for the interference of our medical art has gone by as the
 friend of our patient - Like the good Samaritan we can
 pour the Balm of consolation into his spiritual wounds and
 now when "life's fever'd dream is o'er", we can by the tendering
 of our sympathy and advice to surviving friends secure to
 ourselves that happiness which arises from a consciousness
 of duty well performed. And on the other hand - When
 our Prognosis is to be a favourable one - When we can
 administer our medical Agents in addition to the travel
 or the voyage that forms a part of our Hygiene and
 when time with healing on his wings rolls around and our
 patient returns with the flush of health upon his cheek -
 and we feel the warm pressure of his hand and see perhaps
 the tear drop of gratitude glistening on his eye who
 is there who would not envy the Physician his feelings
 of satisfaction at such a moment. Then we can

indeed realie - that -

"Love linked with Knowledge crowns our noble art"

"Gold buys the Science but Heaven rewards the Heart"

It is a matter of satisfaction to the Writer that he has chosen a calling which owned our Saviour himself as a practitioner, and which has received the sanction of the great and good men of all ages from the remotest antiquity - No other profession embraces among its followers a greater number of brilliant names than the goodly array that graces our profession from the days of Hippocrates and Celsus down to the present - Nor is it without its rewards and pleasures which as the "green Oasis in the desert to the parched and weary traveller" serves to cheer and lighten our pilgrimage through the barren wastes of life - The Writer is aware that it has been abused by the Satirist, derided by Wits, and lampooned "whenever folly shakes her rattles" but in defiance of this and the more serious injury done to it by the unworthy course of too many of its own followers, still it ranks as one of the most honourable among men -

"The most beautiful of all things
 is the human eye, and the most
 beautiful of all eyes is the
 eye of a woman, and the most
 beautiful of all women is the
 woman whose eyes are like
 the stars of heaven, and whose
 smile is like the sun, and whose
 heart is like the flowers of the
 field, and whose soul is like
 the angels of God."

Progressive as all other Sciences are it is a matter of congratulation to the Philanthropist that our art has kept pace with them - The day has gone by for consulting the Horoscope, or trusting to the supposed efficacy of charms or Amulets or incantations in the treatment of disease -

Our science is now a positive one and a long train of brilliant discoveries which have shot across our literary horizon with the dazzling splendour of the Aurora Borealis across a northern sky prove that its march is onward - The discovery of vaccination by which Smallpox is nearly disarmed of its terrors, and by the observation of a German Chemist that wonderful Agent Iodine which removes the horrors of Bronchocela and cutaneous, & still later Laennec's great discovery of the Stethoscope by means of which we can explore the contents of the great cavities of the body, decide upon the existence of disease, make our prognosis as to its final result and use those means which our skill suggests to us to avert it - All these prove that a new era is about

The first of these is the fact that the
 body is not a simple mass of matter
 but is a complex system of parts
 which are constantly in motion
 and interacting with each other.
 The second is the fact that the
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 and interacting with each other.
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 The tenth is the fact that the
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 and interacting with each other.

opening on our profession - That much remains yet to be discovered as regards the best method of treatment in many diseases cannot be denied - But enough has been done to prove to the satisfaction of the writer, that the full burst of that perfect day of which we are now catching the first glimmering is not far off - And although Pausanias and Catholicons exist only in the brains of the quacks of this, as did the Philosophus Stone in the brain of the Alchemists of the middle ages, still the day is not far off when without being thought Utopian in our ideas we may reasonably hope to find in the hands of our practitioners such an increase of our specific Medical Agents as will tend to disarm that Hydra headed Monster Disease and Death will only be occasioned by accidents or that natural decay of the Body which always accompanies old age - That such a consummation is devoutly to be wished for none can deny and to bring it about, requires the united exertions of all the Members of our profession each adding his mite to the common

opening on our profession. The number of
 in business as regards the but without that
 human cannot be done. The number of
 from the satisfaction of the world. The
 of that part of what we are not getting
 first planning is not far off. The
 and conditions exist only in the form of
 the world the things that are in the
 part of the middle age with the
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 such an increase of our
 as well as to show that the
 and death with a of the
 natural decay of the body which
 old age. The number of
 to be with for men can be
 regarding the number of all the
 profession each showing the

stock of knowledge and observation. By this if we doubt accomplish as much as the enthusiasm of the Writer would lead him to hope, we will accomplish something, much more than if without effort we sat sulkily waiting for such improvements as chance or accident might reveal to us.

And in concluding this long digression from the subject now immediately under consideration the Writer must express his feelings of Gratitude and respect for his Preceptors in this Institution to whom tuition he feels indebted for the largest portion of his limited medical knowledge. This may not perhaps be the most fitting occasion to make such acknowledgements yet the writer cannot but take the only opportunity that he will have of expressing himself in improved. That the future of his Alma Mater may be as useful, as brilliant, and as prosperous as it has hitherto been is his most sincere wish and that his own career

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in life shall not render him unworthy to be ranked
among the Sons shall be his earnest endeavour -

F. J. M. P. S.

in life shall not be the least amount of success
among the great who in his country

W. J. W. B.

Inaugural Dissertation

on

the Malaria

Submitted to the Examining

Board of the

University of Virginia, in conformity with the

Requirements of the

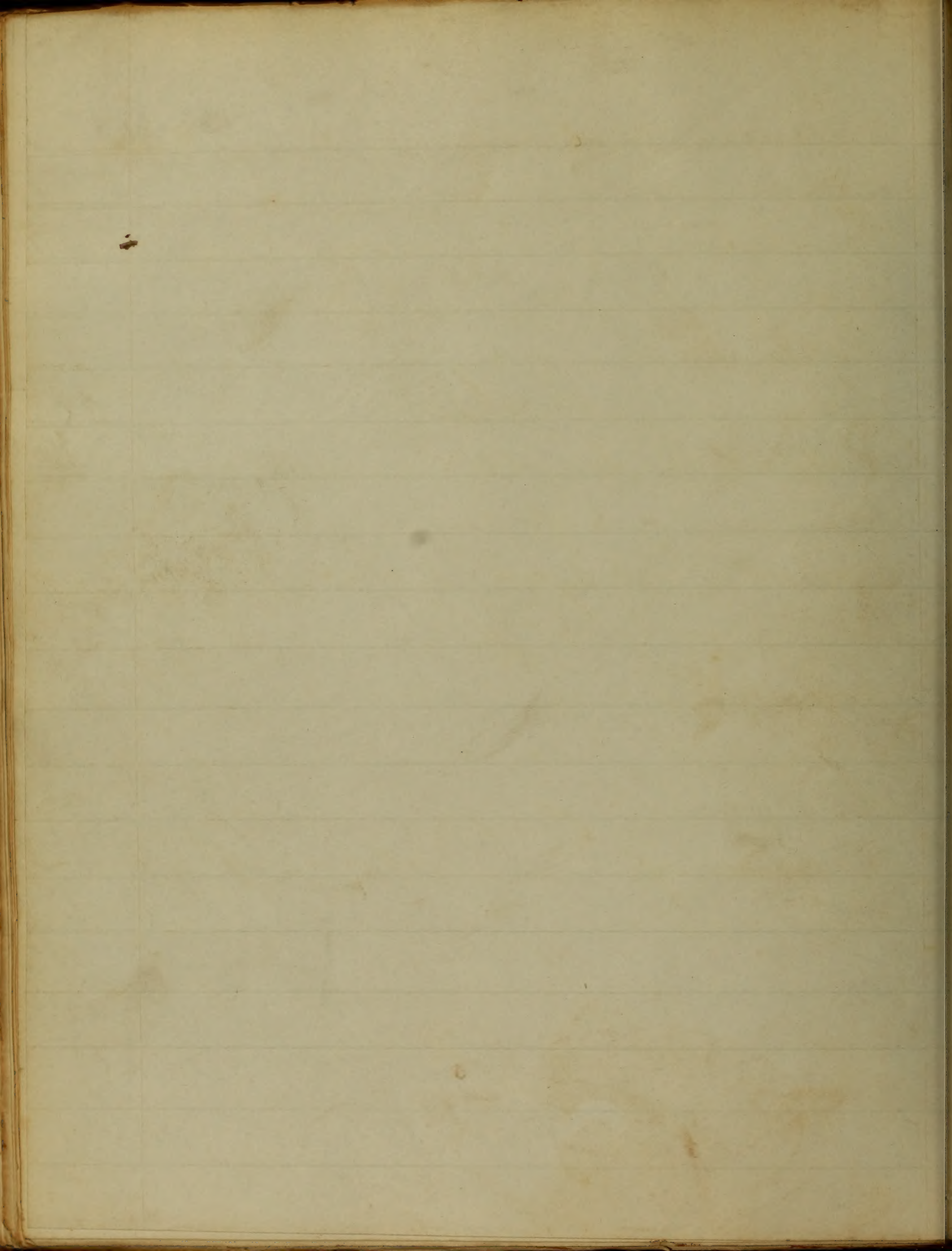
University of Virginia, in conformity with the

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Requirements of a Doctor of Medicine

by

John P. Jones



An

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University of Maryland
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by

W. H. Bran

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My friend and professor

Charles Edward

Professor of the Department of Mathematics

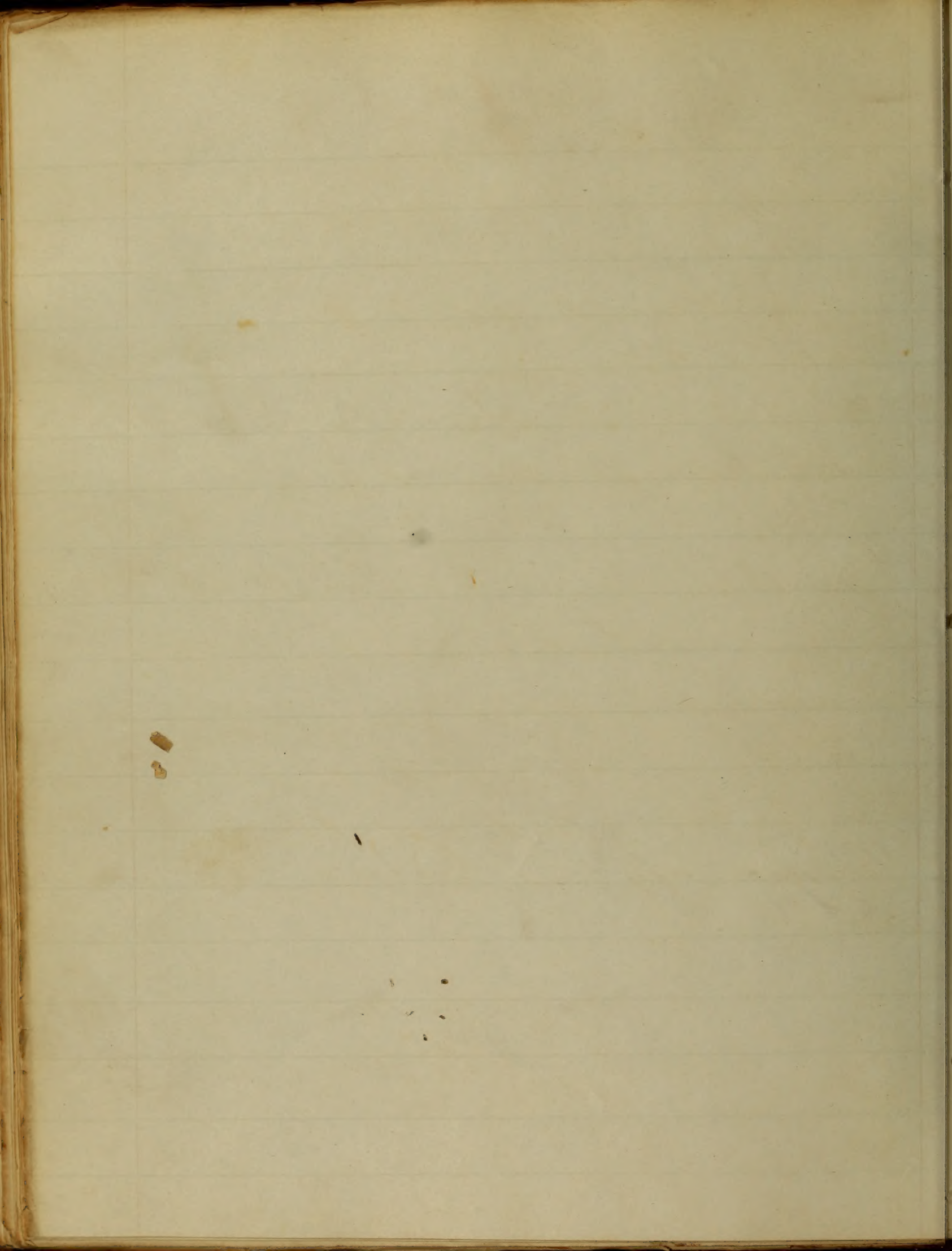
University of Maryland

Sir,

I feel that it is a great
pleasure to have you
as a student of my department
and I am sure that you will
benefit greatly from your
study here. I am sure that
you will find the first part of
your study very interesting.

Respectfully

Edward



To

My friend and Preceptor

Samuel Chew A. M. M. D.

Professor of Therapeutics, Materia Med. & Hygiene

In the
University of Maryland.

Sir,

Feeling that I owe you
a debt of gratitude for your kind
rest to me during the time I have
been reading with you, Permit me
to inscribe this the first fruit of my
study to you

Respectfully

H. H. Bean

to
The printer and publisher

James Blair, Jr.

Professor of Theology, Union Theological Seminary

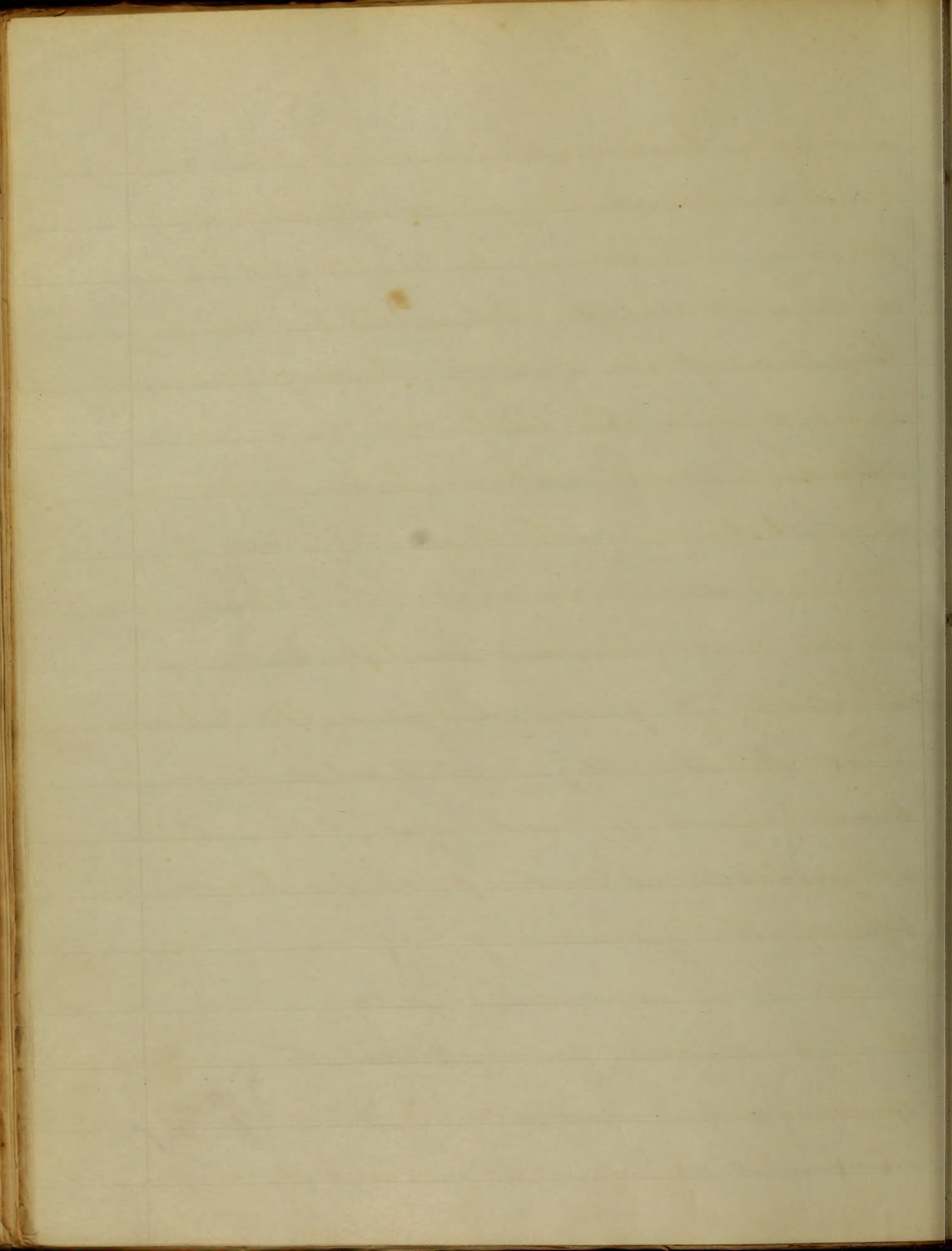
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24.
I believe that I am your
a debt of gratitude for your
and to me during the time I have
been connected with you, I cannot
be indebted to you for your
kindness to you

Yours truly,
James Blair, Jr.

✓

Being in the possession of the Institution
that each candidate for graduation shall
prepare a thesis of his own composition
which shall be presented to the faculty for
their approval, with great diffidence
I undertake this task. The many great
advantages under which a student would
shout laborer with regard to such an
attempt, could be sufficiently obvious.
There is of course a more liberal
knowledge, as has been but a short time
to prepare a thesis, and that has never
before been done among the various
subjects which are presented to him
during the lectures by each of the
faculty members.
He has no personal or practical knowledge
of the subject he undertakes to do
and does not receive any information to help



Seeing in the Circular of this Institution that each candidate for graduation shall prepare a thesis of his own composition which shall be presented to the faculty for their approval, with great diffidence I undertake this task. The many disadvantages under which a student necessarily labors with regard to such an attempt must be sufficiently obvious.

He is of course a mere tyro in medical knowledge, he has had but a short time to prepare himself, and that has necessarily been divided among the various subjects which are presented to him during the lectures by each of the different Chairs.

He has no personal or practical knowledge of the subject he undertakes to discuss, & must derive his information solely from

-The observation & experience of others.

Under such circumstances I think it must be evident to all that he can scarcely be expected to do justice to himself or to render any material contribution to the illustration of the subject which he has selected for examination.

The subject which I have chosen is at once both Copious and difficult.

Very numerous indeed are the Authors who have written on it and the men of Science who have investigated its origin and source and the peculiar characteristics of it, and still is it a hidden and occluded subject to the mind of finite man.

This subject is Malaria an agent we only know by its effects.

The observation of the
the fact of the
I must be content to
One I myself be expected to
I myself as a matter of
Contribution to the
subject which is the
conclusion.

The subject which I have
once both before and
The necessary means are
who have written on
of Science who have
origin and the
character of it and
written out several
number of fine
The subject is
we only know by

The proofs of its existence are altogether negative, and sadly may it be said that we derive those proofs from the devastating ravages which are made on the human family who are exposed to its pernicious influence.

It is related by Bishop Heber that the lower animals have an instinctive knowledge of its destructibility in certain parts of India, and leave their native homes, and seek for shelter in higher climes during its prevalence.

Macculloch when speaking of this agent remarks if the Sword had slain its thousands, Malaria had slain its tens of thousands.

It is disease, not the field of action which digs the grave of armies, it is Malaria by which the burning spirit-

The proofs of its existence are
negative, and not of a
that we know these proofs from
the observation of things which are
made on the human body which
opposed to its formation of
It is stated by Bishop Butler that the
same number have an influence
knowledge of its destination
this part of which, and how the
action occurs, and that it is
higher classes during its formation
recalled when speaking of the
remains of the body for the
the same, but there is
of the same
It is stated, not the full of
which says the power of
Matters of which the body

-fetter for better things is quenched, and
in the coward's bed of death this is the
destroying angel, the real pestilence
which walks at noonday, and to which
all the other causes of mortality are
but as feeble auxiliaries in the work
of destruction.

And I may remark
here that our own Army has suffered
far more in Mexico during the past
Summer by this agent, than they have
by the Mexican Sword:

"They did not fall in eager strife

"Upon a well-fought field,

"Not from the red wound poured their life

"When Covering foemen yield

"The Archangel's shade was slowly cast

"Upon each palled brow

"But Calm and fearless to the last"

"They sleep securely now!"

Dr. Watson remarks in this country i.e. in England
Thank God we witness its milder evils only,
and those not very often, but it is the bane
and scourge of large portions of the World.
Whether you practise here or abroad it is very
fit that you should know the habitats,
habits and qualities of this wide-spread
poison.

If I recollect aright, our professor
in Surgery in his introductory address
in reference to this subject remarked
'tis not when we have an Enemy to deal
with who fronts us face to face (though
he may be strong & formidable) that we
dread the attack; but 'tis when we have
an Enemy who is dark & secret in his
attack & conceals himself so that he may
the more effectually strike his blow when
we are least suspecting.

Such is Malaria! it habitates the air we breathe, and still we cannot detect it there.

The atmosphere which is supposed to contain it has not been proved to be anything more or less than common healthy air;

Chemical Analysis having failed to detect by the most delicate reagents anything which may be properly called Malaria.

In the Cyclopaedia of practical medicine Vol. 3rd page 174 in an article by Dr Jos.

Brown I find the following. The chemical & physical properties of Malaria are unknown to us, the experiments which have been hitherto performed to illustrate its nature or even to discover its presence having furnished very unsatisfactory results. The air collected above the marshes of Fort Fuentes, (in Spain) was found by Goltzoni as pure as that at the Summit

Book is contained in the
series, and the same is
The volume is a copy of
and it has not been found to be
more or less than common
The volume is a copy of
of the most valuable
which may be purchased
for the purpose of
Vol. 2. The price is
I have found the following
and the physical properties of
unknown to us, the
then the best specimens
section or even to
being furnished by
The volume is a copy
of the most valuable
The volume is a copy

- of Mt. Lequone if not more so; and M.D
obtained in the most confined marshes as
on the most exposed hills 78 parts of azote
21 of oxygen and 1 of carbonic acid gas
from an analysis of the air.

It is true that M. Thenard and Dupuytren
found that the Carbureted Hydrogen dis-
engaged from marshes left in the water
through which it was passed a peculiar
& very putrescible matter; and M. Julia
discovered that dew gathered in the neigh-
bourhood of marshes contained likewise
a matter capable of fermentation; but
there is no evidence that these substan-
ces are malaria nor were they proved
to be so do we know anything of their
chemical properties but their capacity for
undergoing the putrefactive process.

Again Library of Medicine Vol. 1 page 233

The first of these is the
... in the ...
... the most ...
... of ...
... from an ...
... the ...
... found that the ...
... engaged from ...
... through what ...
... a very ...
... discovered that ...
... treatment of ...
... a ...
... there is no ...
... as we ...
... to be ...
... chemical ...
... undergoing the ...
... of ...

- Many attempts have been made to arrive at a knowledge of the physical qualities of this agent. Moschoti and Brosci examined the atmosphere, the former of some very insalubrious rice-fields, the latter of an unhealthy spot in the Papal state, from what examination it appeared that the vitiated air contained albuminous floculi somewhat viscid in appearance, but the nature of which was not understood; and that it possessed a certain weight as it did not appear to rise in the atmosphere unless mingled with it by currents of air.

All that is valuable on the Constitution of the Atmosphere of those places where ague is prevalent may be summed up from the results of the extensive investigation made by M. Julia; first the air of these several situations contained the same

Many attempts have been made to
at a knowledge of the principles
of the system. The result is
various in the attempt, the progress
very indistinctly appears, the latter
and itself that in the paper itself, however
mentioned it appears that the system
the system appears to be
what is not in appearance, but the
of what was not understood, and that
perhaps a certain degree of the
appear to be in the system, and
perhaps with it of course of an
the fact is evident in the Constitution
the description of these principles
a general way to be known, and
the result of the system, and
written by Mr. Justice, first the
second edition, and the

- principle and in the same proportion as
the purest air of the most healthy situation,
Second, Marsh air contains a principle which
eludes the test of the most delicate Reagents.
Third, Though the nature of this noxious a-
gent is unknown, there is reason to believe
that its pernicious effects depend on a fow
of vegetable and animal substance in a
state of decay or on a solution of those
substances in air or the gases resulting
from their decay; Fourth Experiment has
not yet demonstrated in Marsh air the
existence of Azotic gas, Carburetted hydrogen
Ammoniacal gas or any of the gases resulting
from decomposition; and if they be present
in this vapour their quantity is too small
to be appreciated.

This brings us to the next branch of our
subject viz its origin and source —

- Here in my opinion a difficulty presents itself; the Author of our text-book Dr. Watson having collected certain facts from observations made by Dr Ferguson (during a Campaign on the Continent of Europe), which to him are conclusive but nevertheless in opposition to the generally received opinion on this subject.

From the time of Lascisci an Italian, who was born at Rome 1654, & who was the first to investigate this subject it had been the prevailing belief that Malaria was consequent on the putrefaction of vegetable matter or arose from marshes: from which Circumstance it received the name of Marsh Miasmata.

Having read carefully the facts given by Dr Watson and from which he states that neither marshes nor vegetation are

- necessary to produce malaria; that the peculiar poisons may abound where there is no decaying vegetable matter and none to decay.

As the prevailing belief is in my opinion an erroneous one & as it is really of great importance that correct views should be taken and disseminated by Medical men on this subject, I will mention a few of the most striking facts detailed by Dr Ferguson.

Now since these facts, after having carefully examined them, are not conclusive to my mind, since they are opposed to such high authority, I will mention two of the most striking of them and then give my reasons for differing from the inference which has been drawn from them.

In the year 1809 several Regiments of our

- Army in Spain took up an encampment in a hilly ravine which had lately been a water course, pools of water still remained here & there among the rocks so pure that the soldiers were anxious to bivouac near them for the sake of using the water: Several of the men were seized with violent remittent fever before they could remove from the bivouac the next morning. Till then says Dr Ferguson it had always been believed amongst us that vegetable putrefaction (the sum of decay of vegetables) was essential to the production of pestiferous miasmata; but in the instance of the half-dried ravine before us from the strong bed of which (as soil never could be for the torrents), the very existence even of vegetables was ~~so~~ impossible proved as pestiferous as the bed of a fern.

The second case mentioned is as follows:

After the battle of Solivera the Army retreated along the course of the Guadiana river, into the plain of Estremadura; the country was so arid and dry for want of rain that the Guadiana itself and all the smaller streams, had in fact ceased to be streams, and were no more than lines of detached pools in the course of that had formerly been rivers.

The troops then suffered from remittent fever of such destructive malignity, that the enemy and all Europe thought the British host extirpated.

In both the cases mentioned it seems to me that there are strong reasons for supposing a priori that malaria would have been produced, and that from vegetable putrefaction.

Indeed I can't see wherein those cases differ from any other in which we find-

The first case was a woman in a yellow
After the death of Johnson in the year 1845
along the course of the Pennsylvania road
the place of Pennsylvania County and the
and they for a number of years had the
they and all the families there, but in
first case it is to be seen, and was in
more than half of October 1845 in the
course that has formerly been
the troops the support from the
if such a situation was to be
out of the troops the
expected.
In both the cases mentioned I
that there are many more
a person that is
person, but that
person I could not
After from any other

- malaria acting; and until we know the ultimate composition of this poison, I think it will be impossible to say with absolute certainty from what it does originate.

Here are water-courses which have been dried by the Sun & Air with only a line of detached pools and their beds exposed to the action of heat, air and moisture, three of the agents which are generally supposed to be necessary in the production of this poison, and indeed it is obvious to my mind that there was vegetable matter also: since there were three of the agents present which are supposed to aid in the production of this poison, let us consider the reasons which induce us to believe the fourth, or vegetable matter was also present. —

- We know that all considerable water courses are formed by a number of tributary streams, and that these receive the drainings from the hills around during rain and we also know that generally these washings from the hills contain a considerable quantity of vegetable matter, such as muds, leaves &c; And may we not ask, what becomes of this refuse-matter? is it not deposited either in the bottom of the large stream or on the adjoining lands? Now let us examine for a moment the reported case; the first is a hilly ravine, the second the Guadiana River, now that there should have been vegetation, or at least vegetable matter collected in and around those streams is to my mind obvious: Usually there is at certain seasons of the year an abundance -

- of undergrowth around the river bottom
and here I should think we would be
likely to find it in a very suitable state
for giving rise to malarial after having
lain rotting in water for months during
the winter & spring, and then at the drought
came on being gradually dried and at the
same time being exposed to the heat & air
it underwent decomposition and thus pro-
duced gases which were so destructive to the
British army; I cannot see wherein
these cases differ from others where we
are accustomed to see the effect of this
agent: Take any malarious country (I
mean marshy country), and we will per-
ceive the same cause at work to produce
the same results in a less degree; circum-
stances in these cases render results more
striking. During the winter & spring months

of under-graduate accounts to have been
our line of business - there is no
way to find it in a copy but the
for giving me a number after the
has nothing in water for months
the number of days, and also of the
came on being furnished with
some time being expected to be
it was not until after the
then found what was the
British army; I cannot be
then could differ from what
an account to be the
of it. There are no
mean nearly every day but we
since the same result of war
the same result in a few days
thence in this case, for the
History. During the

marshes are generally covered with water and at the hot season come on they gradually dry and the soil becomes exposed to the action of the sun & air:

Their soil contained a very large quantity of vegetable matter which being acted on by heat air, and moisture becomes rotted and gives rise to gases which are sometimes even offensive to the smell & which taints the atmosphere of the surrounding country with that peculiar poison which acts as both a predisposing & exciting cause of intermittent & remittent fever.

In reading Dr Watson on this subject I was struck with the peculiarity in his manner of accounting for things; in his argument against the necessity of vegetable matter being present when this poison is produced he cites as an instance the rotting Cabbage

- leave around Covent Garden and those
which taint the air of the streets from
the neglected dust dose of London during
the hot weather of summer which give rise
to no ague; and afterwards de Say, Cocteur
paris, agues are much less common in
large towns than in country villages, this
had been oddly enough accounted for by
saying that populous cities are so full
that there is no room for the malarial;
a much more rational & probable expla-
nation is that which ascribes the freedom
of crowded towns and thickly inhabited
districts to the number of fires burned
in them.

Now that marshes are not the only source
of malarial I am perfectly satisfied, but
that they are a very frequent source I
think, from fact observed, need no argument

least account of the various matters
which touch the one of the other from
the vegetables that they of London
the lot number of numbers which give
to me again, and of course, I think, about
partly, again, we must be common
large found than a country village, which
but been not, though, however, for
saying that the particular, they are in fact
that there is a reason for the material,
a much more laborious, I think, after
than is that which would be possible
of course, but not that, which, which
difficult to the number of feet, which
in this
then that matter, and not the only thing
of material, I am perfectly satisfied, but
that they are a very frequent source of
think, from fact, which, which, which

I might cite cases innumerable to prove that they are so, but I think it unnecessary. No observation is more general than that Ague is endemic among the inhabitants of places where marshes abound, and in season as the Spring and autumn when the effluvia arising from them are more active and the body perhaps more liable to be affected by their peculiar poison.

There are few marshy countries in temperate and tropical climates in which intermittent fever is not known. The connection therefore between them does not depend on limited but a comprehensive induction of facts; the truth is abundantly confirmed.

Ague indeed sometimes appears where the influence of marsh effluvia cannot be traced; and the term Malaria has been brought into modern use to denote a

I might also have mentioned to you that
they are so full of them of course, as
the situation is more general than that of
a particular country, the situation of place,
when generally observed, and in which
the things are not common when the
subject is more than an mere action in
the body, which is more than to be
by the general system.
There are few words, especially in English,
and perhaps in other languages,
from a not known. The common
for between them, but not before
which is a very common mistake
first; the first is a very common
After which, however, appears to be
the influence of words, especially in
in terms, but the term "between" has
brought into question, and to show a

- morbid atmosphere arising from the soil
capable of producing intermittent fever
in which marsh miasmata, properly so called
are supposed not to constitute an essential
part.

That there should be moisture and a cer-
tain degree of heat present in the produc-
tion of this poison, I think highly probable
from the fact that we never see its effect
even in their mildest form except when
the temperature is sufficiently high for it not
to be termed cold, and we know there is
always more or less dampness existing
in the atmosphere.

It has been said by an eminent writer
that heat is the extrinsic agent most in-
fluential in favouring the production of
malaria in soils & situations capable
of engendering it, and we judge also from

- the fact that in those places which are capable of engendering it we perceive its effect most strikingly when these two conditions are present.

"When marshy land is brought to a very dry state in summer after long continued drought Ague is often but little known in the vicinity; but the first heavy shower after the drought will sometimes give rise to it. And on the contrary in a wet season while much water is lying on the marshes the disease is rare; but in proportion as they become dried to a certain point miasmata are found to be active according to the degree of heat, the season of the year, and the state of the population.

