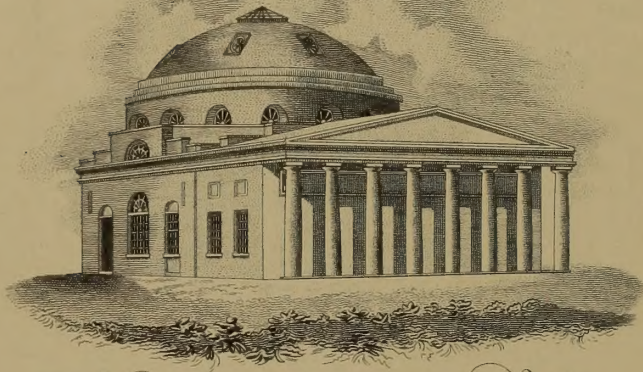
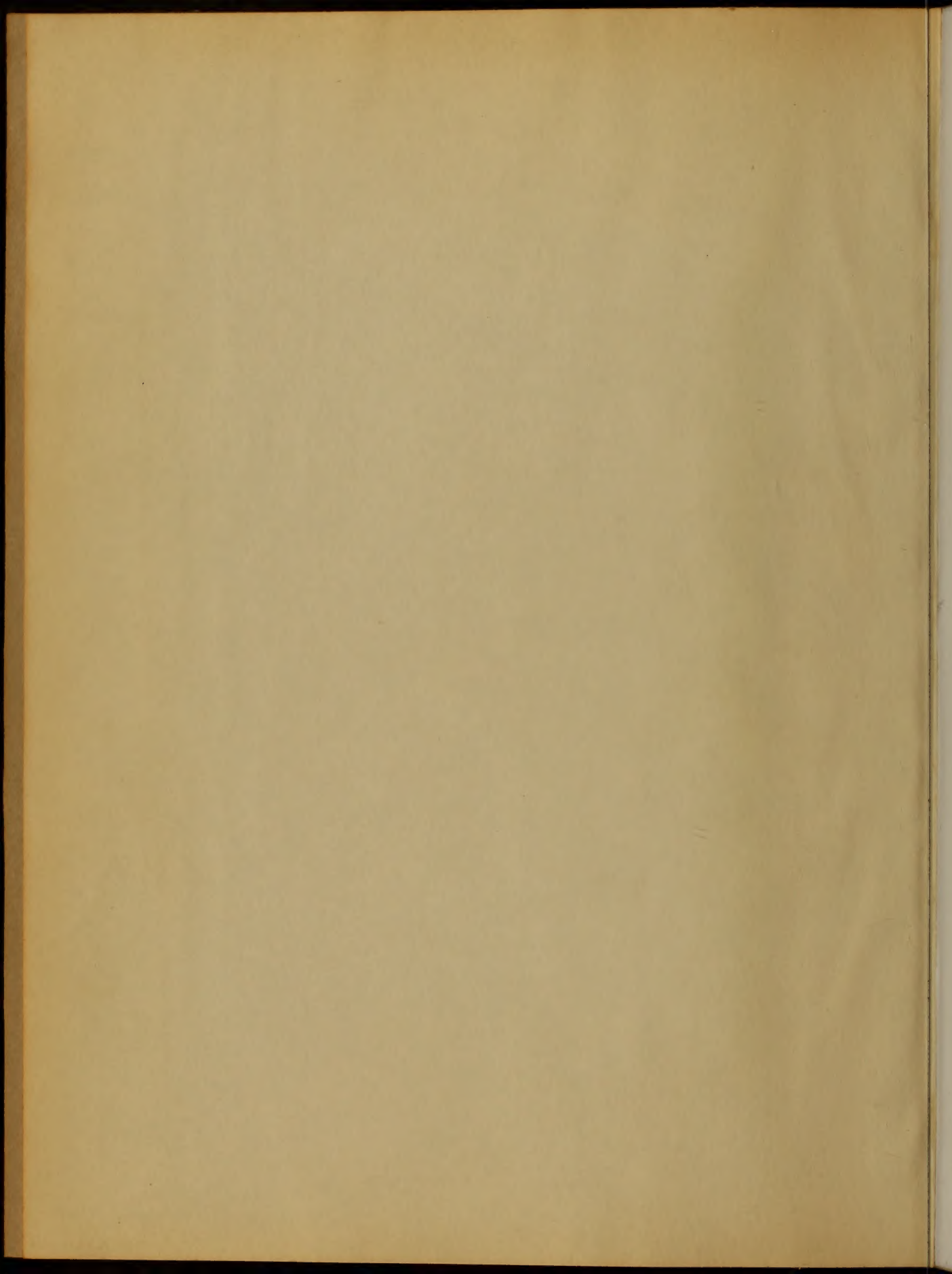


LIBRARY
OF THE
School of Medicine



University of Maryland



University of Maryland Theses

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.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES

The University of Chicago is pleased to announce the appointment of Dr. [Name] to the position of [Title] in the Department of [Department Name]. Dr. [Name] will be reporting to the Department on [Date].

Dr. [Name] received his Ph.D. from the University of Chicago in [Year] and has since held positions at [Institution] and [Institution]. His research interests are in [Field].

Dr. [Name] is a member of the [Organization] and [Organization]. He is also a member of the [Organization].

THE UNIVERSITY OF CHICAGO

19[Year]

(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1869 (c)

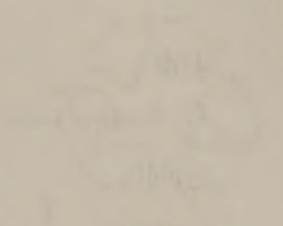
Author	Title
Hartman, Jacob Henry	Six Surgical Cases
Cook, George Wythe	Syphilis
Boyle, Charles B.	Scarlatina
Crampton, Louis W.	Narcotics
Skinner, William T.	Effects of Bromide of Potassium on the Human System
Jenkins, Charles A.	Delirium Tremens
Downey, Jesse W.	Cinchona
Ligget, John J.	Tetanus: Its Nature and Treatment
Dunn, Edward H.	Gun-Shot Wounds
Howard, James M. H.	Pain, Its Nature and Causes
Gehrman, Albert J.	Circulation of the Blood
Russell, William L.	Tuberculosis
Chapman, James K.	Typhoid Fever
Wagner, John E. S.	Diagnosis of Simple Pregnancy
Shertzer, Abram T.	Intermittent Fever

HSLSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

WILLIAM OF MARYLAND

1689

DECLARATION OF RIGHTS



That the representatives of the people have the right to elect their representatives in the General Assembly

That the General Assembly has the right to elect the Governor

That the General Assembly has the right to elect the Judges

That the General Assembly has the right to elect the Justices of the Peace

That the General Assembly has the right to elect the Sheriffs

That the General Assembly has the right to elect the Coroners

That the General Assembly has the right to elect the Clerks

That the General Assembly has the right to elect the Auditors

That the General Assembly has the right to elect the Treasurers

That the General Assembly has the right to elect the Surveyors

That the General Assembly has the right to elect the Constables

That the General Assembly has the right to elect the Judges of the Admiralty
That the General Assembly has the right to elect the Judges of the Common Pleas
That the General Assembly has the right to elect the Judges of the Oyer and Terminer
That the General Assembly has the right to elect the Judges of the Assize
That the General Assembly has the right to elect the Judges of the Bench
That the General Assembly has the right to elect the Judges of the King's Bench
That the General Assembly has the right to elect the Judges of the Common Pleas
That the General Assembly has the right to elect the Judges of the Oyer and Terminer
That the General Assembly has the right to elect the Judges of the Assize
That the General Assembly has the right to elect the Judges of the Bench
That the General Assembly has the right to elect the Judges of the King's Bench

UNIVERSITY OF MARYLAND

THESES

1869 (c)

Hartman, Jacob H. ^{Henry}	Six Surgical Cases	39p.
Cook, George W. ^{Wythe}	Syphilis	24p.
Boyle, Charles B.	Scarlatina	22p.
Crampton, E. W. ^{Louis}	Narcotics	43p.
Skinner, W. T. ^{William}	Effects of Bromide of Potassium on the Human System	14p.
Jenkins, Charles A.	Delirium Tremens	12p.
Downey, J. W. ^{Jesse}	Cinchona	25p.
Ligget, John J.	Tetanus; Its Nature and Treatment	36p.
Dunn, Edward H.	Gun-Shot Wounds	34p.
Howard, James M. H.	Pain, Its Nature and Causes	19p.
Gehrman, Albert J.	Circulation of the Blood	31p.
Russell, William L. ^S	Tuberculosis	77p.
Chapman, James K.	Typhoid Fever	23p.
Wagner, J. E. S. ^{John}	Diagnosis of Simple Pregnancy	23p.
Shertzer, Abram Y. ^{T.}	Intermittent Fever	44p.

11
12
13

14
15
16

17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

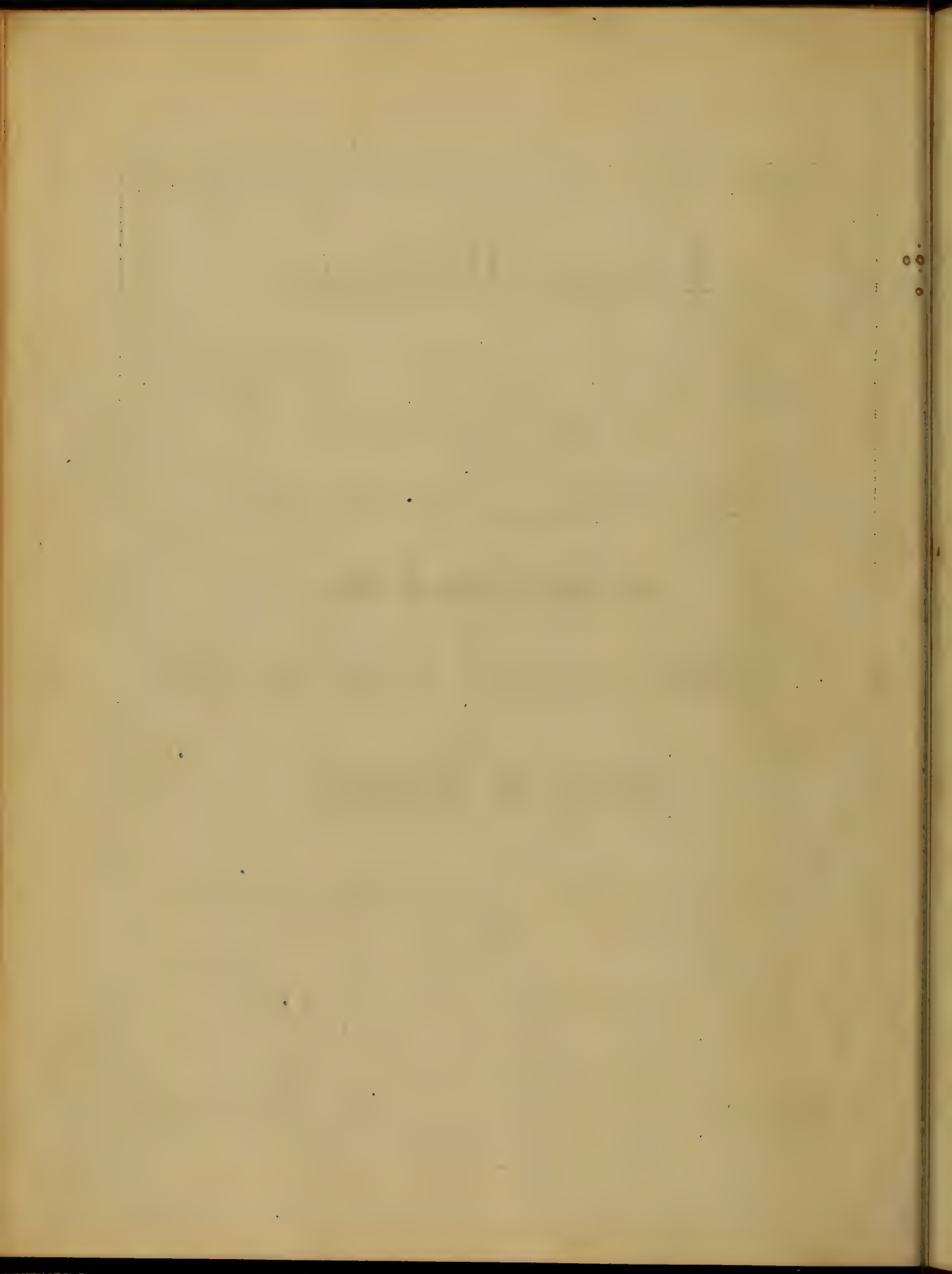
AN
Inaugural Dissertation
ON
Six Surgical Cases.
Submitted to the Examination
OF THE
Provost, Regents and Faculty
OF
PHYSIC,
OF THE
UNIVERSITY OF MARYLAND,
FOR THE DEGREE OF
DOCTOR OF MEDICINE,

By
Jacob Henry Hartman
of
Baltimore - Md.

Session of

1868-69

IML
18957



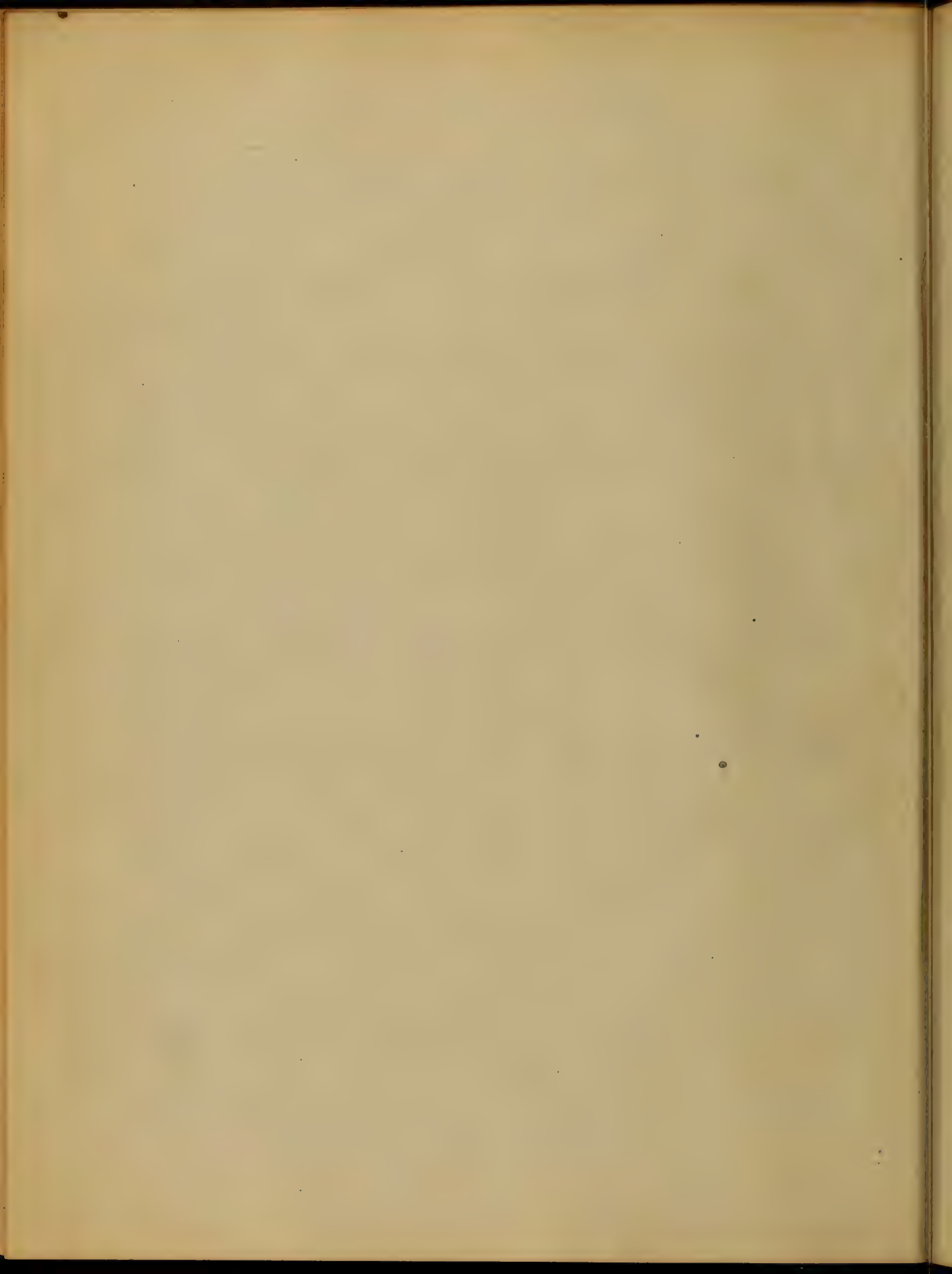
Case 1

"Dislocation of the Femur"

Nov 23rd 1868.

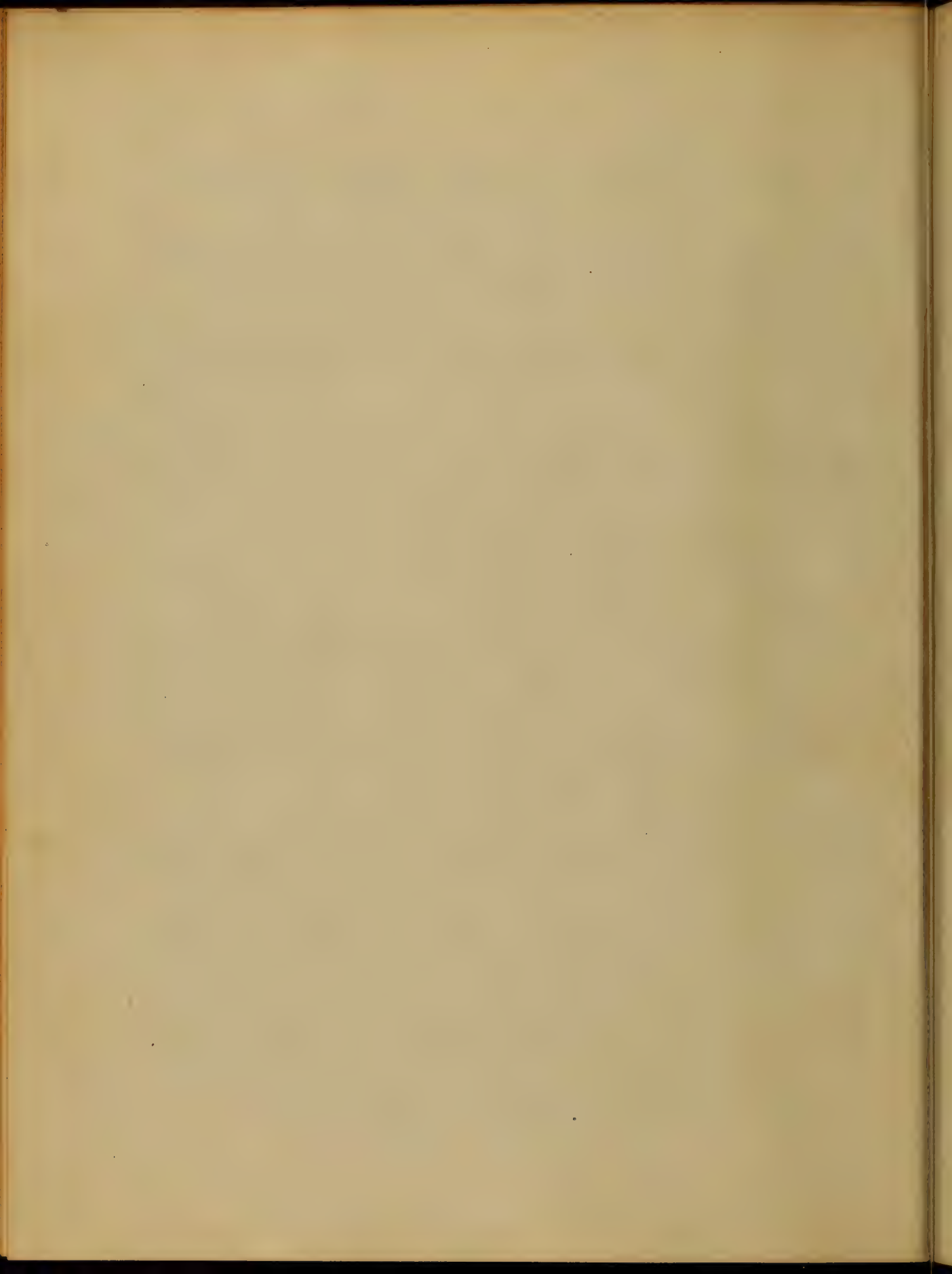
James C. Dowling, white aged 33 years, was admitted into the Balt: Infirmary from one of the lower counties of Maryland.

He was a person of fine muscular development, a carpenter by trade, and gave his history of the accident as follows: On the morning of the 23rd of Nov, after indulging in several drinks, he was riding in an open carriage with two other persons, (the seat being only intended to accommodate two) he either lost his balance or was pushed out of the carriage by the



others, falling upon the right hip, the fall occasioned a dislocation of the right Femur, upwards and backwards upon the dorsum of the ilium. He was conveyed home and three physicians were summoned, who placed him under chloroform and made long and continued efforts at reduction, they failed, to reduce it, and sent by him a written certificate to that effect.

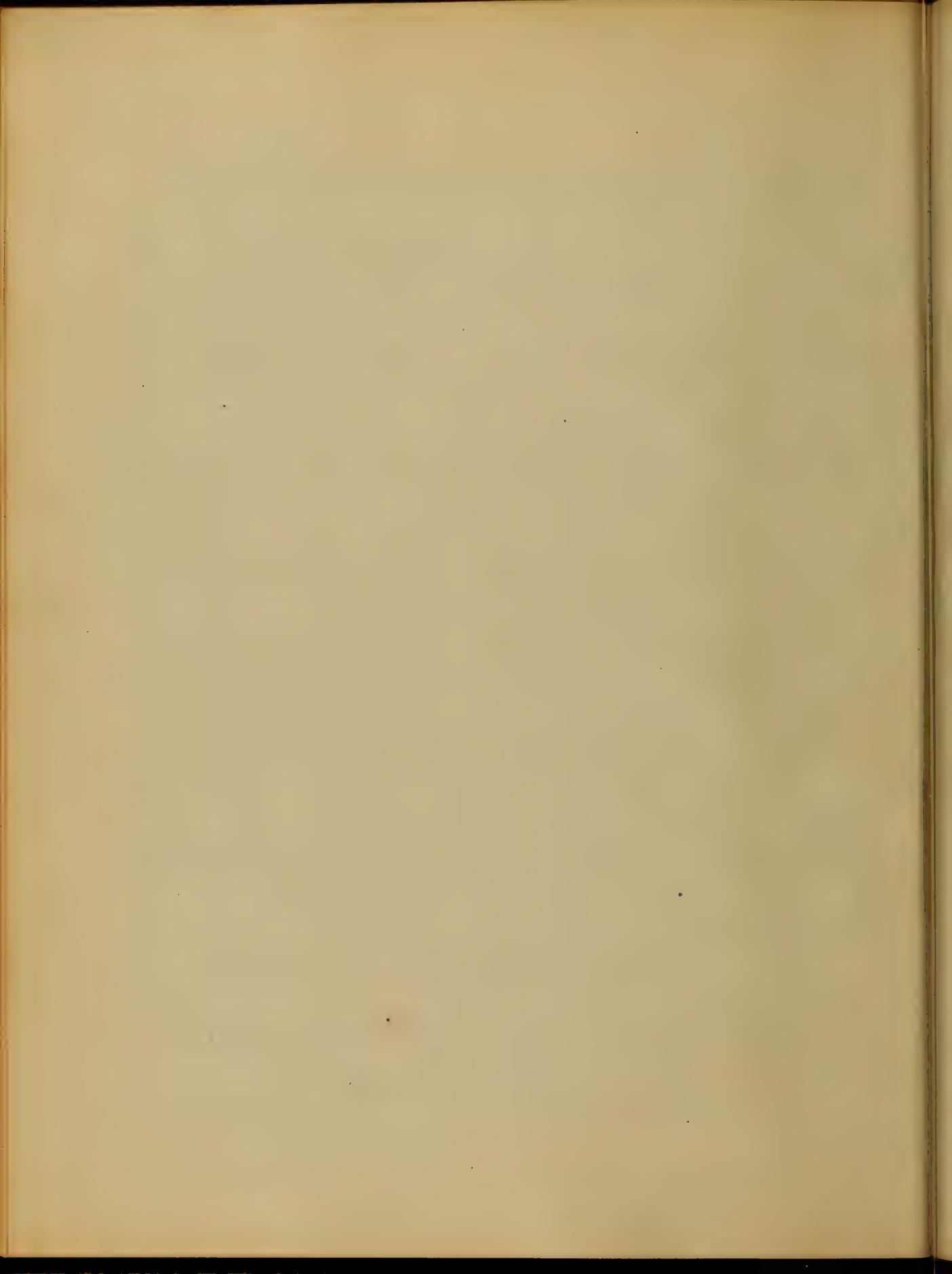
When admitted, the affected limb presented a shortening of one and a half inches, an inversion of the knee and foot, the inner margin of the latter,



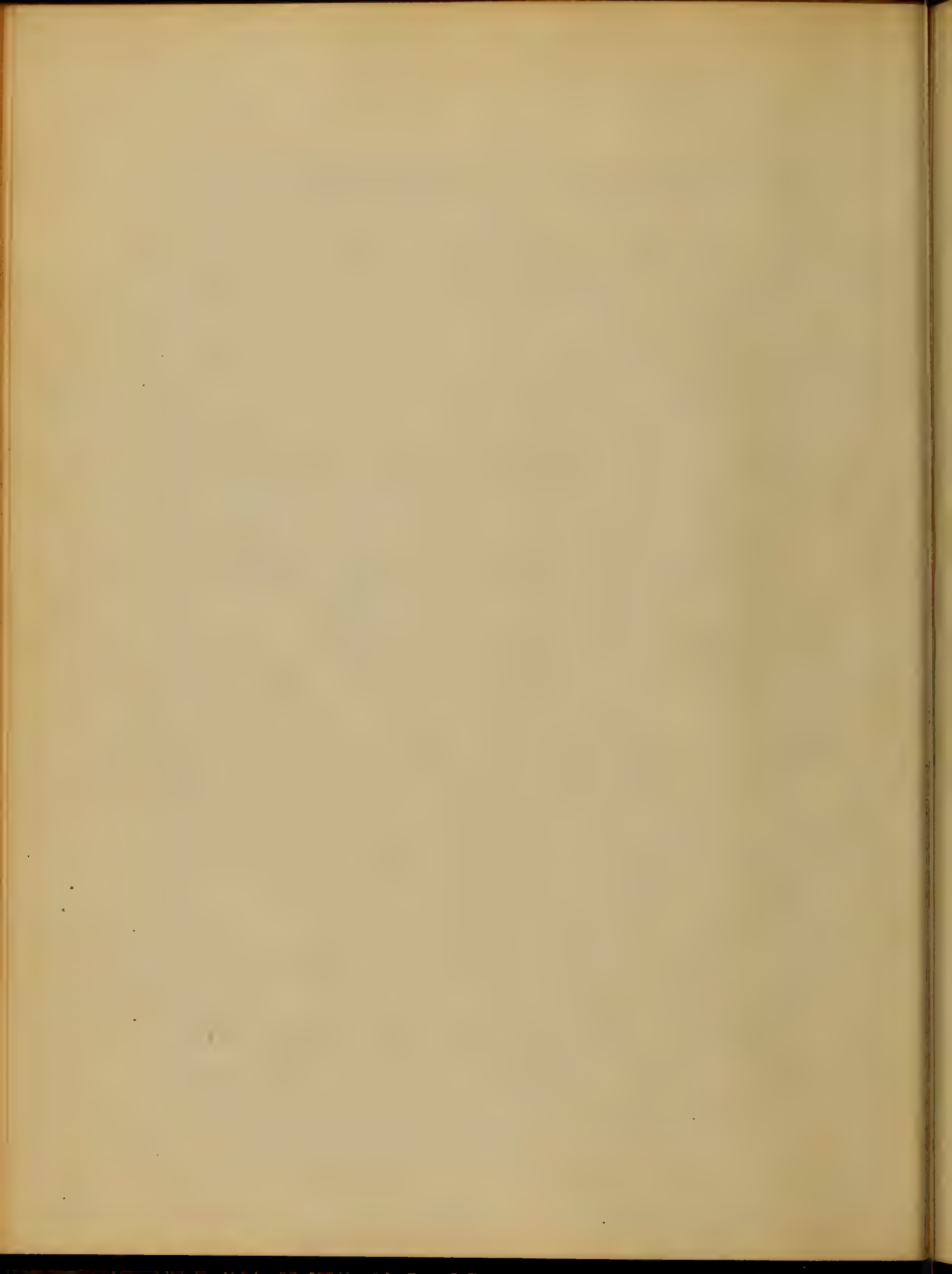
resting against the instep of the
left foot, the knee in front of,
and a little above the opposite
one, the anterior surface of the
limb, facing almost directly to
the left side, the trochanteric prom-
-inence flatter, less prominent, and
more elevated than on the healthy
limb. There was considerable
echymosis and swelling around
the joint, he complained of
great pain, especially on the
upper and inner side of the thigh.

Nov 28th

The patient was chloro-
-formed in the presence of the
class and the reduction was

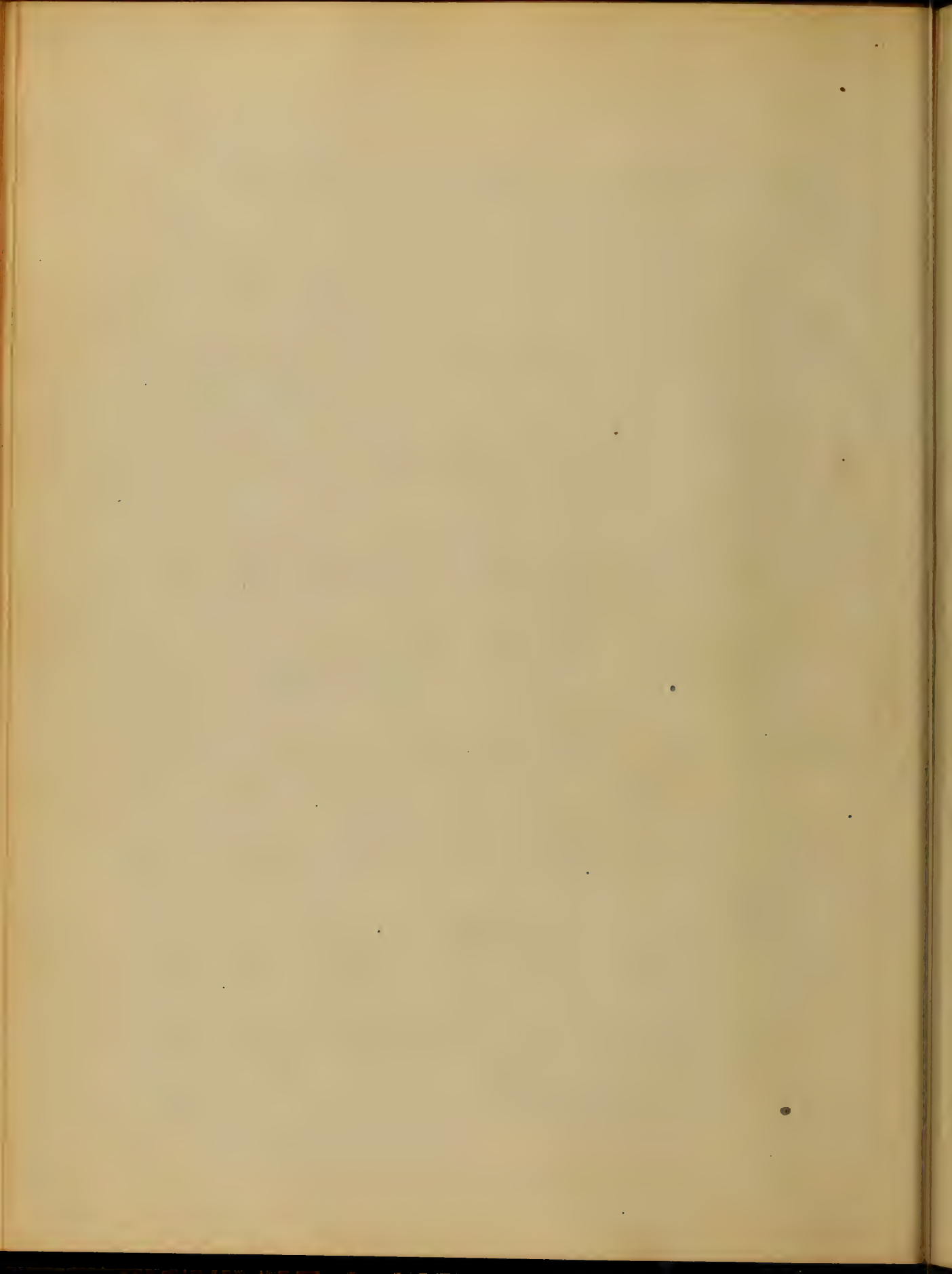


then accomplished by the follow-
-ing manipulations, Prof Smith
standing on the right side of the
patient, (who was placed on
a table of convenient height)
seized the right knee with his
left hand, and with the aid of
an assistant forcibly flexed
the thigh upon the Pelvis, and
the leg upon the thigh, the knee
then being in the vicinity of the
left shoulder, this constituted the
first stage; then holding the
foot in the position mentioned
viz. inversion, the knee was pushed
as far to the right as possible
or in other words "everted". This



Completed the second stage.
 Eversion of the foot followed
 by complete extension of the
 limb, ^{which} was the third and last
 stage, during which the head
 of the Femur, slipped over the
 border of the Acetabulum into
 the cavity with a loud snap,
 which was audible over the
 whole Theatre. The operation
 occupied but a few moments
 and nothing could have been
 more satisfactory than the result.

The patient suffered for some
 hours after the operation with
 severe pain, a few grains of
 Opium, was directed for him.



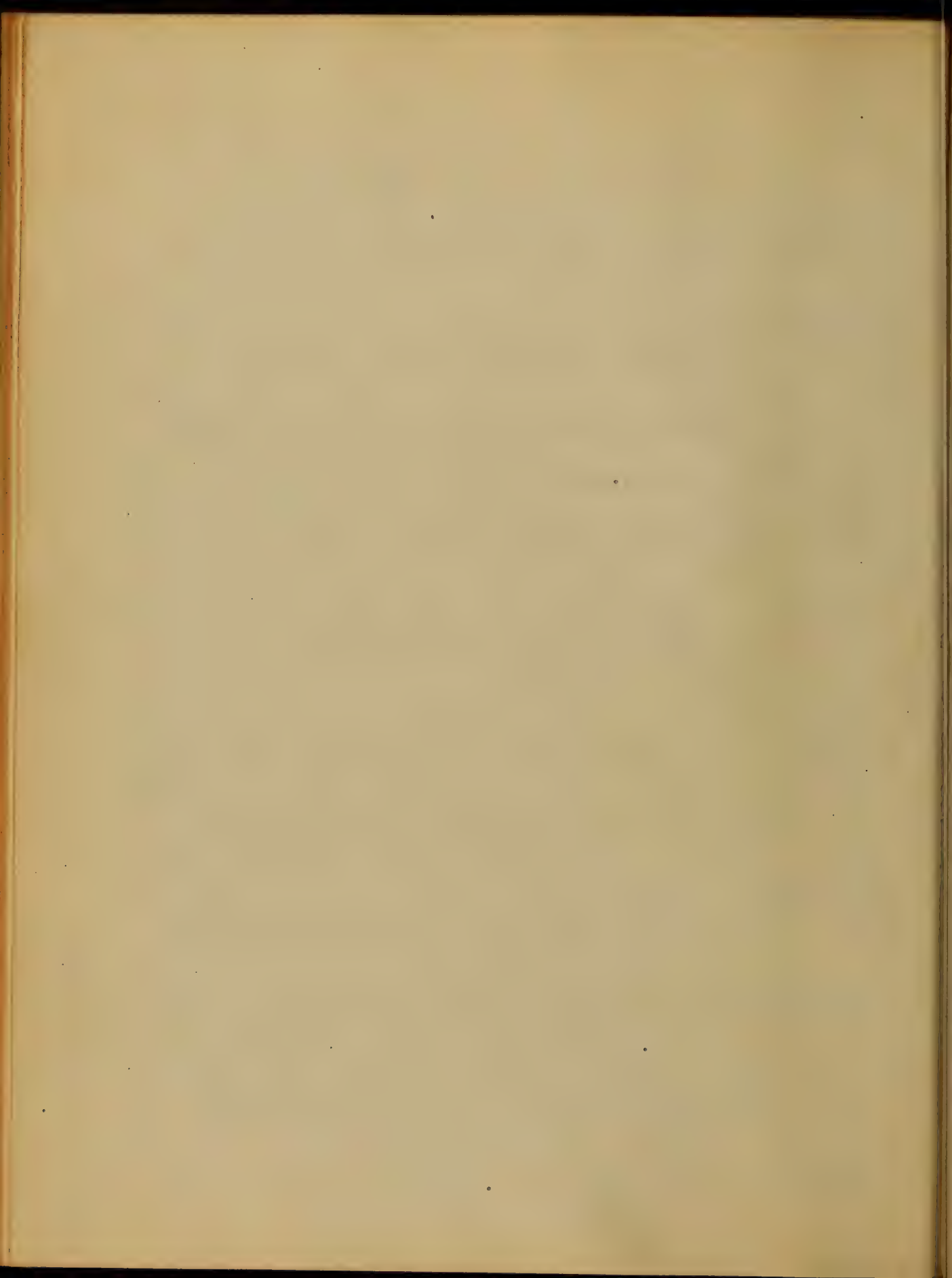
in broken doses, which somewhat relieved the pain.

Nov 29th

The patient was doing very well and comparatively easy, rested tolerably well the night before, there was considerable swelling and he complained of slight pain about the seat of injury.

Nov 30th The patient was improving rapidly, and was sitting up in bed.

Dec 5th Found the patient sitting up in a chair, had considerable use and motion in the limb, complained of no pain whatever, Dec 11th The patient left the Hospital well, and with the use of his injured limb,

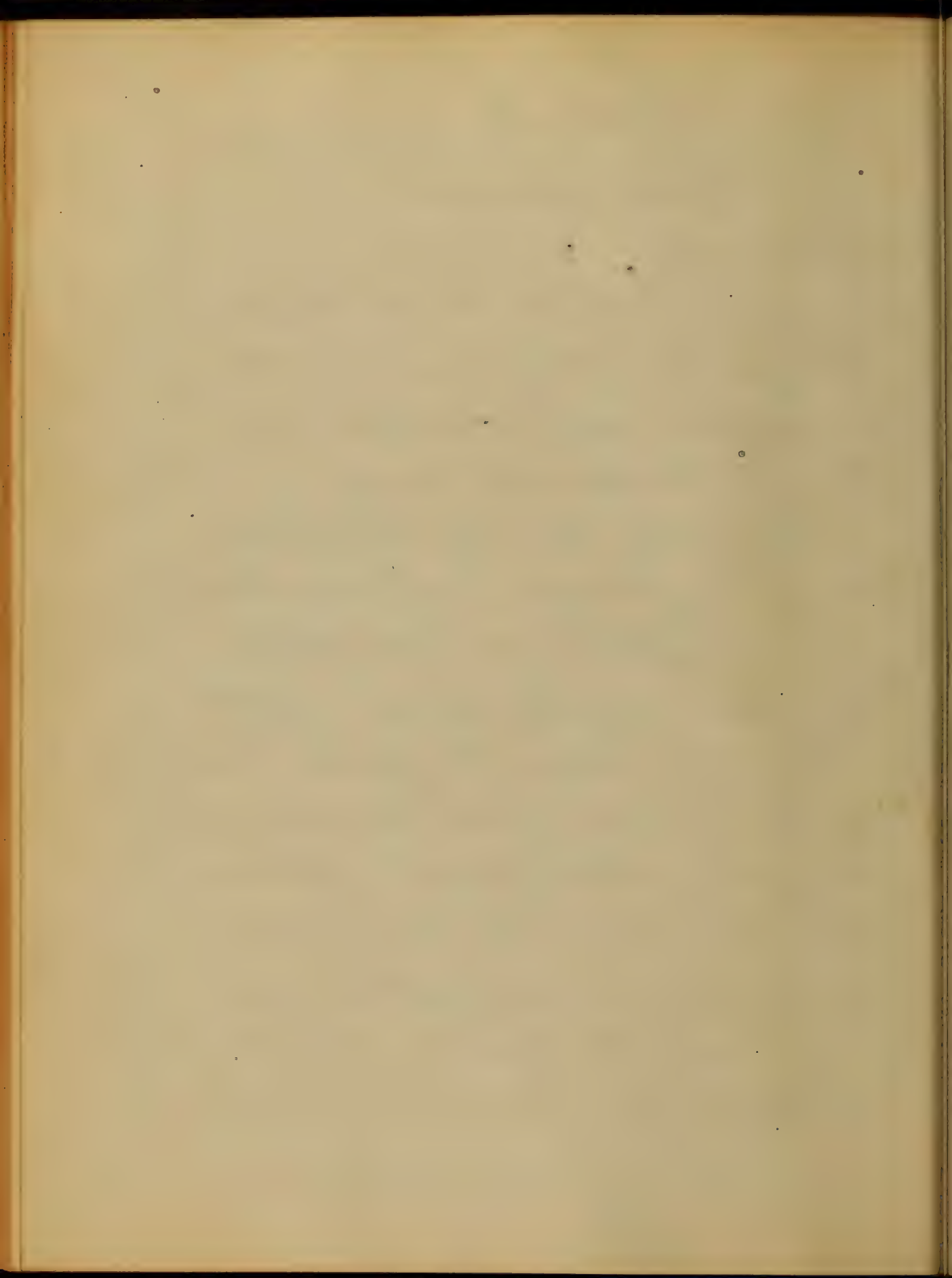


Case II
Epithelioma

Sept 28th 1868.

Col J. B. of Prince
George's Co, Maryland aged
sixty five, was admitted into
the Baltimore Infirmary.

He gave the history of his
case as follows, About three
years before a minute ulcer
appeared in the groove of the
upper lip, near the junction
of the mucous and cutaneous
surfaces of the latter. It had
been treated with ointment
"Nitro. Argenti. and other appli-
-cations by his Country physician
and sometime it would seem



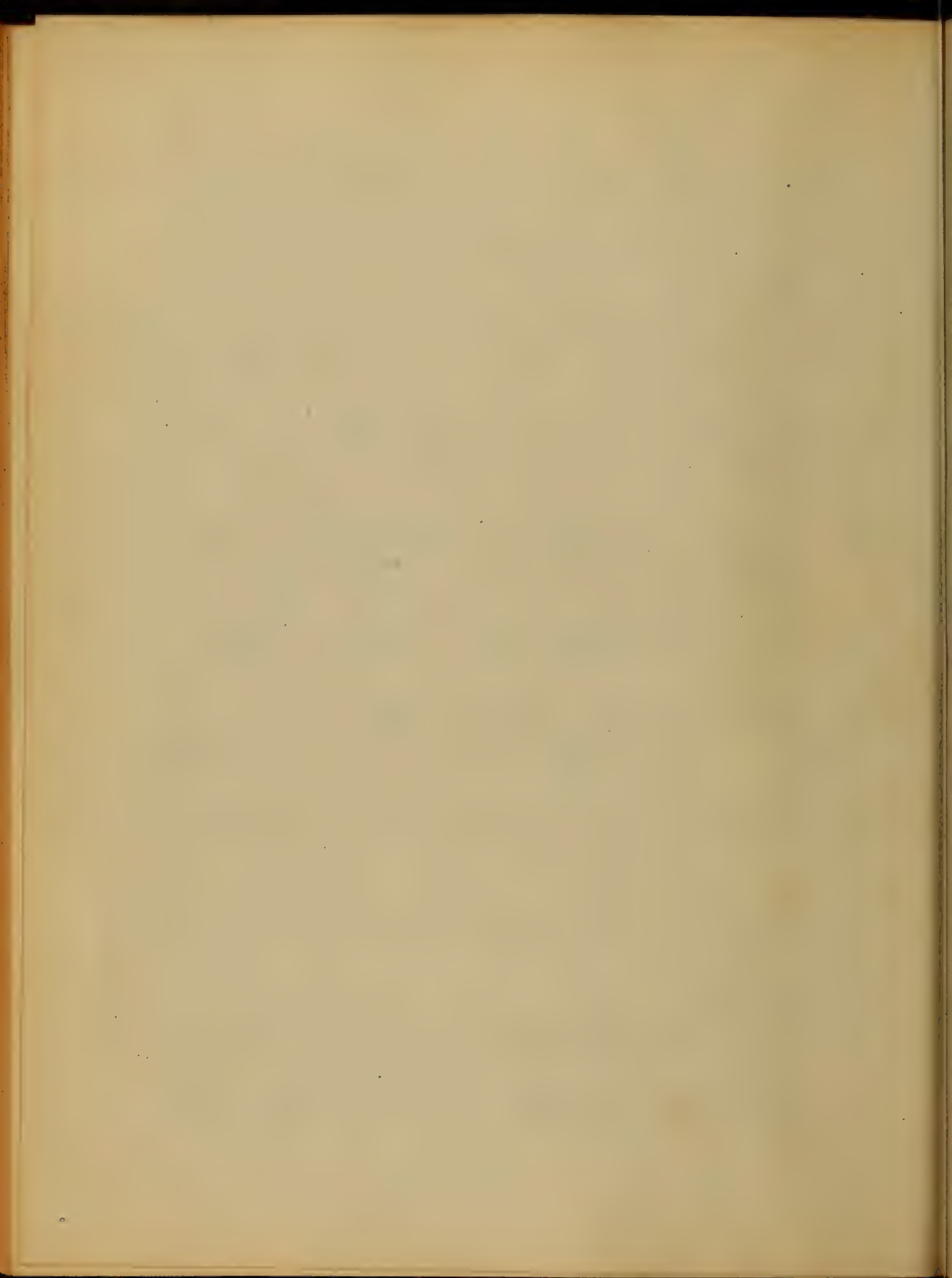
almost healed only to break
out again as badly as before.

He had suffered no pain in
it whatever. He did not drink
or use tobacco in any form, but
attributed it to a cut of the
lip by his razor whilst shaving.

When he came into the
Hospital, the ulcer presented
the following appearance, it
was about the third of an inch
in area, of a grayish color,
hard elevated edges and
depressed in the centre.

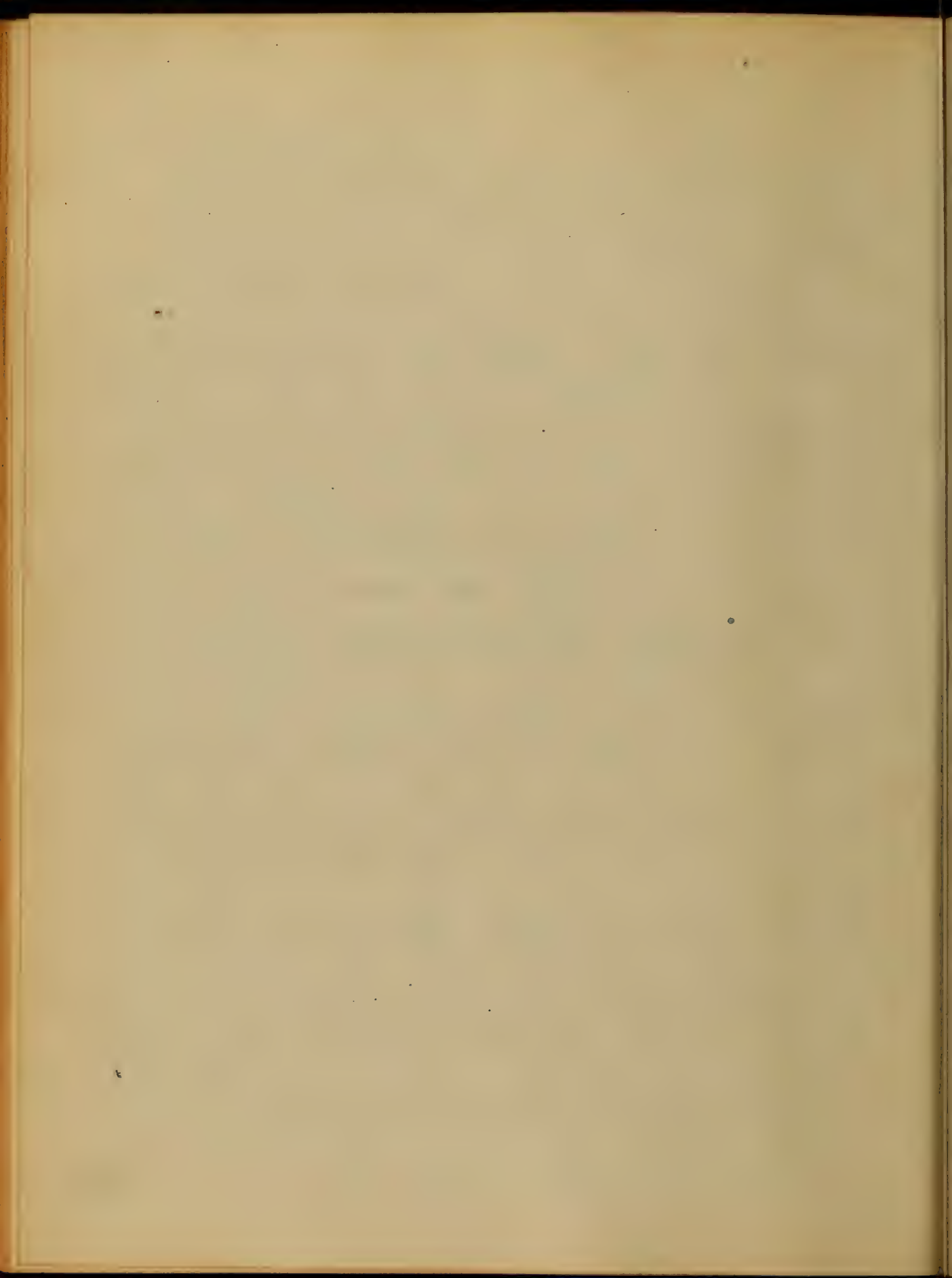
Octo 1st

Dr Butler, then visiting
Surgeon to the Hospital, saw the



patient, and diagnosed it
"Epithelioma".

He determined to excise
it as the only hope for permanent
relief. The patient being
chloroformed in the recumbent
posture, and his head being
firmly held by an assistant;
Dr Butler, made with a
scalpel two incisions like an
inverted V - meeting beneath the
nose; and separating one half-
inch at the tip the bleeding
from the superior coronary artery
was arrested by the fingers,
cold water and torsion, the
ligature being objectionable.



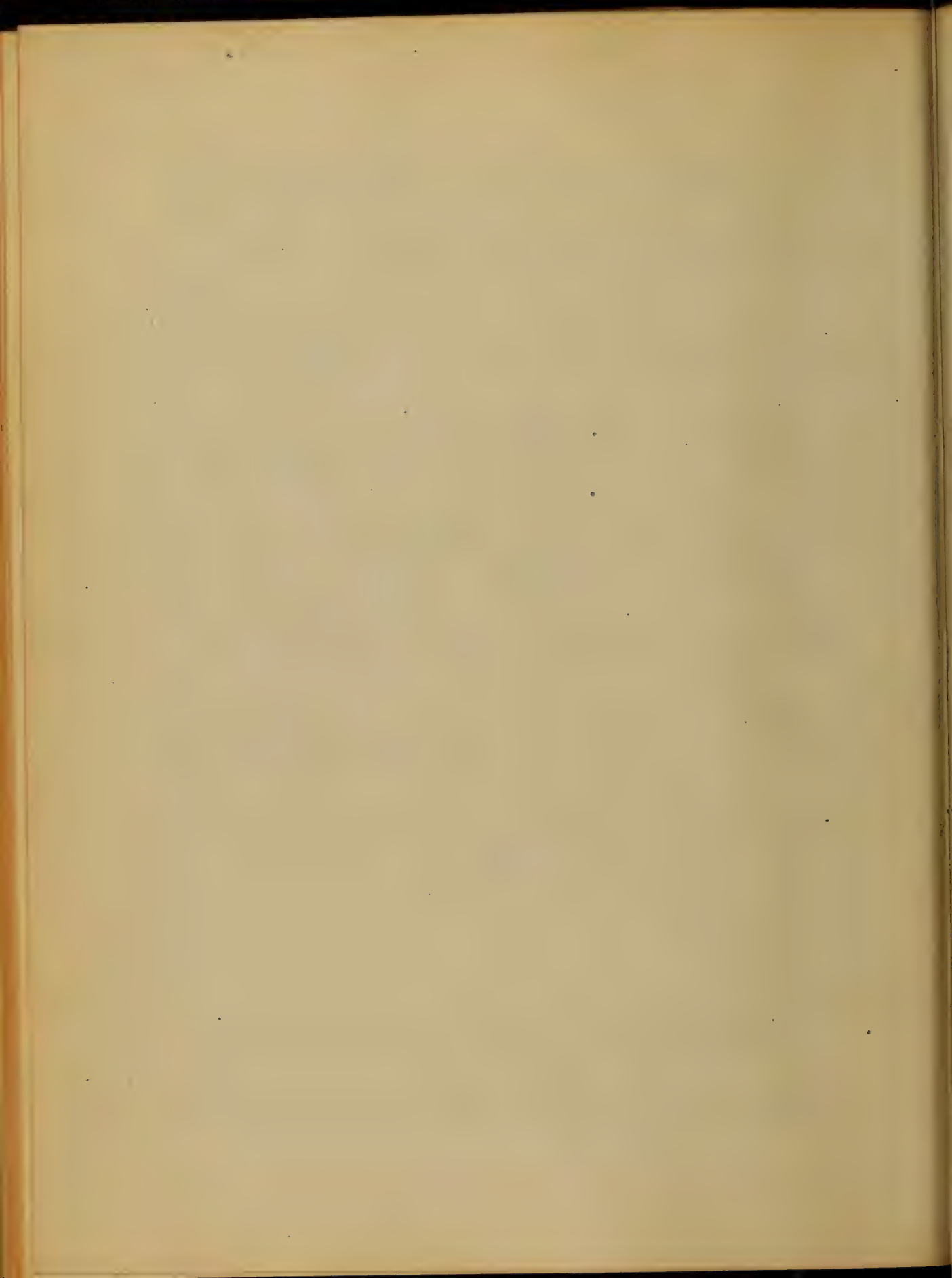
as adhesive union was proposed.

Three suture pins were then passed through the skin and cut surfaces, but not through the mucous membrane; and a figure eight ligature twisted about them, thus there was accurate apposition of the cut surfaces.

The part excised presented a grayish white appearance and was hard and gristly to the touch. Dr. Butler ordered the part to be dressed with Cerati simplex and lint.

Oct 3rd

The patient had been sitting up since the day before, and felt



11
very well, Union had taken
place below and there was no
suppuration; pain or bleeding.

Oct 5th

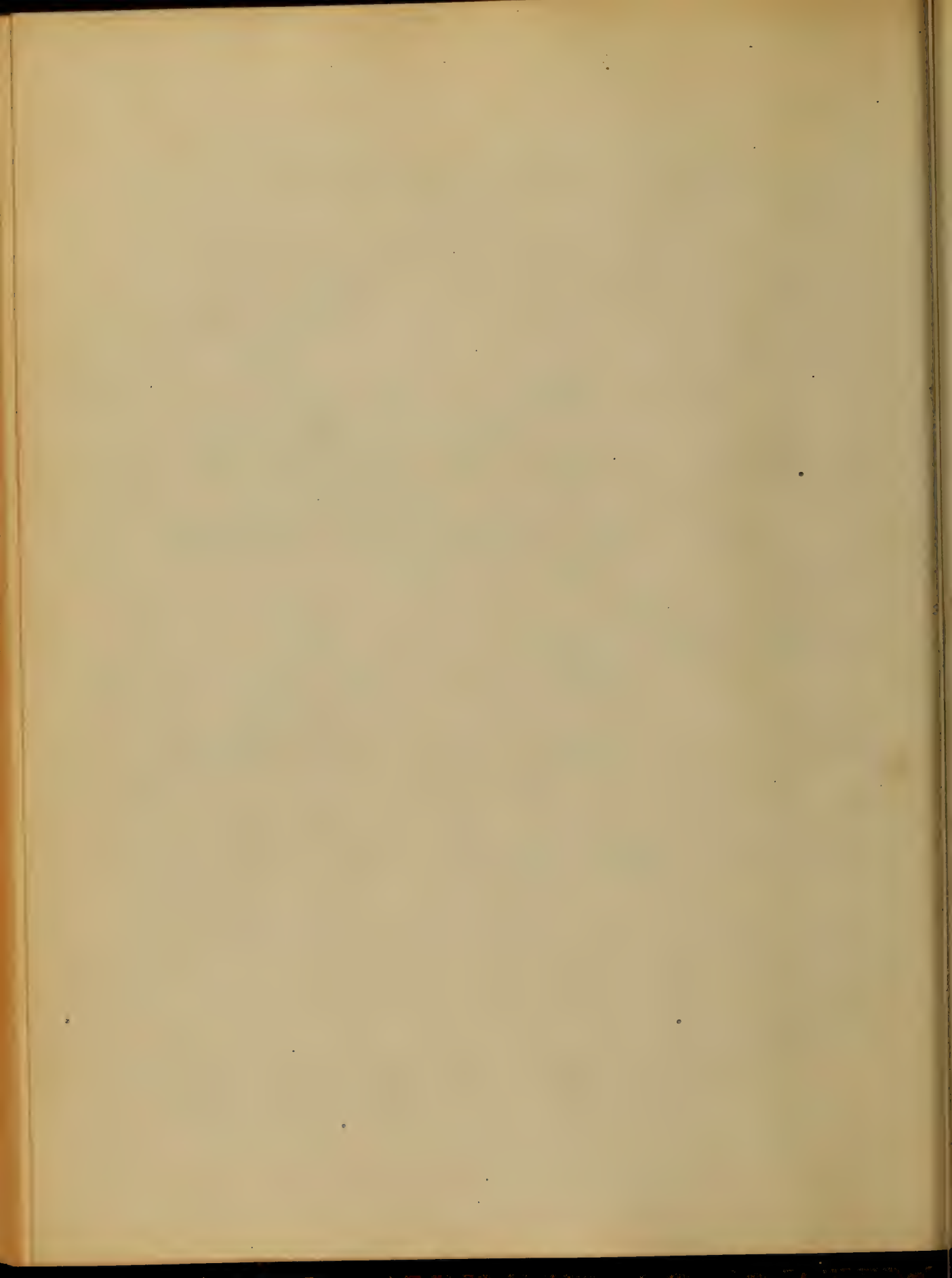
Col B. was doing well.
Complete union had taken place
Dr Butler removed the suture
pins -

Oct 6th to 9th

The patient was
still improving and had been
walking about the city for
the last two days. He had
no soreness or pain in the
part operated upon.

Oct 10th

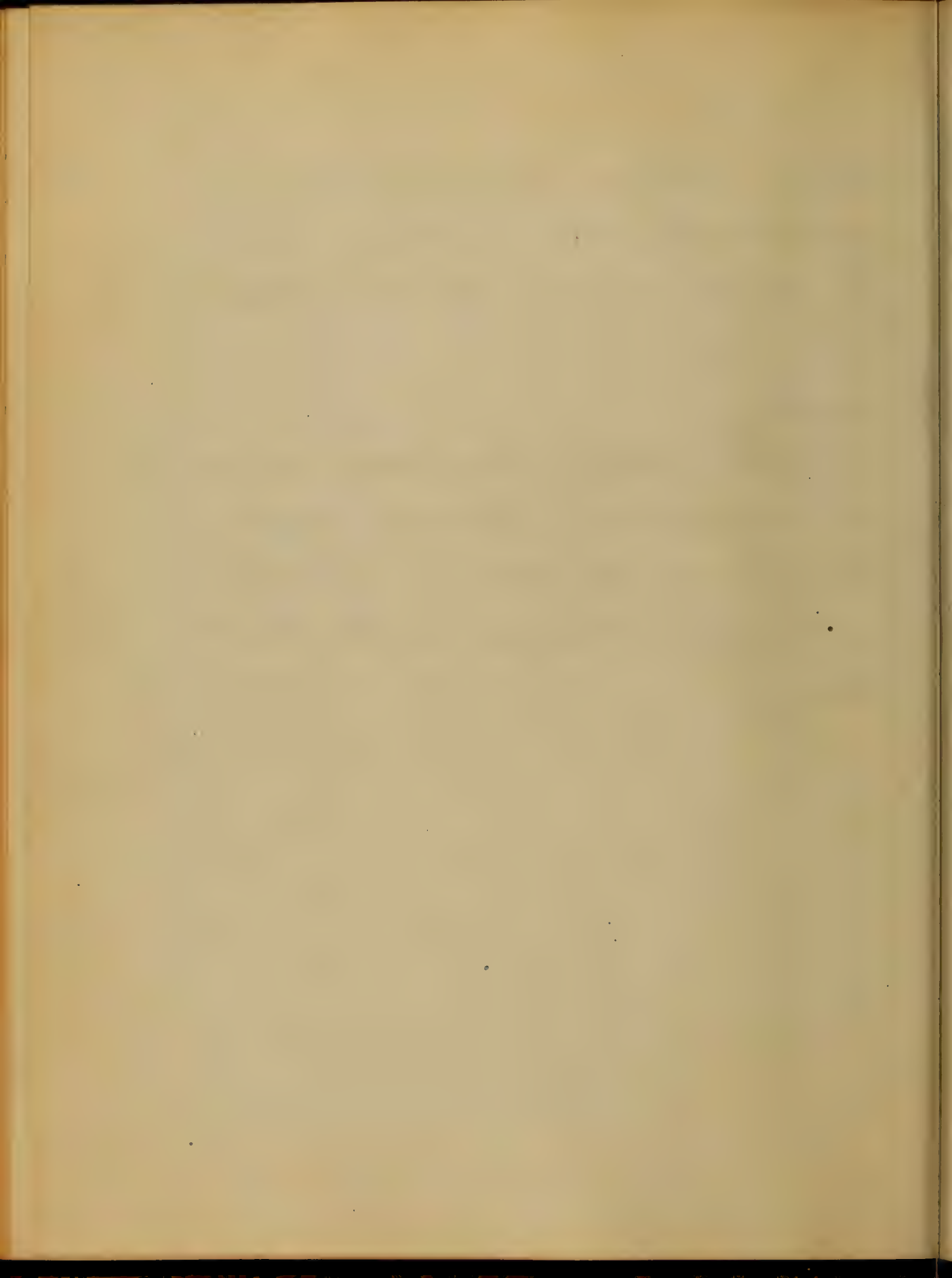
Col B. left the Hospital



well. There would be no perceptible scar, as it would be concealed by the mustache.

note.

This patient was seen about the middle of December and there was no return of the original disease up to that time

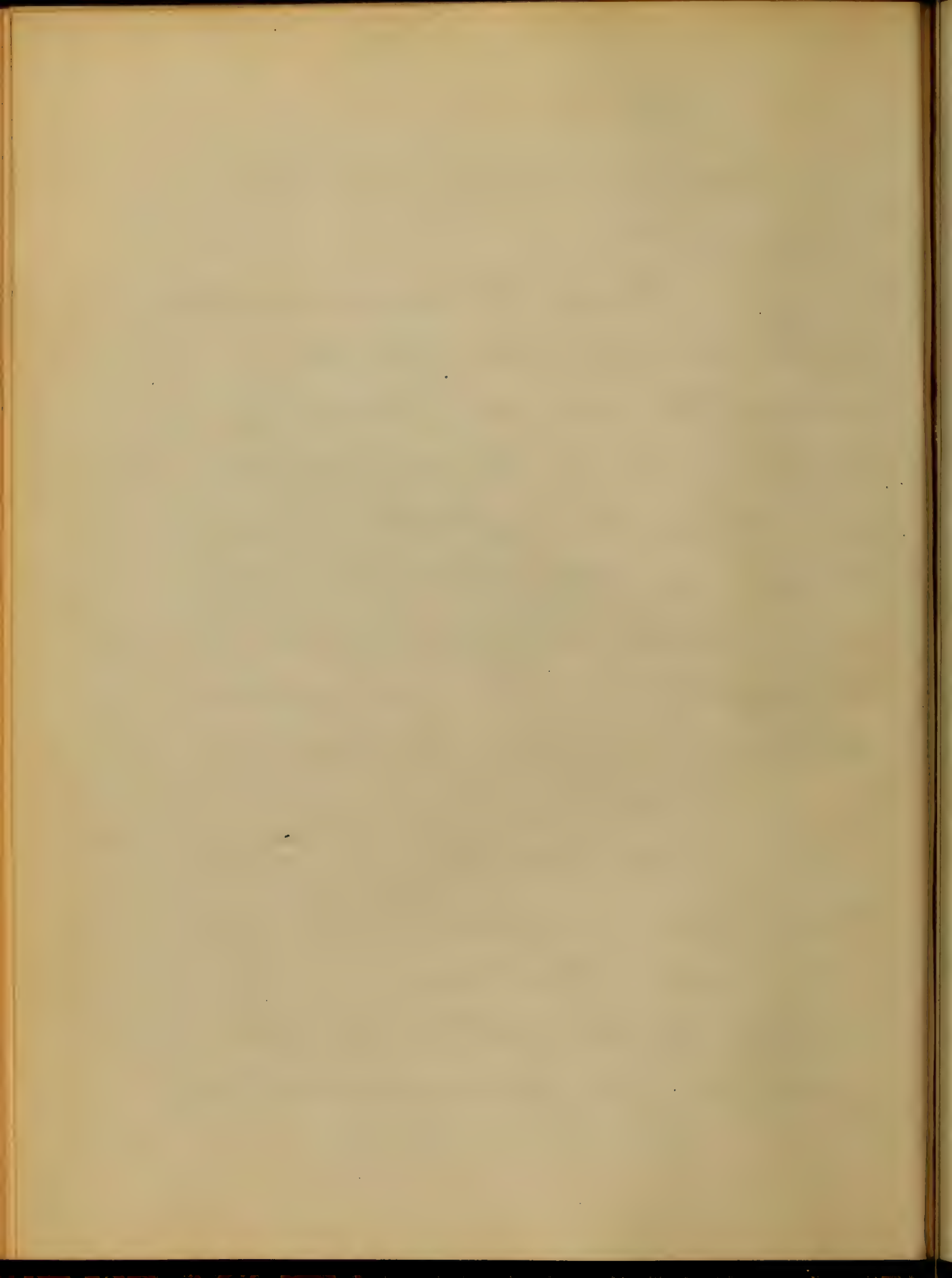


Case III

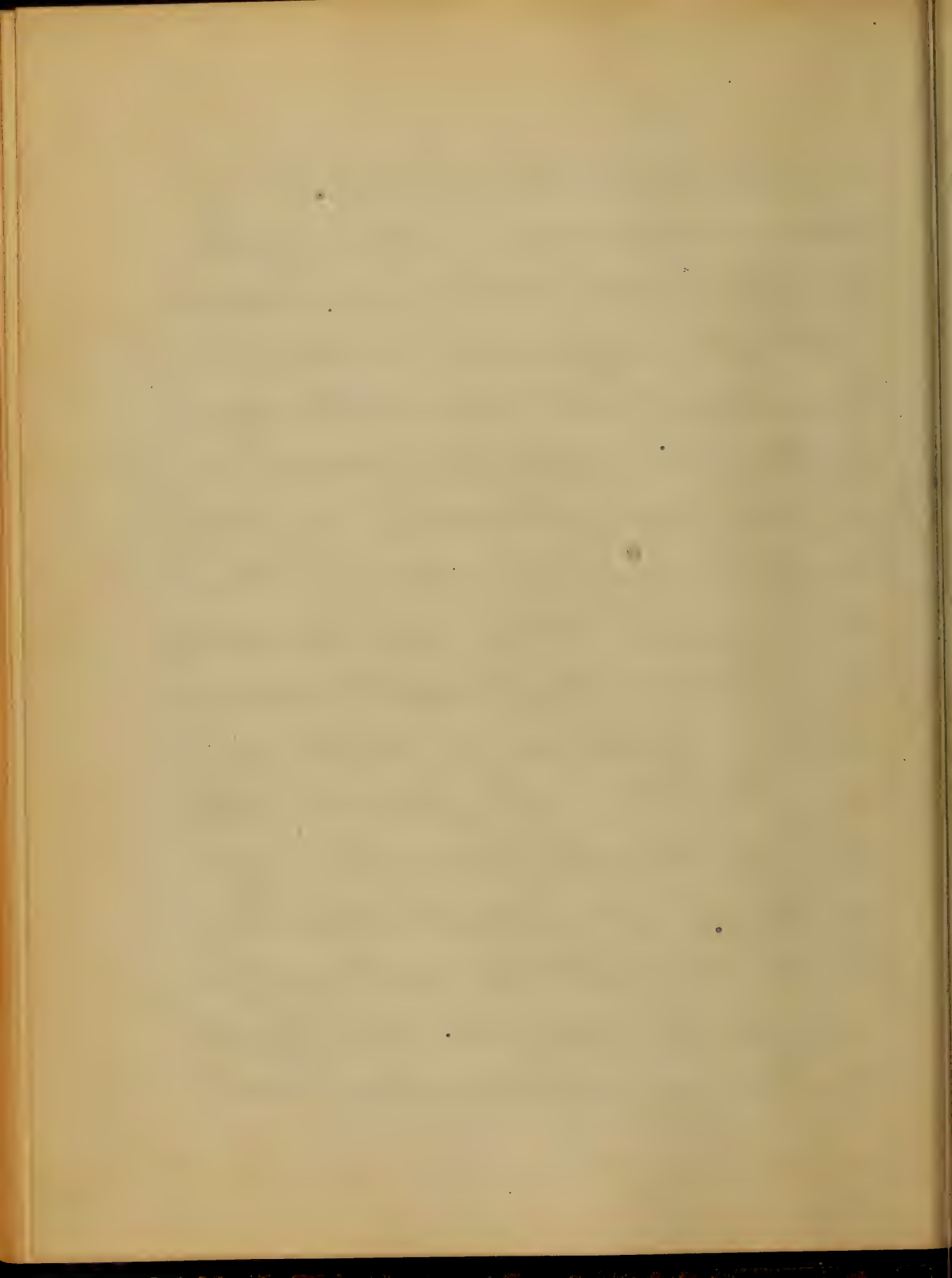
Ligation of the Femoral Artery.June 13th 1868.

Thomas B. by occupation a fisherman, aged 59. was admitted into the Baltimore Infirmary for Epithelial Cancer, involving the right Ala, of the nose, part of which was eaten away, and the inner Canthus of the right eye, the sight of which was still perfect. It began five years before, but had advanced none for the past two years, and had never caused him any pain.

Proper treatment was instituted on the 25th of July. In forty two days after admission into

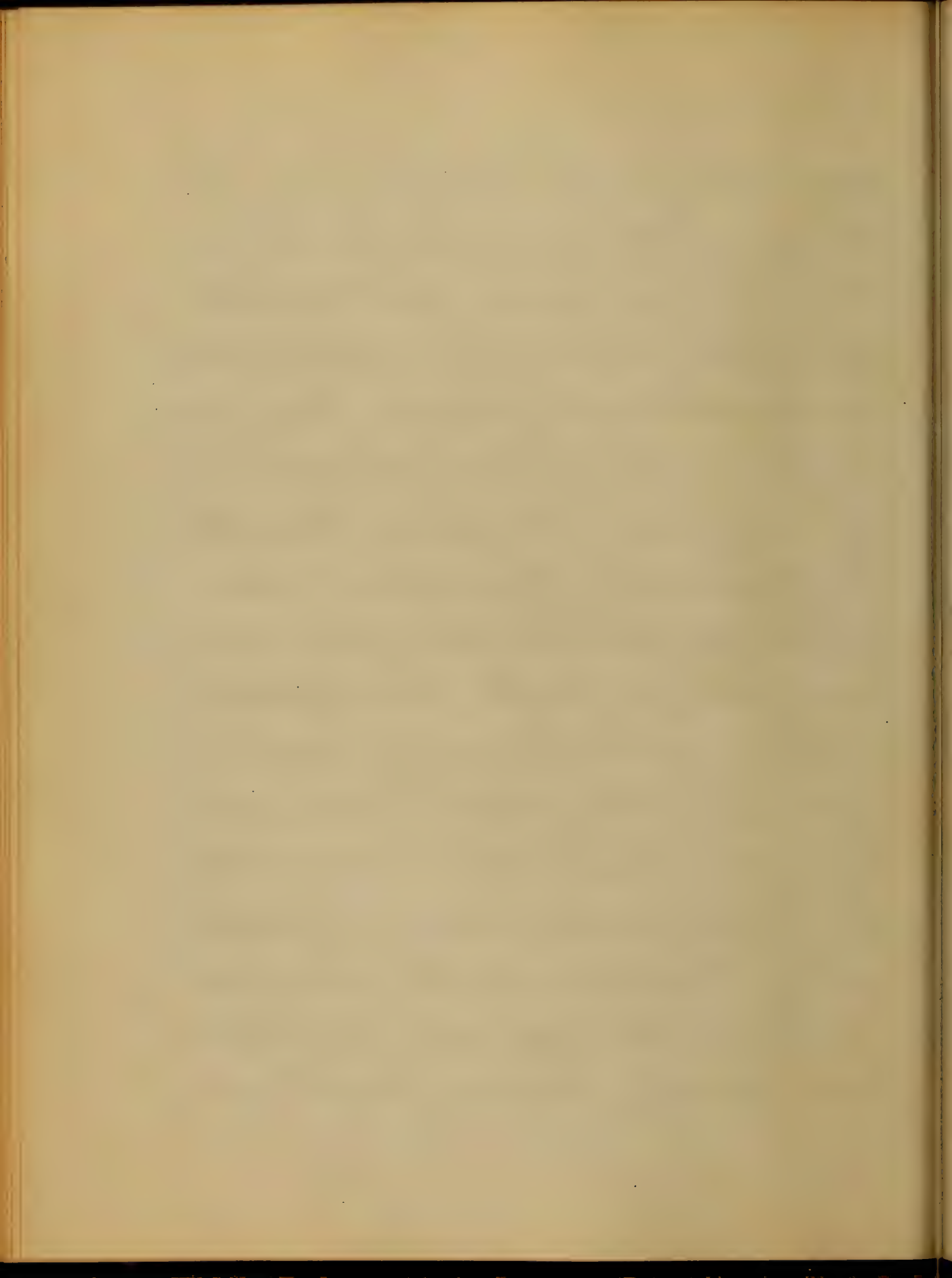


the Infirmary, he complained of pain and swelling in the right Popliteal space, which upon examination was found to contain a pulsating tumor, about the size of the fist, expanding synchronously with the action of the heart, ceasing its pulsation, when the Femoral artery was compressed above in the thigh, and communicating to the ear a loud rushing bruit. The patient when questioned as regards the origin of this tumor, stated that he had observed a swelling for two months past at that point, but as it was painless, and

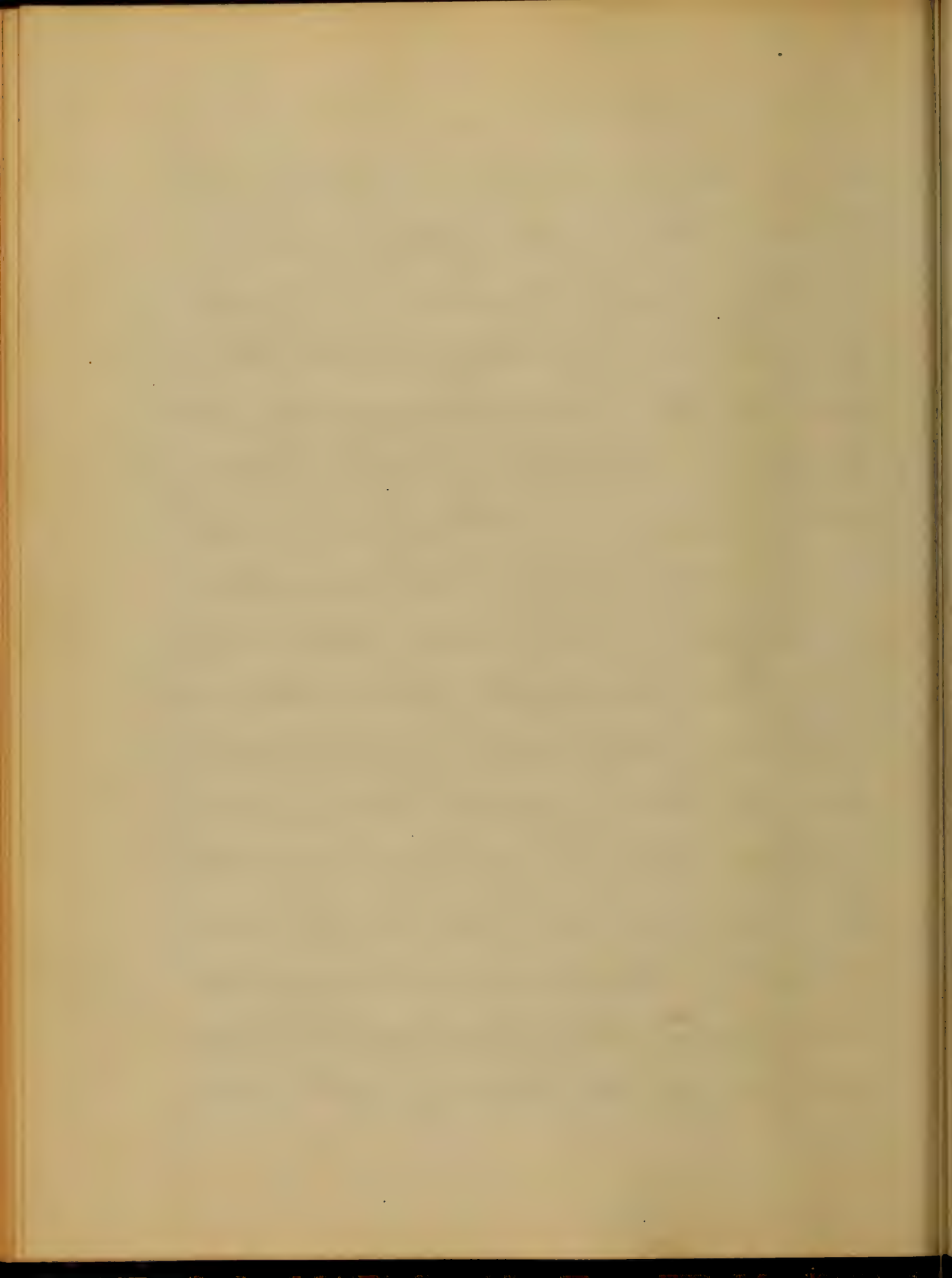


and caused no inconvenience, he thought it of no consequence, also that he had never had Syphilis or taken courses of Mercury, but his health had always been good until the Epithelioma appeared.

Compression was first attempted by means of a Journiquet continually applied over the vessel in the thigh, under this treatment which was continued for some days, the Aneurism increased in size, the pain in the back of the leg became severe, and extended along the course of the Popliteal nerve to the foot, and the patient was unable to straighten his leg.



16
or walk. After an examination
of the Aorta throughout its
course, it was decided to ligate
the Femoral Artery, which was
done on the 12th of August by Dr.
James N. Butler, in the following
manner, — He first made
an incision about three inches
in length in the lower portion of
Scarpas triangle, which divided
the skin and superficial fascia,
due care being taken to avoid the
Saphena vein, he next divided the
^{deep} fascia on a director to the same
extent of the previous incision, and
then treated the sheath of the Femoral
Artery in like manner; A silk

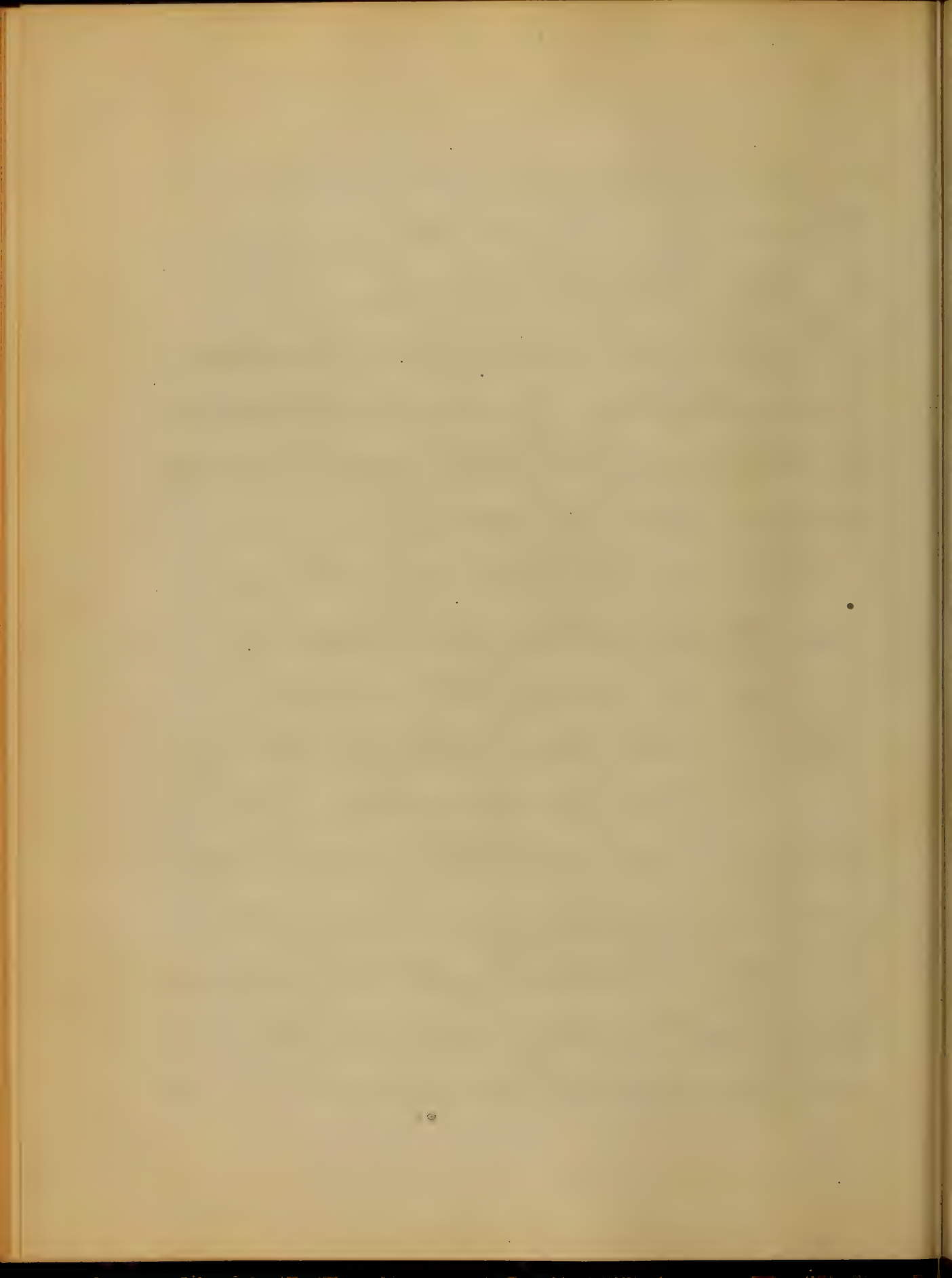


ligature was then passed around the Artery with an Aneurism needle and tied firmly.

The incision was then closed and held together by strips of adhesive plaster, and a pad and bandage applied over the wound.

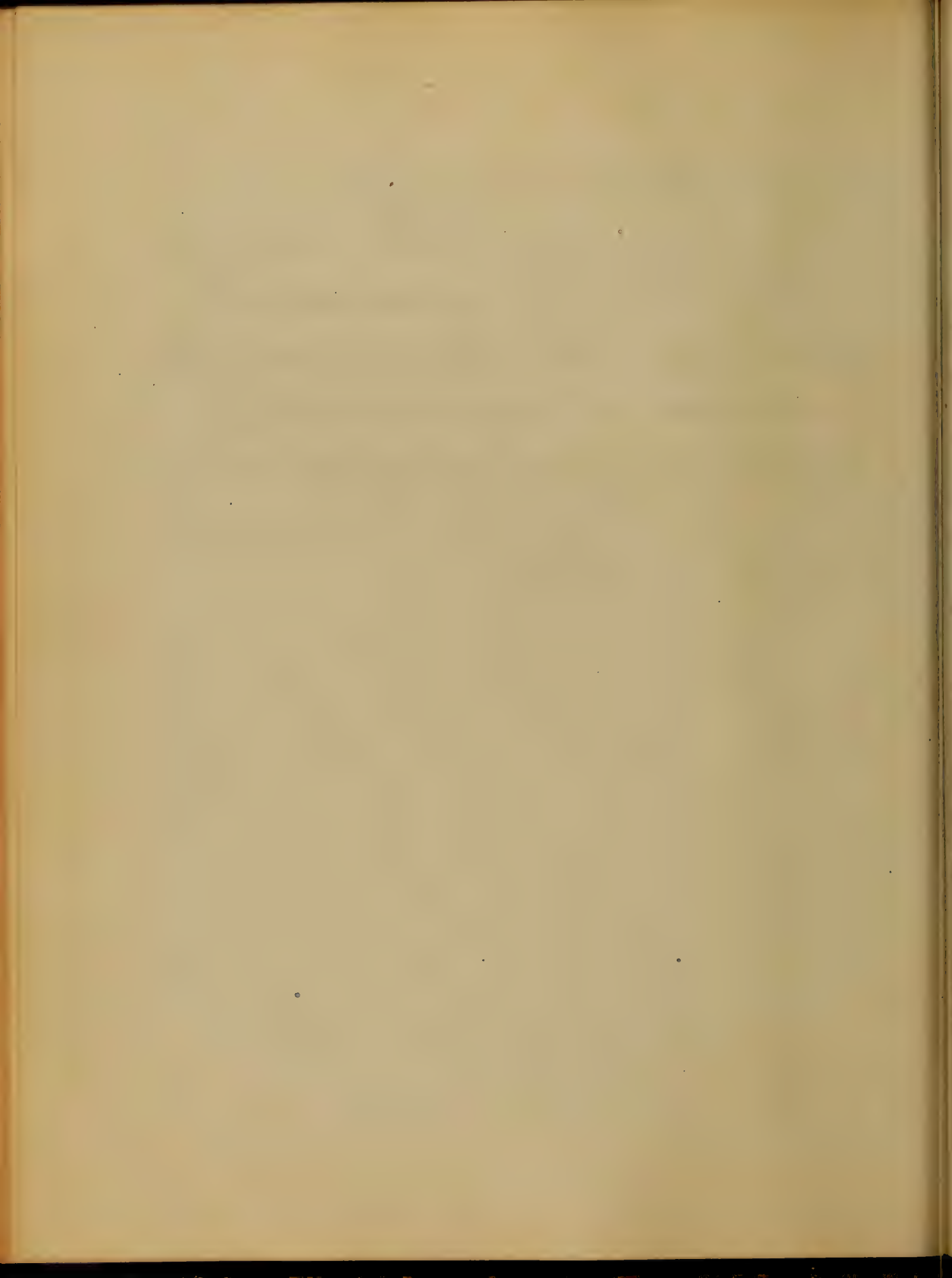
There was hardly any bleeding and the operation was performed without the use of Chloroform.

The limb was cold for some hours after the operation; it then became inordinately warm, owing to the increased activity of the capillary circulation. Chilly sensations were experienced, and there was considerable suppuration from



the wound for some days.

On the 21st day after the operation the ligature was removed without hemorrhage. The tumor gradually diminished in size, and at the time of the discharge of the patient from the Hospital it was scarcely perceptible.



19

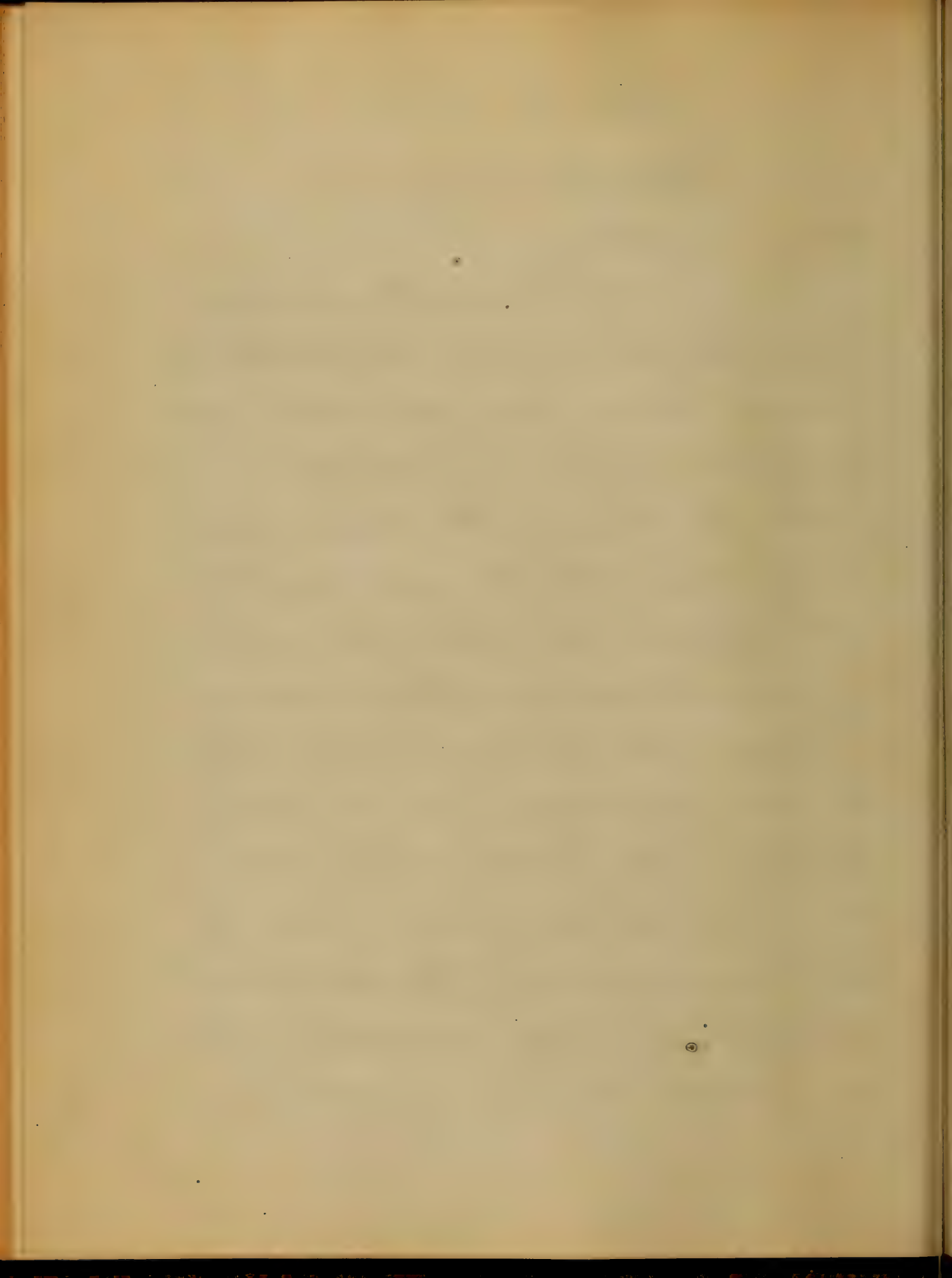
Case IV

Tracheotomy.

June 3rd 1868.

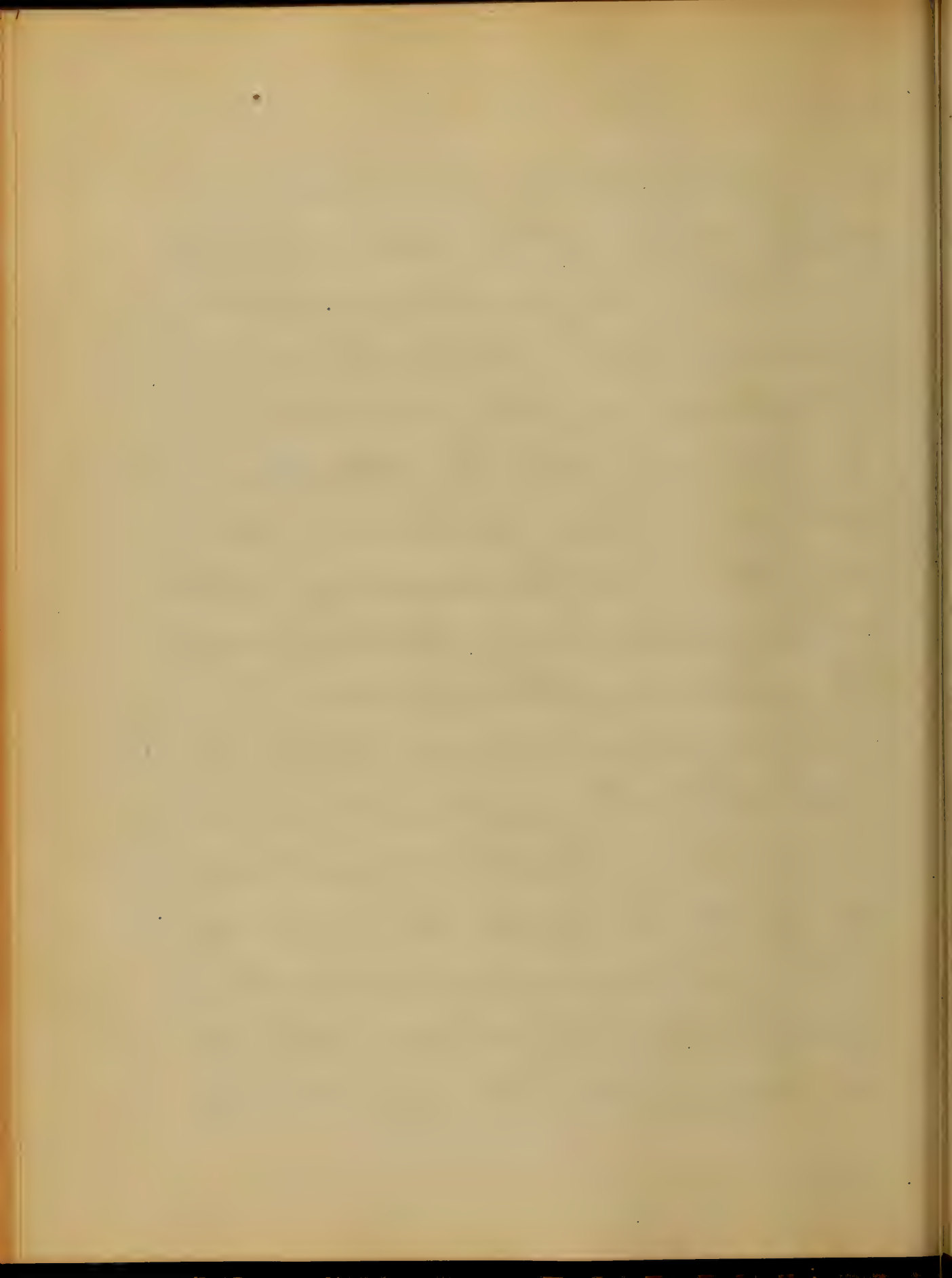
Richard Ford, colored
aged 4 years from Prince Georges
County, Md. was admitted into
the Baltimore Infirmary.

The history of the case was
as follows; On the evening of July
30th he was playing with some
grains of corn, and by chance one
passed into his wind pipe; when
the accident occurred, he was
held by the heels and shaken,
but to no effect, since then he
has been easy, with the exception
of a slight cough occasionally
and then there seemed a body

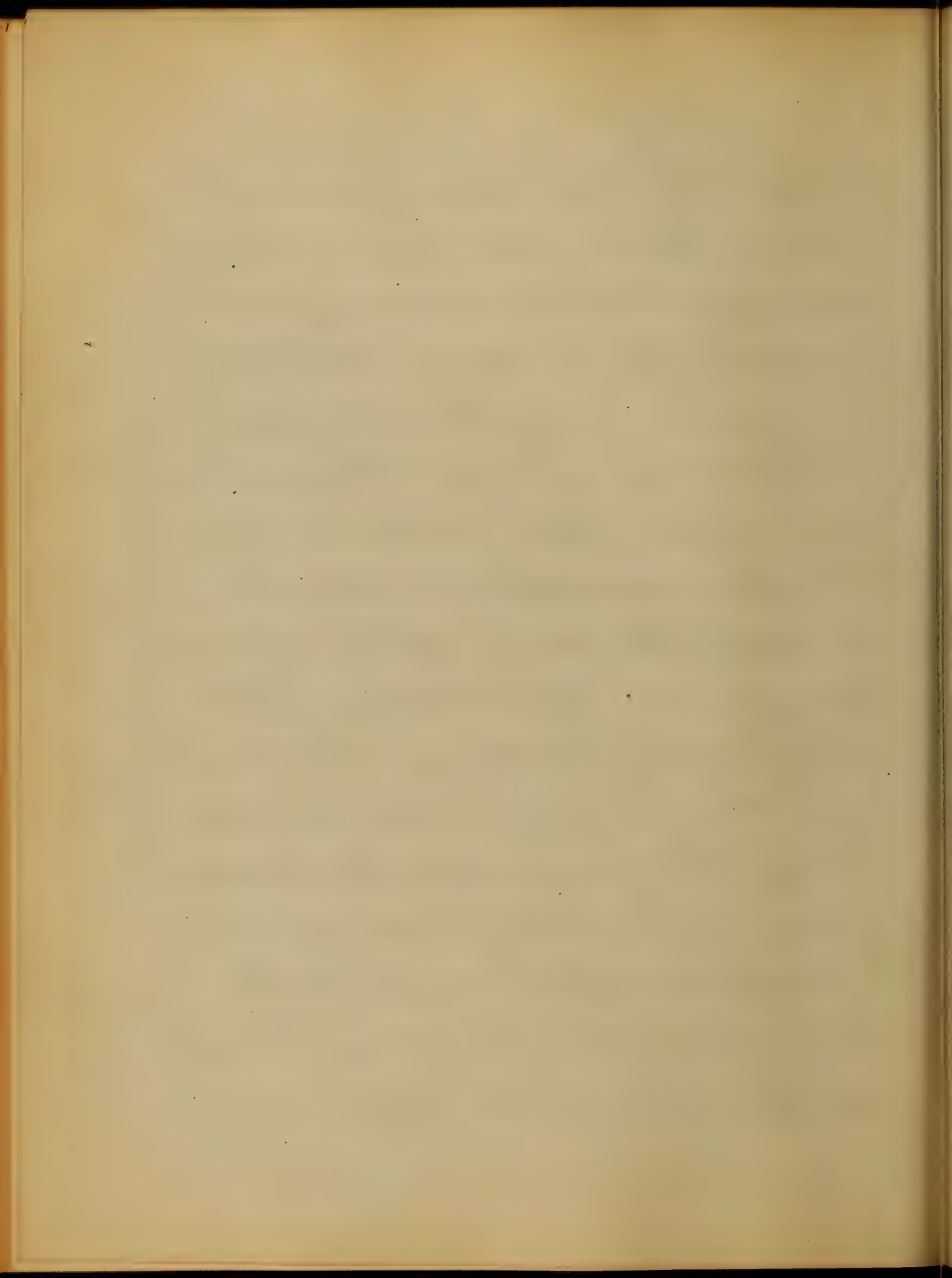


30
rising and falling with each
respiration. There was no dullness
over either lung or loss of ordinary
sound. With Stethoscope over
the Larynx there was heard
a sort of vibratory clapping
sound. Prof Johnston saw
the case on the morning of the
above date, and decided upon
performing Tracheotomy.

He proceeded as follows;
the boy being placed upon
a table, a pillow was placed
beneath his neck so as to make
it more prominent and his
head held by an assistant,
A Tenaculum having the con-

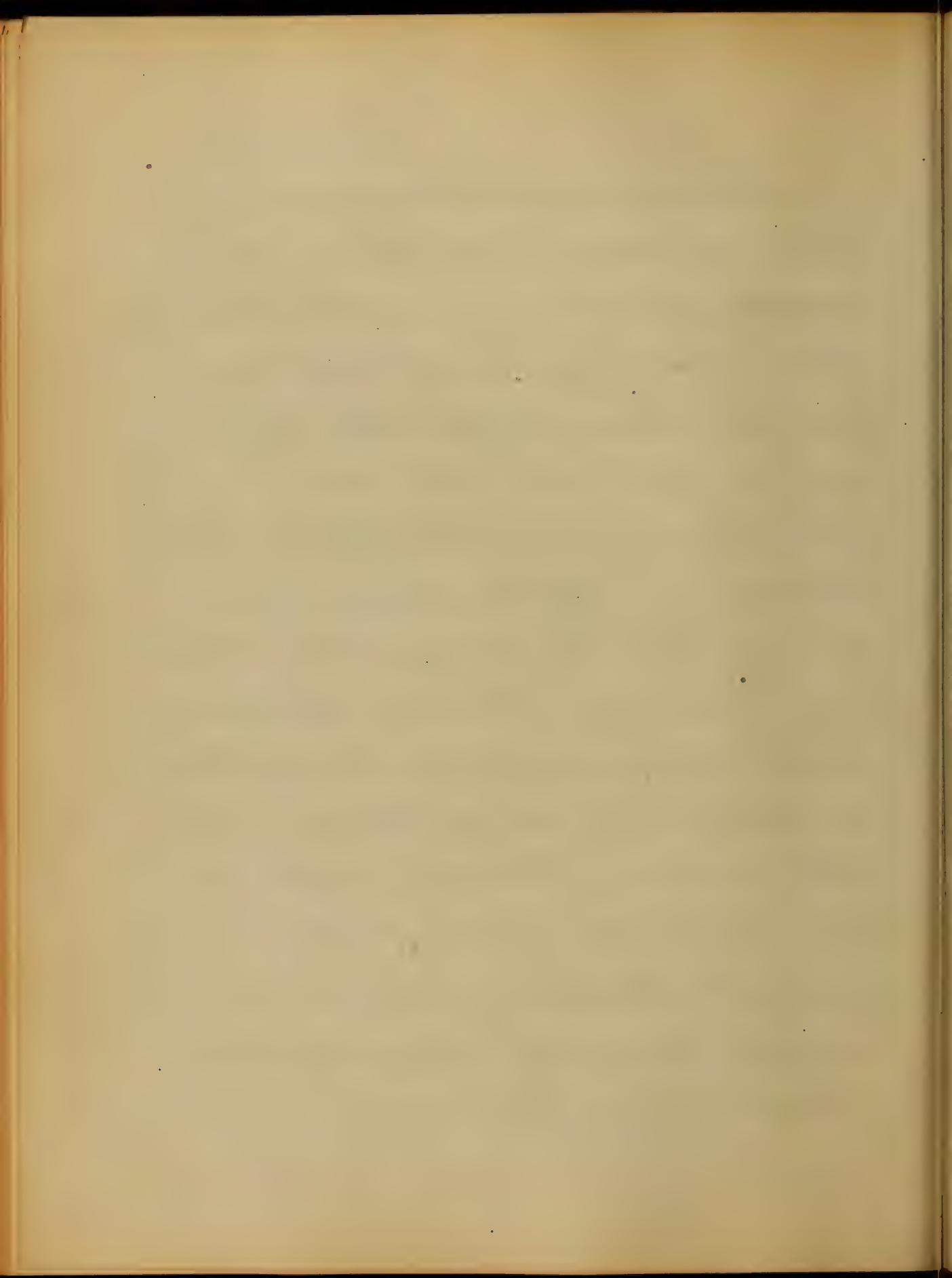


convexity of its curve grooved,
was passed into the Trachea
through the depression just be-
neath the Cricoid cartilage,
the point being directed upwards.
The integument in the median
line was then incised for
the distance of one half inch
beneath the point of the previous
puncture. Not waiting for
the bleeding to cease, the point
of the scalpel was passed
along the groove of the Troacu-
lum into the Trachea and
the latter cut through to the
extent of the previous incision.
Efforts of severe coughing immediat-



-ly followed with the violent escape of blood and wind through the mouth and opening into the Trachea and a large grain of corn was ejected through the latter five or six feet into the air,

Choking was avoided by separating the margins of the incision and constantly wiping away the blood with a sponge. He was removed in the reclining posture to his bed a towel being merely thrown over the aperture, The boy inspired through his nostrils, which were dilated at each inspiration, and expired through the opening, The operation was Chassagnac's.



23
Upon examining the grain of corn
it was found softened and enlarged,
from imbibition of the fluids
of the air passages.

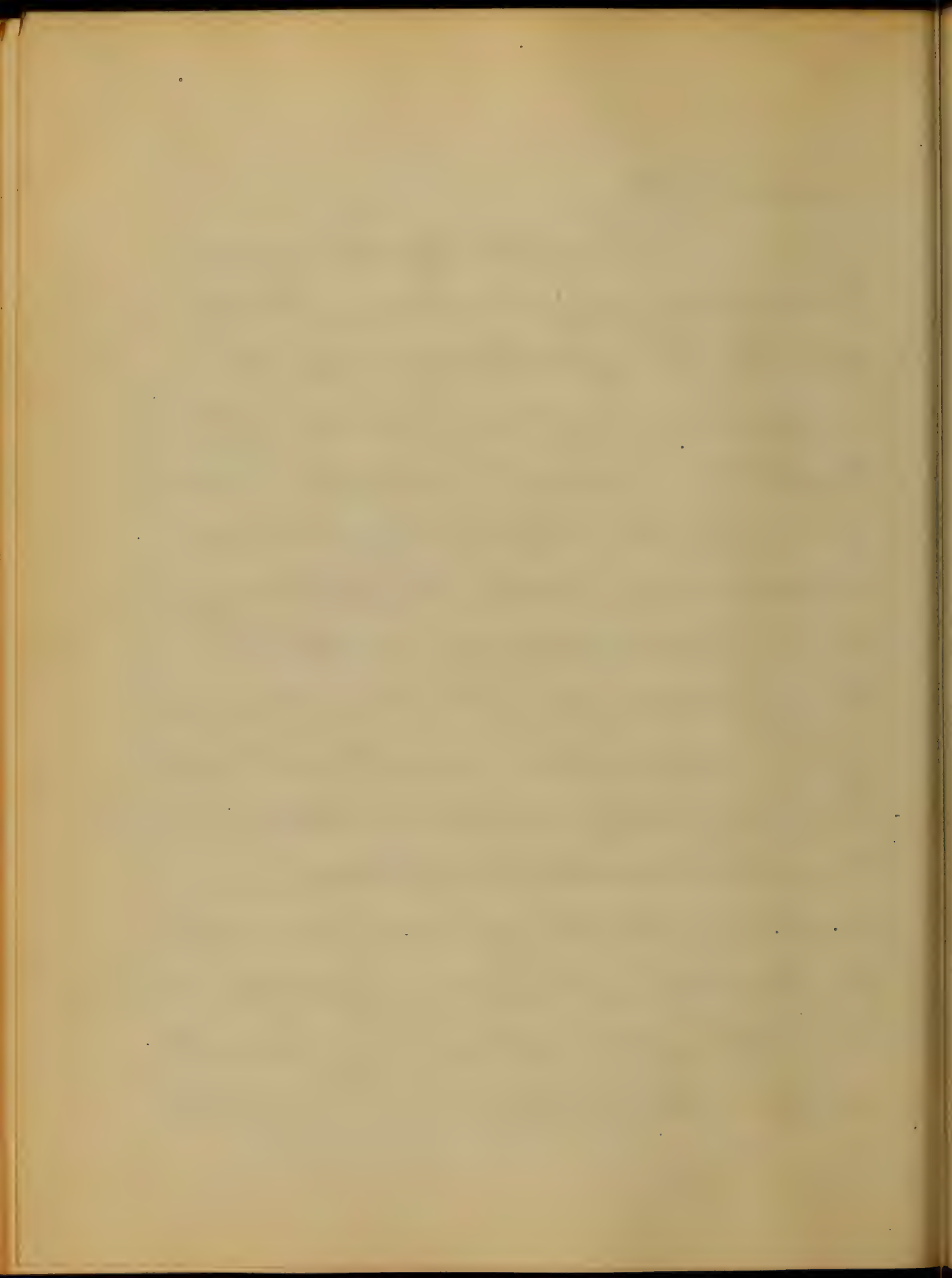
June 4th 9 A. M.

The patient was
doing very well; he breathed more
easily through the mouth and nostrils,
the aperture was closed and the
edges adherent, he had several
times during the night the paroxys-
ms of hissing due to the forcible
escape of air through the opening,
but nevertheless rested well. He
ate a hearty breakfast and did
not complain of feeling unwell from
the operation.

June 4th 12 M.

Found the boy sitting at in bed and enjoying his dinner, Prof Johnston brought the edges of the integument together with a silk ligature; (he would have used a suture pin, but the boy was to be removed to his home the following day,) he directed a piece of lint to be placed over the wound secured by a bandage, passed around the neck and the ligature to be removed in a couple of days, this to complete the treatment.

June 5th The patient was removed from the Hospital on the morning of the above date, doing very well in every respect and in a favorable condition to a speedy recovery.



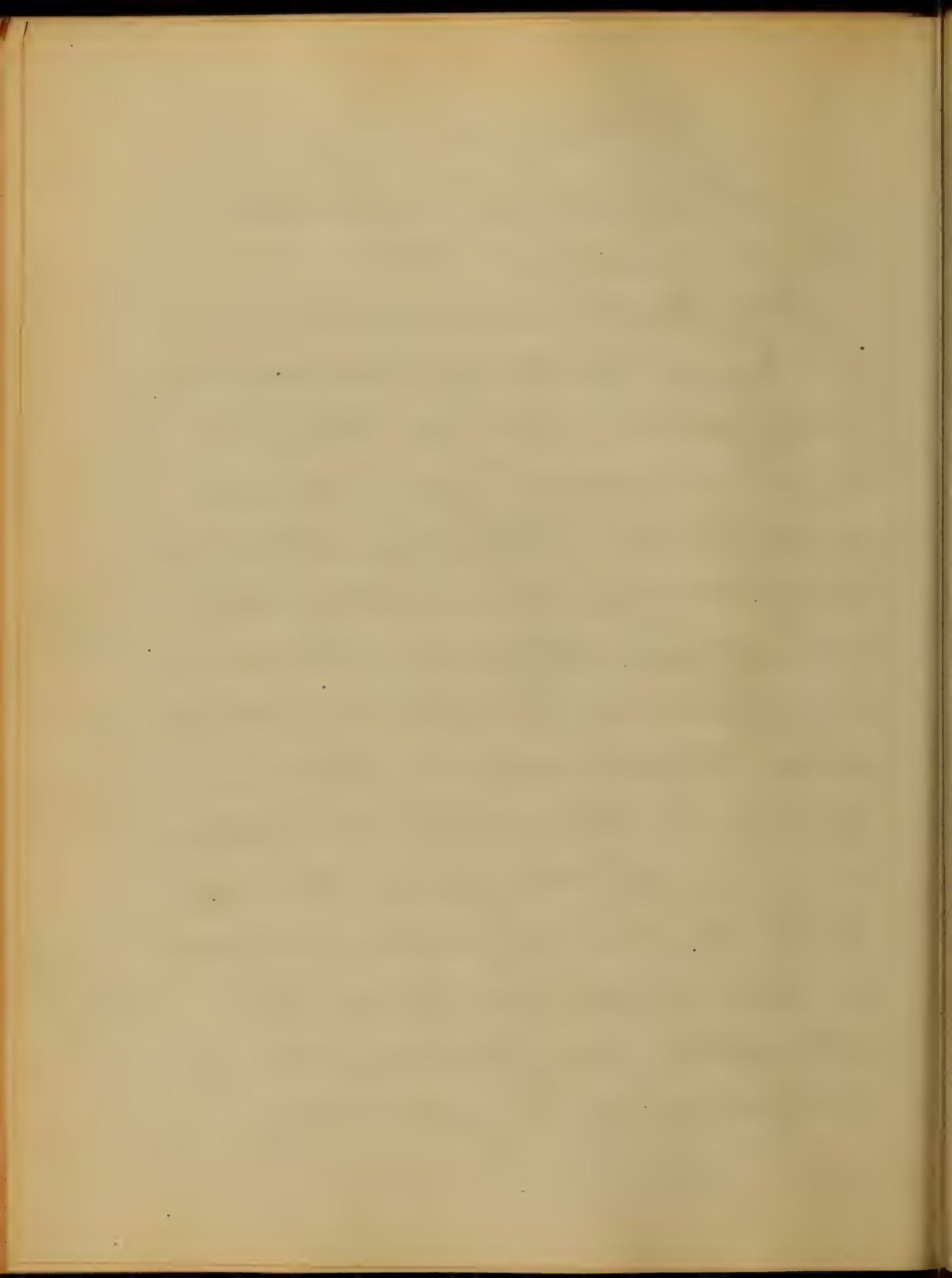
Case V

Strangulated Hernia.

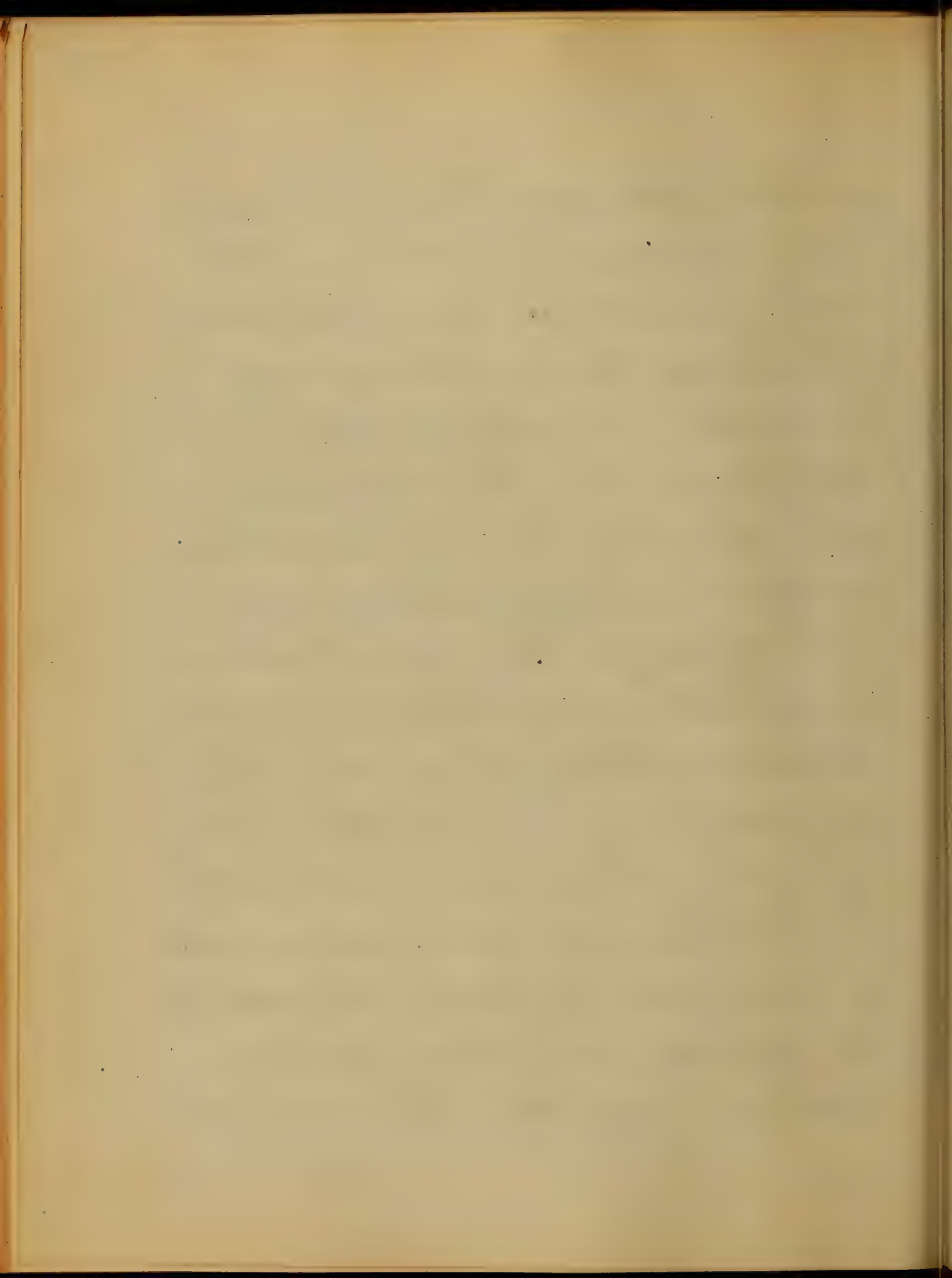
Oct 11th Sunday. 2 P.M.

Dr. Butler was called to see a Jewish child aged two and a half years, who had oblique Inguinal Hernia since shortly after birth. It had several times come down and been replaced by their family physician. It was on the right side and had been down since Friday afternoon, continued efforts had been made (the patient being under chloroform) the day before by two physicians, to reduce it, but they were ineffectual.

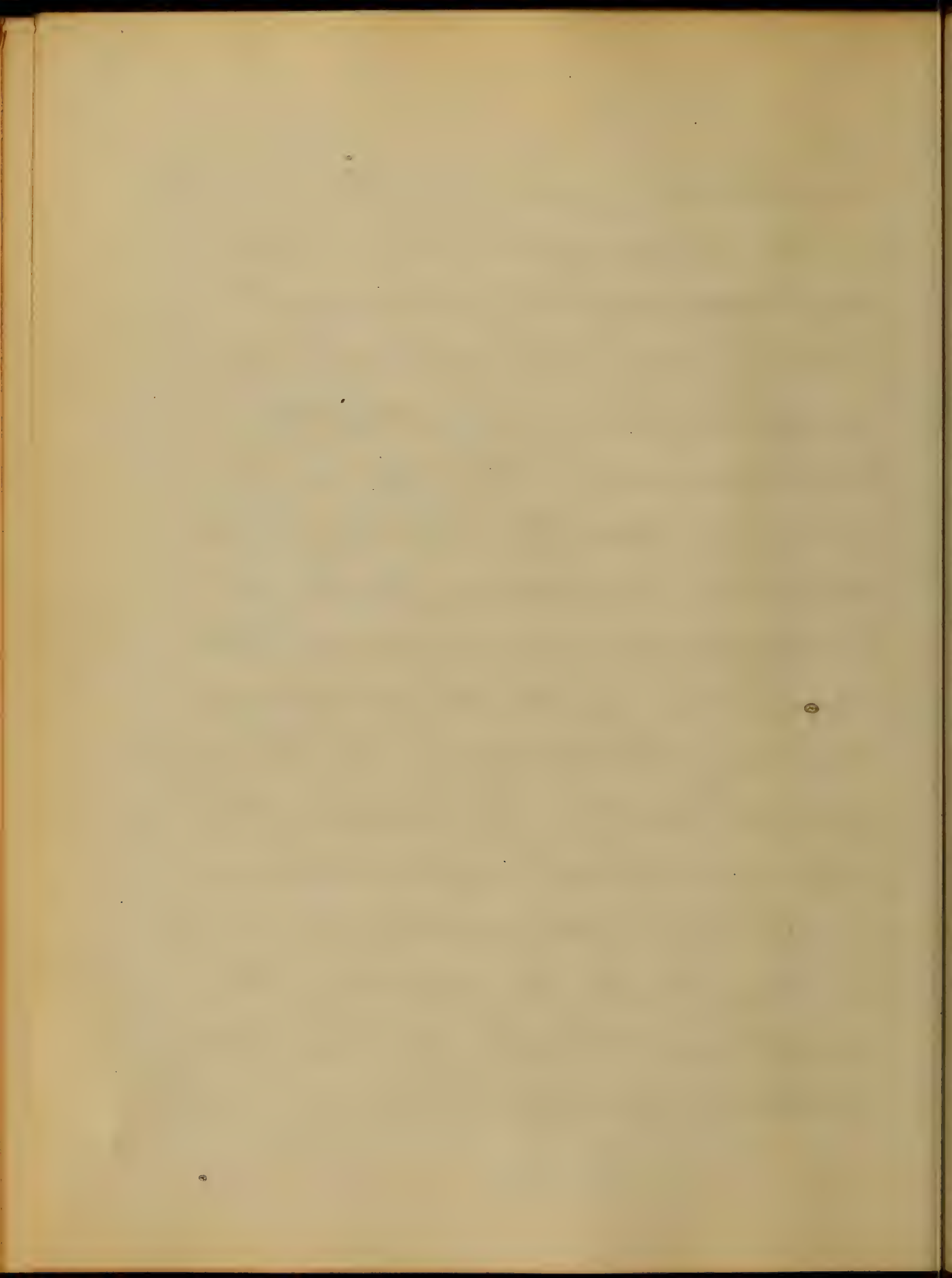
The child was found quiet, and not seeming to suffer any.



It had just eaten dinner. The abdomen was hard and swollen and the sac seemed to contain hard feces. The patient being chloroformed, Dr. Butler attempted to reduce it, but failed. He then determined upon operating, and proceeded as follows: An incision one and a half inches long was first made with a bistury, obliquely over the middle of the tumor, then the first covering beneath, the superficial fascia and with it the Inter-columnar were raised with a small pair of forceps and lifted, the director was then passed first up, and then down, and then

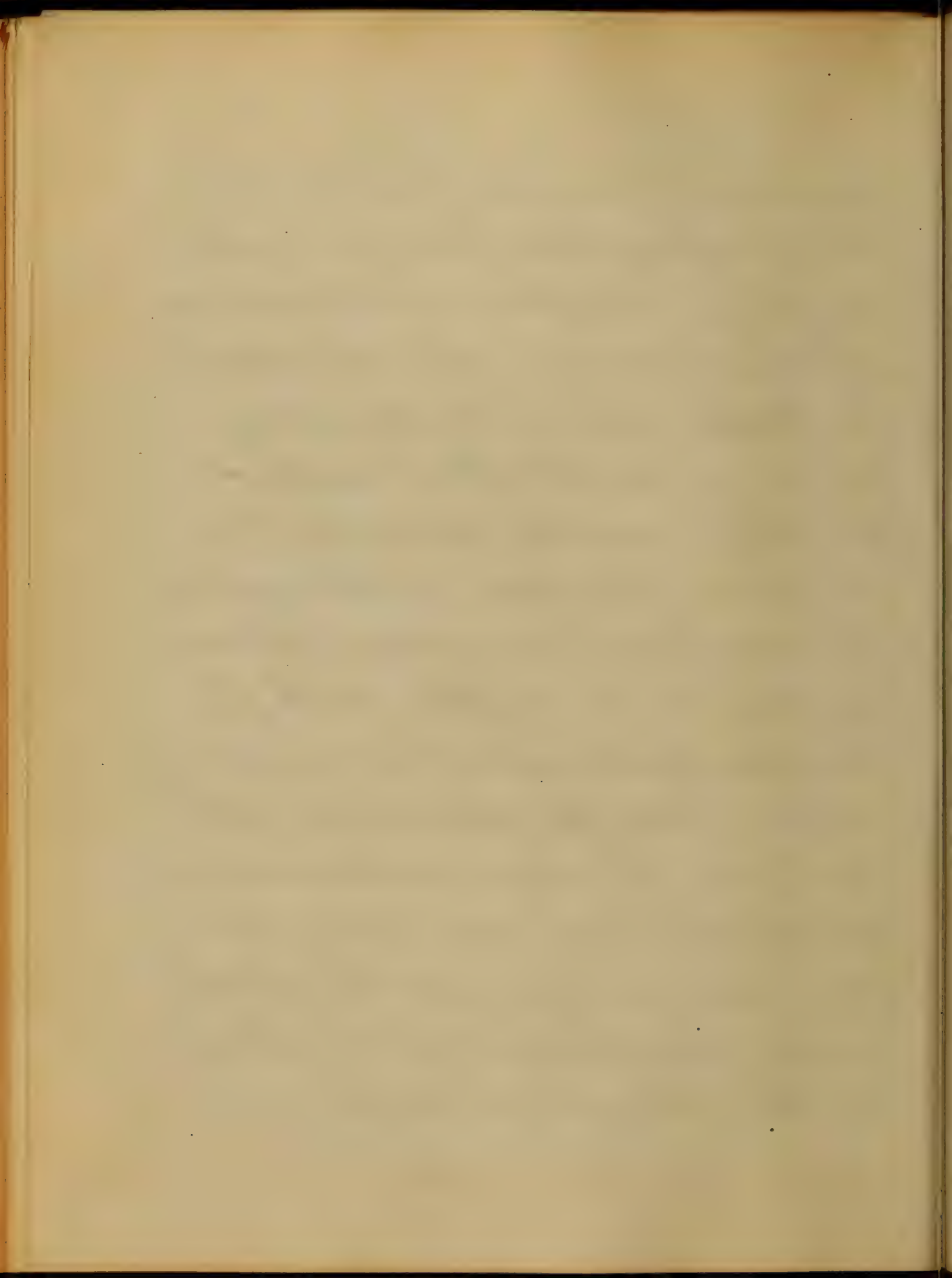


membranes divided to the extent
 of the previous incision. The
 next membrane the Cremaster
 fascia, and then next the Trans-
 -versalis fascia were treated in
 like manner. He then reached
 a bulging sac, fluctuating and
 evidently containing fluid, it
 looked dark, and presented the
 appearance of the intestine con-
 -mining to ulcerate, Dr Butler
 was in doubt - but passing his
 finger upwards he felt above and
 inside of this sac a little tumor which
 he knew to be the intestine, he
 nipped and slit this sac in like
 manner with the others and a



quantity of Serum gushed out. Then his finger detected a constricting band of fibres at the external abdominal ring. He next passed Sir Astley Cooper's knife along the finger on its flat surface, but was unable to divide the stricture. He said he always tried this method in every case but was unable to do anything with it.

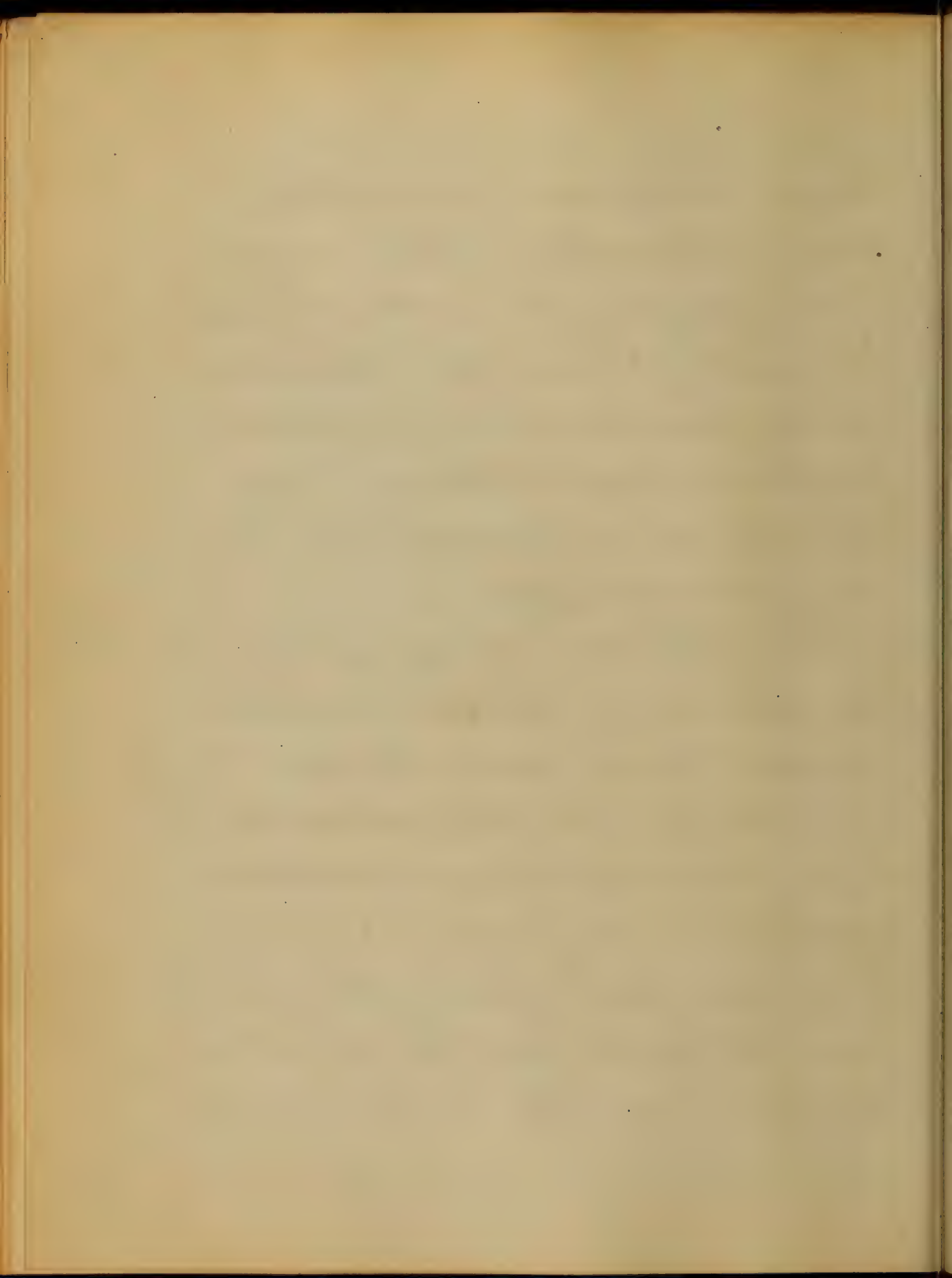
He then took a plain bistoury passing it flat along the index finger of his left hand, the edge directed outwards then turning it so as to bring the edge directly upwards; he slit the constricting fibres, and the intestine was then returned with perfect ease.



Three interrupted silk sutures were passed through the margins of the integument and the incision drawn together, a wet compress which was ordered to be kept wet constantly, and it secured by a bandage passed around the hips, were the dressings.

Dr Opium Camph. and quiet were ordered and if Peritonitis supervened Calomel and Opium.

Dr Butler had never operated before, or heard of an operation on a child so young. A truss had been procured for this child but it could not be worn, on account of its producing ac



much pain.

From 11th to 15th.

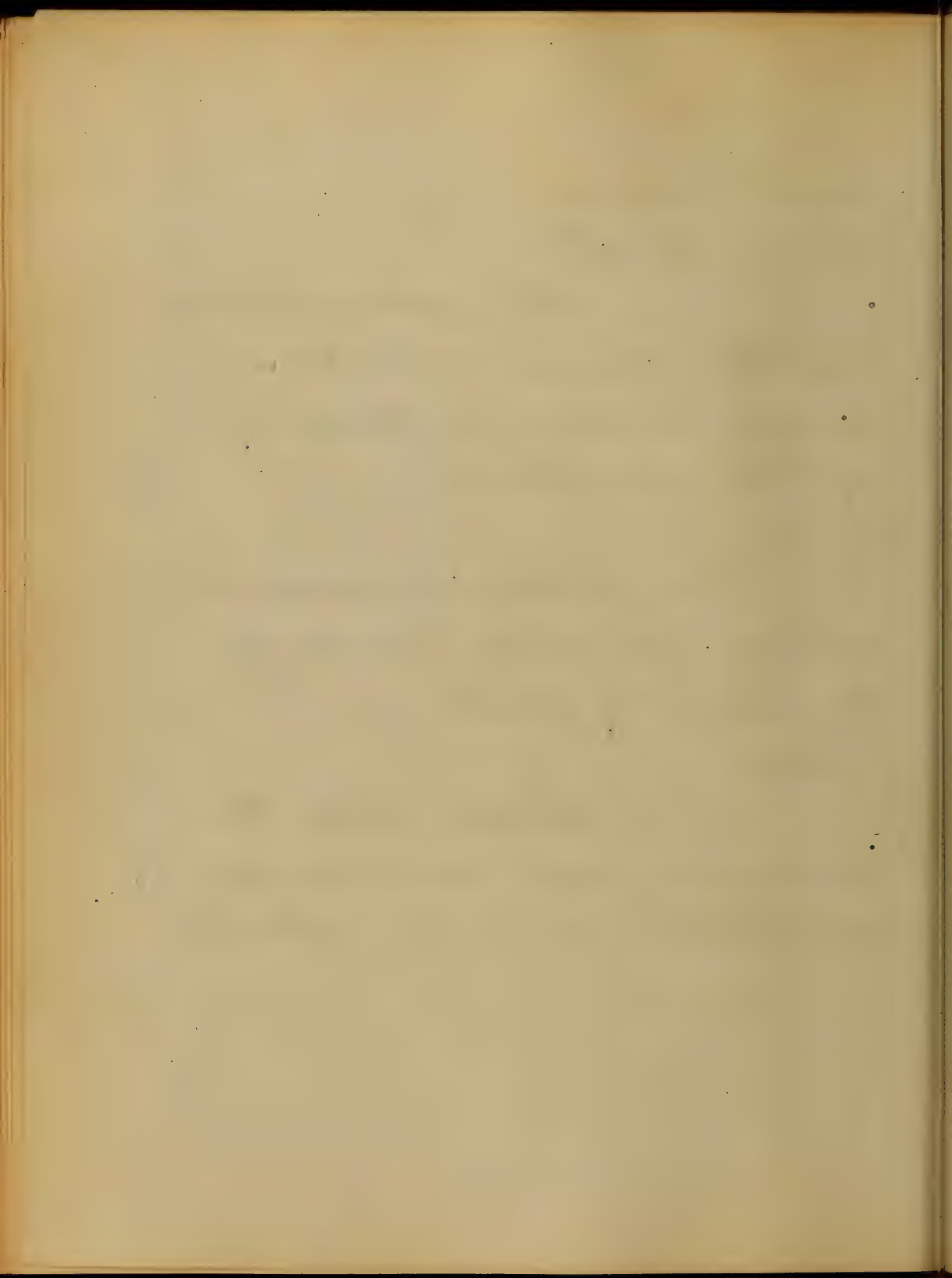
The patient improved rapidly, there seemed to be no pain or soreness at the seat of the operation.

Oct 17.

Dr Butler removed the sutures, the child was doing remarkably well.

Oct 19.

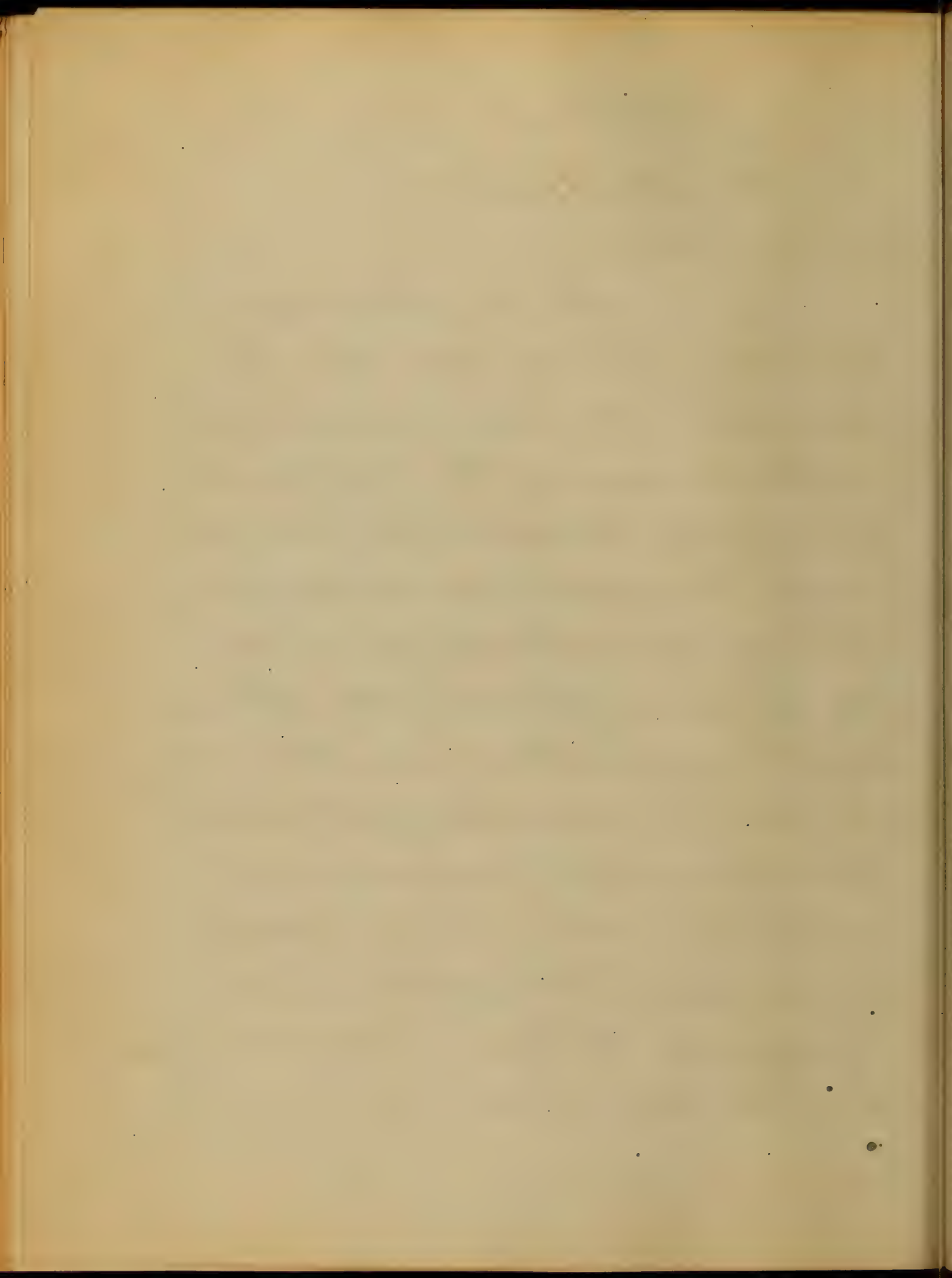
Dr Butler said the child was well and needed no further medical attention.



Case VI
Epithelioma.

Oct 30th 1867.

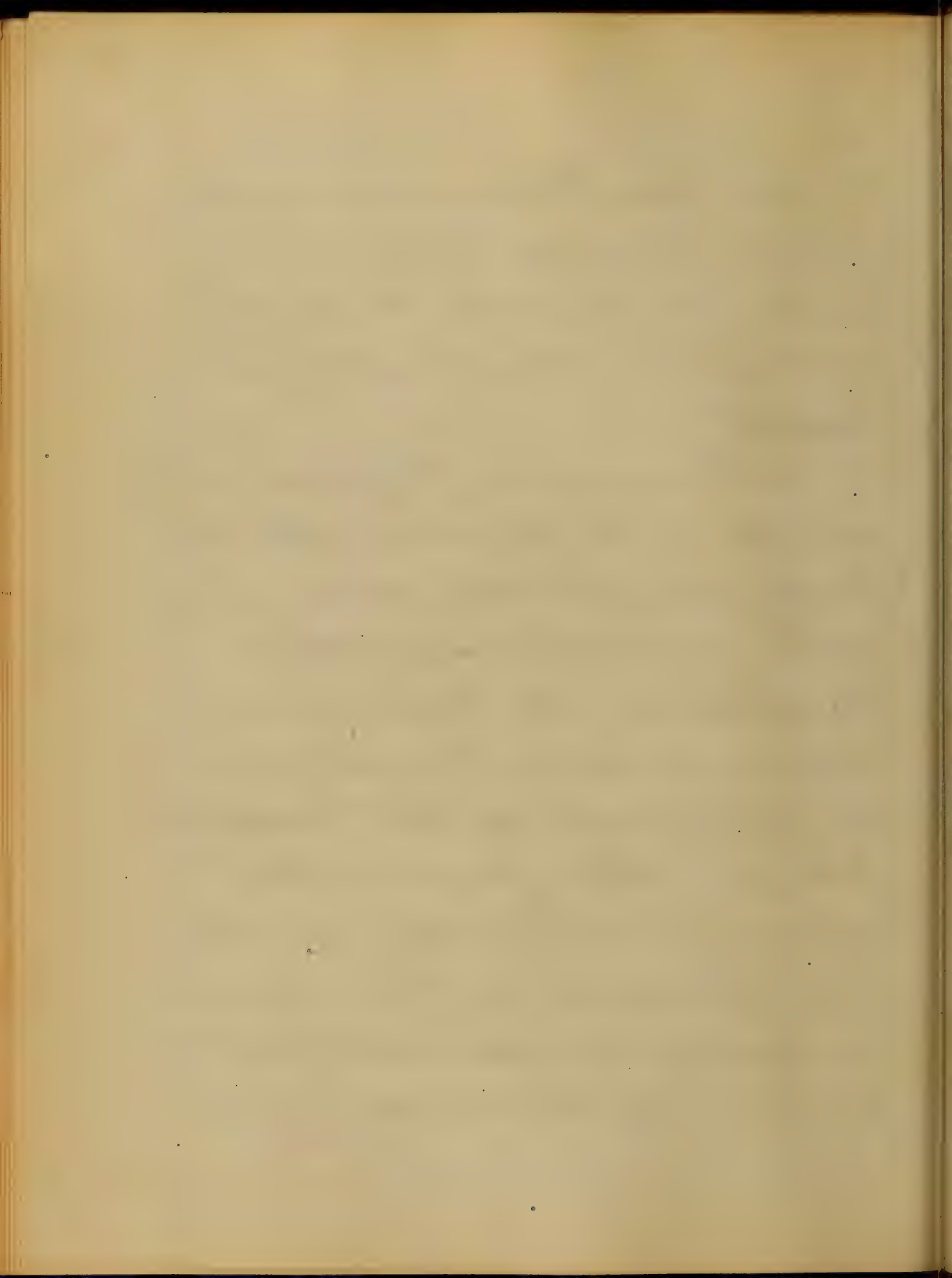
Mr. P. (white) aged
sixty two was admitted into the
Hospital. He had an oval ulcer,
on the dorsum of the left hand
with hard elevated borders and
about two inches in diameter.
There was a slight enlargement of
the Sigmoid gland at the elbow,
due to sympathetic irritation
The patient was brought before
the class on the morning of
Nov 2nd when Prof Smith
diagnosed it "Epithelioma", and
proceeded to treat it accordingly.
He brushed it over with a stick



of Caustic Potassa, and directed it to be dressed with Turner's Cerate, also that the Caustic be applied in a course of days.