A certain quantity of moisture therefore seems to be necessary upon the marsh in order that the miasmata may be -

The fact that in the present state of the
the of improvement is a necessary
most strictly when the
an account.
When we look at the progress of the
this is a necessary part of the
When we look at the progress of the
the fact that the progress of the
thought with the progress of the
that in the progress of the
most with a spirit of the
the fact is true, but a
because there is a certain
are found to be a
degree of that the
and the state of the
A certain quantity of
seems to be necessary upon the
in order that the

disengaged, and of vapour in the atmosphere to convey them to a distance; while a superabundance either prevents their evolution or entirely absorbs them.

I have seen reported cases of remittent which were caused by the impure air on ship, where there was some rotting vegetable matter on board now if these cases were correctly reported it proved more clearly than any other that vegetable decomposition will give rise to an agent capable of producing that form of fever, and as malaria is the only agent which I suppose to be capable of producing this fever, then it must follow that malaria may be produced from putrefying vegetable matter.

Since this has been questioned, I will conclude this branch of my subject by an extract from an article on this subject

- by Dr Joseph Brown "then certainly exists many facts which prove that vegetable matter is in the highest degree favourable to the production of Malaria if not essential to it.

There are the universal presence of such matter where the poison is generated, the case adduced by Dr Ferrius & similar ones accepted, if they are to be regarded as exceptions; the pernicious effects of the steeping of hemp and flax, for we presume that it will not be argued in this case, the mere evaporation of the water independantly of the vegetable matter would produce the poison; a similar result from the leakage of sugar and the decomposition of coffee, potatoes, pepper, &c. and the fever which committed such ravage on board the *Princess* frigate from the action of the bilgewater on the chips & shavings -

by the first Baron...
many facts which have been established
on other in the highest degree possible
to the preservation of the nation of our country
to the...
There are the numerous instances of such cases
to which the present is generally the only
instance of the...
copies of the...
the...
and...
be...
of the...
another...
the...
the...
and...
to...
of the...

-left in the hole.

A similar argument may be deduced from the wholesomeness of peat-bogs which seem so well calculated at any marsh to produce malaria, excepting that the vegetable matter they contain being in a subterraneous state, is not susceptible of decomposition.

Since there is no reason to think that the evaporation of mere water will produce the poison, we are compelled to conclude in the case mentioned by Dr Ferguson some influence from mere terrestrial soil gave rise to the effluvia which are usually owing to the presence of such matter.

The next thing to be considered in reference to this subject is the propagation of the poison.

There have been many very interesting-

Left in the last.
The number of persons who
the observations of fact of which
to with calculated of any number of
the number of persons who
within the country keep in a
number that, I not including
petition.
There are a number of things
in the course of our work
the person, and the number of
in the case mentioned by the
reference from our testimony
to the effect that an
to the number of that
the most thing to be
to the number of that
of the person.
There are two more very

facts discovered concerning the nature and habits of this poison.

It is specific in its nature; like specific put capable of producing the venereal disease or the small pox may not differ in its sensible qualities from the healthiest but must include some matter in a peculiar state of decomposition which state is capable of being imparted to other living matter", so that it been found that the atmosphere which contained malarial differed no-wise in its sensible qualities from healthy air; yet does it contain a most virulent poison, which poison is capable of producing on the human system specific effects, the nature of which has so far remained undiscovered and intermittent fever with its diurnal paroxysm common as it is that a

yet proved a stumbling-block to the most learned reasoners the world had produced.

As might be supposed the effect of the poison is in general more intense in proportion to the proximity to its source.

This is probably owing to the more condensed state in which malaria exists near to the spot where it had generated;

and it is remarked that circumstances which favour its condensation add to the intensity of its effects.

Still however there are many instances where the effect of malaria are much worse at a distance from its origin, for instance, the heights on a south or south-western exposure above a marsh are generally far more unhealthy than are the low-land immediately around the marsh: above on the heights there is-

The power of a stimulus that is not
learned necessarily is not a function.
It might be supposed the effect of the
power is in general more intense in
proportion to the frequency of the stimulus.
This is probably owing to the more or
less of habit that is acquired in the
case of the first stimulus. It is not generally
true of a stimulus that is presented
which forms a habit. The habit is not
the result of its effect.
This however is an easy matter
when the effect of stimulus is small
above a distance from the origin
for instance, the light in a dark
dark room is not seen above a certain
distance for more than a few feet
as the eye has a limited range
the same: above in the light the

the combined action of malaria and the east-wind, which is supposed on exposure thereto to give more power to this poison. It had been observed that persons who have been exposed to malaria have escaped its influence for weeks until they were exposed to an east-wind, when they were attacked immediately by an ague. The distance to which malaria may be carried by currents of air is different in different latitudes: "The distance to which marshy emanations may extend by gradual diffusion, had been calculated by Monfalcone to be 1400 or 1500 feet of elevation, and from 600 to 1000 in a horizontal direction".

But malaria may be wafted by currents of air much farther than this, sometimes even to the distance of miles.

There are many other very interesting facts concerning this poison, interesting both in a medical and an hygienic point of view. It has been clearly ascertained that this poison exerts far more pernicious influence upon the body when in the state of sleep, than when awake; and also that exposure to it in the night even when awake is much more apt to produce fever than the same amount of exposure during the day.

It has also been observed that as a general rule good diet affords some protection against the influence of this poison: whereas the contrary is often very manifest, low-living, fatigued, debauch and imprudenced always predispose to attack of this fever.

Persons removing from healthy climates,

There are many other things which
concerning the power of the
a nation and an important part
of it. It has been a long
time that the power has been
exercised in favor of the
in the state of things, but when
and also that the power is in the
state when there is a great
to produce power than the
of the power than the
It has also been shown that
power is not a great
power against the
power which is
very important in the
state and an important
part of it. It has
been shown that the
power is not a great
power against the
power which is
very important in the
state and an important
part of it.

- of Northern latitude into marshy low-land countries are much more apt to be attacked by fever than those who by long residence or by birth have become acclimated.

It is from this fact, I suppose, that seamen after returning from long voyages are when landing on shore subject to this poison, so susceptible to its influence; and not only to this poison or the fever resulting from it, but to all other forms of fever.

From the tendency which malaria has to settle on the leaves of trees they have proved sometimes a safeguard to houses in their vicinity, and it would be well for those who live in malarious climates to have a grove of trees encircling their houses.

Being heavier than atmospheric air it is said to brood over the surface of the earth and consequently the ground. apartment of houses are more unwholesome at dormitories than the upper stories.

It is also stated that water has the power of absorbing it; and that fire will rob it of its virulence.

Alcoholic stimulants taken in the morning before going out are said to brace the system against its action. There is a case illustrative of this in Watson's *Practical* of medicine.

Flannel I think from what I have witnessed is of all other hygienic means we have the best safe-guard in protecting the system against the action of this poison. We have already seen that the body is much more susceptible

- to its influence, after fatigue, when the power of the system are prostrated by over-exertion the nervous energy is exhausted, it is less capable of resisting atmospheric changes! - there is much a cessation of perspiration - the capillaries of the whole system are relaxed - the body becomes chilled.

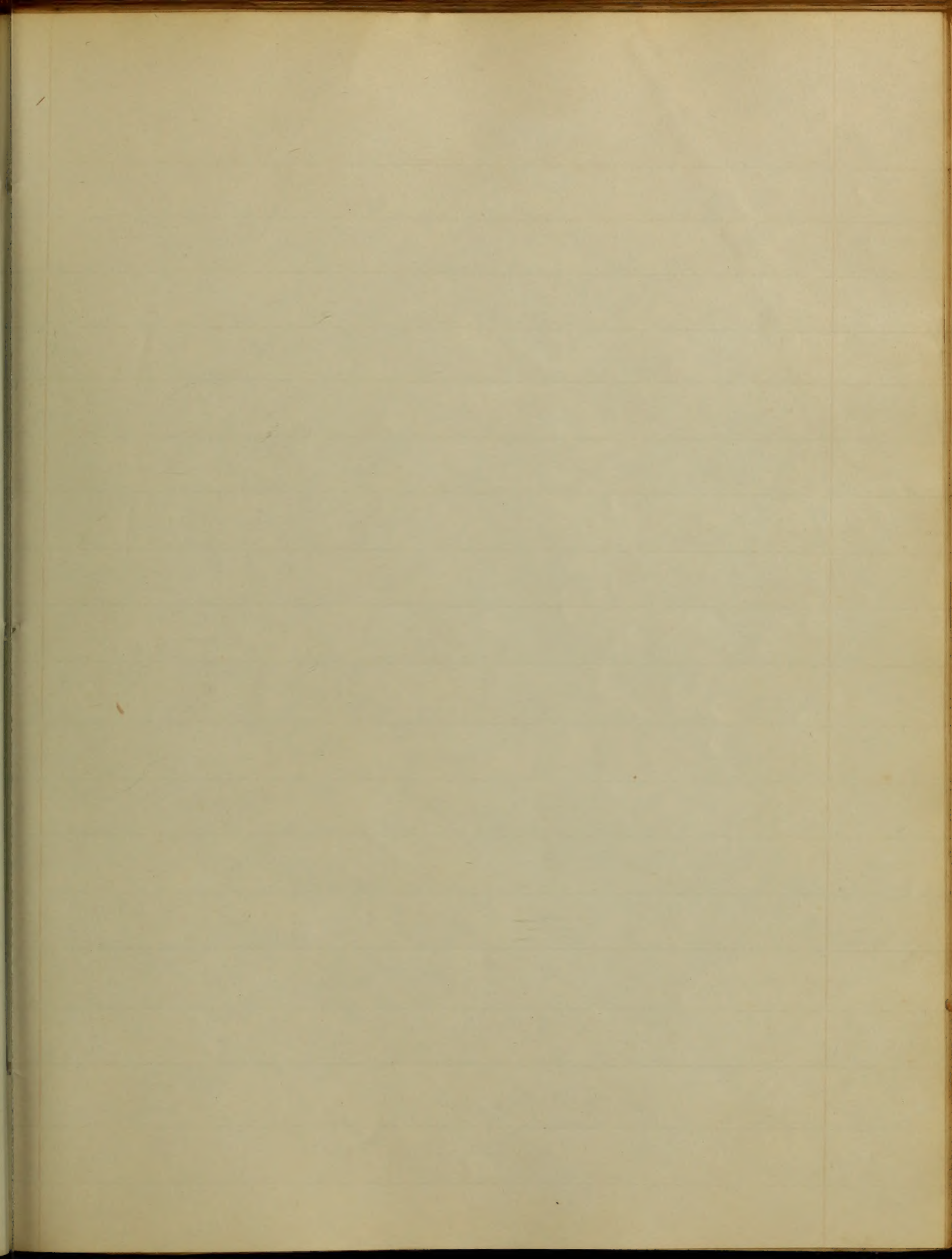
If such a state of things happen after exposure to the poison, which had predisposed the body to ague it is almost certain to be followed by a remittent fever, the fatigue and consequent chilliness acting as an exciting cause,

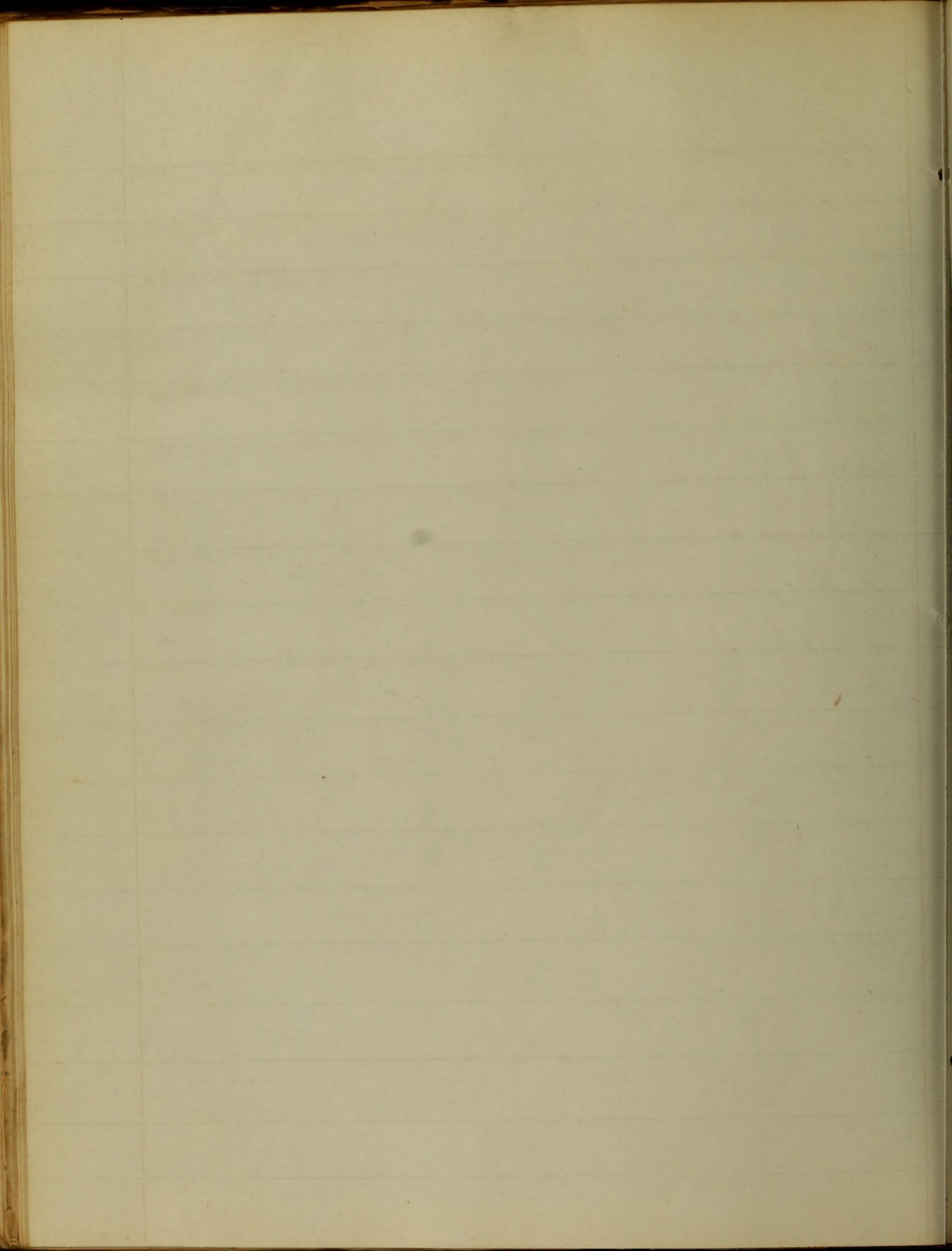
Now if the system be sufficiently protected by flannel the body cool more gradually the heat of the body is not so rapidly carried off by the air, nature as it were has time to rally against the poison.

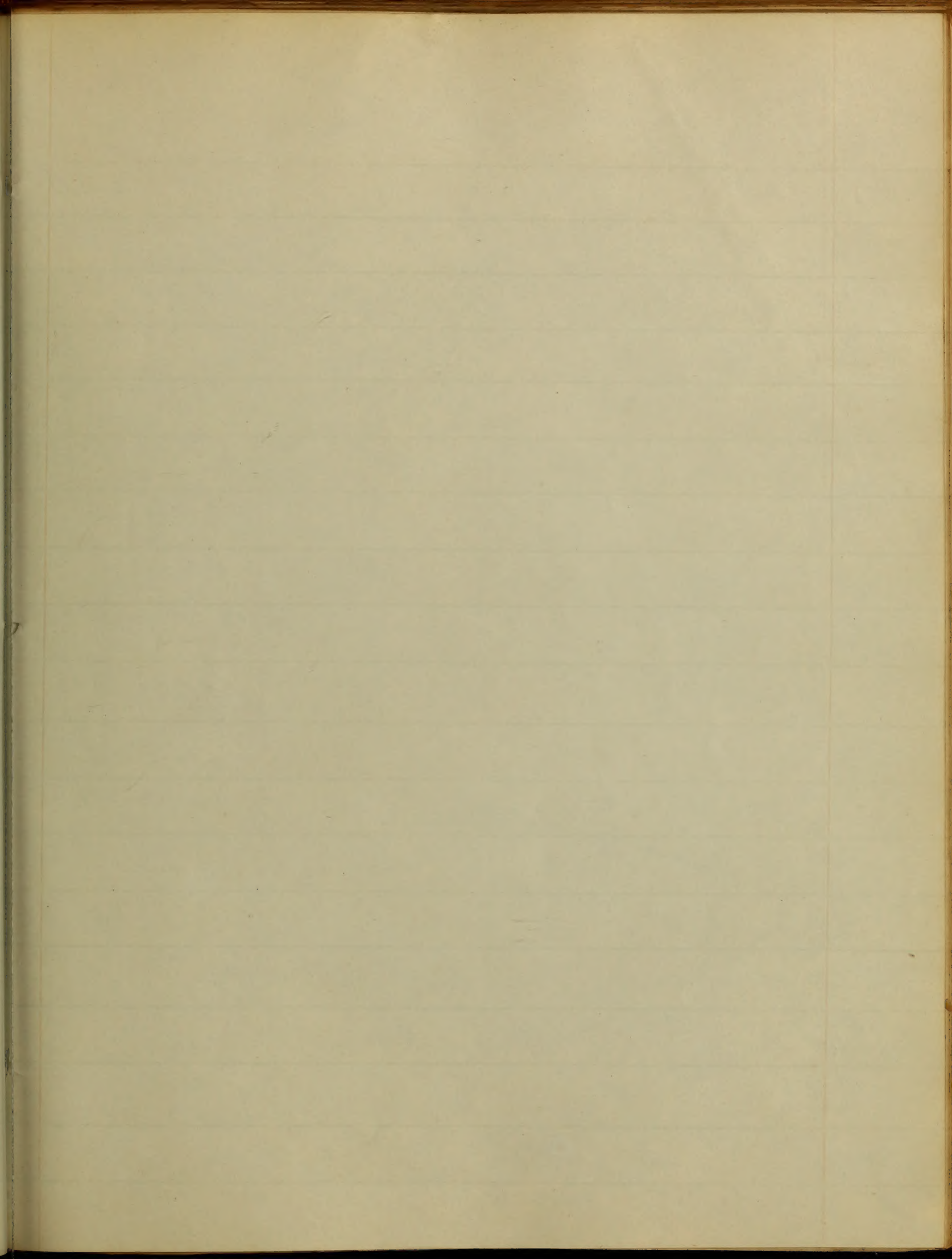
before she is prostrated. Such being the case it becomes of the highest importance to protect the system well with flannel in all malarious countries.

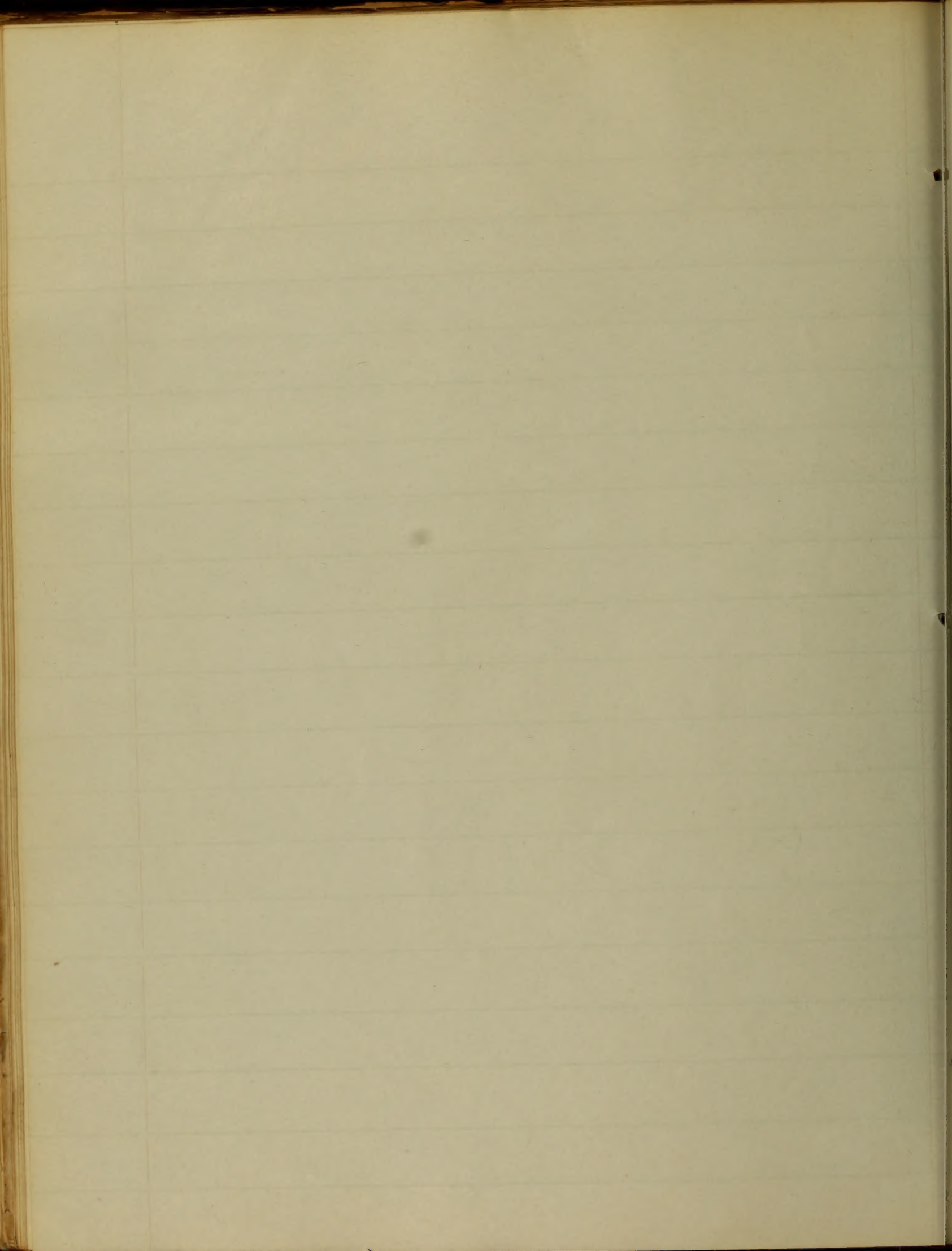
I have thus enumerated most of the facts as to the generation, and propagation of this poison; and had intended writing of its medical Operands and effects but since these cannot be embraced in a thesis of ordinary length, I will conclude.

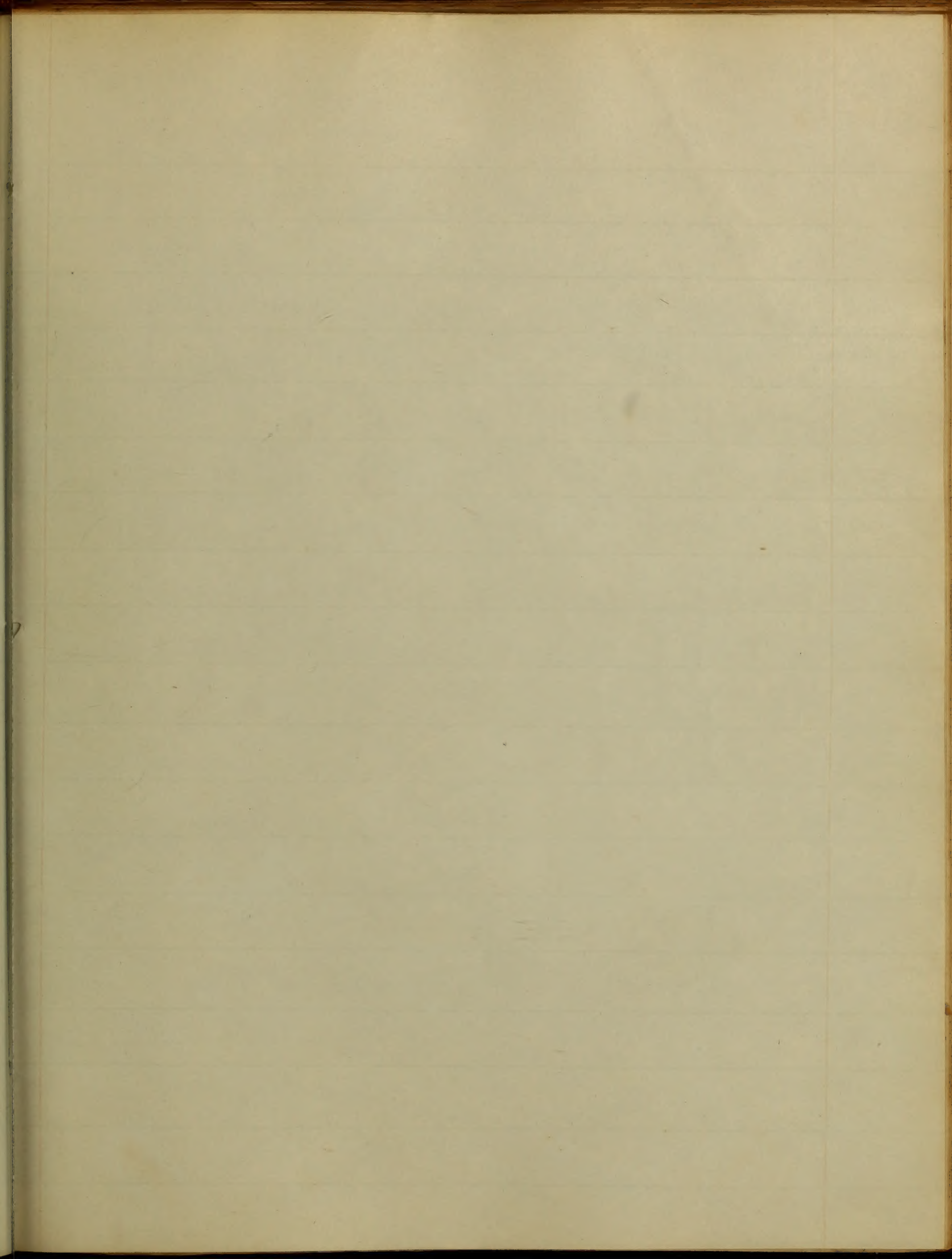
Before the a further but long
and a number of the light
I passed the light was a
in all the surrounding
I have that amount of the
as to the present and
the price, and the
to the present and
the amount to be
of a very light, I

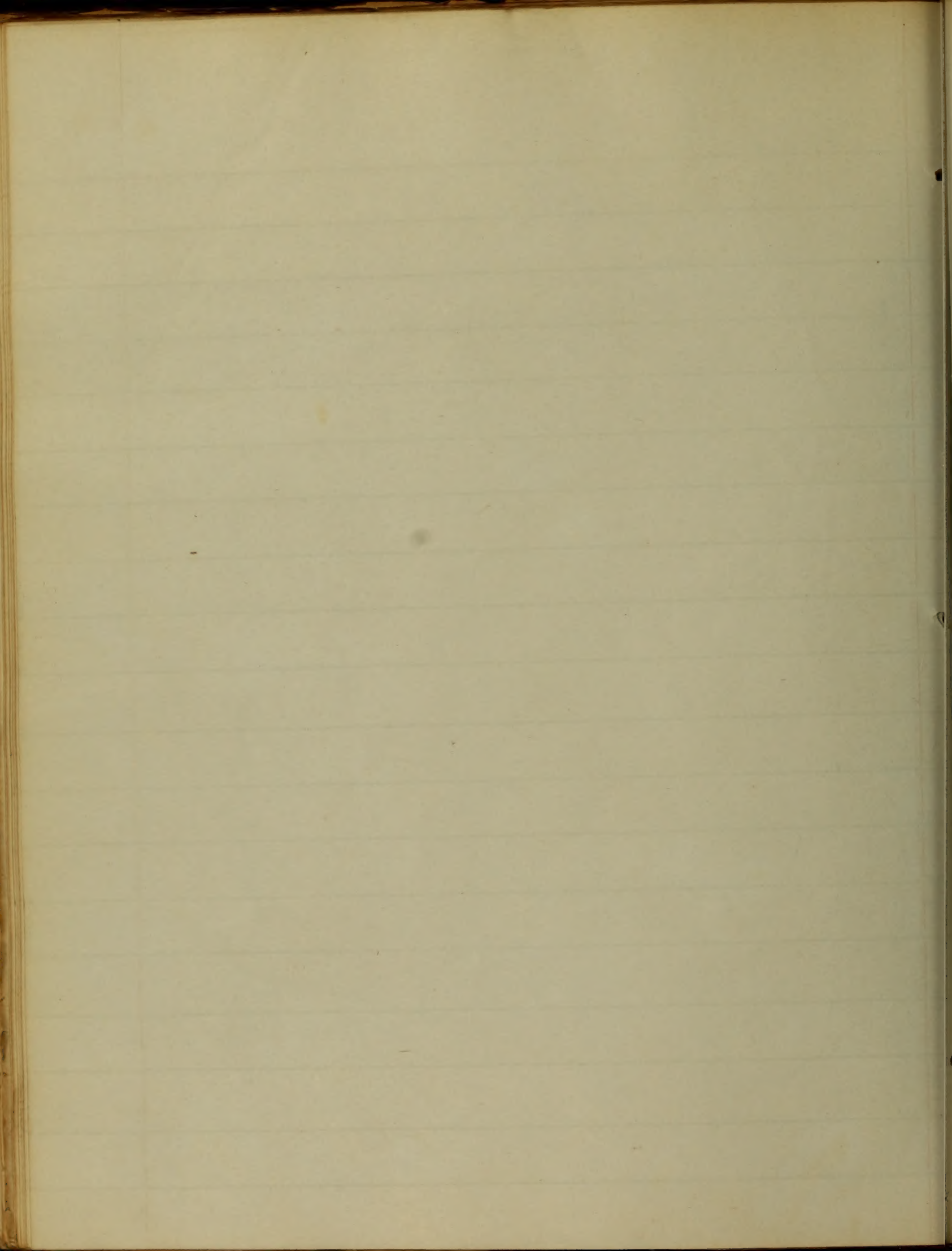






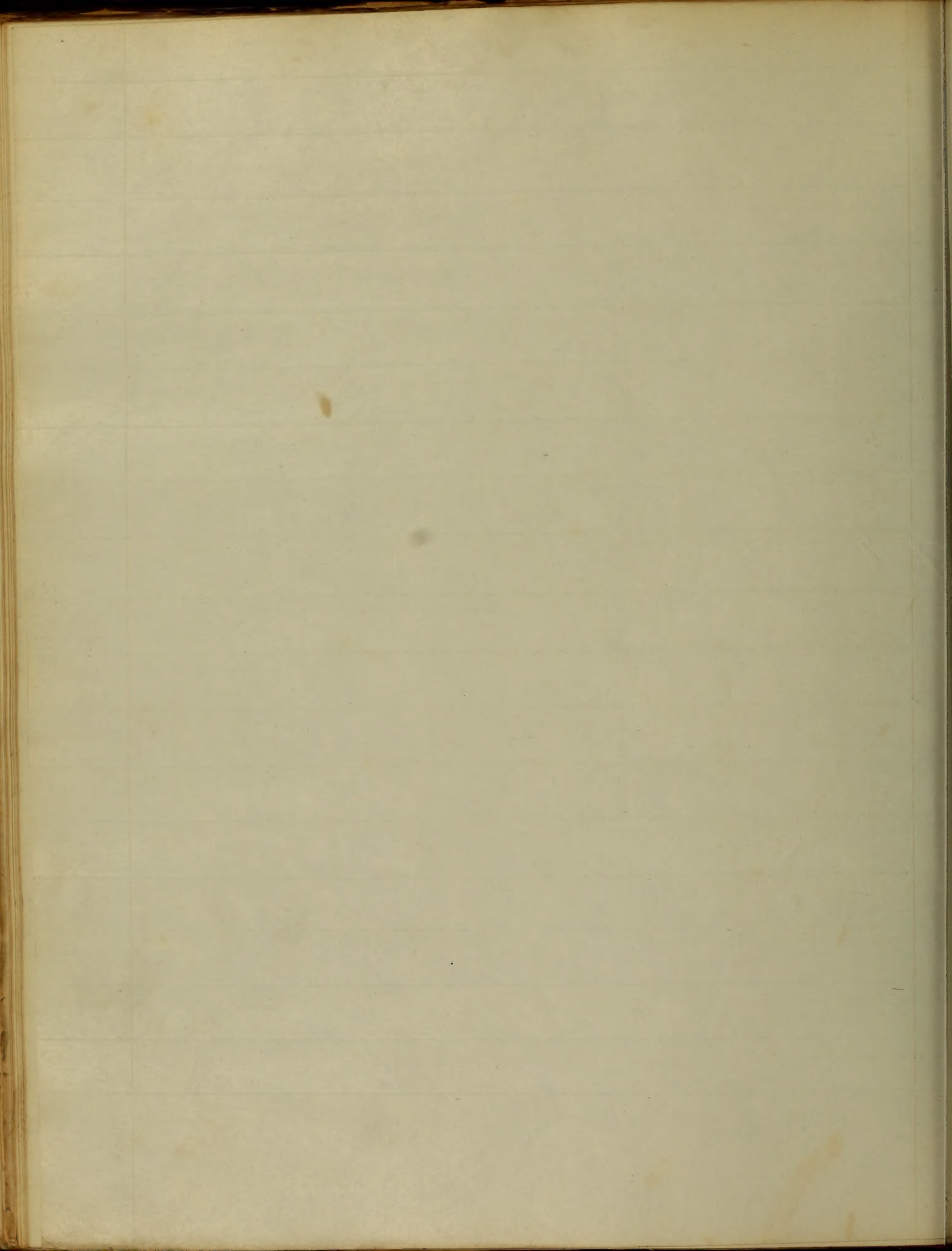






75

[Faint, illegible handwriting]



A Thesis
on
Inflammation
Submitted to the examination
of the
Provoosts Regents and Faculty of Physic
of the
University of Maryland
Medical Department
for the
Degree of Doctor of Medicine
by
Charles F. B. Swan

U. S. Army

No.