Nov 16th

The resident physician had reapplied the Caustic, the ulcer presented a healthy appearance with granulations over the surface, the border was indurated and inflamed from the application of the Caustic Potassa. The gland at the elbow was smaller than at the last examination, the veins were somewhat injected on the left forearm. He complained of a

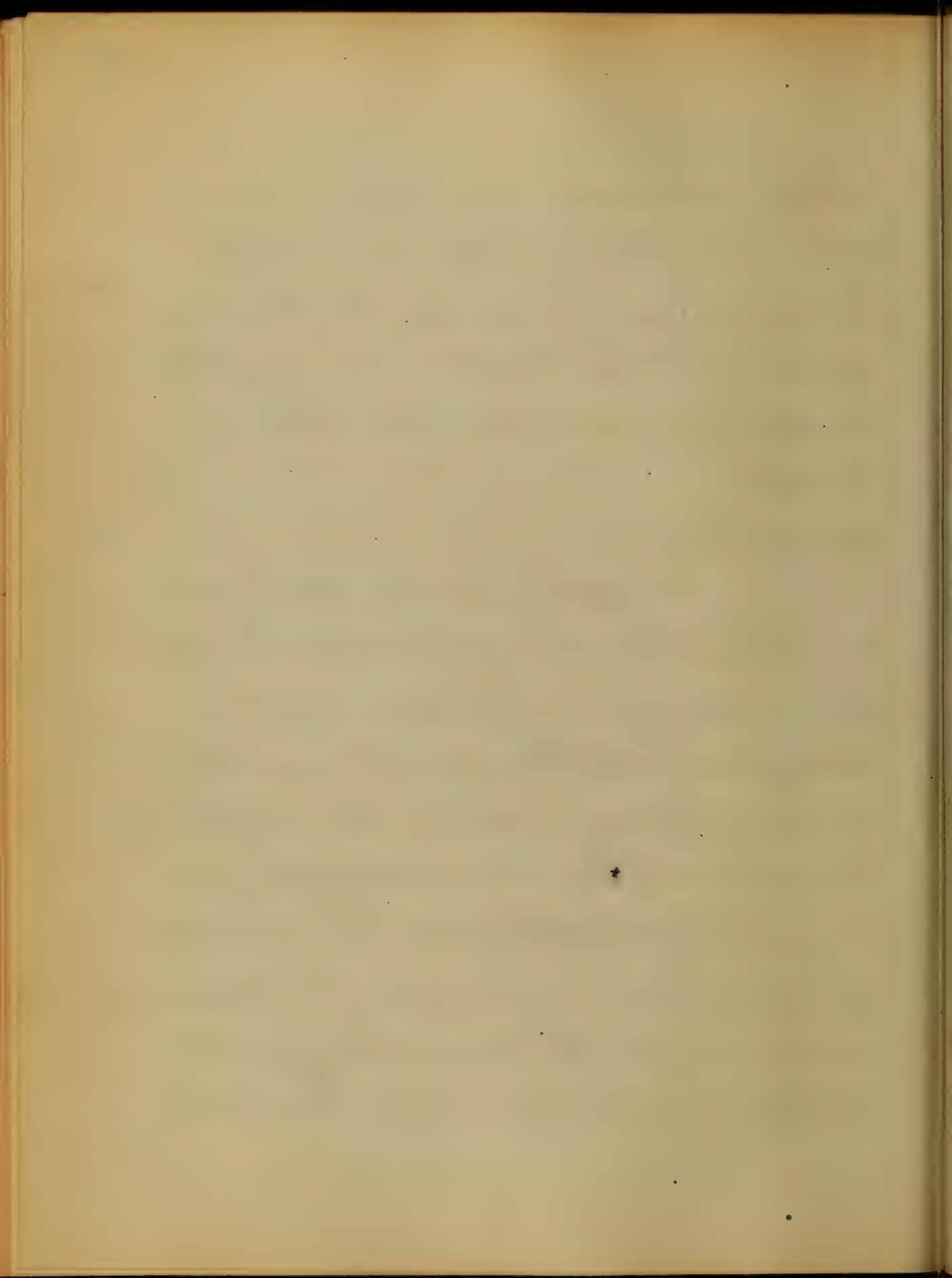


sharp, shooting, & stinging pain over the whole dorsum of the hand, extending partly up the forearm. There had been no other dressing applied but Turner's Cerate.

Nov 24.th

The patient's hand looked much improved there was healthy pus and granulations on the surface of the ulcer and there was no appearance of the original disease; He had a slight pain about the middle of the knuckle.

Prof Smith thought the disease arrested for the time being, and recommended highly the appli-



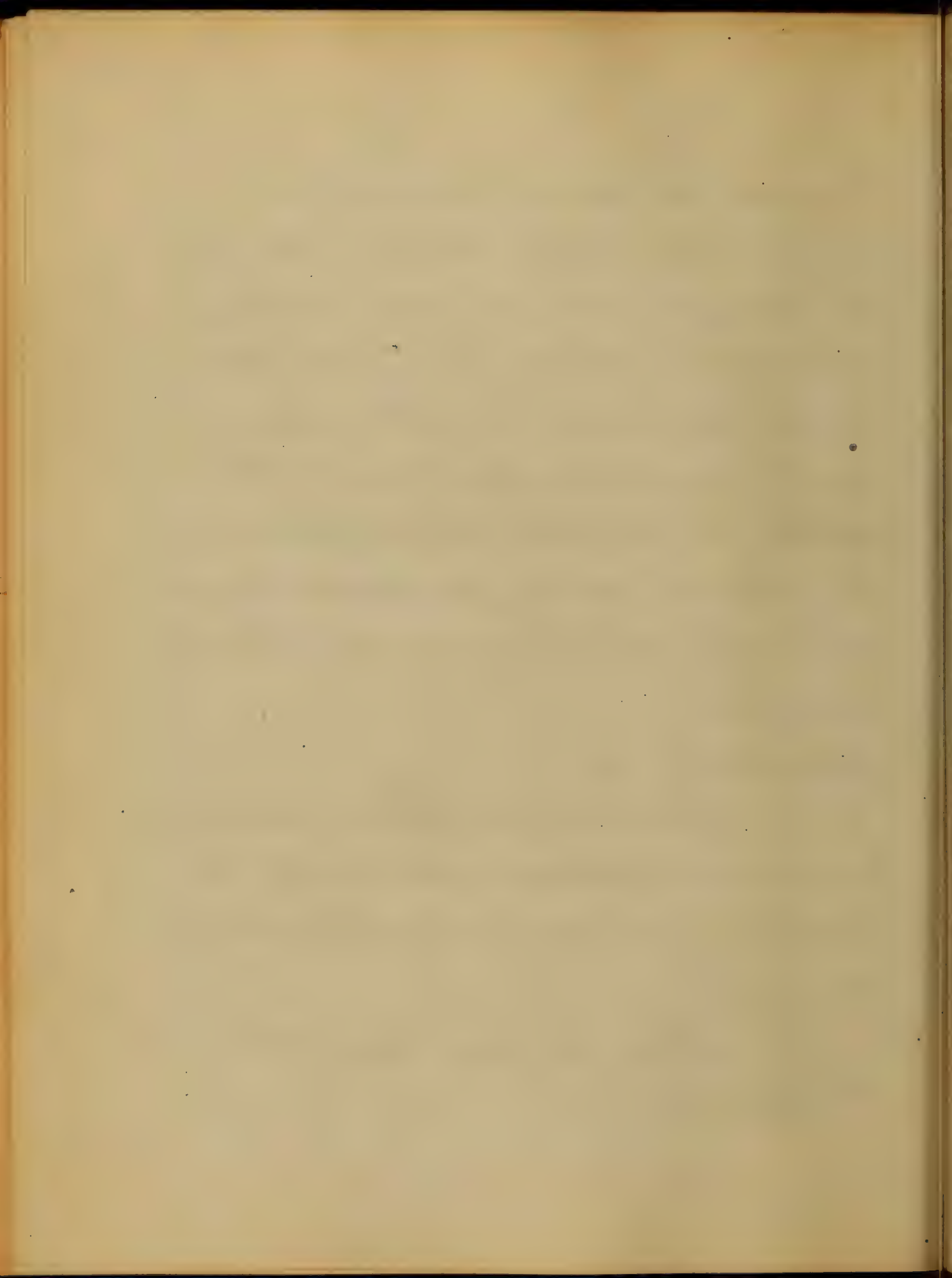
-Cation in such cases, of two parts of Caustic Potassa to one of Opium. A piece of adhesive plaster with a hole in it somewhat smaller than the ulcer being applied first over the latter, to prevent the diffusion of the Caustic preparation amongst the surrounding healthy tissues.

Nov 29th

The patient's hand looked very well and seemed as if it would be healed in a few days

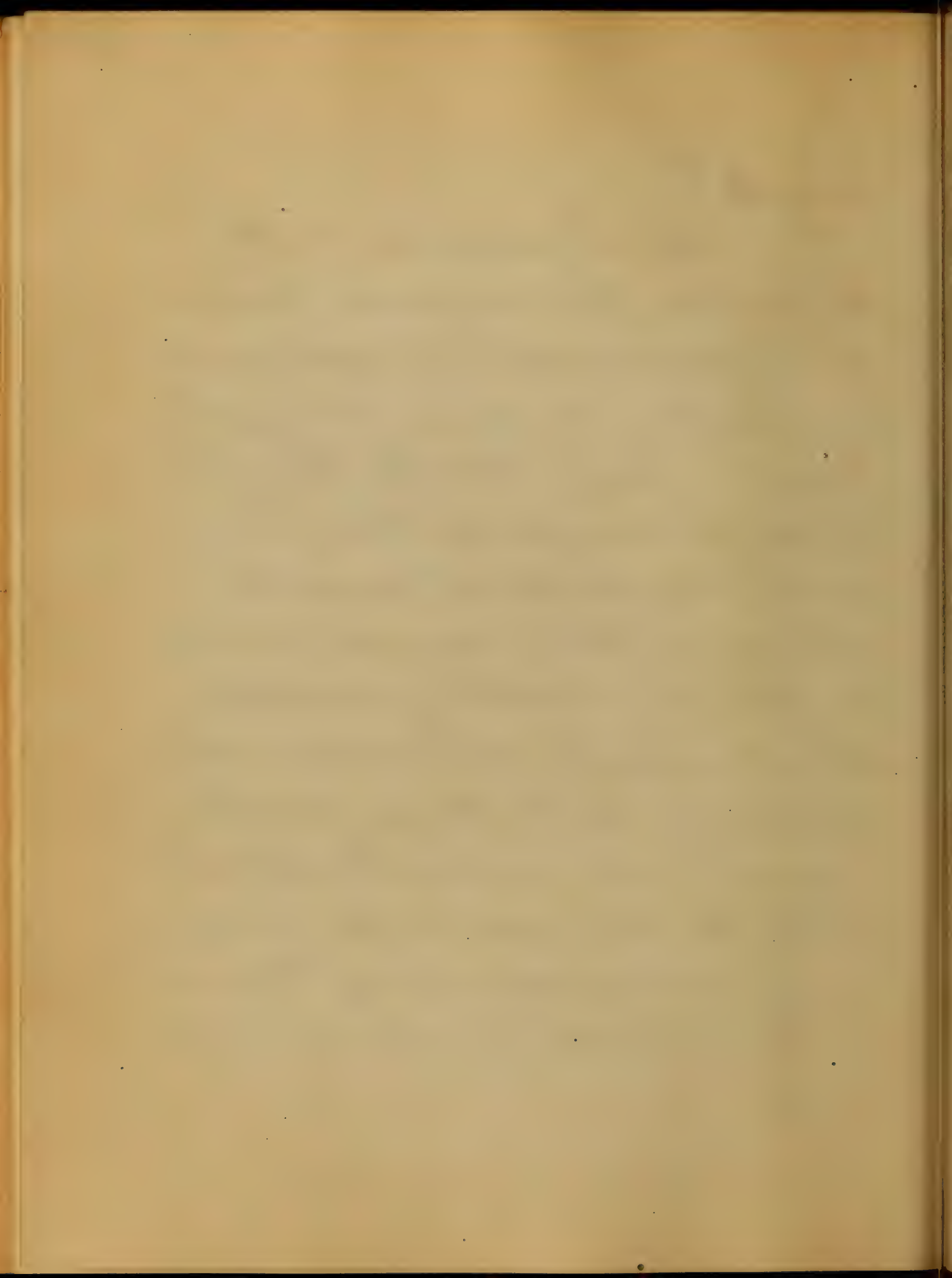
Nov 30th

The patient left the Hospital.



Jan 8th

M. J. returned to the Hospital his original disease has again made its appearance in the old cicatrix worse than before. Prof Smith thought that excision of the ulcer was ^{the} only hope of complete recovery. He excised it with a Scalpel, cutting outside the diseased structures and exposing the tendons, no chloroform was used, he ordered it to be dressed with lint, and watery solution of Opium to be applied to allay pain



Jan^y 11th

Surfaces and edges of the
ulcers looked perfectly healthy, the
gland at the elbow was reduced
in size.

Jan^y 18th

The Lund presented a
favorable appearance, he
sleight pain in the fore arm
he stated that "his general health
was not so good till the operation.
He was using Unguentum of

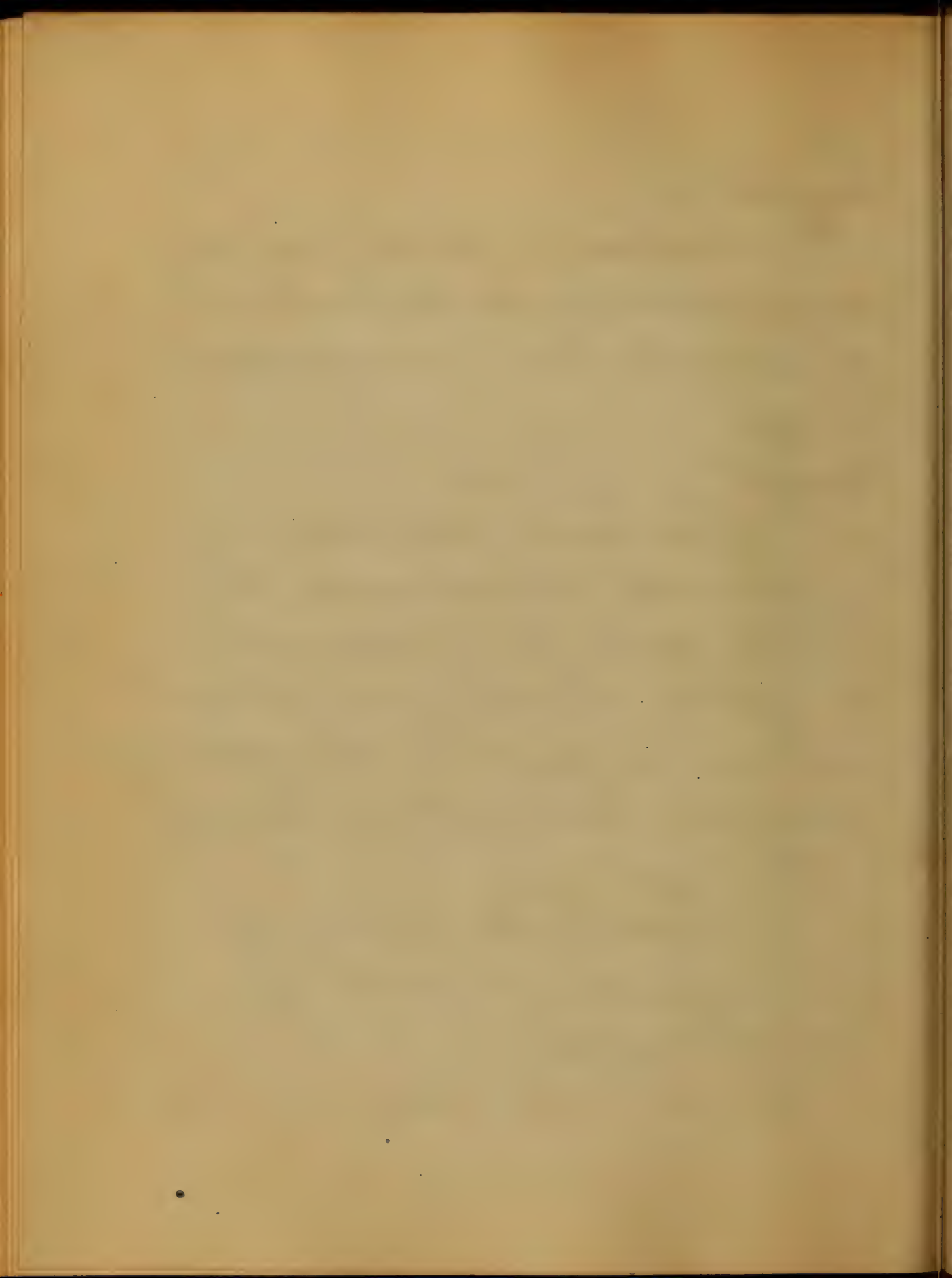
R^t

Proto Chlor Hydr^g ℥i

Turners Cerate ℥i

M. fiat ungl.

Sig. To be applied twice a day



July 24th

The ulcer did not look so well, a little dil. nitric acid was applied to repel exuberant granulations, the latter had been bleeding and discolored the surface. the sigmoid gland was not increased in size; he was ordered a tonic pill consisting of

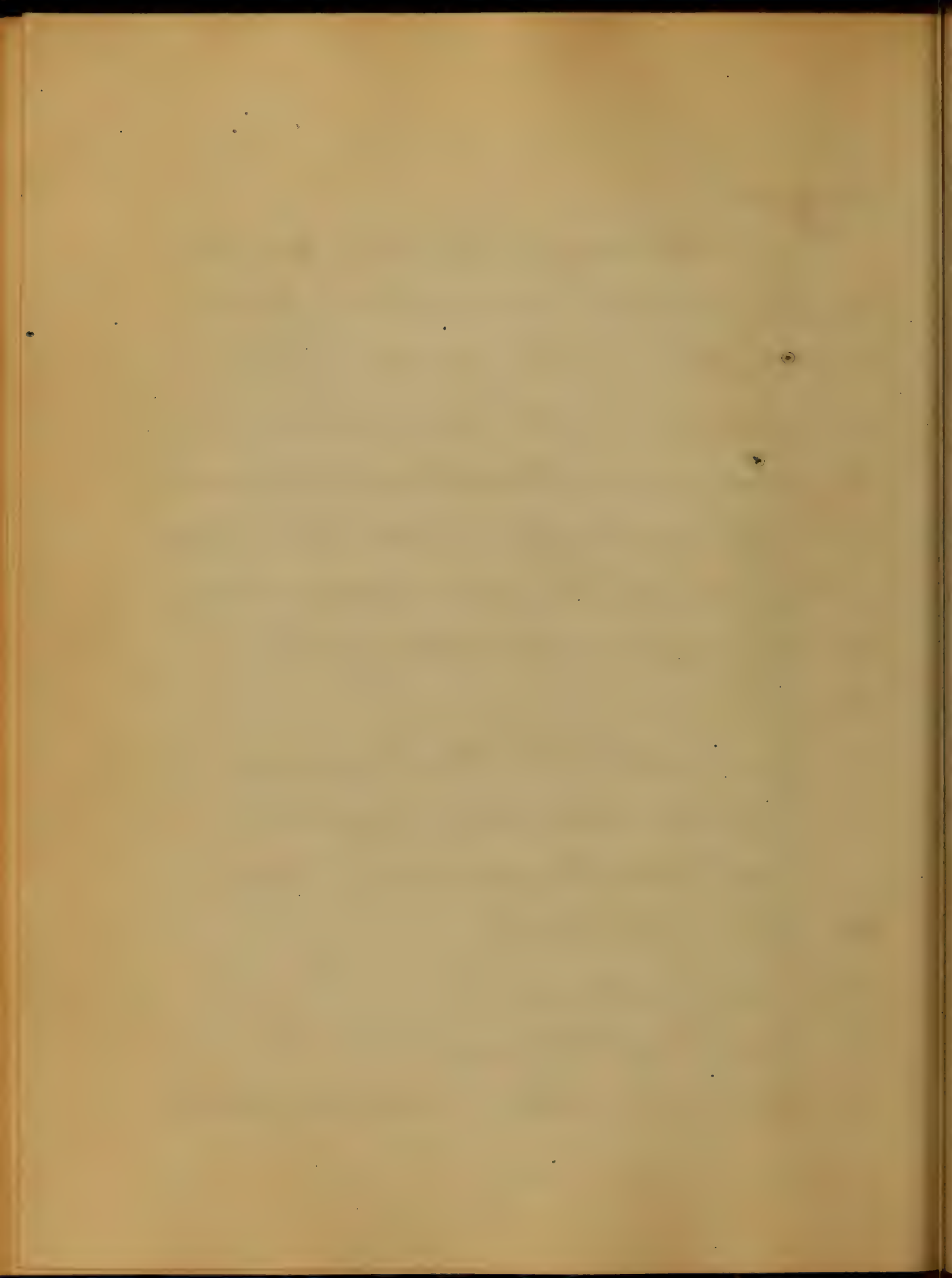
Rx

- Proto Carb Ferrig. grs xx.
- Musc. Yonica - grs x.
- Sulph Quinia - grs xx.

M. fiat. pill no x.

Sig. One pill ten die.

The Ungt. of Calomel and Turner's Brate, was ordered to be stopped



and in its place, the following
was ordered.

R_x.

Acid Carbol gas V.

Turners Cerate ℥j.

M. Sig. to be applied twice a day.

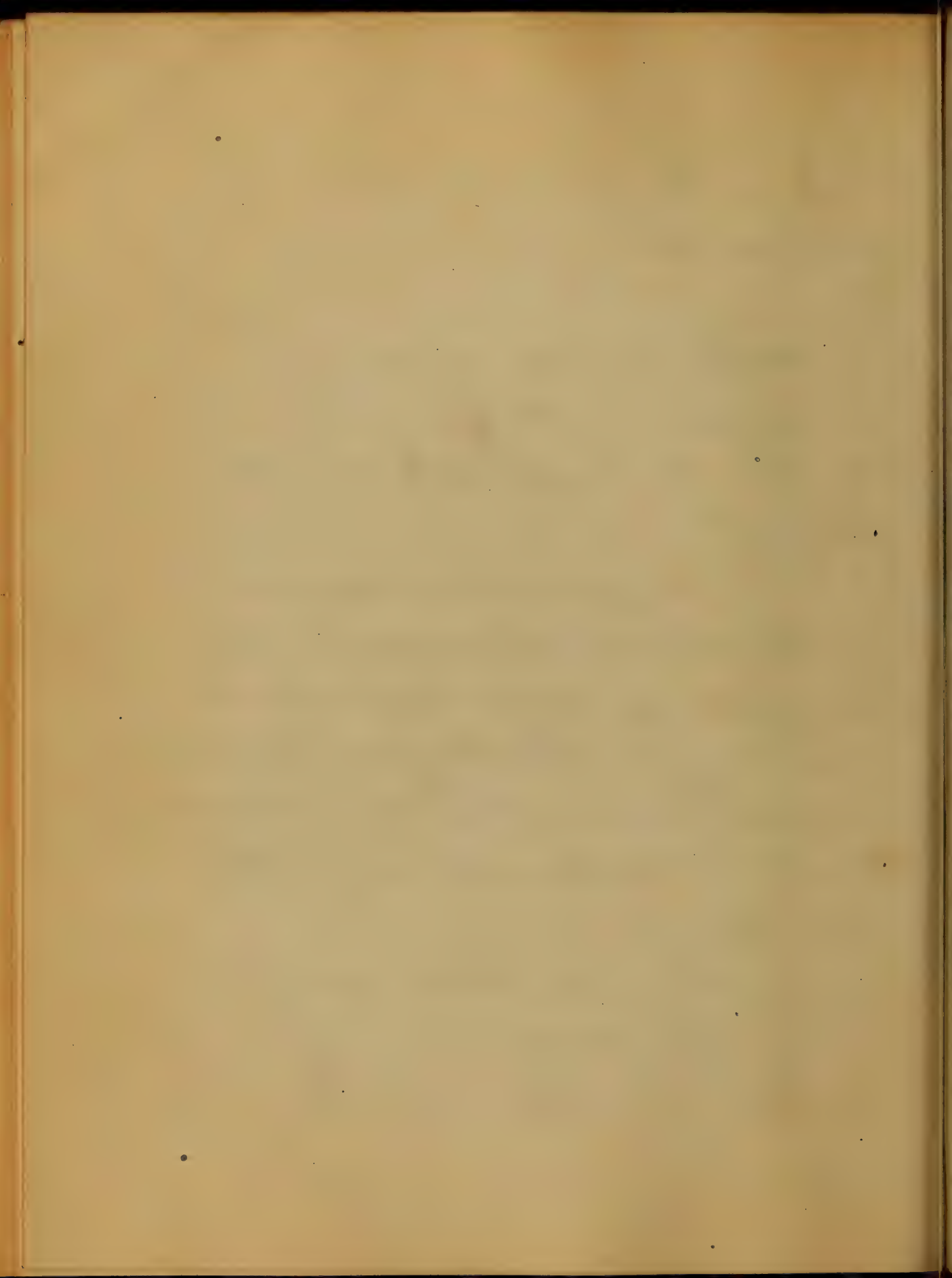
Feb. 5th

The granulations were
unhealthy and abundant, also
very spongy, and required an
astringent. The Ungt of Carbolic
Acid, ^{and} Turners Cerate was order-
-ed to be discontinued and
to use,

R_x - Argenti-Nitras. gas iij

Aqua Distil. ℥j

M. Sig. To be applied bis die.

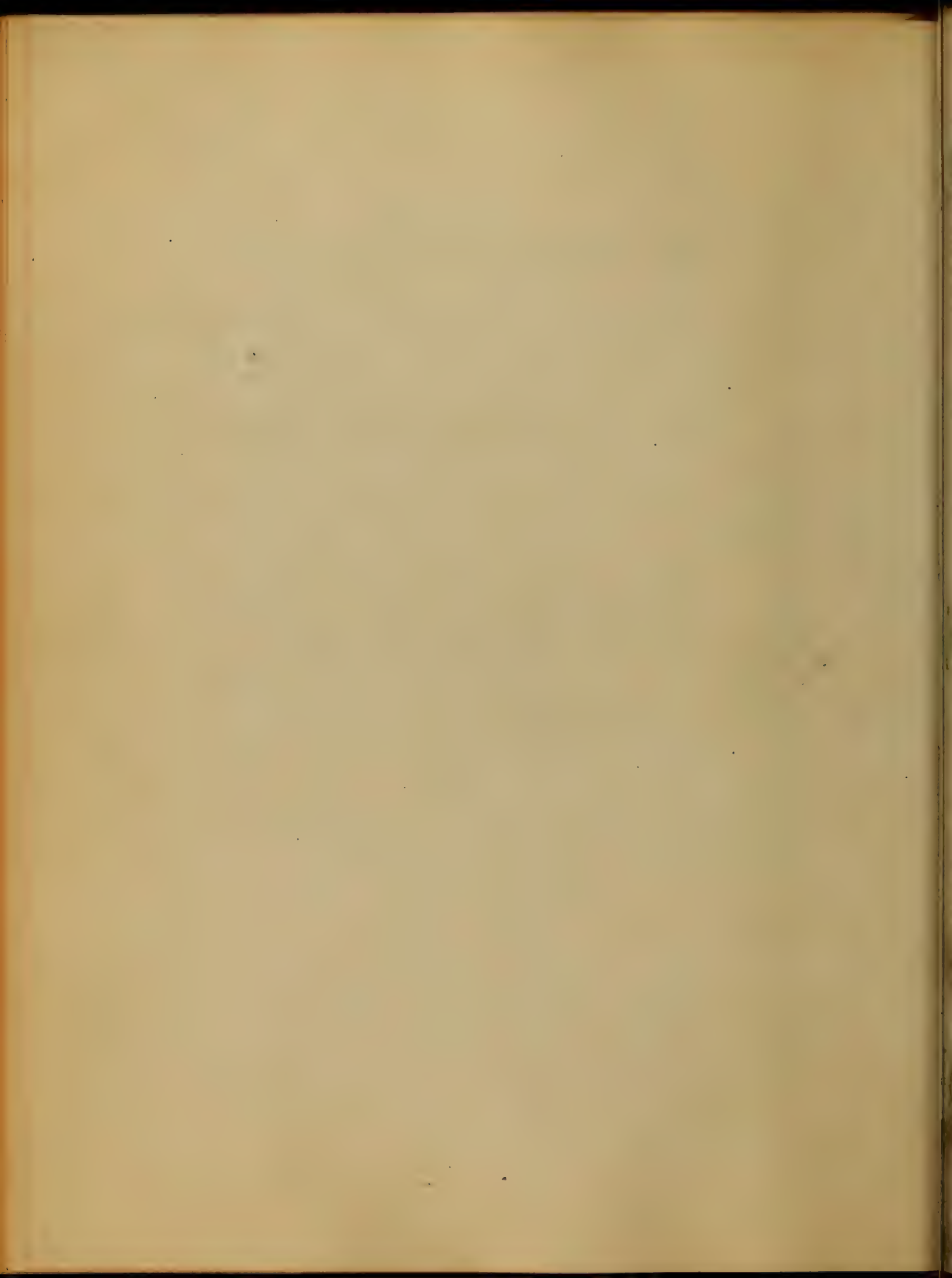


Feb 12th

The patient's hand very much improved and the ulcer nearly healed, all washes &c were ordered to be stopped, and dressed with Cerati simplex.

Feb 18th

The patient left the Hospital, his hand being entirely well.



AN
Inaugural Dissertation

ON

Syphilis
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

George Mott Loric

Front Royal Virginia

• Session of 1858-59. January 1859.

10

THE UNIVERSITY OF CHICAGO

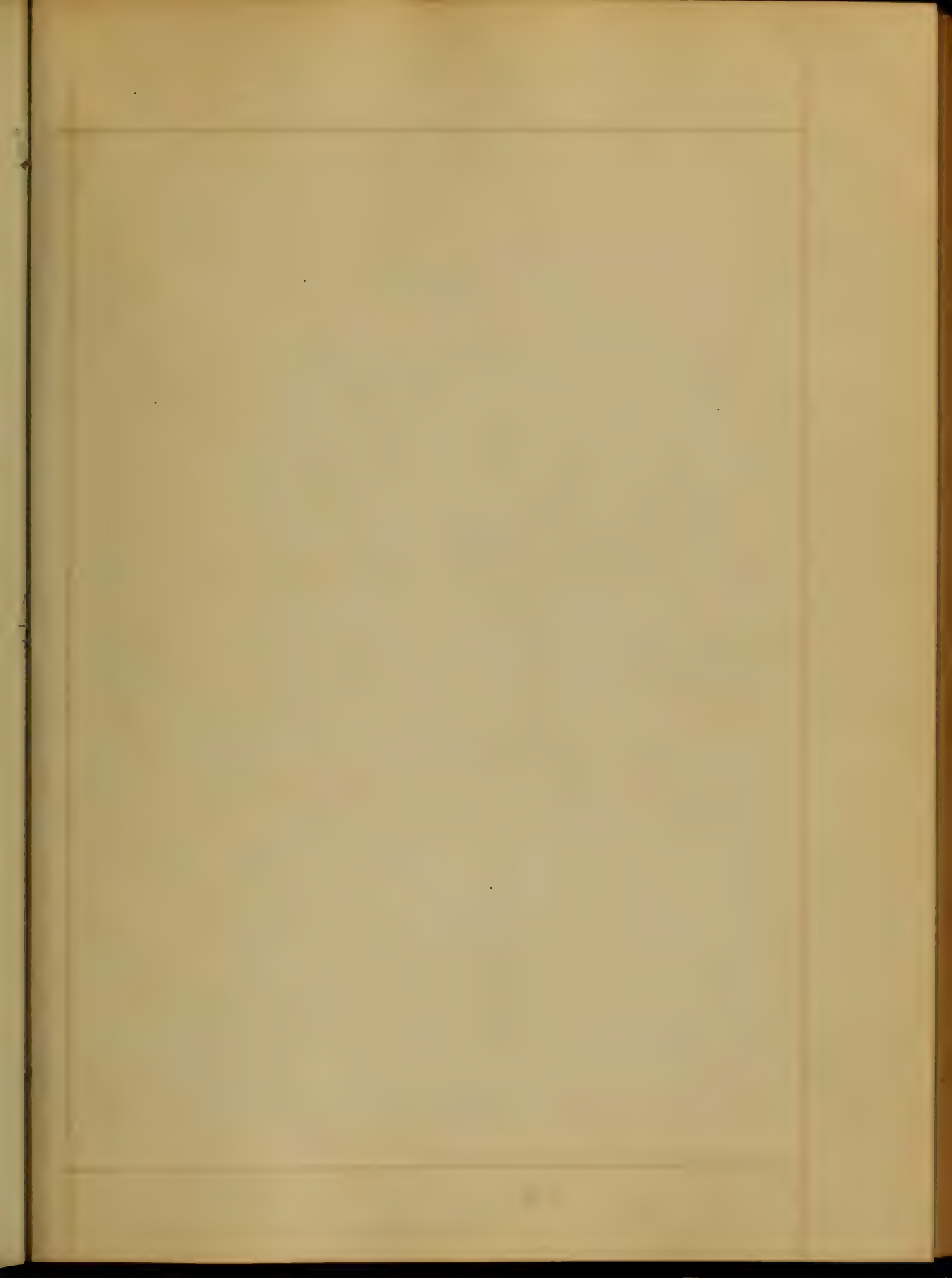
PHILOSOPHY DEPARTMENT

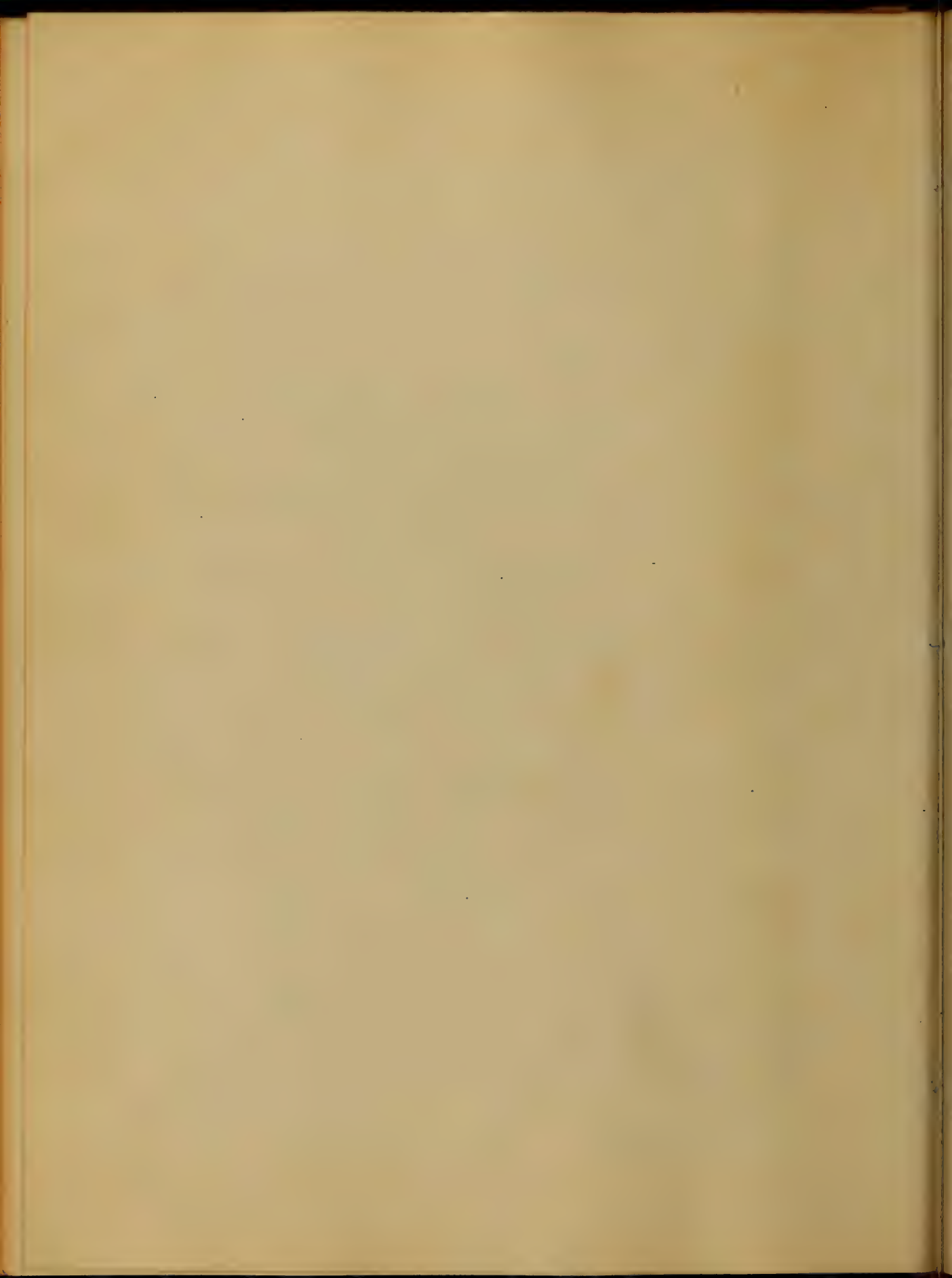
PHILOSOPHY 101

LECTURE NOTES

WINTER 1964

11

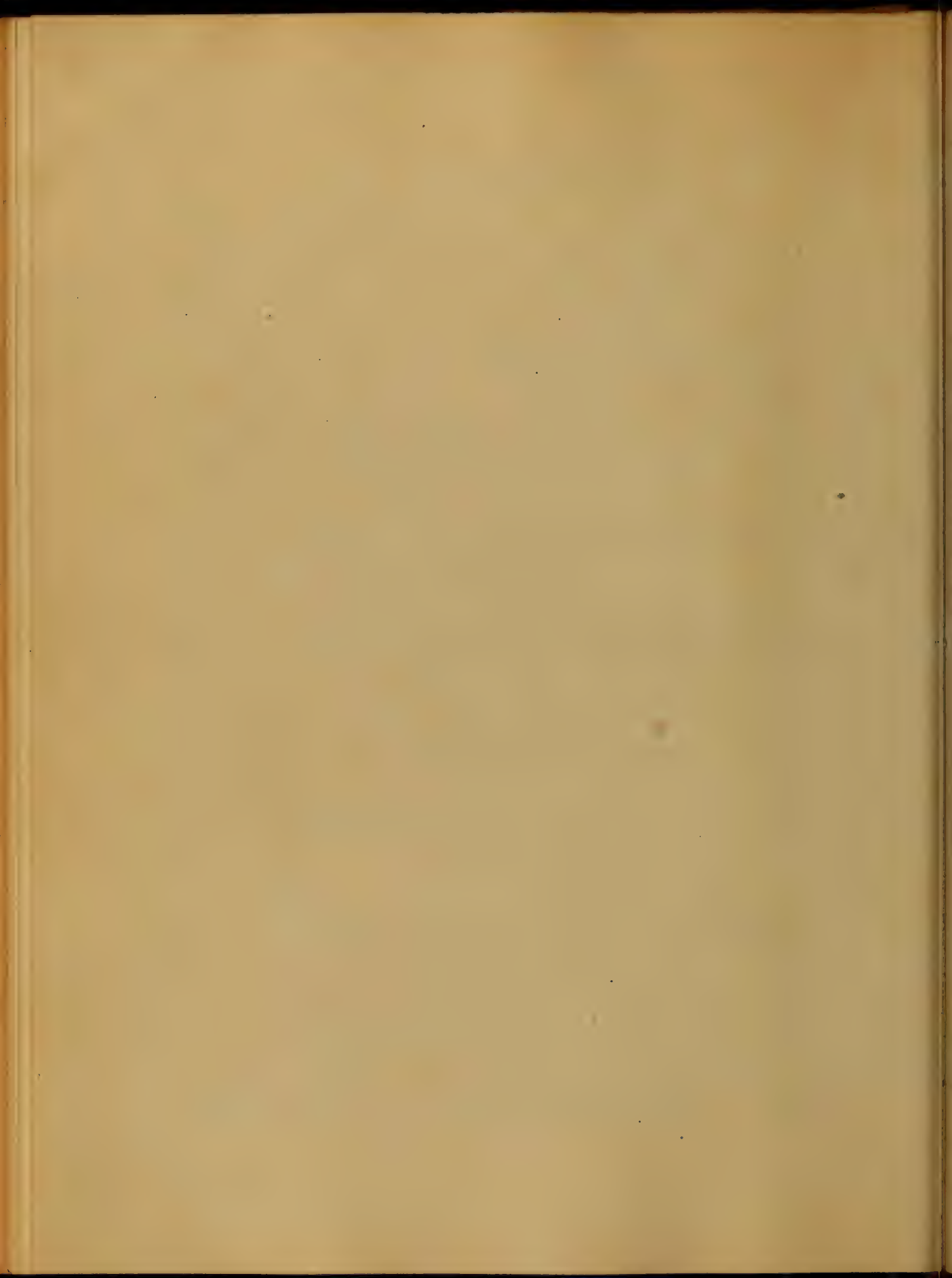




Syphilis.

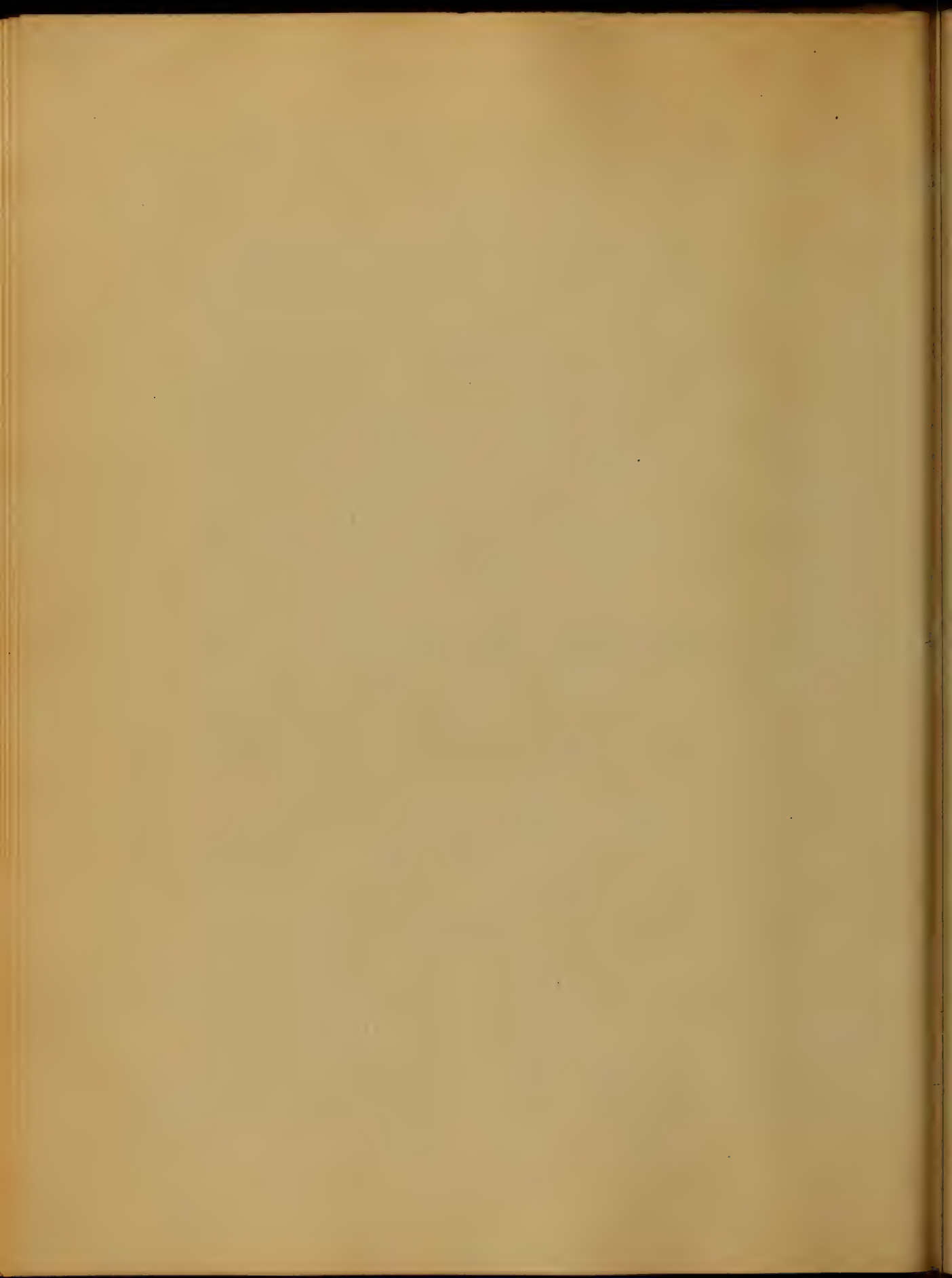
Man, as he came from the hand of his maker, was possessed of a perfect mind and body; but when he transgressed those laws which were instituted for the government of his organism, he brought upon himself disease and death; and prominent among those ailments to which the human frame is heir, is that which forms the subject of this dissertation - Syphilis.

The term Syphilis has been applied indiscriminately to two diseases, whose primary appearances, though very similar - yet in their

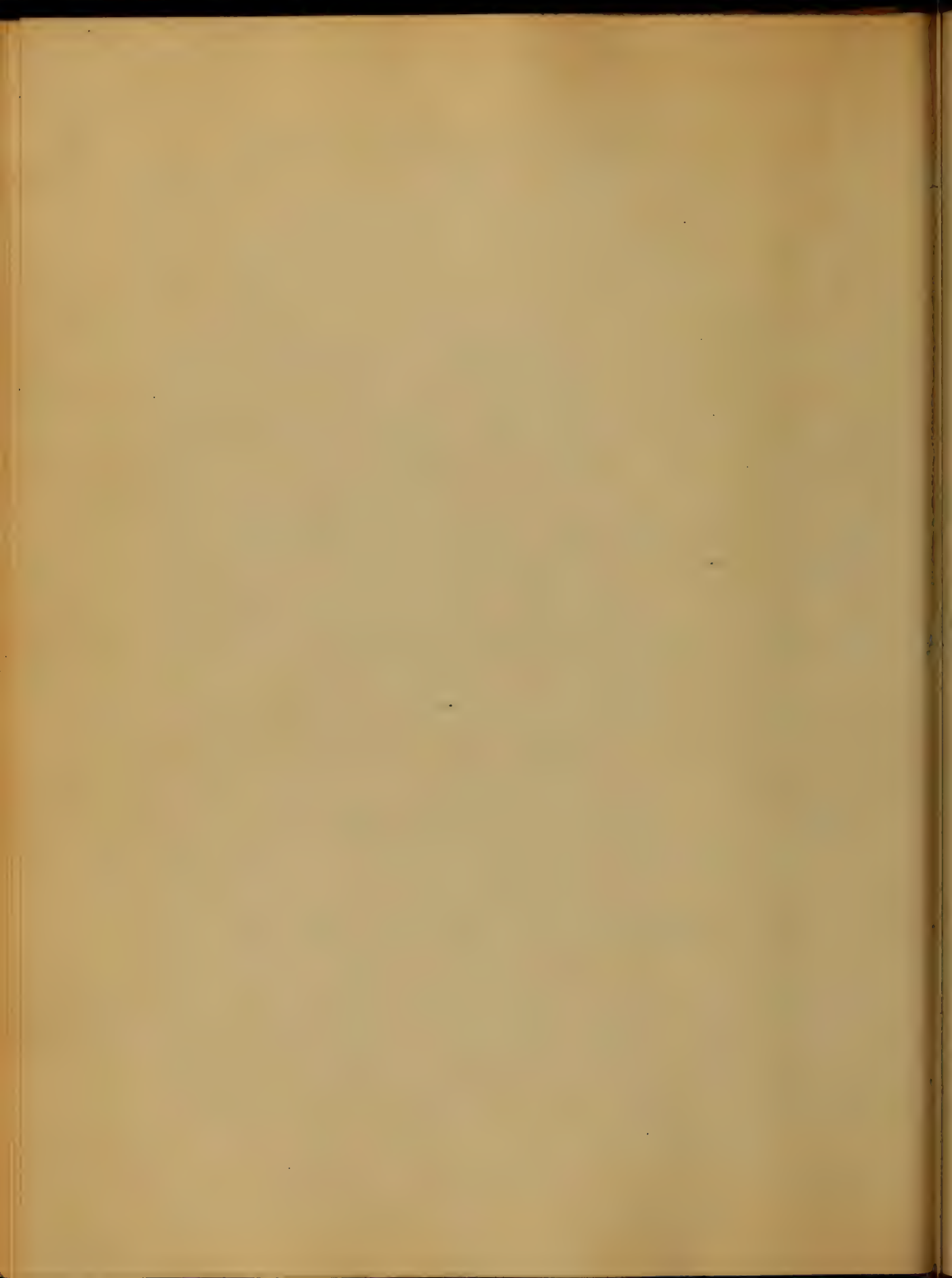


ulterior agents, are essentially dif-
ferent: The one is purely a venereal
disease, while the other is form-
ed by certain constitutional con-
ditions, which characterize the
difference between them.

The origin of syphilis has been
a subject of considerable discussion
among the scientific, and various
opinions have been expressed and
warmly contended as to its origin-
ation. Whether that may be it is
quite evident from history, that
the disease first appeared (at least
in civilized countries), earlier to
the latter end of the fifteenth
century, when it was introduced into



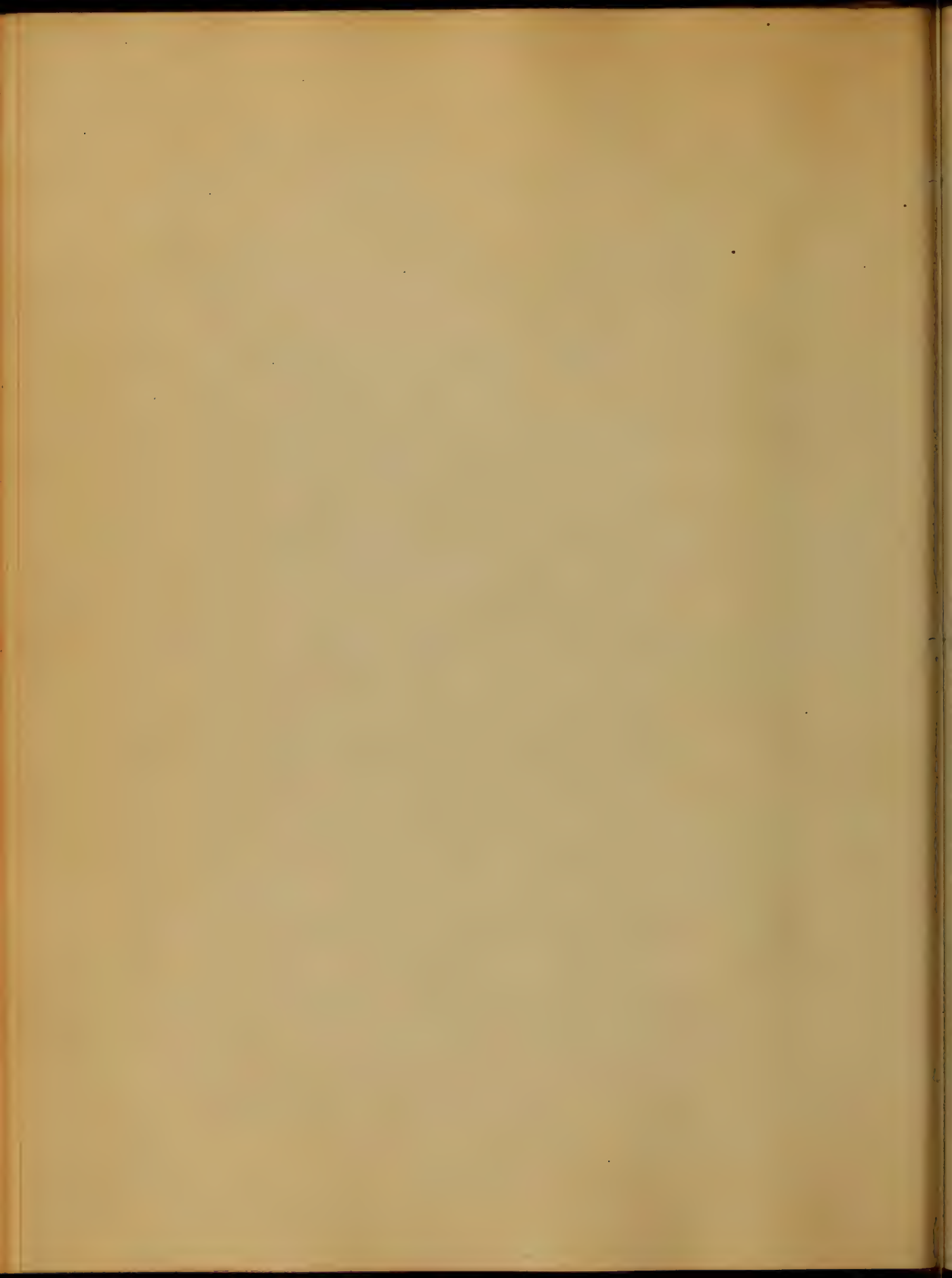
with considerable virulence among
the inhabitants of Italy, and the
French troops—who were at that
time invading that country; rapidly
spreading throughout Europe,
filling all who witnessed its rav-
ages with terror and consternation.
That there is an essential differ-
ence both in the production and
effects of these venereal diseases, is
clearly seen when the symptoms of
those which have been already exam-
ined into the subject. Thus: simple
venereal ulcers of a nonspecific
character are known to have ex-
isted from time immemorial, and
they will produce an effect



on the constitution have been re-
corded in medical works, with
comparatively a few years. Of
two hundred and ninety two cases
of general syphilis collected from
statistics by Bumstead, all were
undoubtedly produced by ulcers
but twenty two, ~~but~~ owing to the
immense extent which the disease
sometimes assumes and the sig-
nificance of the local trouble, it
is more than probable that syph-
ilis is always produced by ulcers
and is now the result of a chan-
croid. Mr. Bassera, as quoted by
Bumstead, from the Bulletin, writes
by Louis, it is a source of the

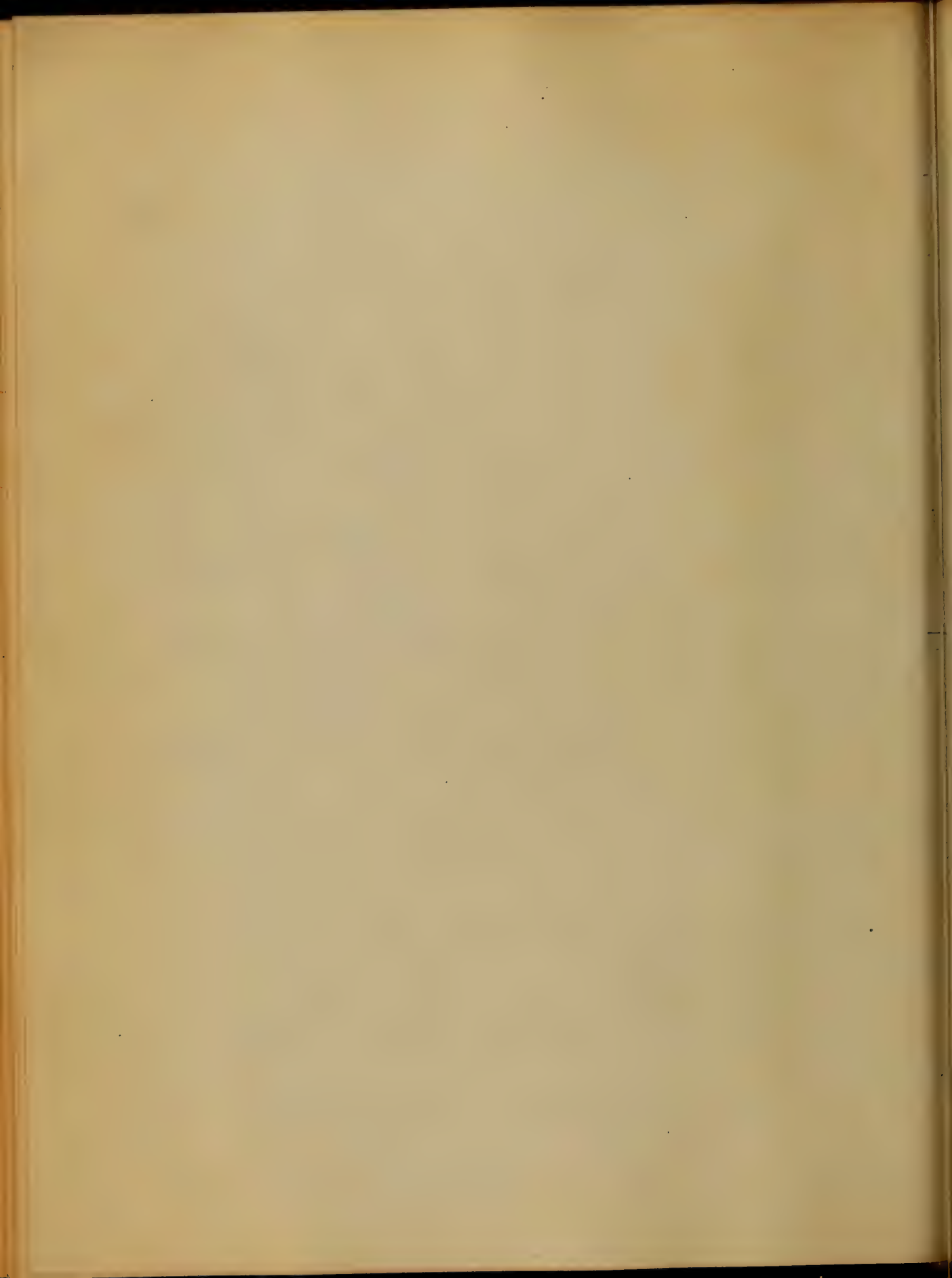


duality of poisons, that he lays it
down as a law, that "whenever a
person has a cholera and other
acute constitutional affections, the
generalization of the epidemic
phenomena is first of all due
to the fact that the person
from whom the contagion came
had a cholera which was neces-
sarily followed by constitutional
symptoms." Hunter however, was
of the opinion that "there is no
difference in the kind of matter,
and no variation can arise in
the disease from the matters be-
ing of different degrees of acuteness.
It is the variations of the symp-

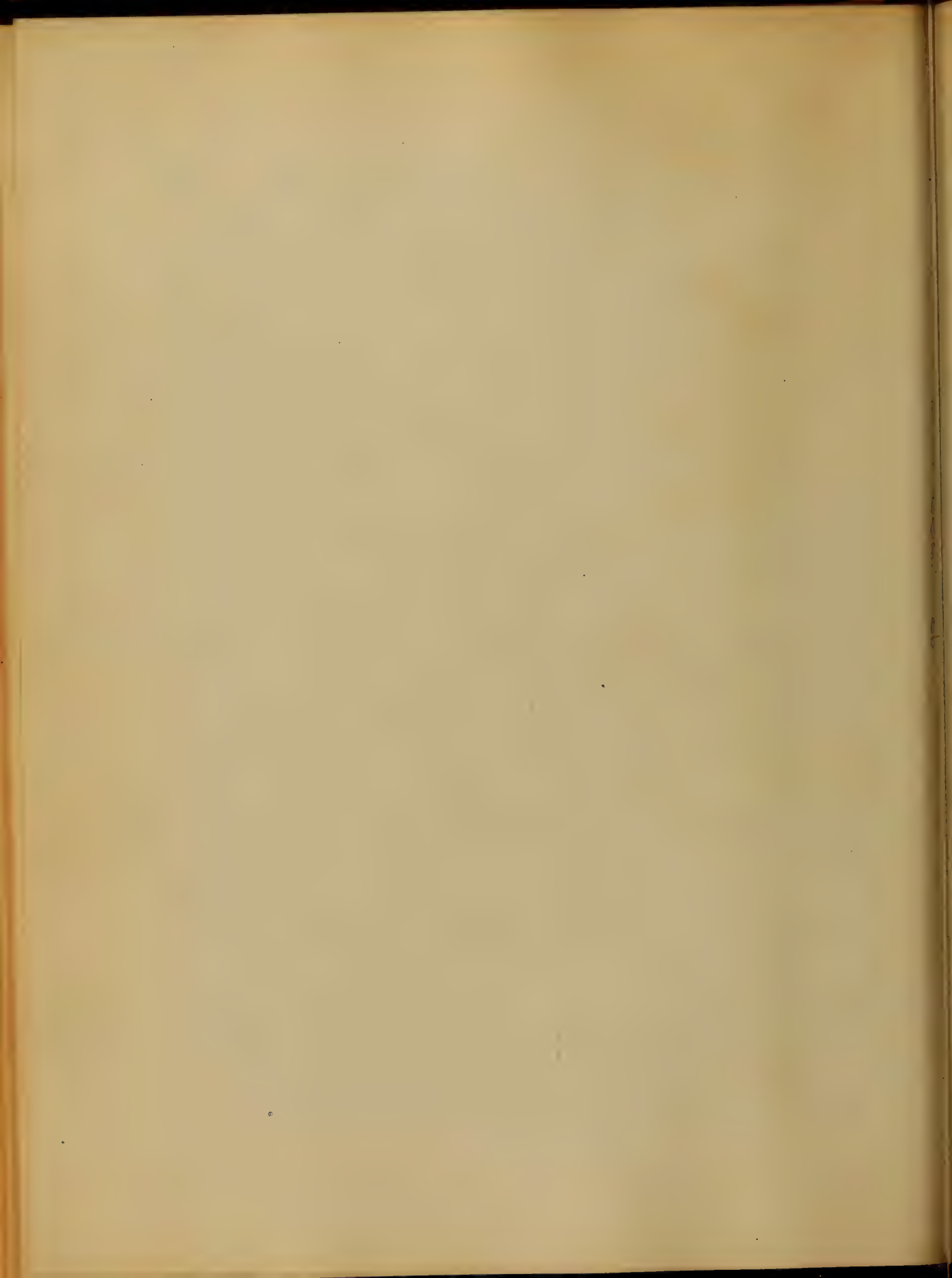


time in different persons to
form upon the constitution
and habit of the patient at
the time." It is not necessary
to remark further upon this point
as the duality of diseases is gene-
rally admitted at the present day.

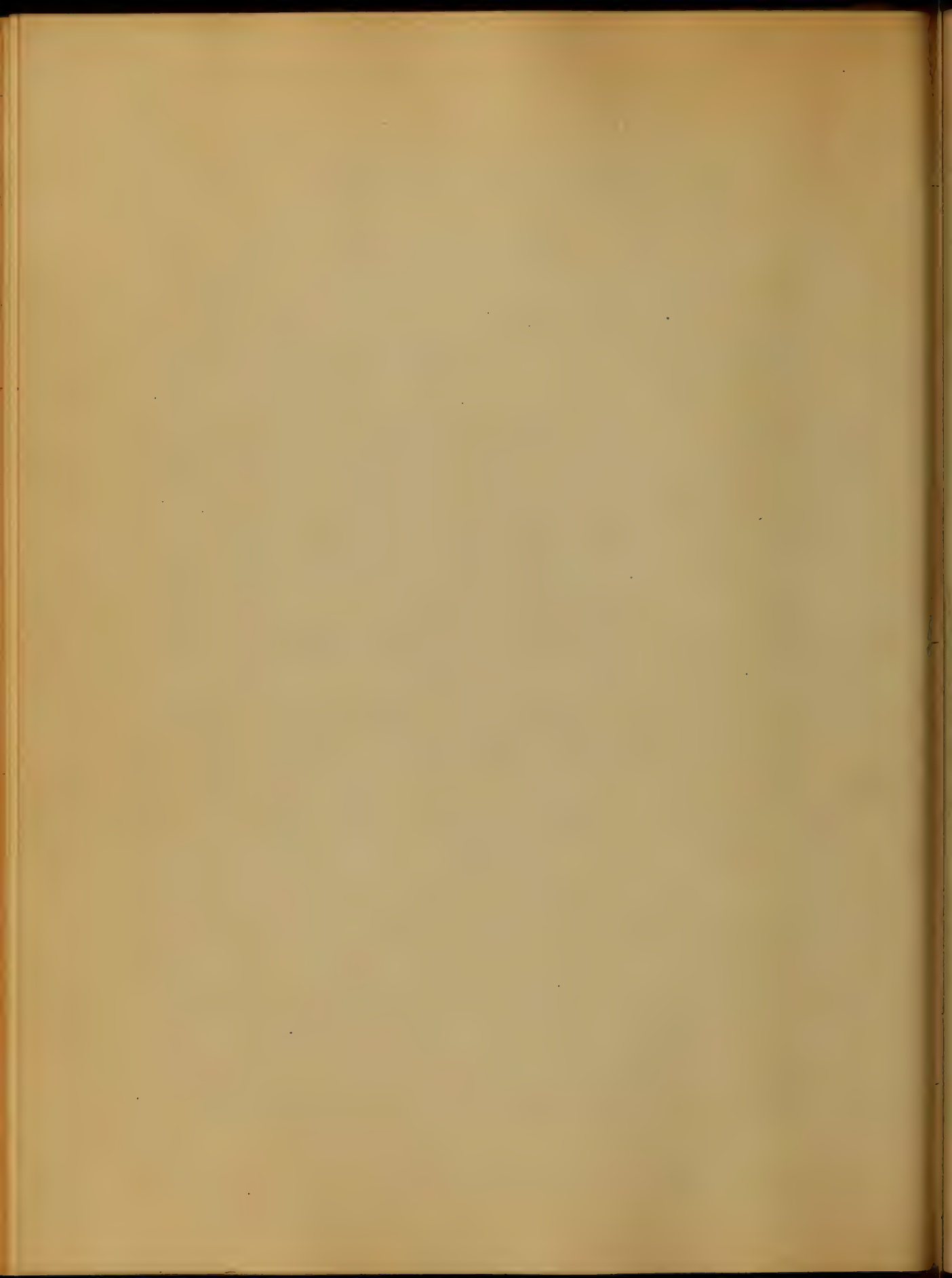
"A chancre is the initiatory ca-
use of acquired syphilis, arising
at the point at which the vi-
rus enters the system, and sepa-
rated from the general mani-
festations of constitutional in-
fection by a period of incuba-
tion." There is another definition
having the same end view, nam-
ely that it is the source of the



and as ~~the~~ ~~word~~ ~~is~~ ~~not~~ ~~in~~ ~~any~~
usually distinguished from
it - and to which the name chan-
cre is commonly and properly
applied. This is that form of
ulcer found when the system
which is not competent to af-
fect the system at large and
affords no protection from future
inoculation; 2d. This form of re-
versal, from its resemblance
to chancre, the term chancreid
has been applied. But as this
~~is~~ ~~not~~ ~~truly~~ ~~speaking~~
embraced by the term chancre,
it will be excluded from con-
sideration in this essay.



A true and genuine virus
is an virus produced by the
inoculation of syphilitic juice
into any part of the body. By
far the most common seat of
these primary sores, is upon the
genitals, because most exposed,
though as before remarked they
may occur upon any part where
the virus comes in contact with
an abraded surface; as the arms,
lips, tongue, nose, or extremities.
These specific ulcers do not give
present appearance charac-
teristic of stercorice, though for
years they may be lingering
system. During such is the virus



abundance of their reports, and
particularly by their indurated
bases. These characters are especially
sometimes wanting, and a case
of a non-specific kind occa-
sionally assumed these condi-
tions. Autoinoculation is the
most certain means of diagno-
sis, but even this sometimes fails.
As regards the treatment of chan-
cers, diagnosis is of little conse-
quence; but respecting progno-
sis it is of the greatest importance.

The usual course of a chancre
may be briefly stated thus, in
about fourteen days (that is, being
the average period of incubation).