Medical Department

Subscribed to the

of the

Provisional Hospital and Ambulance

of the

Department of the Army

Medical Department

of the

Department of the Army

No.

Contract of the

As a candidate for graduation in the Medical
Department of the University of Maryland
I humbly in conformity to its requirements
Submit to the Proctors, Regents, and faculty
of Physic This Thesis on Inflammation
A Subject I have chosen from its great im-
portance alike to the Physician and the Surgeon
A knowledge of its causes; of its laws; of
its morbid and salutary effects; of its
course; of its symptoms, and of its
treatment cannot be too accurately studied
nor too well understood. How indispensable
necessary a thorough acquaintance with this subject
may better be appreciated if we reflect that
more than three fourths of the cases to
which we as Physicians are called we
have to deal with inflammation, and to
the Surgeon it is one of the greatest means
of cure which he should have in his power

The Government has provided for the
Department of the Interior
I have in reference to the
Bureau of the Land Office
of which the Department
has charge the same
is under the Department
of the Interior
and is under the
charge of the
Secretary of the
Department
of the Interior
and is under the
charge of the
Secretary of the
Department
of the Interior

to excite at pleasure and when excited,
should be able to controll

As a consequence of inflammation death
may be the result either by anemia or
sthenia apnoea or coma. By anemia which
signifies bloodless and is the consequence of
an insufficient quantity of the natural stim-
ulus of the heart the blood, being sent to the
heart to cause it to contract, which is the
mode of death in those ~~diseases~~ which produce
wasting emaciation as in pthisis, dysentery
and in all chronic inflammations.

By asthenia which is caused by the exercise of
any injurious influence upon the brain
and nervous system as to paralyze the action
of the heart from insufficiency of or inter-
ruption to the nervous influence which should
be conducted to the heart this is the mode of
death in some forms of apoplexy in peritonitis

Faint, illegible handwriting on a lined page, possibly bleed-through from the reverse side.

also in certain forms of fever
 By Apnoea which signifies want of air
 This is the mode of death when from some
 mechanical ~~obstruction~~ to the entrance of
 air to the lungs the blood is prevented
 from being duly oxygenized the chemical
 action of the lungs is prevented this is
 the most common mode of dying this is the
 form of death in croup that inflammation
 of the trachea so common and so fatal to
 children also happens in laryngitis, in
 pneumonia in bronchitis and in double
 pleurisy - Death by Coma resembles
 death by Apnoea in its pathological ana-
 tomy, but in coma the muscular efforts of
 respiration are primarily interfered with
 from injury to the brain, the chemical
 changes in the blood being the result of
 failure in the respiratory muscles and

Faint, illegible handwriting, likely bleed-through from the reverse side of the page. The text is mirrored and difficult to decipher.

not from any impediment to the entrance
of air to the lungs this is the mode of death
in Hydrocephalus in some forms of Apoplexy
and in inflammation of the membranes of
the brain All these modes of death are
met with in fevers and after a compli-
cation Sometimes there is a tendency to
death in one way sometimes another all
these symptoms we have to combat as
one or another seems to get the ascendancy.
Since we have seen such fatal results
do follow in such a variety of modes
as a consequence of inflammation should
this not stimulate us to endeavour to
become more intimately acquainted with
a subject in the knowledge of which
the lives of so many of our fellow crea-
tures and our own reputation as Physi-
cians depend

I propose here briefly to consider the causes which produce inflammation; some of its morbid and salutary effects; of the symptoms attend it; of its events and terminations and lastly of the treatment which it requires. I shall proceed then to treat of the causes which produce inflammation and these may be either predisposing or exciting. By predisposing I mean that particular state of the system which predisposes to disease, as when one has had an attack of rheumatism, or slight exposure again to cold and moisture would very probably bring on an other attack. The exposure to cold would be called the exciting cause, and that particular state of the system rendered more liable or susceptible to take the disease from a previous attack would be called predisposing.

The first part of the book is devoted to a general
description of the country and its inhabitants
and the state of the colonies at the time of
the first settlement. The second part contains
a detailed account of the progress of the
settlements and the various difficulties
which they encountered. The third part
describes the state of the colonies at the
time of the Revolution and the
causes which led to the outbreak of
the war. The fourth part contains
a history of the war and the
consequences which followed. The
fifth part describes the state of the
colonies at the present time and
the prospects which they hold for the
future.

One may expose himself to day with perfect
 impunity, which if repeated again would
 put his life in jeopardy evidently showing
 that there must be a predisposing cause
 Many a person has been known to pass through
 childhood to adult life with frequent exposure
 to measles, and scarletina, (diseases more common
 to children than to adults) without contracting
 and when he thinks he is quite proof
 against it he is taken with the disease when
 he least expects it on the slightest exposure to
 its effluvia or indeed without knowing he
 had been in any way exposed to it what it is
 or will produce that state of the system which
 will predispose to disease is very difficult
 to determine some of the causes however
 we are able to point out excessive fatigue
 or any over exertion either corporeal or men-
 tal which by exhausting the strength and impairing the

Animal functions predisposes the system
 in such a manner that it yields more
 readily to the injurious effects of any exci-
 ting cause; or in other words by the im-
 pairment of the animal function and the
 exhaustion of the nervous system the re-
 generative energies of the system are insuffi-
 cient to ward off the effects of the exciting
 cause - It has been said to know the cause
 of disease is sometimes to be able to avoid it
 to prevent this is particularly the case in
 reference to the predisposing causes for we
 find in some families a strong predisposition
 on the part of each individual to gastritis, or
 gastroenteritis by being aware of this pre-
 disposition we are after all to prevent
 its occurrence by giving tone and vigor to the
 system and preventing the ingestion of such
 food as would be most likely to act as an exciting cause

So much then for the predisposing causes I will next consider the more direct the immediate, or exciting cause of inflammation, which we are able with more accuracy to determine and these are sudden variations in temperature from heat to cold cold is the most common cause of inflammation, cold when judiciously applied is one of the most invigorating remedies we possess it is also one of the best prophylactics, it is also of great importance in the treatment of inflammation, cold under certain circumstances is followed by the most dangerous results if applied to the body while heated and the cause of heat still operating no ill effects will ensue but applied to the body while cooling after being overheated the most injurious consequences will be the result, if death does not soon follow the most serious inflammation of internal organs will be the consequence -

to want them for the purpose of
will not be able to do so
that a similar case of
in one all with an account
and then we shall see
a time from that day
our case of
chiefly affected in one of
this in itself is the
factor, it is a
kind of
them a feeling of
if applied to the
has still
but of
will be
follow the
is

Cold produces its injurious effects in proportion to the length of time it has been applied, and not in proportion to its intensity. However the force of habit will enable a person to endure intense cold for a considerable length of time without suffering any injurious consequences; cold applied to one asleep or to the body by a current of air when the body is heated or cold damp or wet clothes in contact with the body for a length of time are the most injurious modes of its application. The most common diseases of cold damp weather are rheumatism and inflammation of some portion of the respiratory apparatus - Cutaneous and Hepatic disorders together with affections of the Stomach and bowels are the most common diseases of warm climates. Another and very common exciting cause of inflammation is the result of excess in eating and drinking, eating

Get Justice to improve of the
time to the length of the
and not in perfection to the
the face of labor will with a
some minutes a week for a
of these matters of the
consequence of the
the help of a great number
a well thought out plan
help for the of the
side of the application
of all these matters in
frustration of the
facilities in the
also together with the
and last we have
of more than one
was a great number
most of the

certain indigestible substances for food which act as an irritant and produce violent gastritis
 There are also various chemical and mechanical irritants which are the source of inflammation whether wilfully employed by the hand of the surgeon, or as the result of accident.
 I will next consider some of the morbid and salutary effects produced by inflammation
 Most of the organic changes in the human body recognize inflammation as their origin
 what would be the particular organic change will depend entirely upon what particular organ or tissue of the body is the seat of inflammation for instance if inflammation of the mucous membrane there is thickening as in inflammation of the mucous membrane of the air passages a thickening is produced and consequently an impairment and sometimes a total loss of voice, in inflammation

of the mucous membrane of the urethra which
 either from being badly treated or suffered to run
 on without any treatment a thickening is produced
 and consequently a diminution of the caliber of
 the tube and so mechanically preventing the
 flow of urine giving rise to that very common
 and troublesome disorder constriction of the urethra
 in all inflammation of areolar tissue or of the
 parenchyma of organs they are rendered thicker
 and harder, the consolidation caused by effusion
 of serum which has not been absorbed, in infla-
 mation of serous surfaces there is an effusion
 of lymph which soon becomes organized produ-
 cing agglutination of its opposite surfaces
 as in inflammation of the investing membranes
 of the lungs so in inflammation of the living
 membrane ^{of the valves} of the heart ^{of the valves} which is a serous or
 fibrous membrane, the effect of inflammation
 there is to pucker, thicken, and harden them

The salutary effects of inflammation are witnessed
 in the reparation of broken bones which is ac-
 complished by effusion of lymph around the
 bone which soon becomes organized then is changed
 into a cartilaginous substance which is called
 provisional callus which firmly adheres around
 the bone giving it support until by the deposit of
 specific matter the bone is united, the provisional
 tumour is then absorbed. by exciting inflammation
 in the tunica vaginalis when the serum of hydropse
 is discharged the opposite surfaces of the tunica
 vaginalis becomes agglutinated together by adhesive
 inflammation the cavity of the sack is entirely ob-
 literated and the accumulation of serum entirely pre-
 vented, it is by this beautiful process that wounds
 are closed ulcers healed and the fissure of the cleft
~~lips~~ united and the many dangerous and fatal
 consequences averted by the intervention of
 adhesive inflammation

The symptoms of inflammation are pain
 redness, heat and swelling. pain is no
 doubt produced from the implication of
 the nerves of the part in the diseased process
 pain varies with the seat of inflammation
 or in other words the character of the pain
 whether it is sharp stitching lancinating
 throbbing or a dull aching pain depends
 altogether upon what structure of the
 body is the seat of inflammation. parts
 of the body which possess very little sensibility
 in a healthy condition, when in a ~~state~~
 state of inflammation cause most excruciating
 pain and these are bone tendon ligament
 and cartilage why this is so we must
 explain in the same way that we account for
 the greater pain in inflammation of serous
 investing membranes than in mucous lining
 membranes. The mucous membranes are

The first thing I noticed when I
 stepped out of the train was
 the fresh air. It felt like I
 had been in a cocoon for years.
 The sun was shining brightly
 on the water. The birds were
 singing. It was a beautiful
 scene. I had never seen
 anything like this before.
 The water was so clear. I
 could see the bottom. The
 fish were so big. I had
 never seen anything like this
 before. The water was so
 clear. I could see the
 bottom. The fish were so
 big. I had never seen
 anything like this before.

soft yielding and susceptible of great
 distension ^{and therefore} are less painful than serous
 membranes which are more tightly applied
 and are less elastic and consequently are less
 able to bear much tension. The tension which
 is caused by the swelling in inflammation is no
 doubt the reason why there is more pain in serous
 investing membranes than in mucous membranes
 & why we should have greater pain in bones,
 cartilage, ligament & tendons is their almost
 total inelasticity. The less pain in inflamma-
 tion of the parenchyma of an organ is ac-
 counted for in the same way they are soft and
 yielding and would allow a great degree of
 swelling without much tension from
 what we have seen much may be learned
 concerning the seat of inflammation
 from the character of the pain or
 from its intensity or the degree of pain.

[Faint, illegible handwriting on lined paper]

In inflammation the redness is occasioned by the greater circulation of red blood in the vessels of the part inflamed, there is no doubt new vessels formed which circulate red blood which if they had existed before certainly did not circulate red blood we see this in inflammation of the eye the vessels too are greatly enlarged consequently carry a greater quantity of red blood, The degree of redness depends upon the character of the inflammation in acute form of frank inflammation the redness is a bright red color but in chronic forms of inflammation or when there is a disposition to gangrene the color is dark purplish redness is most invariably present during all inflammation & during one or another stage of it, Heat is always produced by the union of oxygen with carbon so the heat of the body depends upon the union

of the oxygen of the air with one of the elements
of the body its carbon so in inflammation of
any part, the super-natural heat of the part
is caused by the increased quantity of oxygen
in the part which is dependent upon the great-
er quantity of arterial blood circulating in the
part. Increased heat is always attendant
upon inflammation during some stage or
other of its course but the heat of in-
flammation never exceeds that of the blood
in the central parts of the body. The surface
of the body is always cooler than the internal
parts and the surface of the extremities
always cooler than the surface of the body.
So in inflammation you would have to
make a comparative estimate of the degree
of heat. The Swelling in inflammation is
in some measure dependent upon the greater
influx of blood into the part, but it is more

dependant upon what is poured out from the
 blood vessels which is either serum, pus,
 blood or lymph. The serum or watery part of
 the blood is effused as an effect of inflama-
 tion which may mechanically prevent the due
 return of blood through the veins & the heart
 this is the true theory of acute dropsy,
 acute dropsy is always the product of in-
 flammation. Sometimes there is so great an
 effusion of serum into the cavity of the pleura
 in double pleuritis that the breathing is
 very much interfered with and the life of the
 patient threatened by apnoea. Also in
 meningitis which is an inflammation of the membranes
 of the brain there is an effusion of serum which
 causes death either by coma or by asthma -

The effusion of blood is caused by the giving
 way of some blood vessel - Coagulable lymph
 is the fibrin of the blood separated from its

other constituents which soon becomes organized it is one of the beautiful efforts of nature in the reparation of tissue as we have seen in considering the salutary effects of inflammation, how soon the fibrin is effused and organized depends altogether upon the nature of the inflammation and the condition of the constitution at the time some times it is effused and becomes organized in a few hours and then again not for some days. Pus is altered blood the product of inflammation or a better definition perhaps is that it is the fibrin assuming a low degree of organization pus is some times poured out in a few hours as in gonorrhoea. The formation of pus which is diffused under the cellular tissue or incysted as in an abscess either acute or chronic is very often productive of fatal

[The page contains approximately 20 lines of extremely faint, illegible handwriting, likely bleed-through from the reverse side of the paper.]

consequences by the adynamic state to which
 the patient is brought great emaciation is
 the ~~product~~ and if death results it is by anemia
 I have now considered inflammation as it dis-
 plays itself locally - I will next consider
 the effects which it produces upon the
 whole system or its constitutional effects
 As one would suppose no process such as
 we have been considering would be
 going on in any part of the body
 without producing a great deal of con-
 stitutional disturbance - When inflama-
 tion first sets in it is soon followed by
 other symptoms which affect the whole system
 and these are first a sense of chilliness or a
 rigor which ^{is intensely} is altogether dependent upon
 what part is the seat of inflammation
 after the chill there is heat and dryness of skin
 loss of appetite thirst headache pain in the back

general soreness of the muscles, lassitude, languor,
 inability, or indisposition to make any muscular
 effort, deficiency in all the secretions if
 there is a hypersecretion it is vitiated, and
 scanty high colored urine, increase in the
 frequency and force of the pulse which is
 also full and hard incompressible all
 the constitutional symptoms varies very
 much with the seat of inflammation and the
 peculiar constitutional habit of the patient
 for in some persons the slightest inflammation
 will give rise to the severest constitutional
 symptoms the cerebral symptoms varies very much
 with for in some there is violent delirium as
 soon as there is the slightest increase in the
 frequency and force of the pulse. of the state
 of the pulse much is to be learned. for in
 inflammation of the viscera of the Thorax there
 is quite a different pulse from the pulse

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above mentioned matter. I have the honor to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
 Yours obedient servant,
 J. M. [Name]

of inflammation of any of the viscera of the abdomen. The one is characterized by frequent full hard incompressible pulse. The other by frequent quick & steady pulse -

An increase in the fibrin of the blood circulating through the whole system gives rise to that general constitution disturbance which we call fever. The duration of the inflammation depends upon the part inflamed, and the treatment which has been employed to arrest it. The character of the fever depends upon the habit of the patient if one of sanguine temperament young and vigorous the fever will be inflammatory but if the inflammation occur in one who has lived intemperately or has been subject to long continued excitement of the nerves, ^{system} or who is old and infirm and whose life very much exhausted the fever will of a typhoid type

when inflammation subsides it is either
 by resolution which is its most favourable
 termination or by suppuration. Mortifica-
 tion and liberation I consider as the effects
 of inflammation when an inflammation
 has been properly treated the pain will
 cease; the redness fade; the swelling will
 be reduced to the natural size of the part
 the preternatural heat of the part will be gone
 and the part assume its natural temperature
 and all the constitutional symptoms will
 disappear the patient recovers; but if
 proper treatment has not been employ-
 ed or has been used but not successfully
 pus is formed which soon makes its es-
 cape if not assisted by the Scalpel of
 the surgeon it burrows its way to the
 cuticle which bursts and the pus is dis-
 charged or a channel is formed ^{by} the

effusion of coagulable lymph which is organized and the pus is discharged into one of the natural outlets of the body. From the surface of this abscess pus may still continue to be secreted for a length of time in such quantities that the system is entirely worn out, or by degrees the abscess fills up by granulation until the whole cavity is obliterated and the parts resume their normal healthy aspect,

Lastly we come to the treatment of inflammation as we have seen that the blood is the cause of this inflammation heat redness and swelling our first object would be to attempt to lessen the quantity of blood circulating through the part. This may be accomplished either by general bloodletting or by local bloodletting the first object may be attained either by venesection or arteriotomy the last by cupping or leeching

Faint, illegible handwriting, possibly bleed-through from the reverse side of the page. The text is mirrored and difficult to decipher.

The quantity of blood to be taken depends entirely
 upon the part inflamed and the habit of the patient
 by cupping or leeching we abstract blood locally and
 thereby unload the engorged capillaries and by
 general bloodletting we lessen the quantity of
 the blood circulating in the part & we thereby
 reduce the force and frequency of the pulse by
 taking from the heart its natural stimulus the
 blood and as a consequence being left to stimulate
 it contracts less frequently, another adjuvant
 remedy is purging which in addition to the removal
 of feces and ~~other~~ ^{the} irritating secretions it produces
 copious serous discharges from the whole of the
 mucous membrane and inflammation of the brain or
 any part of the head purging acts as a vomitive - Mercury
 is another very powerful remedy in the treatment of inflammation
 especially of serous surfaces where from agglutination of
 their opposite surfaces harm would likely result, it is
 a great stimulus to the secretory organs it is what we
 mainly rely upon in the treatment of Pleurisy & Peritonitis

The great effect of Mercury is render the blood
 antiplastic and mercury should always be given
 with that intention it also is an absorbent of co-
 agulable lymph, it is one ^{of the} best and most powerful
 mercury stimulants we possess - Antimony
 which is a counterstimulant is also much used
 in the treatment of inflammation it exerts a peculiar
 sedative influence over the heart and arteries reduces
 the force & frequency of the pulse. Digitalis is an
 other remedy which also acts as a sedative upon the
 heart. narcotics and sedatives are important
 classes of medicine in the treatment of inflammation
 which by their soothing influence which they exert
 and by allaying irritation are great adjuvants
 in the treatment of inflammation. counter
 irritants which by the detracting from an
 inflamed surface ^{of part} assist greatly in the treatment
 of inflammation for this purpose Issues, blisters,
 stimulating liniments, Sinapisms, & cups are used

application of cold as I have said before is
 if judiciously applied of great service in the
 treatment of inflammation. The rules for its appli-
 cation I will not mention. The Antiphlogistic
 regimen should in all cases be most rigidly en-
 forced, rest, in the recumbent posture all stimu-
 lants must be avoided and must be kept upon rigid diet
~~and~~ in other words must be ~~starved~~ refrain from
 eating and drinking altogether. The function of
 the inflamed organ should not be used at all
 if it can be avoided one of the most important of
 the antiphlogistic regimen is to attend to the natural
 evacuation which ^{should} be at least once a day
 Another important class of remedies in the treat-
 ment of inflammation is diaphoretics this is how-
 ever very well accomplished by antispasmodics.
 In the therapeutic application of these remedies
 in the treatment of inflammation in nothing is
 so much judgment required as in the use of the
 lancet, it is indeed the great remedy in inflammation

Handwritten text, likely bleed-through from the reverse side of the page. The text is mirrored and mostly illegible due to fading and the nature of the ink transfer.

11
An
Inaugural Dissertation

on

Dysphoid Fever.

Submitted to the examination of the

Honourable Regents of Faculty of Medicine

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Samuel S. Smith.

Baltimore, January 1847.

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An
Inaugural Dissertation
on
Typhoid Fever.

Submitted to the examination of the
Provost, Regents and Faculty of Physic
(of the)
University of Maryland

For the
Degree of Doctor of Medicine

By
Sargore Sunkler.

Baltimore February 1847.

11

Journal of the

1800

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of the

of the

Respectfully Inscribed

to my esteemed

Friend

and kind

Preceptor

Dr. Alex^r. Robinson.

Individuals of the

to be returned

to the

and

Director

of the

of the

"The Youth who strives th' Olympic prize to gain,
All arts must use, and every toil sustain."

Page 1.

Gentlemen of the Faculty,

I have in accordance with the rule of the University of Maryland, in the Medical Department of which, I have the honor to be a student, written a Thesis, which is herewith presented for your inspection.

— It is not to be expected that an inexperienced Medical student shall write anything new and valuable in medicine. He can but give a compilation of facts gathered from the knowledge of others, a reflection, as it were from a brighter source. Nothing new or untold can be received as truths in medicine, unless sanctioned by experience and use. It is only after years of practice and careful observation that the physician can venture to advance any new doctrine in respect to disease, its form, or treatment, with the hope that his fellow practitioners, will examine his theory, and at the most pronounce it plausible. How then is it to be presumed, that a young man devoid of medical experience, and but

The truth was shown in the paper from the year
All our work was done under the name of the

Journal of the Society

I have no acquaintance with the
rule of the University of Cambridge in the historical part
most of which I have the honor to be a student, and
a thesis which is inserted in your paper is
It is not to be expected that a student should
submit a thesis which is not a subject in the
the case but give a complete account of the
the University of Cambridge as it is now
I have no acquaintance with the
as the University of Cambridge is not a subject in the
and will all in order after a general and
I believe that the University can produce to return
very few theorems in respect to the
I believe that the paper that has been published
we will examine the thing and if the result
it is possible that there is to be a
a young man of great talents and

partially acquainted with the laws which govern the human system, can produce a medical composition, that will be admired for the fresh truths it contains, or a new code of treatment that has been successful?