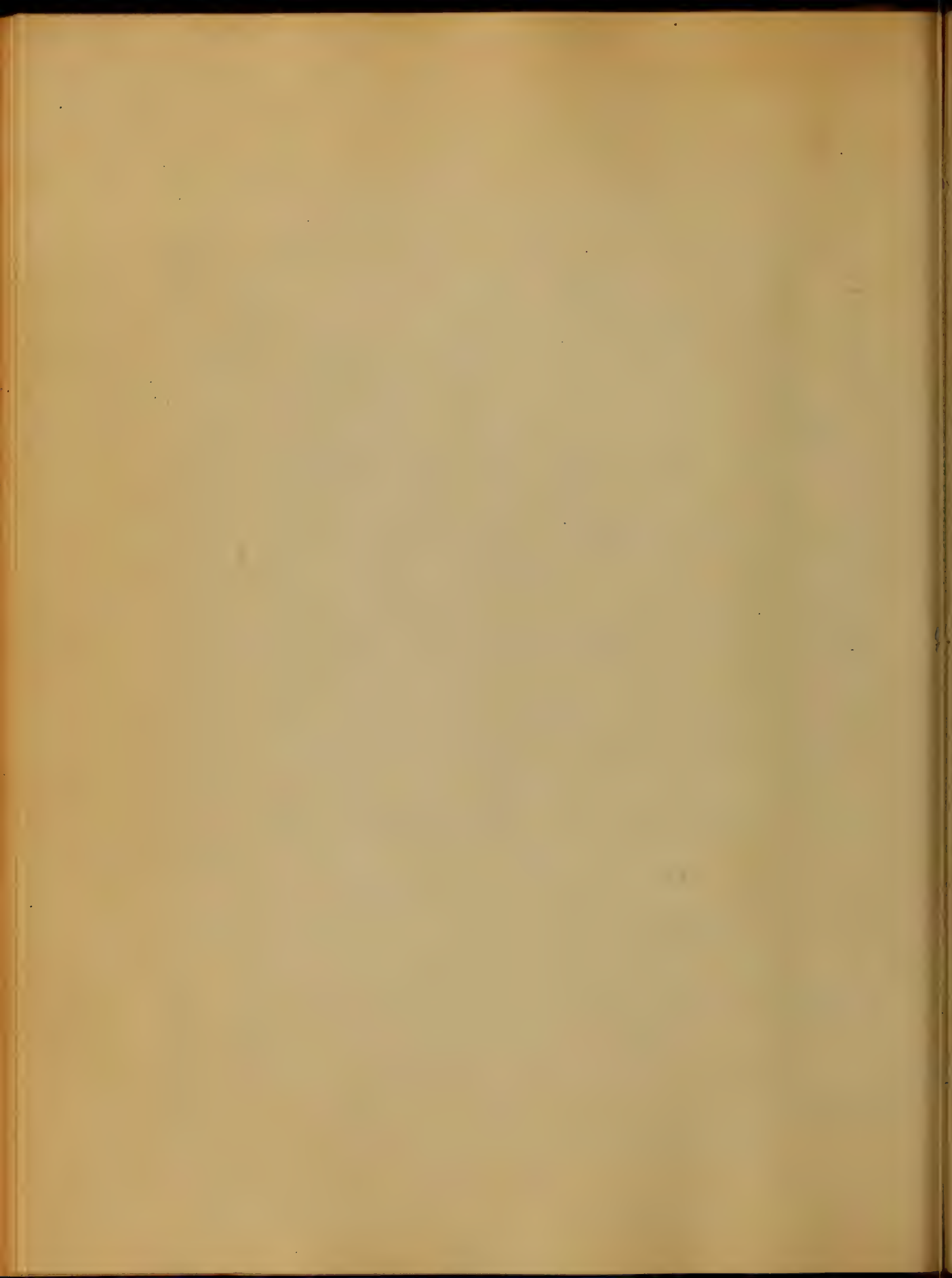


after an infecting center a su-
perficial vesicle occurs, not
involving the whole thickness
of the skin, which may heal
without leaving a scar, or
the inoculation from it may
concentrate upon its surface and
form a crust, which after a
few days falls off, leaving a
simple vacuolated ulcer which
involves the whole thickness of
the skin, presenting the appear-
ance mentioned above as usually as-
sumed by ~~the disease~~ that is charac-
teristic, showing edges and granu-
lating upon the bottom of the ulcer.
The condition of the granulation



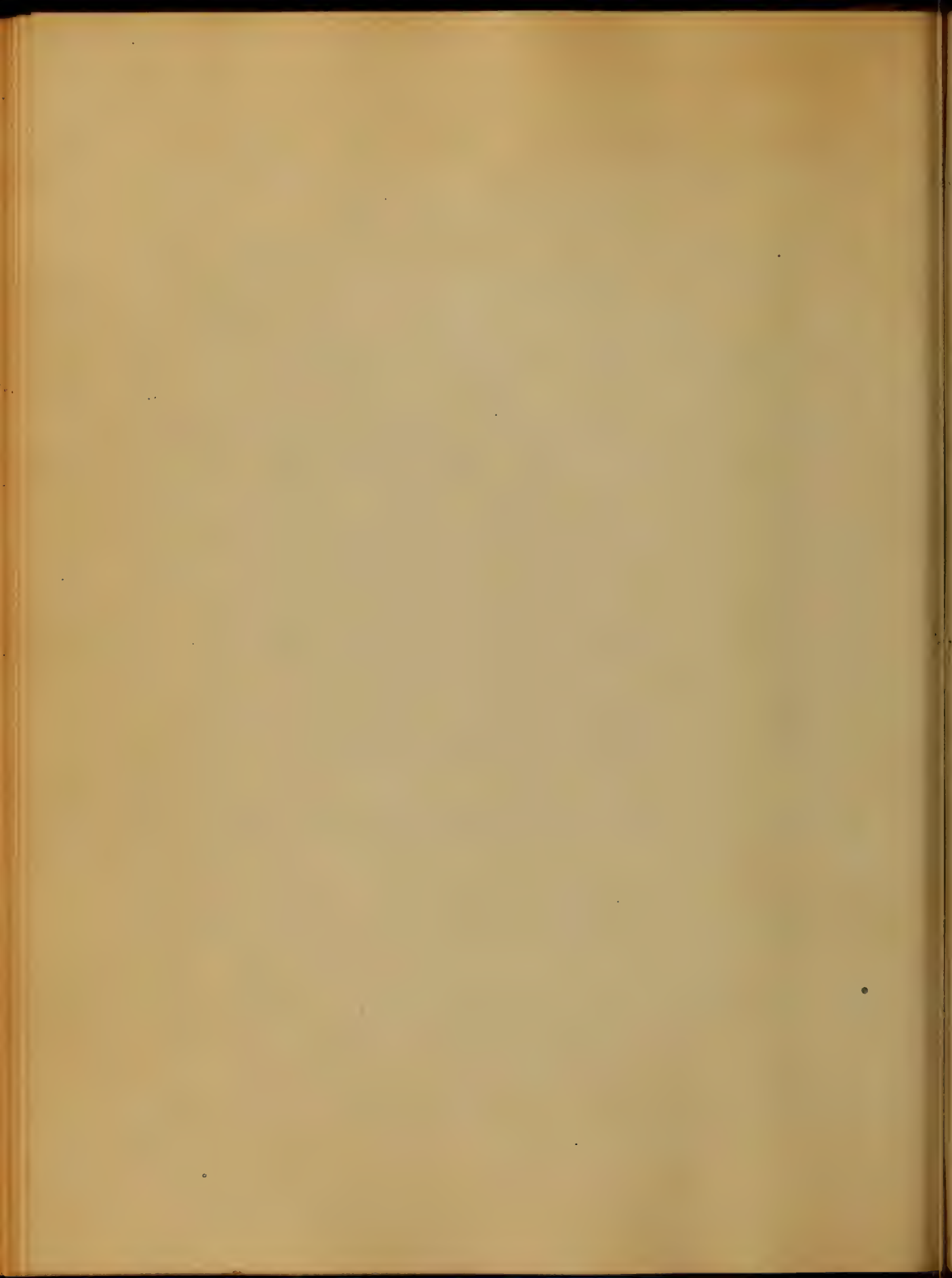
In a greater or less period, the ulcers frequently heal without treatment - but sometimes being greatly aggravated by injudicious stimulation.

The treatment of cancreres is purely local: rest being enjoined upon the patient; and cleanliness of the parts is strictly to be maintained: for the ulcers sometimes heal without any other attention. It is often necessary however to use medicated solutions for their disinfectant, or stimulating, properties, or for the application of a diluted solution of nitric acid - or of a mixture of



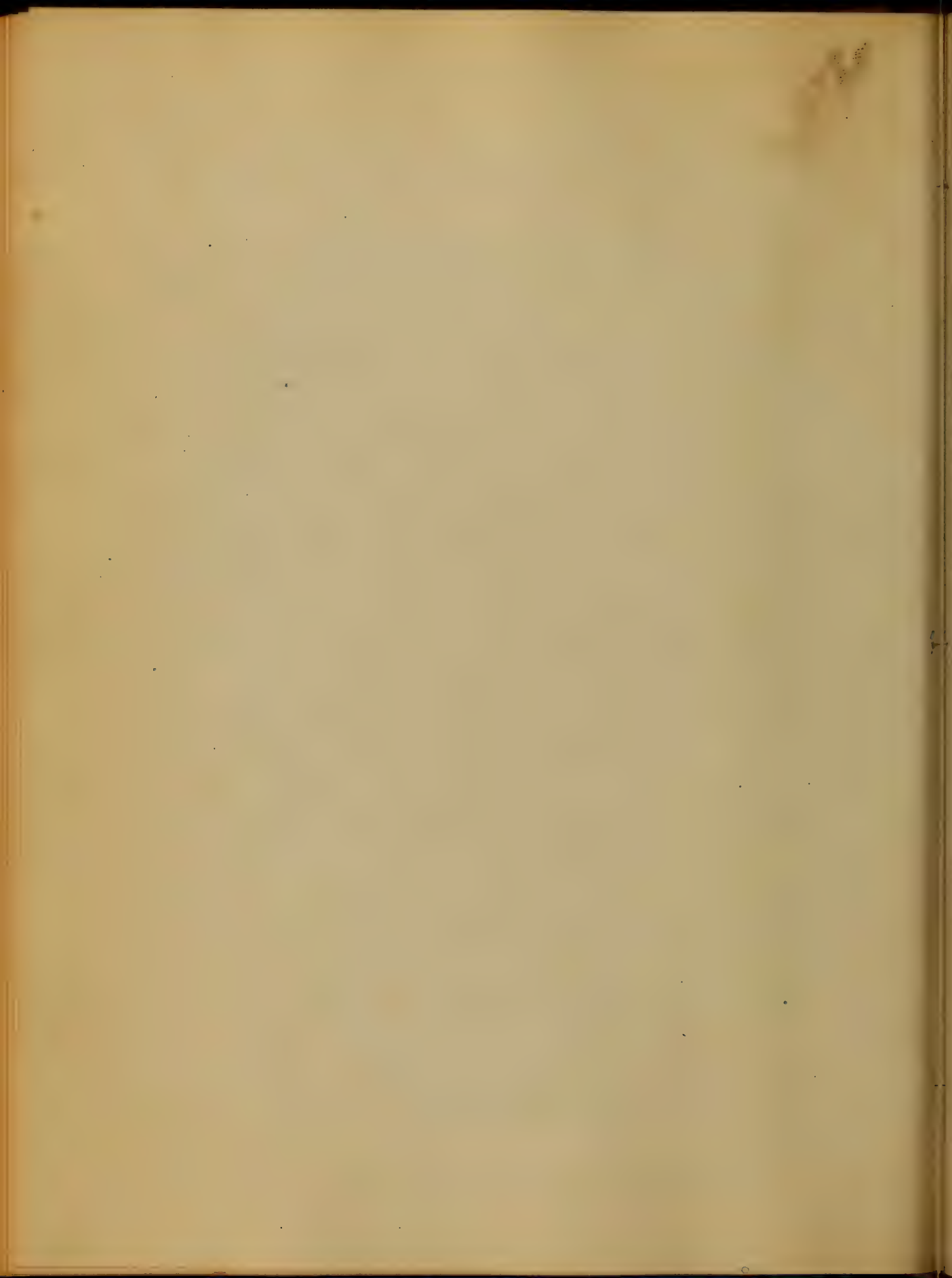
Localities of mercury. In general,
chancres are to be treated as oth-
er ulcers. Stimulation or counter-irri-
tation when necessary. The same ap-
plications which have a specific ef-
fect. The old plan of destructive con-
tamination with a view to prevent
constitutional manifestations is
now abandoned as worse than
useless; as the disease becomes gen-
eral soon after inoculation.

As a rule, suppuration there
is not a concomitant of cure,
though it is not always absent.
Its presence depends upon the
amount of irritation at the seat
of the sore: there is a ~~...~~

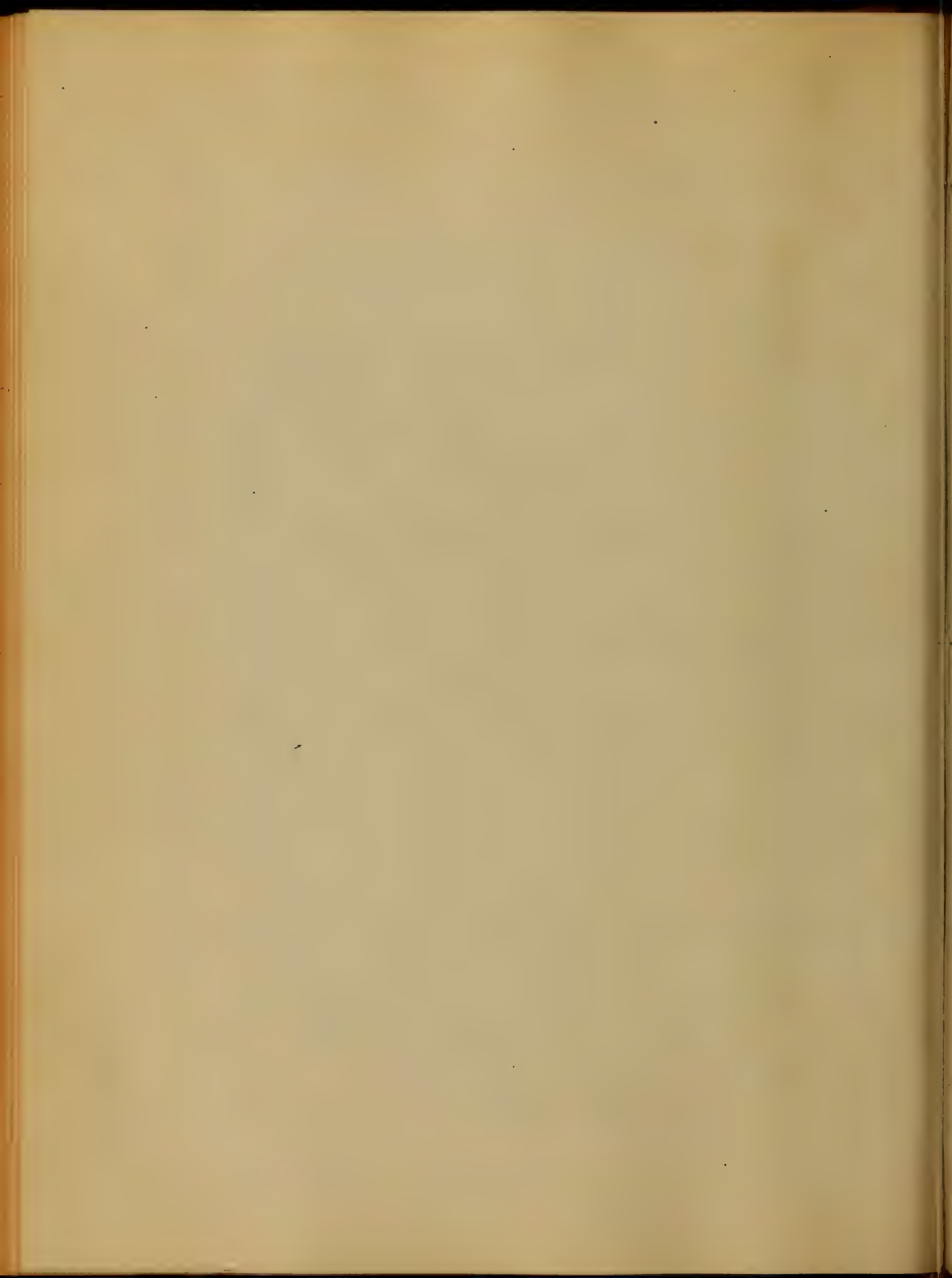


or less induration of the lymphatic
glands, that is common, and
is in the course of the lymphatic
system leading to that disease, the
induration in the groin serves
as a diagnostic mark in deter-
mining the character of the
disease. There is no special indica-
tion in the treatment of tubercles -
it is to be conducted upon gene-
ral principles.

Syphilis as it affects the sys-
tem at large is so varied in its
manifestations that it would
be inexpedient to enter minutely
upon its consideration in this
paper like this. General principles

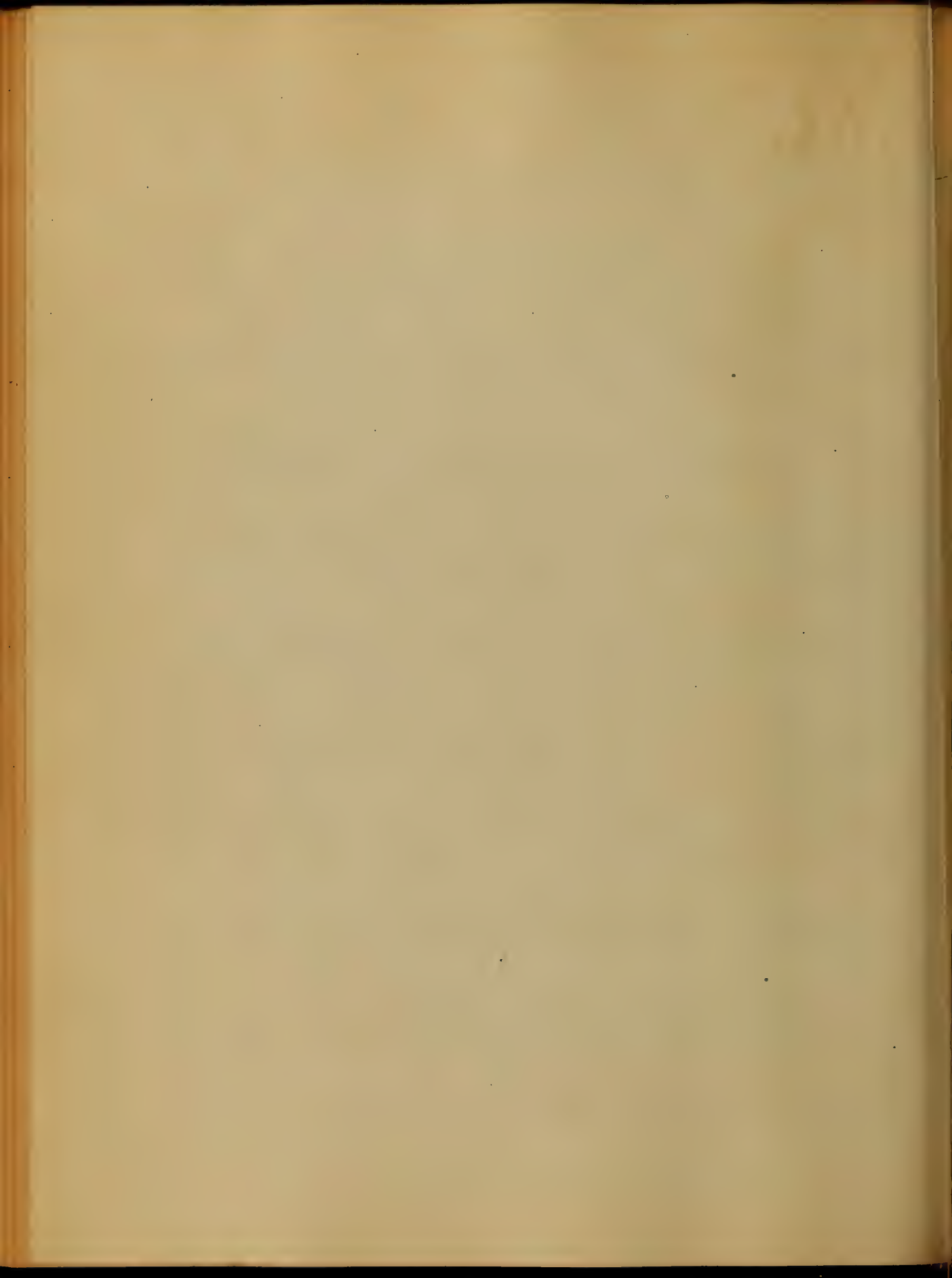


has been divided into secondary and tertiary. Recent changes from those to secondary symptoms are referred to certain affections of the skin (scaly, scaly eruptions), and of some parts of the mucous membrane (conjunctiva, catarrh, and superficial ulcerations), and also to dermoids (catarrh and ulcers), and some peculiar pathological affections of the eye (catarrh, lymphatic ganglia (enlargement of the glands in various parts of the body, especially the neck), etc. Tertiary symptoms consist of various changes which take place in the subcutaneous and mucous



cellular tissue (gumma tumors), in
the serous (peritonitis), in the fibrous
and osseous tissues (Pleurastitis, os-
titis caries, etc.), and in the deeper
organs."

The period of latency between
the appearance of the chancre and
constitutional manifestations, varies
from three weeks to six months, the
average period being between thirty
and forty five days, when "in most
instances, either headache accompa-
nied by general malaise, engage-
ment of the suboccipital ganglia,
acne capitis, or an eruption upon
the abdomen or arms" heralds the
beginning of that train of symptoms

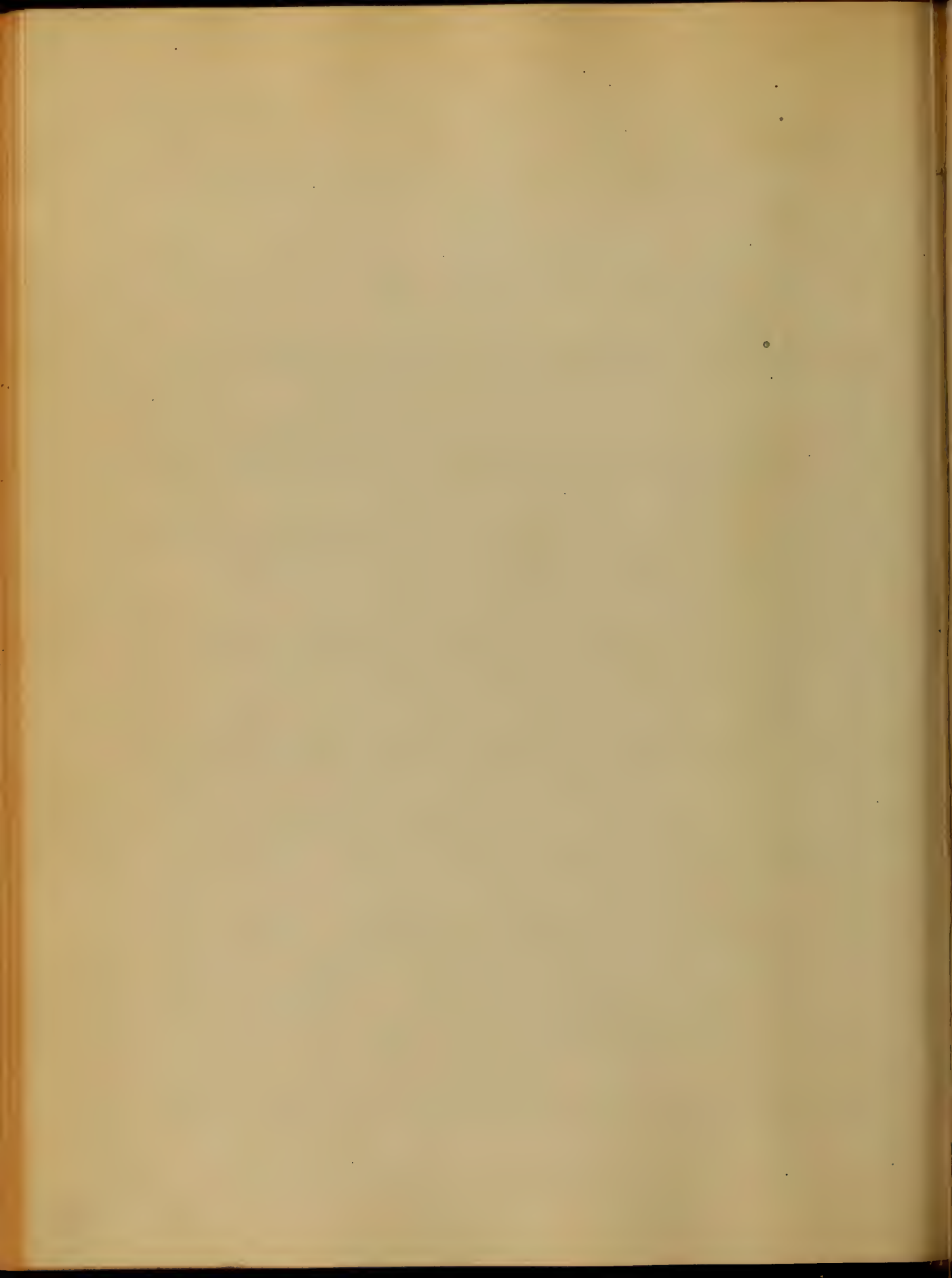


moments so indicative of syphilis
tion. But these varied phenomena
must therefore be traced by, as their
consideration would be incompatible
with the length to which it is de-
sirable to restrict this thesis. It may
be well to mention in passing, that
these secondary lesions assume all
the varied forms of skin affections
with diseases of its appendages; also
diseases of the mucous membranes,
eyes, and various other tissues. Syph-
ilodermata may be distinguished from
nonspecific eruptions by the history
of the case, by the color the color
or lam color being very constant in
specific eruptions - by the absence of

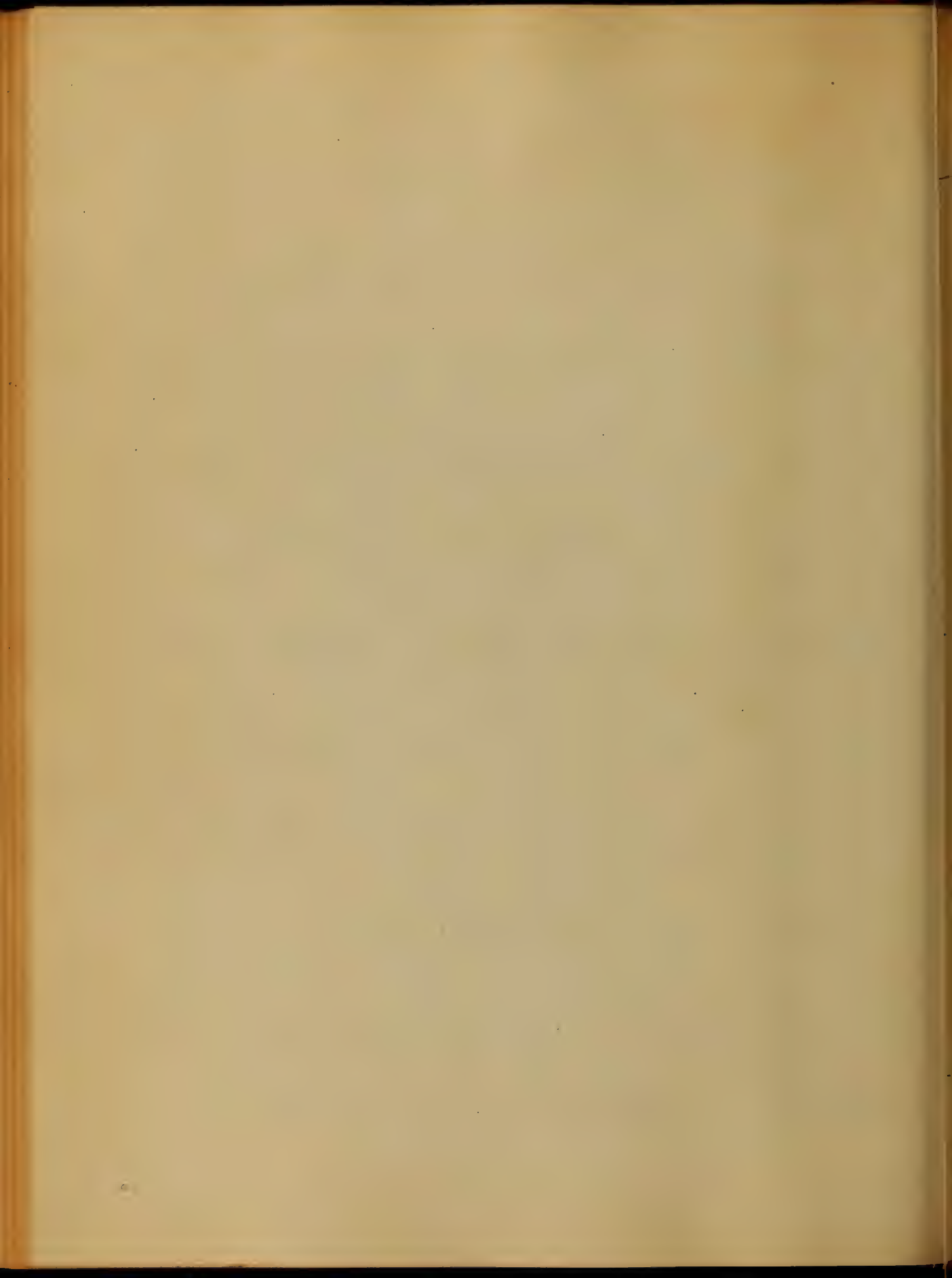


itching and by the circular form so constant in syphilitic eruptions.

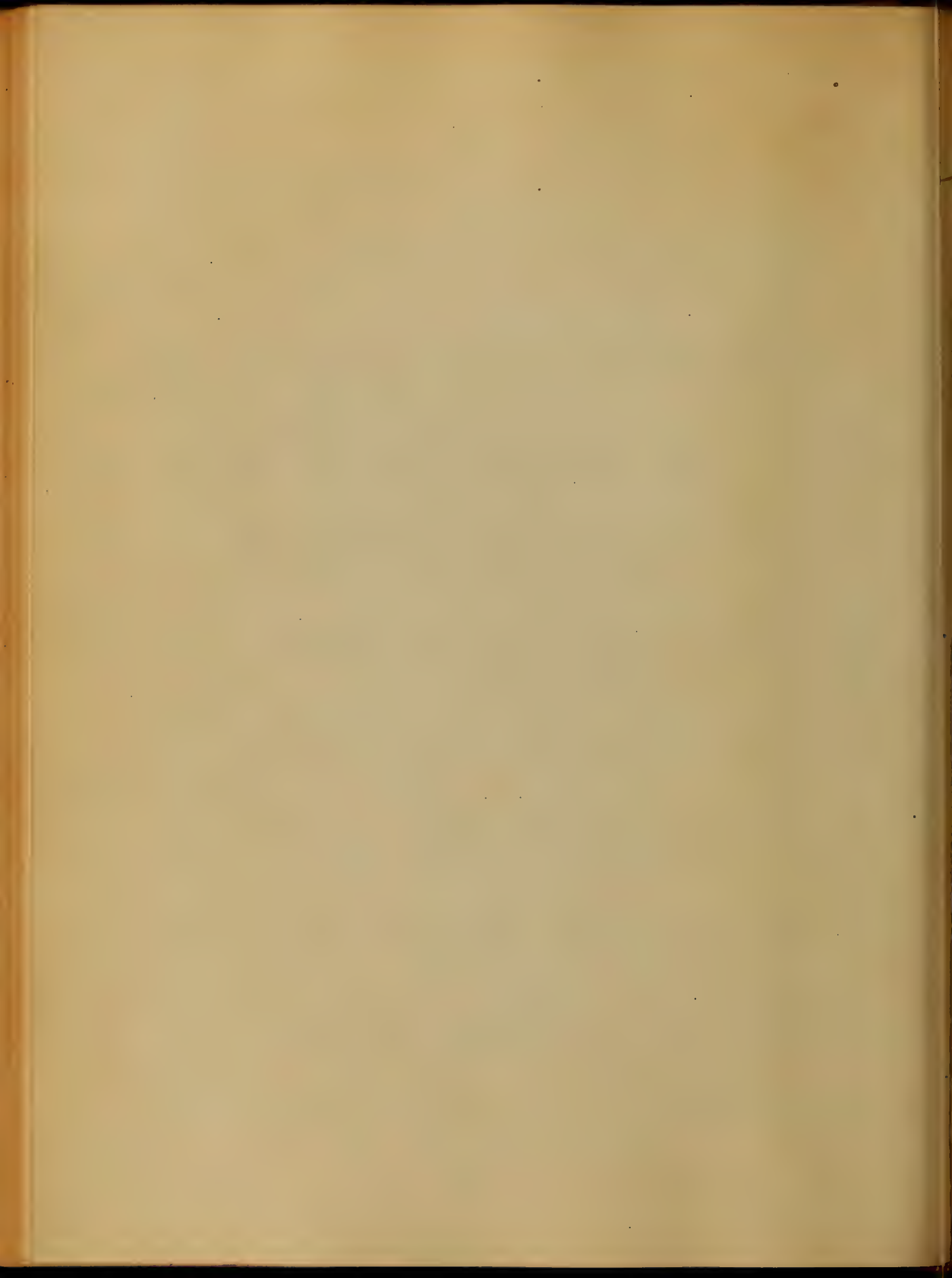
In speaking of the treatment of chancres, nothing was said concerning constitutional medication, as it was deemed best to defer it until the treatment of general syphilis was under consideration; which shall now receive attention. Formerly, it was the custom as soon as a patient with a venereal ulcer presented himself for treatment immediately to begin feeding him with mercury, which was continued until profuse salivation was induced and in many instances with most disastrous effects.



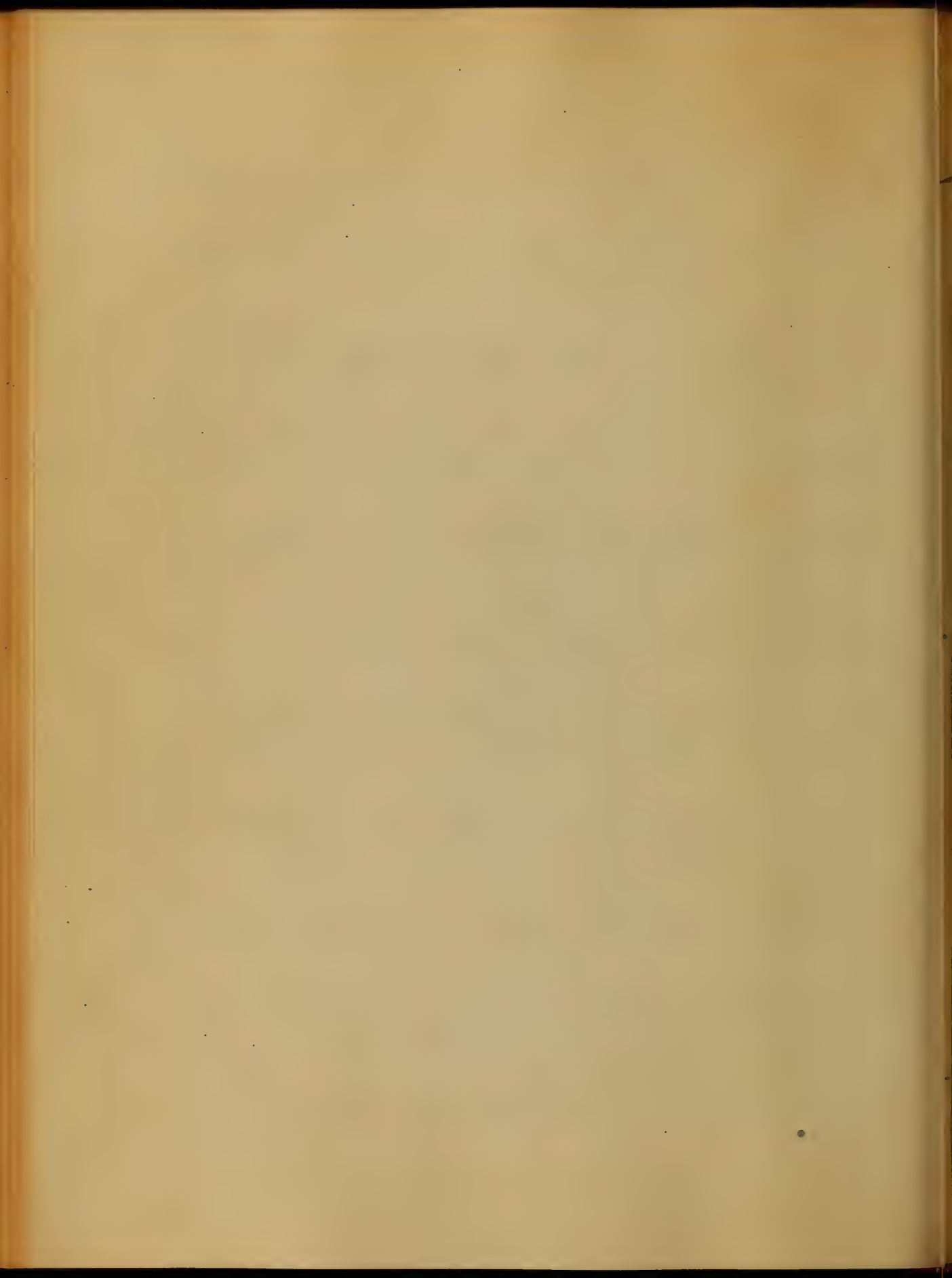
but as science has advanced this
wholesale mercurialization has given
place to more rational treatment;
and even those who most warmly
advocate its use do not carry it
beyond a "slight touching of the gums."
The use of mercury in primary
syphilis is to be deprecated - and
for these reasons: first - because mer-
cury as an agent impoverishes the
system; and since some vigorous
and robust subjects have undoubtedly
had syphilis and yet no consti-
tutional manifestations, it would
be better to improve the nutrition
of the whole organism, than the con-
stitution may be better able to re-



sist the inroads of the disease. First
fore tonics, good food and good
hygienic circumstances with absten-
ance of alcohol and all depressing
agencies, would be better treatment.
Second- from its continued use the sys-
tem becomes accustomed to mercury
when in a great measure it loses its
beneficial effects; it is therefore bet-
ter to defer the employment of this
agent until nature may be best as-
sisted, and that is when the system
endeavors to throw off the poison, as is
manifested upon the surface. The
argument that "some chancres will
not heal without the employment
of mercury," is not valid in establish-



ing that it should always be used; since many chancres cicatrize without any treatment. It is not because these are chancres that they do not heal: but because of some peculiarity of habit. Though mercury would not be recommended in primary syphilis, it is an agent of great potency in secondary lesions, and, unless specially contraindicated, should never be omitted: but saturation should be avoided, as all the beneficial effects of the drug may be obtained without overloading the system with it. The particular form of mercury to be employed can be ascertained only on trial: one preparation being more

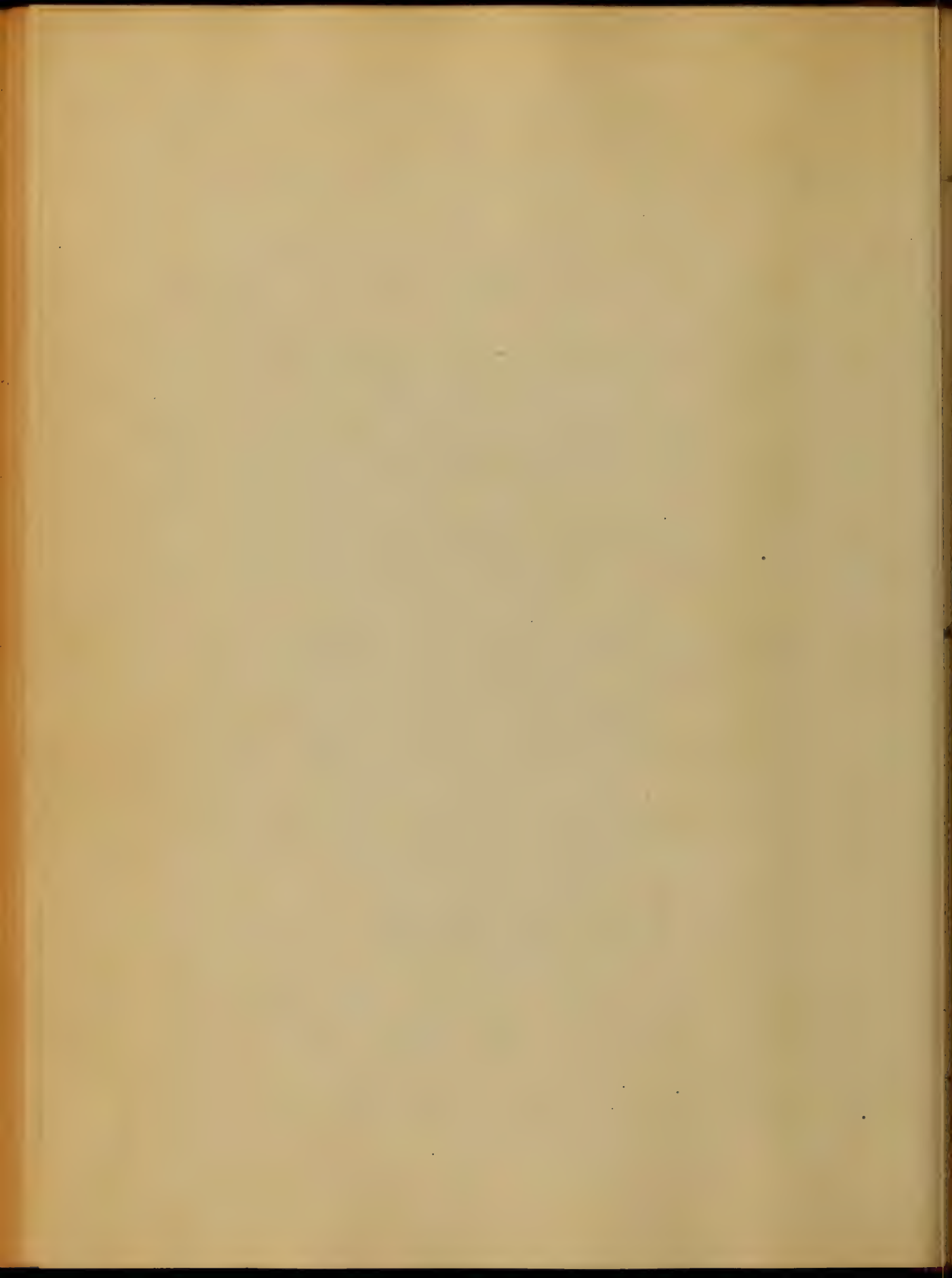


beneficial in some cases than in others, and sometimes it is found beneficial to combine several forms. Fumigations and inunction with mercurials are sometimes resorted to with good results. The form and administration of the drug are to be left to the discretion of the practitioner. When mercurials could not be used, the mineral acids have been employed with benefit. Next to mercury, the iodine compounds rank: the iodide of potassium is the best. Iodine, vapourations however, are more beneficial in the tertiary stage of the disease.

Tertiary syphilis can receive but a moment's consideration, and this



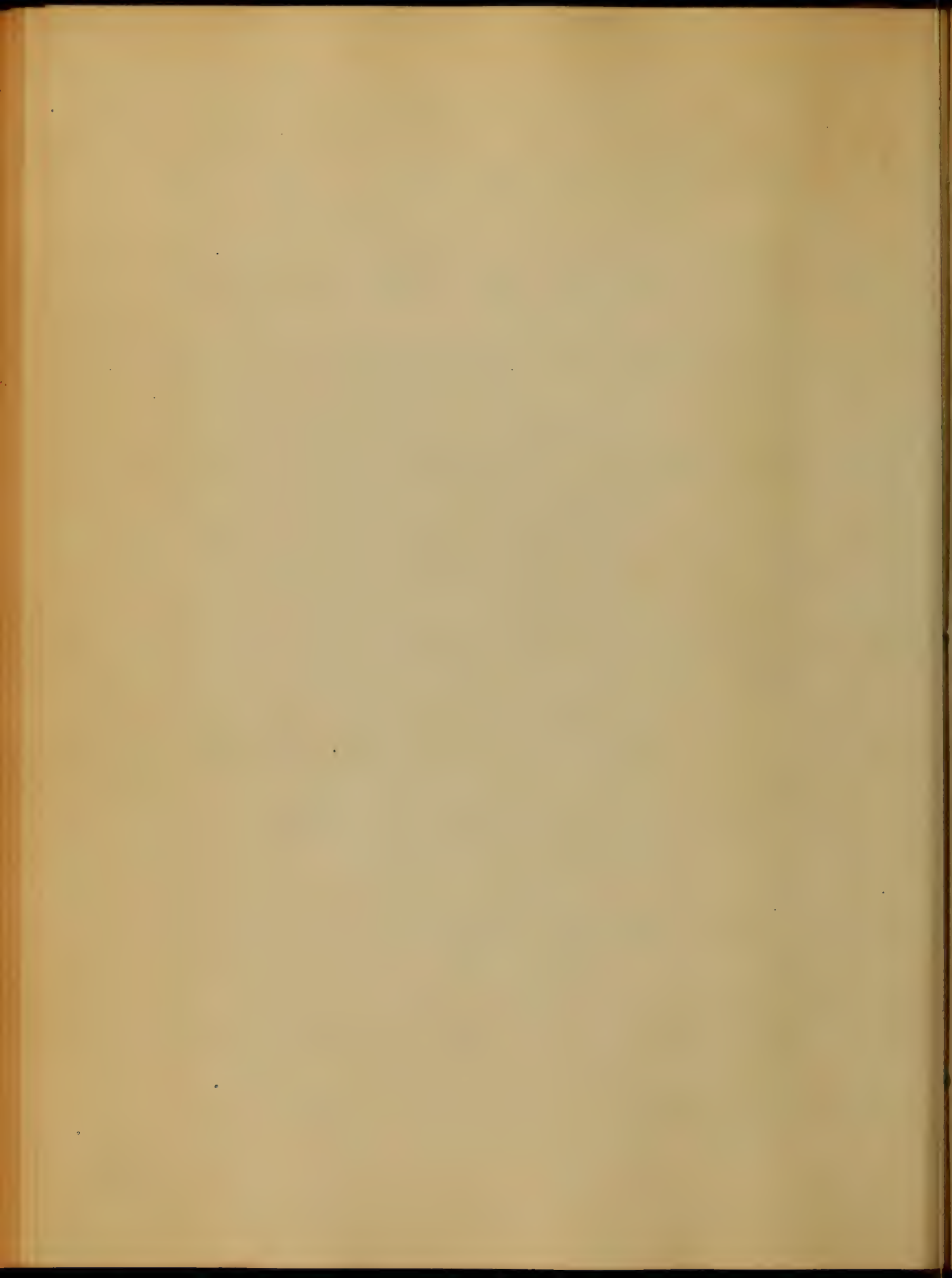
lakes will be brought to a close. It is not always tertiary as respects times; for it sometimes occurs without being preceded by any secondary lesions. In the majority of cases however it is preceded by the secondary form. Rage and flitting, pains, extensive ulceration, periosteal nodos and sometimes caries of the bones are the conditions in tertiary syphilis. The bones of the cranium are most frequently carious. I have seen in the University Museum a beautiful specimen in which the left parietal bone was almost entirely destroyed by syphilitic caries, and the other bones of the head were more or less diseased.



In the treatment of this condition, mercury is not an available remedy; the iodine compounds hold the first rank. Hygienic regulations are to be strictly enforced in this, as in all the forms of syphilis.

I have gentlemen, given you a brief and very imperfect resumé of a disease which demands the careful attention of every physician not only because of the terrible manifestations in itself; but it transmits to succeeding generations some of the most distressing maladies to which man is liable.

In criticizing this paper I must beg you to bear in mind

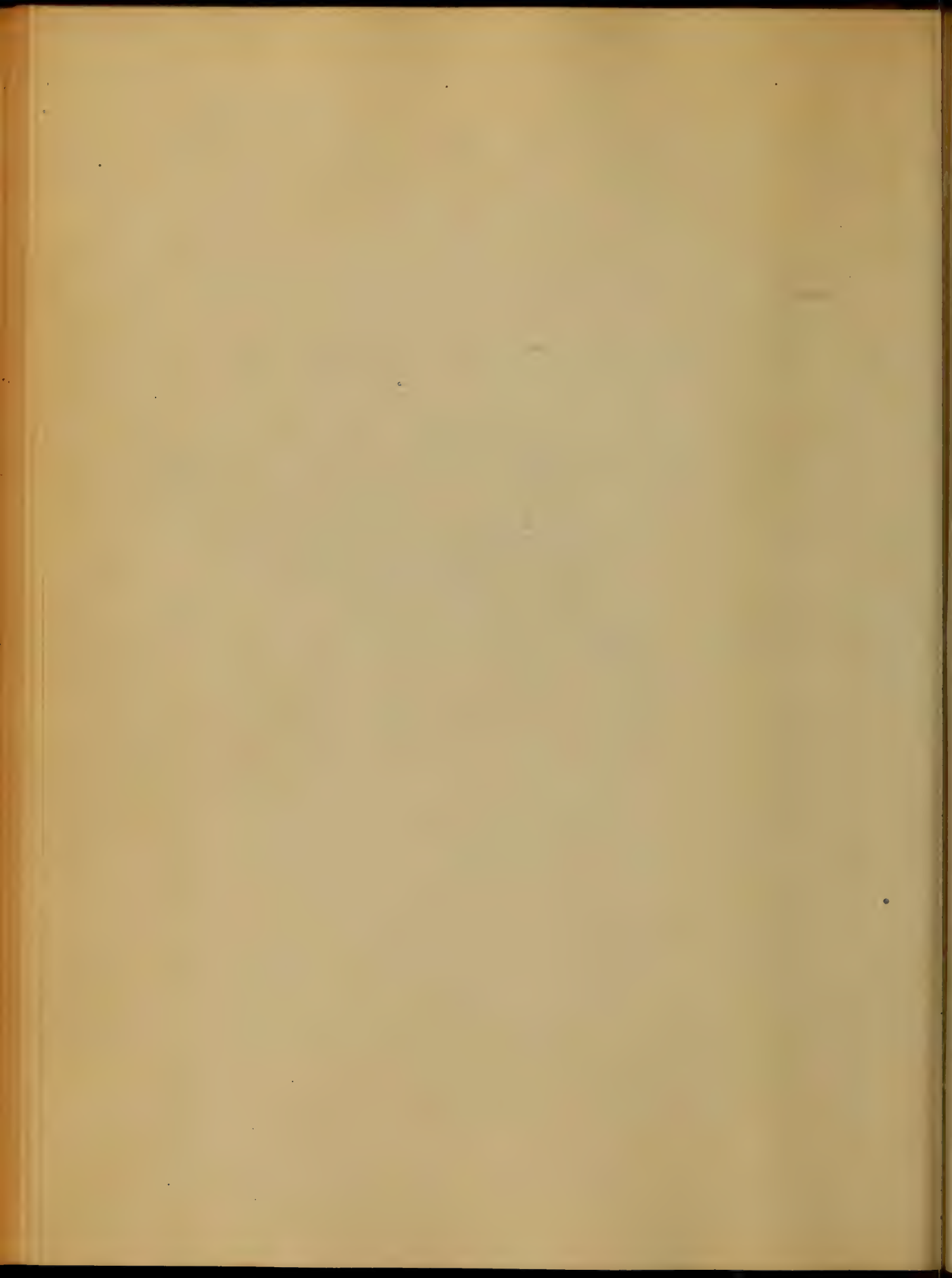


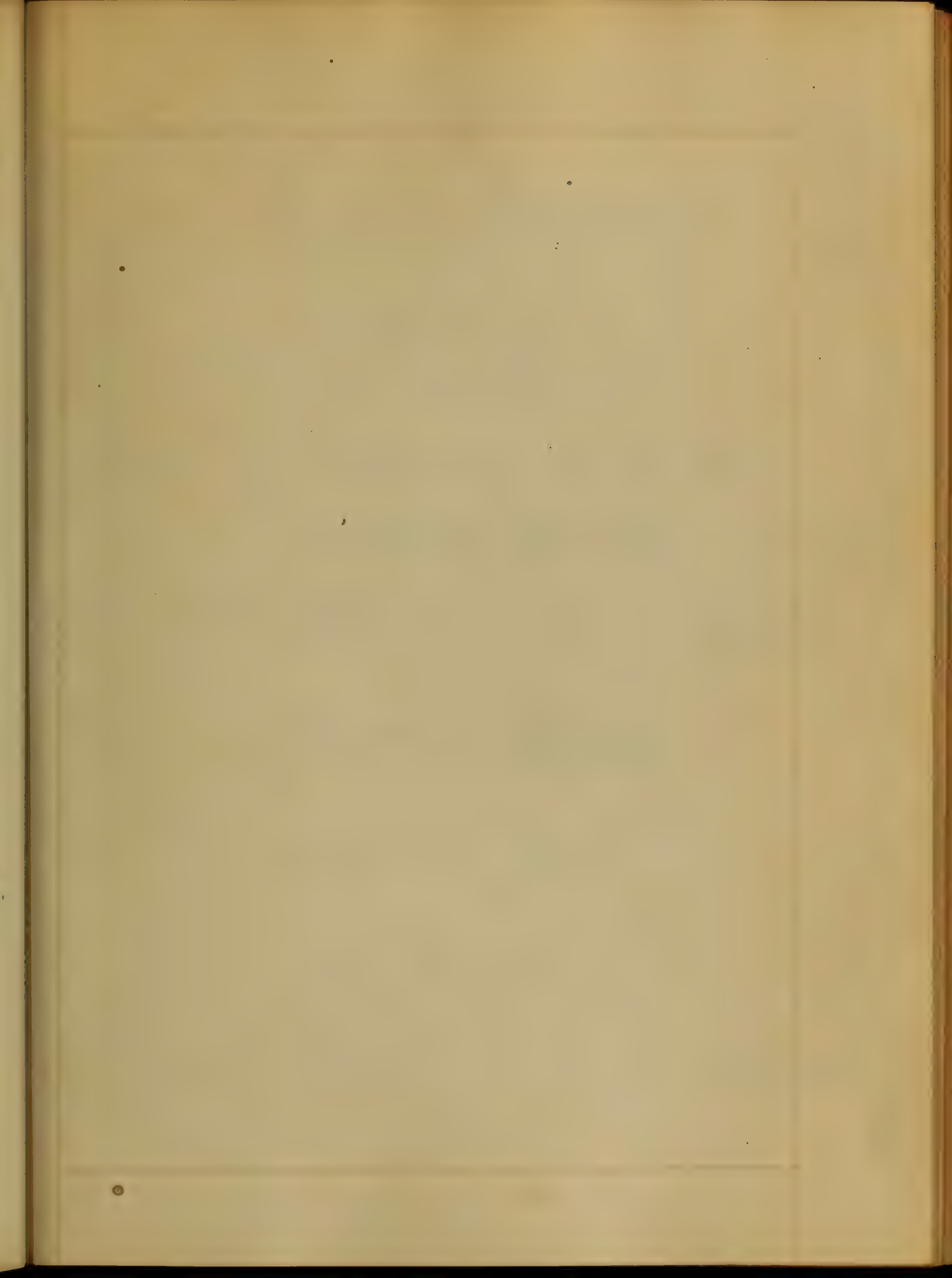
that its author is a mere tyro in
Medicine and that there are neces-
sarily many deficiencies which
in time may in a measure be
supplied.

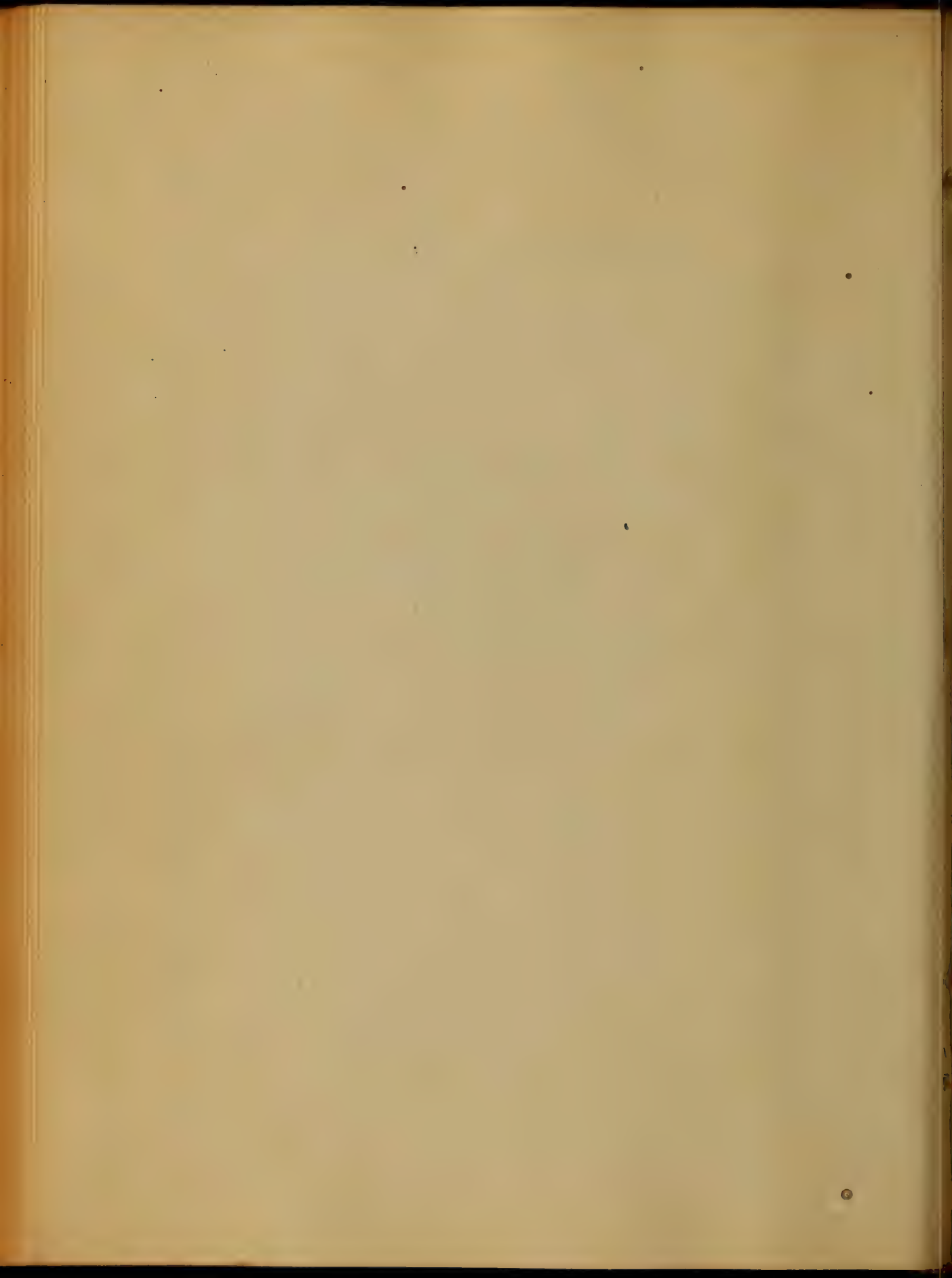
I am Gentlemen, with much
respect, your appreciative pupil.

Geo. Wythe Cook

January, 1859



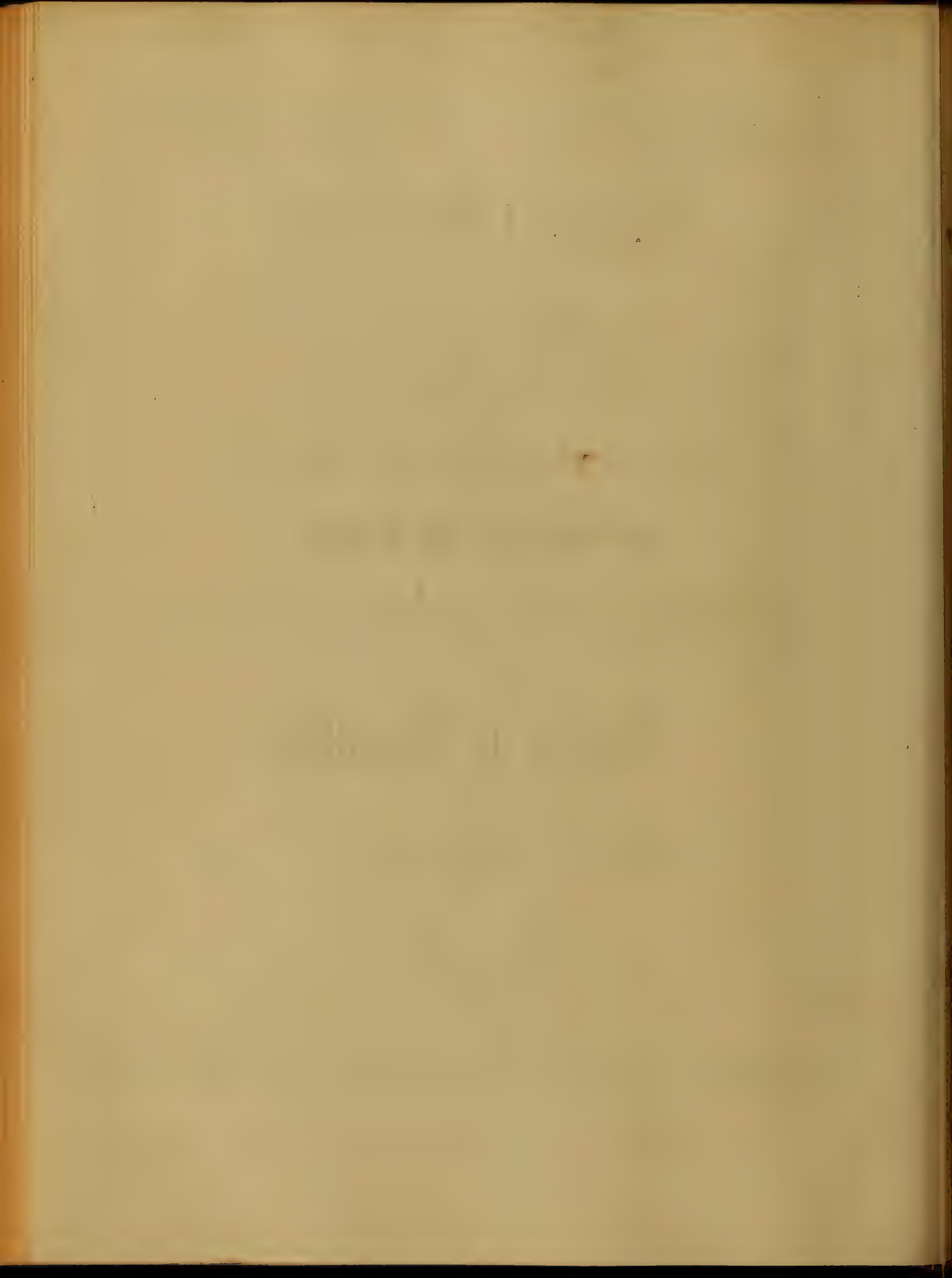




AN
Inaugural Dissertation
ON
Scarlatina.
Submitted to the Examination
OF THE
Provost, Regents and Faculty
OF
PHYSIC,
OF THE
UNIVERSITY OF MARYLAND,
FOR THE DEGREE OF
DOCTOR OF MEDICINE,

By
Charles B. Berke
of
Maryland.

Session of 1868-9/1869



Scarlatina.

This disease belongs to the exanthematous or eruptive class of fevers and has received its name from the color of its eruption.

It is a disease remarkable for the great diversity which it presents in different cases as regards symptoms and fatality.

The varieties of Scarlatina, which are but modifications in degree of one typical affection, are four in number, viz:

Scarlatina Simplex. Scarlatina Maligna

Scarlatina Anginosa, Scarlatina sine eruptione.

This disease presents no special Anatomical Characters save that of the eruption and affection of the Throat. Any other lesions



found after death are due to complications
 Though some authors go to show the frequent
 occurrence of a condition of the mucous
 membrane of the stomach and intestines
 analagous to that of the cutaneous surface.

Scarletina Simplex commences, after
 a period of incubation which last from
 four to six days - with a feeling of languor
 and lassitude, with pain in the head, in
 the back, and in the limbs. Upon break-
 ing out of the efflorescence, the pulse is
 quick, but feeble, the eyes are red and
 humid; the tongue covered in the mid-
 dle with white mucus studded with
 red papillae and red along the edges



The tonsils are inflamed and enlarged, and
 the palate and pharynx red. Often there
 is dry cough, a troublesome itching sensation
 of the skin, together with swelling of hands
 and feet. The eruption usually appears
 on the second day; first upon the neck
 & face and chest in form of number of
 red points which become aggregated into
 patches of irregular form and size.
 This eruption is of very bright red color
 and most distinct about the loins and
 flexures of the joints. By the third
 day, the rash has extended to the trunk
 of the body, and upper extremities, also
 to the mucous membrane of the eyes, nose



mouth, pharynx and air passages; and by
The fourth day, to the lower extremities.

The efflorescence attains its most vivid
redness upon the evening of the third or
fourth day after its commencement.

Dr. Howard states that most generally the
disease makes its appearance at night.

The decline of Scarlatina commences on
The fifth day from the eruption: The
redness disappearing from those parts
first, where it first appeared and by
The seventh day has nearly entirely
escaped away. On the eighth and ninth
days the desquamation of the epidermis
has become general and in many parts



laminae of considerable size are thrown off

In this disease, the urine, at the commencement, while there is considerable fever, is of a dark deep red color, and possesses all the properties of inflammation of the urine.

Albumen has been found quite frequently in the urine during the period of desquamation, but not as a necessary consequence.

Dropsy may also supervene without the presence of albumen. Examinations of the urine should be made frequently with both nitric acid and heat in order that we may be prepared to combat with the many changes which take place and so often are fore-runners of the more



dangerous form -

Scarletina Anginosa is ushered in with more violent symptoms than the preceding. The violence of the disease falls principally upon the throat. There is a sense of constriction about the throat, and great stiffness of the muscles of the neck and jaw. The uvula, palate, uvula and tonsils are red and swollen and surfaces are covered with an exudation of coagulable lymph. Deglutition becomes painful and difficult. Breath very fetid. An accumulation of sordes upon the teeth. Respiration very much interfered with and not infrequently the ulcerative inflammation may extend through the



Eustachian tubes to the tympanum, and destroy the auditory apparatus so as to cause permanent deafness - The local affection is thus rapidly progressing in the neck. The constitutional symptoms are indicative of very serious and dangerous disturbances. Sometimes seldom however the inflammation extends to the larynx and bronchial tubes. The eyes may become involved. Several cases are reported by Dr. Howard in which there was total destruction of both eyes. The submaxillary and lymphatic glands of the neck become enlarged and inflamed. There are recorded in which suppuration has



taken place, constituting what has been called Scarlatinous tubercles Suppuration of the glands of the neck may occur early in the disease or on the other hand they may be developed during the stage of Desquamative gangrene and ulceration of the throat are very rare events.

Sometimes the eruption in this form of the disease is very light and again it has been found that if the disease is violent it is liable to occur with inflammation of the throat & of laryngitis or oedema of the glottis the severity of the throat affection may be sufficient to cause fatal results. Albuminuria is more apt to result in



This form of the disease - other complications
than those which have been mentioned
sometimes occur, but seldom -

Scarlatina Maligna is a very greatly
aggravated form of Scarlatina Anginosa
and designates an overwhelming toxic
impression of the morbid cause of the
disease, occurring in persons of debilita-
ted constitution, most commonly making
its appearance in the winter months
and in damp, unhealthy, and ill ventilated
situations - Sometimes it makes its ap-
pearance sporadically, while at other
times it invades suddenly and unexpect-
edly during the progress of scarlatina



Simplex or Anginosa. The chief characteristics of this greatly to be dreaded form of Scarlatina are the sometimes sudden prostration of the whole nervous system, the great cerebral trouble being added to the affection of the fauces and skin. There is great irritability & restlessness, accompanied by low muttering delirium. The pulse is irregular and scarcely perceptible. The eyes look red and sunken. There is an acrid secretion from the nose which, being swallowed, causes diarrhoea. The lips, the teeth and the tongue are covered by a white brownish film. Often the tongue and the nails are



deeply ulcerated and covered with slough. Abscesses are often found in the cellular tissue of the neck. The respiration is greatly impeded, quick and rattling.

The eruption in this form of the disease is late in making its appearance and often the patient succumbs before any appearance of eruption is taken.

Dr. Donaldson several days since narrated to me circumstances of a similar character occurring in his private practice. The patient yielding to its poisonous influence, without any eruption whatever, in the short space of forty eight hours. The duration of the rash



is equally uncertain with its period of invasion. Dr Sims states that in some instances the rash suddenly disappears a few hours after it has formed, and comes on again after the expiration of a week continuing two or three days; in one case numerous patches of it appeared a third time on the seventh day from the second eruption, then remained for two days.

Scarlatina Maligna is a disease of such extreme danger that only patients of very vigorous constitution survive it. However, if the seventh day be passed without hope may be entertained



Scarlatina sine eruptione is a very mild form of disease some few cases have been occasionally observed, fever and angina being present, but no perceptible efflorescence - This form occurs in a secondary attack before the patient has become completely re-established. Dr. Howard states that no case of death from second attack of Scarlatina has been recorded, and I feel well assured that if the book contained a single case it would not have escaped his inscrutable glances.

Having hurriedly run over the different forms of Scarlatina and the most prominent symptoms of the same



I will now turn my attention to That which
 has made life burdensome to many who
 have survived the disease properly;

The Sequelae - The one most frequently
 occurring is Albuminuria with general
 Dropsy. This sequelae usually supervenes
 between the tenth and twentieth day,
 and sometimes as early as the fifth
 day. It is referable to the transfer of an
 inflammation to the structure of the Kidney
 and is indicated by swelling of the face
 and lower extremities when used a va-
 rious positions. Shortly after this, contain-
 ing urea takes place in the Urinary canal.
 The urine is scanty & generally contains



blood - Dr. McSherry exhibited a specimen
 of Urine, containing blood and epithelial
 casts, as passed by one of his patients in
 private practice - Pleuritis, pericarditis and
 acute rheumatism are occasionally sequels,
 as well as concomitants of scarlet fever.
 Chorea is also reckoned among the occa-
 sional sequels - The communicability of
 Scarlat fever seems to be established by
 The strongest proof and is possible
 That its causation always involves infection.
 The following example is given by the late
 Prof. D. R. Palmer, in a family living
 several miles from Stock Pt. in
 a obscure part of the County, and



cut a simple erythema. He visited with his
family, some friends in low water & in the
mild district and he had been checked in the
family of the party visited. After his re-
turn home all his children had in succession
Scarlet fever. The children of his wife's sister
contracted it to the children of the two
families died from this disease.