Such then, gentlemen, you do not, cannot expect to find; but the various diseases that have been chosen as the subjects of a dissertation, you look to see discussed and treated according to the best known theories and the principles you teach. — If I have in this attempt to portray the symptoms, duration and treatment, of one of the many maladies that infect mankind, fallen short of the mark, I pray you consider, that, although we may judge of a tree by its fruits, yet the tree bringeth not forth perfect fruit until it hath matured.

~~~~~ .. ~~~~~ Hargrove Hinkley. ~~~~~



partially acquainted with the same subject, and the  
system, can produce a similar result, that will  
be answered for the first time if certain are  
of treatment that has been successful?  
such than, development of an acute, and not  
but the answer is, that there have been cases  
subjects of a dissertation, after take to be  
and treated, according to the best known  
the principles of the same. If I have in this  
to obtain the symptoms, that have been  
of one of the several varieties that is  
fallen short of the mark, I have the  
although we may judge of a tree by its  
the tree brings out the perfect fruit, it  
with water.

... ..



The disease which I have selected as the subject of my thesis is one fraught with interest to the American physician inasmuch as it does at times prevail, very extensively throughout the United States, and is, in fact, the most generally diffused essential fever, that we have.

Upon this account therefore, it has received considerable attention and investigation, as well by our physicians as those of Europe.

In the description herein given of the symptoms, morbid changes and treatment of Typhoid Fever I have classified my remarks in a manner somewhat similar to that pursued by Doctor Bartlett in his works on Typhoid and Typhus fevers.



The disease which I have described in the subject of our  
history is frequently met with in the West Indian  
islands, and is attended with a peculiar  
character, the United States, and in fact, the most  
generally different treatment from that we have  
known this account, therefore, it has seemed worth  
while attention and investigation, as well as  
conferences by a number of friends, and  
the description of the symptoms, and  
changes in the treatment of different cases, have been  
first very carefully in a manner, so that it might be  
that persons of doctor's rank, or who were  
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## Symptoms.

Modes of Attack.— The modes of attack of this disease are various, both in regard to the symptoms and the length of time. Generally it is slow and gradual in its approach, and the patient is unable, accurately, to say when he was first taken ill. He may have a general feeling of "malaise", a slight headache, pains in the back and legs, and a sense of chilliness followed by that of heat. Sometimes his sleep is broken, and he is not refreshed as much as usual; he feels unable to exert the powers of the body and mind, which are always depressed; generally, according to the degree of fever. These feelings may remain for some time or gradually increase and give place to others more severe and characteristic of the disease. One peculiar symptom or set of symptoms may predominate in one case and a different set in another.

Debrile Symptoms. Chill. There is generally, though not always present, in the attack a chill, sometimes amount-  
-ing



Diagnosis

The history of the case is as follows. The patient is a young man, aged 25, who has been suffering from a chronic cough and expectoration of sputum for several years. The cough is worse in the morning and at night, and is accompanied by a feeling of irritation in the throat. The sputum is thick and yellowish, and is often streaked with blood. There is also a slight fever, and the patient feels generally unwell. The physical examination shows a normal heart and lungs, but there is a slight increase in the vocal freeness of the lungs, and a few scattered rales are heard in the lower part of the chest. The diagnosis is chronic bronchitis, and the treatment is to be directed to the removal of the cause, and to the relief of the symptoms.



to a rigour. Sometimes the chill is repeated more or less frequently throughout the disease.

State of the Skin. Subsequent to the chill, the skin is dry and the heat thereof much increased. The state of the skin may differ; the whole surface of the body being hot and pungent, or only particular parts. This morbid heat sometimes shifting about from place to place, and subject to changes of intensity. The greatest exacerbation or increase of the febrile and unpleasant symptoms, or rather feelings, is generally in the evening. In relation to this evening exacerbation in fevers, Fordyce says, "that all men, even in the most perfect health, have a feverish attack in the evening, which goes off in the morning. There is a depression of strength, both of body and mind sufficiently evident; there is not the same alacrity of mind in the evening, nor power of memory, imagination, and judgement as there is in the morning. If in perfect health this natural evening paroxysm <sup>of fever</sup> is visible, it is infinitely more so in diseases of most kinds."







The condition of the skin in regard to moisture, differs in different patients; in some there is hardly any moisture, in others the sweating is profuse, sometimes coming on after the evening paroxysm, sometimes occurring in the night. During convalescence there is often a considerable sweating, which necessarily tends to keep up the enfeebled condition and retard the recovery. There is a peculiar odor arising from a person infected with Typhoid Fever, which is noticed by Drs. Smith and Bartlett, and which I have, myself observed.

Pulse. - The pulse is always increased and, according to Bartlett, ranges, from seventy to one hundred and forty, in a minute. It is sometimes full and strong, sometimes small and soft.

Thoracic Symptoms. These consist of increased respiration in some cases accompanied by a hissing sound, and a slight cough, and viscid expectoration, which last is not however always present. In a physical examination







of the chest we most always find some sibilant rhoncus. The Nervous symptoms declare themselves by headache, pains in the back and limbs, disordered state of the mind, expression of countenance, and deranged state of the senses. The headache which is rarely absent in this disease, is sometimes of a dull throbbing kind, at others severe and lancinating; in one case felt more particularly in the forehead and temples, in another all over the head. The pain in the back and limbs is greater or less in different cases, generally consisting in a feeling of soreness. The state of the mind is always remarkably depressed, the patient in some instances replying in a very indolent manner to questions put, in others being remarkably irritable. There is a degree of listlessness and stupidity in the countenance, a want of perfect recollection and of full possession of the powers of the mind. Delirium is frequently present, and when it is so, seems to increase towards evening or at the approach of the febrile paroxysm.



of the chest we must always find some degree of expansion  
the chest is inflated by the action of the diaphragm  
in the back and lower part of the chest  
expansion of the chest is not complete until the  
lungs are fully inflated. The chest is not inflated in this  
disease. It is however of a full healthy kind of  
others have and expansion of the chest is not complete  
in this kind of disease. The chest is not inflated in this  
all over the chest. The lungs in the back and sides is  
greater or less in the front than in the back and sides in  
a feeling of soreness. The state of the lungs is not  
markedly affected. The patient in some instances  
is obliged in a very violent manner to quit his bed  
in other being remarkably irritable. Some is obliged  
of restlessness and difficulty in the continuation of  
work of perfect rest and of full expansion  
of the front of the chest. The chest is not inflated  
front and sides it is so. Some in some cases  
remains in the state of the chest.



Sometimes it is very violent, but more frequently of the mild description. There is in some cases mostly those of a severe character, a state of drowsiness or lethargy, and in these it is noticed, that the patient declares he never gets any sleep and appears unconscious of having dozed. In regard to the state of the senses, the hearing is most always affected in a greater or less degree, the loss of hearing being accompanied by a ringing in the ears, and dizziness. The sight is rarely affected unless we mention an increased sensibility to the light.

#### Sense of Taste and Condition of the Tongue.

The tongue is generally coated and this condition of course impairs the taste, and in some cases articles disagreeable to the taste in health are taken without evidencing any repugnance. A certain value is justly attached to the state of the tongue. "It sometimes becomes clammy or dry, sometimes it is clean and smooth, more often furred; its edges and tip, will perhaps, be red, then a white fur will







begin, which either covers the central part of the tongue, or is divided by a straight brown streak which occupies its middle portion. This brown streak is often the first step to dryness and blackness of the tongue."

For the tongue to be dry and furred is a bad omen, but when in addition to this it becomes brown or black, the disease in the majority of instances proves fatal. When, on the contrary, the tongue is but little altered, or remains moist; or if, having become dry, it again becomes moist —, it is either a sign of amendment, or indicates a mild form of fever. It is necessary in estimating the state of the tongue to notice whether or not the patient sleeps with the mouth open.

**State of the Muscles.** There is a great depression of muscular strength in this fever, which commences from the first attack; sometimes, *subcillus tendinum* occurs; the body feels sore all over, and the muscular system is completely relaxed. In extreme prostration the patient lies constantly on the back. Occasionally the muscles of the diaphragm are affected







causing triceps. The debility lasts until the close of the disease, a disposition to turn on the side or sit up in a chair should be regarded as a favorable return of strength.

### Digestive and Abdominal Symptoms.

The symptoms of derangement in the digestive organs are characterised by the state of the tongue and appetite; by nausea and vomiting, state of the bowels, pain in the abdomen and tympanites. The appetite is lost to a greater or less degree, according to the violence of the disease; often totally. The thirst is always increased, and is in proportion to the height of the fever, cold drinks being generally desired. Patients in Typhoid Fever, frequently, suffer from nausea and vomiting, the matter ejected, being, according to Dr. Nathan Smith, "vitiated bile, mixed with mucus of an unhealthy color and consistence." ~ In regard to the state of the bowels, the most frequent condition is that of diarrhoea, which is sometimes continuous throughout the whole attack, and in some instances not making its



The first part of the paper is devoted to a general  
 consideration of the subject, and to a statement of the  
 objects to be attained. It is then divided into three  
 parts, the first of which is devoted to a description  
 of the nature and extent of the disease, the second  
 to a description of the symptoms, and the third to a  
 description of the treatment. The first part is  
 devoted to a description of the nature and extent  
 of the disease, and is divided into three sections,  
 the first of which is devoted to a description of  
 the nature of the disease, the second to a  
 description of the extent of the disease, and the  
 third to a description of the symptoms. The second  
 part is devoted to a description of the symptoms,  
 and is divided into three sections, the first of  
 which is devoted to a description of the nature  
 of the symptoms, the second to a description of  
 the extent of the symptoms, and the third to a  
 description of the treatment. The third part is  
 devoted to a description of the treatment, and  
 is divided into three sections, the first of which  
 is devoted to a description of the nature of the  
 treatment, the second to a description of the  
 extent of the treatment, and the third to a  
 description of the symptoms.



appearance until late in the disease. Dr Nathan Smith says, "the latter stages of all severe cases are attended with diarrhoea". The discharge is in appearance watery and of a dark brown color, sometimes tinged with blood.

A peculiarity exists, with respect to the discharges from the bowels in this fever, which I do not recollect having been mentioned by authors on the disease. The evacuations are ejected suddenly and generally with much flatus. Pain in the abdomen is a very constant accompaniment of Typhoid Fever, sometimes sharp and severe and at others only elicited by pressure. It is mostly seated in the iliac fossa, and the patient feels pain on being pressed over the region of the caput coli; and here we may detect a gurgling sound on pressure, a peculiar characteristic of this fever.

There is considerable tympanitis, varying in degree, but for the most part proportioned to the severity of the attack. Miscellaneous symptoms. Emaciation exists in nearly all cases of Typhoid Fever, varying in extent. ~



Aphorismes utiles dans le traitement de la tuberculose  
 "The latter stages of the disease are characterized by  
 diarrhoea". The discharge is in appearance watery and  
 of a dark brown color, sometimes tinged with blood.  
 The tubercular matter is more abundant in the  
 the lungs in this form, which is a correct  
 and firm foundation by nature in the disease.  
 In such cases one should be particularly  
 with correct diet. Observe the patient's  
 constant occurrence of different forms, some  
 more abundant and some and others especially in  
 form. It is usually noted in the first part of the  
 patient's life on their part from the nature of the  
 cough; but here we must take a different course  
 in practice, especially in the treatment of the  
 disease is easier in the tubercular, watery  
 for the most part, but it is the nature of the  
 fact. The tubercular matter is more abundant  
 in all cases of tubercular disease, compared with



State of the Urine. In the commencement of the fever the urine is high colored and voided often; as the disease advances the bladder is seldom evacuated, and there is retention of the urine. Epistaxis is not unfrequent, especially in the commencement of this fever, it is, however, generally slight.

cutaneous Eruptions. During the course of the second week, there takes place an eruption, which is so characteristic of this fever, that it has been called Syphoid eruption. It occurs principally about the neck and breast, although sometimes appearing on the rest of the body. This eruption consists of small red specks, resembling flea bites, which disappear upon pressure of the finger, but return again when the finger is removed. They are slightly elevated above the surface of the skin, not always perceptible to the touch; and according to Dr Power "usually appear in several separate eruptions, each lasting about two days, never appearing before the fifth or after the thirty fifth day." There is also another eruption,







called sudamina, which appears upon the neck, shoulders and breast. It consists of small transparent vesicles, containing a clear fluid, elevating the cuticle. These vesicles dry up in two three days and the cuticle exfoliates. We sometimes have petechiae appearing, which is looked upon as a grave symptom. There is a great tendency to the formation of ulcers on the skin, especially on the nates and edges of blistered surfaces.

The foregoing symptoms which I have enumerated vary considerably in proportion to the attack. Some of them are more important than others, some more peculiar to this disease. It is very rare if ever that they are all found combined in any one case of Typhoid Fever.

**Anatomical Lesions.** I will now proceed to speak of the anatomical lesions which are present, either constant or occasional in this disease; and first of the Circulatory System. The most frequent change found in the condition of the heart is that of softening, which according to Dr Power, is found in one half the cases met with of Typhoid Fever.







In seventeen of forty six cases, Louis found this softening well marked, accompanied by a paleness and flaccidity of the liver of that organ. The state of the blood in Typhoid fever is materially altered from its normal condition, and blood drawn from patients in this disease seldom or never presents any buffy coat. There is a want of a due proportion of fibrine, which all writers on this disease have noticed. Messieurs Andral and Savarret, in their elaborate memoir on the blood, assert, the fibrin never rises perceptibly above the normal standard in true Typhoid fever, and that it decreases in proportion to the advancement of the disease. Seherer has made a partial analysis of the blood in cases of Typhoid fever of a very low putrid type. The blood was black and tar-like, and instead of forming a firm clot, became a soft mass, from which the serum did not separate. The little fibrin it contained was soft and gelatinous. The blood-corpuscles were jagged, and more or less injured; they were smaller than usual and their nuclei were very distinct. The albumen and corpuscles are also diminished.







In regard to the Respiratory System, we find some lesions of the lungs in two thirds of cases. They are more or less congested; but the most common alteration found, is splenization or carnification; the former term used by Doct<sup>r</sup> Power in his lectures, is objected to in Dr Bartlett's work, who prefers the word carnification, as being more appropriate. In some few cases we find ulceration of the glottis and epiglottis; in many cases there is inflammation of the mucous membrane of the bronchi.

The condition of the Brain, is seldom changed, as would from the frequency of delirium in this disease, be reasoned. In examinations of the brain, made of those who have died in the delirium of fever, by Fordyce, Stokes, Schromel and others, there has been found no appreciable alteration in a majority of cases.

Lesions of the Digestive and Abdominal Organs. Changes in these organs are constant. We find in the digestive tube in one sixth of cases little ulcers in the pharynx and oesophagus; we also find pus in the mucous membrane of the pharynx.







The alterations found in the stomach are various, from simple inflammation to ulceration; softening of the mucous tissues seems to be the most common change.

The most common and peculiar lesion in Typhoid fever, is found in the small intestines; this is, in fact, characteristic of the disease. The mucous membrane is more or less in a state of inflammation, and also changed in consistence.

The traces are more marked in the last portion of the ileum, than as we approach the jejunum. The attendant characteristic lesion spoken of in this disease, is the alteration in Peyer's <sup>so called, they being solitary glands,</sup> and Brunner's glands, varying in different cases. There are soft and hard patches met with in this lesion, in those who die early. After the tenth or twelfth day these become ulcerated, various in appearance; those in Peyer's glands oval, those in Brunner's round, looking as if the membrane were punched.

The more numerous the glands affected, the more superficial is the ulceration. The deepest ulcerations are found near the ileo-caecal valve, and diminishing in severity as we leave the valve. The mucous membrane between these diseased



The attention of the student is directed to the fact that the  
 following are the principal points to be observed in the study of  
 the subject. It is to be noted that the first of these is the  
 study of the general principles of the subject, and the second is  
 the study of the particular details of the subject. The third is  
 the study of the history of the subject, and the fourth is the  
 study of the present state of the subject. It is to be noted that  
 the first of these is the most important, and the second is the  
 next most important. The third and fourth are of less importance.  
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 are of less importance. It is to be noted that the first of these  
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 and fourth are of less importance. It is to be noted that the  
 first of these is the most important, and the second is the next  
 most important. The third and fourth are of less importance.



follicles is sometimes found entirely healthy. Cicatrization takes place sometimes in this disease, after ulceration, leaving a peculiar looking serous membrane.

We also find alterations in the mesenteric glands, constantly. If the patient die from the tenth to the fifteenth day, we find these glands increased in size and of a pink hue; after the fifteenth and before the thirtieth day, they are found filled with pus, and assuming a brown hue; after this time they decrease in size and assume a slaty hue.

In the large intestines, we find softening of the mucous membrane in three fourths of the cases and not unfrequently ulceration. Another, though not constant, lesion is alteration of the spleen; it becomes enlarged and assumes the same appearance as in malignant, remittent and intermittent fevers. Morbid alteration of the liver is not frequent. When it does exist, it is found to consist of a slight softening and change in color. ~ ~ ~ ~ ~

Some of the foregoing lesions are only occasional, others are constant, identifying the disease. "The real and relative







importance", says Dr Bartlett, "of the several lesions, accidental, and essential, is a question, in the actual state of our knowledge, not susceptible of absolute and positive settlement. It is a very natural and philosophical conclusion, perhaps, that the essential and constant lesions, are more important than those of an opposite character. This is true, of course, so far as diagnosis is concerned; so far as the fixing and identification of the specific disease is concerned, but it is very questionable, whether these lesions exercise a more powerful influence upon the rapidity, and danger of the disease, than some of the others. It seems, indeed, very probable, that in many cases life is destroyed or the disease is rendered dangerous and severe, by the successive development of these secondary alterations, rather than by the extent, and gravity, of the essential lesions alone". I am strongly inclined to think that this last conclusion is correct, especially when among the secondary lesions, we find the lungs affected. The most common of the sequelae of Typhoid fever, is consumption, following







soon upon the fever. In two thirds of the fatal cases, we find congestion of the posterior and inferior parts of the lung, in itself sufficient to produce death. However, this is chiefly observed in cases of great debility, or those in which the patients have been a long while upon their backs.

Causes. - I now proceed to mention the causes, which to us seem most to affect this disease; the true essential cause being as yet unknown to medical science. Age seems to exert great influence, this fever apparently being more fatal during puberty and manhood, than after thirty years old. Neither sex or occupation seem to have any action on this disease. Residence may exert a slight influence, as we find it more common in large cities than in the country, and among strangers, and students going into a hospital, (to reside). Climate seems to have but little effect, tho' this disease may perhaps be more common in the Eastern, Middle and Western states, than in the Southern. Debilitating circumstances exercise some influence. The action of putrid substances does not seem to affect it, for



have seen the form. In the hands of the patient  
 first conception of the disease and symptoms of the  
 in itself sufficient to produce death. It is not  
 by almost in cases of great debility, or those in whom the  
 habits have been a long time of the same kind  
 however. I have observed it more than the usual number of  
 years next to effect this disease; the time is not  
 being very much unknown to either of us. The  
 to great effect in the form of the disease  
 more fatal than any other kind of disease. It is often  
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 however. It is not a disease of the  
 The action of the substance is not of the



we do not find it more prevalent among scavengers, and those occupied in the cleansing of sewers and drains, than in other occupations. The question of its contagion has been handled by many eminent physicians and it is not yet settled. But to be on the safe side we had better treat it as contagious, it being in this respect, no doubt modified by many causes and attendant circumstances. In my father's family last year, during the existence of a case of Typhoid fever, which terminated fatally, there were four members of the family, including myself, almost constantly in the room. Neither of us were attacked by the disease, but another member of the family, who seldom entered the room, was after the decease of the patient, seized with this fever, but he ultimately recovered. The state of health, <sup>in the last case</sup> previous to the attack of fever, was much debilitated by close confinement in a counting-house. This might have had some influence in the matter, and yet in regard to myself, my own state of health was worse than his; having just returned from the West,



The first part of the manuscript is a list of names  
 and their respective ranks in the military of the  
 Kingdom of France. The names are written in a  
 cursive hand, and the ranks are listed below them.  
 The list includes names such as "Le Comte de  
 ..." and "Le Marquis de ...". The text is  
 somewhat faded and difficult to read in places.  
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 ..." and "Le Marquis de ...". The text is  
 somewhat faded and difficult to read in places.



suffering from a violent Intermittent fever, contracted in the "American Bottom" of Illinois, consequently much enfeebled, and yet I escaped the Typhoid, although much more exposed to its influence. Query, was it the existence of Intermittent fever in the system, that overpowered any influence, which might have been produced by the contagious principle of the Typhoid. — — — Typhoid fever has been divided into several varieties by different authors.

Louis divides his cases into three classes, mild severe and fatal. Whomel has several forms, the inflammatory, the bilious, the mucous, the ataxic and the adynamic. — Duration — Typhoid fever rarely or never occurs in the same person. The convalescence is proportioned to the attack. In severe cases the average duration is twenty five to thirty five days; the limits are fourteen for mild and thirty five for severe. From the insidious mode of attack, and its almost imperceptible approach, it is extremely difficult to date the commencement of an attack of Typhoid fever. — — — — —



The first of these is the fact that the  
 human mind is not a blank slate at birth  
 but is filled with a vast amount of  
 information that it acquires from the  
 world around it. This information is  
 stored in the brain and is available  
 for use at any time. The second  
 point is that the human mind is  
 capable of learning and growing  
 throughout its life. This is because  
 the brain is constantly receiving  
 new information and is able to  
 process it in a way that allows  
 for the development of new skills  
 and knowledge. The third point  
 is that the human mind is capable  
 of abstract thought and reasoning.  
 This allows us to solve problems  
 and make decisions that are not  
 based on immediate sensory input.  
 Finally, the human mind is capable  
 of self-reflection and introspection.  
 This allows us to think about our  
 own thoughts and feelings and to  
 make changes to our behavior based  
 on that reflection.



Complications. — The complications of this fever are not very frequent. We may have true enteritis as a complication, especially in children. Pneumonia, a common complication, is found in about one in six cases; this we can discover by physical examination. We sometimes have Erysipelas as a complication, about once in eighteen cases. This is generally fatal. Inflammation of the ear is a complication, most common, when met with, in children. In inflammation of the parotid glands, suppuration is inevitable and death probable. Peritonitis. This most suddenly fatal accident is marked by a quick acute pain, and vomiting of fecal matter. We cannot foresee this accident. It may occur in the mild as well as in the severe forms. It is not however so apt to occur in children as in adults. We may sometimes have intestinal hemorrhage, with concomitant symptoms. This is a bad symptom, found according to Dr Power, in about one in eight cases.

Relapses. — There sometimes occur relapses in this fever, which may be brought on by inattention to diet during convalescence.

Patients who are recovering from an attack of Typhoid fever



The first part of the paper is devoted to a general  
 consideration of the various forms of the  
 word, especially in the plural. It is shown  
 that the plural is formed in different ways  
 according to the gender and number of the  
 noun. The most common forms are the  
 addition of -s or -es to the singular form.  
 In some cases, however, the plural is  
 formed by a complete change of the  
 word, as in the case of 'child' and  
 'man'. The paper also discusses the  
 formation of the plural in Latin and  
 Greek, and compares it with the  
 English plural. It is shown that the  
 Latin and Greek plurals are often  
 more regular than the English plural.  
 The paper concludes with a list of  
 the most common plural forms in  
 English, and a note on the use of  
 the plural in poetry and prose.



have a very sudden return of appetite, which must be guarded against. There is a falling off of the hair after an attack of this disease; and sometimes we have insanity following the fever for a short time. Dr Nathan Smith mentions, that in some instances the morals appear to be affected by an attack of Typhoid fever; and he cites a particular case in which the propensity to steal, was developed after an attack of this fever.

**Diagnosis.** The diagnosis of Typhoid fever, is now, owing to the pathological researches of Louis, Chomel, Jackson and others, comparatively not difficult. Although in many cases, in the earlier stages, it is obscure, and we need all the grave symptoms grouped together, to make us certain. The examination of the blood may assist the diagnosis, as also the age, as we seldom meet with the disease in persons over fifty, unless in epidemic form. Apart from complications the diagnosis is generally easy; the great muscular debility, headache, pains in the back, feeling of soreness, loss of appetite, state of the skin, increase of pulse, hurried respiration,







physiognomy, epistaxis, loss or dullness of hearing, the gurg-  
 -ling sound elicited on pressure over the ileo-cecal valve,  
 and the peculiar flea bite eruptions, point out conclusively  
 the disease. We must however be searching in our diagnosis,  
 and discover any complications that may exist, and against  
 which we will have to combat. Dr Marshall Hall says,  
 "If it be true that few diseases of an individual organ exist  
 uncomplicated, it is especially so in regard to fevers. In  
 fact our task of diagnosis is only half-performed, when we  
 have ascertained the case to be fever—a special form of fever.  
 The complications may immediately or immediately be the  
 cause of death. If these be undetected, or undistinguished, the  
 first part of the diagnosis will be unavailing. In the course  
 of fevers, the early detection of a complication is therefore of  
 the utmost moment. It is also of the greatest importance to  
 cultivate a habit of watching, and of renewed examinations,  
 for such complications."

**Prognosis.** The prognosis of Typhoid Fever is almost always grave.  
 An attack of the malady leaves the patient in a condition to be



The first part of the diagnosis is only half finished, but the  
 second part is complete. It is especially in the second part  
 that the diagnosis is complete. The first part is only half  
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 only half finished, but the second part is complete. The first  
 part is only half finished, but the second part is complete.



assailed by tubercular disease. Those attacks which come on tardily are worse than those which come on acutely. In cases with difficulty of swallowing, the prognosis is grave. Slowness of the pulse, and weakness, and coldness of the system are grave symptoms. A relapse after or during convalescence is generally fatal. Diarrhea, especially in the latter stage of the disease, is a bad symptom. Dr Nathan Smith says, "The danger of the disease is in proportion to the violence of the diarrhea. I have never lost a patient whose bowels continued constipated through the whole course of the disease, and have never known a fatal case of Typhoid unattended by diarrhea." Involuntary discharges from the bowels and retention of urine, are generally found in fatal cases. The prognosis of course varies much in different cases, governed by circumstances.

Dr Stokes says, "It is hardly necessary for me to state, that persons differ exceedingly in their power of bearing up against an attack of fever. It is a fact, almost universally known, that one man may be favorably circumstanced for resisting







the disease, while another may be a bad and unfavorable subject. Anything that has a tendency to weaken and depress, as excessive apprehension, exhausting labor of body or mind, the debility brought on by mercury, bad food, and foul air, grief, care, and other depressing moral causes, all these are circumstances, which generally speaking, render fever exceedingly dangerous.

To theorise on the subject of Typhoid fever, would require abler minds than are possessed by the generality of modern medical students. I will therefore only mention a few remarks made by others on this subject. This disease is always characterised by lesion of the intestinal follicles. Is this lesion the cause or effect? Bartlett, and other writers, and many eminent medical men are of the opinion, "that the local lesions are peculiar in their nature; secondary and dependent in their relations; constituting not the primary and essential cause, but only one of the pathological constituents."

One theory declares the lesion to be the cause, the symptoms, the effects; while another, perhaps with more reason, places the







cause in a disordered state of the blood. — — — —

Before speaking of the treatment of this fever, I will say a few words in respect to the mortality of the disease, which should have been mentioned before. The mortality is, as has been found from careful observation, affected by age, season, and climate. During youth, or up to the age of puberty the mortality is smaller, than it is at any time thereafter. Dr Roby cites a Typhoid epidemic in Lowell, which carried off all or nearly all attacked, above fifty. Schomel has noticed that the mortality is greater in cold than in warm weather; and other writers mention the same facts in regard to the influence of weather, or season upon the mortality. It has been observed, that the mortality is greatest in the unacclimated, than in residents; and this may be owing very probably, to the change which the system is undergoing in being acclimated, and which change is favorable to the disease. Complications increase the mortality.

**Treatment.** This is yet very unsettled; every one who has written on this fever, having advanced some particular,







favorite treatment, and each one of which has in a manner, been successful. The circumstances which modify the treatment in one particular case, do not exist in another, and therefore we must adapt our treatment to attendant circumstances. The negative treatment, seems to be the most judicious in this disease, which can be guided, but not checked. The question of bleeding in the early stages, has been long canvassed, and is now questioned, and favored. The result of strong bleeding in the first stages, has given us the fact that it does not increase the mortality, but adds to the tediousness of the convalescence. Bleeding then is useful, the sooner employed the best; it is especially useful in inflammatory attacks. We may bleed more than once as circumstances may warrant. This remedy must be cautiously used especially in children, as it is in them apt to promote secondary complications. We must be extremely careful to confine our patients to a strict diet - give them plenty of cold iced drinks - apply warm fomentations to the abdomen - give flaxseed enema. If the diarrhea is profuse give starch and laudanum injections.



The first of these is the fact that the  
 government has not yet decided  
 whether it will support the  
 proposed amendments. It is  
 therefore necessary to  
 consider the merits of the  
 amendments in themselves,  
 without regard to the  
 views of the government.  
 The first amendment is  
 a very important one,  
 and it is necessary to  
 consider it carefully.  
 It is necessary to  
 consider the merits of  
 the amendments in  
 themselves, without  
 regard to the views  
 of the government.  
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 consider it  
 carefully.  
 It is necessary  
 to consider the  
 merits of the  
 amendments  
 in themselves,  
 without regard  
 to the views  
 of the  
 government.



If this does not answer give black drop; this also checks the insombrancy and gives quiet. In irritability of stomach we give prussic acid and soda. To give ease and comfort to our patient, we sponge him all over; but this does not do when the skin becomes cool and the pulse low. We also make use of the Neutral salts. In the later stages when he is sinking, we give tonics - quinine - brandy - and carbonate of ammonia. The use of tonics from the commencement is injurious; they are useful in this disease, but we must not use them, when the symptoms contra-indicate them. Purgatives have lately come into use again, especially in France. Louis advises their use throughout the disease as very beneficial. The most appropriate are saline and laxative purgatives. They are contra-indicated in diarrhoea, intestinal hemorrhage, and great weakness. We must keep the apartment in which our patient is, well ventilated and clean, and have his person kept cool, and his clothes changed frequently. The mouth should be kept clean and washed out. In case where the tongue is much furred and mouth in a bad condition, give an emeto-cathartic, or a



of these things are not necessary for the
 in the world of probability. An individual of the world
 of the future is not a thing but a thing that is
 in the future. The future is not a thing but a
 thing that is in the future. The future is not a
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 thing that is in the future. The future is not
 a thing but a thing that is in the future.



saline purgative. Dr Power says, "In cases of intense meteorism a solution of common salt, given in tablespoonfull doses, acts well. The diarrhea should not be too much checked. In case of perforation keep the patient entirely quiet— give no food and but little drink. Drs Graves and Stokes advise opium in large doses, in cases of perforation, and Louis gives it in this accident, though in smaller doses. Orangeade is very grateful, and may be given in small quantities, iced. The application of two or three leeches to the temples or nostrils is often useful in cerebral congestion, and when there is intense headache, the forerunner of delirium. Blisters are likewise advantageous in such cases. When there is a tendency to local congestion, we must change the position, and give a little calomel or hydragyrum cum creta combined with the purgatives; or calomel and opium may be given every six or eight hours. To check the approach of bed sores, in addition to altering the position, we must cover the places getting red with Diachylon salve. We may, in bronchial difficulty give an emetic to take away the excess of serous







secretion. The bladder sometimes needs attending to, which we must be careful of. When the disease is complicated with local affection in the head, chest, or abdomen, these should be treated on the same principles as the idiopathic disease, with this important modification, that evacua-  
-tives of all kinds must be used more sparingly, and that even in these cases, if there be much prostration of strength, wine must be exhibited, though more moderately than in the simple disease. The Convalescence of Typhoid Fever is slow and tedious, and we must be care-  
-ful to prevent a relapse. The appetite, as before mentioned returns strongly, but we must guard against giving way too much to it. Tonics will be found of service during convalescence. We sometimes have edema of the legs, tender-  
-ness of the feet, or gastric irritation, a little trip to the country and proper treatment overcome these. To adopt the language of Dr Bartlett, "we may hope, that our treatment of this disease, will yet become more successful, and more uni-  
-form; more exact in its application, and more positive







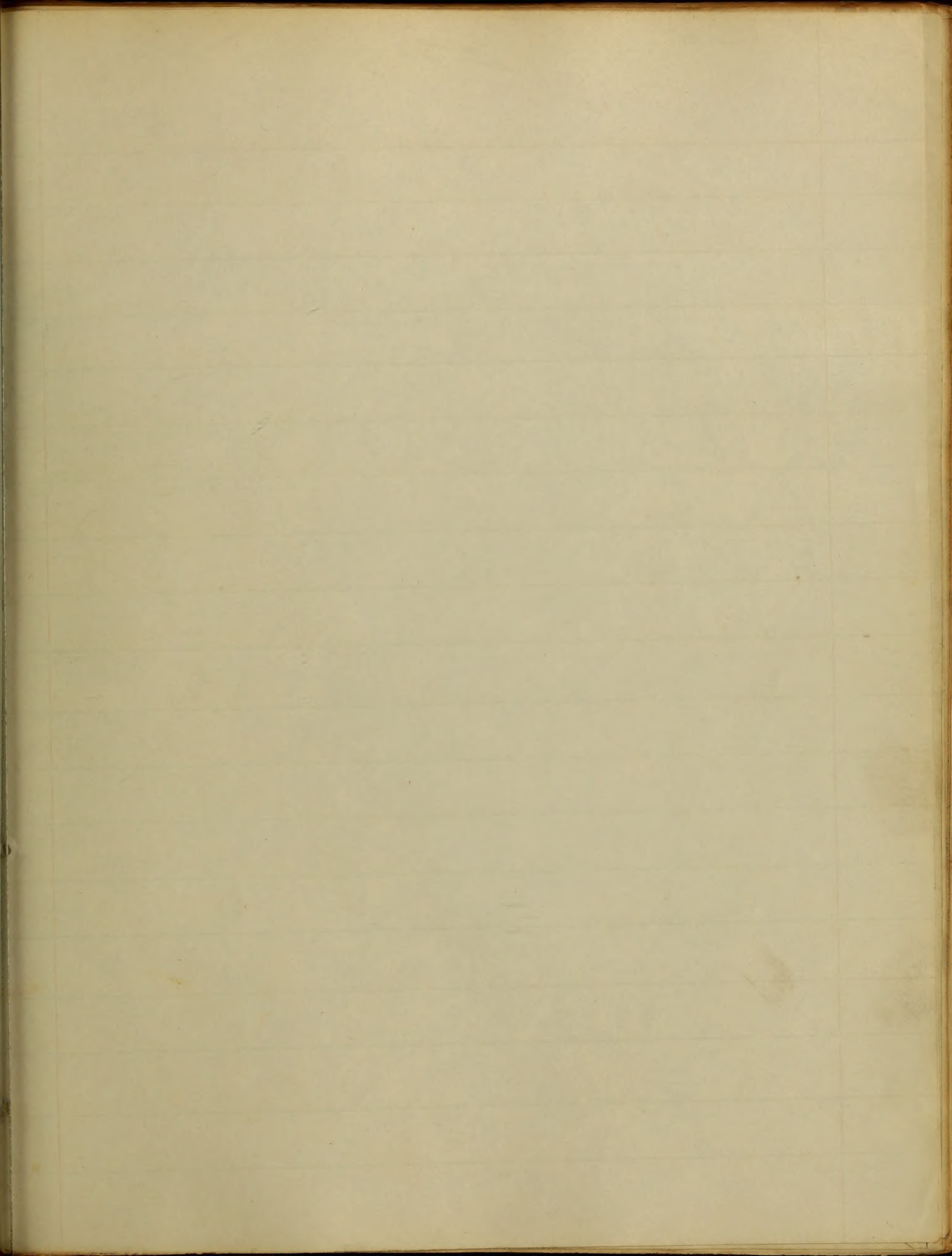
in its results. Many "ministers and interpreters of Nature", faithful to their high vocation, and competent to its duties, are zealously and patiently occupied in endeavouring to accomplish this end. Guided by a sound philosophy; relying upon the one great means of ascertaining the properties and relations of all forms of matter, inorganic and organic, that of observation, they or their successors may yet find, by persevering experiment or fortunate discovery, methods of modifying the living organization, and of correcting its disordered actions, which shall give us a much greater control over the disease, than we are now able to exert."

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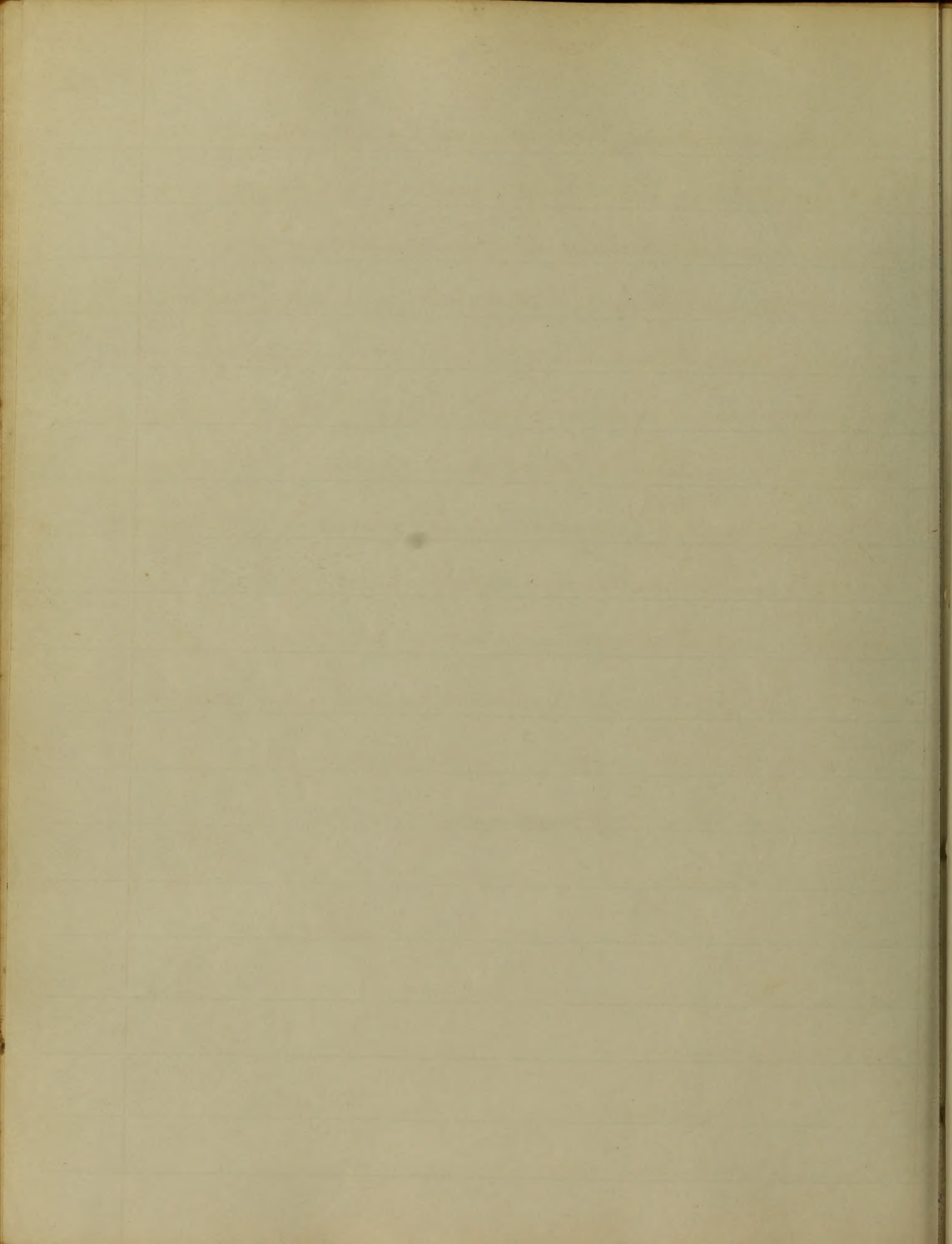




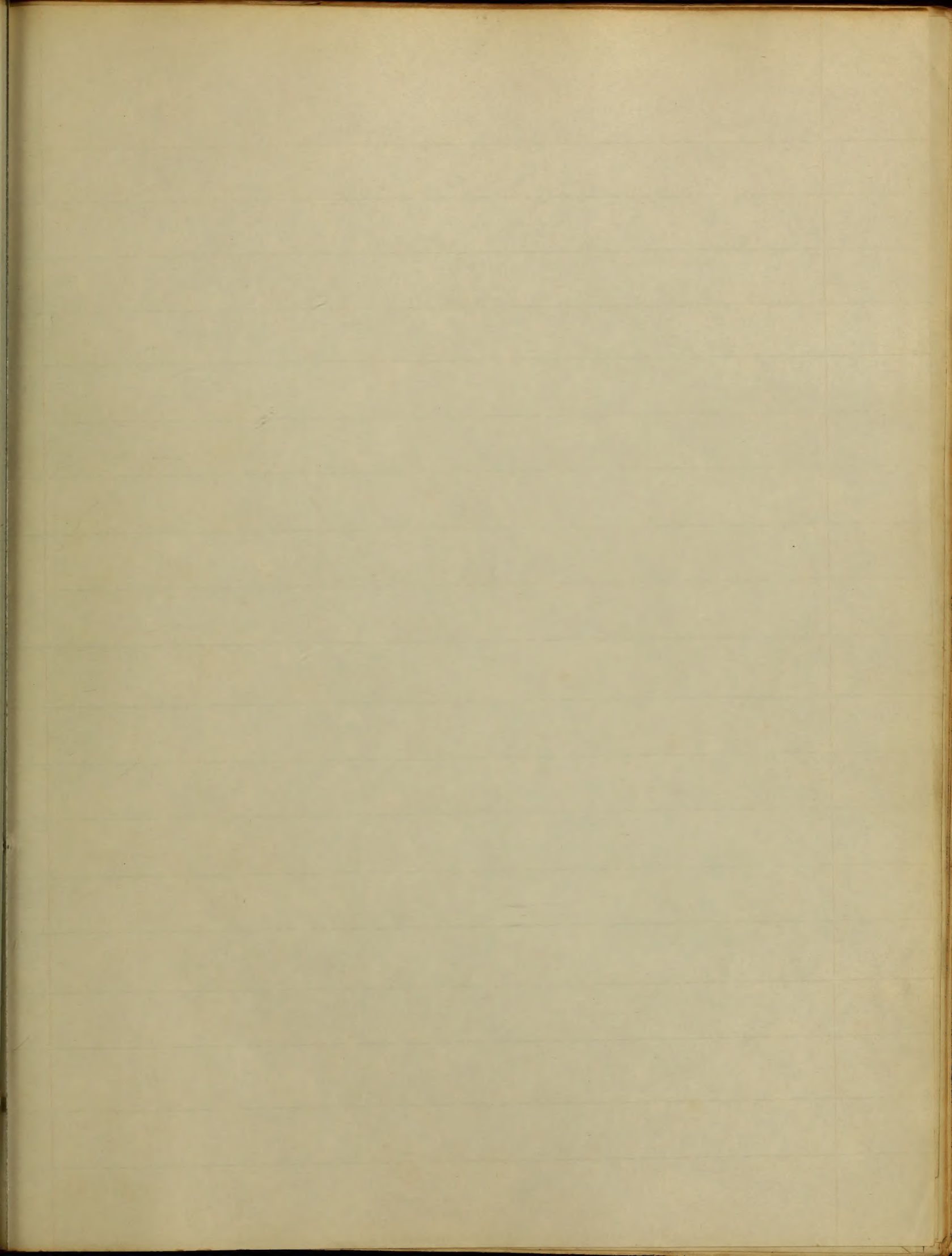




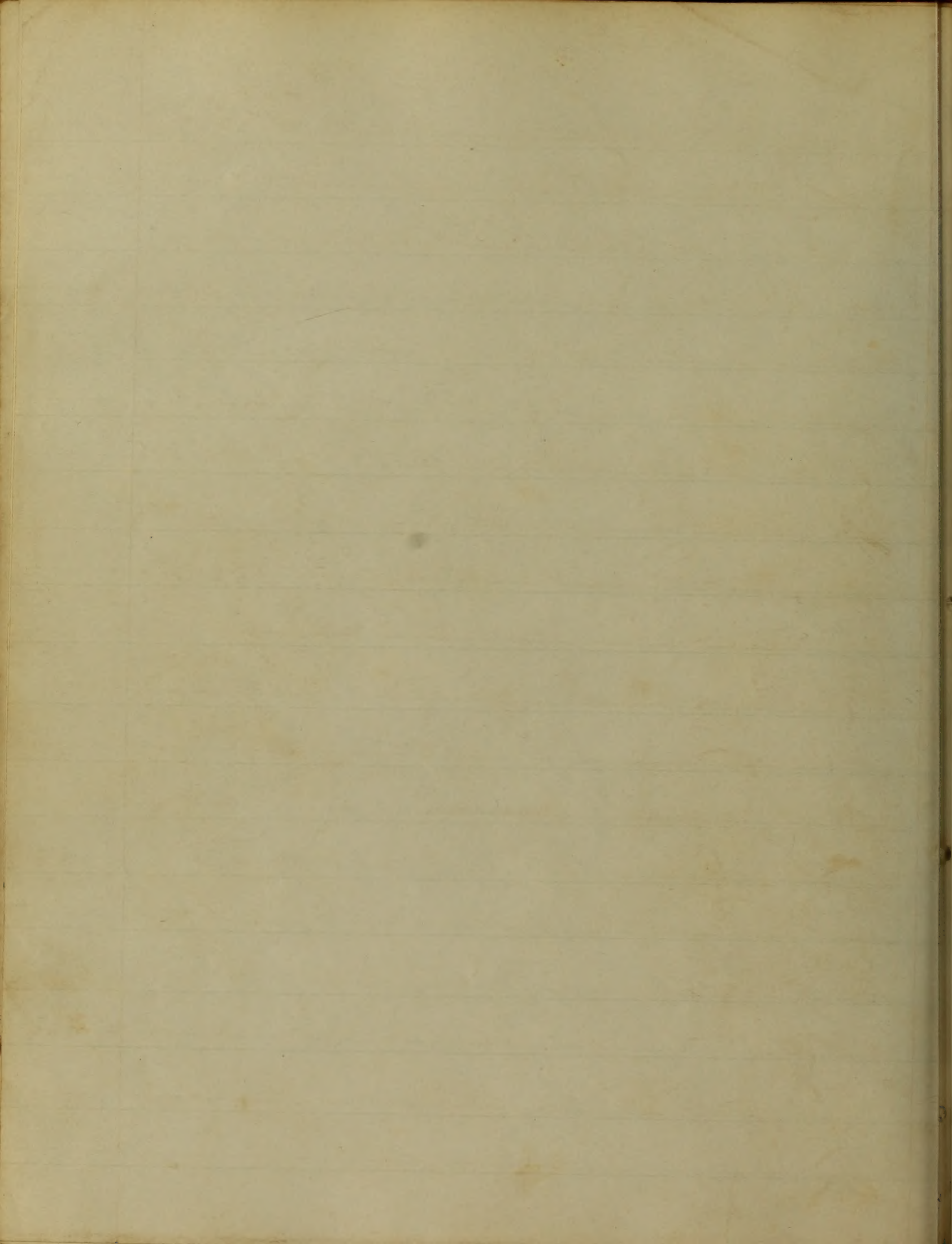




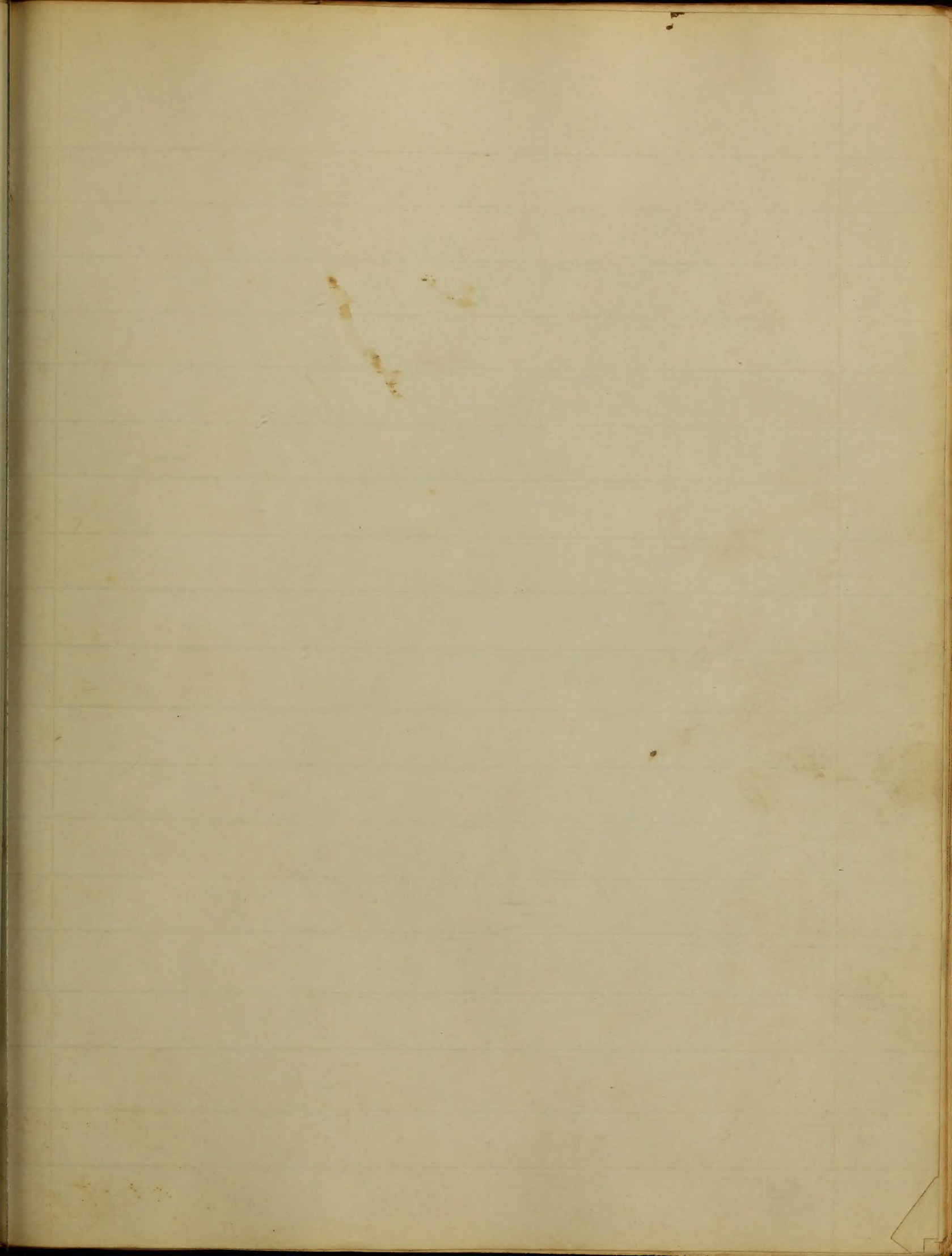




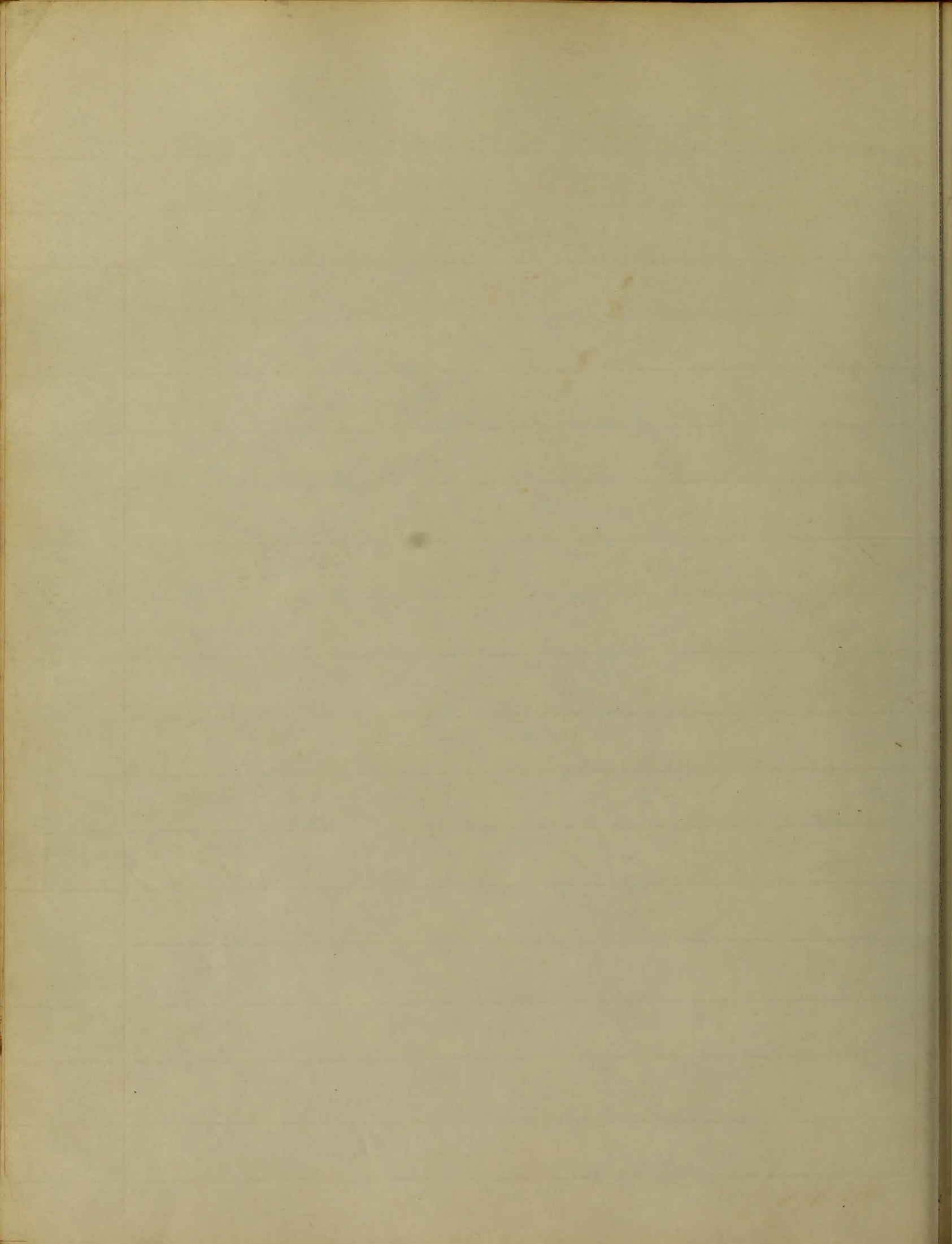




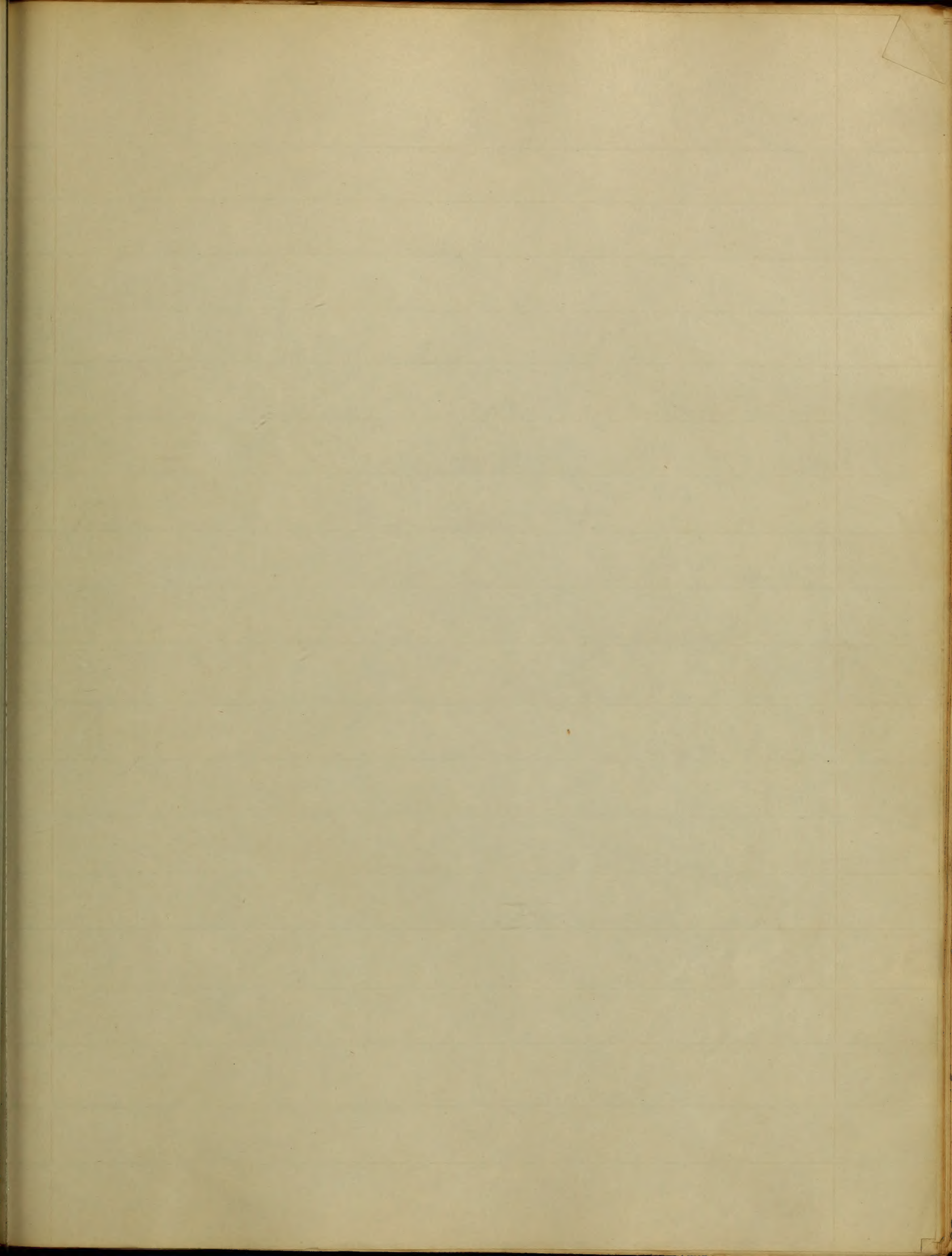




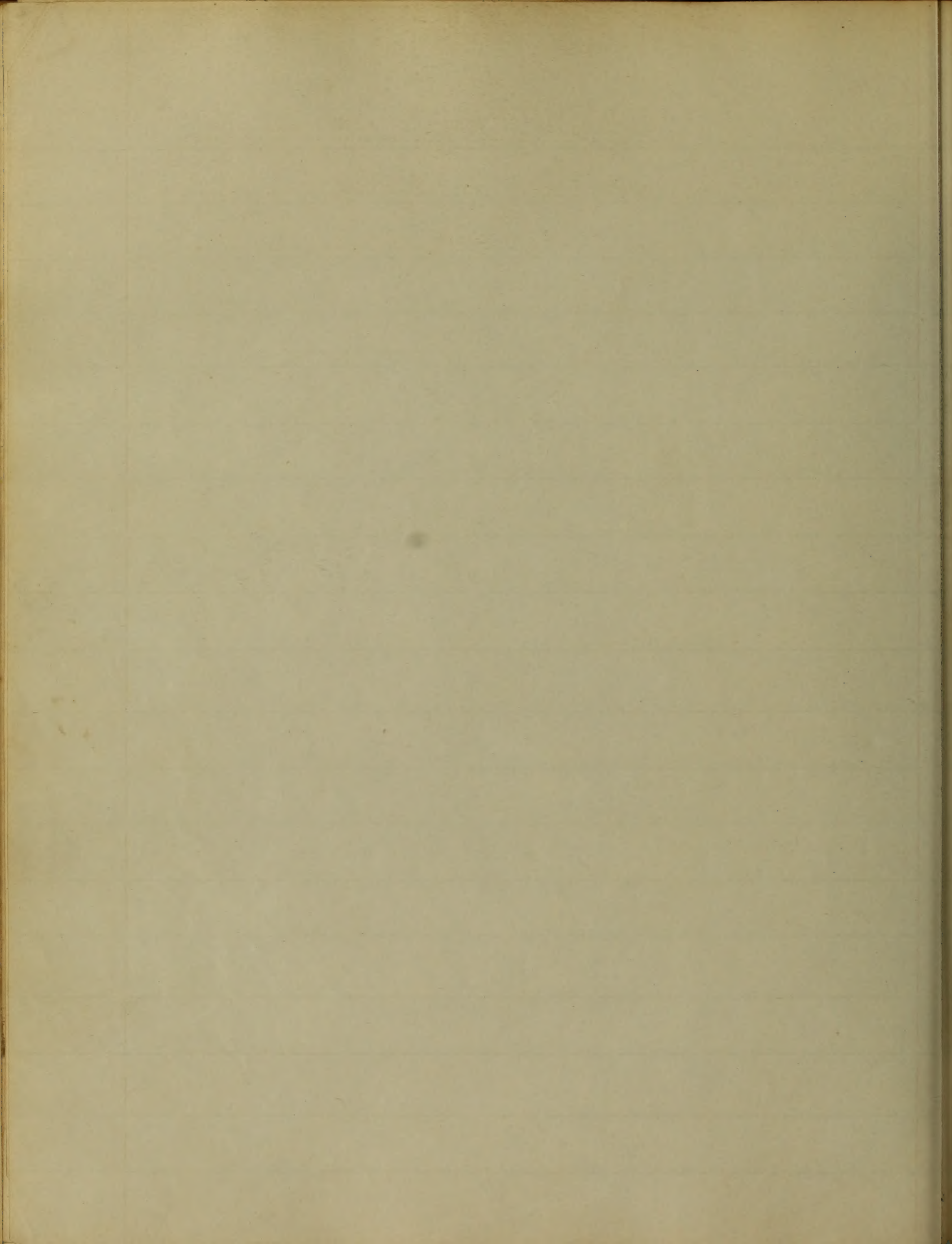














The  
Honorable

Chairman

of the  
Board of Regents and Faculty of the  
University of Maryland

for the

Degree of Doctor of Medicine

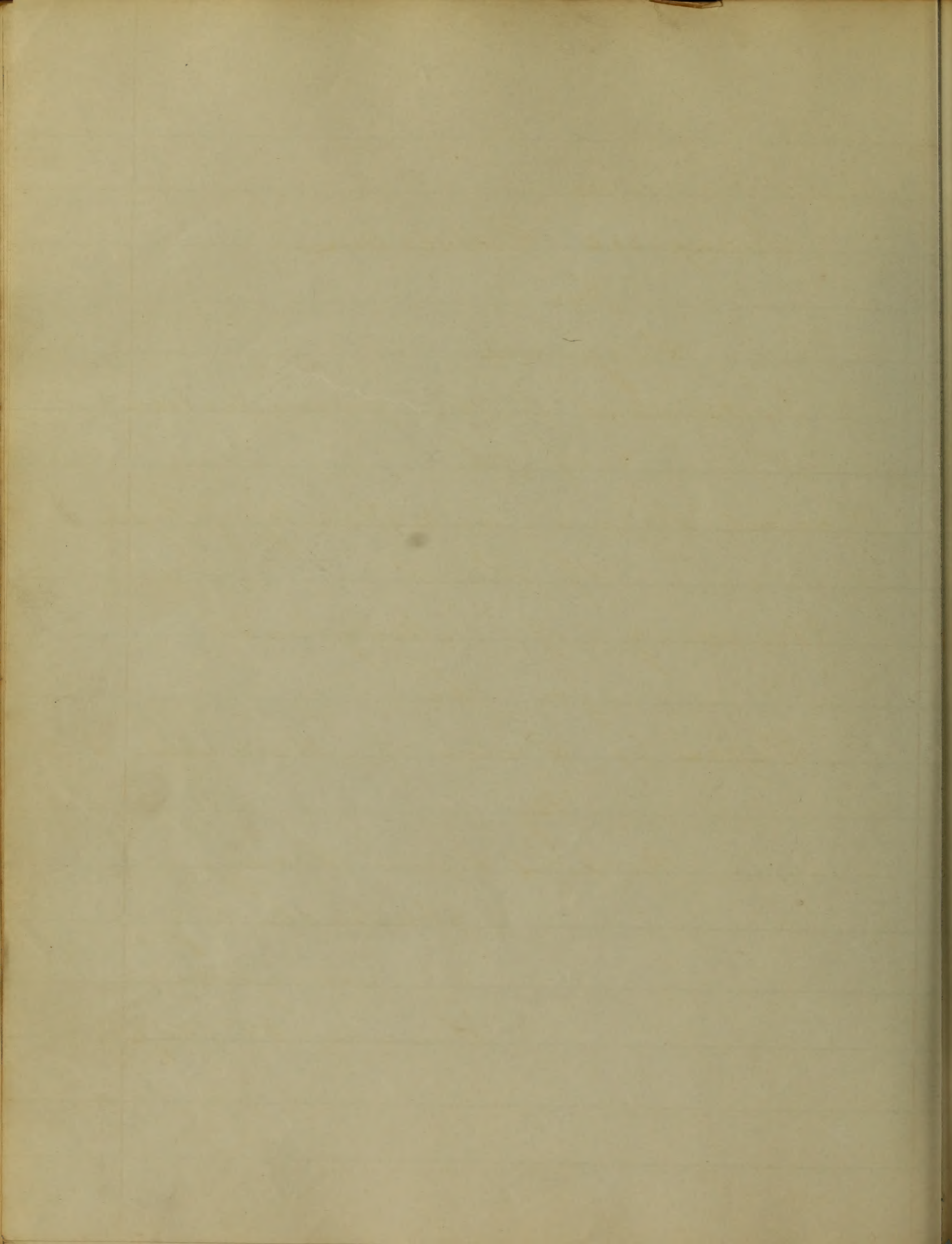
By  
Richard Lewis Stoney

Federick City

Maryland

January 15 1842







An  
Inaugural Dissertation

On  
Diagnosis.

Submitted to the examination  
of the  
Provost, Regents, and Faculty of Physic  
of the  
University of Maryland  
for the  
Degree of Doctor of Medicine

By  
Nicholas James Doney

Frederick City

Maryland

January 10<sup>th</sup> 1847.



1  
The  
Department  
of  
the  
Interior  
Washington  
D.C.  
June 10th 1877  
Dear Sir  
I have the honor  
to acknowledge  
the receipt of  
your letter of  
the 7th inst.  
and in reply  
to inform you  
that the same  
has been  
forwarded  
to the  
proper  
authorities  
for their  
consideration  
I am, Sir,  
Very  
Respectfully,  
Your  
Obedient  
Servant,  
John  
S. [Name]



## On Diagnosis

In examining the subject before us, we are Compelled to divide it under several heads, each of which, is desired to be studied, with its relation to the whole subject. That we may be the better able to understand the object desired, let us in the first place endeavour to point out the correct meaning of the term Diagnosis; secondly, the manner of Diagnosis, next the great importance of a correct Diagnosis based upon Pathology and lastly some of the great Diagnostics and differences between Diseases.— Diagnosis is that science by which we are enabled to know and distinguish Disease, one from the other, as well as the difference of the type of Disease; which knowledge is obtained by the Classification and arrangement of the different signs and symptoms, presented by the patient—







each Case, to be studied, and examined as an isolated Case; then the similarity compared to others. Diagnosis is susceptible of a Division into general and special Diagnosis, we understand general Diagnosis to teach us the power of arranging and dividing Diseases, into families or groups of Disease, each group controlled and known by separate and distinct signs, and symptoms, without any relation, to the others - each group also capable of a division, of types or forms; each type modified by the circumstances, under which it may occur; for instance the difference between inflammatory and nervous Diseases. Erythematous and Trophic - Sympathetic and Idiopathic.

Special Diagnosis again teaches the means of pointing out the particular, form or type of the Disease, with its location, and nature,



1847  
The first of the series, the second of the series, the third of the series, the fourth of the series, the fifth of the series, the sixth of the series, the seventh of the series, the eighth of the series, the ninth of the series, the tenth of the series, the eleventh of the series, the twelfth of the series, the thirteenth of the series, the fourteenth of the series, the fifteenth of the series, the sixteenth of the series, the seventeenth of the series, the eighteenth of the series, the nineteenth of the series, the twentieth of the series, the twenty-first of the series, the twenty-second of the series, the twenty-third of the series, the twenty-fourth of the series, the twenty-fifth of the series, the twenty-sixth of the series, the twenty-seventh of the series, the twenty-eighth of the series, the twenty-ninth of the series, the thirtieth of the series, the thirty-first of the series, the thirty-second of the series, the thirty-third of the series, the thirty-fourth of the series, the thirty-fifth of the series, the thirty-sixth of the series, the thirty-seventh of the series, the thirty-eighth of the series, the thirty-ninth of the series, the fortieth of the series, the forty-first of the series, the forty-second of the series, the forty-third of the series, the forty-fourth of the series, the forty-fifth of the series, the forty-sixth of the series, the forty-seventh of the series, the forty-eighth of the series, the forty-ninth of the series, the fiftieth of the series, the fifty-first of the series, the fifty-second of the series, the fifty-third of the series, the fifty-fourth of the series, the fifty-fifth of the series, the fifty-sixth of the series, the fifty-seventh of the series, the fifty-eighth of the series, the fifty-ninth of the series, the sixtieth of the series, the sixty-first of the series, the sixty-second of the series, the sixty-third of the series, the sixty-fourth of the series, the sixty-fifth of the series, the sixty-sixth of the series, the sixty-seventh of the series, the sixty-eighth of the series, the sixty-ninth of the series, the seventieth of the series, the seventy-first of the series, the seventy-second of the series, the seventy-third of the series, the seventy-fourth of the series, the seventy-fifth of the series, the seventy-sixth of the series, the seventy-seventh of the series, the seventy-eighth of the series, the seventy-ninth of the series, the eightieth of the series, the eighty-first of the series, the eighty-second of the series, the eighty-third of the series, the eighty-fourth of the series, the eighty-fifth of the series, the eighty-sixth of the series, the eighty-seventh of the series, the eighty-eighth of the series, the eighty-ninth of the series, the ninetieth of the series, the ninety-first of the series, the ninety-second of the series, the ninety-third of the series, the ninety-fourth of the series, the ninety-fifth of the series, the ninety-sixth of the series, the ninety-seventh of the series, the ninety-eighth of the series, the ninety-ninth of the series, the hundredth of the series.



Governed by the mode of the attack; nature of the state of the patient, previous to the attack; for example, whether the disease be an inflammatory attack of the body, of the Lungs; or simply of the Membrane covering the Lungs, called the Pleura; or again if it may be a tubercular deposit in the Lungs, or possibly an inflammation of the Bronchial tubes; also the possibility of the patient suffering under variola or may it not be simply scarlatina - be it Measles, or Variocella, and so are we enabled by our knowledge of special diagnosis, to pass through the entire Catalogue of the "ills to which man is heir".

We shall now direct our attention, to the means, of diagnosing disease, with the necessity of a Carefull and rigid examination, of the patient - endeavouring to shew the necessity of this strict study, of the symptoms, by the







Simple fact of all persons, being so desirous to  
 dwell freely on their ills, and sufferings; nearly  
 all patients, are ready to tell not only the nature,  
 of their suffering; but also the Cause, and the  
 seat of the Disease: by which means they would  
 not infrequently lead the Practitioner from  
 the correct path; provided he suffered himself  
 to be content with their statement; It therefore  
 behooves him, to make his own investigations;  
 And it then becomes a matter, of importance  
 in what manner he interrogates his patient;  
 And as the plan laid down in Audral's  
Clinic appears the most advisable; we beg  
 permission, to use it. Audral says, the first  
 thing to be done, is to examine the exterior, by  
 which means we form some idea, of the patients  
 Age, strength, and state of mind; Also the form  
 of the body, its size, Colour, and eruption, if  
 there may be any; He then says the first







Question, to be addressed to a patient, should be "Where have you any pain?" rather than the question "What ails you?" for by the last question he may be sure to be left as much in the dark with respect to the nature, of the patient's Disease as he was before he put the question.

Whereas by asking where his ailment, lies, the patient seldom fails to point out the function, and organ, diseased. Even with this precision in conducting our examinations, it is sometimes difficult to prevent patients from wandering into piquant accounts, concerning their Complaints; frequently too they take one organ for another: they, for instance, complain of a pain in the Stomach, when the seat of the Disease is in the Chest.

It is useful, in order to avoid all misunderstanding to bid them lay their hand on the part where they feel pain. The next question, should be "How long are you ailing in this way?"







by this, you ascertain wheather the Disease be Acute  
 or Chronic. If you discover that the Disease is of  
 recent occurrence, we then confine our attention  
 solely to the Consideration, of Acute Diseases, excluding  
 altogether Chronic Diseases, of the same organ.  
 After examining the patient in this way; it next  
 remains for us to go back to the previous Circum-  
 stances, which might have acted as Causes, or which  
 might furnish some usefull data for the treat-  
 ment. We should inquire to what Causes, the  
 patient attributes his Disease: wheather the Disease  
 be hereditary or acquired: wheather the present  
 is the first attack of it, or wheather it appeared  
 on a former occasion. Lastly, we should direct our  
 attention to the Age, Sex, Constitution, Idiosyncrasy,  
 habits, and profession, of the patient." Following  
 out the general principles here laid down.  
 We come next in order, to the State of the pulse,  
 the Condition of the tongue, and Mouth, the







State of the Skin, then the respiration; and turning our examination a little deeper, we come to the expectoration, the Cough and to the secretions, in general. Lastly to the aid of Auscultation and Percussion, by which aid, great light has been thrown over disease; which light bids fair to disperse the Clouds, of Doubt, that at one time rendered the Diagnosis of disease comparatively difficult; affording a sanguine hope that the Day is not far distant when there will no longer remain any doubt or difficulty in this most important Study - -

Hence arises the great necessity, and importance of properly studying and understanding, Diagnosis in its correct meaning - based upon a knowledge of Pathology. By a proper use & knowledge of Diagnosis, we are enabled to know the distinction between the studied and scientific practitioner, and the bold, and presumptuous Quack;



that of the other than the...  
 an examination...  
 expectation...  
 in general...  
 but...  
 the...  
 to...  
 the...  
 which...  
 that...  
 no...  
 the...  
 these...  
 of...  
 in...  
 of...  
 progress...  
 return...  
 was...



Who after (to all appearances) a careful examination  
 of his patient. Says with a great degree of self  
 importance. And assured of the ignorance, of the  
 Family. "There is something wrong in the Chest - the Chest  
 is not all right - the abdomen is diseased, or the  
 brain is injured" - without saying or even know-  
 ing what it is - while on the other hand, the  
 Practitioner from principle, tells emphatically  
 the seat, and nature of the attack, whether  
 it be acute or chronic; he says he knows it to  
 be this or that, from the nature, and form of the  
 symptoms; presented by the Case, knowing each  
 Case to be governed by fixed and immutable  
 general principles, he gains his knowledge  
 from a knowledge of Pathology, and a stan-  
 -dard of health; he sees that each organ or vis-  
 -cus is not pursuing its wonted natural -  
 functions, he examines every part, every sec-  
 -tion, he knows each to present certain







Appearances when in health, and sees the difference  
 in the then existing Condition; But how different  
 from the other, who sees, to be sure "that some  
 thing is wrong", but why? or how, he knows  
 not. Because he does not know, the means of  
 Diagnosis; fixed upon scientific basis =  
 Alas for the Country and our Profession, we  
 have still another kind of Quacks, or as they  
 call themselves Cruppys. Men who have  
 gained the title M.D. and permission to prac-  
 tise Medicine, but Men entirely ignorant, of  
 the benefits resulting from a knowledge of  
 Diagnosis. Simply from the fact of their hav-  
 ing never studied it, or if at all, but imper-  
 fectly, Men who know nothing about the Ap-  
 pearances, presented by Morbid Anatomy. - Con-  
 sequently it is not at all surprising to hear  
 these Men say they never rely on Pathognomonic  
 Signs. that they can nothing, at all about



I have been thinking much lately of the  
 various ways in which we are connected  
 to the world around us. It seems to me  
 that we are all part of a great  
 scheme of things, and that our  
 actions have consequences that  
 reach far beyond ourselves. I  
 often wonder how we can be so  
 selfish, and how we can be so  
 ignorant of the needs of others.  
 I think that we should all try to  
 be more helpful and more  
 understanding. I think that we  
 should all try to be more  
 generous and more kind. I think  
 that we should all try to be more  
 patient and more forgiving. I  
 think that we should all try to be  
 more loving and more merciful.  
 I think that we should all try to  
 be more just and more fair. I  
 think that we should all try to be  
 more honest and more truthful.  
 I think that we should all try to  
 be more brave and more courageous.  
 I think that we should all try to  
 be more wise and more thoughtful.  
 I think that we should all try to  
 be more humble and more lowly.  
 I think that we should all try to  
 be more pure and more clean.  
 I think that we should all try to  
 be more holy and more righteous.  
 I think that we should all try to  
 be more good and more virtuous.  
 I think that we should all try to  
 be more beautiful and more lovely.  
 I think that we should all try to  
 be more happy and more content.  
 I think that we should all try to  
 be more peaceful and more harmonious.  
 I think that we should all try to  
 be more united and more brotherly.  
 I think that we should all try to  
 be more loving and more merciful.  
 I think that we should all try to  
 be more just and more fair.  
 I think that we should all try to  
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 I think that we should all try to  
 be more happy and more content.  
 I think that we should all try to  
 be more peaceful and more harmonious.  
 I think that we should all try to  
 be more united and more brotherly.



the symptoms, of the case; all they care for, is; he  
 has Billious Fever, or some other fever, which they  
 undertake to cure, reasoning thus; Mr. A. had  
 Billious fever, and was relieved by such a Cou-  
 rse - now for consequence this Case must yield  
 to the same Curative means. for both Cases are  
 Billious fever - he sees, or thinks he sees, a simi-  
 larity, in ~~the~~ Cases, and by noticing the stages  
 of the attack, he feels prepared to say at once  
 the result of the attack - Pity! thrice pity! that  
 such Medical Philosophers, ever not Compell-  
 ed to enjoy the practice of such Hypothetical  
 Philosophy upon their own more than hum-  
 an Carcasses, that they might be led to feel,  
 (When they will not see) the absurdities, of such  
 abortive attempts at reason; such men are  
 often heard to say that Science will answer  
to talk about; but when you enter the Sick  
 Chamber, you must divest yourself of all



The appearance of the Court, all the day long, the  
 the Bill is now the same as the former one  
 substitute to the Bill is now the same as the former one  
 William is now the same as the former one  
 we are now the same as the former one  
 to the same as the former one  
 William is now the same as the former one  
is now the same as the former one  
 of the same as the former one  
 the same as the former one  
 such is now the same as the former one  
 as to the same as the former one  
 the same as the former one  
 the same as the former one  
 when the same as the former one  
 whether the same as the former one  
 the same as the former one  
 to the same as the former one  
 whether the same as the former one



such superfluous nonsense. Alas! poor deluded beings - deluded by self conceit - groveling in the most helpless darkness of ignorance. The vast importance of correct Diagnosis may be so variously shown, and so readily understood, with so palpable benefit to the meditating student, that it is hardly necessary to mention a single more instance: yet we will point out the necessity, in a case, when the Practitioner is called to see a patient, who he finds in a comatose state utterly unconscious of any thing surrounding him, and his friends also unable to give any satisfactory account of his condition; what a quandary the M.D. is placed in; yet comparatively how easy the practitioner who is prepared to examine every portion of the body, and then contrasting the existing condition, with his standard of health, based upon a proper anatomical knowledge







He is at once able to say if any injury has occurred  
 externally or internally, or wheather it may not  