Diagnosis. The special diagnos-
tic characters of Scarlet fever are, first,
the decided and acute erythema of the
fauces, secondly, the early appearance
and rapid extension of the erythema,
and, thirdly, the bright red and diffused
character of the rash. From measles it



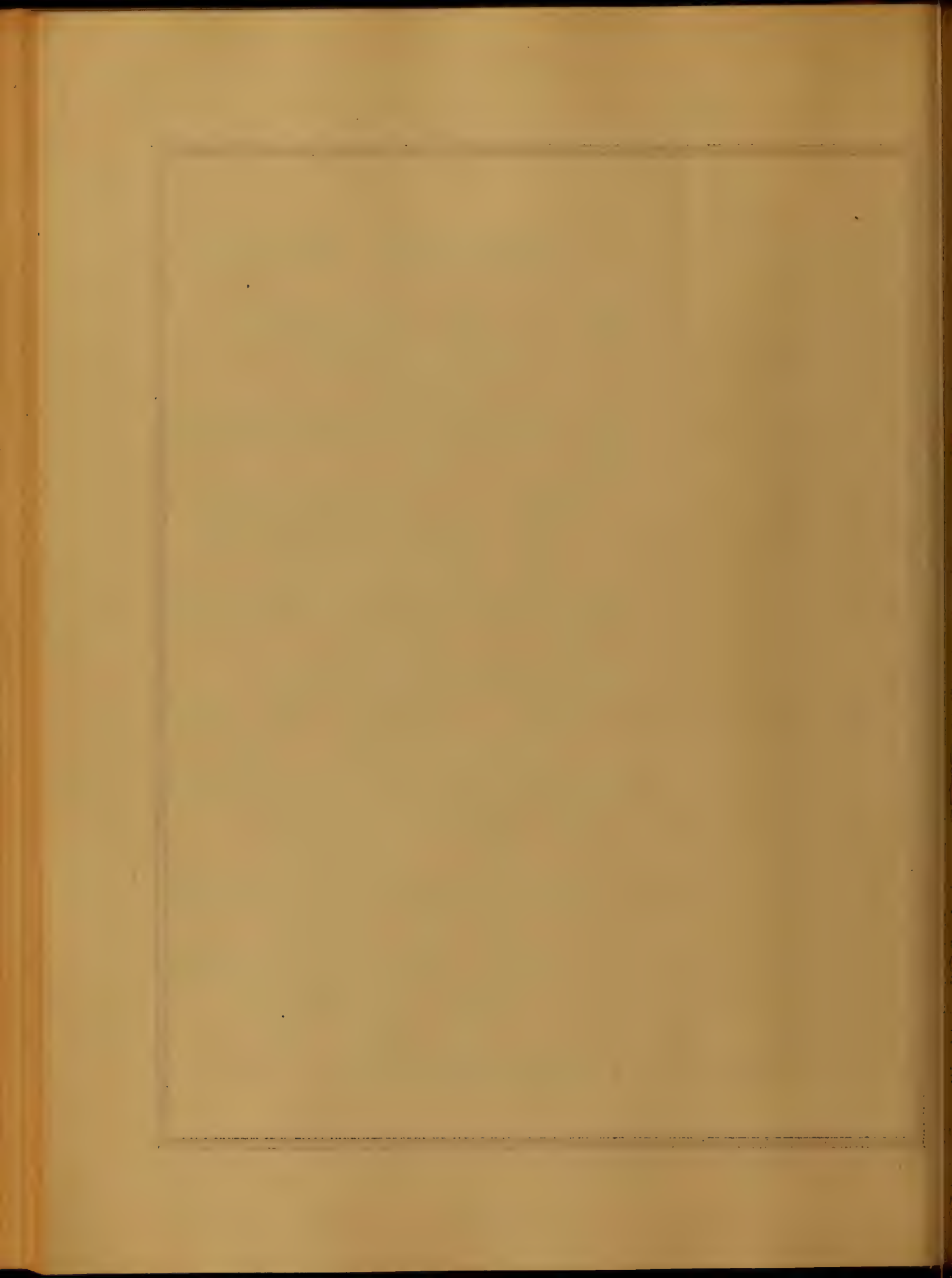
is known by the eruption making its
appearance upon the second day with
catachol spots, but with
From roseola, it is distinguished by the
fever and sore throat & the eruptions in
the latter being irregular blotches
of a dark rose color instead of the pink
or scarlet tint.

Prognosis - The prognosis of scarlet
fever will be much influenced by the nature
of the prevailing epidemic. It sometimes
invades with such overwhelming rapidity
as to destroy life before any pathological
changes can be effected. Scarlatina diffusa
is dreaded on this change if it be frequent



larkly through its course. Should delirium
 supervene, as it frequently does in children,
 then the prognosis is unfavorable. A sud-
 den fading of the eruption is also a symp-
 tom of great danger. The danger of
 Scarlatina is greatly increased by den-
 tition. Pregnancy adds to the danger
 & results in miscarriage frequently -

Treatment. The Duple form, says
 Sydenham, is fatal, only through the
 officiousness of the doctor, and requires
 no treatment but good confinement to the
 house for several weeks, after the disap-
 pearance of the disease. Here dress patient
 warm clothing. Spare diet, and attend



tion to the bowels - Dr. Crew in his lectures
 upon Belladonna, strongly recommends
 its use in this disease as a prophylactic
 many authors however expressing very little
 confidence in its virtues. Bleeding and
 active purgation are not indicated in
 Scarlatina. Dr. Howard recommends the
 free use of Opium, & Alum as an em-
 ic in case the stomach be over-loaded,
 and after its action Magnesia may
 be given as a laxative purgative beyond
 what of cleaning out the bowels being
 prohibited. The Nutrient mixture
 Sponging the surface with rosegerm
 water or glycerine and cream. Dr. The

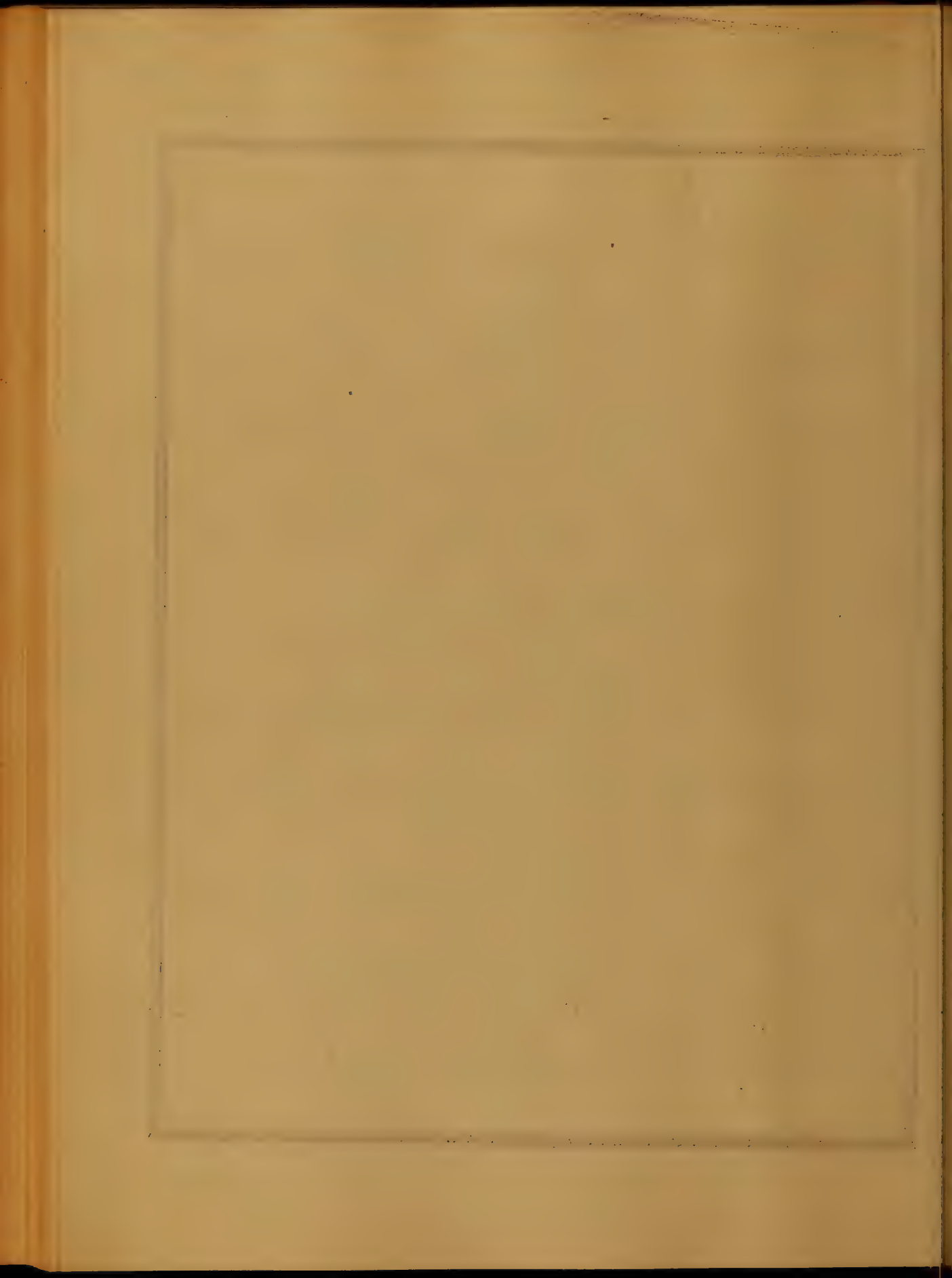


Angina form gargle of Chlorate of Potash
 Heat to the throat and ice internally as before.
 Phlores are particularly injurious because of
 their acting as an additional irritant.
 The tincture of Iodine is not a few to
 some objection, and is an admirable remedy
 of the ulceration of the nose takes place,
 when you should resort to injection
 of warm water or add sufficient quantity
 of Pot. Mang. of Potash to impregnate
 the water may be used. Quinine is a val-
 uable medicine so long as the urine
 remains normal. In the maximum
 of most cases place the feet in warm
 water & apply heat to the head.

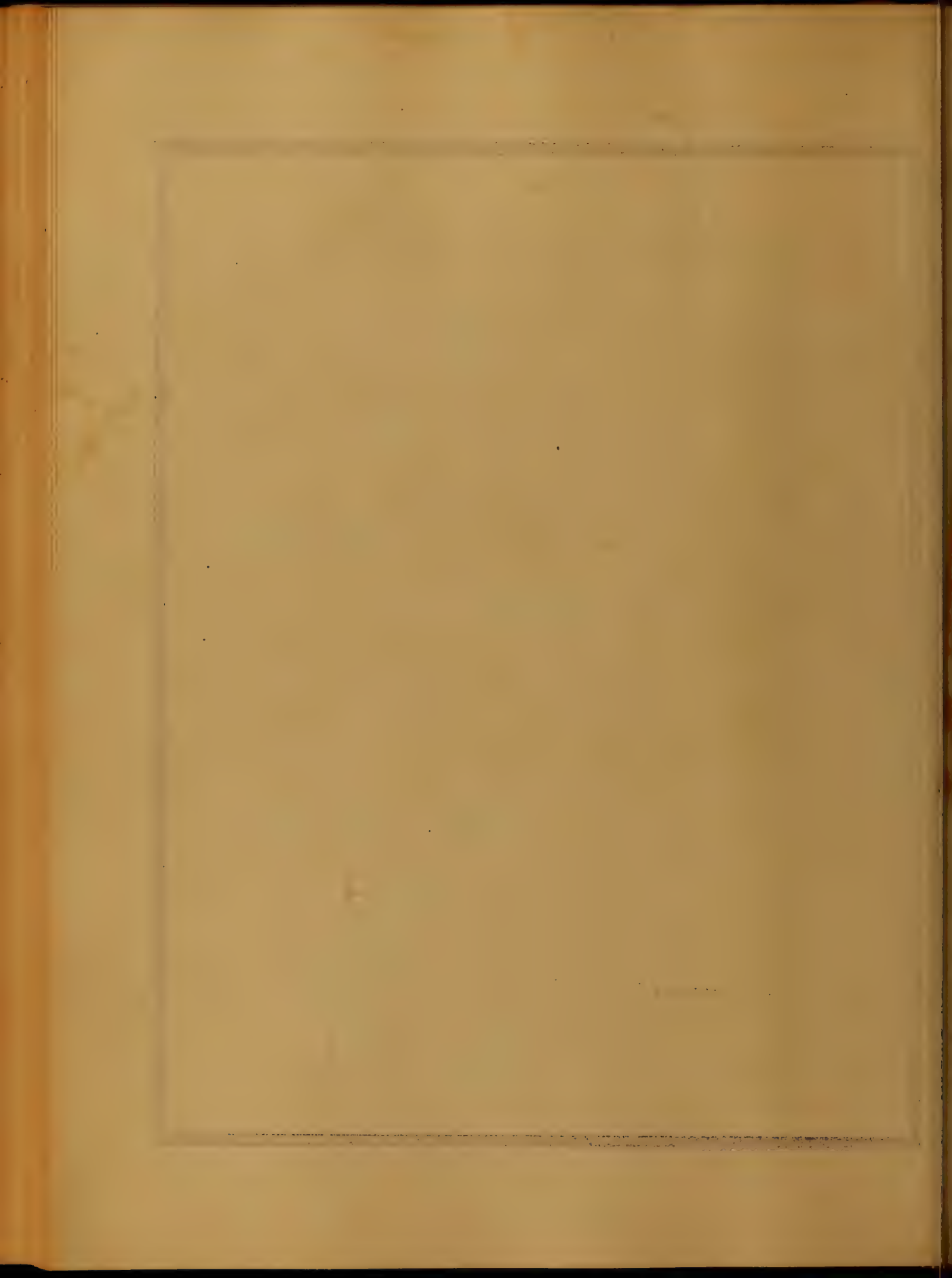


Should the pulse grow weak then Stimulate
 The acetic acid treatment is strongly lau-
 ded by some practitioners, also that
 of Carb. of Ammonia. The most im-
 portant thing to be looked after in
 this disease is, in the language of
 Dr. Howard, Hygiene -

Should Dropsy make its appearance
 The same remedies should be resorted
 to as would be indicated in Dropsy
 resulting from other causes, and
 among the most reasonable of these
 are, the hot air bath the free
 use of Digitalis and Mars. Sulph.
 Iron, except for heat and urine



require the use of the lancet -



AN
Inaugural Dissertation

ON

Narcotics.

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

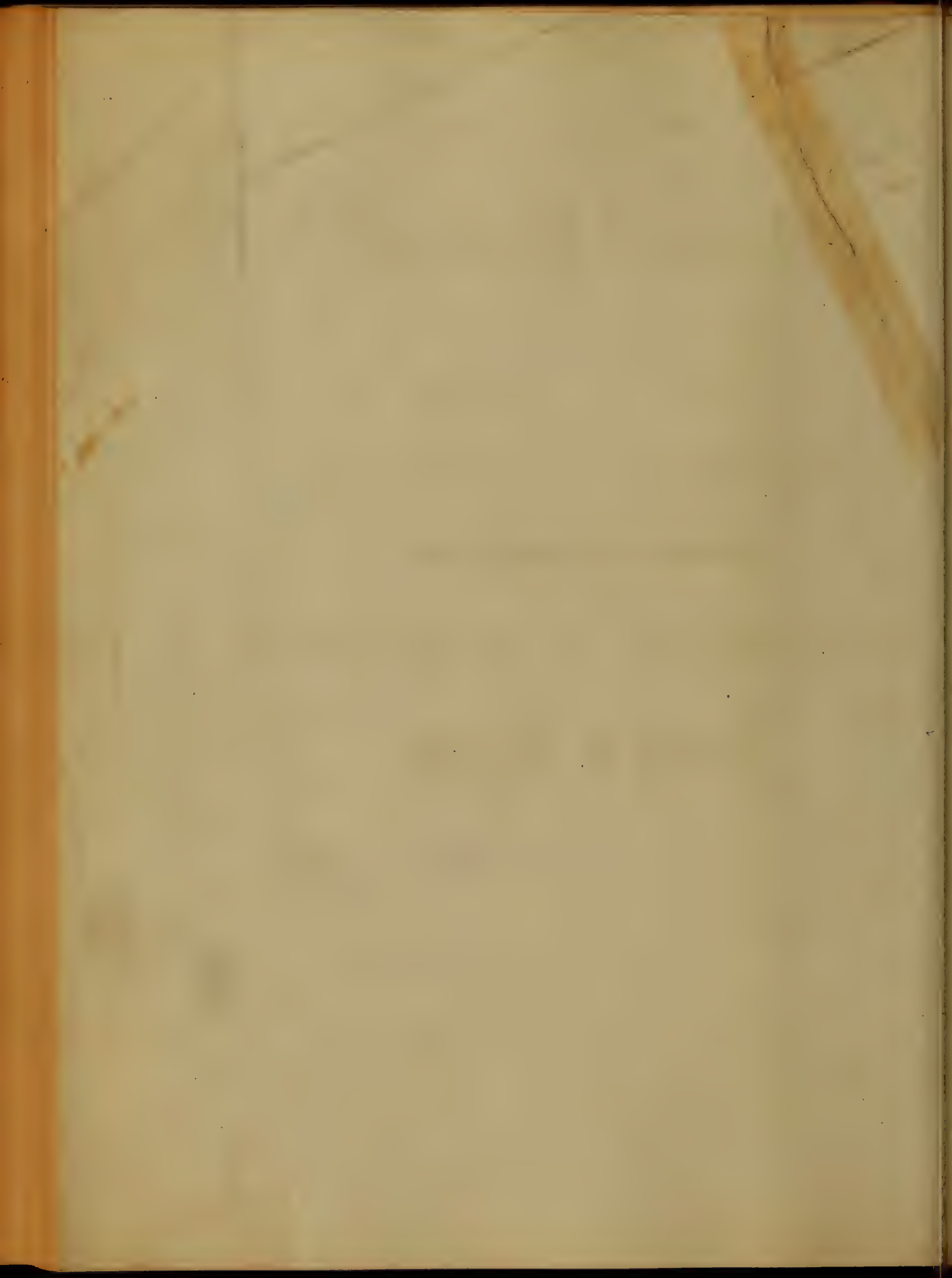
L. M. Crumpton

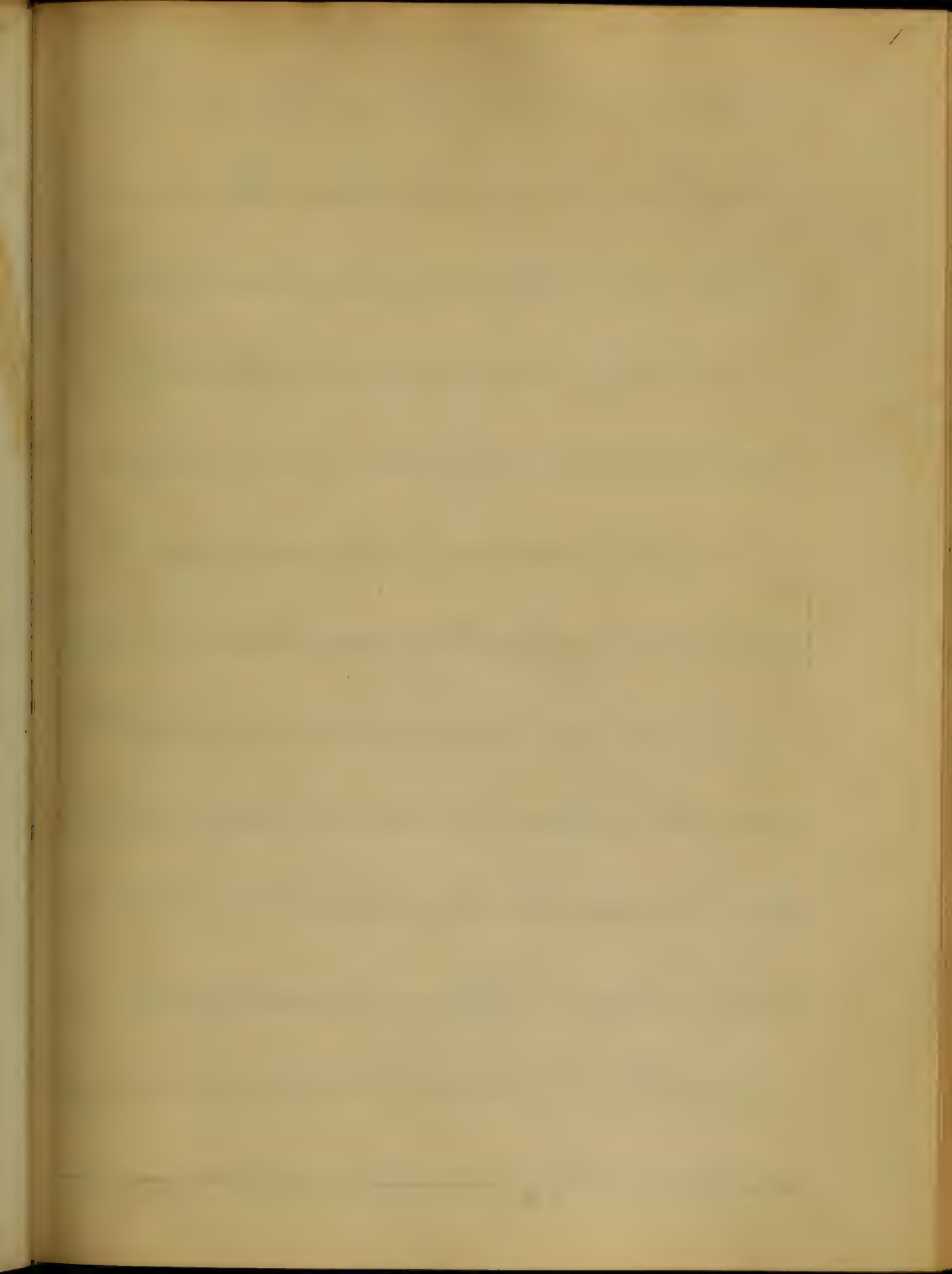
of

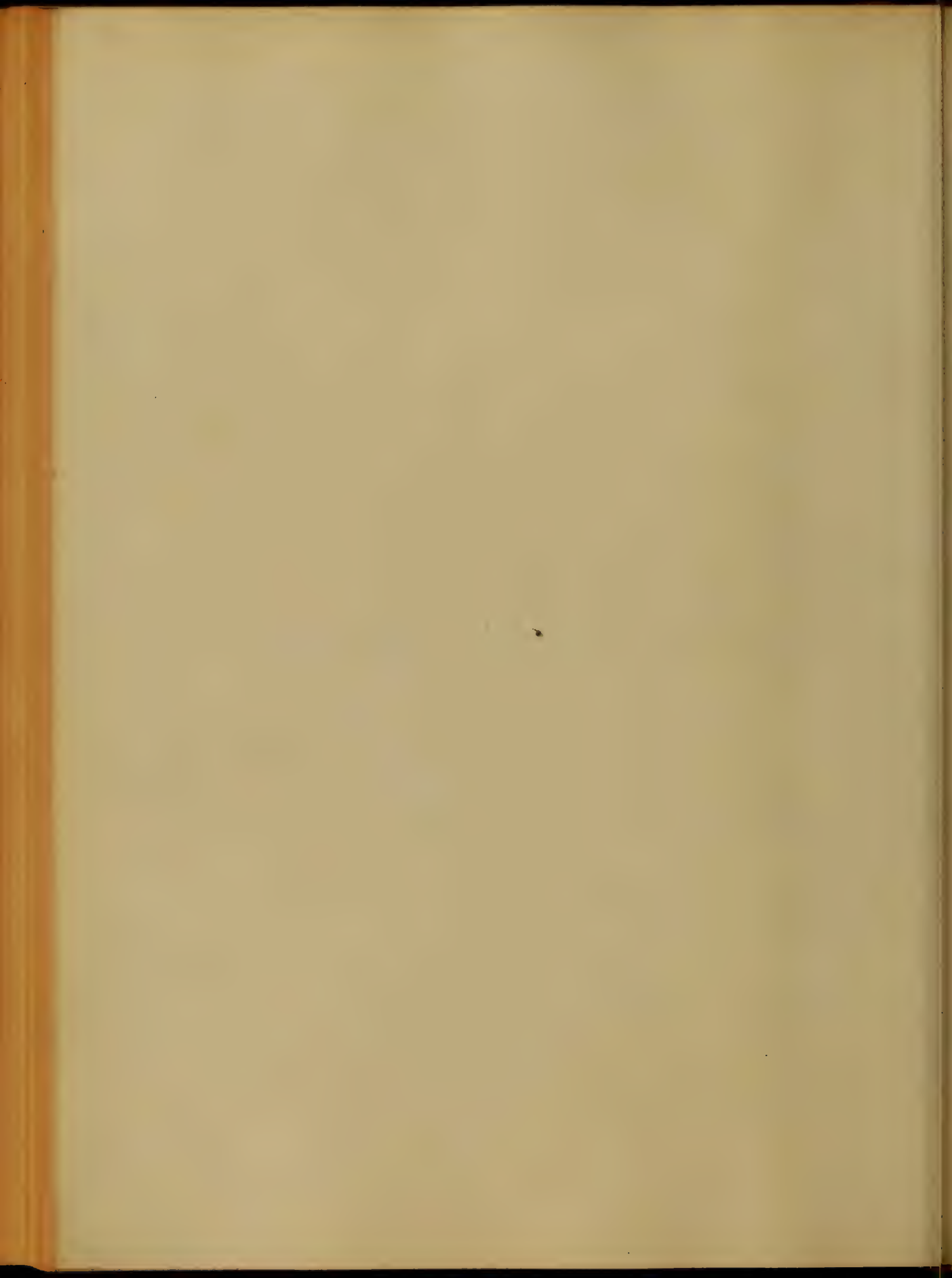
Maryland

Session of

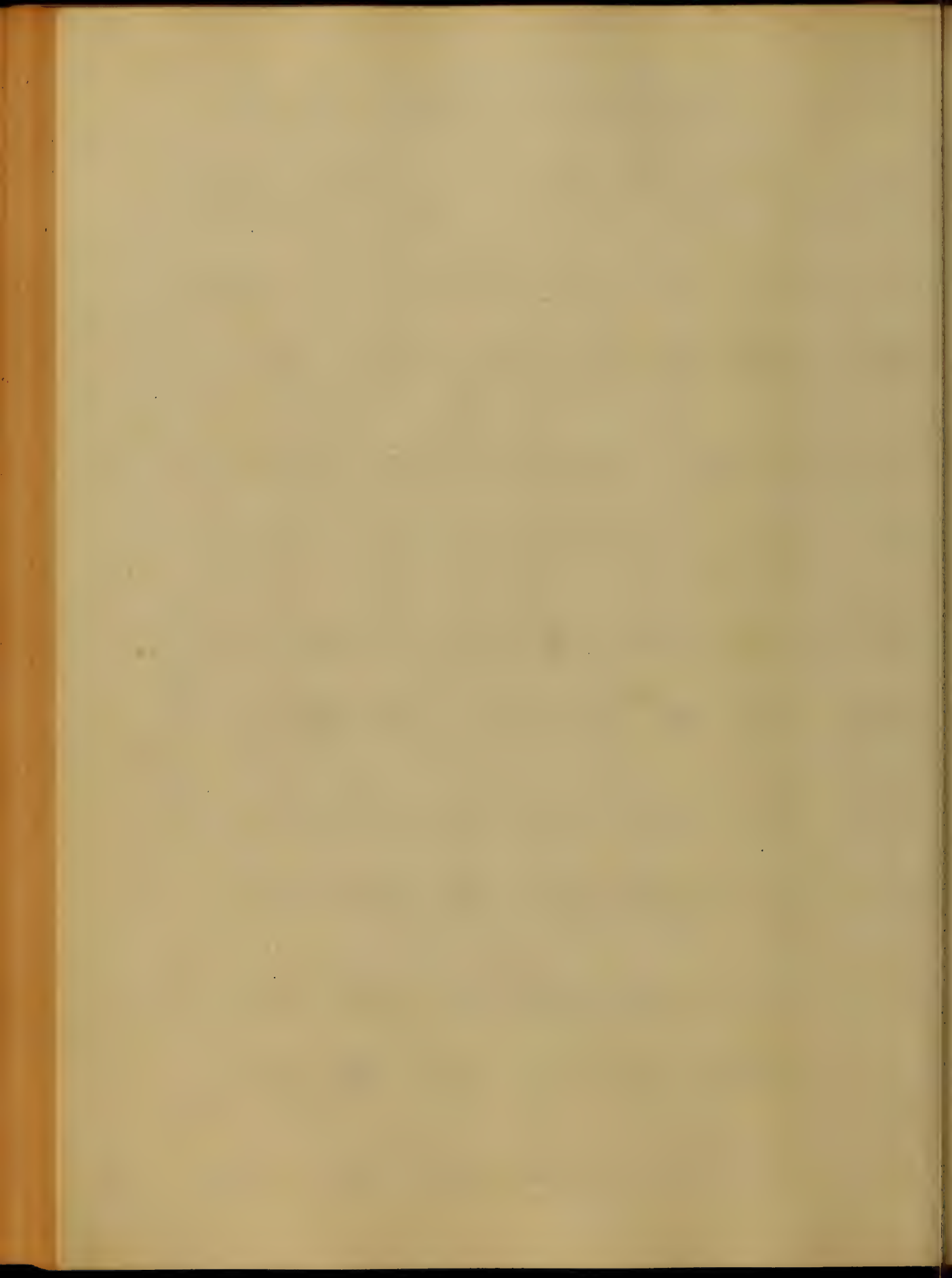
1867.



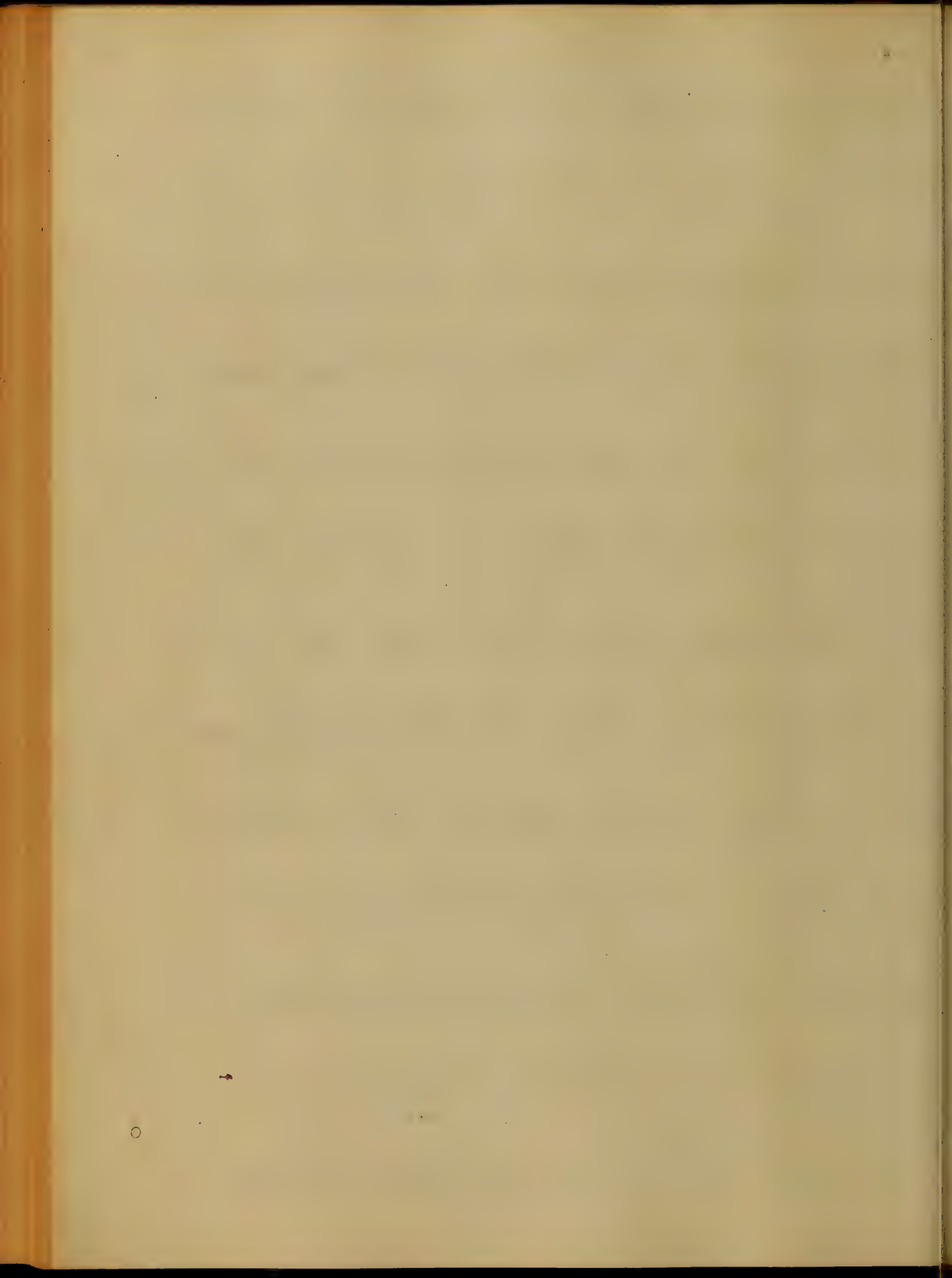


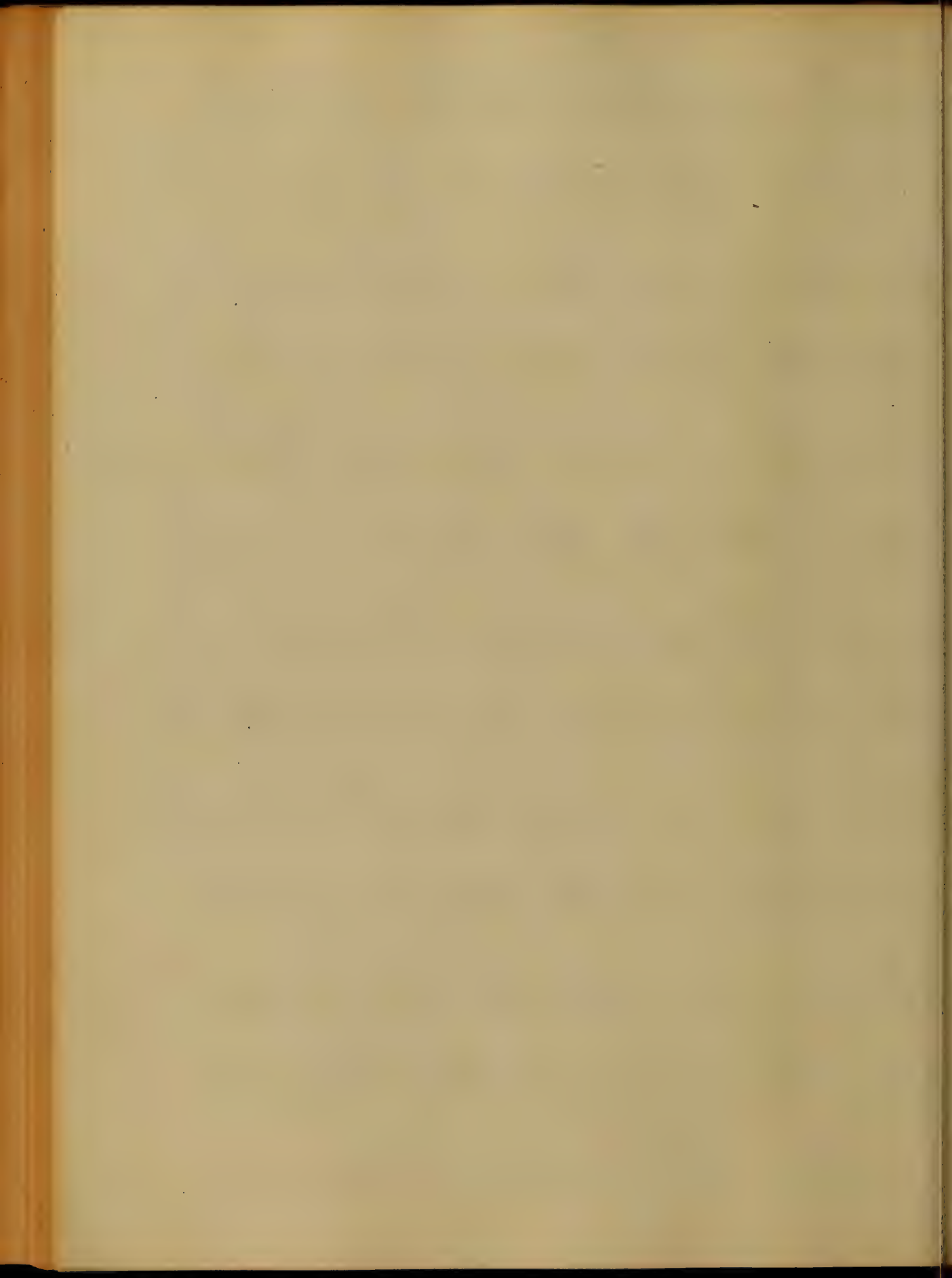


The strongest motive which
 encircles the bosom of the young
 man or the ardent Physician is
 that which enables him to
 dispel the sufferings of mor-
 tal man. and kindle up
 the glowing flame of friend-
 ship in the hearts of those
 over whom aching flames
 he has diffused the soothing
 and salutary effects of his
 grateful balm. The Physician
 who has been busy for years in



the work of his noble profession
and who, if faithful to himself
must often examine and review
the road over which he has trav-
eled and will observe, in the
far distant future, when he
has been crowned with the lau-
rels of experience, the soothing
and heavenly effects of sarcas-
tic: and it will rekindle the
flame of pensive memory
and cause him to traverse
again the wide spread fields





two different patients. In the one
perhaps a deep and tranquil
sleep ensues. pain is relieved.
The disease is checked, and the
patient is on the road to recovery.

But, what of the other! alas how
different a scene is presented.

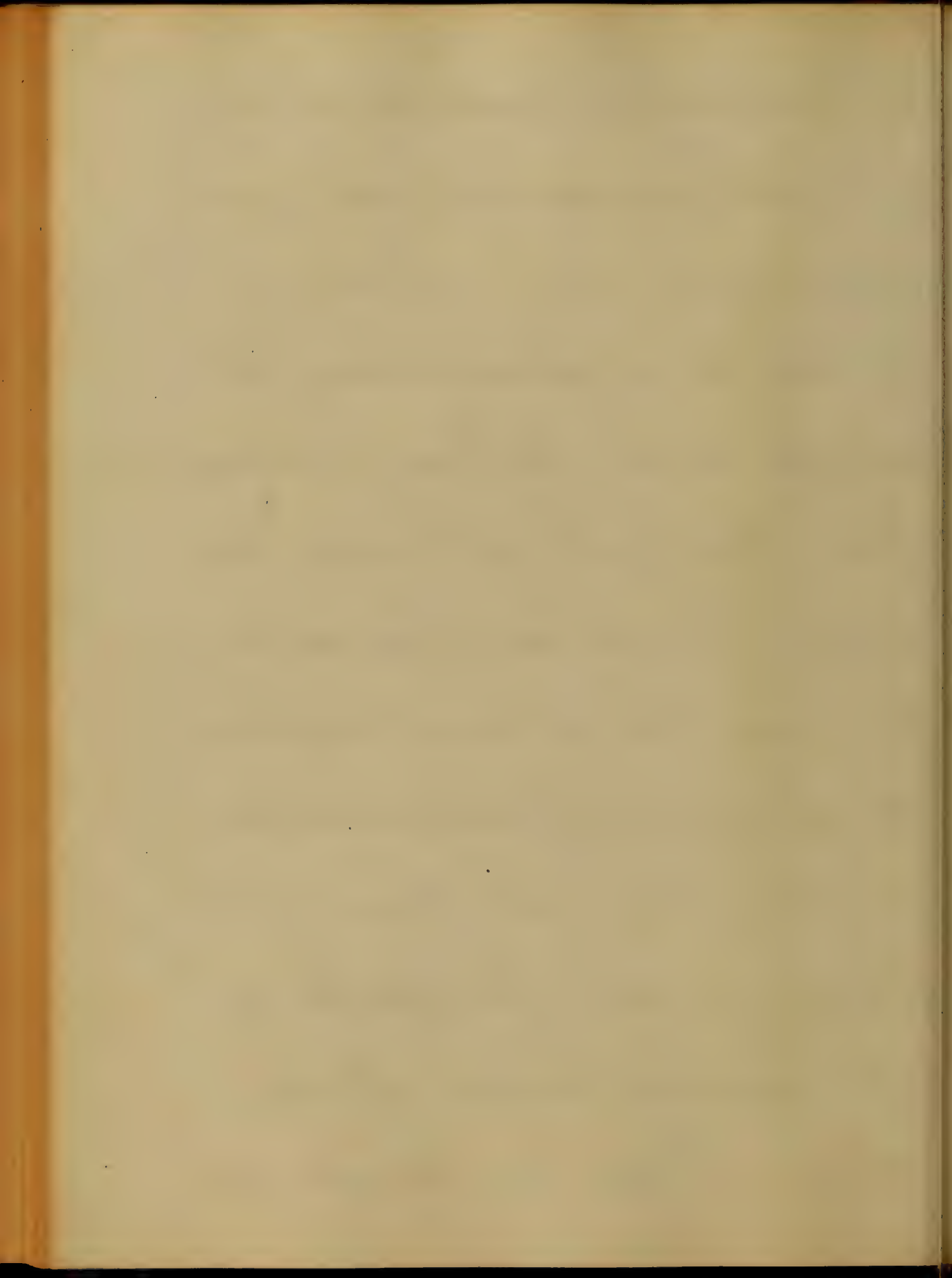
too well has it done its work.

the unfortunates-victim sleeps
to wake no more, and his

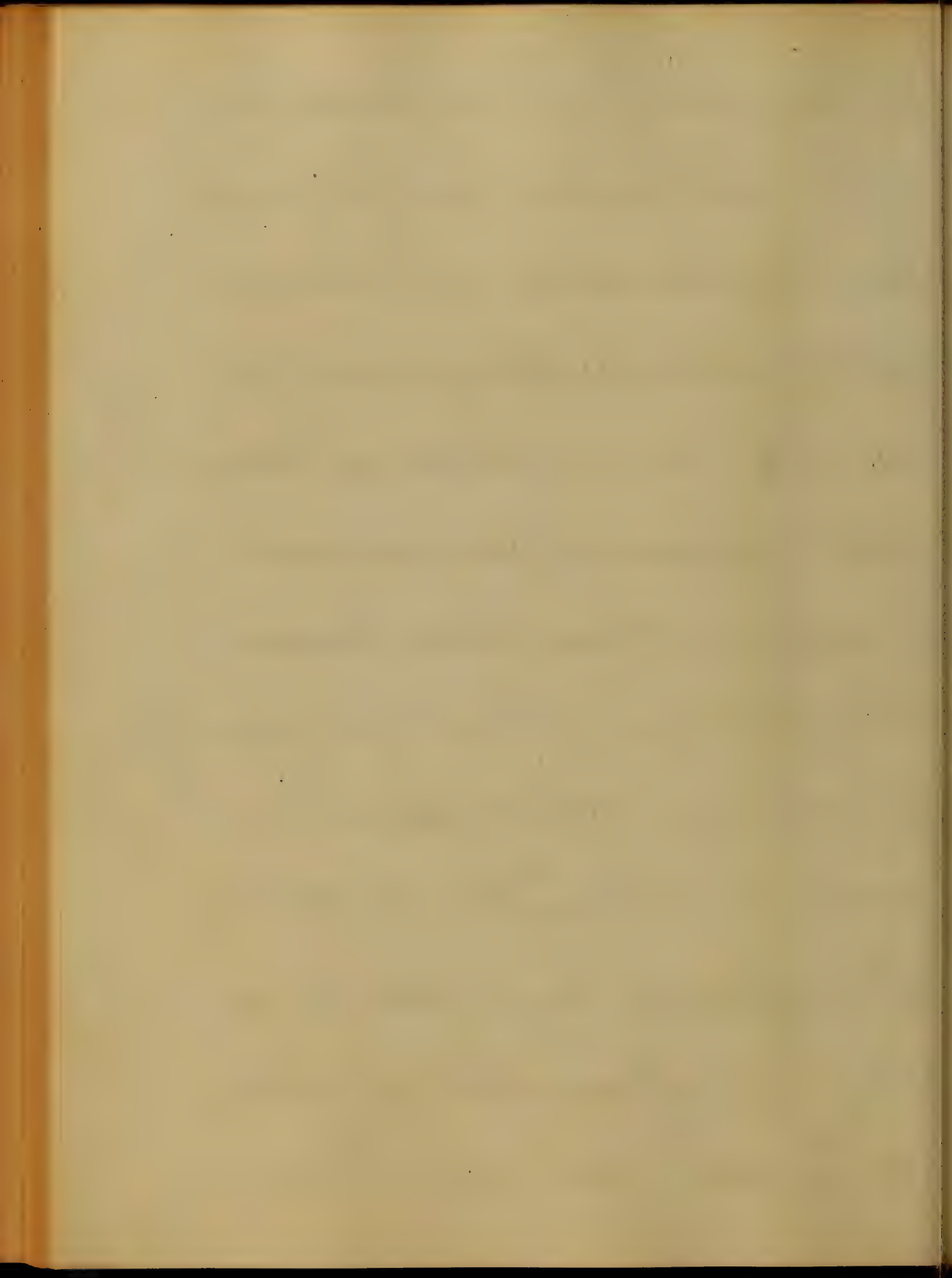
spirit takes its flight to

the unseen world. "Surely

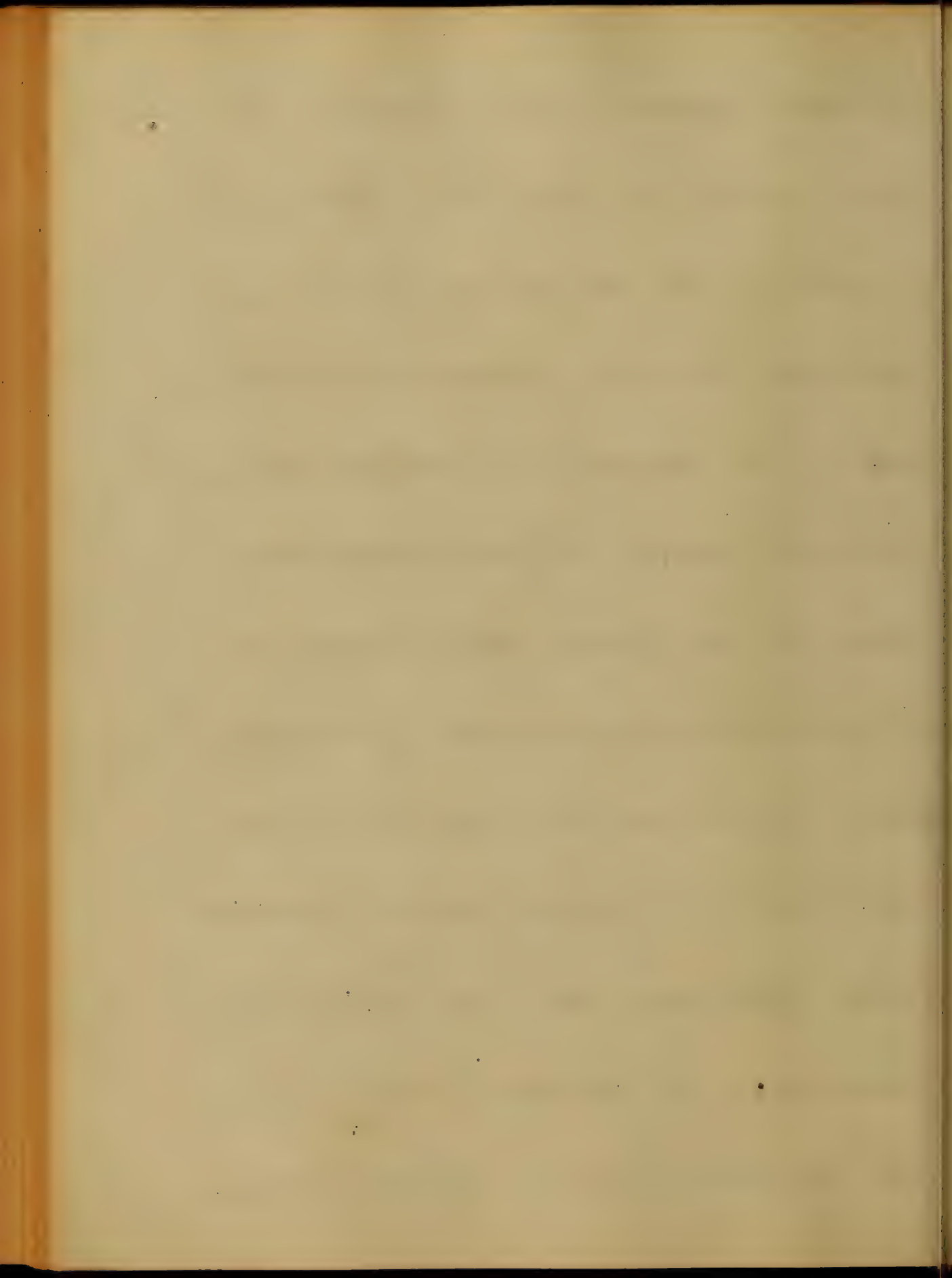
there no one without an



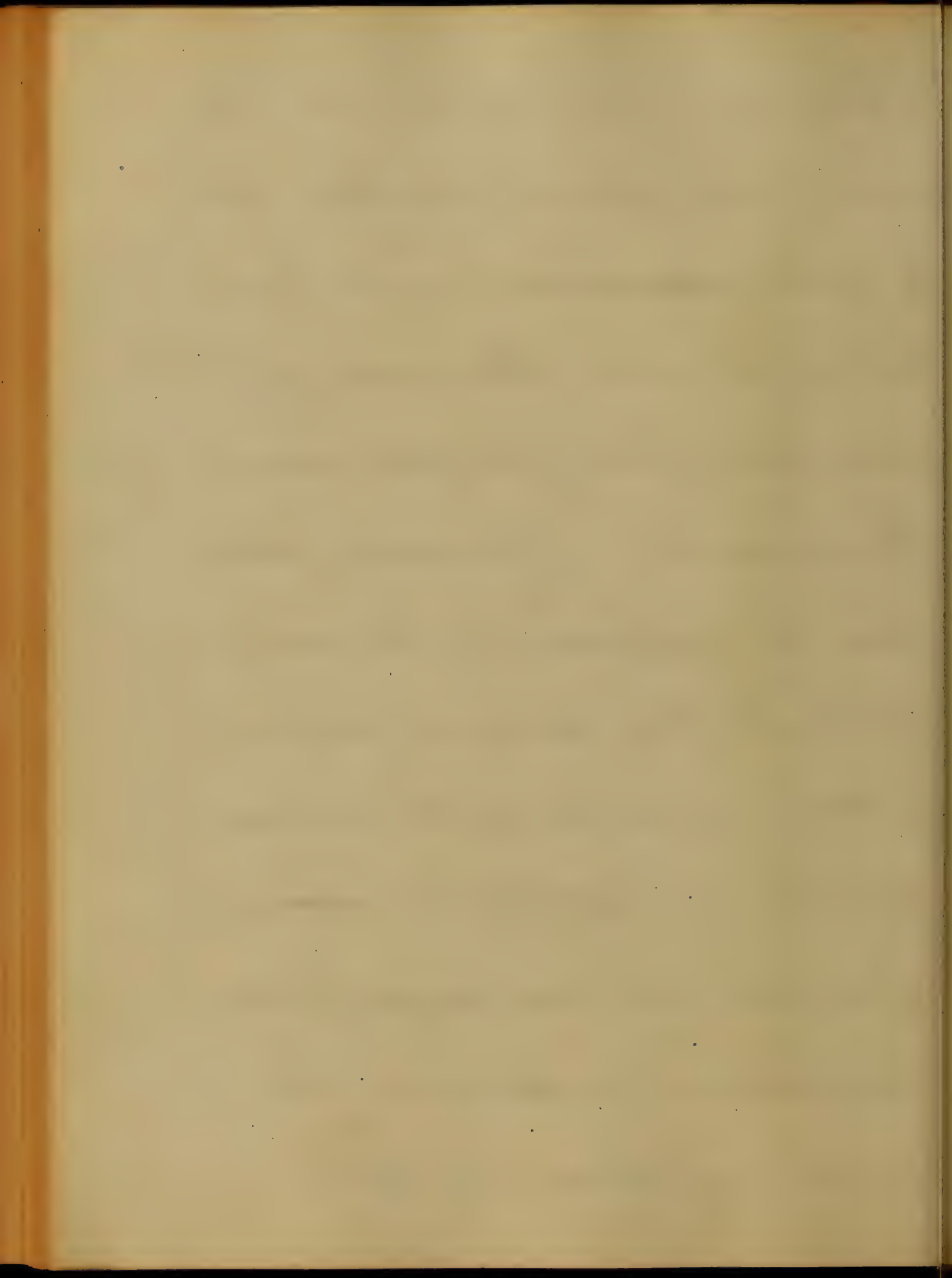
earnest and arduous preparation
will dare embark in a calling
like this, so copious of good if
rightly used, so full of peril to
oneself and to society if domi-
nated by ignorance or unfaith-
fulness. There is perhaps no
other field in the whole range
of medicine, which offers a
more inviting ^{field} for the mind
of a diligent and aspiring
student, than that of nar-
cotics. And from none have



greater good, more lasting ben-
efit and a for the advan-
ment of the cause of medicine,
sprung. Materia Medica teaches
us of no medicines whose praise
can be more highly extolled,
nor do we find there any di-
scredit them in words of destruc-
tion, when administered by an
unskilful hand. As it is impos-
sible for any one in the first
instance to furnish with even
the slightest degree of precision

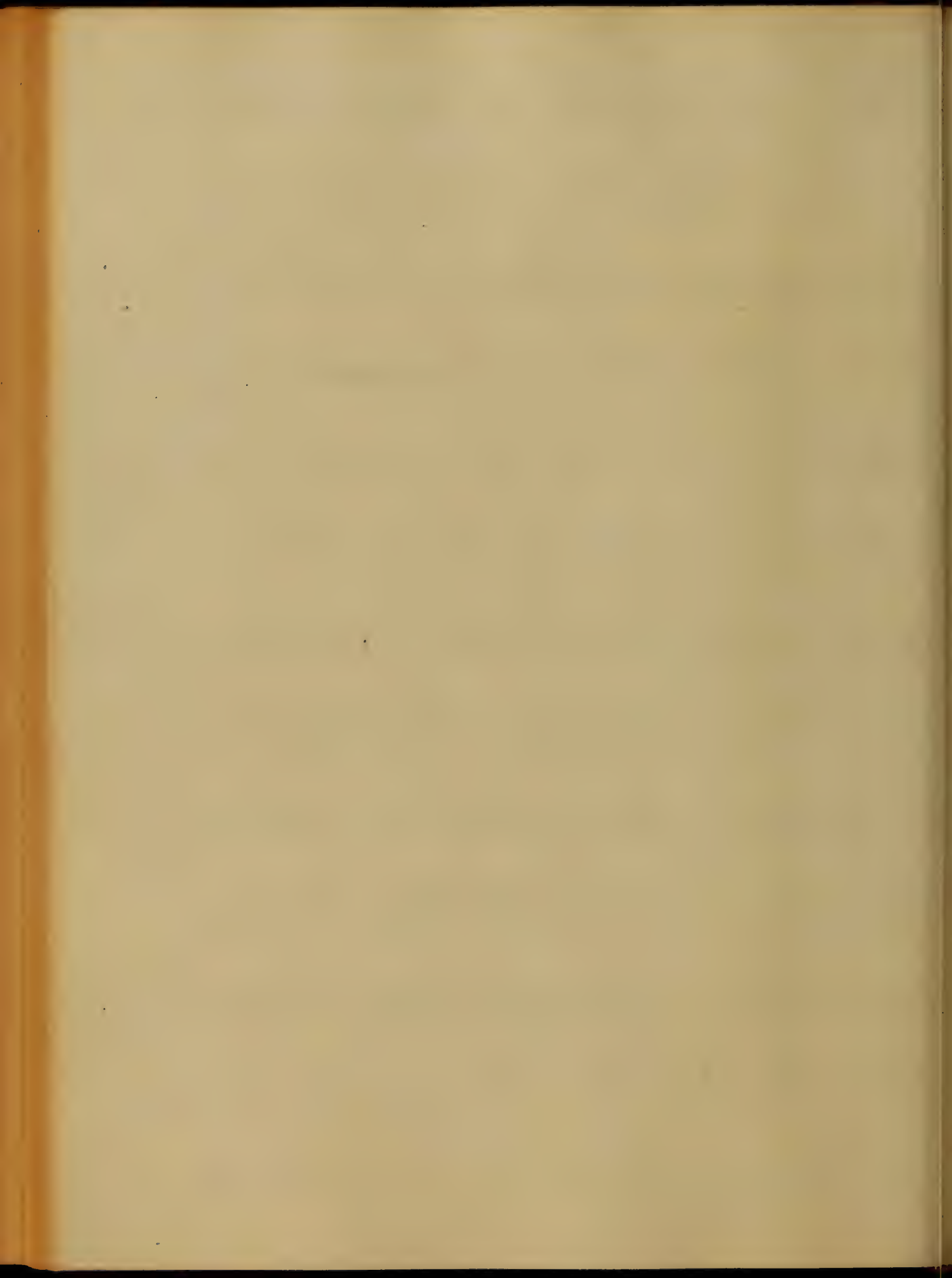


what will be the effects of any medicine, by any other means, than that of direct experiment, I must be content to follow - the opinions of others, who have written upon this subject. Narcotics then may be defined to be medicines which at first produce some little excitement of the nervous system, in appropriate doses diminish nervous excitability, and produce sleep, and in excessive doses will destroy life.



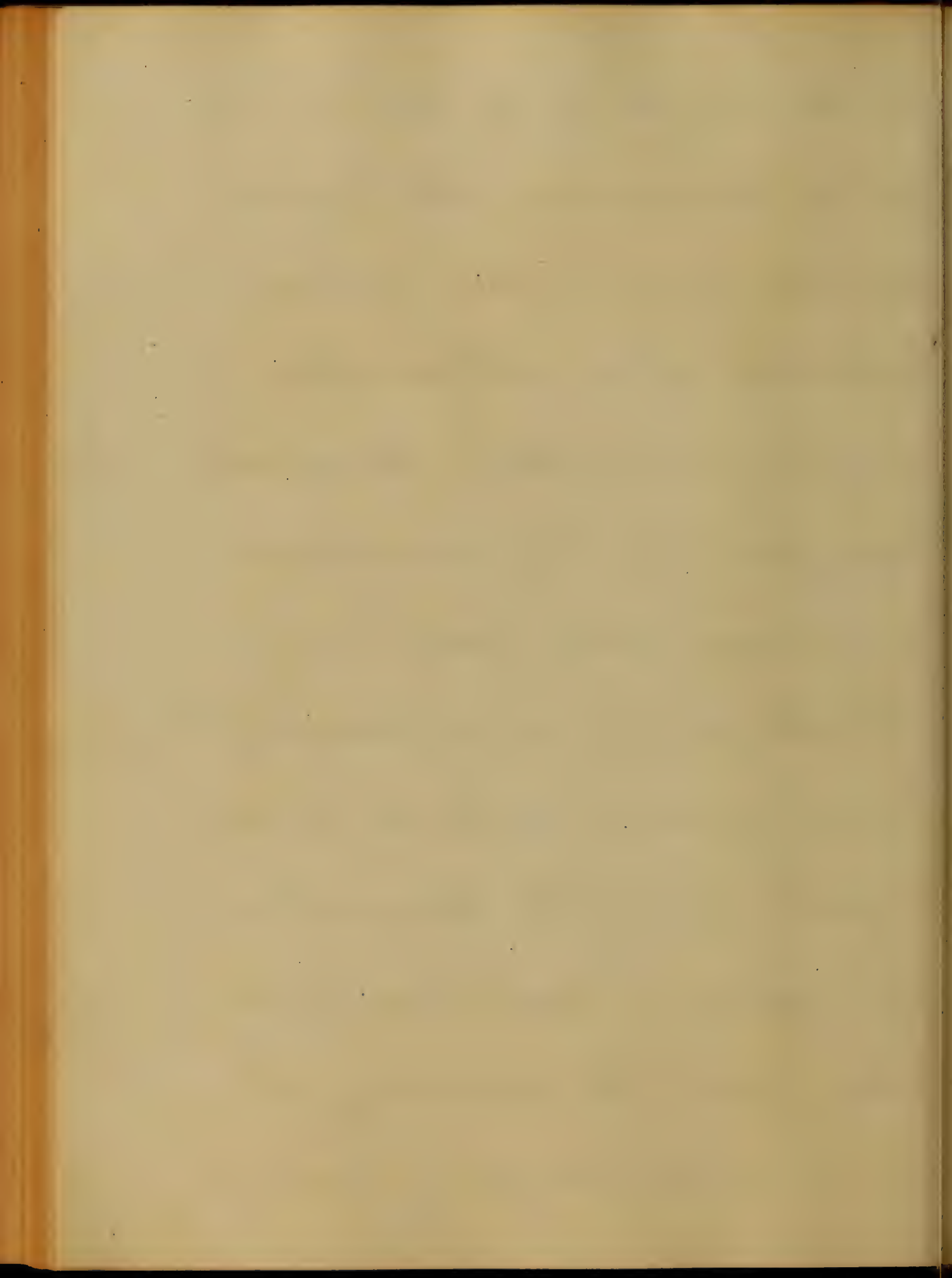
7

This description, though it is subject
to criticism, is one which we
may employ; because if it
does not set forth every
phenomenon in the action of
a narcotic, at the same time
it conveys to the mind nothing
erroneous: and for this reason
it may be accepted till the
further advancement of know-
ledge can suggest one more con-
clusive. It has been a medical
question and an exciting one.

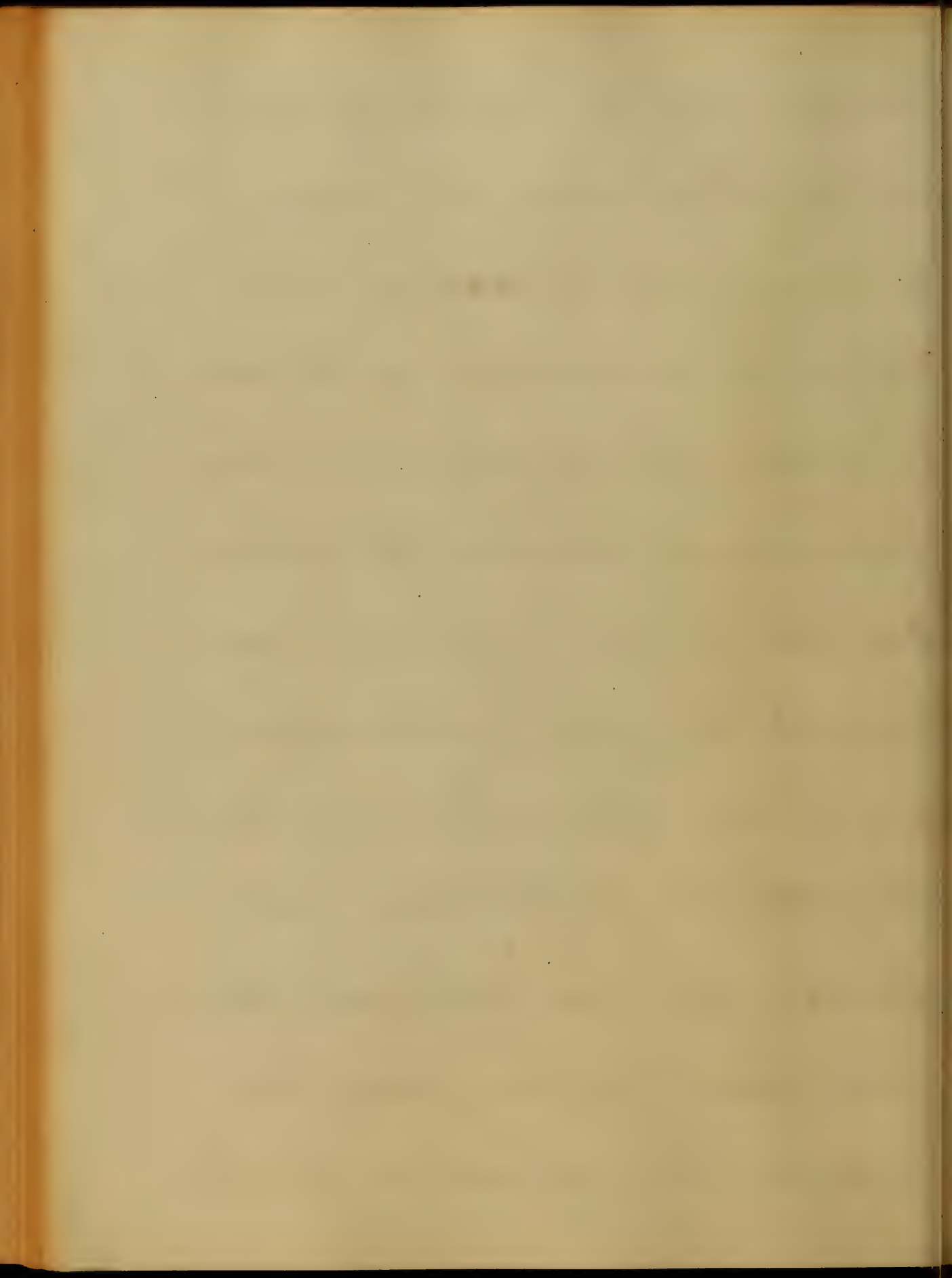


of inquiry as to the manner in
which narcotics exert their con-
stitutional effects. Very many
different theories have been
advanced, to explain the mystery,
and facts have been adduced
to support them all.