 be Apoplexy, and to treat the Case accordingly,  
 while even yet Life may be restored, while it is  
 a matter of Life or Death. Again he may  
 be called on, when it is essentially requisite  
 to relieve the patient in a short time, before all  
 hope of recovery shall have fled. Suppose a  
 Case in which the patient, is unconscious of his  
 Condition, with all the indication of injury  
 of the brain; how important that a Carefull  
 examination should be made; Yet how im-  
 possible for a man to make necessary examination  
 who looks upon all Diseases as but a Modific-  
 ation of one Disease: he who in his self security  
 (which security is his own ignorance) cannot  
 say wheather the Case be an injury of the brain  
 or if such a Condition could not be brought  
 about by a Disorder of Stomach.



The first part of the paper is devoted to a general  
 description of the country, and a notice of the  
 principal towns and cities. The second part  
 contains a list of the principal rivers and  
 lakes, and a description of the principal  
 mountains and hills. The third part  
 contains a list of the principal minerals  
 and a description of the principal  
 manufactures. The fourth part  
 contains a list of the principal  
 exports and imports. The fifth part  
 contains a list of the principal  
 public buildings. The sixth part  
 contains a list of the principal  
 public offices. The seventh part  
 contains a list of the principal  
 public institutions. The eighth part  
 contains a list of the principal  
 public works. The ninth part  
 contains a list of the principal  
 public monuments. The tenth part  
 contains a list of the principal  
 public statues. The eleventh part  
 contains a list of the principal  
 public paintings. The twelfth part  
 contains a list of the principal  
 public sculptures. The thirteenth part  
 contains a list of the principal  
 public gardens. The fourteenth part  
 contains a list of the principal  
 public parks. The fifteenth part  
 contains a list of the principal  
 public squares. The sixteenth part  
 contains a list of the principal  
 public streets. The seventeenth part  
 contains a list of the principal  
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 contains a list of the principal  
 public squares. The nineteenth part  
 contains a list of the principal  
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 contains a list of the principal  
 public squares.



It is generally known that several classes of diseases so nearly resemble others in the presentation of their symptoms, as to make it a matter of careful study to point out the distinction; owing to diseases often occurring with what is called negative symptoms. Yet each class, when discovered, is fundamentally different. Again we see the absolute necessity of correct diagnosis, between Apoplexy and Epilepsy - the emergency of the case requiring prompt and energetic treatment; there is no time to wait, and watch the disease - it must be met at once, or else the vast fabric of nature totters and falls; how absurd it would be to treat either of those cases for any thing but the real cause of the attack. How many lives have been - and are still sacrificed by the foolish notion of purity of disease; the necessity might be carried out in every single case of the entire list of diseases - and each case -



The present time has been chosen  
 to publish this volume in the  
 hope that it will be found  
 useful to some extent in the  
 study of the history of the  
 country and the progress of  
 the sciences and arts in the  
 various parts of the world  
 during the last century. It  
 is the result of a long and  
 laborious research into the  
 sources of information, and  
 the selection of the most  
 interesting and valuable  
 facts and events. It is  
 intended to be a complete  
 and accurate history of the  
 world, from the beginning  
 of the Christian era to the  
 present time. It is divided  
 into three parts, the first  
 of which contains the history  
 of the world from the  
 beginning of the Christian  
 era to the year 1648, the  
 second part contains the  
 history of the world from  
 the year 1648 to the  
 present time, and the third  
 part contains a general  
 history of the world from  
 the beginning of the world  
 to the present time. It is  
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 the year 1648 to the  
 present time, and the third  
 part contains a general  
 history of the world from  
 the beginning of the world  
 to the present time.



within itself will show the advantages to be derived, not only in building the Practitioners reputation but also in the great saving of human life.

Its necessity is pointed out by taking two Cases of any one disease - grant that Mr. A and B - are both suffering with an Attack of Billious = Fever - Does it follow as a matter of Course, that they should both be alike? is it any proof that the Circumstances Controlling the Cases, both in their Causes as well as the Condition of the patients are the same? Certainly not; by no means, for as Professor Bartlett says in his Med. Philos. ophy - "It is a well known fact, that the obvious and appreciable elements, which are united to constitute the disease, differ in many respects in different Cases; and those elements are also constantly changing, in themselves, and their relations to each other - The state of the system, at the commencement of the disease, must also



The first thing that I observed  
 was a building in the distance  
 but in the great country of America  
 the country is divided into  
 by our own great cities and  
 and the shipping and the  
 from the other as a matter of course  
 by which it is not to be  
 the circumstances concerning the  
 this course as well as the  
 and on the same subject  
 for as Professor Butler says in his  
 reply. It is a well known fact that the  
 and especially the  
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 constantly changing in  
 relation to each other the  
 at the commencement of the



be widely different in different Cases. Then in  
 addition to all this, there are peculiarities in  
 different individuals, less obvious in their Charac=  
 ter, of a more subtle and recondite nature;  
 and known only by their effects, which would  
 more or less powerfully, modify the disease itself;  
 Apart from the differences already enumerated  
 Consequently we see the necessity sufficiently  
 forcible to induce all persons desirous of making  
 any progress in the profession, absolutely una=  
 voidable for their advancement. We shall  
 before leaving this portion of our subject,  
 once more seek a Quotation from Dr. Bartlett's  
 Medical Philosophy. viz. "The Philosophical  
 reason of the practical importance of Diagnosis, is  
 simply and manifestly this. It is the expression  
 of one of the terms in every problem of Cure; -  
 it constitutes what may be called one of the  
 elements in every therapeutical operation,



I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the application for a license to sell and dispense the medicinal wine of the late Dr. Williams. The same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,  
 Yours obedient servant,  
 J. M. [Name]



or Analysis - It is the only term, the value of which it is difficult to ascertain; it is the great element, upon a full knowledge of which, the certainty of every therapeutical operation depends.

Just in proportion to the perfection and absolute-ness of our Diagnosis; just in proportion to the Completeness of our Pathological Knowledge, will be the certainty of our therapeutics. And nearly all the Difficulties, the Obscurities, the uncertainties, the imperfections of Practical Medicine, grow out of the Difficulties, the Obscurities, the uncertainties, the imperfections of our Pathological Knowledge, or, in other words, of our Diagnosis." We also beg the opinion of Professor Davidge, in his Nosological arrangement - "That the Pathognomonic symptoms in Disease, are as unequivocal and fixed as the distinctive Characters in Animals or plants; and further, that no Generic Disease, in any of its







Distinctive Diagnostic properties, however, by time, by Climate, or any other accidental Circumstances, been changed.

In pursuance of the Course adopted in the Commencement of our investigation of the subject before us we come now to the last and grand object of our study; the importance of Care in this part appears so palpable, that we hope for excuse in taking a recapitulation of the Course of our investigation. In the first place, it has been our effort to explain the meaning of the term Diagnosis; next, the great importance of a correct Diagnosis, based upon Pathology with the means of Diagnosis. And lastly it is our desire to point out some of the great Diagnostic indications and Differences. not that we mean to say that each and every sign and symptom, is peculiar only to a certain Disease, or even a certain Class of Diseases.



I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above mentioned matter. I am sorry to hear that you are not satisfied with the result of the investigation. I have been very anxious to do justice to all parties concerned. I will be glad to hear from you again if you have any further suggestions or objections. I am, Sir, very respectfully,  
 Yours truly,  
 J. M. [Name]



For well we know, there are many symptoms, that are common to disease in nearly all circumstances. Yet the absence of which have but little, if any weight in making out our Diagnosis. Our object shall be to endeavour to show, that all signs, and symptoms, only indicative of certain pathological conditions, and that the laws of this part of the profession, under the general principles, are immutable and fixed.

We deem it proper, and perhaps better, that the Diseases of the three Cavities should be considered in their relative positions, in order. Consequently we commence with those of the brain.

Yet when we remember the great difficulty attending the Diagnosis of Diseases of the brain, from the want of Physical signs - which are rendered impossible, from the circumstances under which the brain is placed - as well as from the want of the light shed by -







Auscultation and Percussion - We are therefore  
 Compelled to rest satisfied with Physiological  
 and Pathological induction, and if inductive  
 signs vary much in more simple organs, in  
 consequence of mere variations of Circumstances,  
 they must be infinitely more variable and Com-  
 plex in reference to the brain; An organ within  
 itself of so great structural Complexity -

Believing therefore, the difficulty attending the  
 Diagnosing - also that there is no difference  
 appreciable during life, between inflammation  
 of the Membranes of the brain (it being the opin-  
 ion of Abercrombie, Guessant, Cochin, and Cop-  
 land) Nor do we think there is any apprecia-  
 ble difference <sup>in</sup> inflammation of the Medullary  
 substance, and Meningitis - Abercrombie says  
 "Our knowledge, is not sufficiently matured to  
 enable us to say with Confidence, what symptoms  
 indicate inflammation of the substance of the brain,



The first thing I should mention is that  
 the weather was quite good today.  
 We went for a walk in the park  
 and saw many beautiful flowers.  
 The children were very happy  
 and played for hours.  
 We also had a picnic under  
 a big tree. The food was  
 delicious and everyone enjoyed  
 it very much. It was a  
 very pleasant surprise.  
 I hope to go back soon.  
 The scenery is so beautiful.  
 I wish I could stay here  
 forever. It's a wonderful  
 place to visit. I'll be  
 back next week.



As distinguished from that of its Membranes—  
 In fact we think that one Cannot exist, with-  
 out the other, thereby rendering it, impossible to  
 distinguish them. Consequently, shall pass over  
 Diseases of the brain by attempting to show the Diff-  
 erence between Acute and Chronic Meningitis,  
 An Acute attack makes its appearance  
 first by a Cold stage, or rigor, with great pain  
 in the head, of an acute and throbbing nature,  
 heat, and intumescence of the head, intolerance  
 of light, and sound, blood shot eyes. Staring  
 prominence of the eye balls, Contraction, with  
 oscillation of the pupils. More or less violent  
 Delirium: pulse quick, full and hard— with  
 twitching and jerking of the muscles often—  
 More or less paralysis— this state lasts for a longer  
 or shorter length of time, according to the result of  
 the attack = Whereas, in the other, or Chronic  
 form, it steals insidiously over the victim,



The following facts from the  
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 and the other things  
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leaving him often unconscious of the approach -  
 until it has so fastened its death like talons  
 that death itself is only able to sever its hold.  
 Chronic Meningitis may be either a sequel of  
 the acute form, or it may be primarily Chronic.  
 In either Case, it is obscure, from the deficiency  
 of fever, and from the absence in many instances  
 of any considerable intellectual disturbance  
 the only symptoms then being, more or less constant  
 headache, mostly with somnolency, con-  
 pulsive movements, which may in many in-  
 stances last for a considerable time, generally  
 increasing, until delirium and paralysis  
 ensue. This delirium is at first a mere mon-  
 omania, with intellectual imbecility, and  
 often with sullenness, irascibility, taciturnity,  
 and lofty hallucinations, but sooner or lat-  
 er, it passes into confirmed mania, and  
 this into Idiocy. - The paralysis is at first







Incomplete, but gradually, increases, until it pervades the whole Muscular System, renders the gait tottering - and finally annihilates the power of Motion -

Although Diseases of the brain are comparatively wrapped in Obscurity - we hope, and think the day will come, when all may be explained; with equal force, with any other organ, which belief, the great and general fundamental principles of the Science justify -

Let us commence Diseases of the Chest with Pleuritis and Pneumonia - and first state the symptoms of Pleuritis - then those of Pneumonia - showing what symptoms belong to one, without the other. In Pleurisy we generally have sharp cutting pain in the side, a short dry cough, general inflammatory fever; with hard quick pulse, heat of the skin flushed cheeks, and scanty high coloured urine



to complete the present volume of the  
series to which this is the first  
part relating to a family in which  
some of the names.

Although the names of the  
in the present volume are the same as  
before one must be very careful not to  
mix up the names, with those of the  
other volume which help to give  
general information of the names.

It is known that the  
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but to be without the names of the  
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but a short list of names of the names  
names of the names of the names of the names  
names of the names of the names of the names



Difficulty of breathing, dullness on percussion.  
 Pneumonia usually appears, with cough, diffi-  
 culty of breathing, a dull heavy deep seated pain,  
 blood shot eyes, head ache, and pain in the liver=  
 Ab. intense fever, thirst, furred tongue, loss of ap-  
 petite, scanty high coloured urine; after two or  
 three days the cough, is accompanied with an  
 expectoration, of a rusty coloured sputum of  
 various shades. Semitransparent, tenacious, and  
 coherent, dullness on percussion, and the various  
 signs, which are attendant to Pneumonia, and  
 never found in Pleurisy. Now although we  
 have many symptoms that are common to  
 both, yet there are several very important dis-  
 tinctions, such as the absence of the Sputa, the  
 crepitant, and mucus rhonchi, as well as the  
 various sounds produced by respiration; which  
 are never present in Pleuritis. Also we have in  
 Pneumonia, the red and grey hepatisation as-



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terminations, whilst Pleuritis terminates in effu-  
sion, adhesion, and resolution—

Next in order we shall compare the difference bet-  
ween Peri-Carditis, and Hypertrophy of the heart—

Amongst the most common symptoms in Peri-  
Carditis, are high fever, generally preceded by  
rigors, pain in the region of the heart; irregular-  
ity of pulse, and palpitations, dyspnea, anxiety,  
restlessness, and incapacity of lying on the left  
side, with cough, vomiting, and difficulty  
of swallowing— as the disease advances, there is  
extreme debility, suffocative paroxysms—  
tendency to syncope; with infiltration of the  
face and extremities— In Hypertrophy of the  
heart we find increased size of the heart, du-  
llness on percussion, dyspnea, and slight pal-  
pitations, with a strong full, yet regular  
pulse— more highly arterialized blood, a  
bright eye, and false show of health, with



The first part of the paper is devoted to a general  
 consideration of the subject, and to a discussion of the  
 various theories which have been advanced in regard to  
 the origin of the human race. It is shown that the  
 evidence in favor of the monogenetic theory is  
 much stronger than that in favor of the polygenetic  
 theory. The second part of the paper is devoted to a  
 detailed consideration of the evidence in favor of the  
 monogenetic theory. It is shown that the evidence  
 is of a very strong character, and that it is  
 sufficient to establish the truth of the monogenetic  
 theory beyond all reasonable doubt. The third part of  
 the paper is devoted to a consideration of the  
 various objections which have been advanced in  
 regard to the monogenetic theory. It is shown that  
 these objections are of a very weak character, and  
 that they are not sufficient to overthrow the  
 evidence in favor of the monogenetic theory. The  
 fourth part of the paper is devoted to a  
 consideration of the various theories which have  
 been advanced in regard to the origin of the  
 human race. It is shown that the evidence in  
 favor of the monogenetic theory is much stronger  
 than that in favor of any other theory. The fifth  
 part of the paper is devoted to a consideration of  
 the various theories which have been advanced in  
 regard to the origin of the human race. It is  
 shown that the evidence in favor of the monogenetic  
 theory is of a very strong character, and that it  
 is sufficient to establish the truth of the  
 monogenetic theory beyond all reasonable doubt.



brilliant complexion; Haemoptysis, and Dropsy.  
 Yet never, or very rarely any febrile excitement.

Now although we again find many symptoms in common. Yet what are the differences? the pulse in Peri-Carditis is irregular, some times full and strong, at others, feeble and small, in the one, we find high fever; in the other rarely any - in Peri-Carditis we have in the region of the heart, that sharp lancinating pain; whilst in Hypertrophy we find a dull heavy pain under the sternum - and of necessity a considerable degree of enlargement and displacement of the heart; which is never to be seen in the other. Nor do we detect in Hypertrophy that great restlessness, jactitation, anxiety, faintness, and sense of suffocation, with coldness, and incapacity to assume the recumbent posture; which is so frequently the case in advanced Peri-Carditis.







When we seek the aid of the stethoscope, how different are the signs presented by it. In one we find a number of dry, cracking, rubbing, and whiffling sounds; in the other only a dulness on percussion; now how vastly important is it, that we should study each case, separately, and unconnectedly, and with so great care not to confound signs and symptoms.

We now come in order to Gastritis and Hepatitis. One of the earliest symptoms, in Gastritis is intense pain in the epigastrium, and a sense of burning along the oesophagus. The slightest pressure aggravates the pain, as will also swallowing, and vomiting, which is very frequent and is alternated with the most deadly nausea, and retching - an unquenchable thirst, with a longing for cool drinks, which the stomach is seldom able to retain; a sunken, pale countenance, cold, clammy extremities -



When we first saw the black water  
 and saw the signs of its  
 from a number of the  
 shifting sands in the  
 an impression that  
 that we should not  
 by our measurements  
 can not be performed  
 the more than in  
 the fact of the  
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 from a series of  
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 that with a  
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great prostration; skin dry, hot, and harsh; the pulse frequent, and small, bowels constipated; the urine scanty and high coloured; the tongue red, rugged, and covered with a thick fleshy fur. The local signs are fullness and distention of the Epigastrium, with great heat.

Whilst the symptoms of Hepatitis, are hot dry skin, the pulse full, and often hard the tongue covered with a yellow fur, thirst and a bitter taste, in the mouth, bowing constipation, though often relaxed bowels, urine scanty and of a deep orange colour, and deposits on cooling a red sediment; also some pain, tumefaction, and sometimes jaundice. Now we find in Hepatitis jaundice, a deep orange coloured urine, throwing down a red sediment, a bitter taste in the mouth, with a yellow furred tongue, and a full, hard pulse, which are







never present in Gastritis. Vice versa, we have a frequent and small pulse - great prostration, and increase of pain on pressure; cold clammy extremities - unquenchable thirst - tongue red, rugged - with other symptoms - that are never seen in Hepatitis -

Again, let us point out the difference between Enteritis and Peritonitis; in Enteritis the most usual symptoms are pain of a dull or griping character about the hypogastrium and right iliac region, tenderness on pressure and diarrhoea; the stools being of a thin, feculent character, and often mixed with mucus. generally fever, the skin however being often moist, and the pulse soft - the urine scanty and high coloured, the tongue often red at the tip, and edges - and furred at the centre, the cheeks have a fixed red flush; and the eyes are dull.







Occasionally there is delirium, which is succeeded by stupor; the fever mostly of a low typhoid nature.

Those of Peritonitis are acute pain, in the abdomen; which pain is aggravated by every movement of the body; whilst pressure is extremely distressing. The patient lies supine on his back, with his knees drawn up. The belly is hot, tense, and mostly tympanitic. Constipated bowels with nausea, and vomiting. The skin is dry and hot, the pulse rapid, small, and hard, the tongue has a white fur - the lips are dry. The cheeks pale and collapsed, the eyes sunk, while the countenance indicates great physical distress.

Now we will usually know Enteritis from Peritonitis, by its tendency to diarrhoea, the slighter degree of pain and tenderness, the softer pulse, the absence of vomiting.







And the redness of the tips and margins of the tongue. Whilst peritonitis is characterised by that intense pain and tenderness, with the hot, tense and tympanitic belly. The dry lips, pale, and sunken eyes; collapsed cheeks with that rapid pulse.

In order that we may continue, after having finished Diseases of the Cavities, by giving an example of each. We design to give a Case or two of the eruptive Diseases. And shall first show the Difference between Scarlatina and Measles, as they are most likely to be confounded, for each other. Yet when we study them Carefully, we are able to see a very palpable Distinction, for Scarlatina may be known from Measles, by the time intervening between the first accession of fever, and the appearance of the rash; by the Character of the eruption; and by the sequelae.







Measles commences with Coryza, sneezing, suffusion of the eyes, cough, slight dyspnea, and other Catarrhal symptoms; while in Scarlatina the first sensation of uneasiness is referred to the throat. The eruption in Measles shows itself, on the fourth day of the fever, but in Scarlatina; it may usually be distinguished on the second. In Measles; the rash is disposed in irregular portions of a crescentic form; and is slightly elevated, so as to be sensible to the touch; in Scarlatina the eruption assumes the appearance of broad patches of an indeterminate shape. The rash has a different tint in the two diseases; it is of a vivid red in Scarlatina, but of a darker hue in Measles. In Scarlatina, the fever does not abate upon the appearance of the eruption to the same extent as in Measles: the former is frequently succeeded by Anasarca, inflammation of serous—



The first object of the present paper is to  
 show that the number of partitions of a number  
 into a given number of parts is equal to the  
 number of partitions of the same number  
 into a different number of parts. This is  
 a well known theorem, and is proved in  
 the following manner. Let  $n$  be a number  
 and  $k$  a number less than  $n$ . Let  $P(n, k)$   
 be the number of partitions of  $n$  into  
 $k$  parts, and let  $P(k, n)$  be the number  
 of partitions of  $k$  into  $n$  parts. We  
 shall show that  $P(n, k) = P(k, n)$ .  
 Let  $P(n, k)$  be the number of partitions  
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 the number of partitions of  $k$  into  $n$   
 parts. We shall show that  $P(n, k) = P(k, n)$ .



Membranes, deposits in the joints &c. The sequelae of Measles, are principally affections of the respiratory organs, such as Bronchitis, Pneumonia, and Croup.

We shall now content ourselves by one more example, which shall be Small-pox, and its many modifications and varieties. Although much has been said and written on the subject, and many think there is no difference between the true Variola and many of its varieties, when modified. Also an equal number say there are fixed, and determinate laws, and diagnostics, which opinion we think most plausible. And there are no varieties. Nor any other eruptive diseases, that may not be known from Small-pox by a careful study - first of the Condition of the patient at the time, of the attack, his previous health, the nature and character of the



The first part of the paper is devoted to a general  
 description of the country, and the manner in which  
 the people are employed. The second part is  
 devoted to a description of the principal towns  
 and cities, and the manner in which they are  
 governed. The third part is devoted to a  
 description of the principal occupations of the  
 people, and the manner in which they are  
 carried on. The fourth part is devoted to a  
 description of the principal manufactures of the  
 country, and the manner in which they are  
 carried on. The fifth part is devoted to a  
 description of the principal articles of  
 commerce, and the manner in which they are  
 carried on. The sixth part is devoted to a  
 description of the principal articles of  
 consumption, and the manner in which they are  
 carried on. The seventh part is devoted to a  
 description of the principal articles of  
 export, and the manner in which they are  
 carried on. The eighth part is devoted to a  
 description of the principal articles of  
 import, and the manner in which they are  
 carried on. The ninth part is devoted to a  
 description of the principal articles of  
 exchange, and the manner in which they are  
 carried on. The tenth part is devoted to a  
 description of the principal articles of  
 trade, and the manner in which they are  
 carried on.



percussory symptoms, followed by the progressive symptoms. the length of time intervening between the first accession of fever, and the eruption the Character of the eruption. Although many of the Modified forms of the disease, may assimilate, in other respects, the true Disease. Yet none present the depressed and corrugated look nor is the Duration so great. And when all other means may fail. there is one infallible Symptom, which is one never present in any of the Varieties or Modifications, that one Criterion is the presence of the Secondary fever only in the genuine Disease, or true Variola which when once it has been inhaled, it is never to be forgotten —

The great Doubt and Difficulty of properly Diagnosing eruptive Diseases, appears with so much force, that we may be forgiven, the attempt to say it is —







necessarily equally impressive, in the necessity of proper study and inquiry. - That as in proportion to the difficulty of studying and understanding any subject; ought to be our exertions, and efforts, with a positive determination to master it, if in the power of man. We think the very fact of any science, or part of science, being difficult to acquire, ought to act as a powerful incentive to Ambition, not only that we should determine to Conquer, for our own selfish purposes or merely to have it said, We did Conquer.

But for the purpose of throwing if possible the slightest, and a most faint ray of light, and information, on the great, and general principles of Medical Philosophy; remembering that Medicine is the great preserver of the human race - and in proportion to the benefit our Humanity - will be our reward, and advancement - that one of our greatest pleasures







should be to "Let our light so shine" that others may see - rejoice at, and be benefited by it -

For the purpose of so studying and knowing the great principles of Practical Medicine we deem it essentially necessary, and requisite, that we should first fully know, and understand thoroughly - General Pathology----

We now beg the pleasure and privilege (before finishing our subject,) to make a Dissertation from Dr. Williams, on the need of the study of General Pathology; as the foundation of Practical Medicine -