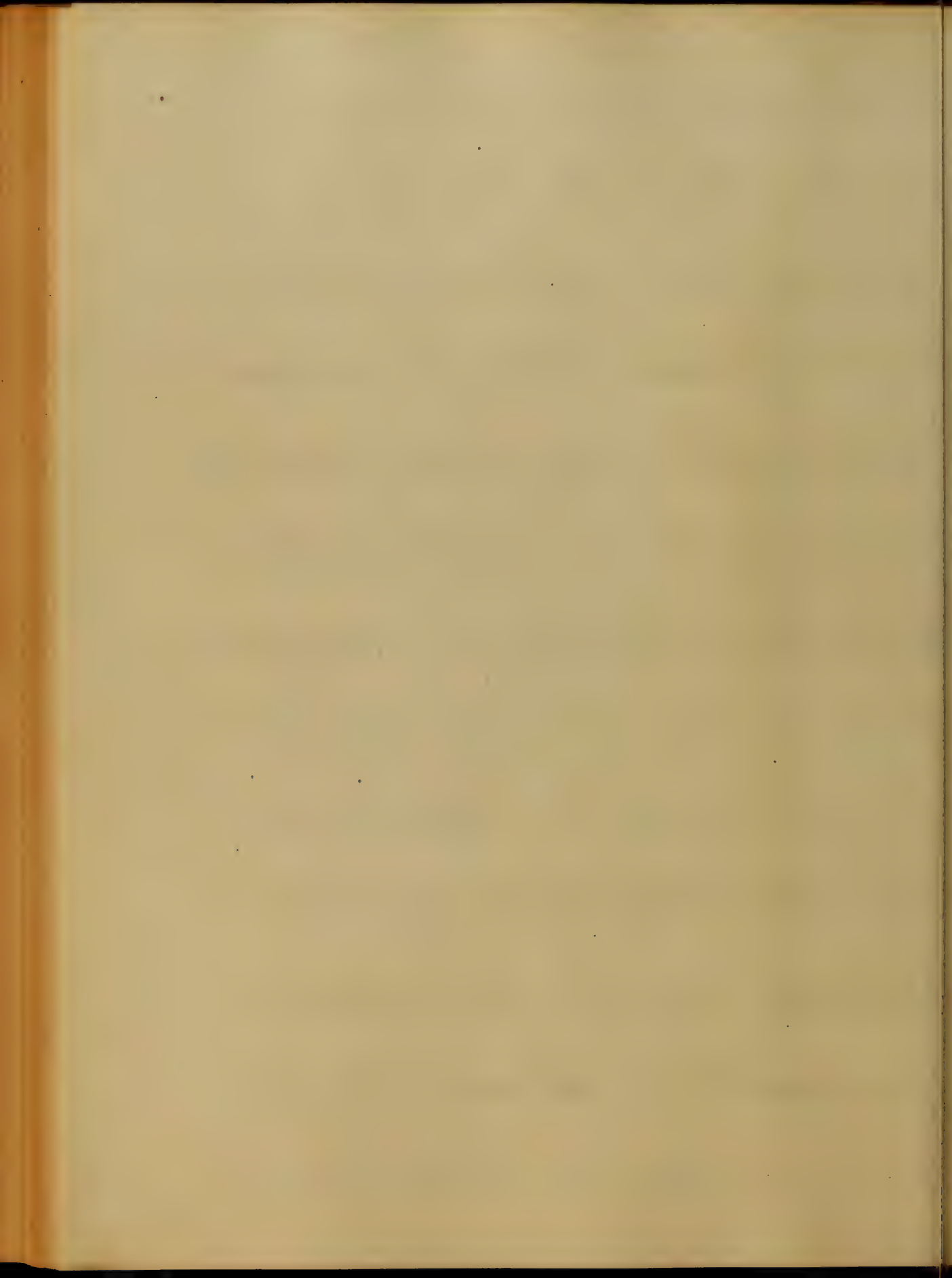
Whether they first act upon the
nerves distributed to the mucous
membrane of the stomach, and
the impression conveyed from
thence along the trunk of the
nerves to the great nervous



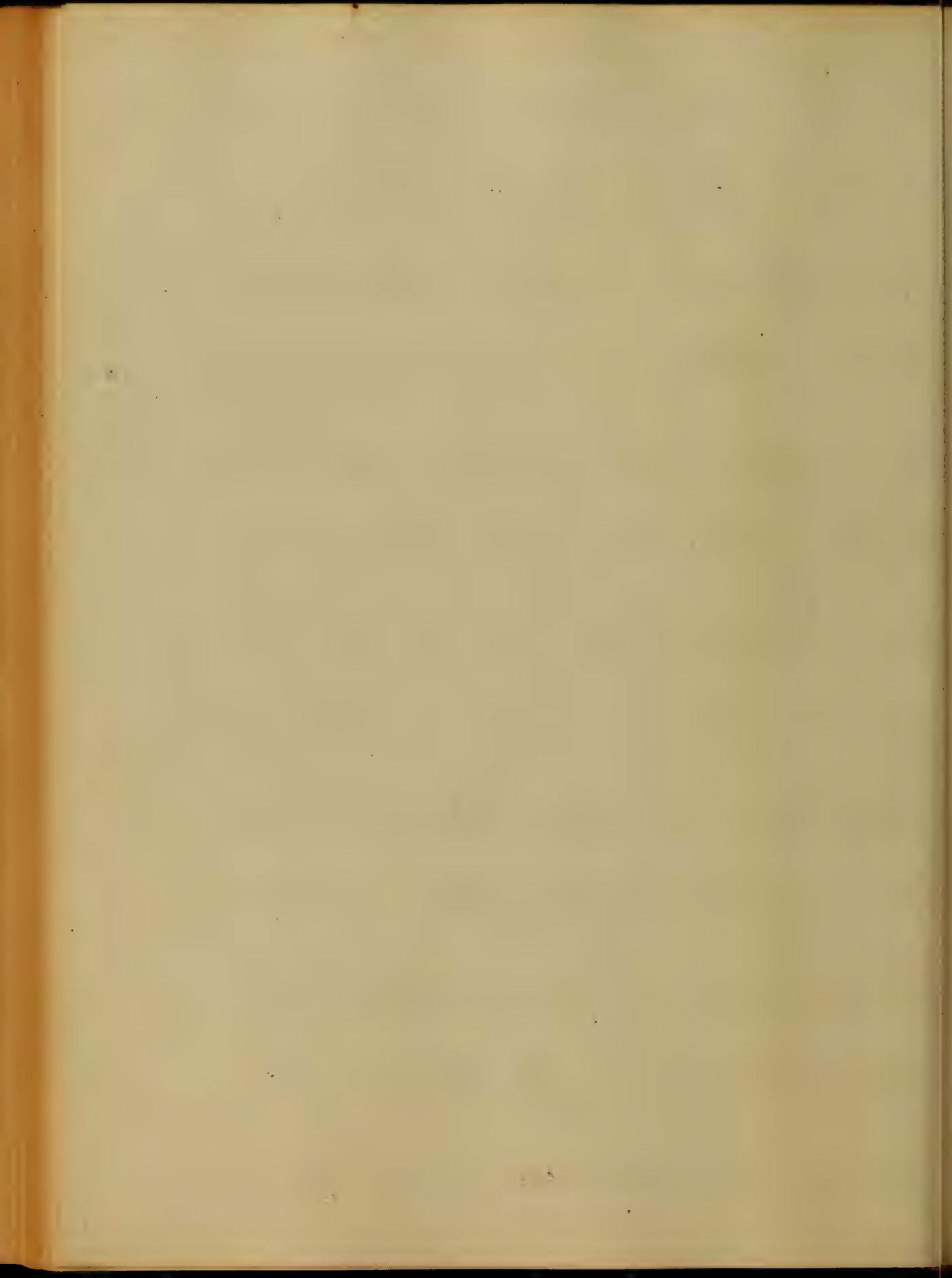
centers, or whether they do not enter
into the blood vessels, and make an
impression on the ~~nerves~~ nerves distrib-
uted to the inner coats of the vessels,
or whether they must not in every
case enter the current of the circula-
tion, and by this channel be con-
veyed to the great nervous centres.
is a question which has engaged
the attention of the medical pro-
fession, for some time past, and
even now there are many who
will not be reconciled to the most



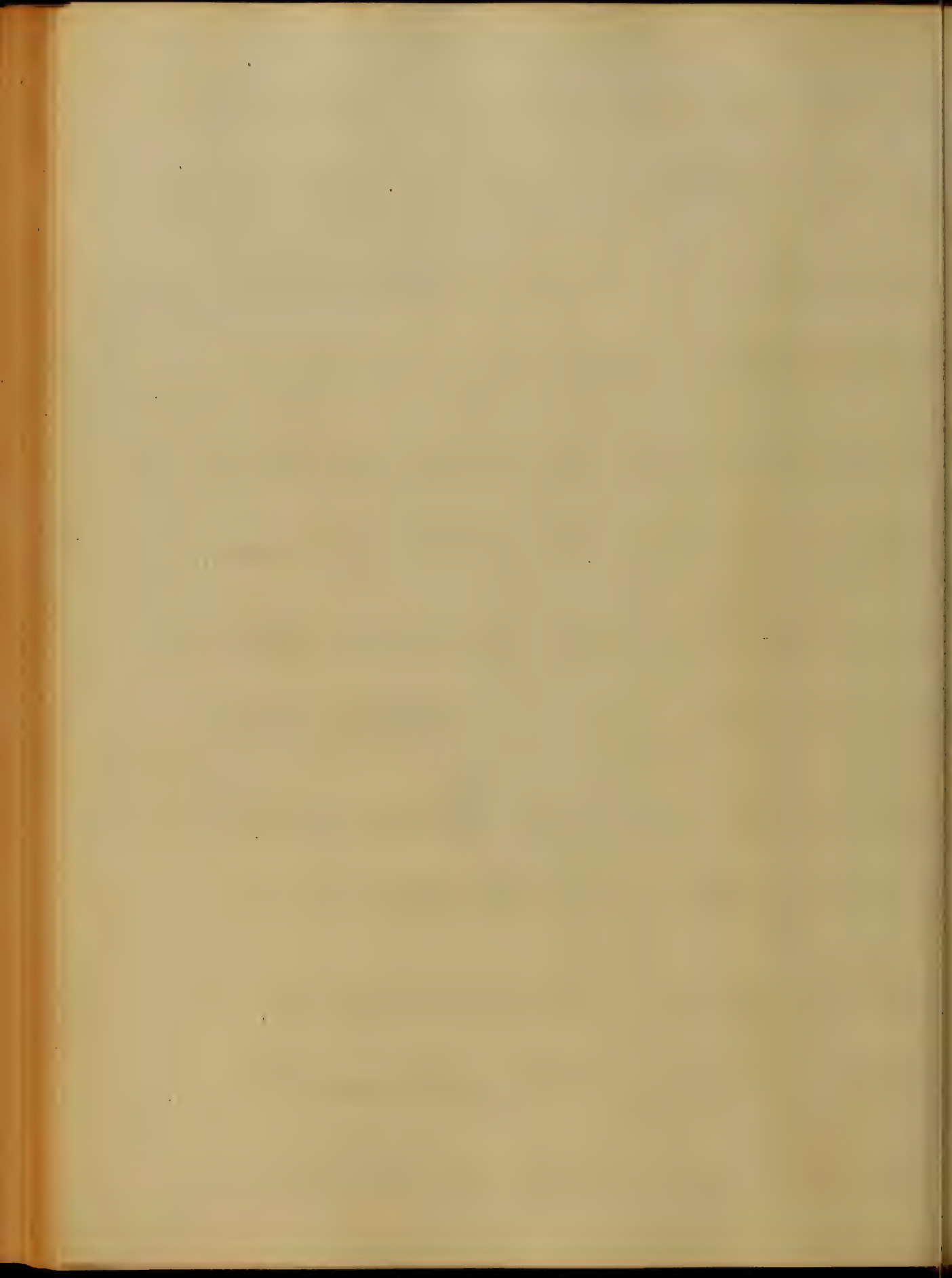
tenable explanation of this seeming
 mystery. However, who places the first
 mode of action, adduce as an argu-
 ment to support them, the great ra-
 pidity with which certain domestic
 agents make known their effects.
 But recent physiological experiments
 have demonstrated this theory to
 be invalid. for it is now known
 that the whole round of the cir-
 culation can be accomplished
 in less than the one half of
 a minute - and it is hardly prob-



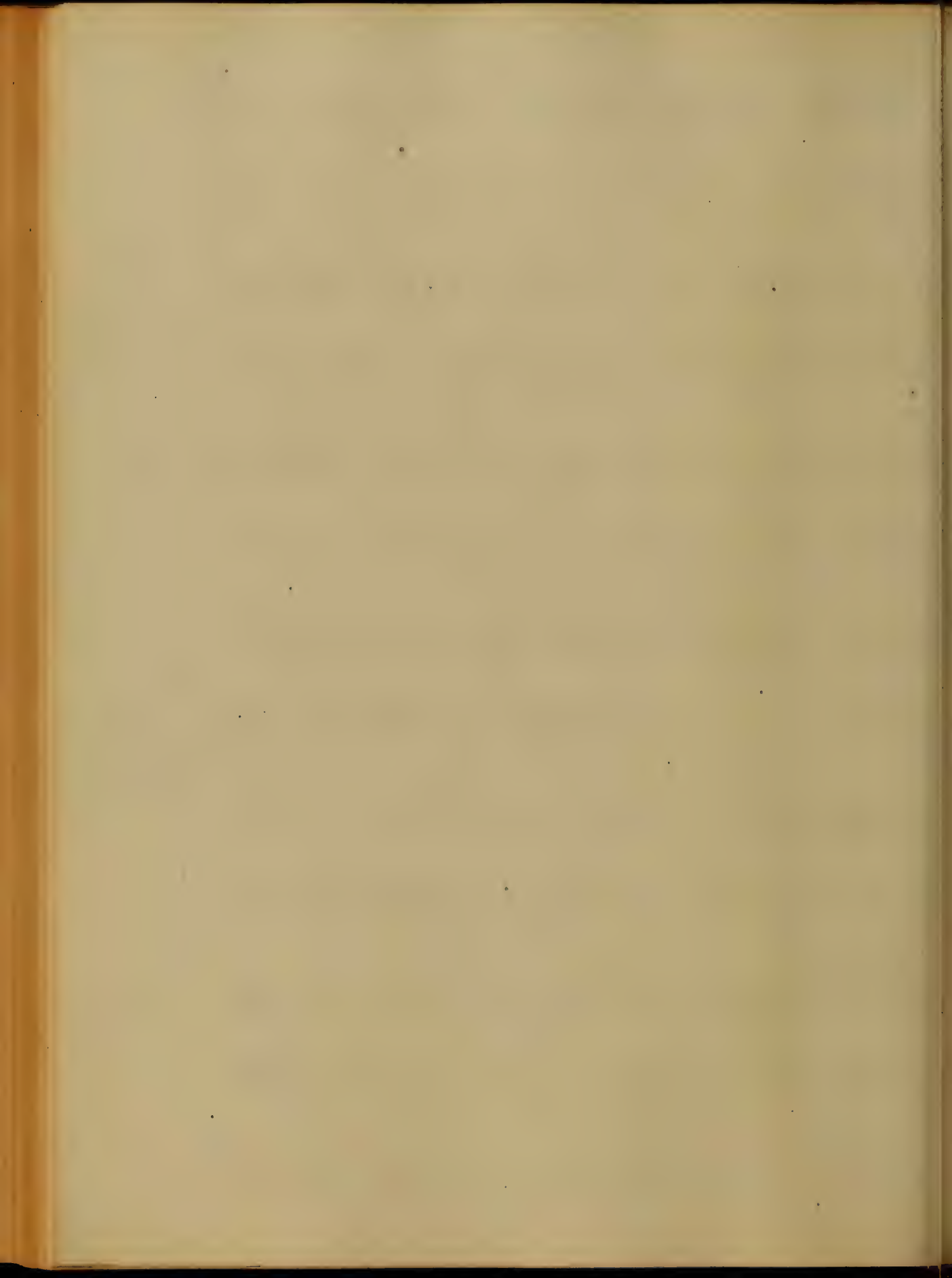
able that any part of the plan
under consideration, can affect
the system in a time much shorter
er than this. As to the second mode
of action viz. by an inspection
made on the various distributions
to the inner parts of the blood
vessels. It seems to be considerably
shorter, as not to demand a
moment's consideration - Hence
I will now close by with my
former comment. At the present
day, however, a very large majority



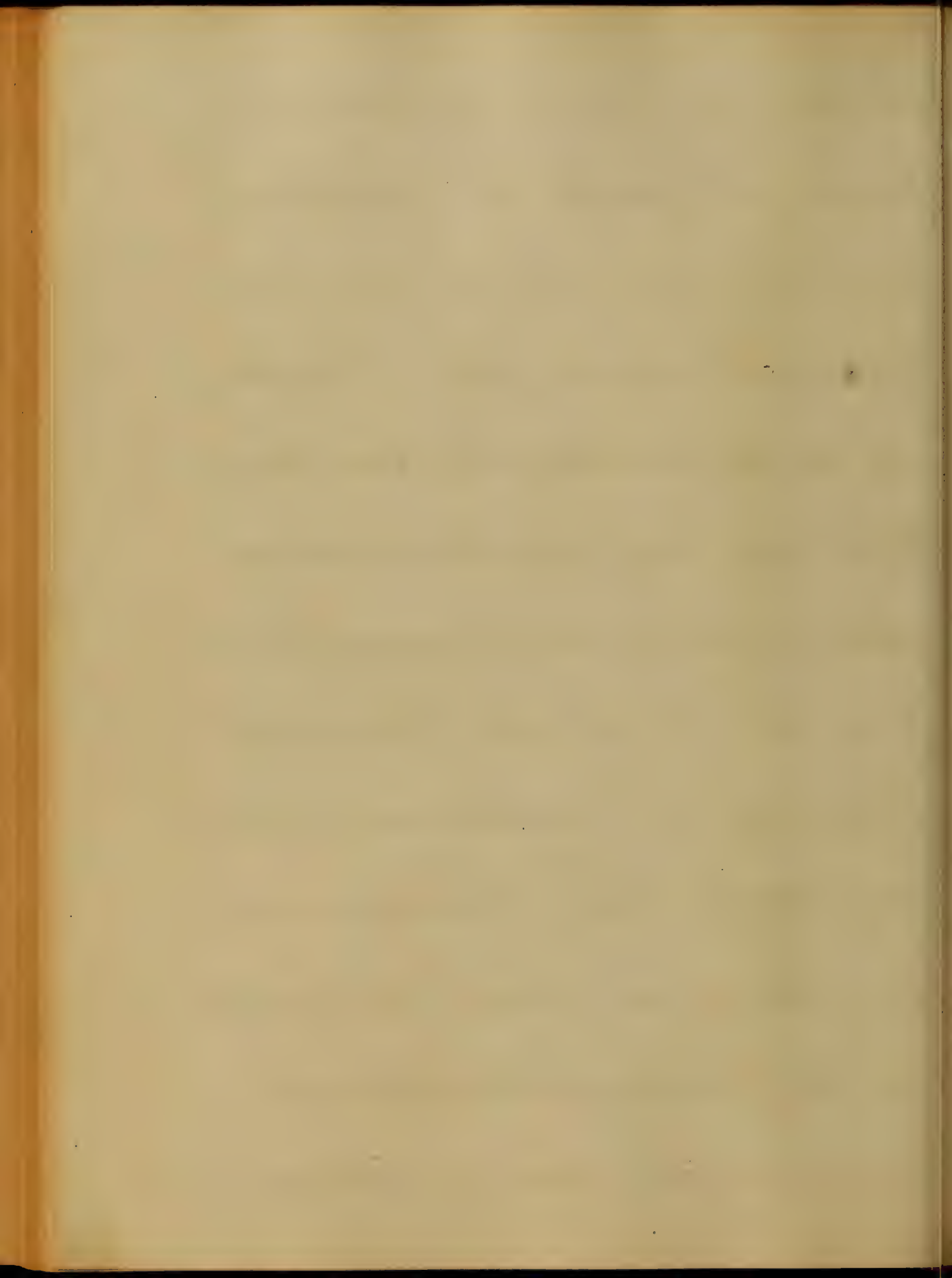
of the medical profession an early
opinion that the current of the cir-
culation is, ^{the} means by which the mor-
cotic effect is disseminated, that is,
to say, conveyed to the nervous centres.
This is conclusively shown by numer-
ous experiments on the lower orders
of animals, some of which it may
be well to mention. Magendie has
shown that all the tissues in
the leg of an animal may be
severed except the principal
vessels and nerves, if now be



moved compress the vessels and
 introduce some poison into the
 extremity of the limb. no effects
 whatever were apparent but just
 as soon as pressure was taken
 off. the poisonous effects were
 immediately manifested and thus
 fully demonstrating the point
 in question. We also know of
 cases when a child at the breast
 has been poisoned by the mother
 taking a dose of opium. We
 can also detect it in the breast.

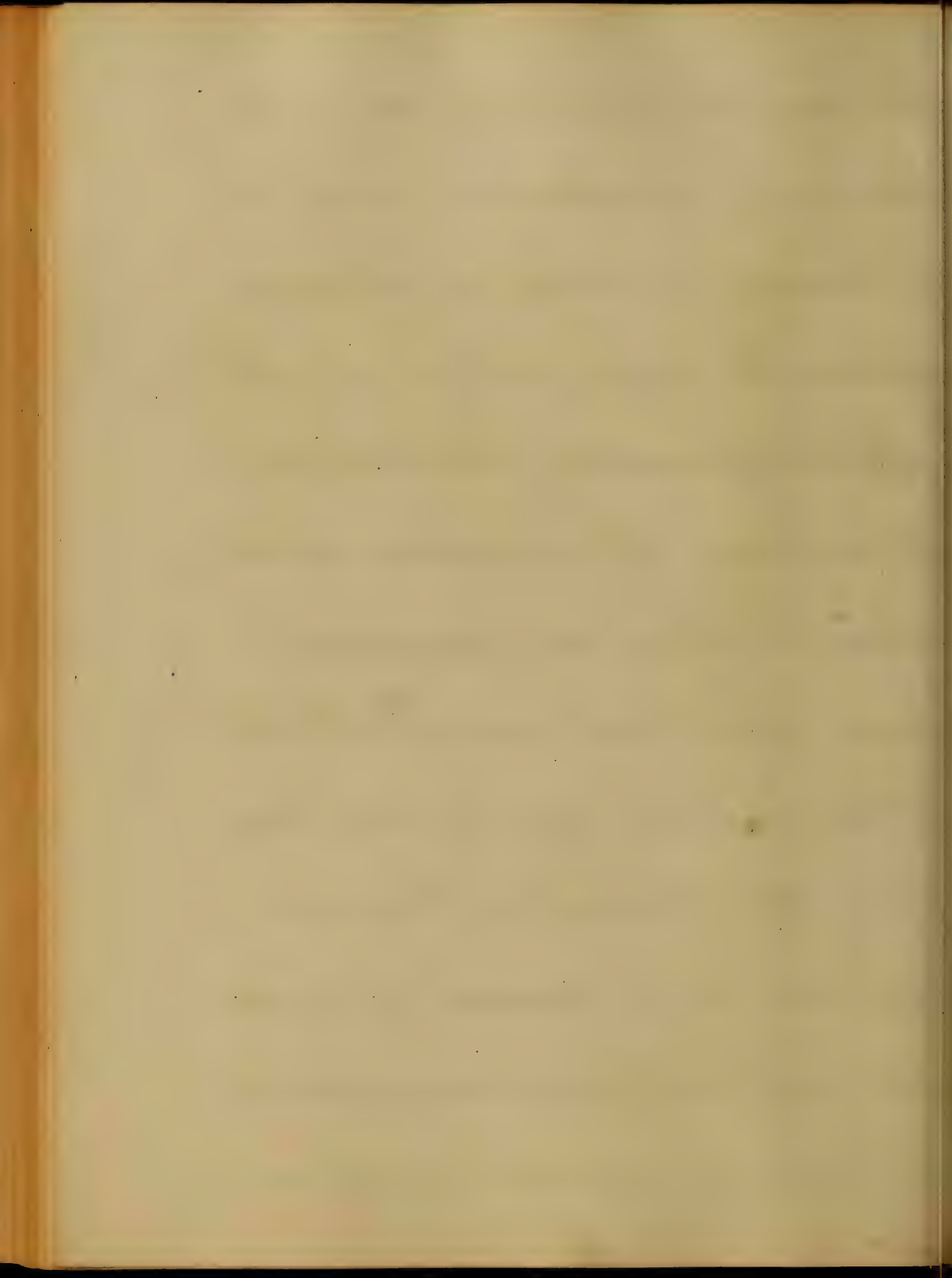


14
The fact that liquid preparations of
opium act much more speedily
than the solid forms, would im-
prove the same thing. Finally,
if applied externally, to a nerve
where they can not be absorbed,
they produce no effect what-
ever on the brain. Moreover in
cases of fatal poisoning by opium
even when there has been no
vomiting, none can be found
in the stomach. We say then they
are absorbed. Having spoken of



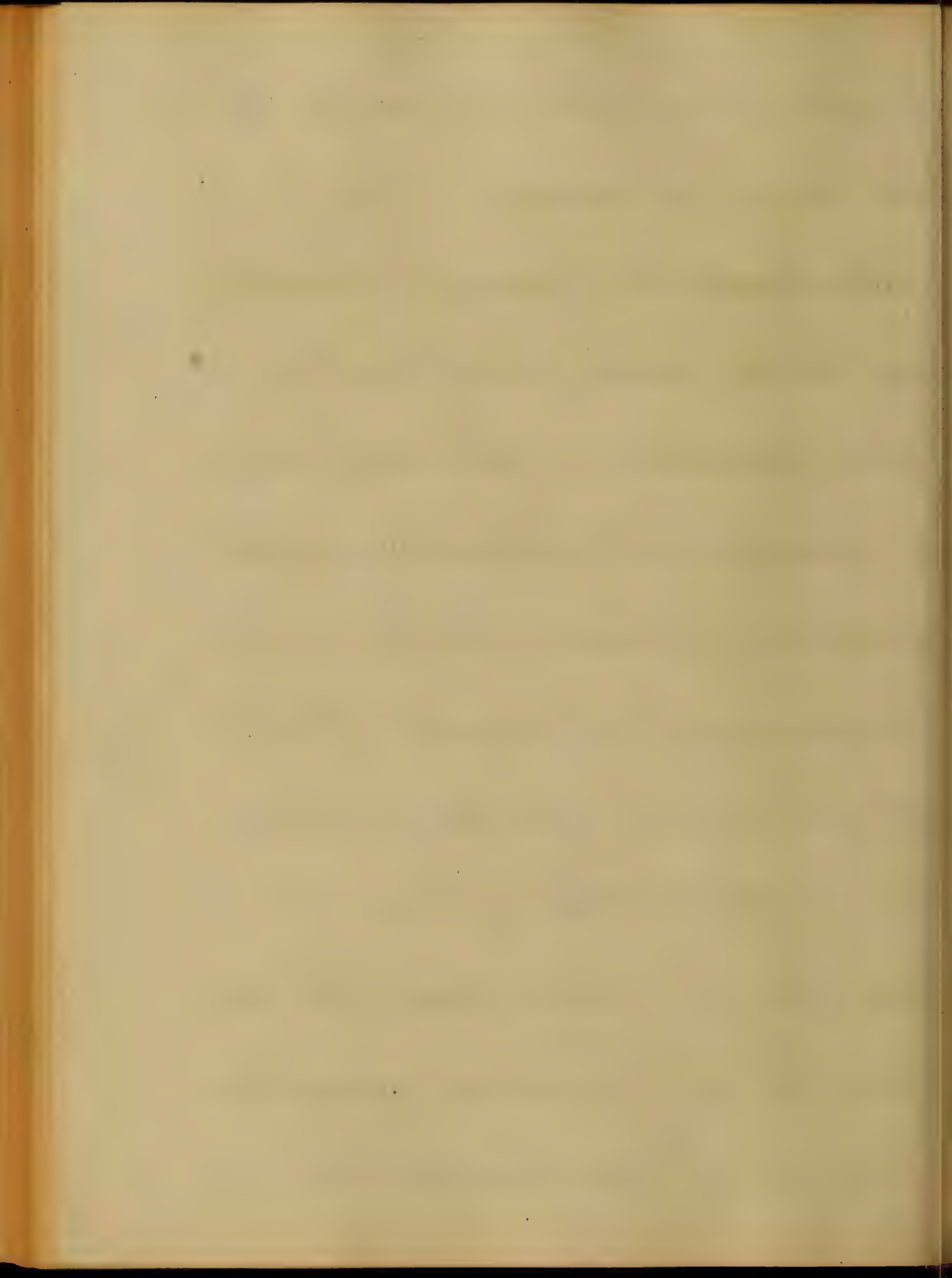
17

the manner in which Narcotics
exert their constitutional effects,
it would be well in the next
place to enquire, what are the
effects of Narcotics on the system?
What train of symptoms do we
observe, when an appropriate
dose of a narcotic has been
administered? or we may say
any dose, however large or
small. As a matter of course
the different symptoms presented
will vary accordingly, as a

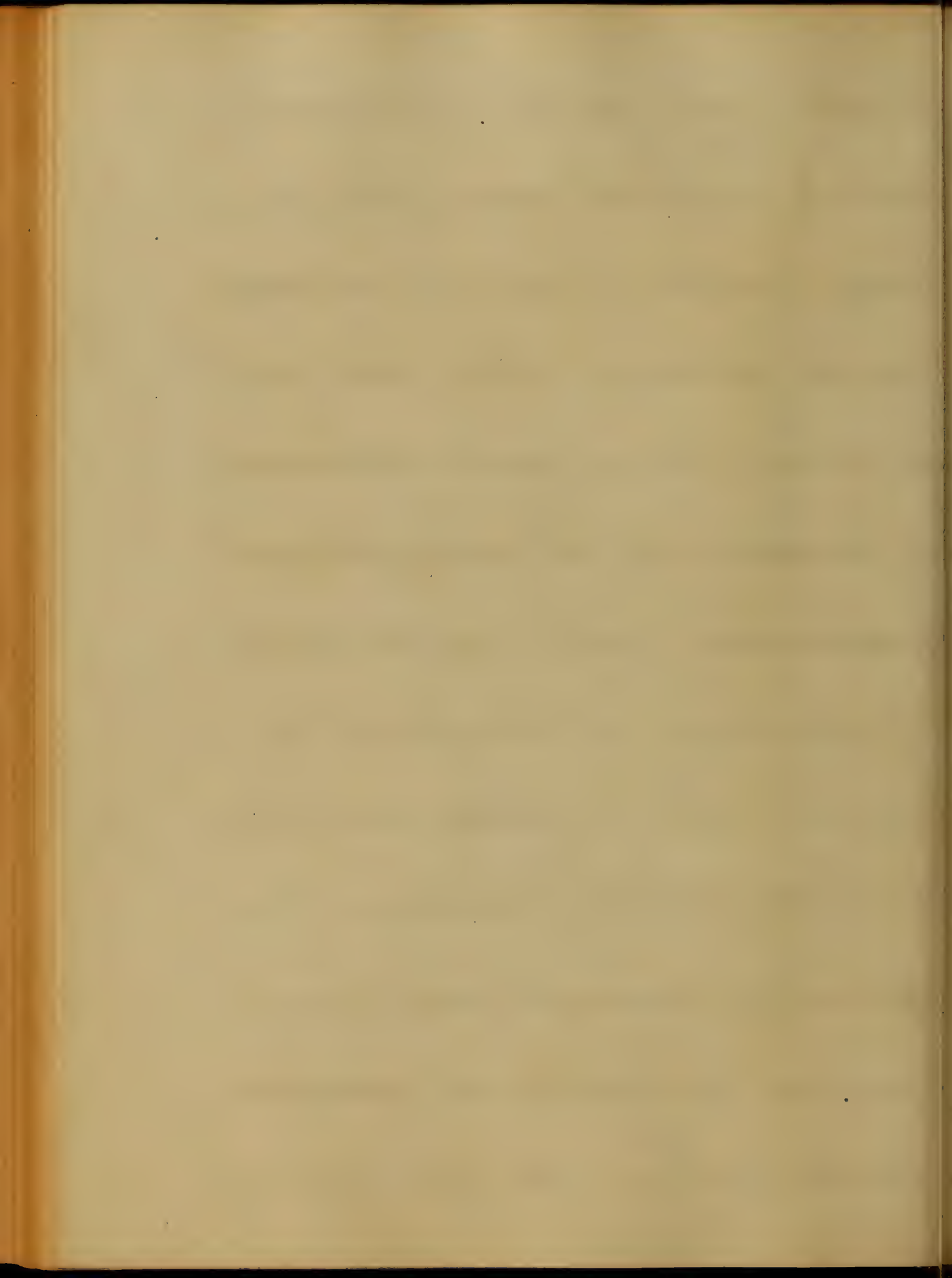


13
large or small quantity of
the drug is used.

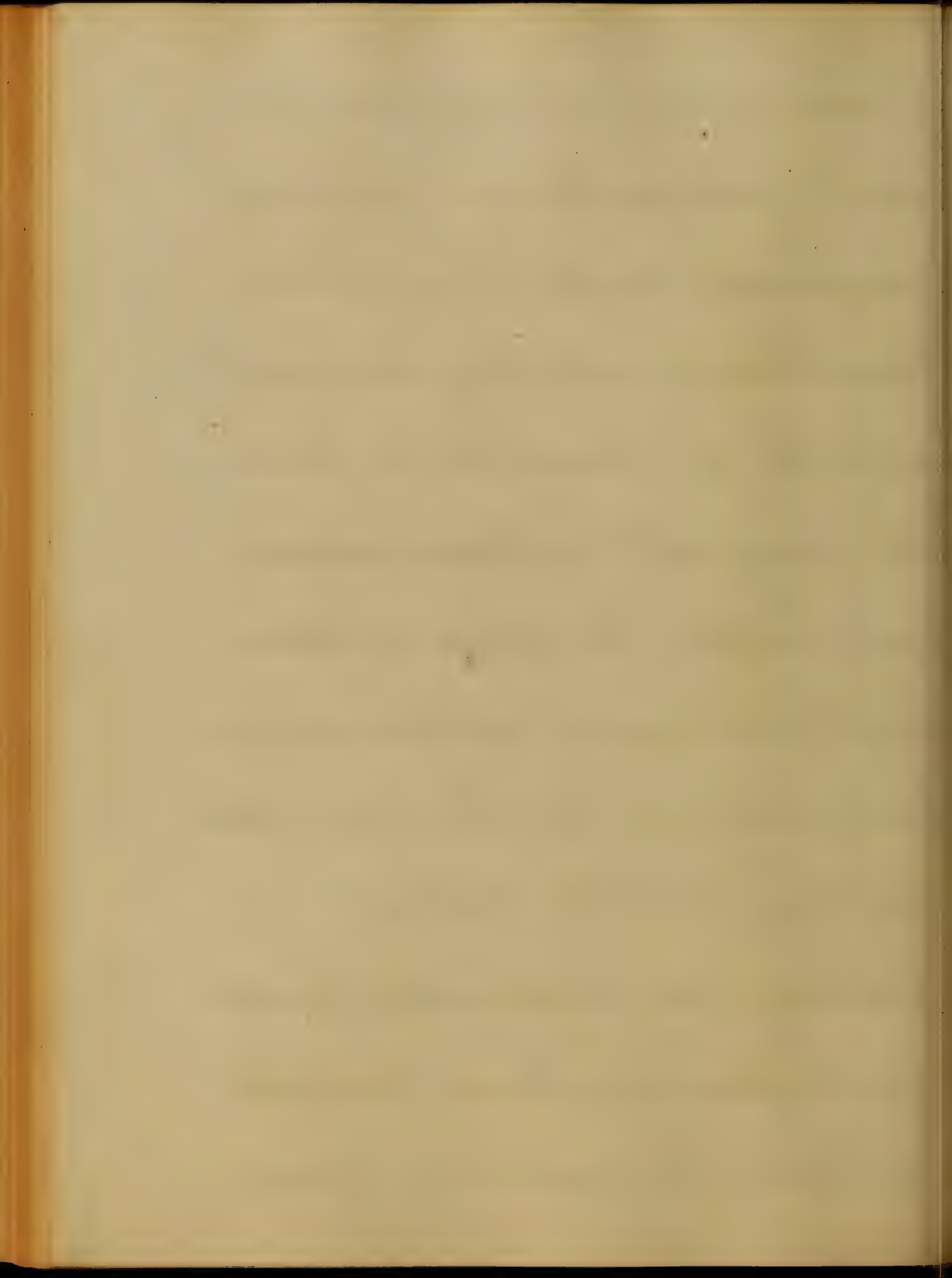
Perhaps it would be well
in order fully to elucidate
this portion of the subject,
to confine the attention, exclu-
sively to Opium, which is the
most important agent of the
class under consideration,
and whose effects and actions
are for the most part, the same
as those of Narcotics generally.
Upon the administration of



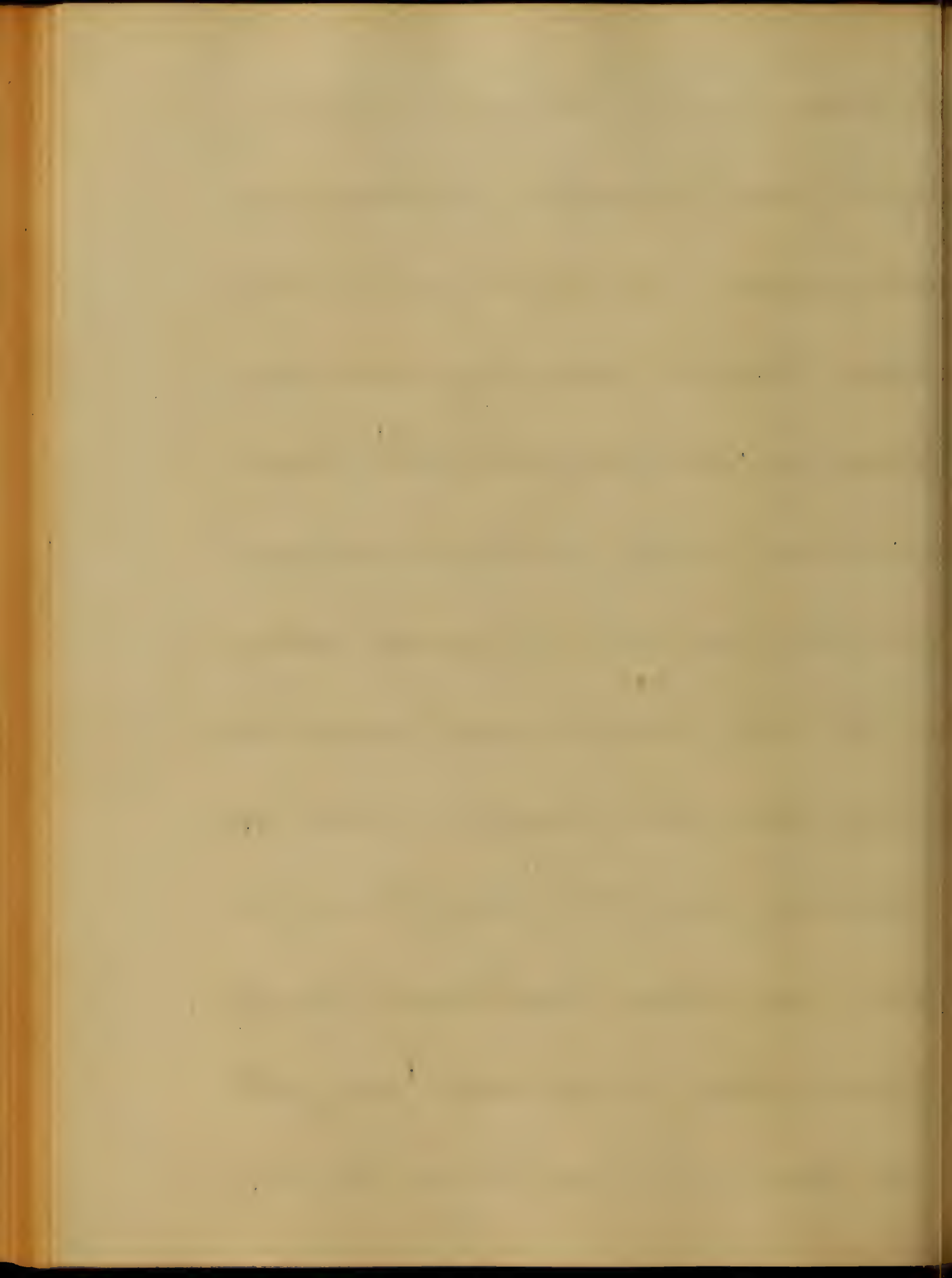
a full dose of Opium. The result is
scarcely at first appreciable, some
only a slight feeling of warmth
in the stomach. This lasts only
a short-time, and its intensity
is measured by the strength of the
preparation. Next a slight feeling
of fullness is manifested in
the head. Then a little nervous ex-
citement, which is followed by a
period of most delicious ease &
comfort. It revives the drooping
spirits of those who live a life of



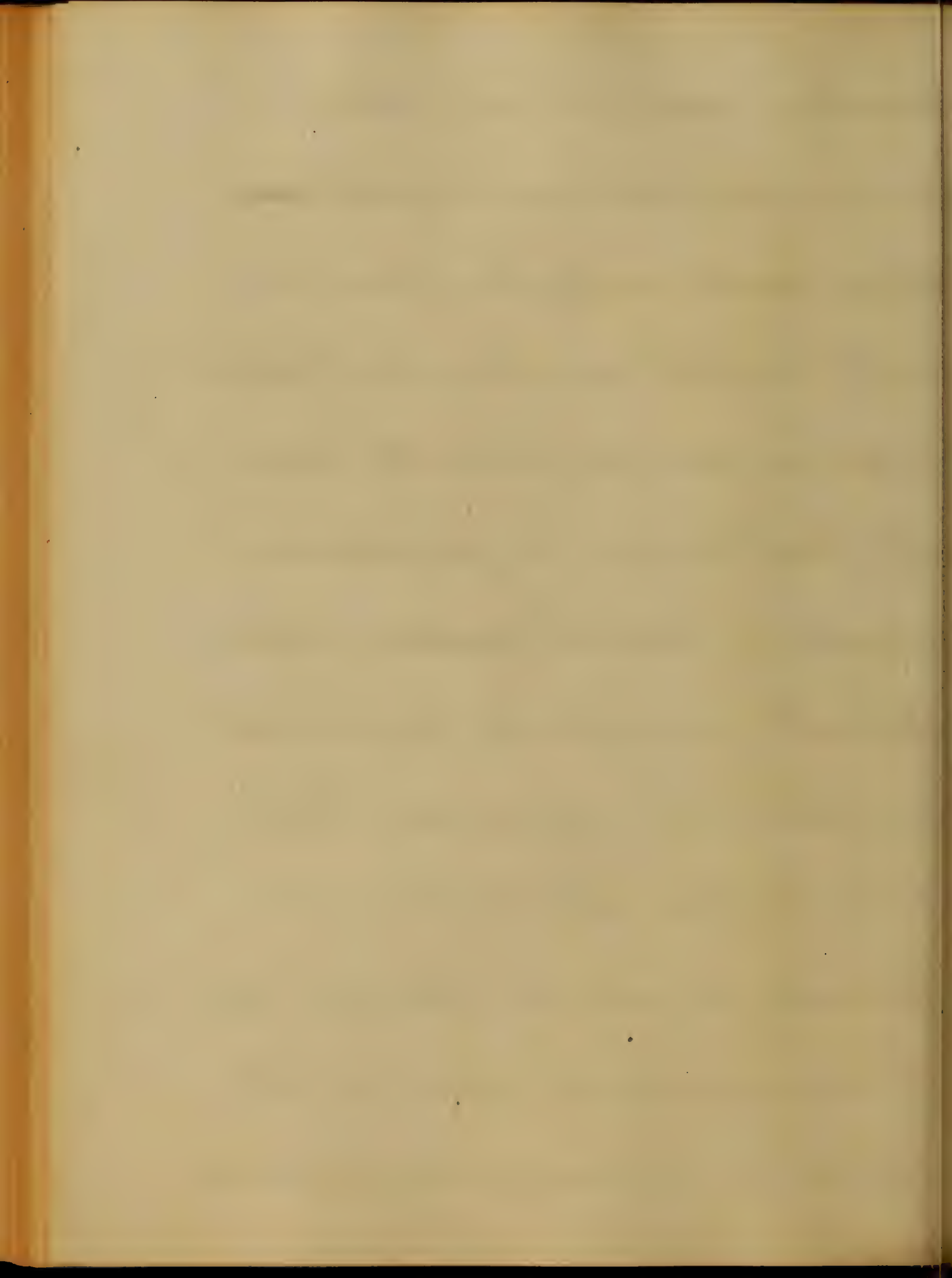
sorrow and grief. often kindles
 up a glowing flame of love and
 emulation. exalts the whole
 moral nature of man, and causes
 a spirit of friendship to pervade
 the mind of the happy subject:
 and incited by noble motives
 he feels a desire to do great and
 noble things. Not like the depressing
 effects of alcohol, it expands the
 mental and intellectual faculties
 to a higher degree than is consistent
 with the ordinary state of the mind



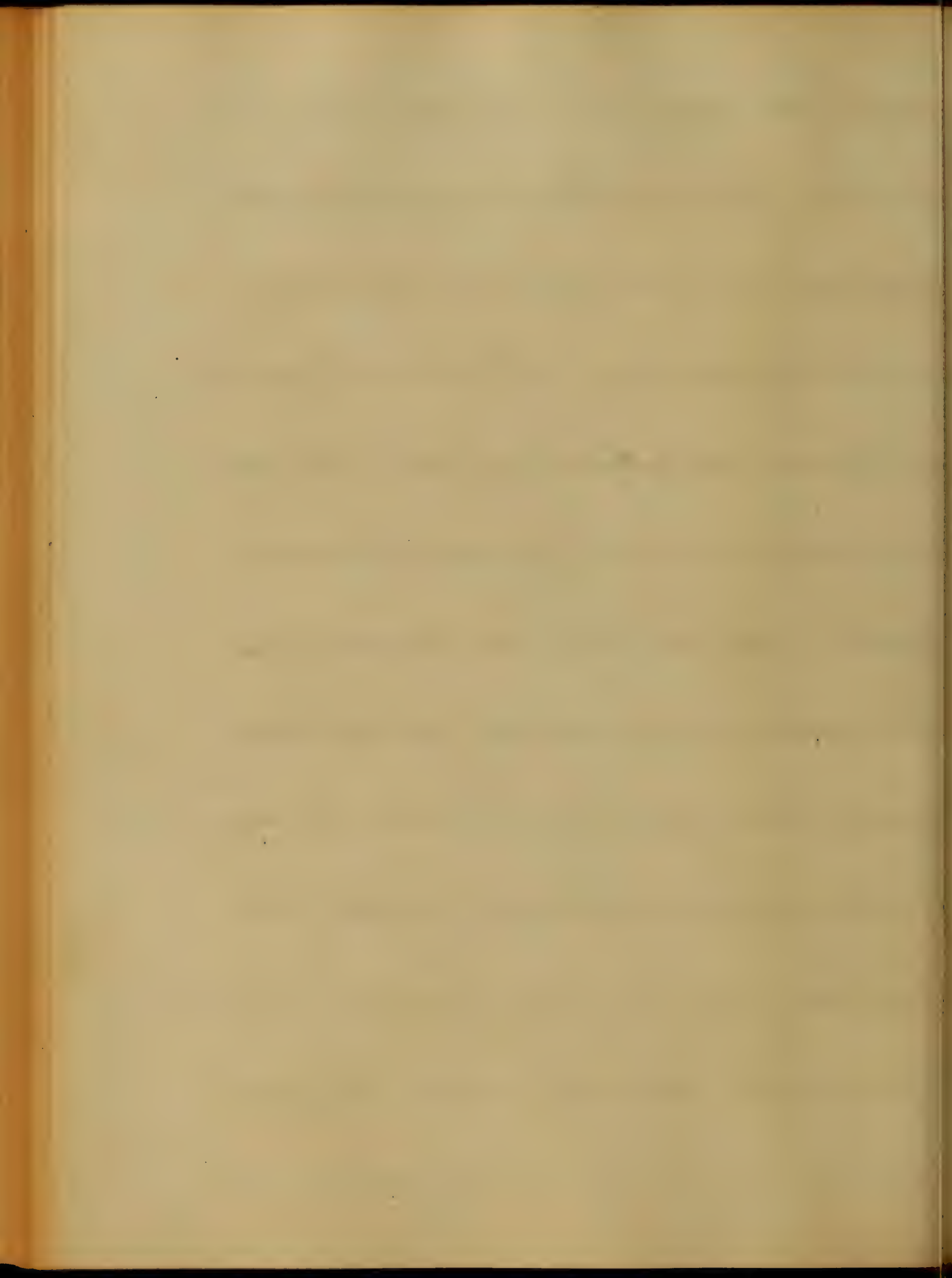
It awakens the sleeping strength
of the poet. heightens his powers of
imagination. and envelopes him in
that blissful cloud of ease and
comfort which enables him more
easily to rivet the mass and reel
in the domain of fancy. Along
with this mental and moral eleva-
tion, muscular energy is also in-
creased, and the hardships of
life are borne with much less fa-
tigue. After a variable length
of time the pleasant feelings



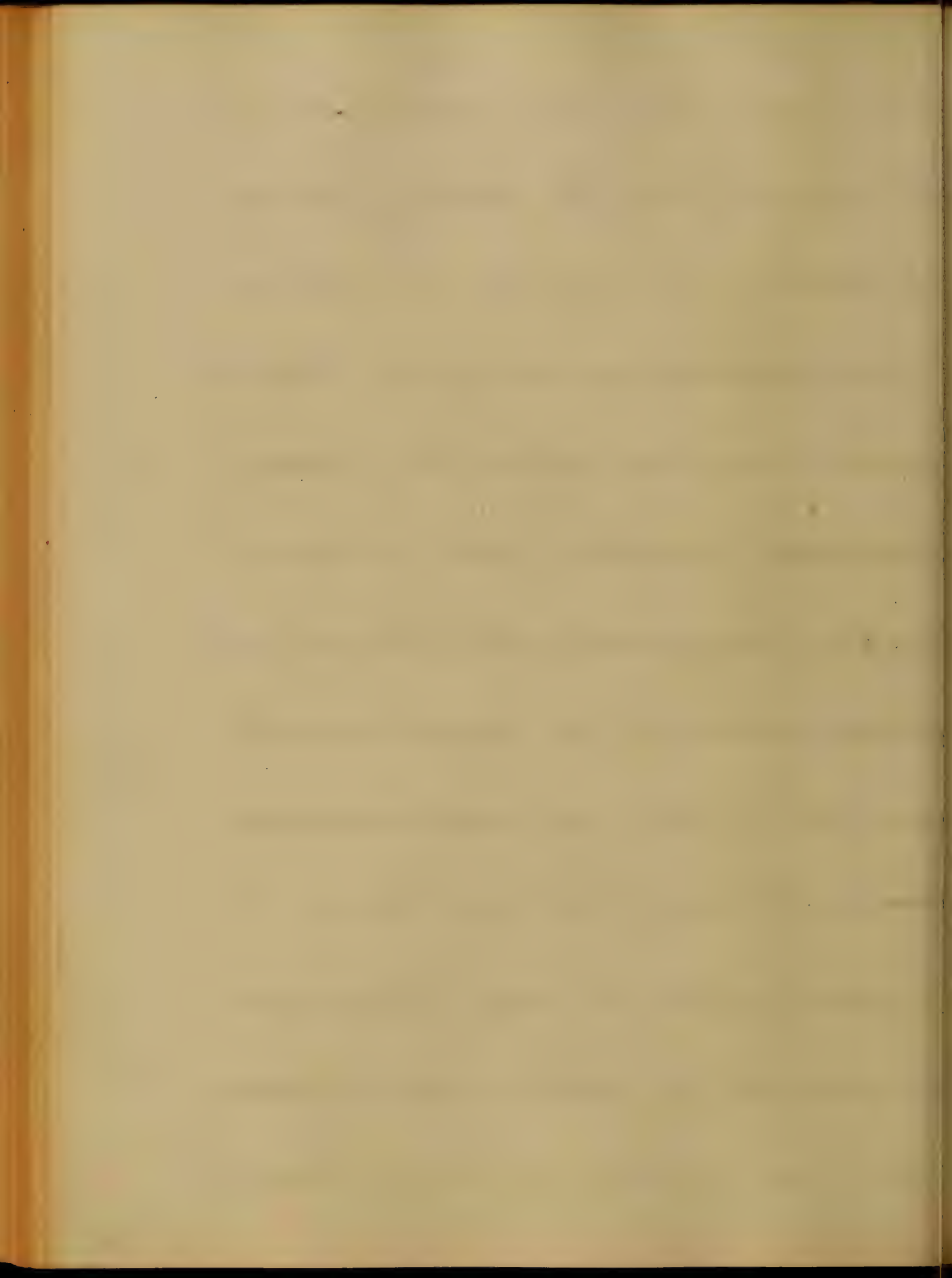
subside, and then the dose being
 repeated deep and refreshing
 sleep ensues. If the dose is not
 sufficiently large, the patient often
 lays awake for hours. The sleep,
 if there be any, is not at all
 refreshing, and the patient is trouble
 ed with all kinds of phantasies
 illusions and vague and horrid
 dreams. When such is the case,
 the dose should be repeated till
 the desired effect is produced. The
 sensibility is diminished to a certain



degree. The special senses are also in-
volved, but perhaps only under the
influence of large doses. Finally
we have stupor, which is the result
of opium in excess in doses. The pa-
tient lies in a sort of comatose con-
dition. The pupils are contracted.
The respiration and the pulse, slow
and feeble. Such is a state of nar-
cotic poisoning, and unless the
proper remedies be employed, death
is soon close the scene. The pro-
gnosis, from a fullness of the

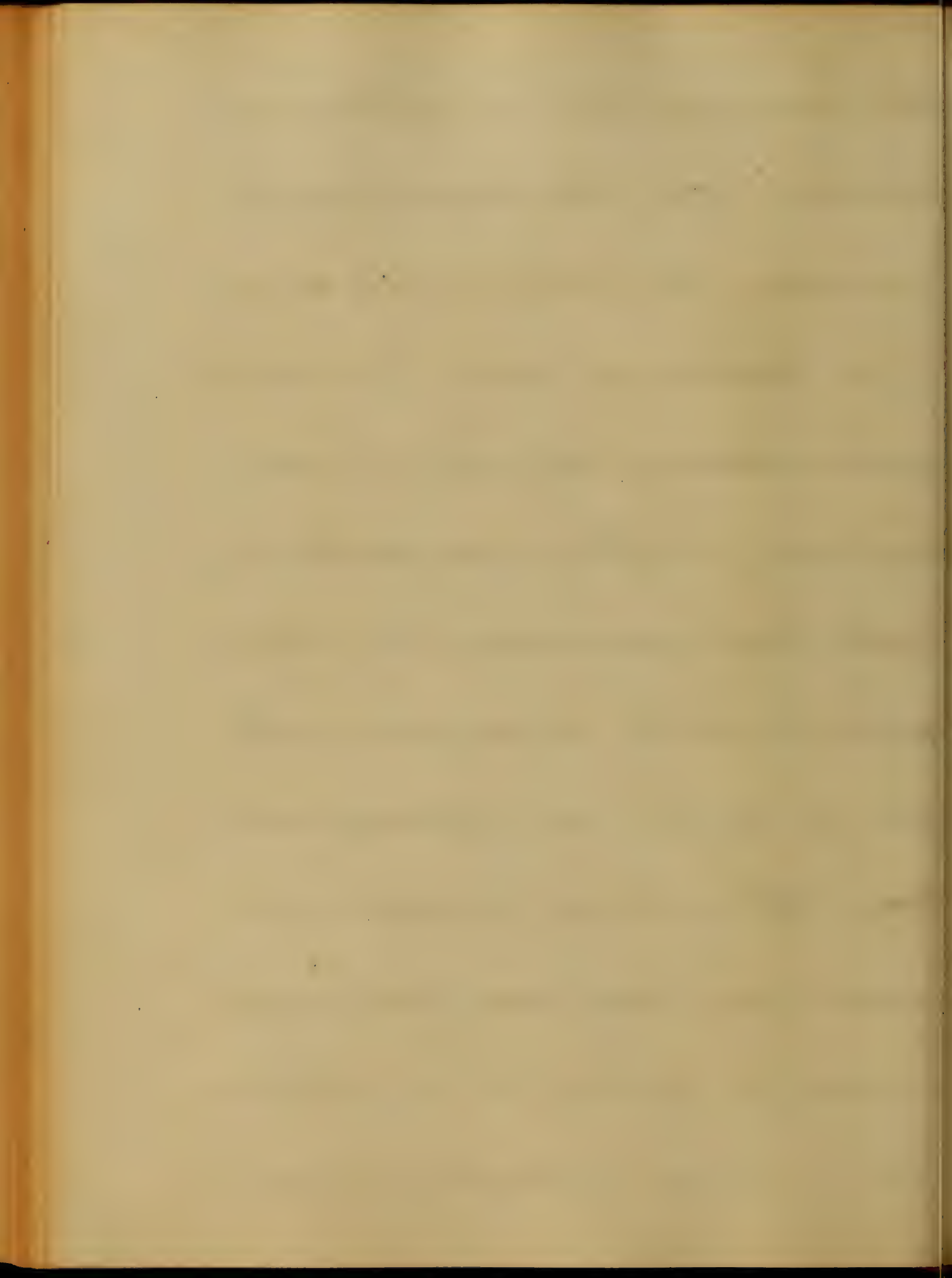


pulse is suspended by any means in
 the first stage of the action of opium.
 A slight suspension of warmth and
 warmth is also observed. The face
 for a short-time returns to florid
 hue, and generally during the stage
 of excitement has a bright color with
 compression. So long as the pulse
 increases. The respiration increases
 proportionally, and vice versa. Con-
 sequently after the stage of excitement
 is over, and the pulse begins to approach
 the normal standard or even to fall below it.

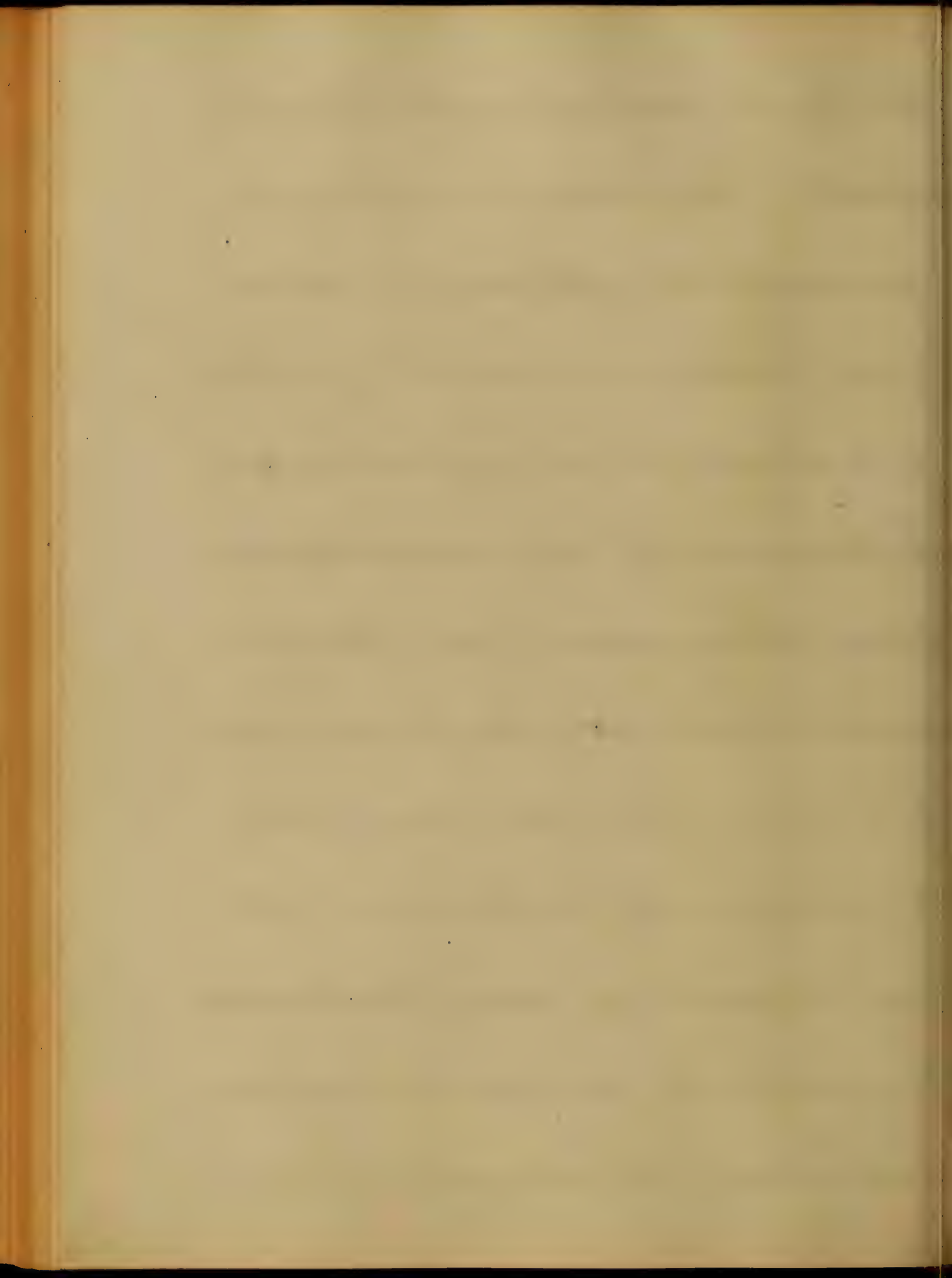


77
The respirations also decrease in
the same ratio, the temperature ac-
tually being the same. This case
it is assumed a doctor has and
gives a venous tinct to the skin
especially the face and prolabium.

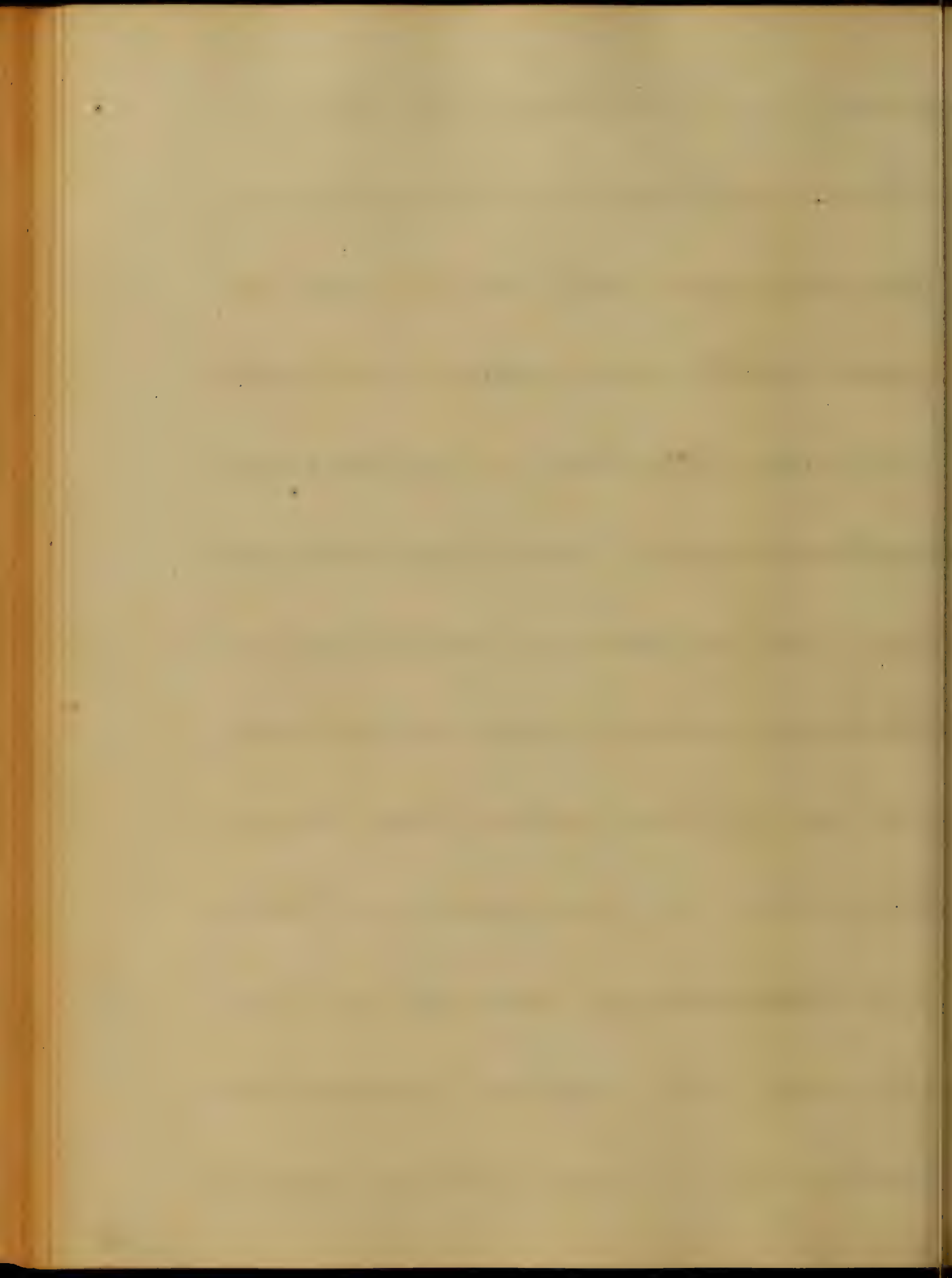
A great revolution has taken
place recently, in respect to the
use of opium in acute inflamma-
tions. It being an artificial stimu-
lant, was used very cautiously,
under the apprehension, that even
being the cure, its influence upon



The local disease must be unfavourable. But clinical experience, and sound pathological views, have demonstrated the fact that it is a very excellent remedy in the treatment of inflammatory affections wherever situated. It is valuable, not only as a palliative, but as a curative remedy. Its palliative effect of course is apparent to any one, and we can also to some extent explain its curative influence. By relieving pain it



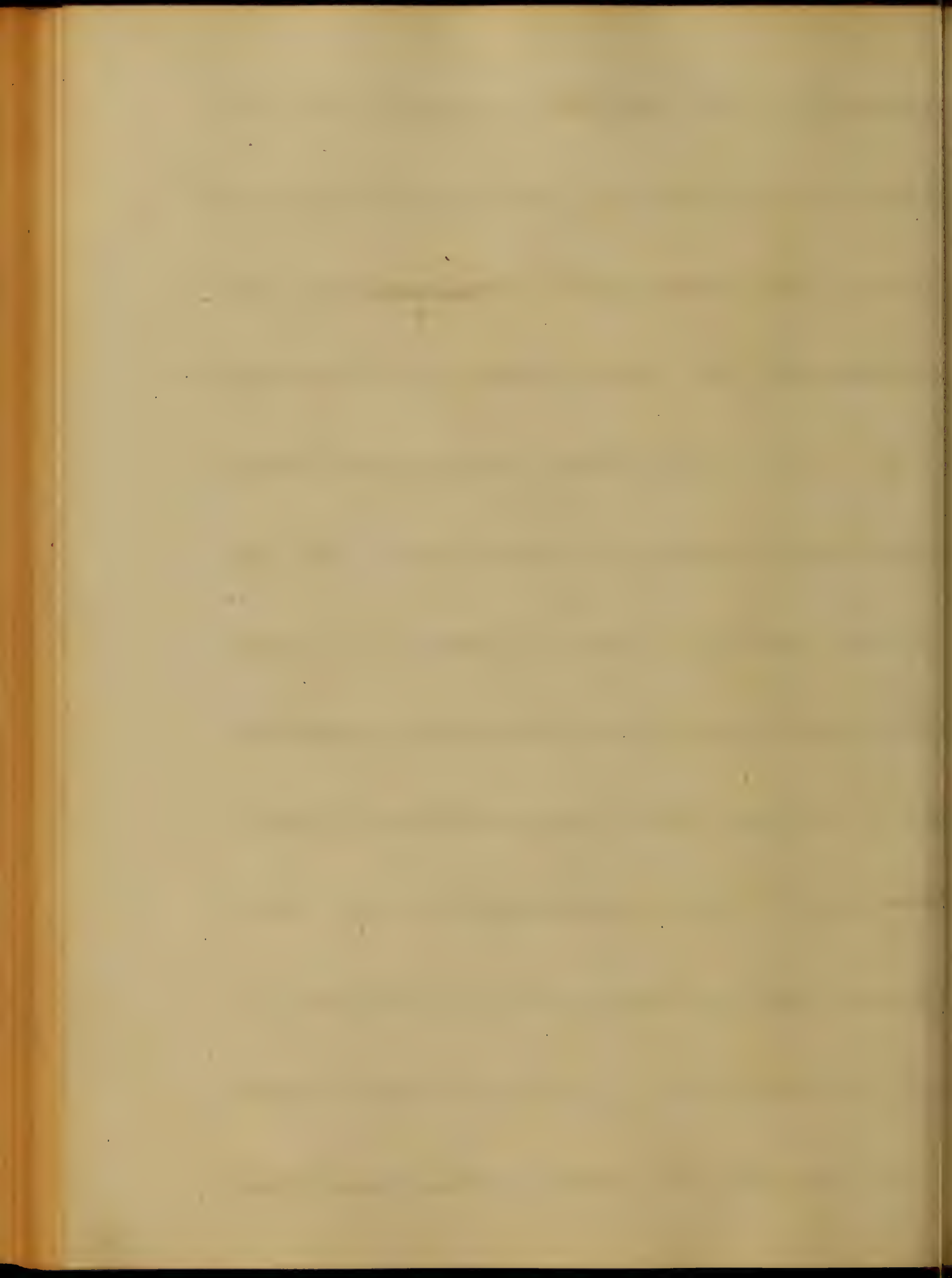
27
produce or rather causes the afflux of
blood to the part to be diminished.
for we know that pain alone is
quite sufficient to produce a deten-
sion of blood to a part. Again
inflammation occasion more or
less constitutional disturbance
which is readily corrected by the
use of opium. Thus also explains
the system in a condition by which
it is better able to tolerate the local
affection. In inflammations death
ensues not because of the injury



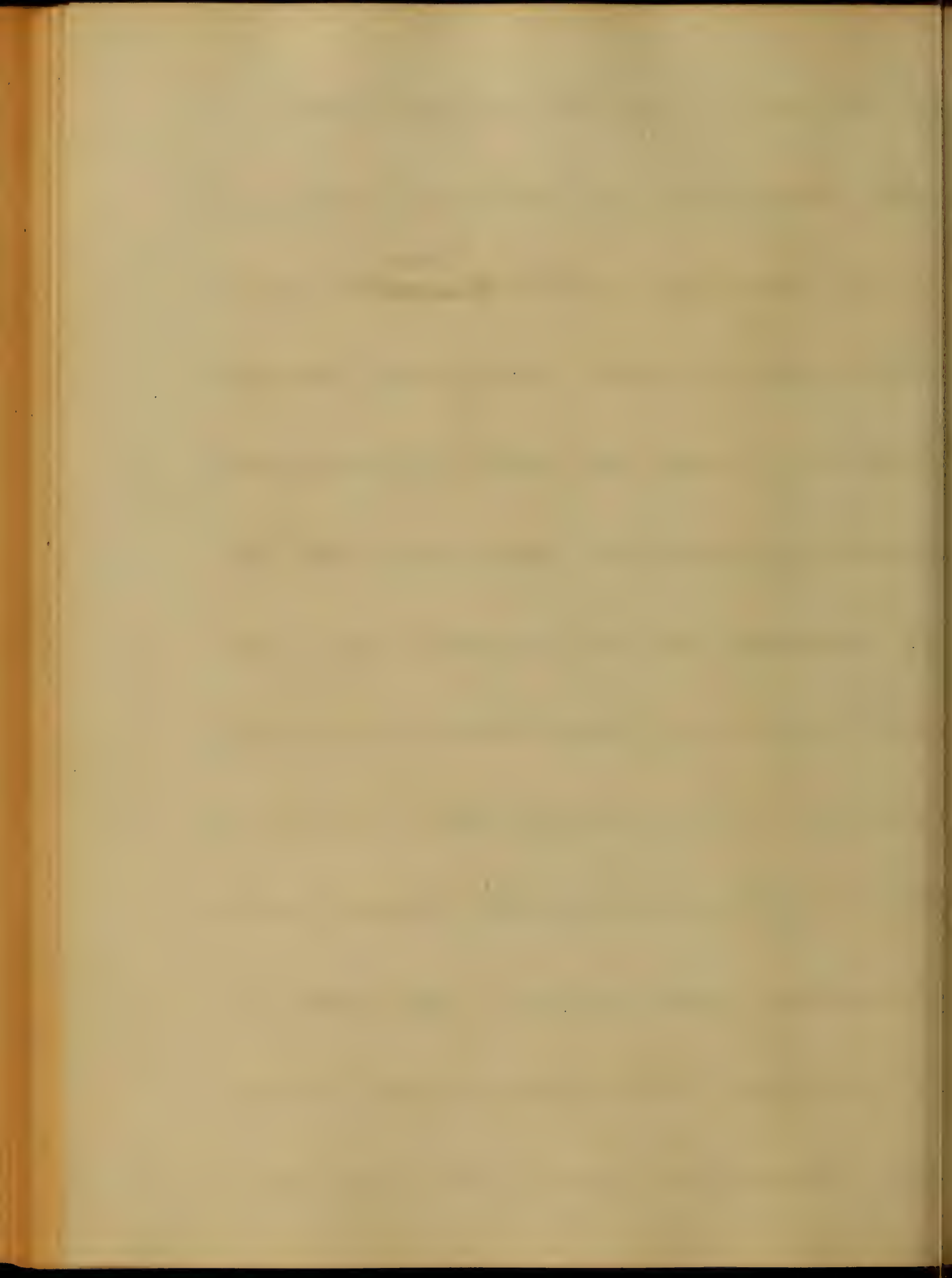
24

done to the inflamed part: but be-
cause the vital powers are depressed
and are rendered inadequate to
support the progress of the disease.

Opium exercises a very
decided influence upon the mor-
tuous. Their correct mode of action
however in this situation appears
to be vague and uncertain. I will
not enter into any detail on this
point: But remain being & believing
the above and general rule laid
down by the distinguished Professor.

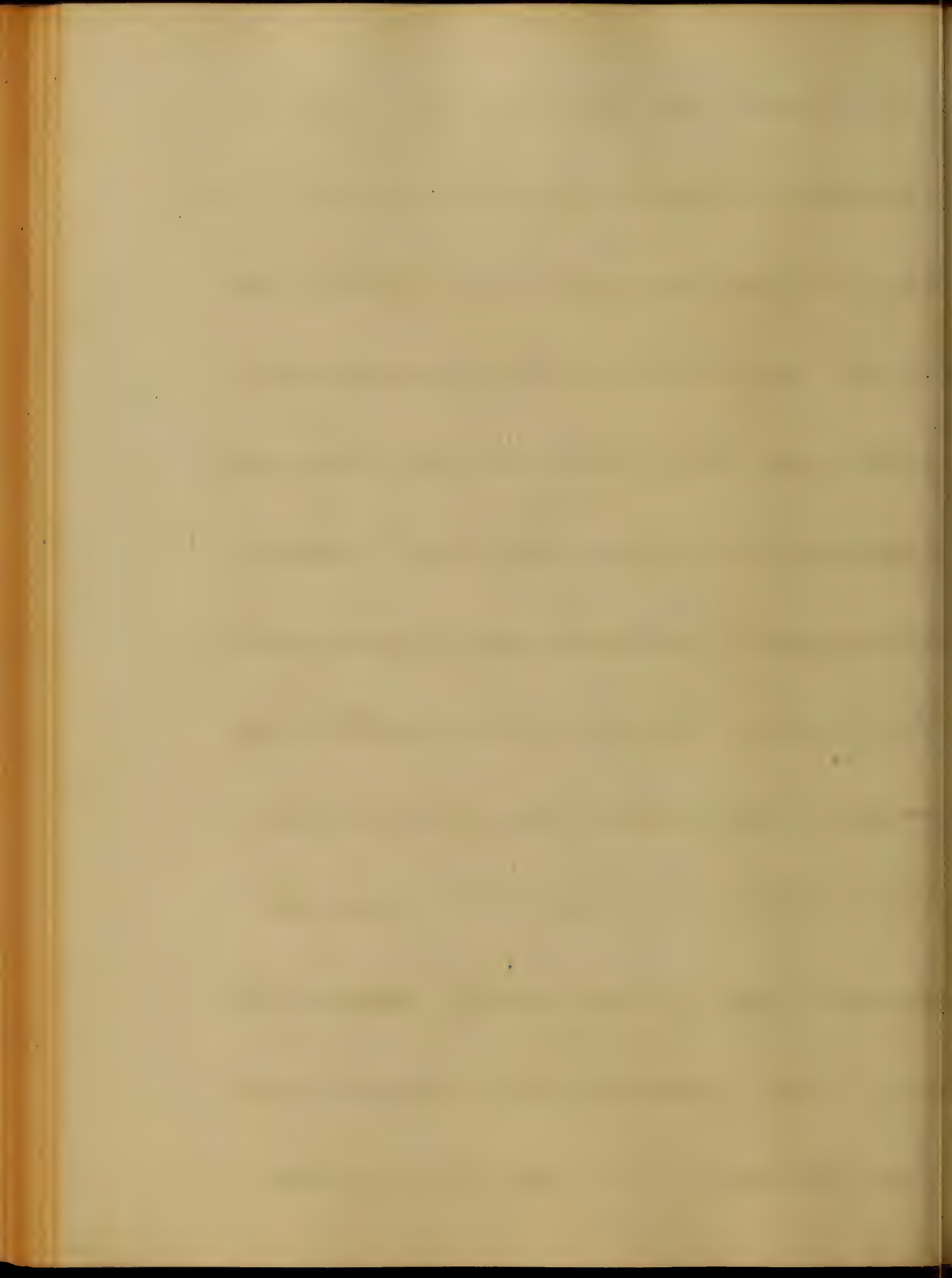


of this subject in the school where
the principles of medicine were first
taught me - viz: that ^{Opium} ~~the~~ diminish
in every secretion except the perspi-
ration." I am content to await the
result of practical experience, whereby
to understand the action on each
secretion in particular. I will only
remark that its effects on the secre-
tions of the alimentary Canal is very
marked and decided, and Opium
is, perhaps, the best remedy known
for Diarrhoea, and other diseases



of a similar type.

Another very important use of Ipecac
 can be anticipated. It is a powerful
 step, and I is often an essential
 step in the treatment of many dis-
 eases. But circumstances must
 always be taken into consideration
 for instance, it must be withheld if
 we see that it will counteract
 the effect of some other medicine
 previously administered. Now this
 is of some importance, sometimes
 in practice, for instance, Ipecac



21
we have a patient, and we wish to
produce a discharge from his bowels.
of course we give a purgative li-
sist - the reason, now it is very
evident that it would be unwise
practice to give an opiate - which
we know will produce effects directly
opposite - to that of a purgative. one
would counteract the effect of the other.
both would lie dormant in the
system. and it were better that the
unhappy patient - should suffer with-
out any at all. There is scarcely a disease

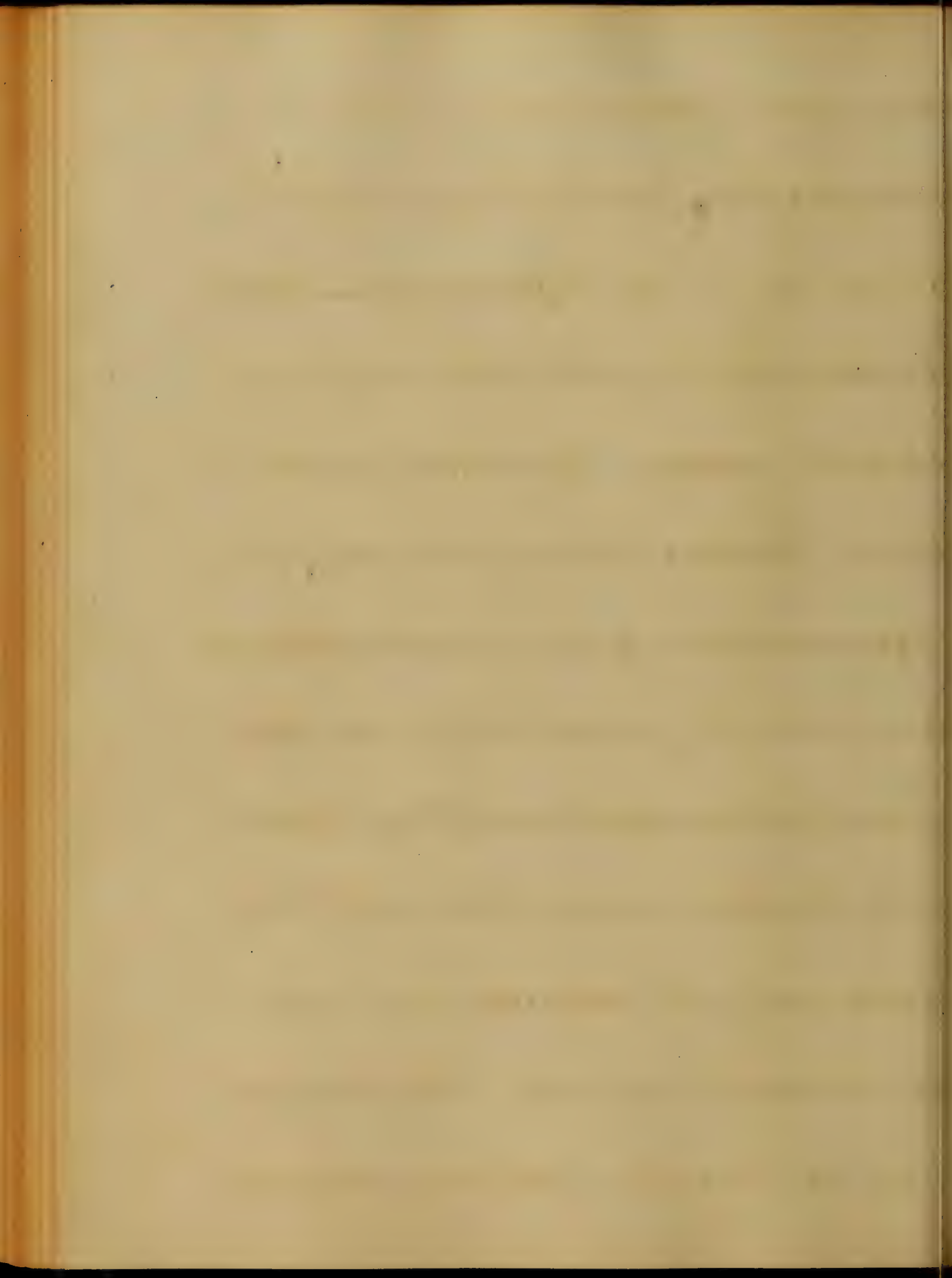


which the Physician is called upon
 to treat, when pain is not a con-
 spicuous and troublesome symptom,
 to relieve which is his obvious duty.

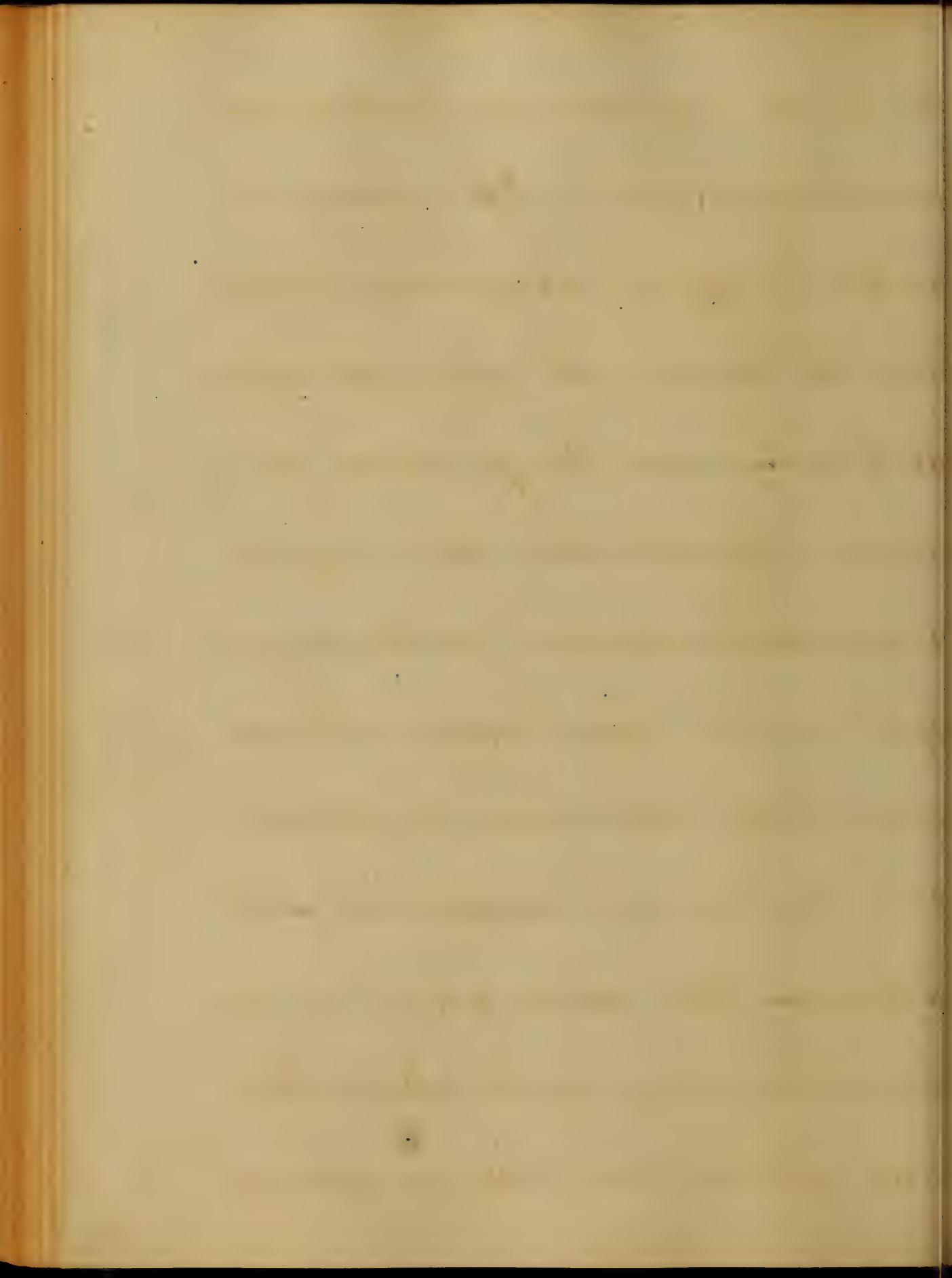
Which as a general rule, can
 be more speedily and efficiently
 accomplished by Opium, than any
 other known drug. There are two
 different kinds of pain, Nervous
 and inflammatory, and it is highly
 important that we should dis-
 criminate between these in practice.
 Nervous pain is, for the most part,

22

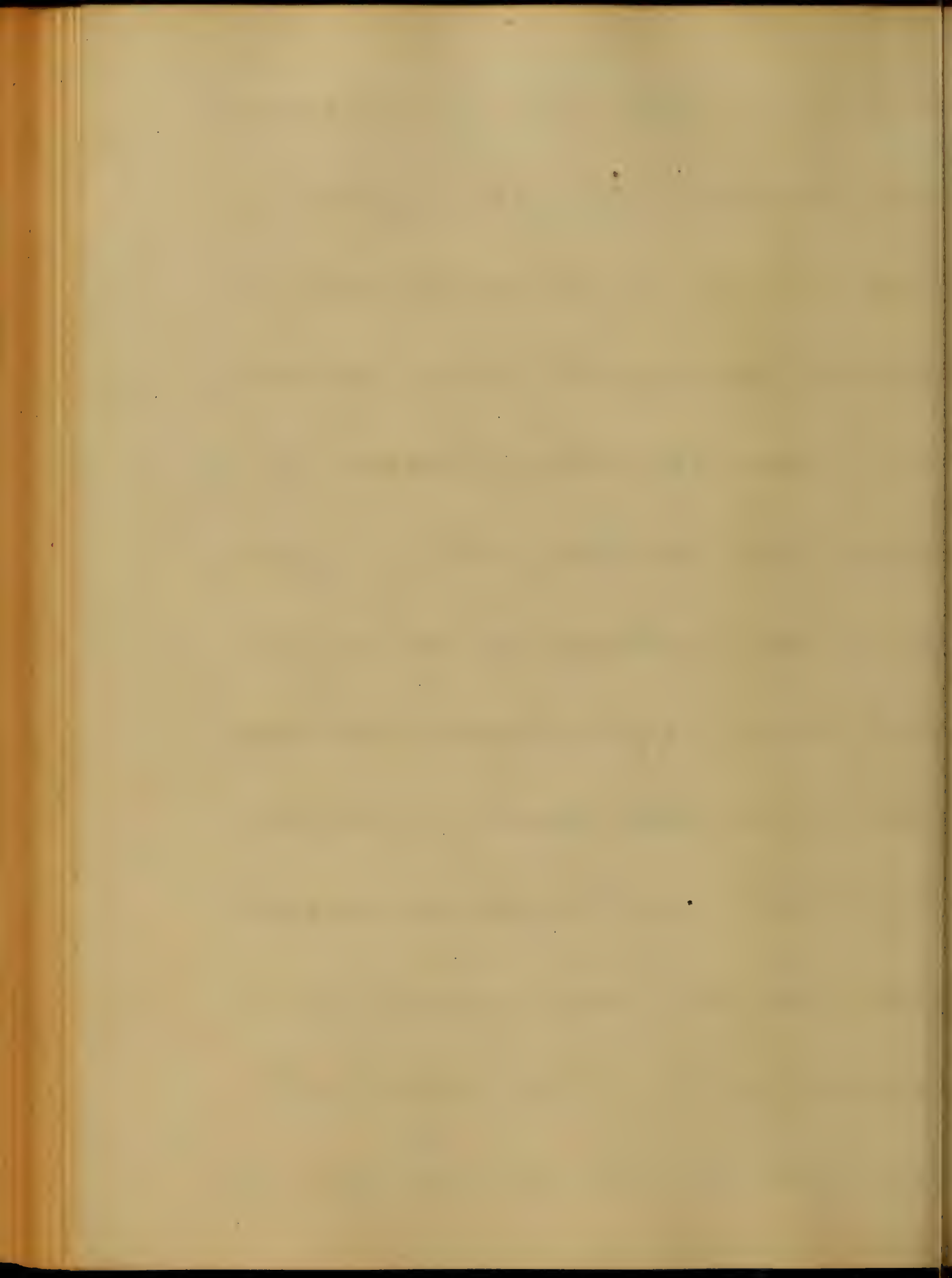
superficial inflammation, then
 deep seated generally. Nervous pain
 is rarely spread. often follows in the
 whole course of the nerve. inflammation
 is confined to a circumscribed
 space. Nervous pain is not constant
 inflammatory is. Nervous pain
 does not injure the organism. which
 is not generally the case ^{is} inflammation
 Now opiates are a source ^{entire} of relief
 for nervous pain. but in pain due
 to inflammation they only play a
 secondary part in the treatment. And



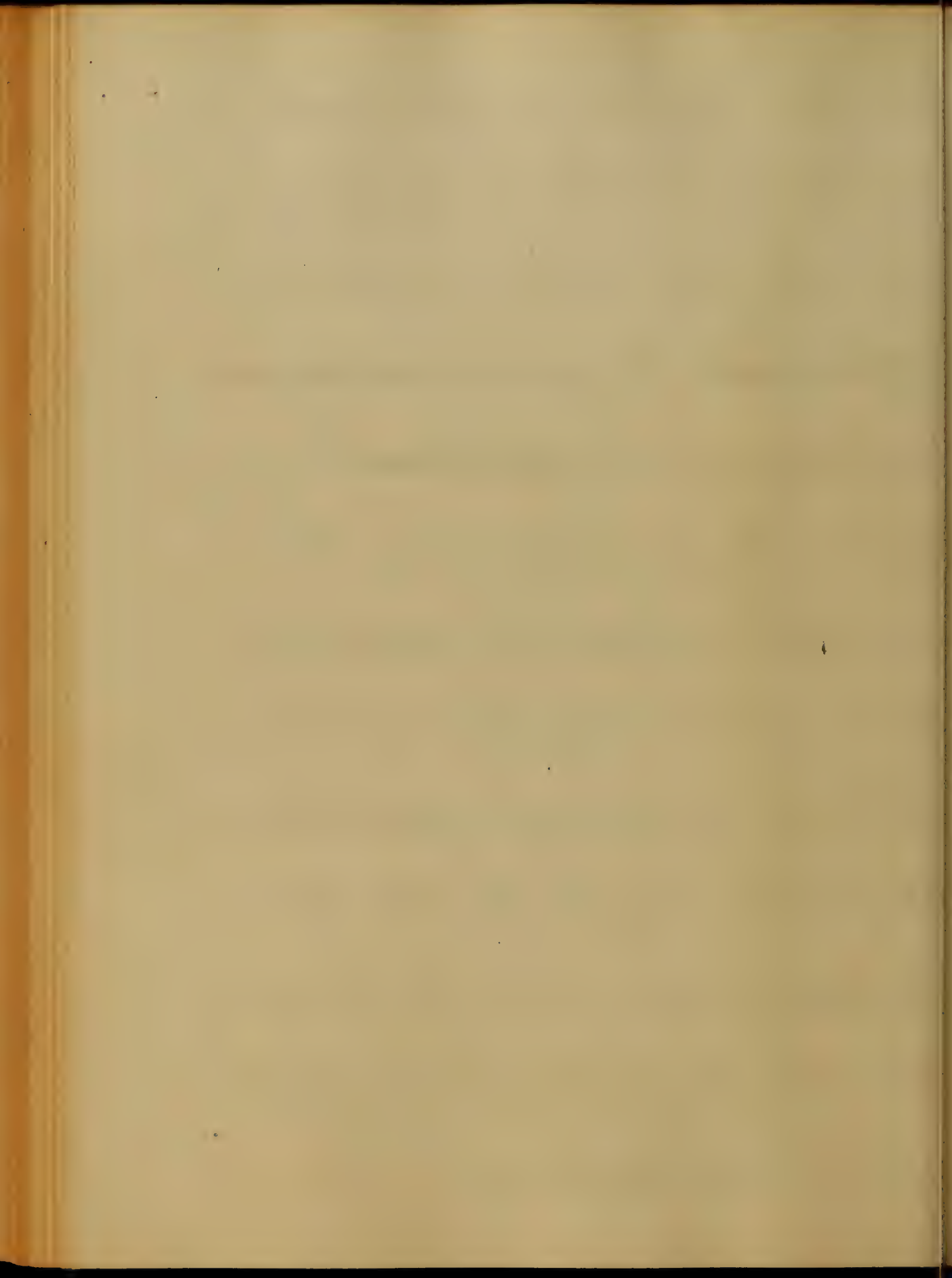
they must be ~~seen~~ instead with cir-
 cumpection. Not that it signifies their
 great efficacy in inflammation, &c.
 In order to bring out their value more
 clearly, suppose - for instance - we
 have a patient laboring under an
 inflammation of some internal organ
 Now in such a case, pain is a very
 important symptom and one by which
 we are often made acquainted with the
 nature and the progress of the disease
 and it must be evident that no more
 can be benefited in the cure, should



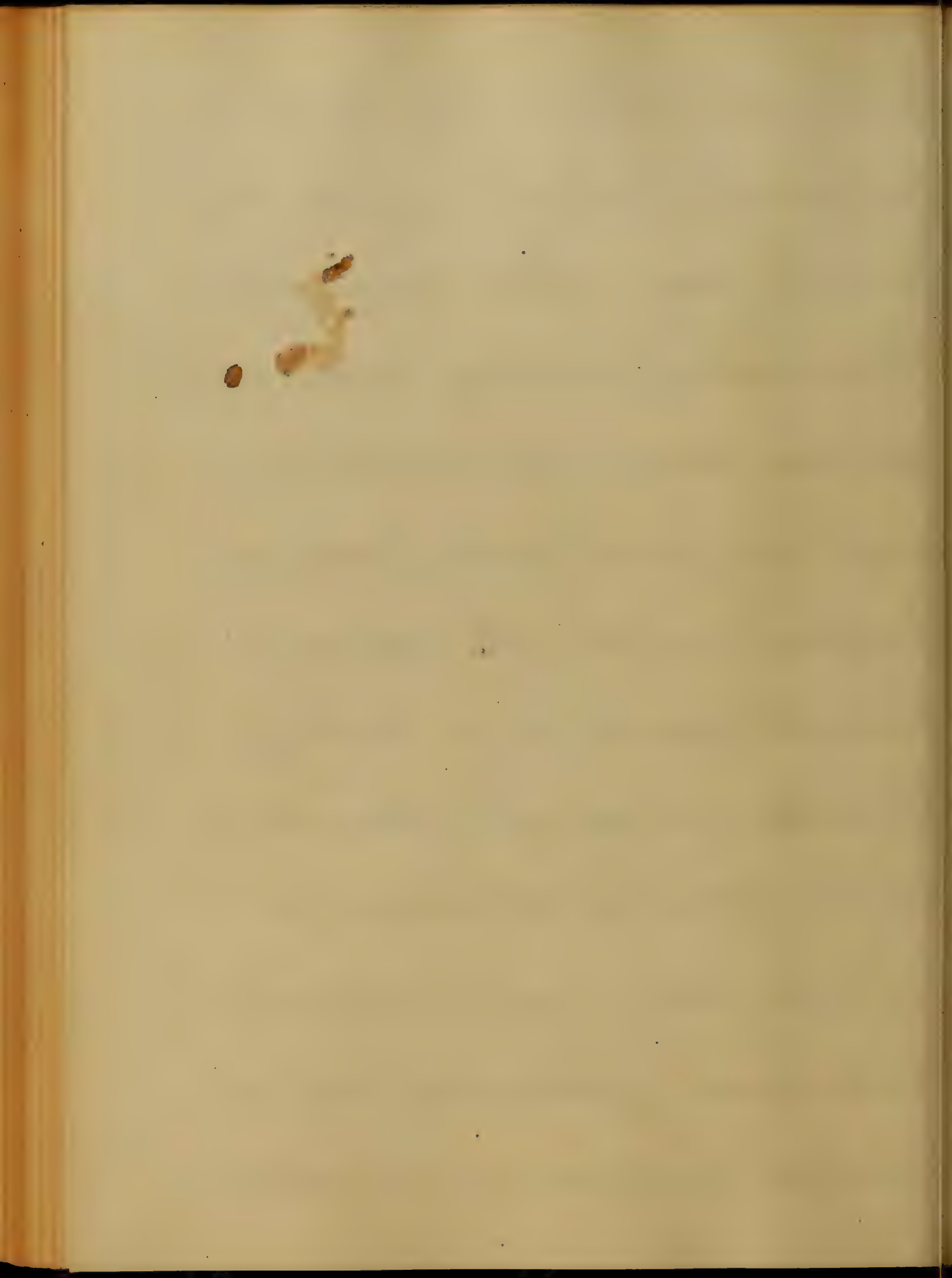
m. of the use of opiate, under the present
 insensible to the pain. The importance
 of this cannot be too forcibly impressed
 upon the mind of the young practitioner
 for he above all things is liable to
 make this mistake. That is, of not
 paying strict attention to the nature
 of the disease, before he applies his rem-
 edies, or in other words he should
 not treat a single symptom in such
 a manner, that would produce an un-
 favourable change, in the whole char-
 acter of the disease. Opiates play an



important part in the treatment
 of spasms of the involuntary mus-
 cles, and also a kind of spasm
 attended with great pain, usually
 denominated Cramp. Has been
 used with great benefit in the
 treatment of spasmodic asthma. The
 nervous element of this affection
 often yields very promptly ^{to} the
 opiate-treatment, but as they can
 directly to diminish the bronchial
 secretion, they must be administered
 with circumspection.

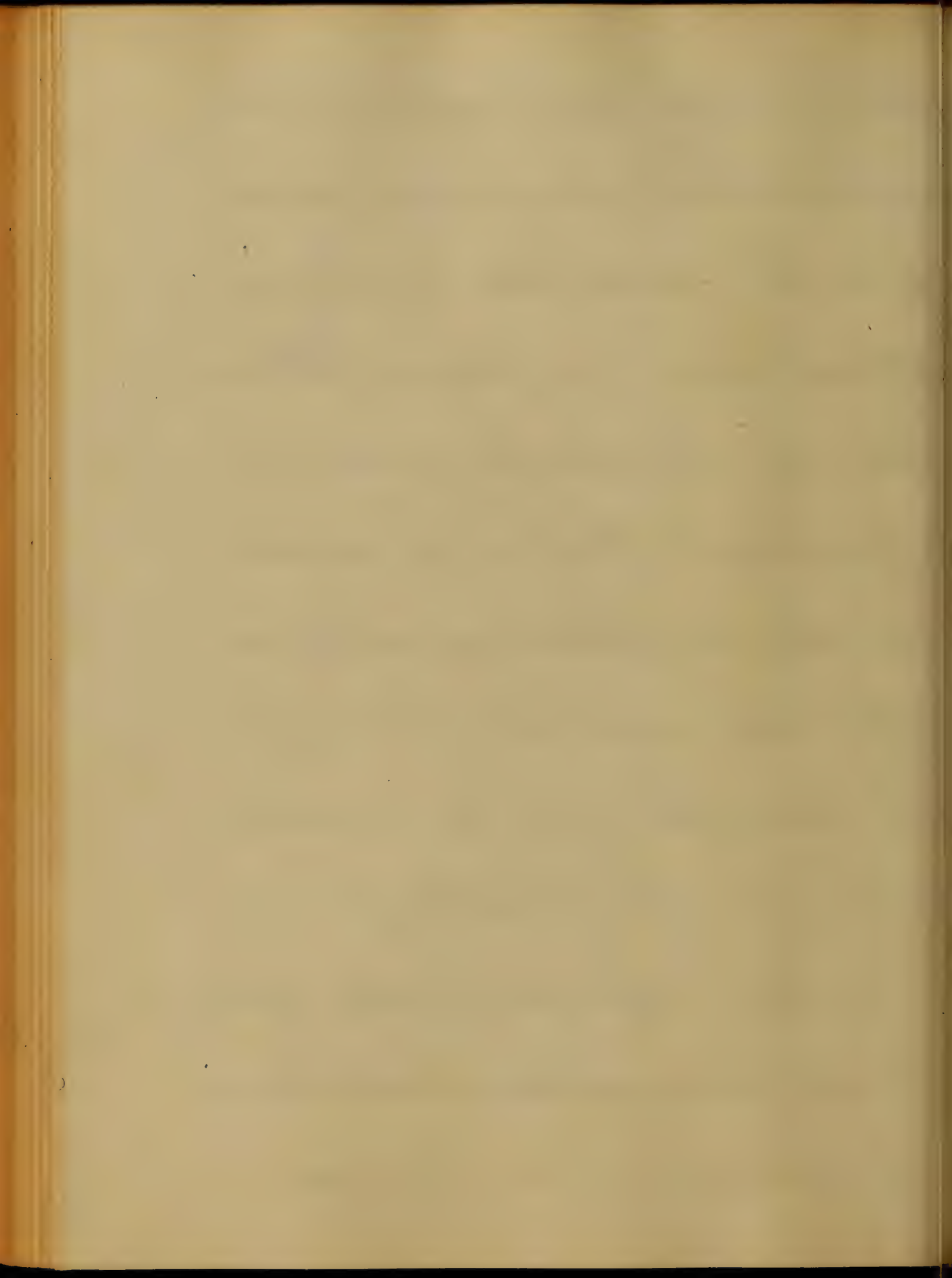


In the treatment of this disease, I know
we have no better remedy in the whole
Materia Medica, than Opium, and
there is scarcely a disease which we
are called upon to treat, where a
single drug excites such happy and
beneficial results. This disease
seems to depend on a loss of
the proper stimulus, to carry on
the functions of the brain, or
perhaps, more properly, a sudden
withdrawal of ^{the} stimulus, which the
miserable subjects were accustomed to.

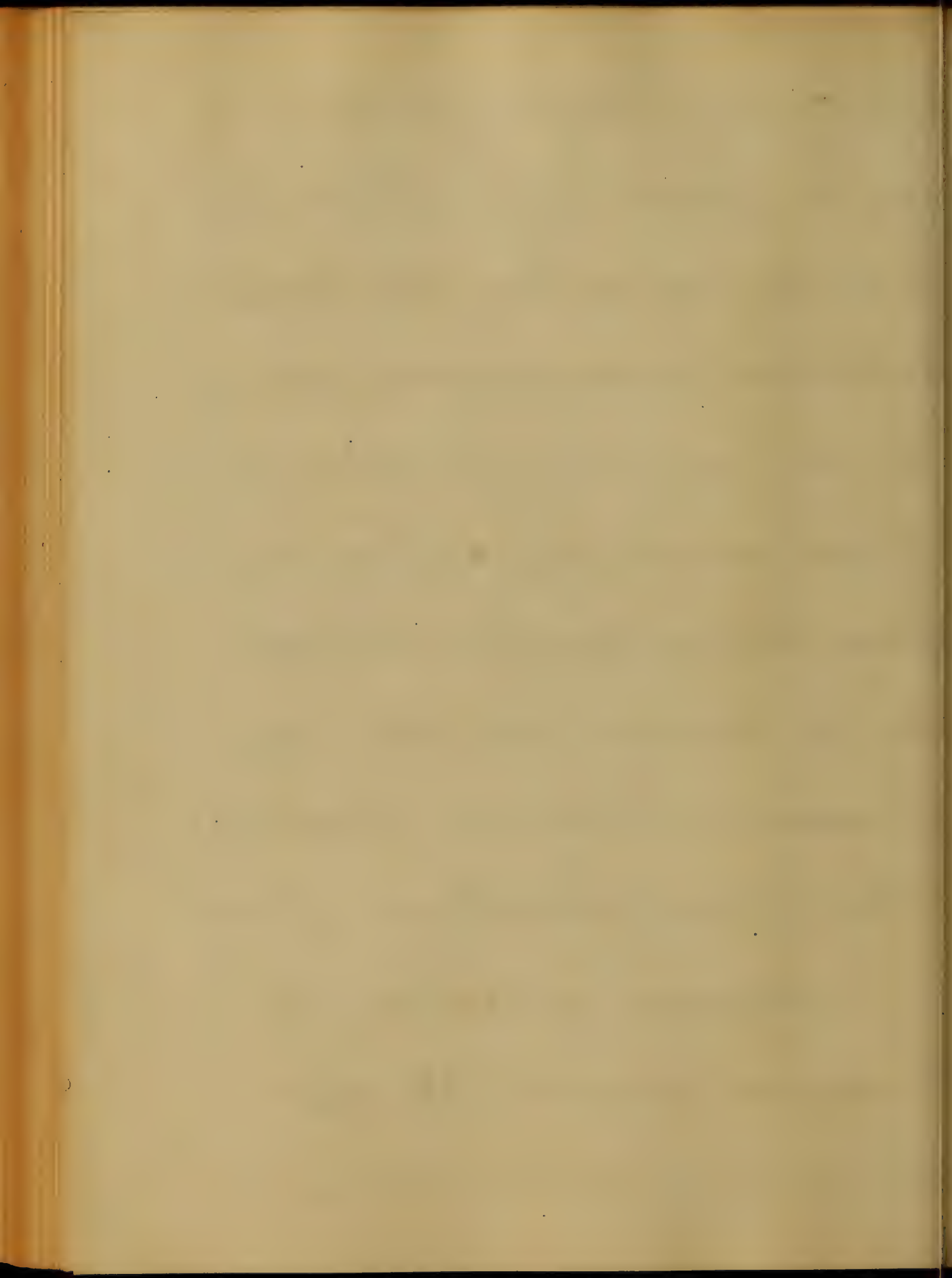


But however this may be the great indication in the treatment seems to be the production of rest & sleep, and it is quite obvious that no other single agent will accomplish this result as readily and as effectually as Opium.

A most important field for the operation of Opium is in diseases below the diaphragm. As in hemorrh. Dysentery, Colic, whether due to indigestible food, passage of gall stones or to Calculi.

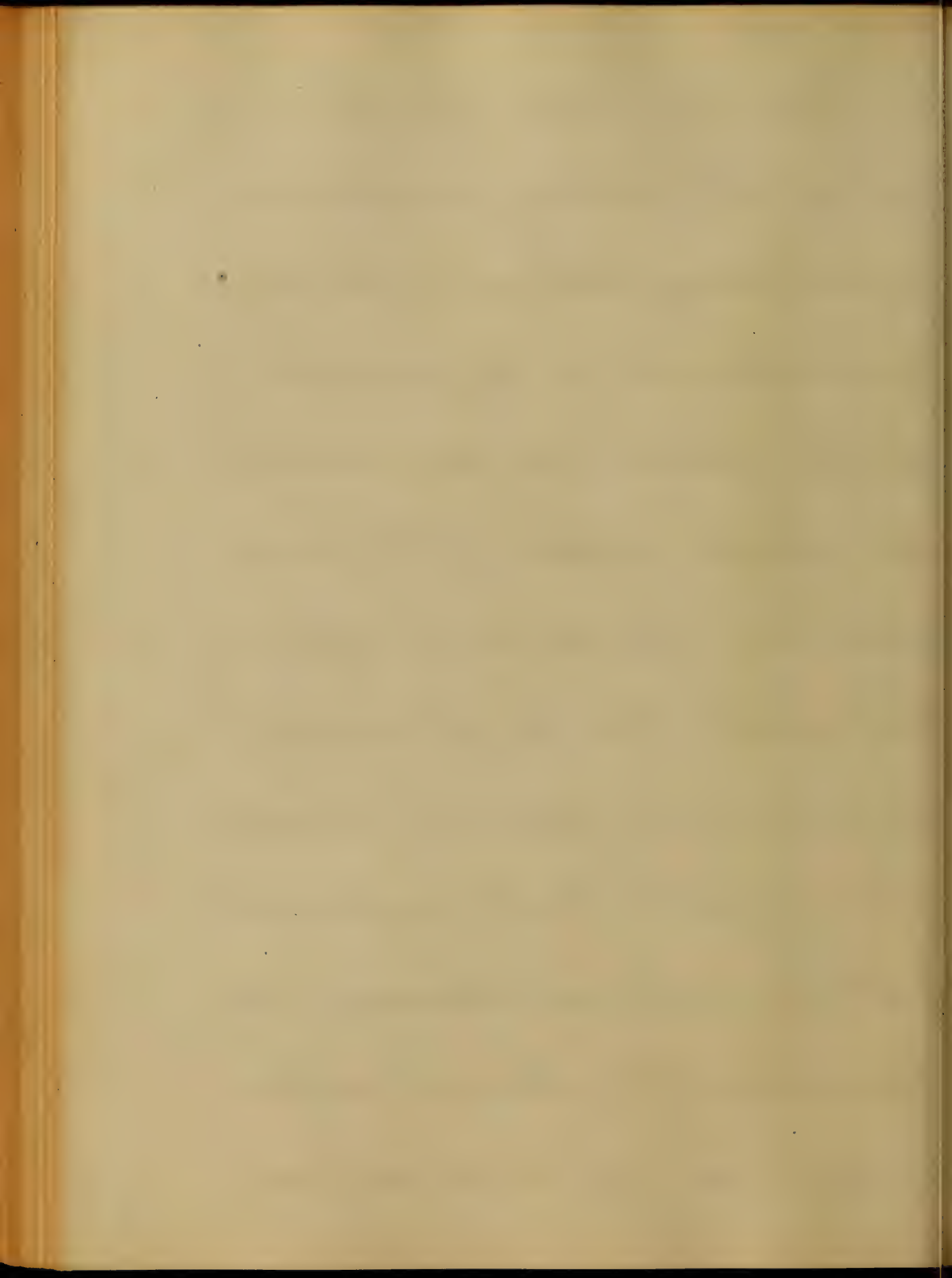


In former times Opium was considerably
 used in Malarious Fevers. it was thought
 that they possessed marked persua-
 sive & antiperiodic properties. at the present
 day however, we do not believe
 them to possess any such virtues.
 Nevertheless Experience has abun-
 dantly proven that they are
 of immense value in the treat-
 ment of Intermittent Fevers. Given
 in full doses just before the
 paroxysm comes on. Not that
 they will regulate the paroxysm



41

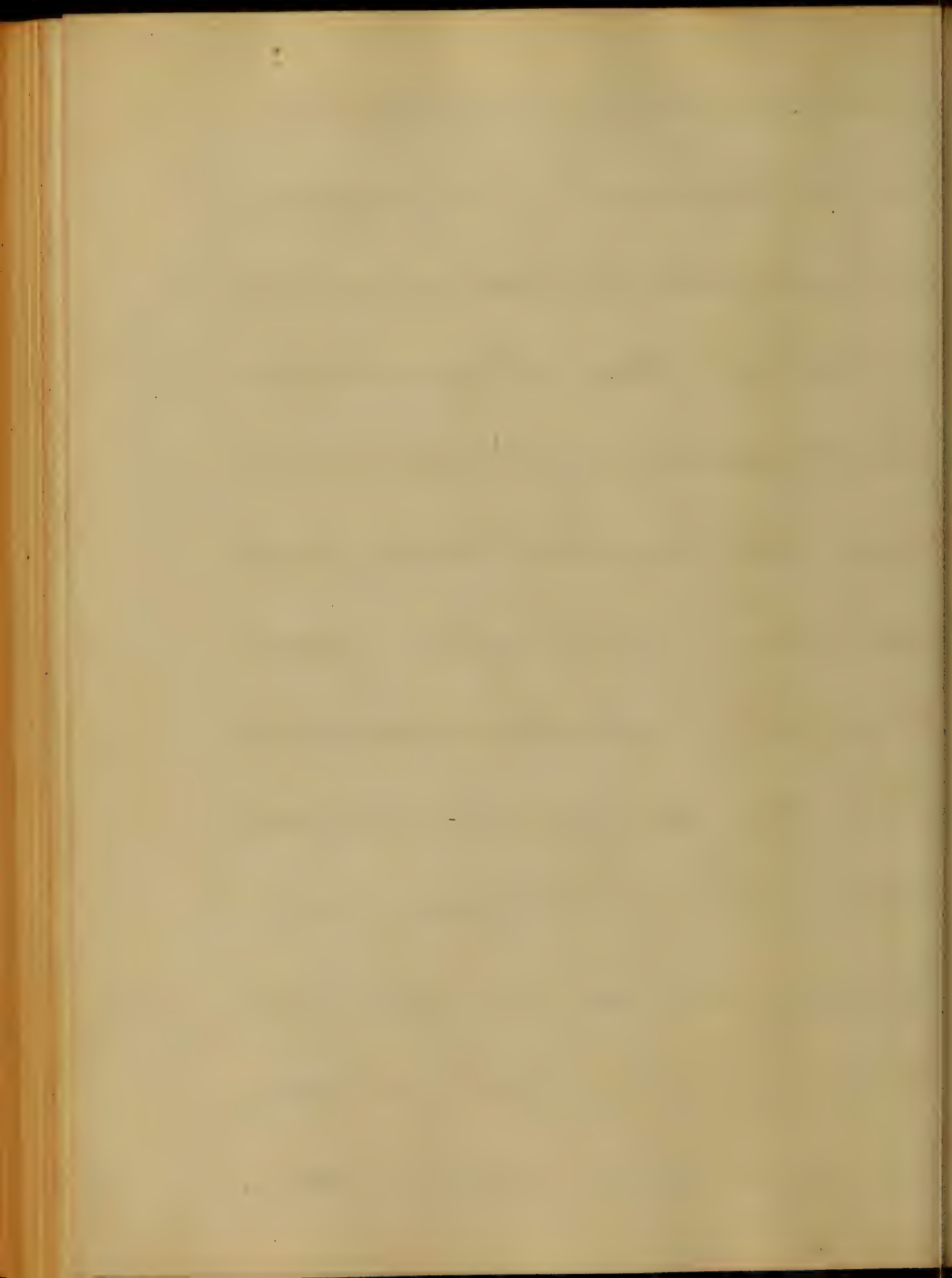
or prevent its recurrence. but will
mitigate its violence in a marked
degree. Many other affections might
be enumerated, in the treatment
of which Opials play an important
part. but the scope of this field
effort will not permit of their
consideration. And for the same
reason I refrain from speaking of
them in reference to Surgical op-
erations. In conclusion we
would say that there is no class
of Medicines which possess so



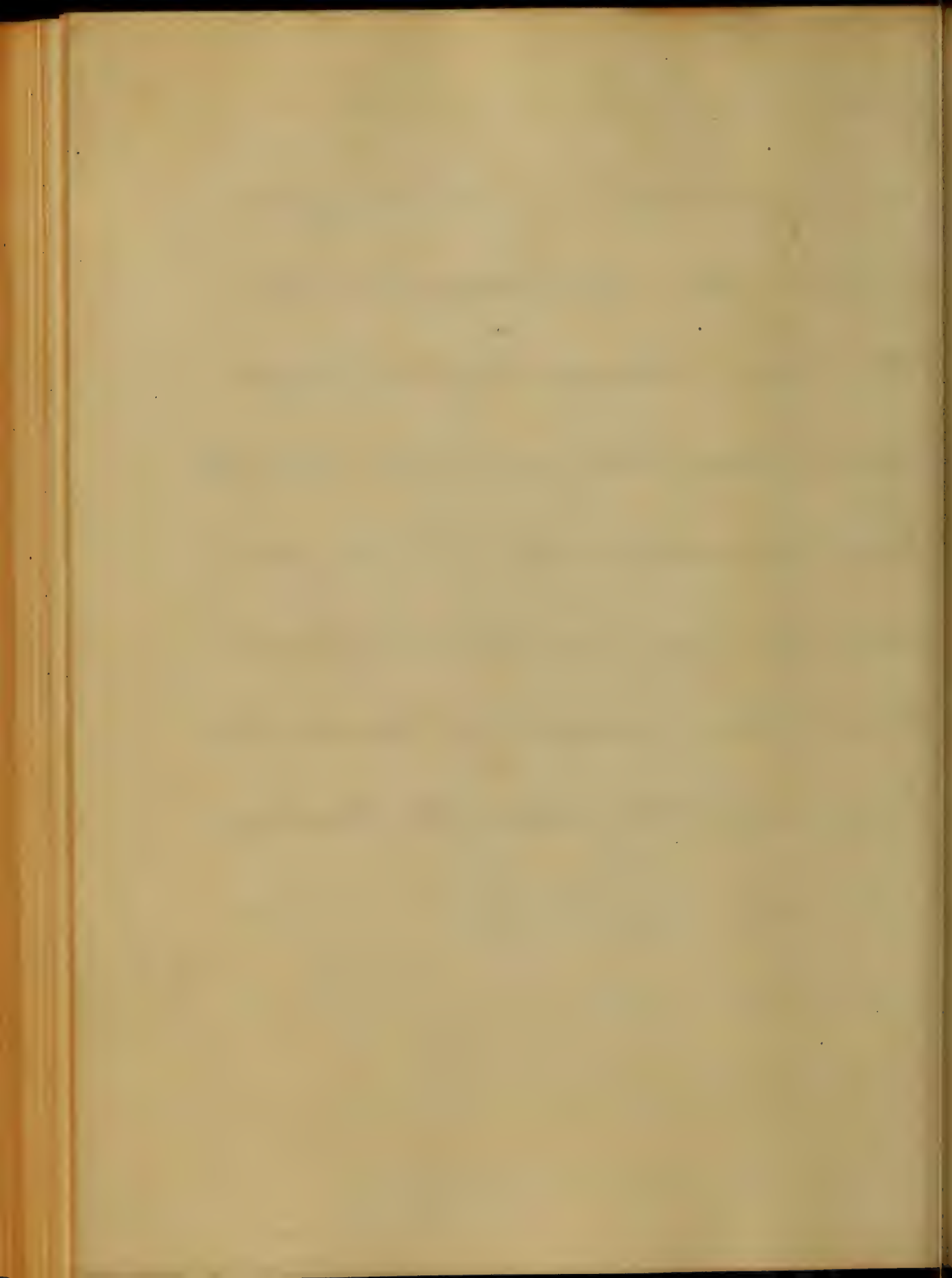
many see the same in their effects on
 different persons, as the Narcotics, those
 whose administration is more mod-
 ified by circumstances, for example,
 age of the patient. Idiosyncrasies of
 certain persons, and their former
 use, and the peculiar susceptibility
 of some persons. As the two Toxic-
 ics are precisely alike in every
 respect one is often an antidote
 for another, as Belladonna for
 Opium, and the same one
 in different patients will often



produce diametrically opposite
results; Hence the great importance
of being extremely careful and re-
served in their administration.
For whilst they, like many other
medicines, are most powerful for
good they are also often most
powerful for evil, in cases even,
when they seem to be most indi-
cated. But if we meet with
disappointments in some cases
this should not deter us from
doing the same thing over



again if we feel assured that we
 were in the right. But too often
 is it the case that ~~the~~ the Prac-
 titioner is insensible to his error.
 untill sad experience has taught
 him a lesson never to be forgotten
 and showed how by his folly
 many an immortal soul has
 been sent to meet its Maker



A
Dissertation
upon the
Effects
of
Bromide of Potassium
on the
Human System
by
W. S. Skinner.

R. F.
Rutledge, Md.
1869-

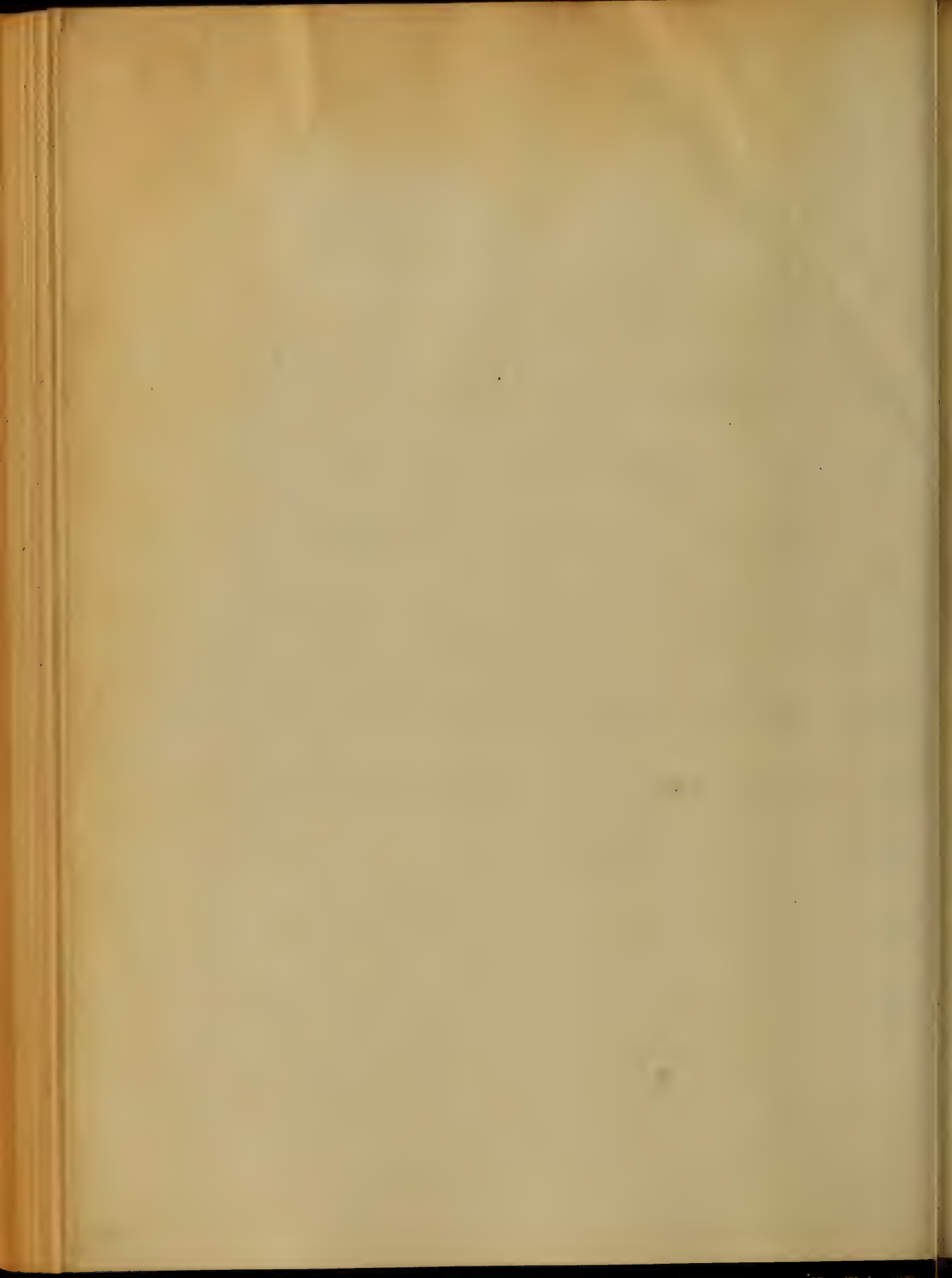


To My Preceptor,

J. T. Holland M.D.

In grateful remembrance of his
professional precepts and examples
and as a memorial of his instruction
and friendship this little treatise
is respectfully and affectionately
dedicated by the

Author.



To the Faculty of
The University of Maryland,
Baltimore's

I am presenting the following
in article to your consideration and
do not congratulate myself that it
will meet with your entire approval.
But when we read that it has been
prepared without our receiving the
opinions of any of yourselves in re-
gard to the subject, we hope it will not
be too great a tax upon your gene-
rosity to beg your indulgence for its
many imperfections.

Very respectfully,

H. J. Skinner

Kuthobing, Md.
Oct. 5 - 1869

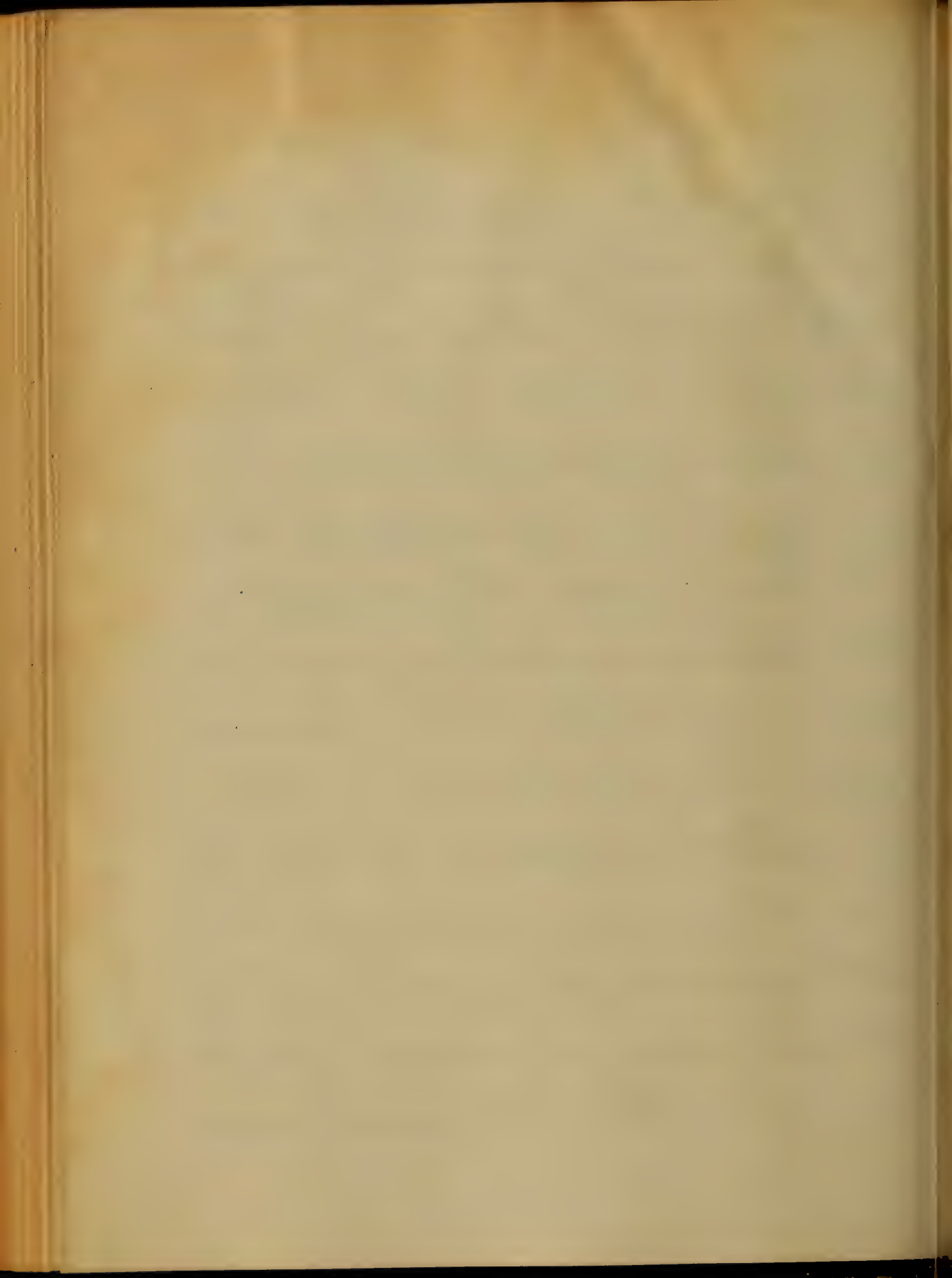


Effects of Bromide of Potassium on the Human System

In regard to this subject not a little difference of opinion exists among the authorities, the most useful to observe its effects, Bromide of Potassium is a very old therapeutic agent, and was formerly much used as an alternative or deobstruent and supposed to have effects analogous to the different preparations of iodine, only greatly inferior to them. But the results of the most recent investigation are in favor of the salt as far more useful and extended sphere of action. It has become

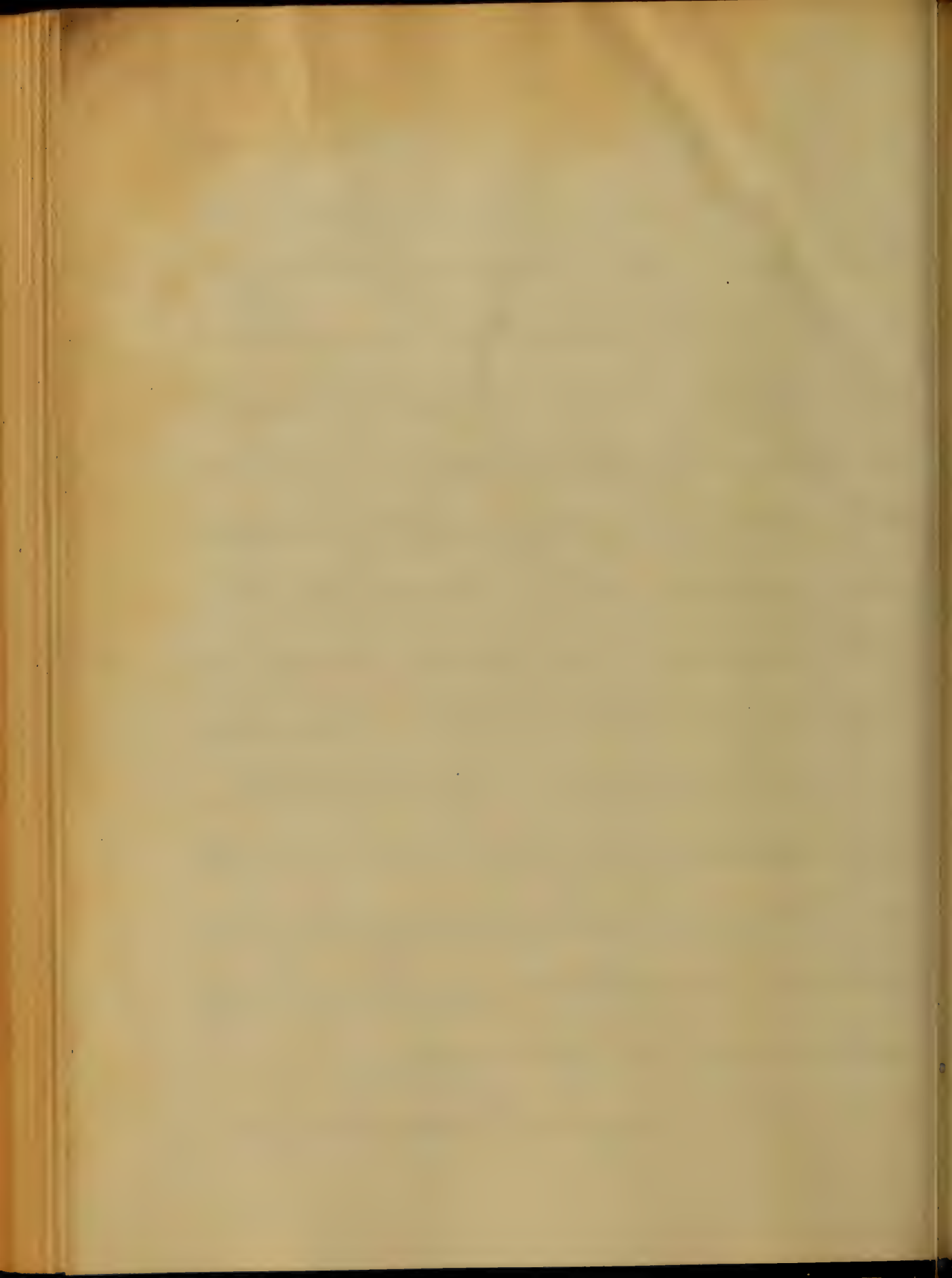


of 16 years almost entirely
to suppress them as well as the
suggestion of portions of the
spinal nervous system, yet those
who have had the most experience
in its use are far from agreeing as
to what portion is specially affected by
it. Thus, Dr. Burrows thinks, "it affects
in lessening cerebral suggestion, &
that suggestion is in its incipient
stages," Dr. Litchton Drouin, "has
been led to the conclusion that the
lovinic acts directly as a sedative
to the medulla oblongata," W. Cabada
states its primary action is upon the
spinal cord, Dr. Bill after conducting



a series of experiments, etc. etc. on
a piece of eight, with the "vegetable"
to suggest that Sunday / potassium
in its legitimate action, ^{is} a matter of
consequence of the numerous numbers and
a deposit of their actions, "It is in
the also it is the results of his ex-
periments that it alloys and ^{is} of the
phosphorus and of the white iron in eyes
According to Dr. Pflüger's observations
on the human eye, "the white
of potassium is the strength of
the heart, not in a sense that it is the
of its heart, so that the pulse is frequently
as low as fifty." (per minute.)

but two marks are used for



It is also instructive to show that they are
the exact language of the states quoted
and that we have not twisted the lan-
guage of the authors to give it a mean-
ing to suit our own preconceptions. It will
be seen that each refers to what is
a different part. Thus to review in
opsis,

Brain - - - - - DuRoi

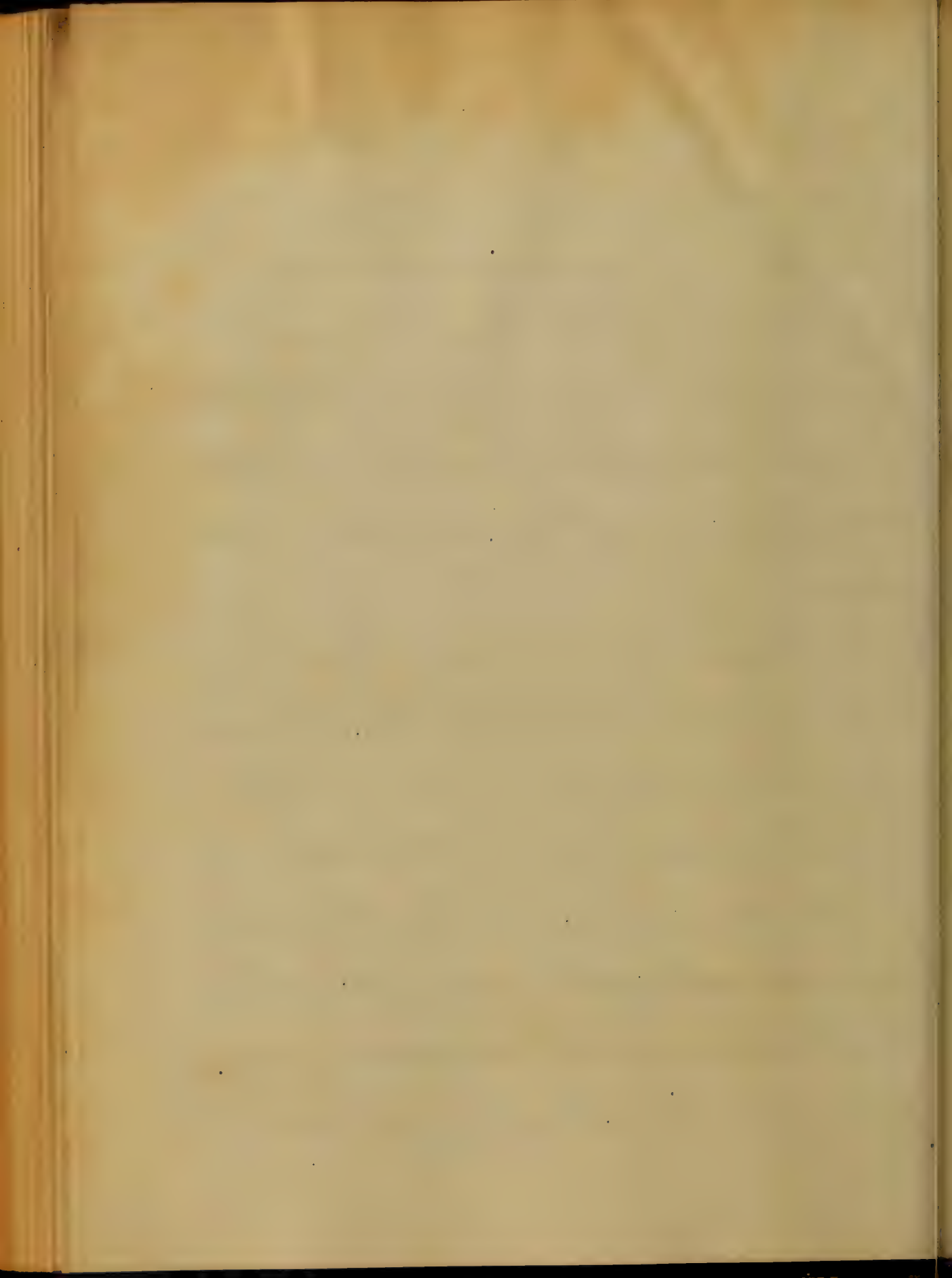
Spinal Cord - - - - - Brown

Spinal Cord - - - - - Leconte

Spinal Cord - - - - - DuRoi

Spinal Cord - - - - - DuRoi

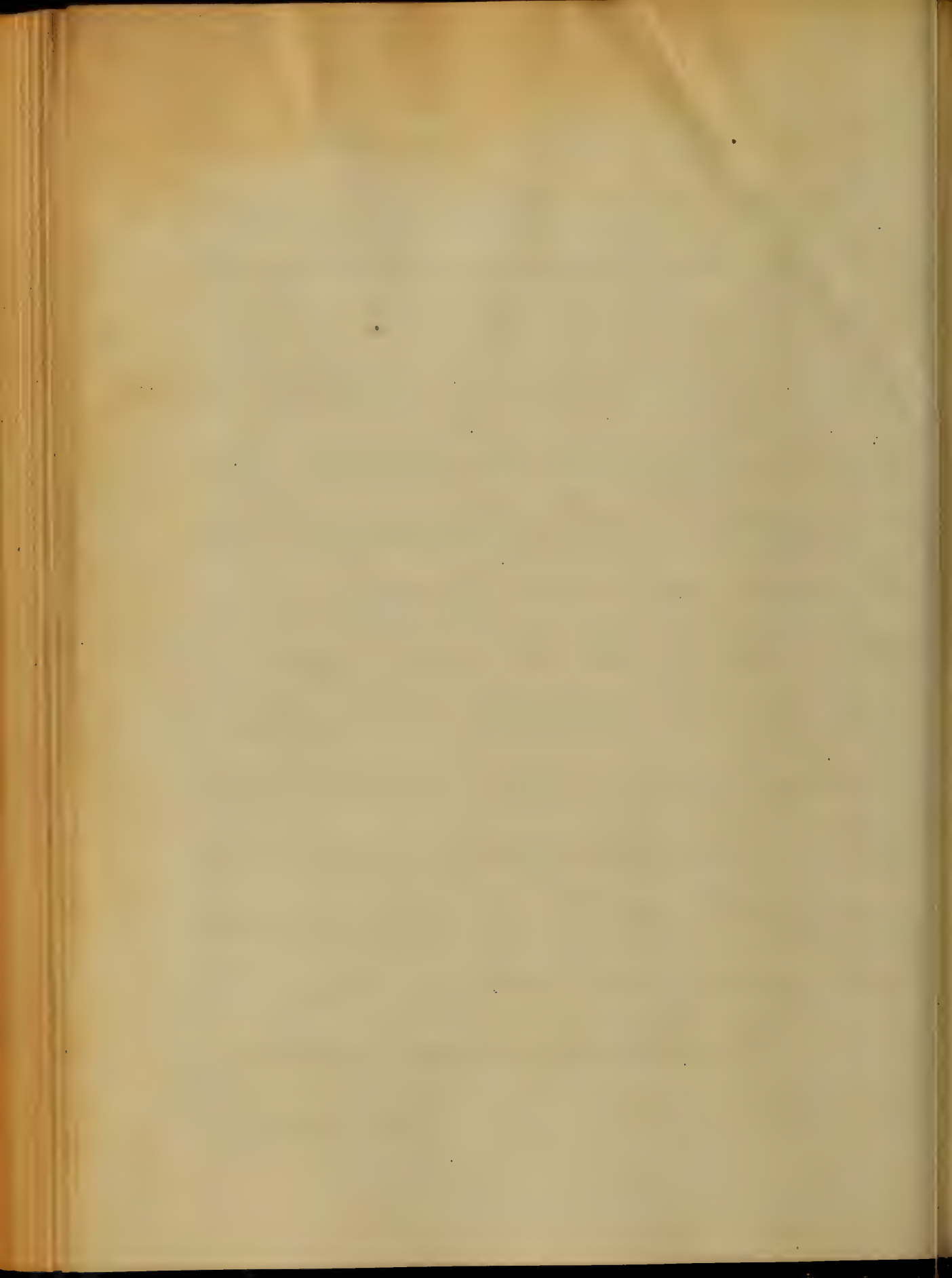
and that all together use of the whole
Cerebro-Spinal Nervous System and
signify the seat of its proper seat of



action, each is most sanguine and
we doubt not equally ^{opinionated} in the belief that
he has has discovered the true action
of the medicine.

Now what do all these ^{se} differ-
ent results prove? Why! if they prove
anything at all they prove that the salt
is a universal sedative to the nervous
system, and that the above experi-
menters, "all are right, and all are
wrong," right, such so far as their
observations extend, but wrong in sup-
posing that others may not have dis-
covered other additional results.