He Says. "It is the fashion to decry our Profession; to call it a poor profession; a degraded profession; If it be poor and degraded, is that the fault of the Calling, or of those who practice it? or rather of those who should have governed and protected it? Is the art of healing in itself less -







Noble, because its Practitioners, unsupported by  
 the arm of civil power, and too often unsustained  
 by a Consciousness of their own Dignity,  
 have not raised it to the place in Society  
 which it ought to hold?—

Poor it may be, but degraded it cannot  
 be, so long as its foundation  
 is Science, and its end the good of Mankind



I have not seen the book since it was published  
 and I am not sure if it is still in the  
 hands of the Government of this country.  
 I have not seen it at the place in which  
 it was published.  
 I am not sure if it is still in the  
 hands of the Government of this country.  
 I have not seen it at the place in which  
 it was published.



70  
The  
Inaugural Association

of the  
National Society

Submitted to the consideration

of the

Board of Trustees of the

University of the

State of New York

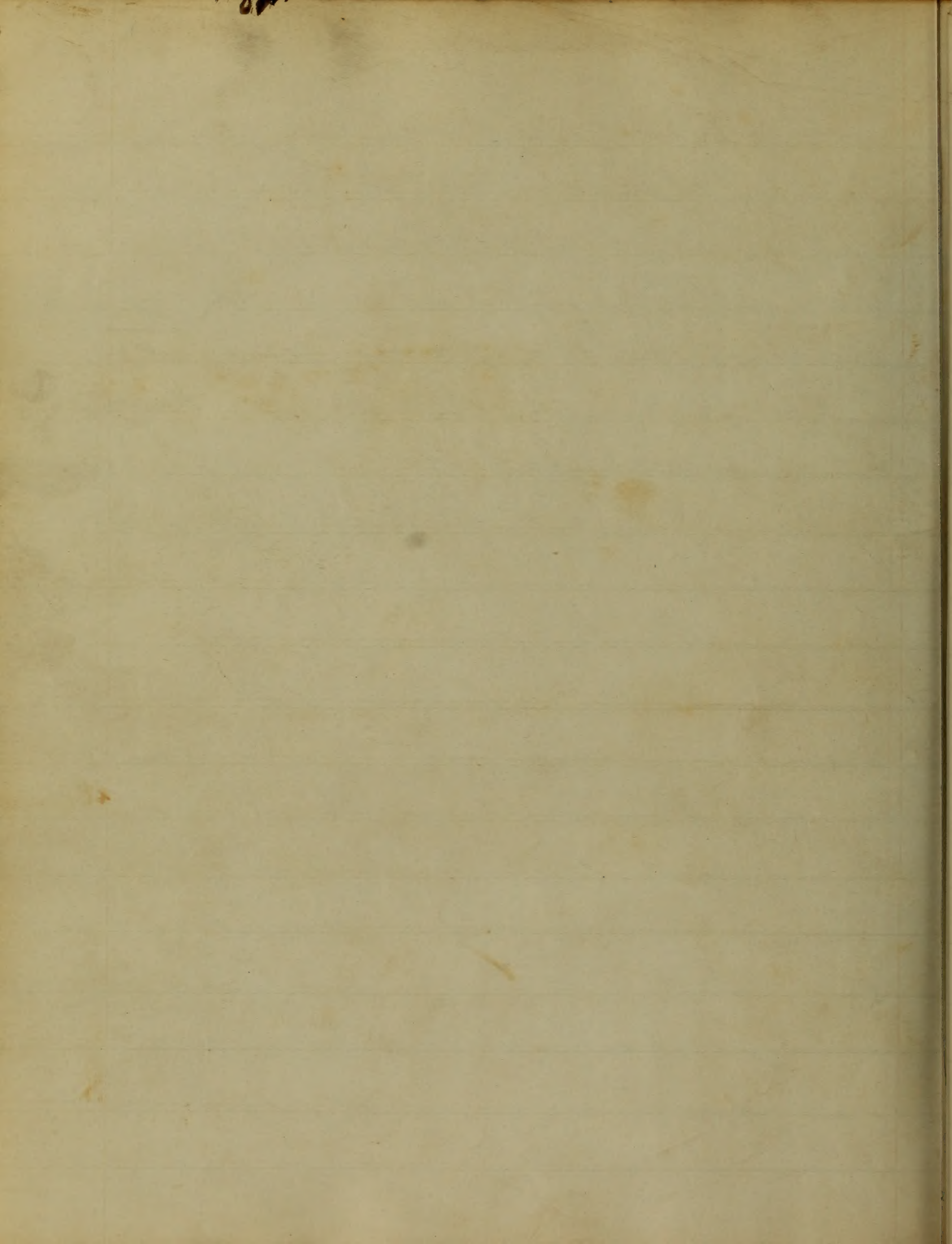
for the

purpose of locating a permanent

By

Wm. H. Burleigh







Ex -

An  
Inaugural Dissertation,  
On  
Animal Intelligence.  
Submitted to the Examination  
Of the  
Provost, Regents, and Faculty,  
Of the  
University of Maryland,  
for the  
Degree of Doctor of Medicine,  
By  
Loyd. W. Brown.



No

Department of Agriculture

No

Annual Report

Submitted to the President

of the

Department of Agriculture

for the

Year ending June 30, 1900

Part

Report of the Secretary

of

the Department



To

Professor of R. S. Y.,

As a testimony of high admiration

for him,

As a Teacher, & as a Man,

The writer of the following pages,

Respectfully begs leave,

to inscribe them.



20  
Professor of History,  
in a testimony of his  
for him  
in a testimony of his  
the matter of the following paper  
Respectfully  
to receive them.



## Animal Intellect

Perhaps, no problem, has more vex'd the brain of Sage, and philosopher, than that of the future existence of man - the actuality of an immaterial essence, a soul in him. Wisdom seems now to have decided this question in the affirmative, and it is at rest. But there is another problem, closely allied to this, and suggested by it, to which, the same wisdom, has given a negative decision - We allude to the existence of an intelligence in animals, - a thinking, feeling principle, separate and distinct from their physical organisation. Bared, as the decision of this problem is, upon no positive proof, it may not be uninteresting to inquire, whether the evidences, and arguments, which tend to an affirmation, are not at least as strong & plausible, as those which have led to an absolute negation -

To some, it may seem a strange fancy, the selection



James Watson

perhaps as before, but now we have  
of 200 and perhaps than 100 of the  
nature of the - the necessity of the  
evidence, a fact we have in the  
been the order the present in the  
and it is at the. But there is another  
clearly allied to the one suggested by it  
the same evidence as given a separate  
the relation to the extent the  
evidence - a further fact being  
and distinct from the physical  
based on the evidence of the  
the positive proof of - may be  
inquire whether the evidence  
time to an experiment, and not  
of phenomena as the which have  
what happens  
to show it may be a change from the



of such a theme for a medical thesis: To such we would remark, that all sciences within the scope of man's intellect, whether those sciences be physical, Moral, or Metaphysical, offer aids to the great study of Medicine - indeed, they may be well compared to so many streams, all pouring their tributaries of Knowledge, into this profound sea of Wisdom. Surely then, any inquiry into the question of being, whether it regards Matter, or Mind, in man, or those orders of his fellow animals beneath him, cannot be other than interesting, if not the source of useful Knowledge.

The Chief reasons, which have led to the universal belief in the absence of minds in animals, seem to be these: the immense superiority of man's intellect over the manifestations of their intelligence; and a want of progression in their acquirements. To the arguments drawn from these sources, we will advert, in the course of our reflections.

The strongest proof of the existence of a one deity,



The strength of the evidence for an effect  
is not in the course of an experiment  
to the experiment shown from the way in which  
and a want of proportion between the  
as to the way the manufacturing of the  
seem to be that the common language of  
numerical help in the absence of such a  
The chief reason which has led to the  
from an attempt to get the sense of things  
of his fellow countrymen to have faith in the  
is a good matter to have in mind, the  
then, and helping out the capacity of  
knowledge and the progress of science  
to a very obvious and promising state  
of science - indeed they may be all  
found in the history of the world  
of science which has led to the  
of his fellow countrymen to have faith in the  
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then, and helping out the capacity of  
knowledge and the progress of science  
to a very obvious and promising state  
of science - indeed they may be all  
found in the history of the world



infinitely Supreme in his attributes, is the entity of  
 design in all nature, & for the perfection of this design,  
 the few simple, & inalienable laws, by which it is  
 govern'd. One of these universal laws, is the sequence  
 of cause & effect - a like effect, always flowing from  
 a like cause. Destroy this, and you destroy the base  
 upon which is erected the graceful superstructure  
 of science. Nay more, you hurl back to chaos, the  
 beautiful system of universal order, which, Deity,  
 at the beginning of Creation, call'd into being. No one,  
 will then affirm, that the same result can ever be  
 the effect of dissimilar causes, or that dissimilar ob-  
 jects, can possibly possess like qualities. You cannot  
 impart to water, the qualities & properties of fire, nor  
 to the hard & brittle stone, the ductility & malleability  
 of lead; a'fortiori, you fail to find in inorganic  
 matter, the properties of organized bodies, & by a more  
 potent reason still, you discover not in any matter  
 whatever, the qualities & phenomena of mind - of im-



in printed papers is the attention to the subject of  
design in all cases of the production of the work  
the few simple & beautiful lines of which the  
forms of the other ornaments are in the opinion  
of some a slight & like effect of having been  
a little more. Looking to the fact that the  
after which is made the complete representation  
of nature. The more you find fault to show the  
beautiful system of ornaments which will  
of the beginning of nature. It is not long ago  
will then affirm that the same is true in every  
the effect of the ornament is that ornament is  
not only a useful property but a quality. The same  
purpose to make the ornament of the work  
to the work of the stone, the wood, & the metal.  
of these. It is true, you find it in every  
matter, the production of ornaments is a  
but never with you without some of these  
which, the quality & the manner of the



- immaterial essence.

This law holding universally good, (and no one will deny that it does) it then inevitably follows, that if in the lower animals, we find those qualities, or rather those phenomena or manifestations, which, in Man, we attribute to an immaterial essence, distinct from his physical being, there must exist - in them, as in Man, an immaterial essence, altho' it may be, & doubtless is, of an almost infinitely lower grade, than the human mind.

The question then presents itself: Do animals in general, or any of them, evince the possession of an intelligence - do they show powers of memory, reason, for thought, faculties of courage, fear, anger, joy, pride, love, hate, fidelity; or any of those qualities, which, in Man, we look upon as the legitimate offspring of mind?

Every day, affords numerous instances, of the exhibition of such powers. Even the very lowest animals, show cunning in the capture of their food, & thereby,



Medical Museum

The following account of the  
any that it is (or) it is not, I have  
the two animals, or four the  
I have not seen, but I have  
to be in the same  
I have seen, but I have  
in the same  
in the same

The first of these  
as any of them, since the  
as the other part of  
I have seen, but I have  
of these

Experiments of the

Very few of these  
in the same  
The following



Evidence the possession of some of the faculties of intelligence, altho' they may be ever so slight, and feeble. But in the Cat, the dog, the horse, the elephant, in the various tribes of Simia, & in other animals of a higher grade, we have intellectual manifestations, strong & frequent, & of a character not to be mistaken. You can hardly look over a miscellaneous publication, without finding some account of animal intelligence, and book after book, is published of anecdotes concerning them. Now, granting that many, nay most of these accounts & anecdotes, are false, (& this is not probable) yet those which are true, give incontrovertible proof, of the existence of a brute mind of some sort at least, so far as its manifestations extend, similar to the human intellect.

Indeed, the indirect-acknowledgement of this, is universal. Talk to any man, who has had much to do with animals, & he will be certain to tell you something of their self-will, their cunning, & intelligence,







6

their fear, anger, hate, kindness, & so forth, speaking  
of them, exactly, as he would speak of reasonable beings.  
Now, if they possess not an order of mind, why this  
incongruity, this strange antithesis of fact, & ex-  
pression, this giving to animals, in conversation,  
faculties which they do not possess? The answer  
given is, "because their words & terms, are necessary  
to an intelligible account of their history & actions."  
And when for necessary? Plainly because, we have a  
certain set of words & terms to express the operations  
of the human mind, and when speaking of the  
lower animals, very naturally, & perforce must, to  
express like operations in them, use the selfsame  
words & terms.

Listen to the Oriental traveler, who has slept  
beneath the tent of the Arab, and wandered with  
him across the deserts, among wastes, and he will tell  
you, incident after incident, of the intelligence of  
the patient Camel, and of the noble horse of the







desert, who, curbing his proud wild spirit, comes  
 tamely at his Master's command, & listens to, & un-  
 derstands, while he receives the fond caress, every  
 word spoken to him, or lays himself quietly before  
 the tent door, to afford a temporary pillow, for the  
 sport, & leaps, of his Master's child-rev. The Showman,  
 to various animals, teaches tricks that excite the  
 wonder of the gaping crowd - tricks, the acquirement  
 of which, brings into requisition, not only memory, but  
 reason & will, the highest faculties of mind. The  
 Sportsman, learns his dog to hunt with care, & point the  
 game, & has many a tale to tell, of his acuteness, cunning,  
 bravery, & fidelity - fidelity, which does not grow weaker  
 at the reception of wrong & injury, & yet is strengthened  
 by every act of kindness. Sit in the hospice of the  
 Monks of the Great St Bernard, as the fire burns  
 bright within, & without, in the gathering gloom of  
 approaching night, the storm howls, & the fast-snow  
 falls: - and, whilst they busy themselves in fastening







about the needs of their noble dogs, the little store of mine, to revive the dying traveler, who may have sunk beneath the cold by the way, or been whelmed beneath the avalanche, ask them, if animals can feel, can reason, can love, - have intelligence. And, as at the bidding of their masters, they, with a seeming pride resulting from the consciousness of virtuous action, bound fearlessly forth into the freezing night; to search thro' the gloom along the trackless mountain-side, for the way-lost-traveler, & listen mid the intervals of the storm, for the faint-moan & cry of the perishing, tell me, if there be nothing in them but dull matter, tell me, if that noble conduct, which in man, would be look'd upon as the offspring of a soul of the highest & noblest generosity; is in them, the effect of nothing, or rather of that which is tantamount; a portion of dull matter, soon to be mingled with the common, insensible dust, - on which we tread upon.

The appreciation & enjoyment of music, one of the chiefest







Sources of refinement, calls into requisition, all the finer feelings of the soul, yet no one will deny that many animals are affected by it; - have all the ferocity of their nature soothed into gentleness by its strains. Even some of them possess the power of singing a series of musical tones: & how often does the fair lady teach the sweet voice of her bird, to warble the notes of a favorite song. Think of the noble warhorse, as at the sound of the trumpet's inspiring hallet, his eye flashes fire, his nostril dilates, & he spurns the ground with impatient, more eager than his daring rider to rush upon & bear down the foe, & tell me if there be not something in him beside mere matter, an immaterial something, that thus strongly moves him? That even some animals can, to a limited extent acquire the language of man is a notable fact. The learned Leibnitz, gives account of a dog, taught by a Hungarian peasant, to speak distinctly a number of words. We might, if more were necessary, multiply instances of mental manifestations in animals, but the mind of every one is stored with numerous recollections of such. — From the examples just-cited, none will deny, that animals can, at least to a certain extent, be taught.



manner of experiment, call into operation all the  
 power of the soul, for we are not to say that  
 many animals are affected by it, but all the faculty  
 their nature bestows and for that of it. It is true  
 some of them possess the power of seeing a kind of  
 fire. When after the fire has been the first  
 of the kind, to make the air of a former day, that  
 the will of the soul, about the source of the  
 heat, his eye looks for, he looks at it, he  
 grows with impatience, more eager than his  
 to look upon it, more than the fire, all of it is  
 they in his breast, but he is not content  
 that this faculty is not that some animals can  
 in the extent of the language of man is a  
 fact, the least degree of reason is a faculty of a  
 human person, to speak, to think, to understand  
 the rights of man, the rights of the soul, the rights of  
 a human, but the mind of man is not the same as the  
 mind of a brute. From the example just cited, we may  
 see, that animals can, about to a certain extent, be taught.



Yet the very idea of being taught, includes that of something  
 capable of learning; & that something, cannot be matter,  
 either organic, or inorganic. For whatever learns, must,  
 just to that extent which it does acquire knowledge, be  
 capable of receiving intellectual impressions. But no  
 matter can receive an intellectual impression. If this  
 be not true, the whole system of mental philosophy is a  
 fallacy; & man's body thinks, & the proudest monuments  
 of thought & reason, have been the result of organic matter,  
 not, of an exalted, & noble immaterial essence  
 Whence too, the doctrine of transmigration? Why did  
 Pythagoras, & so many wise men of ancient times, believe  
 that the souls of their dead friends and acquaintances, dwelt  
 in the bodies of animals around them? Why did they spend  
 their life-long talents, in adducing proofs to confirm their  
 belief? Because, they saw evidences of, & were forced to  
 admit, in animals, the existence of mind. And not  
 knowing whence its origin, & at the same time being con-  
 scious of the existence of a soul in themselves, & ignorant-







of its dwelling place after death, they, by a very natural chain of reflection came to the conclusion, that that animal mind, was the transmigrated soul, manifesting itself under a new state of being.

But, it is remark'd, all this is only instinct. What then it be, it is something in animals, aside, and distinct, from men matter. What is instinct? The answer given is, "it is instinct, something, given to animals to supply the want of reason, having the qualities of mind." In other words, something which is mind, & at the same time is not-mind. Here then, one of the great & deemed immutable laws of the universe, that has held good thro' all creation, up to this final, mightiest effort of the hand of deity - the formation of intelligences - is at last turn'd aside, and God, his omnipotence exhausted, unable to create an intelligence lower than man, has, in the inferior animals, bestow'd upon matter, the faculties of mind. No, instinct is only another name for mind, of which man, in his pride, would fain deprive his fellow animals







But-those who talk of animal instinct, speak also of human instinct, betwixt which two, there is a perfect sameness. Thus, we see in the life of the young child, actions so distinct & determinate, so used as a means to compass a given end, that we cannot attribute them to mere chance; and of all such, they say, they are the result of an instinct. But-why of instinct? Why not of intellect. Is the mind then inactive? Yet-granting, for a moment, that these first-acts of life are the result of instinct-which not-being mind, must-of necessity be a property of organised matter-then must-there exist, a marked difference betwixt its actions, & the actions of mind, and some period must-exist-in the life of the child, at-which, it-ceases to-act, and intellect becomes active. Wherin consists that difference of action-who shall define it: and when shall be placed the period at-which, instinct ceases, and intellect becomes active-who shall draw the line of demarkation? Does not the full grown man,



But there are little of these in the present state of  
 human intellect. It is not till the age of 20 or 25  
 that we see in the life of the young man  
 a selection to the study of letters, to such an extent  
 to employ a private tutor, that the common school  
 is then chosen. But of all these, the first is the  
 result of an education. But why of an education? Is it  
 of intellect. Is the mind then, in the  
 for a moment, that these first acts of life are the result  
 of intellect. Which are not, but the result of necessity  
 in a first act of organization. Matter - then intellect  
 spirit - a matter of difference between the intellect and  
 action of mind, and some kind of matter. It is  
 the life of the child, which is the result of  
 intellect, however, action. The mind is the result of  
 process of action. It is the result of the  
 shall be placed the mind of which, which is  
 and intellect, however, action. The shall be the  
 line of demarcation? Is it the full power of



the very impersonation of intellect, shrink instantly,  
 without, so far as we can see, the shadow of a ratiocin-  
 ation, from a well aimed blow? And as instantly  
 make an effort to recover his lost balance? But  
 these too, are attributed to instinct, which, not being  
 immaterial essence, must, as before said, be a property  
 of organized matter. But, physiologists tell us, and  
 all admit, - that organized matter has but two properties,  
 sensibility, & contractility; - and these, to be excited to  
 action, require always, a mental, or a material stim-  
 ulus. Yet, no one will say, that in either of the cited  
 cases there is the application of a material stimulus;  
 therefore, it must have been mental. As well might  
 we expect, the sturdy oak to shrink from the stroke of  
 the woodman's axe, as to support the human body, un-  
 aided by intellect, - by its animal life, - able to avoid  
 danger. "Animal life"; for what is animal life, if it be  
 not a modification of organic life, produced by the  
 influence of a mental force? What is it, - that distinguishes







the life of Man, from that of the tree, except it be the  
 possession of a mind, & a peculiar arrangement of organs  
 for the action of that mind, whereby his body is adapted  
 for its residence? Altho' man is the habit of looking  
 upon man as physically infinitely removed from plants,  
 and altho', when compared with them, the beautiful  
 complexity of his organisation gives to him such  
 a different appearance, yet their ultimate structure  
 is the same: and altho' he requires prehensions,  
 and a certain preparation his food, before it is fit  
 for nutrition, yet their nutrition, growth, and re-  
 production, are carried on in just the same way:  
 and it is not unreasonable to suppose, that if proper  
 aliment could be immediately presented to the lacteals  
 of the alimentary canal, and the nutrient fluid be  
 aerated without the intervention of voluntary res-  
 piration, a man might live on even without  
 a mind - a soul - (and indeed we have, at  
 least almost, such an example, afforded us by foetal life)



the life of man from that of the tree, except in the  
 possession of a mind, or peculiar arrangements of organs  
 for the action of that mind, which his body is adapted  
 for its execution. All this we see in the bodies of plants  
 upon whom we physically depend, and whose power of  
 sense is the same as our own, and the same as the  
 Comprehension of his organization gives to him such  
 a different appearance, yet the same as the  
 is the same: and all this he requires for his  
 and a certain proportion of his body is for his  
 for nutrition, for the maintenance of his  
 production, we observe in all the same way.  
 and it is not unreasonable to suppose that if  
 element could be demonstrated to be the basis  
 of the elementary sense, and the nature of sense is  
 united without the intervention of any other  
 production, a sense might be as good as  
 a sense - a sense - (and indeed we have  
 but sense, and we might suppose that if



Let his would be a vegetable, a passive, an organic life. But as soon as you give to him a mind, & a nervous system, by which that mind, (as the Engineer by means of ropes & bands, puts in motion & guides a machine), may influence, and control the powers of his body, he becomes an active being, has, & gives evidence of, animal life. Now, the instinct of man, & the lower animals, being the same, & their animal life, being the same; And man's instinct being mind acting by intuition, & his animal life being organic life modified by mental force, we have here another argument, for the existence of mind in inferior animals.

"But," it is asked "if this instinct in animals, is in very fact mind - a distinct immaterial essence - why is it - incapable of progression? Why is it, that whilst man is yearly adding fresh stores, to his already vast amount of knowledge, his brother animals, know no more than they did centuries ago?"







For this, there is very good reason. And in answer-  
 ing it; it may be ask'd, are there not numbers of  
 the human race capable of almost no acquirement-  
 whatever, altho' dotting parents, & faithful teachers,  
 may strive hard & long, to beat into their thickest  
 skulls a few grains of knowledge? And, are there  
 not others, who more unfortunate still, manifest  
 no intelligence at all? Yet who says, there is nothing  
 in them, but matter? Who denies to them, the boon  
 of an immortal mind? Now suppose the whole  
 human race composed of such beings, how high  
 would have been man above the lower animals-  
 how far his residence removed, from the woods &  
 caves, the homes of the bear & wolf? how high would  
 have been rais'd the beautiful superstructures of  
 science - And how full would have been the gar-  
 -ners of knowledge? Containing hardly enough, we  
 may well suppose, to afford seed from one genera-  
 -tion to another.



For this is my first year in office  
 and it is my duty to report to you  
 the business and affairs of the  
 institution, also to bring forward  
 any other business that may  
 come before the board. I have  
 the honor to be, Sir, your  
 obedient servant, J. M. [Name]  
 Secretary



One cause, of a want of progression in animals,  
 in some sort similar to, tho' infinitely less than,  
 that in Man, (a sufficient, & it may be, the only  
 cause too, is the low order of their intellect - their  
 weak reasoning powers; powers in Man so Exalted,  
 as to give him complete dominion, not only over  
 every beast of the field, & fowl of the air, but over the  
 whole Earth, & even the mighty Elements of Space.  
 How often, do we see a force incapable of acting,  
 because control'd by an inert, or a contrary power.  
 Yet that force is not thereby annihilated, - does not the  
 life continue to exist. The all-pervading, & universal  
 controlling force of Gravitation, is for a time over-  
 come by the power of the puny arm of the Archimedes,  
 in sport, hurls the stone in air; and how many a  
 fountain is there, for long centuries, hid beneath the  
 earth, which, if the Superincumbent mass were re-  
 moved, would burst forth, irrigating the parch'd hills,  
 with its pure refreshing streams. - May it not be,



The cause of a great quantity of property being in some cases  
 in some but considered to the neglect of the state  
 that in some, the sufferer must be obliged to the  
 cause but in the last resort of this matter the  
 state is a necessary power; however in some to be  
 as to give him complete dominion, but not  
 any kind of the power of the state, but not  
 while the state is over the subject of the  
 How often do we see a man in a state of  
 because contented with an estate or a country  
 as the force is a state of complete dominion  
 life continues to exist. The all-powful  
 conducting force of government is for a time  
 one of the forms of the power of the state  
 in that sense the state is in a state of  
 foundation is that for any certain kind of  
 state which of the state in a state of  
 more, would be a state of the power of the  
 with it the power of the state. May it be



May is it not reasonable, that the animal mind, naturally so weak, with its reasoning powers so much controlled, as they are, by its passions, & appetites, & desires, is thereby prevented from a progressive improvement? And if, God like as the intellect of man is, there are many beings of the human race, capable of but the slightest improvement, & not a few of no improvement at all, is it strange, that in the chimeric creation of Deity, there should be races of intelligent beings, having faculties but for a limited degree of advancement, linking vegetable life with man, as man himself, stands midway, between earth & heaven?

Anatomy, so dear to the physician, as affording the very foundation & corner stone of the Medical science, does not leave us without a reason, to aid in the investigation of our subject. It demonstrates, from the simplest & lowest orders of animal existence, having a structure but little removed from that of plants, a gradual & beautiful progression,







wanting not one link, up to the complex organisation  
 of the human frame. Now, does not the truest Analogy  
 suggest, that as to Man is given the most beautiful  
 & delicately organised physical frame, as he stands on  
 the summit of creation in body, so should he stand in  
 mind? That he occupies this mental eminence, no  
 one will deny:—yet the selfsame correct Analogy, that  
 suggested & tended to confirm this truth, suggests, and  
 tends to confirm the position, that all animals, have  
 minds, & that their minds, are in degree proportionate to  
 the complexities of their material organisation— that as  
 man, who stands at the head of creation, possesses the  
 master mind, so those animals below him, have intel-  
 lects suited to the grade they hold in the scale of being.  
 Candid observation too, confirms the truth of this Anal-  
 ogy: for we find that the various tribes of Simia, approach-  
 ing nearest to man in their bodily appearance & structure,  
 & having the brain proper, thro' whom functions are performed  
 the phenomena of mind, strictly so call'd, most largely develop'd







& of all the inferior animals, the only ones, like him, Capable of standing erect; have also an intelligence, in its Capacity for improvement, - nearest allied to the human mind.

Again, Anatomy has demonstrated, the perfect identity of the nervous mass, in man, & the lower animals; & has further shown the functions of the brain to be, perception, thought, sentiment, & volition or will, or, to speak more correctly, it is the medium thro' which, are made evident & effective, these phenomena of mind. Now, that general law, with which we set out, & upon which is founded much of our argument, being true, - that like essences have like phenomena, & require the same conditions & substances, thro' which, to make evident - those phenomena or manifestations, - it necessarily follows, that the brain of man and other animals, being precisely the same substance, is the medium, in both, of making evident the qualities of the same essence - the medium of the action of mind. Again, supposing, for a moment, that animals were given evidence of reason, <sup>yet</sup> the substance the medium of intellect



The first part of the paper is devoted to a description of the apparatus used in the experiments. The apparatus consists of a glass tube, closed at one end, and containing a certain quantity of the gas to be examined. The tube is placed in a bath of water, and the pressure is varied by means of a syringe. The volume of the gas is measured by the displacement of water in a graduated tube. The temperature is kept constant by immersing the apparatus in a water bath. The results of the experiments are given in the following table.

The second part of the paper is devoted to a discussion of the results. It is shown that the volume of the gas increases as the pressure is decreased, and that the increase is inversely proportional to the pressure. This is in accordance with Boyle's law. The results also show that the volume of the gas is independent of the nature of the gas, and that it is independent of the temperature, provided the temperature is not too low.

The third part of the paper is devoted to a discussion of the theory of the gas. It is shown that the gas consists of molecules, which are in constant motion. The pressure is due to the collisions of the molecules with the walls of the container. The volume of the gas is determined by the distance between the molecules. The temperature is a measure of the average kinetic energy of the molecules.

The fourth part of the paper is devoted to a discussion of the applications of the gas laws. It is shown that the gas laws are applicable to all gases, and that they are of great importance in many branches of science and industry.



Manifestation, being in both identical, & animals possessing those faculties of mind, included under the terms perception, sentiment, & volition (which even the most sceptical have never denied them) does not reason say, they have thought also: - in other words, that having the same medium for the manifestation of their intelligence, thro' which are made known the phenomena of the human intellect, & possessing those powers of mind, they have the fourth also.

From all that has gone before, the conclusion clearly follows, that there exists in animals, something - call it instinct if you please - similar to, & differing only in degree from that which in man is called intellect. This being true, we are then inevitably forced into one of the three following beliefs: We must believe, either that all manifestations of mind, in man, as well as in inferior animals, are but the result of material organisation, & as a necessary consequence, that with the breaking down, & mouldering of the body back to dust, a gloomy, chill annihilation,



The first of these is the fact that the  
 human mind is not a blank slate  
 at birth, but is filled with  
 impressions from the world  
 around it. These impressions  
 are the result of the  
 senses, and they form the  
 basis of all our knowledge  
 and experience. The second  
 point is that the human  
 mind is not a passive  
 receiver of impressions, but  
 is an active and creative  
 power. It is able to  
 organize and interpret the  
 impressions it receives, and  
 to form new ideas and  
 concepts. The third point  
 is that the human mind  
 is not a fixed entity, but  
 is constantly changing and  
 developing. It is able to  
 learn from experience, and  
 to improve itself over time.  
 These three points are the  
 basis of the theory of  
 the human mind, and they  
 form the foundation of all  
 psychology.

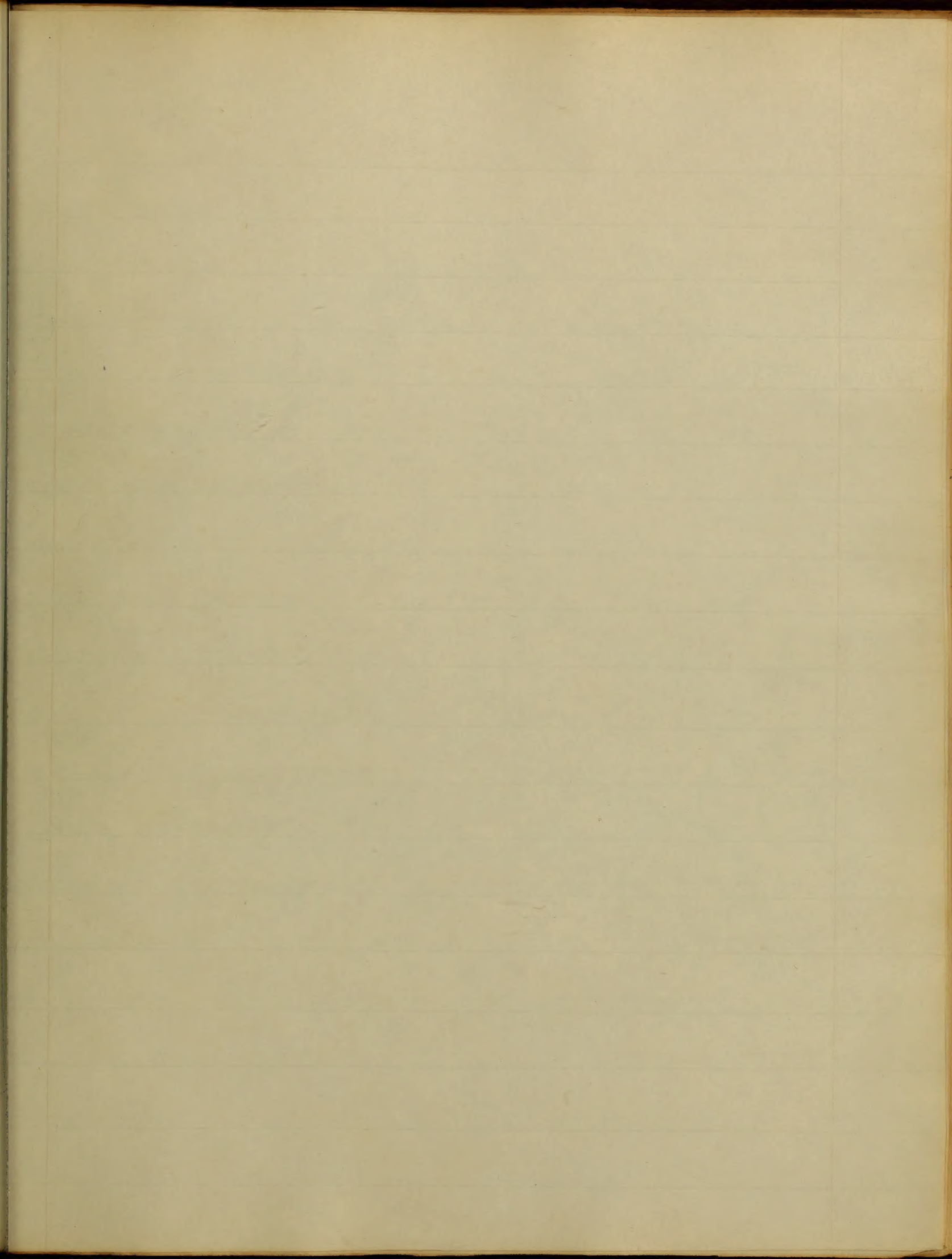


awaits us, thereby quenching the dearest and most-  
 cherished aspirations of the soul - or, if we revolt  
 from materialism, we must believe, that all intelli-  
 gences are but emanations from Deity, the great  
 Central Mind of the Universe, and as such, will  
 be absorbed into him at the death of the body -  
 or, if we reject too the doctrine of Pantheism, we  
 are thrown back upon this last conclusion, where  
 per force we must settle, that all animals have  
 given them, by the Great God of the universe, im-  
 material essences according to their grade of  
 being, and that upon man, his "Master work" he  
 has bestowed an immortal soul -

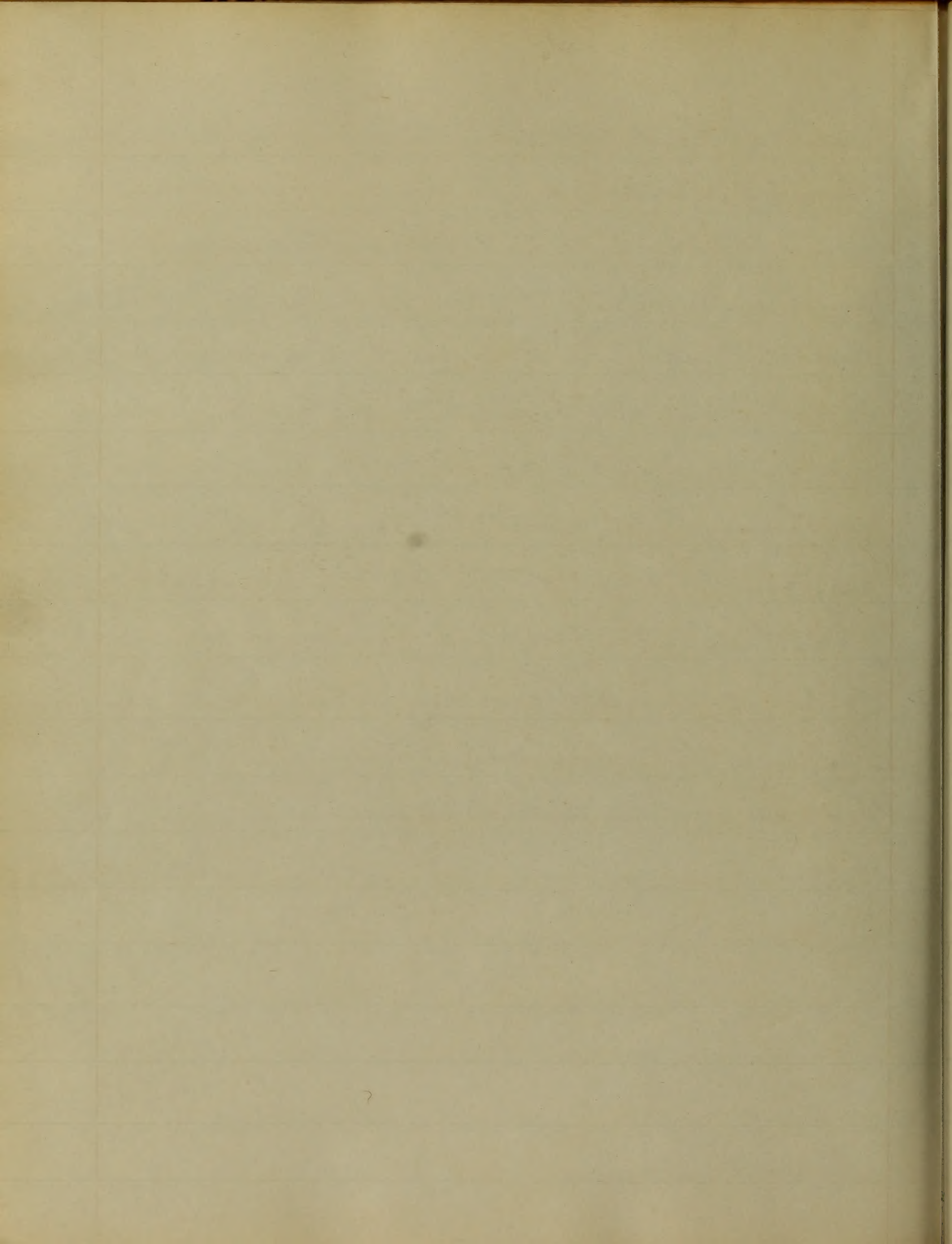


and in the first place, the character of the  
 mind is a reflection of the soul - as of the words  
 from the fountain, as the fountain that all wells  
 give an air of sanctification for the soul  
 Christ Jesus of the universe, and as such, will  
 be reflected into him at the seat of the world  
 as of an eye - to the reflection of the fountain  
 on the other side of the sea, but the fountain  
 has been the same since, that all the universe  
 give them by the great sea of the universe, in  
 material sources according to the form of  
 things, and that upon them, his words will be  
 his reflection on universal soul -











An  
Original Manuscript  
on the

Composition of the Bill  
Submitted to the

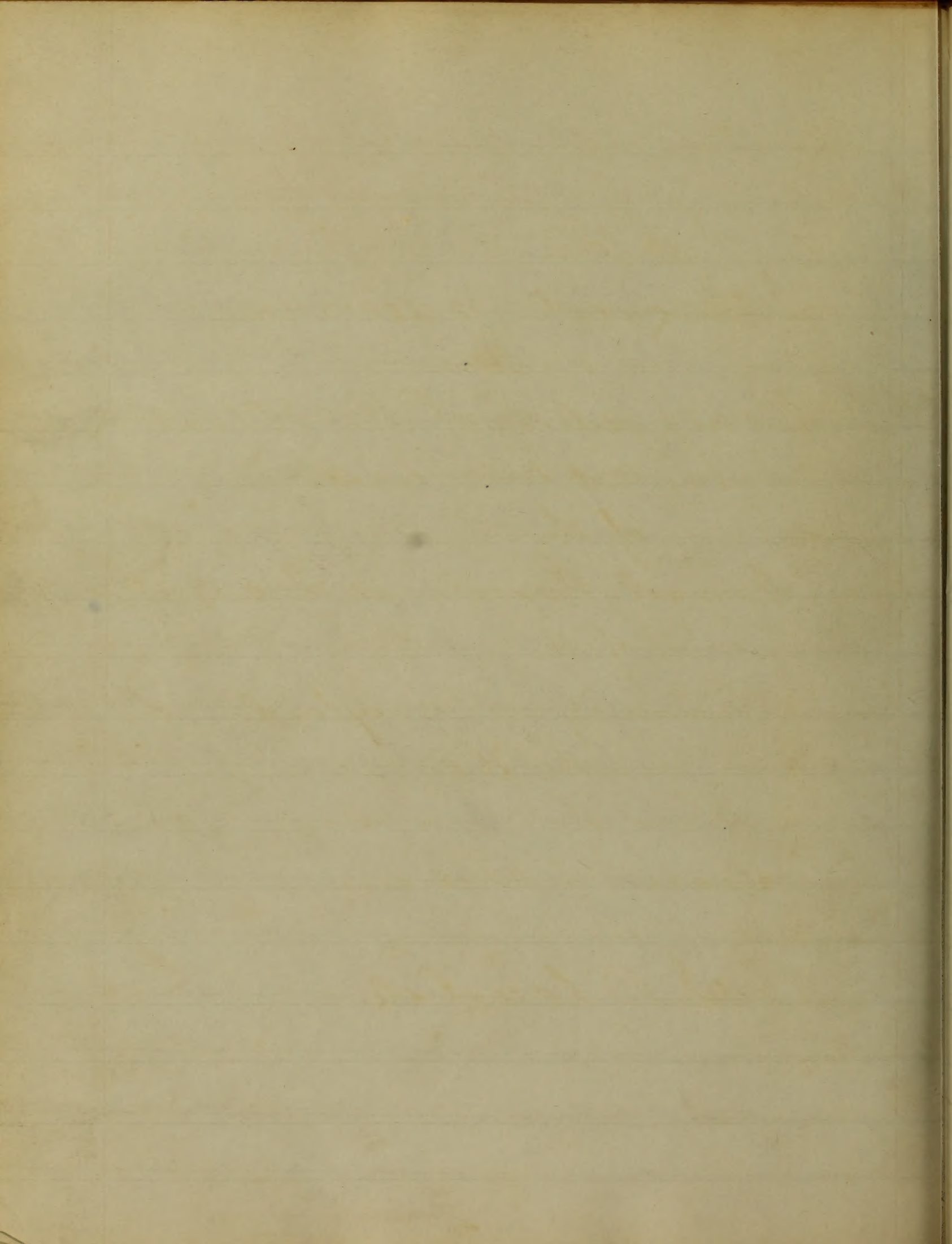
of the  
Provincial Parliament

of the  
Province of Maryland  
for the year

1764

of the







54

The blood the animal principle  
of the human body springs from  
the great Au, which unceasingly  
Inaugural dissertation,  
on the  
Composition of the Blood  
Submitted to the examination  
of the  
Provost, Regents, and Faculty of Physic,  
of the  
University of Maryland  
for the degree  
of  
Doctor of Medicine,

by  
J. P. Carlisle.



J. B. Leavelle

Director of Medicine

for the Regt  
of the Army of Maryland

of the  
General Agents and Land Agents

submitted to the examination  
of the Committee of the House

for the  
General Agent

for



The blood the animal principle  
of the human body springs from  
the great fountain which unceasingly  
undergoing changes both by respiration  
and nutrition is prepared for the performance  
of the duties of its office and then and  
there to be governed by many changes taking  
place in other organs

The composition of which will form the  
basis of this feeble effort.

The subject is one that has puzzled the greatest  
reasoning and research of the gigantic mind of  
an Aesculap. or Linn and much less is than  
to be expected from the puny intellect of a  
second course student, who has learned  
that but few ~~new~~ theories can be advanced  
which have never heretofore occupied the  
entire and investigating mind of the skiffle



The blood the animal furnish  
of the human body being from  
the great fountain which incessantly  
continues to change as both of oxygenation  
and nutrition is prepared for the purposes  
of the duties of its office and the end  
there to be pursued is many changes taking  
place in other organs  
The composition of which will form the  
basis of this faculty of food.  
The subject is one that has puzzled the greatest  
reasoning and wisest of the scientific mind of  
an age. In fact, we know and know of it  
to be subjected from the young in fact of a  
series of courses that are who has learned  
that but few more theories can be advanced  
which have been variously proposed the  
variety and variety of the subject



The materials from which the blood is formed are the Lymph and Chyle.

The Lymph yields the nutritive matter taken up from the intimal structure of the organism.

The Chyle those matters absorbed from the alimentary canal. In the vertebrate

animals the colour of the blood is red and also in some of the invertebrate

Though it is generally colourless in the invertebrate, the blood which is brought

from the extremities to the heart by the venous circulation is of a dark red colour

that which is brought from the Lungs to the heart by the pulmonary veins from thence

to be sent through the aorta to be distributed by the arteries throughout the gen-

eral system is of a bright red colour.

This change in colour takes place on the one hand in the Lungs and on the other



The most striking feature which the blood is  
 formed are the oxygen and the  
 length of the red blood cells  
 from the various sources of the oxygen  
 the cells are then brought about from  
 the absorption of oxygen in the blood  
 amount to the color of the blood is red  
 and also in some of the vessels  
 it is of a general color in the  
 vessels. The blood which is brought  
 from the arteries to the heart is  
 brown coloration is of a dark red color  
 that which is brought from the lungs to  
 heart is the pulmonary vein from there  
 to be sent through the arteries to be  
 distributed by the arteries through out the  
 body system is of a bright red color  
 this change in color takes place on the  
 way and in the lungs and in the



in the capillary system. The change of  
arterial to venous in the Capillaries and  
venous to arterial in the Lungs

To account for these changes there have  
been a great many theories advanced  
some of which bears absurdly to the utmost  
extent. In trying to account for these changes  
it is necessary to call fourth some of the  
phenomena of respiration which is one of the  
chief agents in producing it. If respiration  
be interrupted in any way the blood returns  
from the lungs with its dark venous  
colour unchanged, while even after death  
of an animal if respiration be kept up  
artificially the change in colour takes  
place as natural as before. It is also  
known that if we expose venous blood to  
the action of the atmosphere it absorbs  
a portion of the atmospheric oxygen and



in the capital city of the Empire. The change of  
 order of the names in the Capital and  
 known to be correct in the Empire.  
 To account for these changes there has  
 been a great many theories advanced  
 some of which have been attributed to the  
 extent of going to account for the same.  
 It is necessary to call for the name of the  
 names of the Capital which is one of the  
 chief agents in forming the Capital  
 but which is in any way the least  
 from the Empire with its great  
 order and organized with the  
 of an animal of capital to be left of  
 capital the change in order to be  
 known as a matter of fact before it is  
 known that if we have been there  
 the order of the Capital of the  
 position of the Capital of the Empire



becomes of a bright red colour resembling that of arterial blood. We see that there is a change in the blood brought about by the respired air. Now does any change take place in the respired air.

Dr. Black first observed that Carb. Acid gas was given out during expiration which is easily proven by the simple experiment of breathing into lime water through a tube the water will become turbid

from the precipitation of Carb. Lime

Is there any portion of the respired lost

There have been many answers given

and they all implied that there was

some lost. The average quantity of air

taken in is about 40 cubic inches and in

an ordinary sized man the lungs are

capable of holding 280 cubic inches and

by expiring freely he is able to throw out 70.80.







but by an ordinary expiration he throws  
 out 40 cubic inches. In a minute he takes  
 in 800. inches in an hour 4800 in a day  
 152,000. by weight amounting to 52 pounds  
 a great portion of which he again throws  
 out; but in a very different state from  
 that when taken in. It loses a great  
 portion of its oxygen and mixes with  
 the carb acid gas. But again to trace  
 the changes in the blood. In the lungs  
 the blood comes in contact with a  
 delicate membrane not more than  
 the  $\frac{1}{1000}$  part of an inch in thickness  
 on the one side of this membrane we have  
 the blood and on the opposite we have  
 air. It is a well established fact  
 that the animal membranes are easily  
 penetrated by the gases. The air then has  
 access to the blood and several important



but by an ordinary respiration the  
 cost the cost is not in a moment to take  
 in 800. water in an hour 1100 in a day  
 15.2 111. of weight amounting to 3.2 pounds  
 a great fraction of which is again thrown  
 out, but in a very different state from  
 that when taken in. It has a great  
 portion of its oxygen and nitrogen  
 the cost is not for that again to take  
 the oxygen in the blood. In the lungs  
 the blood comes in contact with a  
 delicate membrane not more than  
 the 1/100 part of an inch in thickness.  
 On the one side of this membrane water  
 the blood and on the opposite we have  
 air. It is a well established fact  
 that the amount of water vapor is easily  
 penetrated by the gases. The air then has  
 access to the blood and blood vapors



Changes takes place in it. The colour is changed. the chyle disappears, and we have the appearance of Carb Acid and water. Now can these changes take place out of the body. We mentioned before that change in colour also the disappearance of oxygen and the formation of Carb. acid gas could take place out of the system. But the disappearance of chyle cannot be produced. What is the source of the carbon entering into the composition of the Carb. acid?

From some papers which were found after the death of Lavoisier it was ascertained that he had come to the conclusion that the venous blood arrived at the lungs charged with a large portion of Carbon & Hydrogen and then by means of the oxygen of the inspired air it forms two new compounds. Carb Acid, and water and is again reanemalid.



It was for the first time in its history  
 changed. The shape of the  
 the appearance of the  
 the appearance of the  
 in the appearance of the  
 and the appearance of the  
 the appearance of the  
 appearance of the  
 that is the appearance of the  
 into the appearance of the  
 Brown color appears when  
 the result of the  
 the red color to the  
 Brown color appears at the  
 with a large quantity of  
 than the appearance of the  
 it forms two or more  
 and water and is again



After wards it was supposed by Lazzarini  
 that the blood in the Lungs possessed the  
 power of separating the oxygen and nitrogen  
 of the inspired air and combining with the  
 oxygen carried it along throughout the  
 whole system and at the extremities of the  
 arteries where the process of assimilation is going  
 on Hydrogen and Carbon are generated and  
 unite with the oxygen of the arterial blood and  
 enter the venous blood in the of Carb Acid and  
 water which are taken to the lungs and then  
 thrown out. Dr. Meadley supposes the great  
 difference between arterial and venous blood  
 to be in the latter having so much more Carbon  
 The theory advanced by Dr. Lettich does  
 appear the most rational: he thinks the carbon  
 is not only mixed in the blood but bound by  
 chemical affinities which are not to be broken  
 up simply by the weak attraction of oxygen at







this temperature. (There are many results which cannot be obtained by the operation of one or two principles but may by the action of more, some results cannot be had by simple electric attraction but may by double as for example in formation of Pyrolicignous acid and various fermentation)

The result we get here is not from the action of one or two but all the principles engaged remove any one and it is impossible to obtain a correct result. When I consider the character of the chyle says Dr Lee Butts and find it contains every principle necessary to every part of the system, we should take into consideration the power exerted by each principle,

The chyle disappearing when it arrives at the lungs shows that it here enters into other combinations. The venous blood arriving at



This time has been...  
 which account is...  
 of one to the...  
 of more...  
 might...  
 as far as...  
 the...  
 the...  
 of one...  
 the...  
 a...  
 a...  
 find it...  
 to...  
 the...  
 the...  
 the...



the lungs with a super abundant amount of  
 carbon which must be separated. But this  
 cannot be done merely by the agency of the  
 oxygen. Dr Leebutt thinks that the carbon  
 of the venous blood is in a state of combination  
 with a portion of Iron and that this Carburet  
 of Iron is loosely combined with the other con-  
 -stituents of the blood. This is followed to  
 the lungs by the Phosphoric Acid of the Chyle  
 the oxygen exercises its affinity for the Carbon  
 and at the same time the Phosphoric Acid  
 its affinity for the Iron, in this manner the  
 Carburet is decomposed and Carbonic Acid  
 formed and thrown out and a sub Phosphate  
 of Iron which gives to the arterial blood its  
 florid colour. This salt is only found in the  
 arterial blood. The blood now goes on  
 through the arteries to their extremities the  
 point of assimilation and there deposits fibrin



the lungs with a rapid admittance and  
 carbon which must be expelled. But the  
 cannot be done merely by the agency of the  
 oxygen the blood. It is in fact the  
 of the oxygen blood is in a state of tension  
 with a portion of blood and the  
 of blood is being combined with the other  
 elements of the blood. This is followed  
 the lungs by the blood. The blood of the  
 the oxygen is combined with the carbon  
 and at the same time the blood is  
 its affinity for the blood in this manner the  
 carbon is driven from the blood  
 forward and thrown out and the  
 of the water goes to the arterial blood  
 fluid enters the cell and is found in the  
 arterial blood. The blood now goes  
 through the arteries to their destination  
 heart of respiration and then back to the



bone and every other part that the waste of the system calls for The sub Phosphate of Iron is here decomposed the acid unites with the lime to form bone at the same moment there is an evolution of Carbon which again combines with the Iron forming Carburet of Iron which gives the venous blood its dark colour and carried by it again to the Lungs

General Properties

The grand division of the blood is into Red Particles or Globules and Liquor Sanguinis The red particles are heavier than the Liquor Sanguinis. The temperature seldom varies from 98° Fah. The specific gravity of the blood varies from 1.053. to 1.059. In its ordinary state has a stinky feel Salty taste and an alkaline reaction also a very faint and peculiar odor. Urea Sanguis







11

Blood drawn from the arm and suffered to stand for a few minutes soon becomes a gelatinous mass; but this slowly contracts and we have appearing a dull yellow fluid (The Serum) this fluid has a specific gravity of from 1.029 to 1.030 a saltish taste and in some animals a weak alkaline reaction. The Serum holds in solution several animal matters among which we find albumen. This substance is coagulated by heat and some of the chemical agents. If we wash the red gelatinous mass we obtain a substance which has a white colour and fibrous texture called Fibrin. The clot is formed by the spontaneous solidification of this substance. The buffy coat of inflammatory is also produced by this substance the formation of which will be considered when we speak of it in detail.

Red Globules. These globules which contain the coloring principle are merely suspended in







the blood and according to the opinion of the distinguished Müller they are distinct from the fibrin which is considered in a state of solution which can be demonstrated by beating the blood with a bundle of rods when we find all the globules intact in the colouring liquid and films of fibrin hanging to the rods. Nothing certain can be said about the origin of the red globules, however it has been asserted that the Lymph globules are the cells which afterwards become the red particles of the blood in an early stage of formation. something similar to the roundish cells of the Rete mucosum which becomes the Epidermic scales. The diameter of the globules in man which are among the smallest is estimated between  $\frac{1}{700}$  and  $\frac{1}{500}$  of a line in diameter according to M. M. Bunnell the large diameter is about  $\frac{1}{25}$  of a line according to M. M. Mandl  $\frac{1}{50}$



The blood and according to the opinion of the  
 distinguished Miller they are derived from  
 the same source which is contained in a state of  
 solution in the blood. The same is proved by  
 looking the blood with a bundle of hair  
 when we find all the globules united in the  
 colourless liquid and when of a fine  
 size to the roots being again united in  
 the regions of the red globules. It has  
 been observed that the depth of redness  
 in the white of an eye is greater the red  
 particles of the blood in an eye of a fine  
 size. Something similar to the same is also  
 of the Red Precipitate which is seen in  
 the blood. The diameter of the globules in  
 the white are varying the diameter is  
 between 1/20 and 1/30 of a line in diameter.  
 According to M. M. Brown the large diameter  
 is about 1/20 of a line according to M. M.



and it is highly probable that the opinion of the latter is the more correct, he having made the most recent experiments. The form of these bodies is very different in different animals in some animals they are circular in others elliptical and I don't regard them as always being flattened whether elliptical or circular although there is a great deal of discrepancy on this point but there is no doubt of their being circular and flattened in the human subject. The flattening is said to be very great in both reptiles, birds, and fishes. There is in central portion of each particle a spot which maintains the form of the globule in which it happens to be placed it is circular in the circular and elliptical in the elliptical. Is this spot a central nucleus? Some authors positively deny it - as Blumenthal, de Baimville, Meber, Wagner, Manal, and Downe.



and it is highly probable that the opinion  
 of the latter is the more correct, he having  
 made the most exact experiments. The form  
 of the bodies is very different in different  
 species, as we have seen in the case of  
 the other elaters and of the elaters  
 as always being flattened, while the elaters  
 are cylindrical, at least there is a great deal  
 of this property in this part, but this is a  
 sort of the being cylindrical and flattened  
 in the human subject. The following is  
 said to be very great in both the elaters and  
 fishes there is in certain parts of each  
 like a flat oval, and the form of the  
 glands in which it happens to be placed  
 occurs in the elaters and elaters in  
 the elaters. The flat of a certain  
 some on their posteriorly being it is flattened  
 in some of the bodies, human and human.



Others assert that it is a central nucleus among whom are Müller, Ev. Home, Prevost and Leumas. Those who deny the existence of a nucleus claim that the spot which is seen in the globule is merely coagulated fibrin. On the contrary Müller contends that the existence of a nucleus has been amply proven with chemical characters essentially different from the outer envelope in each of the red globules of the Frog and Salamander and as it has the same appearance in the globules of Birds and Fishes as in those of the Mammalia and it is stated by some that they have seen by the aid of a microscope the nucleus in the blood particles of the Mammalia and say further that they can even be seen in the particles of human blood. The analysis of this supposed nucleus has never been made out on account of there never having been sufficient quantity obtained.







There is also but little known about the analysis of these envelope. The colouring matter of the red globules are Haematin and Erythrin.

The colouring matter can be obtained in solution by washing the crassamentum but cannot get it pure on account of the nuclei being suspended in the solution which necessarily must form a portion of the analysis.

Liquor Sanguinis This is the fluid which holds in suspension the red particles during life and when coagulation has taken place it separates into two substances Fibrine and Serum

which were previously in solution in Liq. Sanguinis

Serum The serum is a lymphatic fluid almost inodorous saltish to the taste pellucid of a yellowish colour and plastic consistence It contains a large portion of water and in the higher animals has an alkaline reaction a specific gravity of from 1.027. 1.030.







Besides those already mentioned there is one other highly worthy of our consideration. The facility with which the air surrounding a vessel filled with blood passes through this liquid and spends its effects upon the coagulum. Whereas the same action of the air would be very much impeded if not entirely prevented, if instead of the serum, the crassamentum was covered with any foreign liquid: as water, Oil, &c. or even any other fluid belonging to the body, as: Milk, Saliva, Urine - Prevost and Lemas gives a table from which it may be seen that in the serum from human blood about one tenth part by weight consists of solid ingredients in solution. The proportion of the solid parts of the crassamentum to those of the serum is about 3 to 2. The animal matters of serum according to Gmelin are, Salicin, Casein, Albumen.



Besides these already mentioned there is  
 one other highly worthy of our attention  
 the facility with which the air  
 vessel feeds with blood. It is through the  
 ligament and sheath its effects upon the  
 system. When the same action of the air  
 vessel be very much suspended if not  
 entirely of the nature of the  
 vessel. It is to be seen any other  
 to the vessel. as the air vessel is  
 the root and the air vessel is  
 which it may be seen that in the  
 from the air vessel about the  
 part by which it consists of  
 in relation. The properties of the  
 of the air vessel are to those of the  
 in relation to the air vessel  
 according to the air vessel.



Of Masome and Lactic Acid Fibrin. The fibrin  
 the other constituent of the liquor sanguinis is  
 so styled because it coheres in fibers and is  
 found to be the most animalized portion of the  
 vital fluid in which it is contained. The  
 fibrin is found in the coagulum and can  
 be obtained by beating or agitating it with  
 the fingers or a bundle of rods when first taken  
 from the arm. This substance resembles  
 muscular fibre in every respect with the excep-  
 -tion of colour and we have in this respect  
 a very singular circumstance, this difference  
 between a fluid and a solid between an organized  
 substance and matter in its natural state or form.  
 The basis of the crassamentum which is the  
 fibrin appears to be a white elastic substance  
 more heavy than serum insoluble in water  
 and alcohol and contains a large pro-  
 -portion of azote.



The basis of the crystallization which is the  
 fabric appears to be a white elastic substance  
 more heavy than common rubber in water  
 and alcohol and contains a large per-  
 centage of water.  
 Between a fluid and a solid between an organic  
 a very singular occurrence, this appears  
 of color and has in fact in fact a  
 number of fibers in every section with the  
 from the same. This elastic substance  
 the fibers or a bundle of not white but  
 be obtained by heating or a solution of  
 fabric is found in the organic matter  
 later found in nature it is organic. The  
 found to be the most abundant fabric of the  
 so typical because it occurs in fibers and is  
 the other essential of the organic compound is



Fresh fibrin wet with acetic acid soon forms a transparent mass which is dissolved by water. It is owing to the spontaneous solidification of the fibrin that coagulation is brought about and this spontaneous solidification always takes place unless under the influence of living surfaces. In all cases where the blood coagulates more tardily than usual the red particles sink and there is left at the top or surface a fluid which after coagulation forms the white crust which takes the appellation of "Buffy Coat." and the remainder of the blood maintains its natural red colour. The cause of the buffy coat has long been dwelt upon. There is a well established fact that we generally find it upon inflammatory blood and it is highly probable that inflammatory blood owing to some peculiarity of some of its constituents coagulates more tardily than



Great pains were taken to...  
 form a...  
 water...  
 of the...  
 and...  
 better...  
 sufficient...  
 later...  
 which...  
 a...  
 value...  
 "Buff Coat"...  
 maintain...  
 if...  
 there...  
 generally...  
 and...  
 that...  
 to...  
 the...



healthy blood, Now if such be the case it explains in some measure the cause of the buffy coat For we well know that if coagulation is taking place slowly the more time have red particles to subside before coagulation of the fibrin.

So that we might suppose the principle cause of the buffy coat in inflammatory blood is its slow coagulation and and the increased amount of fibrin it contains. Lymph Corpuscles

The existence of these corpuscles have long been known in the lower vertebrata. They being so much smaller than the red corpuscles were easily recognised and through the researches of the distinguished Gulliver and Addison they have been recognised in human blood. We mentioned whilst speaking of the red corpuscles the great variation in size in the different vertebrata but on the contrary with the column leaf corpuscles we find them maintaining a pretty constant







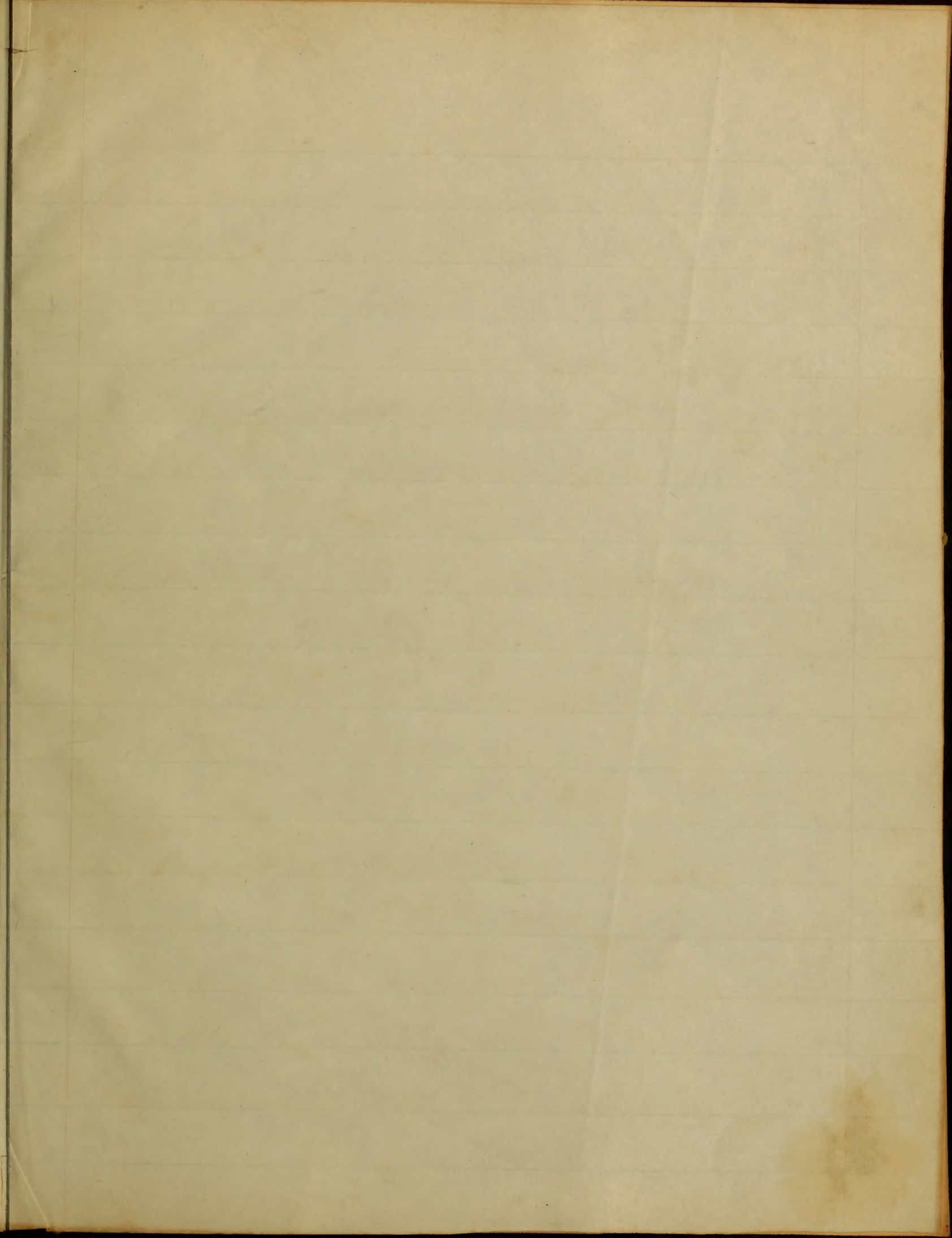
size throughout the whole series of vertebrata their diameter seldom being much greater or much less than 1-3000 of an inch. The circulation of these globules is rather peculiar when ever one of them circulating with the general current of the blood comes in contact with the wall of the vessel it either retards its progress or sticks fast and remains so until the current removes it again also the greater number appear to move along the side whilst the red particles pass rapidly along the centre of the vessel; and frequently the lymph globules appear to stop up the passage of a capillary vessel and as a consequence prevent the red particles from entering but finally they all re enter the general current of the blood again

These phenomena were first noticed by Mr. Poiseuille.

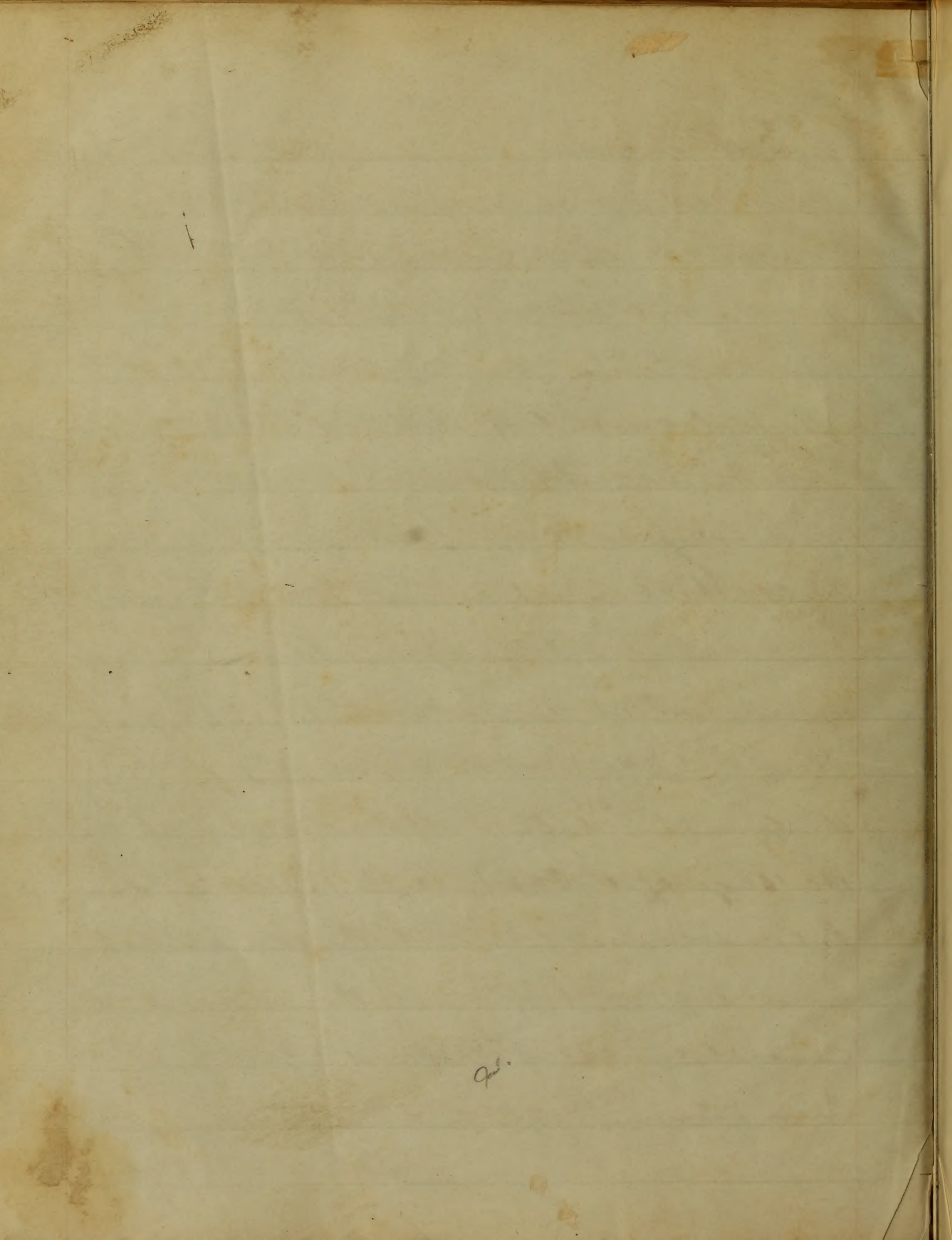












92.