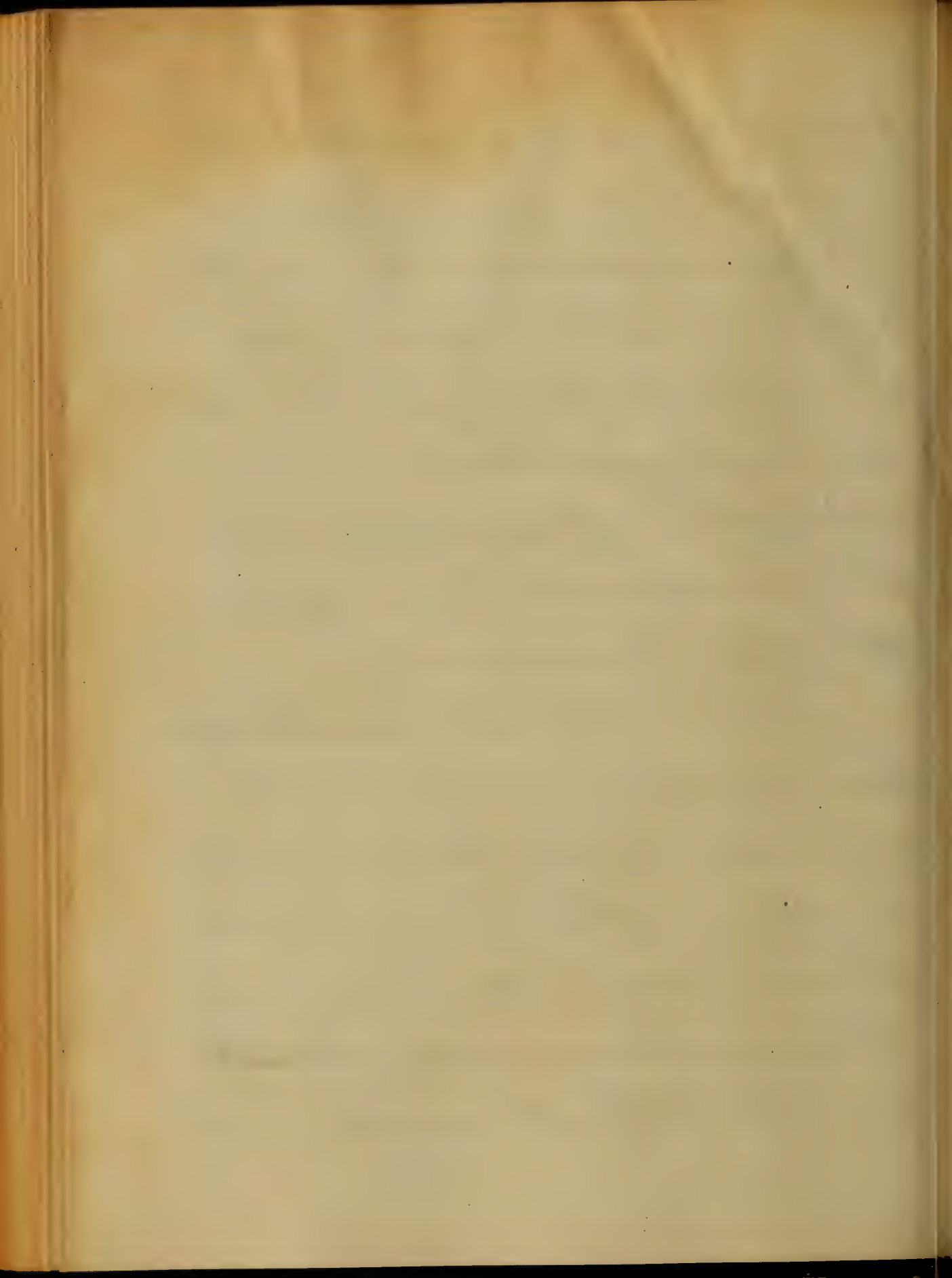
I think very much is to be de-
livered for getting you in the dinner



tions of these great men, But let
us examine for a moment some
of the circumstances under which
they lived, at their experiments,
The above mentioned experiments
were performed either,

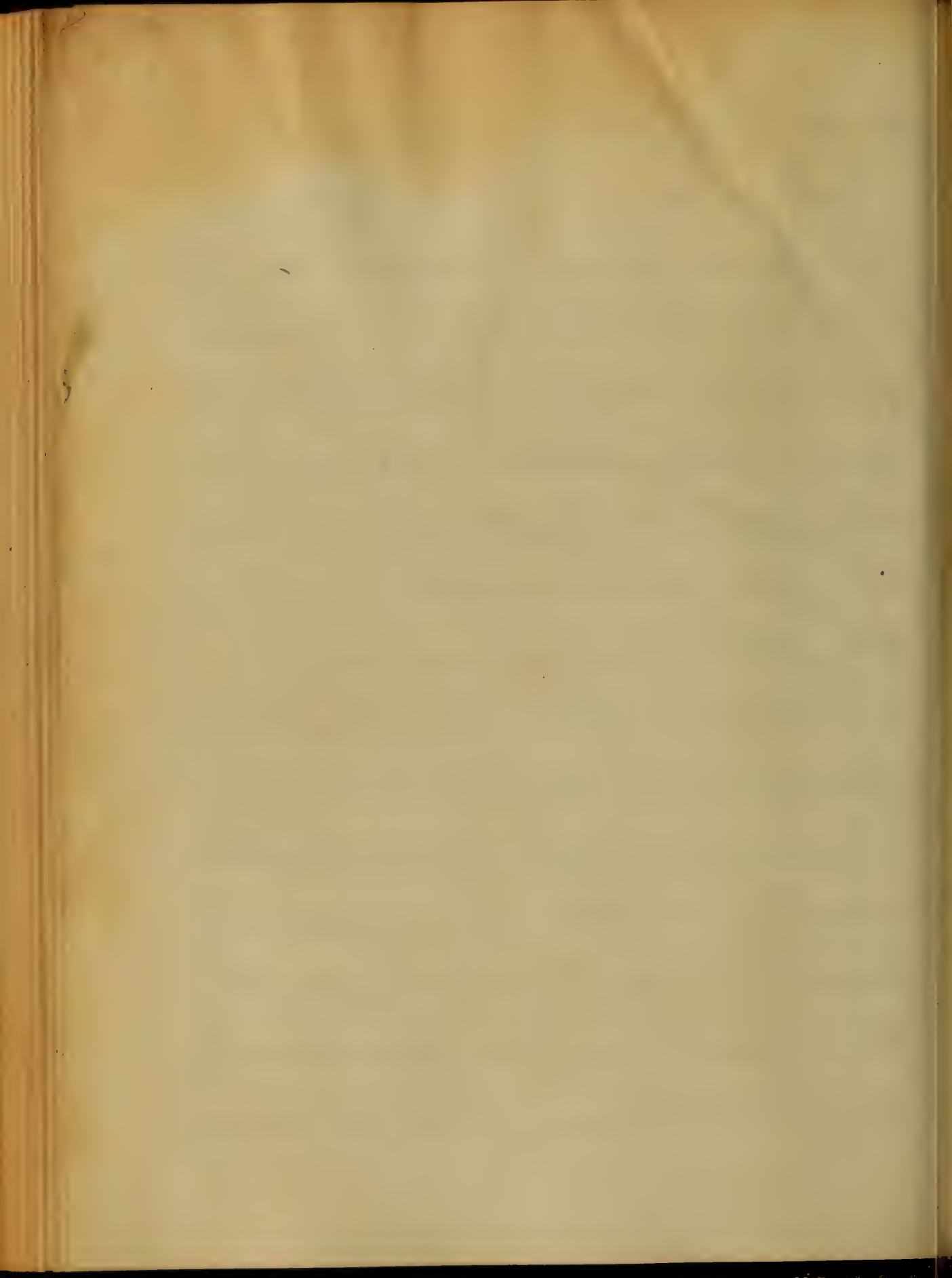
- I Upon the healthy human organism
- II Upon the diseased human organism
- III Upon the lower animals

I Those performed upon the healthy
human organism must have been
confined to one subject, or repeated
on one subject, if repeated on one
the risk of idiosyncrasy is encountered
if repeated upon a number the diffi-
culty of controlling the results is



to diet, habit is insupportable.

If I were performed upon an
diseased man a general 1st
the same allowance is to be made
for idiosyncrasy and difficult
incontrollable habits, diet &c as in
those upon the healthy. 2^d If medi-
cine is administered for the relief of
disease situated in one portion
of the system we may fail to ^{observe} what
effect it has upon the remaining
portion that is healthily & un-
affected should be something remarkable
in the latter as to call our attention
to it; and even then it would be
difficult to discriminate between

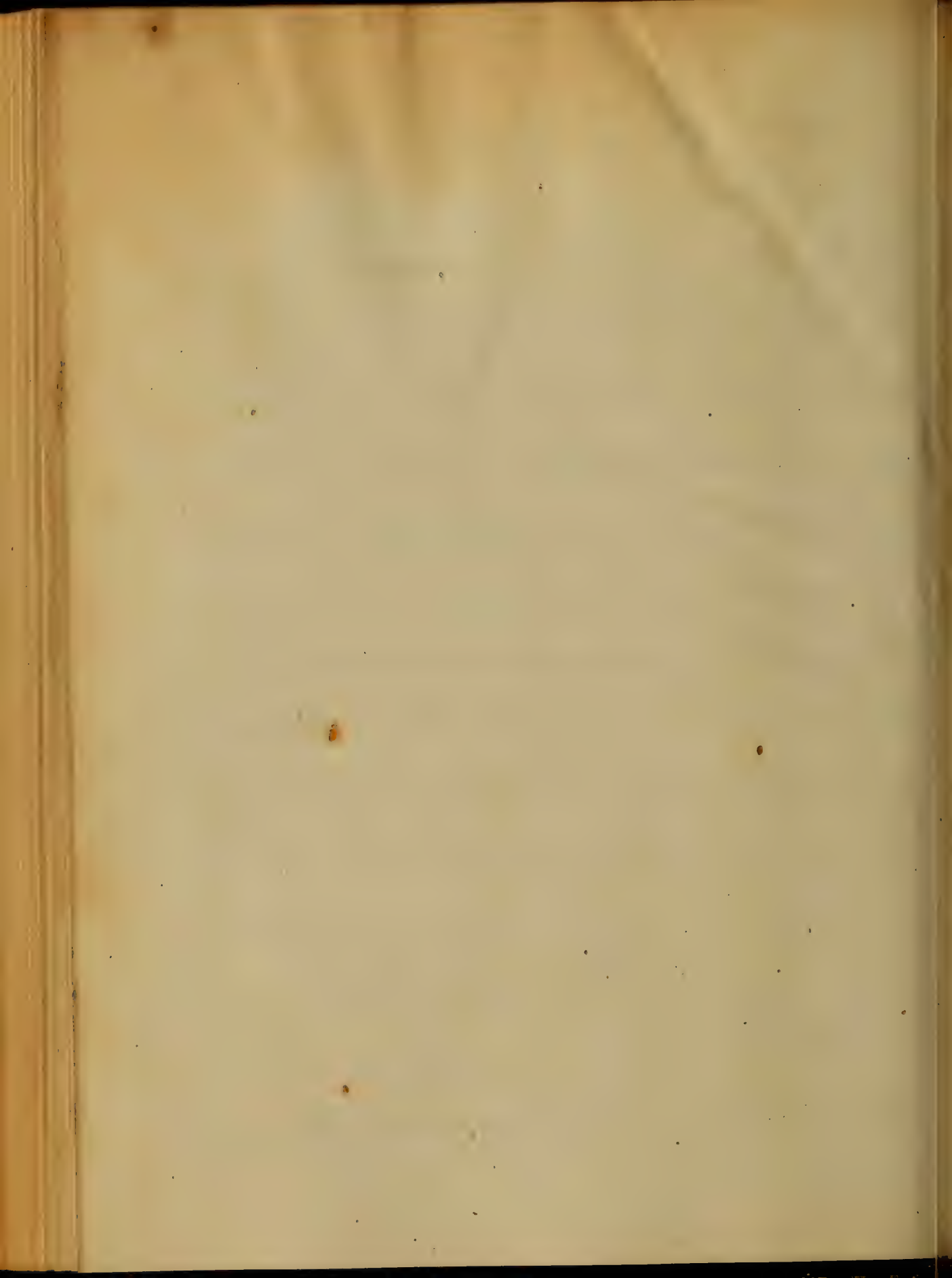


such results and those changes which
are necessary evidence of the disease
under treatment, 3^d medicines of
this class (sedatives), and their opposites
(stimulants), often have the property of
modifying the disordered functions
without having or seeming to have
any effect upon the remainder of
the system. I remember seeing a
man to whom in a severe attack
of colic 12 grains of Opium or its
equivalent, had been adminis-
tered in a little over three hours with
no other apparent effect than that of
relieving the pain: that it had a
most happy effect, I saw if the op-



facts of opium and its preparations had been observed only in solis the profession might have been led to the conclusion that its special seat of action was the gastro-intestinal canal, and similar errors would, no doubt, have resulted from observing its effects in relieving disease situated in other portions of the system. Therefore the therapeutic and physiological effects of medicine are not identical.

III In these experiments upon the lower animals we think the sources of fallacy are still



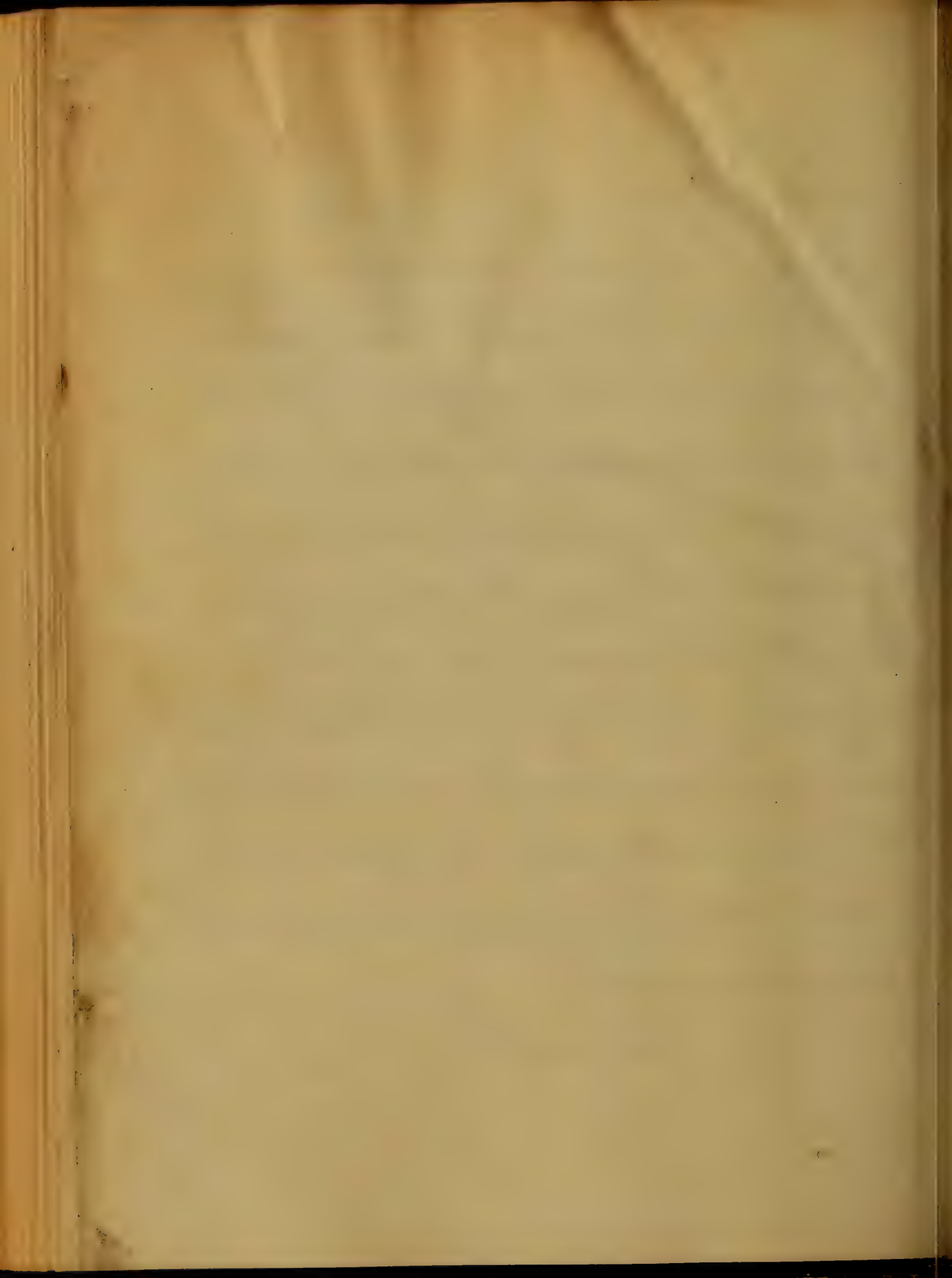
more numerous, for says Bill,
"each tribe of animals has its
own characteristics peculiar to itself,
thus; belladonna and stramonium
are not poisonous to goats and
rabbits, Quistie asserts that, morphia
acts on cats like strychnia, The writer
(Bill) knows from observation, that
the antelope of the plains is a great
consumer of tobacco, It is a common
error, to predicate the therapeutic
action on man of a drug from
even its well known and clearly
defined action on the lower an-
imals."

Therefore our own conclusions



in regard to the action of the
medicine may be summed
up as follows; that bromide of po-
tassium is fully uterine and de-
obstruent, decidedly sedative to
the whole cerebro-spinal nervous
system, and perhaps specially con-
vulsive to the gastric wiring, oesoph-
agus and the pharynx, that it has the
property of allaying irritability of
these parts we doubt not, but we think
this last result, may be explained
upon the principle of its general
sedative action.

"The End,"



AN
Inaugural Dissertation

ON
Delirium Tremens.

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
Charles J. Dentons,

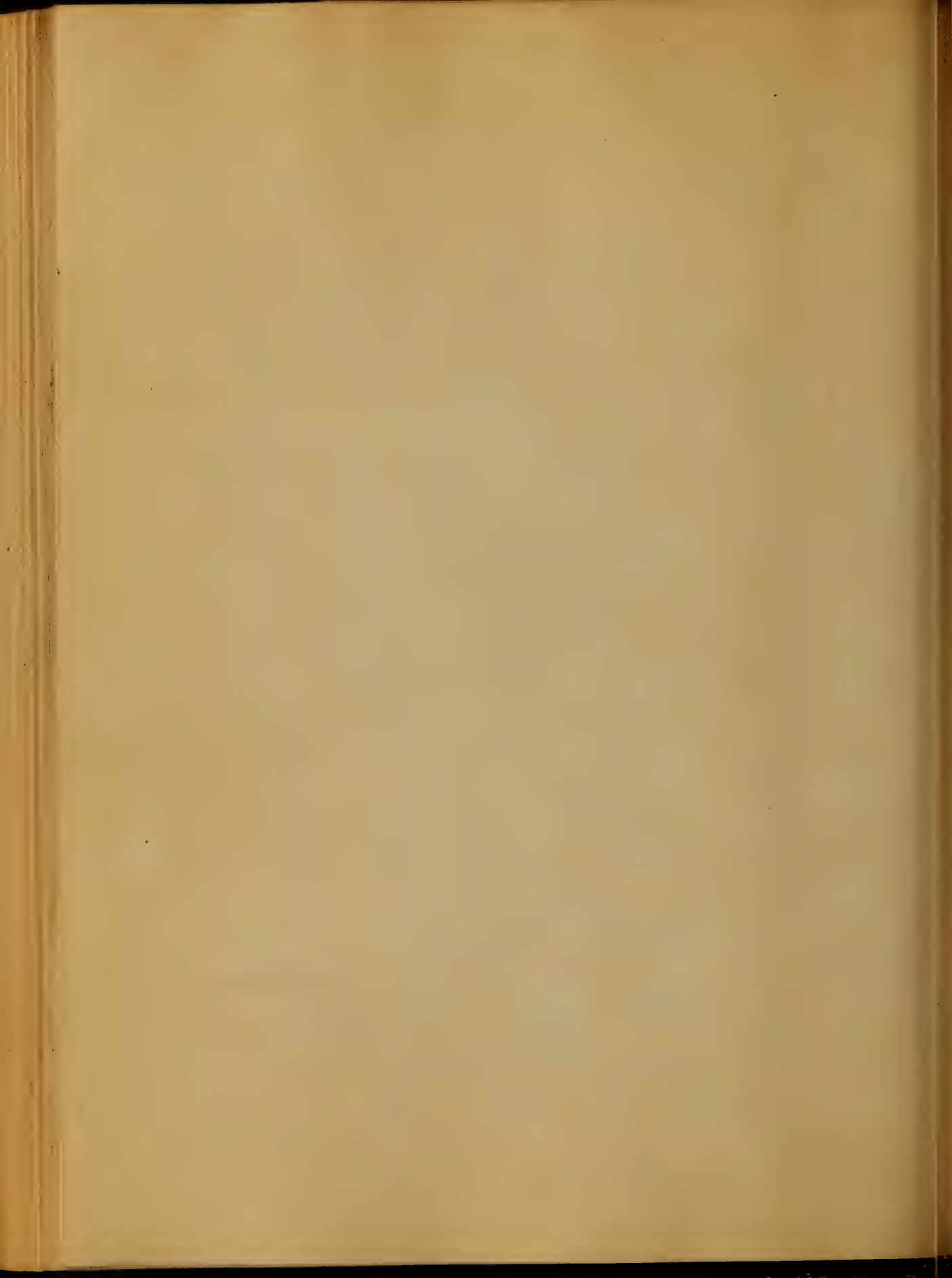
of
Talbot County, Maryland.

Session of 1867

Religious Trances.

The diseases of the mind, as far as is known to man, are more justly regarded in their demands for our consideration, than the one we propose making the subject of this dissertation.

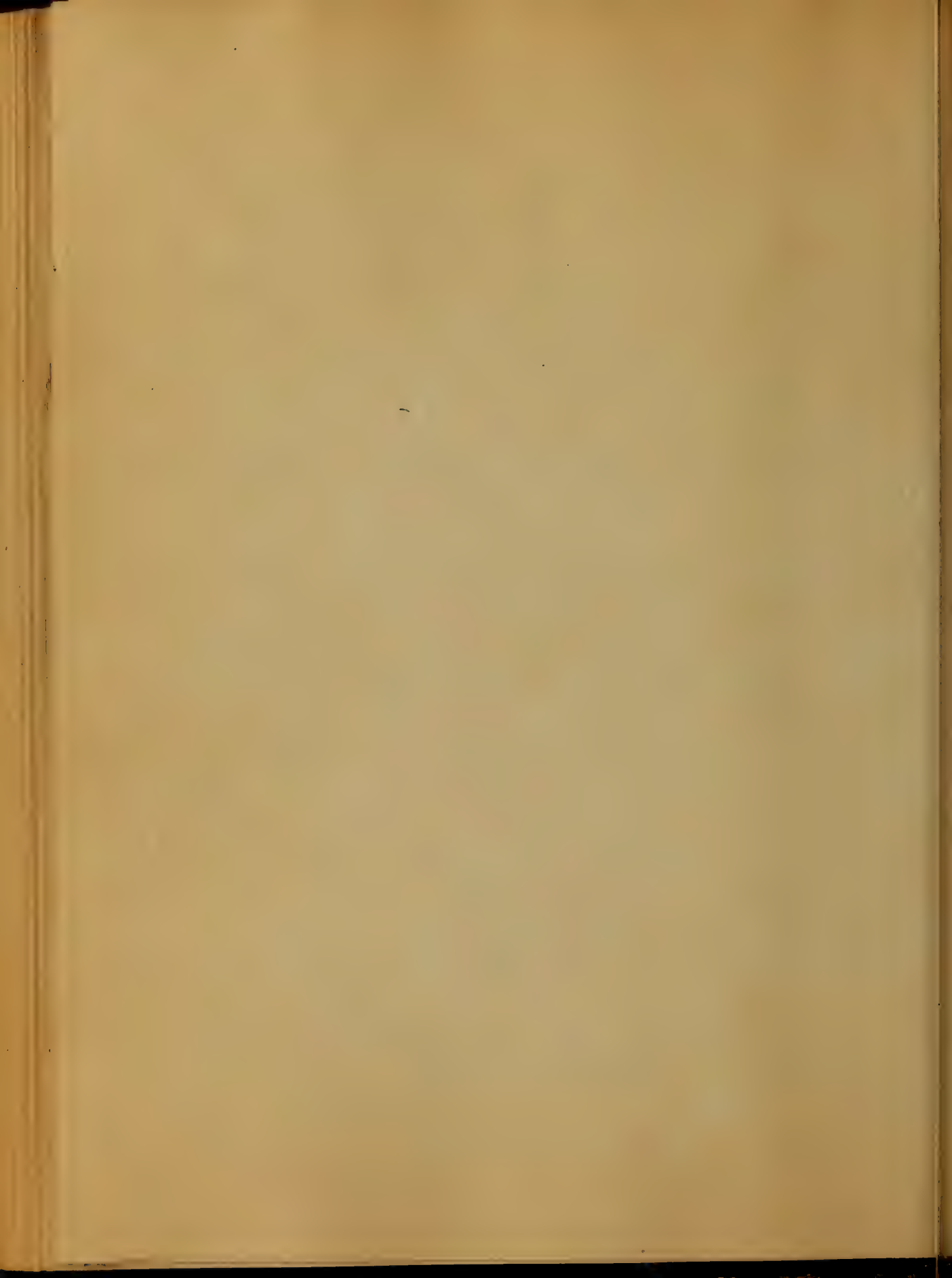
The medicinal employment of Alcohol as a drink, we know to be the one great cause of this affection, and therefore, not like many other diseases, is Religious Trances to be found in certain men or less extended districts, and at certain periods or seasons, but as unlimited as the field in which the cause operates, just so universally do we expect to observe the disease. In making then, the frequency of its occurrence among all



Classes of men, together with the total
obscurity that envelopes all its
pathological lesions, we could hardly
doke it with peculiar interest for
every true physician.

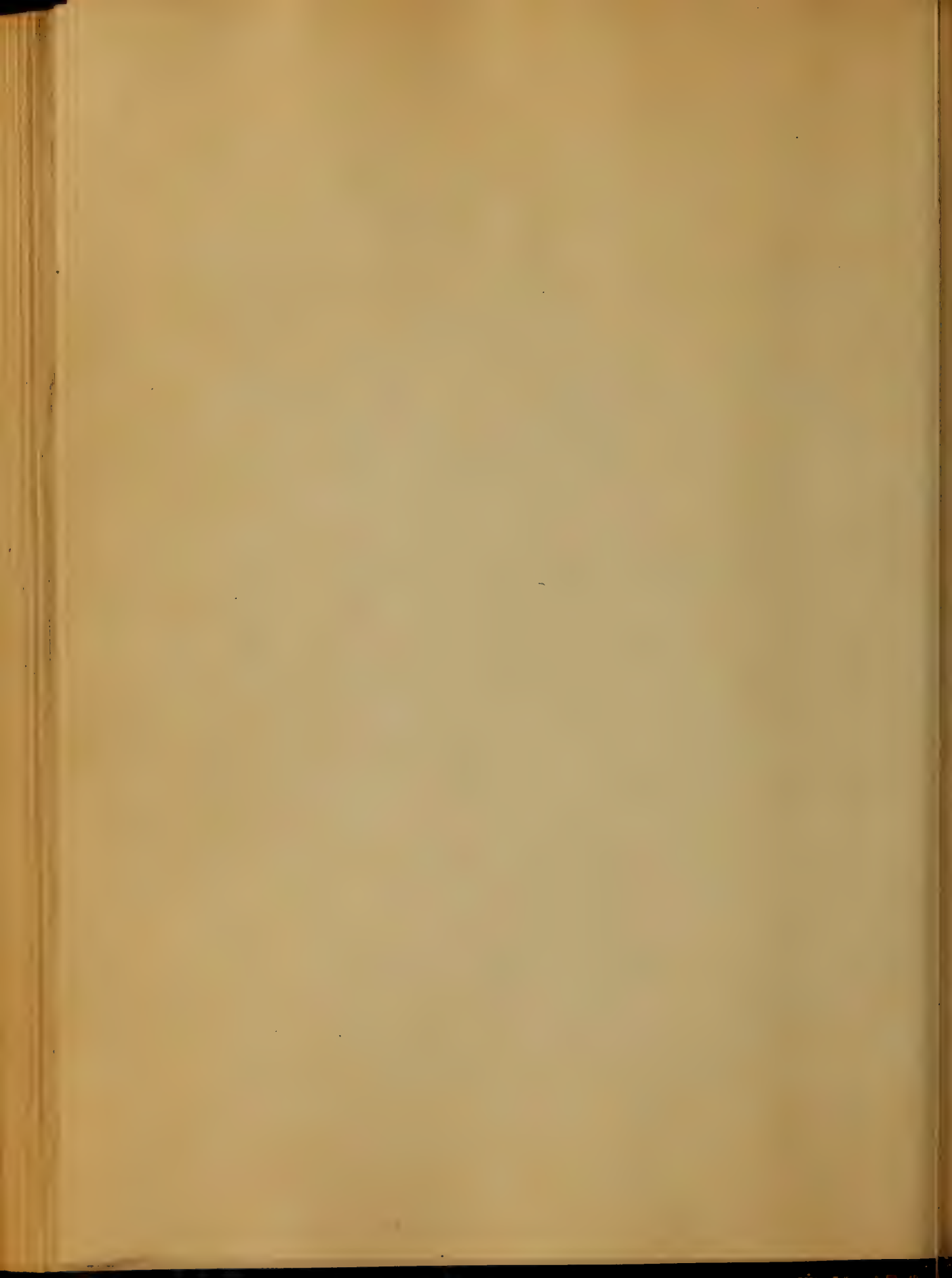
The various morbid effects of the
abuse of alcohol are known under the
general head of alcoholism, which
indirectly favours the production of
very many diseases, by lessening the
power of the economy to resist their
advances, as well as, entering directly
into the causation of very many other
serious individual diseases.

Intoxication is the term applied to
that immediate effect produced by
introduction of the liquor, & consists of



the agent and differs very materially
from the disease under consideration,
which stands prominently among the
effects of its continued use, and the
one perhaps, of all, most frequently,
drawing the attention of the medi-
cal man.

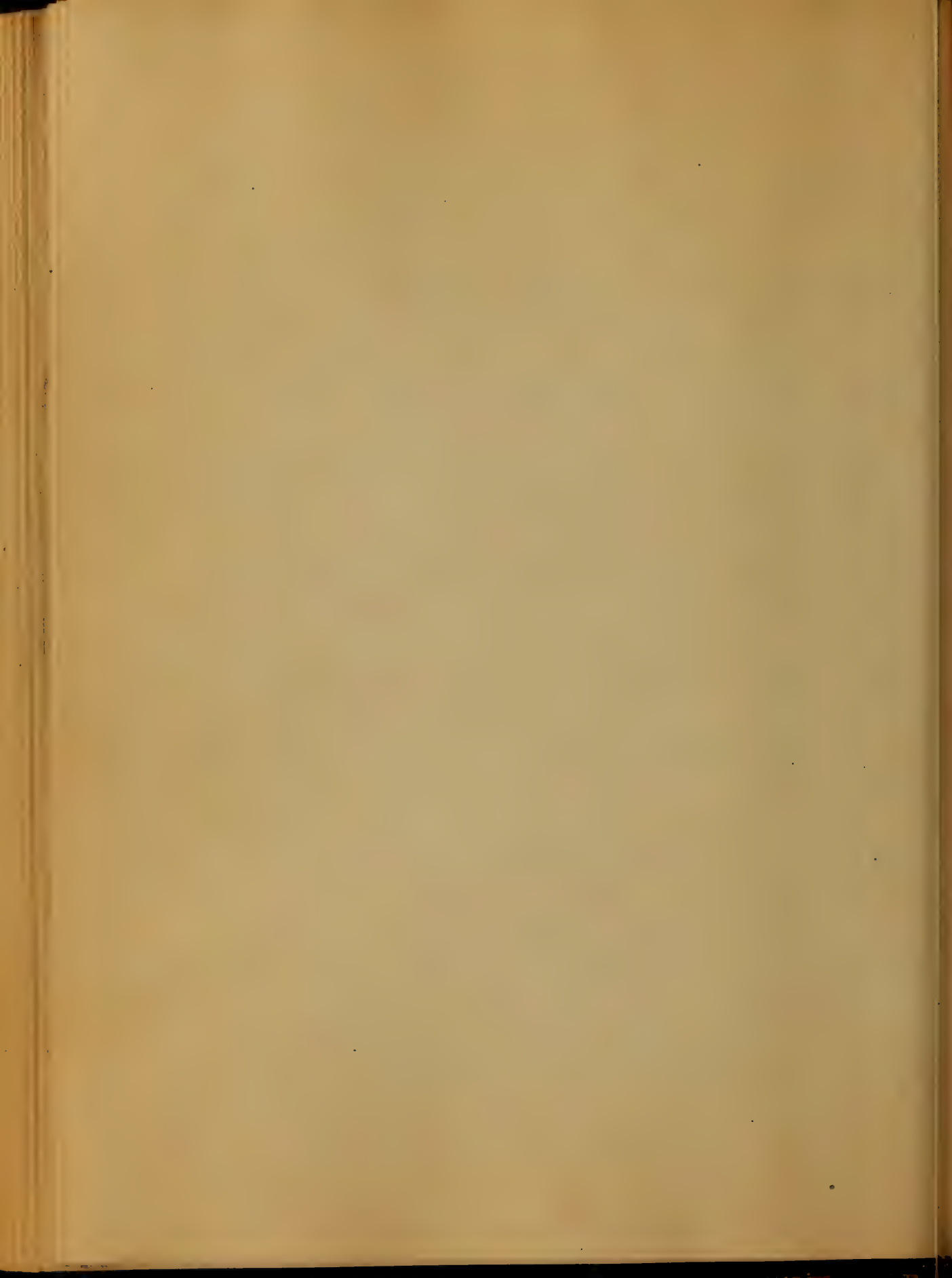
Delirium Tremens is purely a ner-
vous affection and is most frequently
caused by the sudden withdrawal of
alcoholic stimulation after its long
continuance, but may be a direct con-
sequence of the protracted action of
alcohol upon the brain. It therefore
finds it most frequently in persons,
who voluntarily attempt the abandon-
ment of their intemperate habits, or



those who are weak, from some cause,
to obtain the requisite amount to
satisfy their voracious appetite.

Some authors state that the disease
may be induced by any long con-
tinued excitement of the nervous
system, and although we are willing
to accept this as production of a
few cases, there is no doubt, that, by
far the greater number of cases are
to be found among men addicted to
the excessive use of alcohol, in some
one of its various forms. Hence its
most common name among persons
out of the profession - *Mania a potu*.

For some unexplained reason it
is known to be more frequent among



men; Chan women, alike subjected to its
 known causes. This is directly opposed
 to what the world naturally anticipi-
 pates, taking into consideration the
 more sensitive character of the
 female constitution; never the less, all
 authorities agree that such is the case.

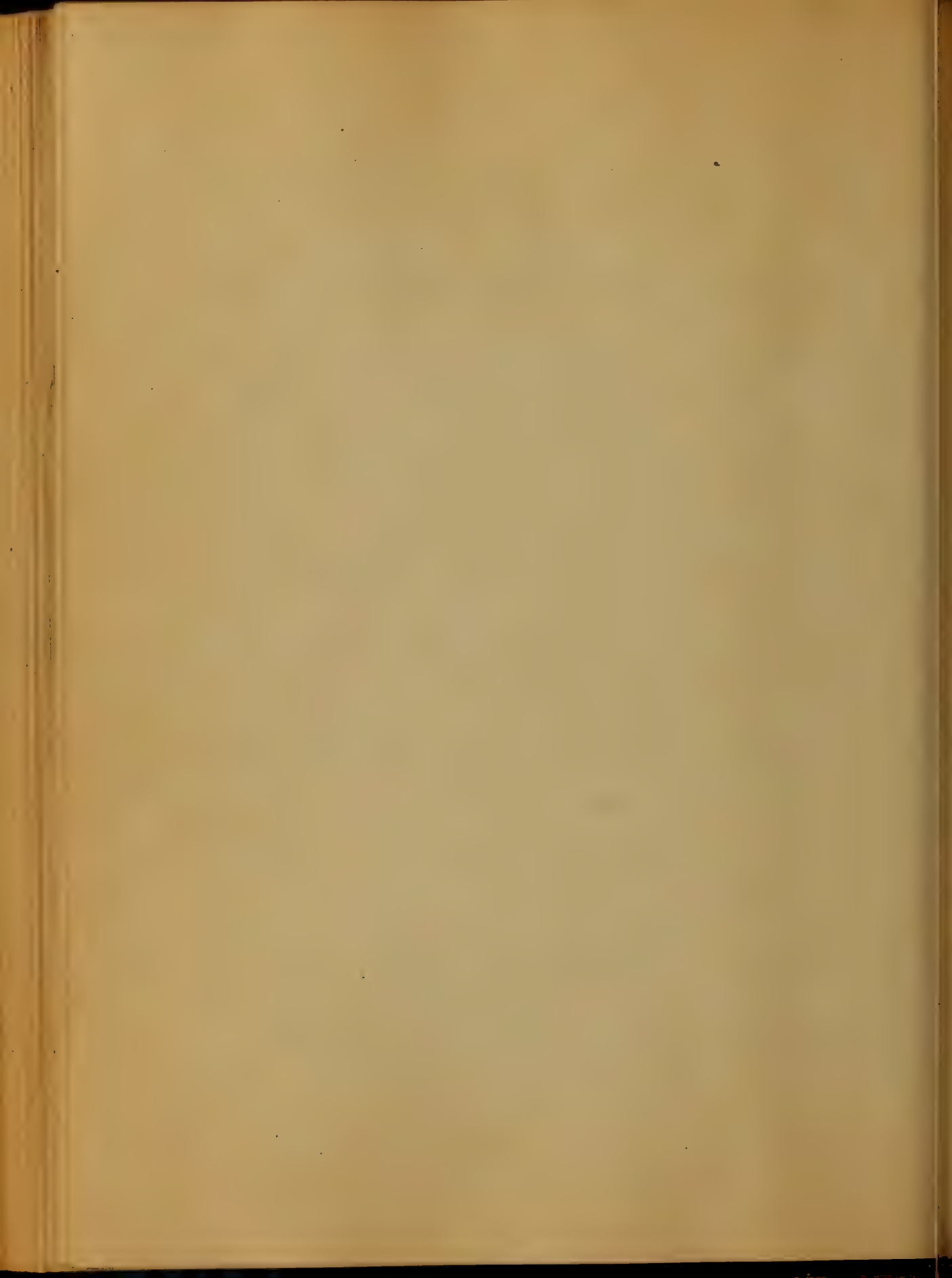
Formerly the prevalent opinion was,
 that Nitrous Oxide was more pro-
 duced by the small ligament, but this
 idea is no longer held by medical
 men. I have witnessed one case at
 the University Hospital brought on
 by a drink of Chis Charadee.

The patient states that he had taken
 several ^{quills} of the stuff, before the attack,
 and took white wine Mentum Chis



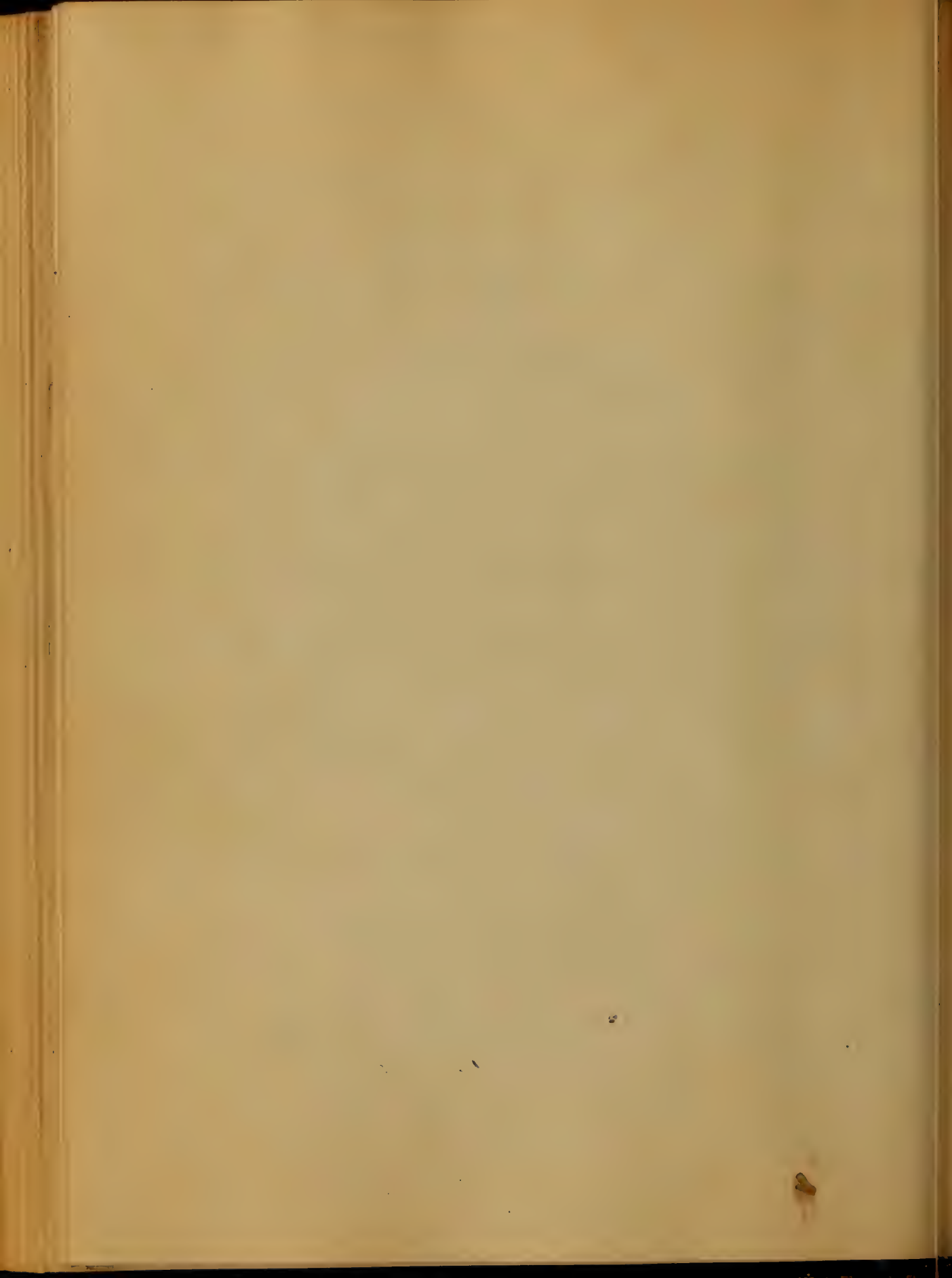
and of the same kind in nature.
 The peculiar nature of the complaint
 with the proper modes of treating it
 were first brought out in 1812
 by L^r Sutton of Guernsey in a little
 treatise upon the subject. During the
 past few years many essays and
 papers have appeared in England,
 France and this Country, where the
 disorder is very common.

The symptoms characterising an attack
 are generally well marked, and although
 we do not expect to find every case pre-
 senting the same features yet there are a
 few, which in nearly every case may be
 confidently looked for. Recollet says
 Dr Watson that the strong features of



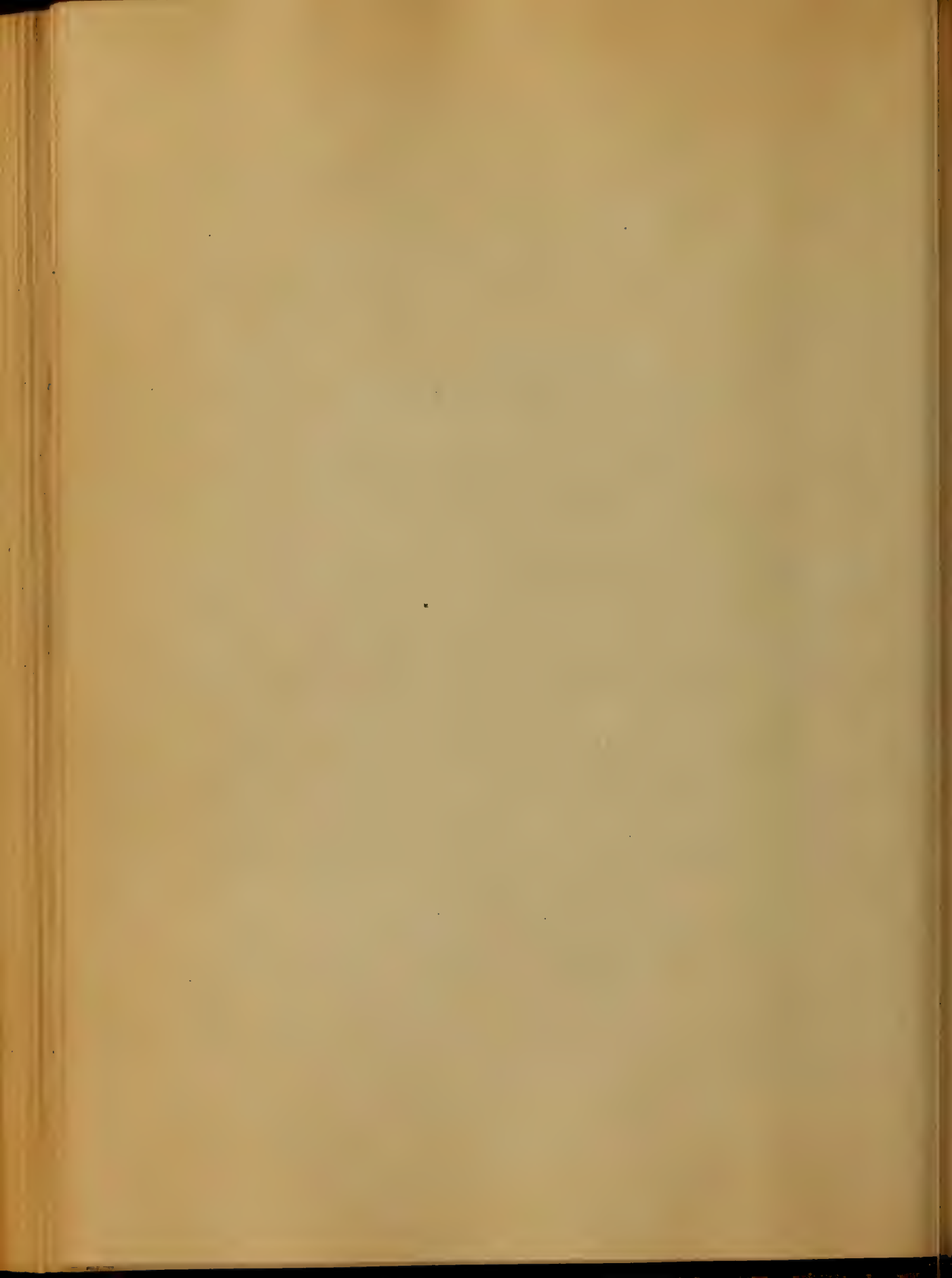
1
The Complaint are Sleeplessness; a busy
but not angry, or restless, delirium, con-
stant Chattering; Trembling of the hands,
with an eager and frigate employment of
the same. To these are added other
Symptoms, which although they are not
so calculated to strike the Doctor, are
of not less importance, in as much,
as they help to establish the diagnosis.

The Tongue is moist and creamy;
the Pulse is soft, though frequent,
while the Skin is perspiring and
often bathed in sweat. This excretion
is described as having a peculiarly of-
fensive odor. The face is sometimes
pale, while at others, it is flushed
and red, with eyes suffused.



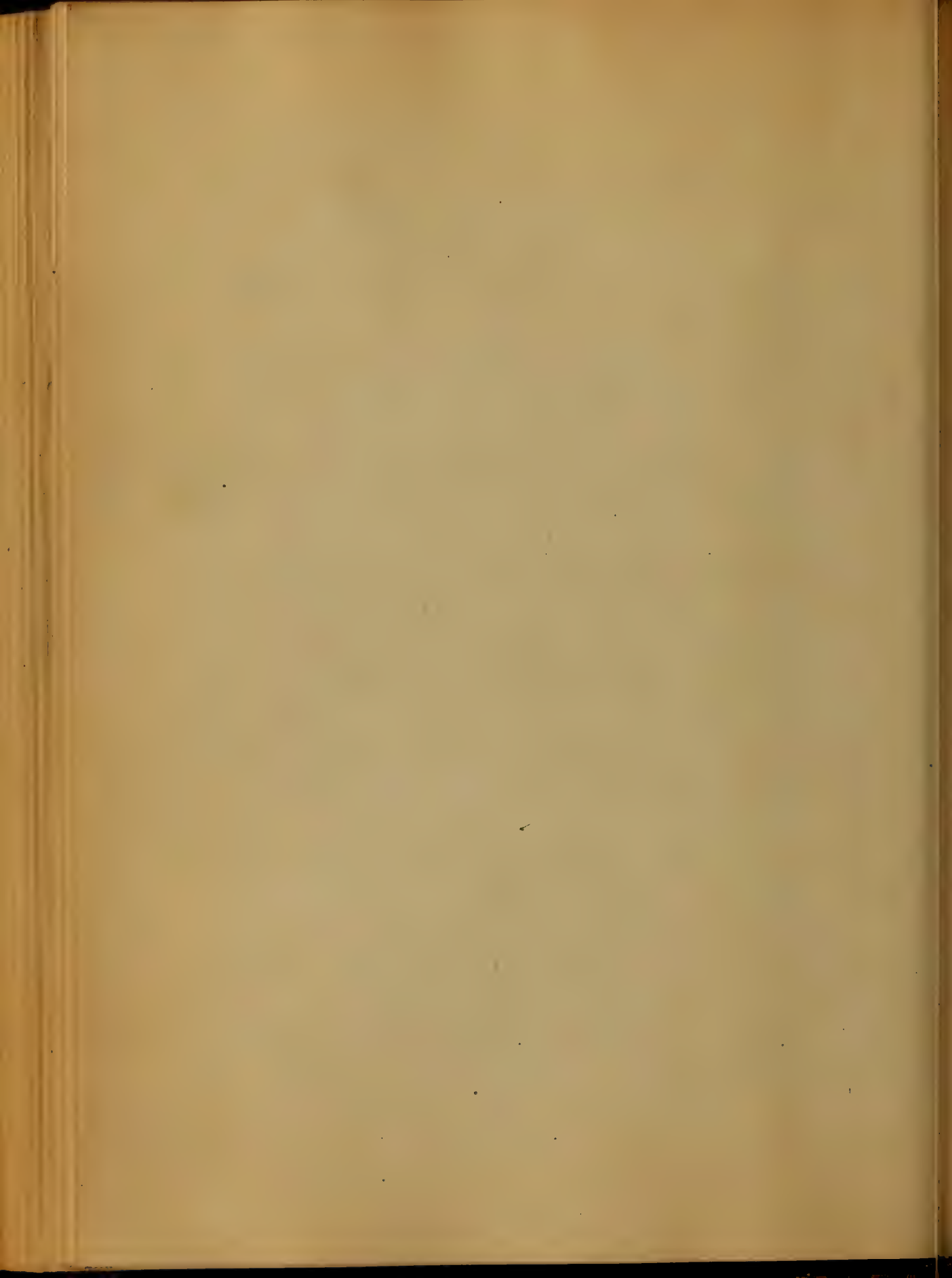
The muscular tremor so frequently present in this affection, often effects the tongue and thereby causes noticable difficulty in articulation &c.

But of all the symptoms, the in-
somnia is the one most universally present, being almost pathognomonic when found associated with the delirium and in most mild cases seems to offer the only indication for treatment. I should have before stated that this is generally a deep mental depression, which marks the first stage of the disease, lasting from one to three days, known by the subjects of this terrible malady as the "Horror".



In this stage the mental suffering is intense, and more frequently now, than at any other time, is the patient prompted to commit some act of violence against his life or person.

As the disease advances the derangement is characteristic, although presenting different forms in one, or another, case on account of the circumstances surrounding the patient. His eyes take on a stare or vacant look, while his whole countenance betokens fright, or his expression is wild and painful to behold. He imagines all sorts of things. He thinks, that some person, perhaps a friend, is desirous of doing him an injury, or frequently, that he



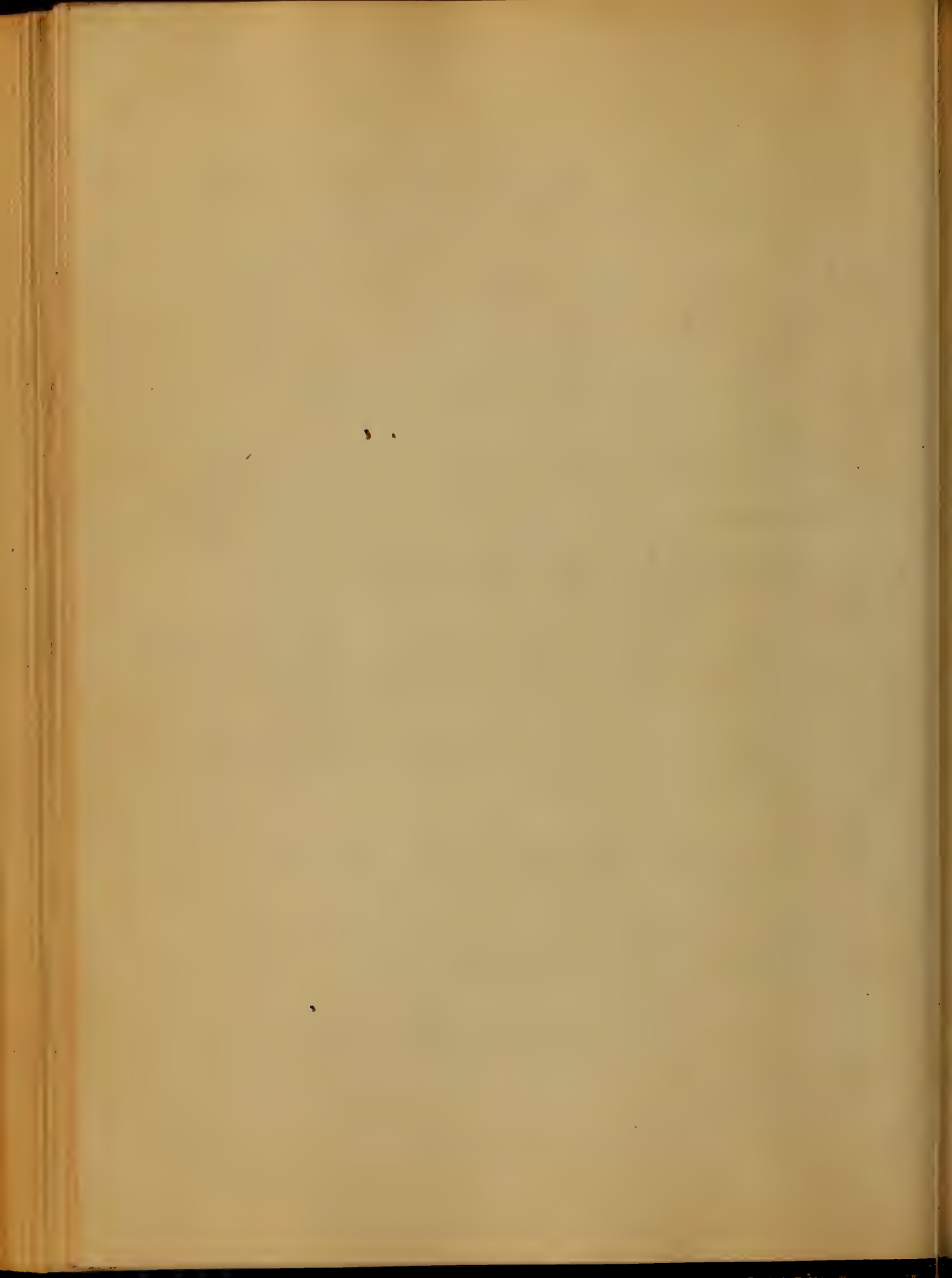
is beset by numberless animals or insects.

In fact, his fears are continually vacillating from one absurd thing to another. To all this, we usually have added, anorexia with constipation which last throughout the course of the disease, and offer sometimes favorable symptoms for medication.

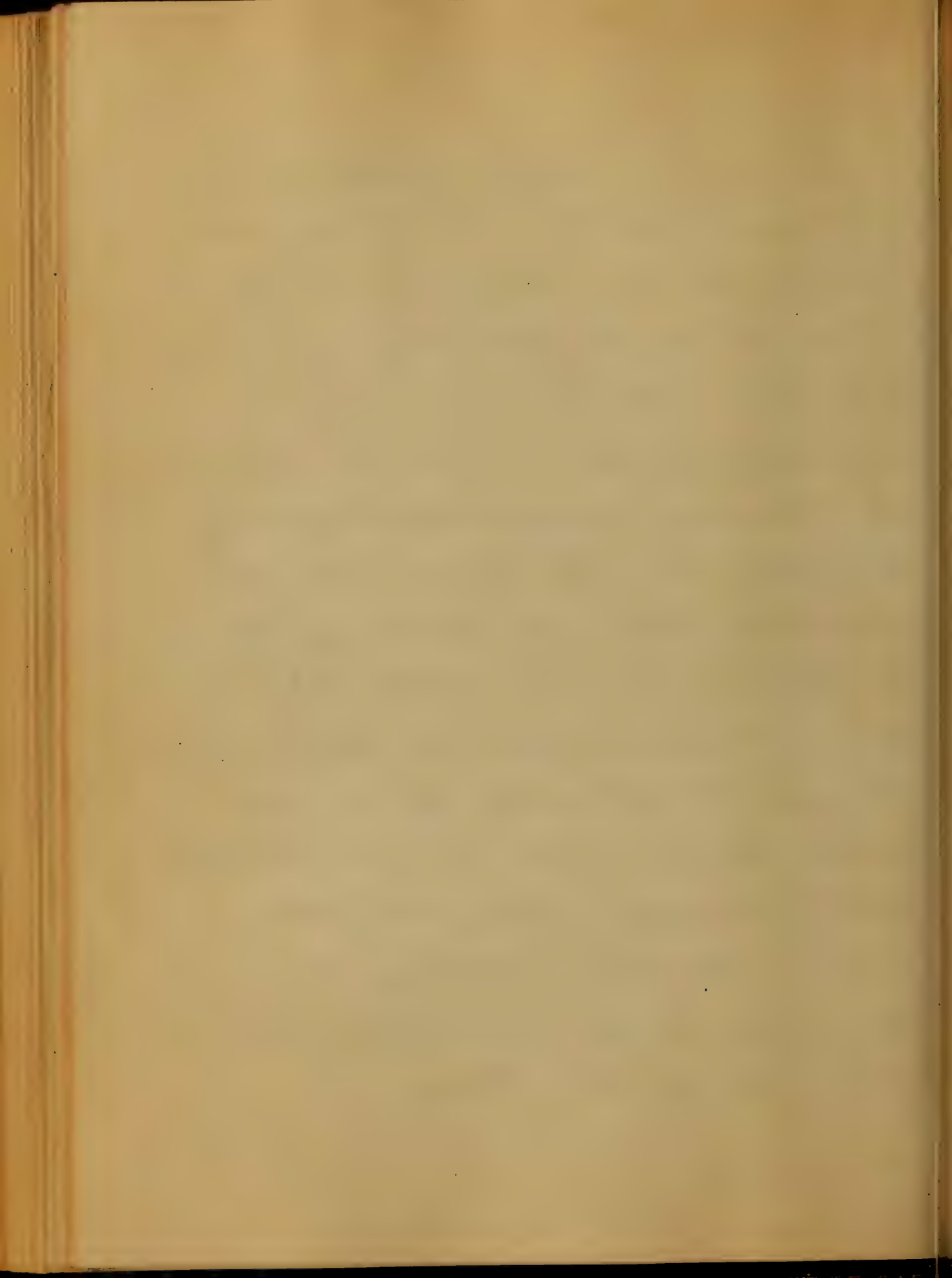
There is little, or no, pain experienced by the sufferer, who on being questioned, generally replies that there is nothing the matter with him.

The Diagnosis of Delirium Tremens is commonly easy and not fraught with much difficulty on account of the similarity of this, and other diseases.

The affection must likely to be



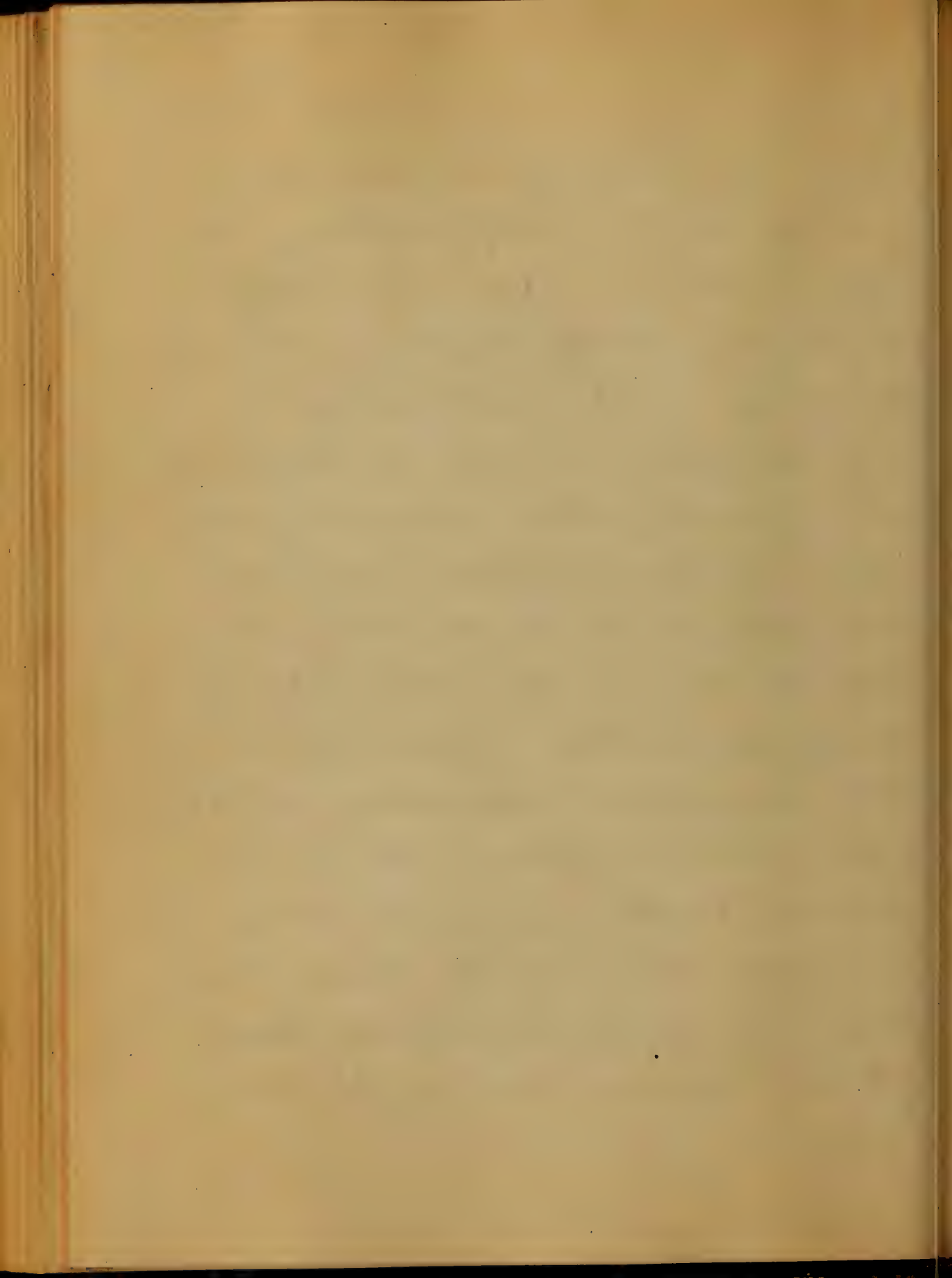
confounded with it, is encephalitis, but
 if careful note be taken of the delirium,
 (which is always a busy delirium), and
 of all the points of history in the case,
 together with the wakefulness so
 universally present in Delirium Tremens,
 the diagnosis may without difficulty
 be made out. Dr. Benes Jones also
 states that there is a deficiency of
 the phosphatic constituents of the
 urine, so generally present in the
 disease encephalitis. In no case
 should the practitioner be easily satisfied
 with a diagnosis, since the treatment
 employed usually in inflammation of
 the brain would be decidedly injurious
 in a case of this kind.



It is authoratively stated that bleeding, which is so frequently employed, when there is structural disease of the brain, is of itself, capable of producing the disease under consideration.

The prognosis is more or less favourable according to several circumstances

If it ^{be} the first attack, and the case presents no complications, the prognosis may be said to be almost always favourable. These cases are more aggravated and serious in character which are produced by the extended employment of the drug, than those caused by the abrupt withdrawal of it. If there be any pathological lesion peculiar to the



disease it is, as yet, unknown. All that can be said concerning the morbid condition, is, that the prolonged action of the stimulant on the brain, induces a morbid condition of insomnia and delirium, unattended by inflammation.

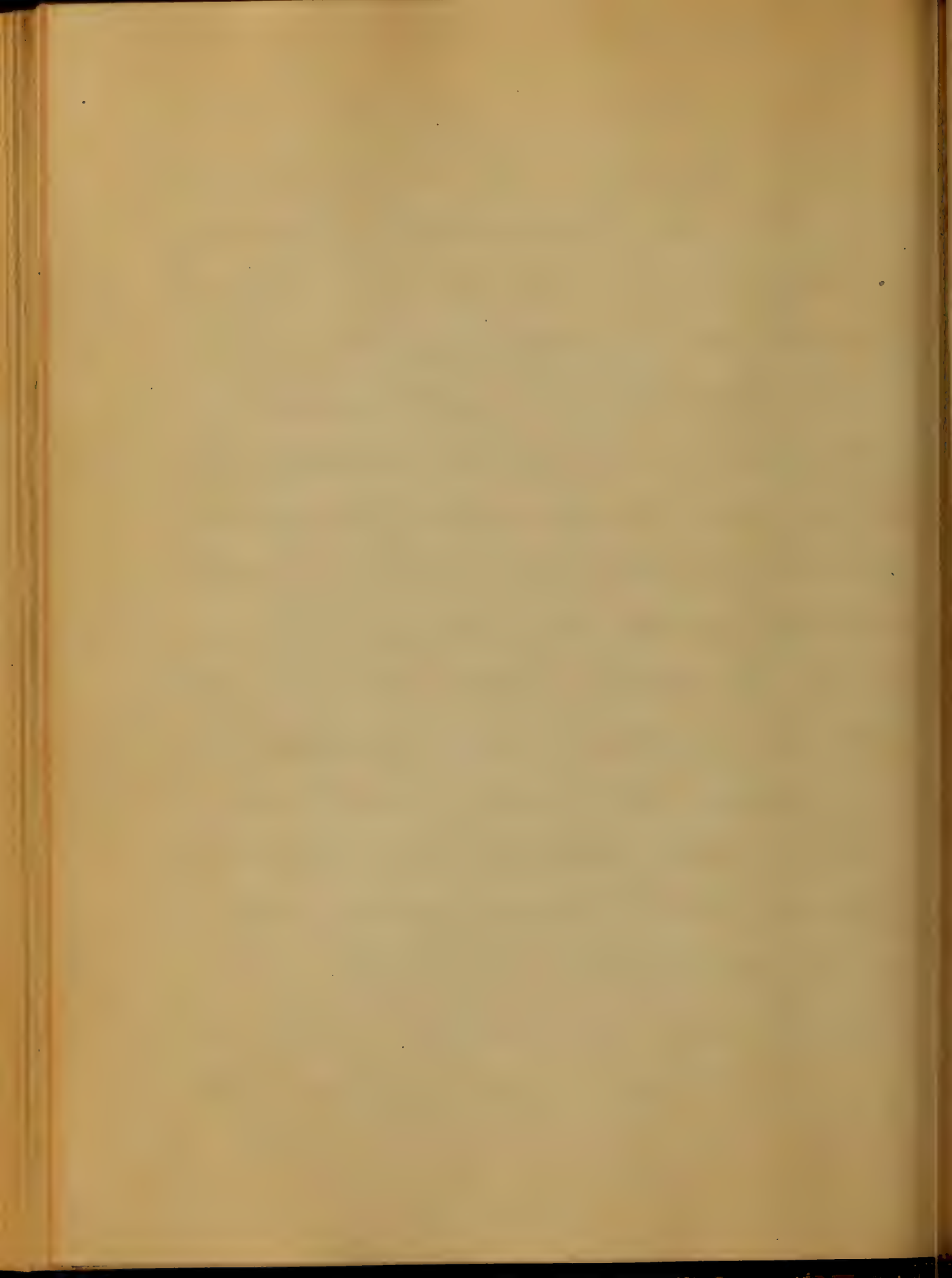
Treatment. With this affliction, as with almost all others, the treatment from time to time undergoes various changes, in the hands of different practitioners, who hope to establish the many theories of their speculative minds.

At one time, we hear of what is called expectant treatment, giving only strong food, without the use of stimulants or opiate. Then we have the practice of giving cathartics



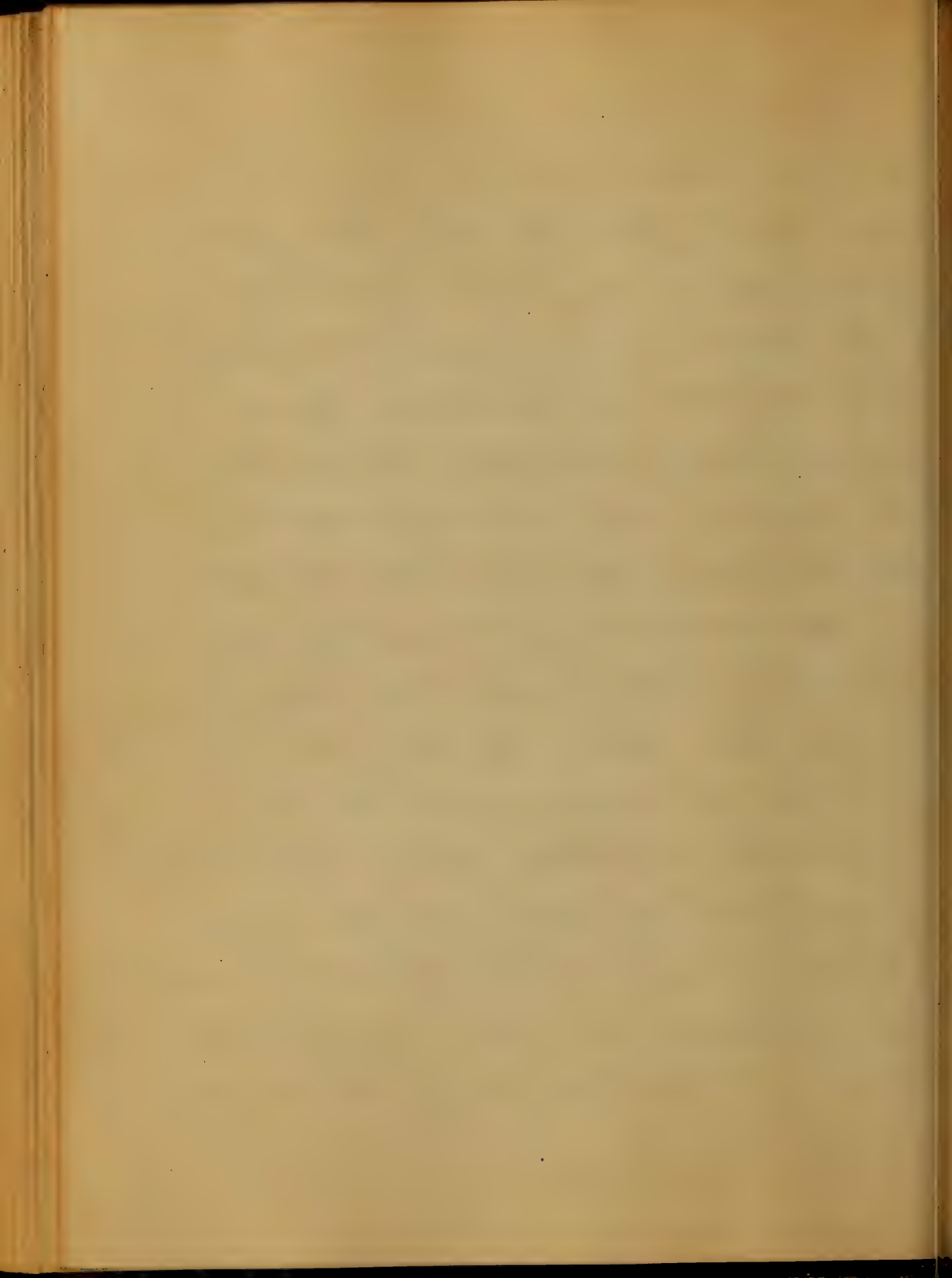
doses of digitalis, or by some preferred,
 the internal administration of Chloroform
 in doses of one or two drachms - all of
 which, perhaps proving beneficial
 in the hands of their appropriate
 advocates in a certain number of
 cases, and under peculiar cir-
 cumstances. One is surprised when
 considering the very great frequency
 of the complaint, that it is yet the
 subject of such diversity of opinion
 as regards its proper treatment.

At one time bleeding was actually
 employed, but is rarely, if ever, employed
 in at the present day, and as
 long as the war which is now so
 zealously being waged against this



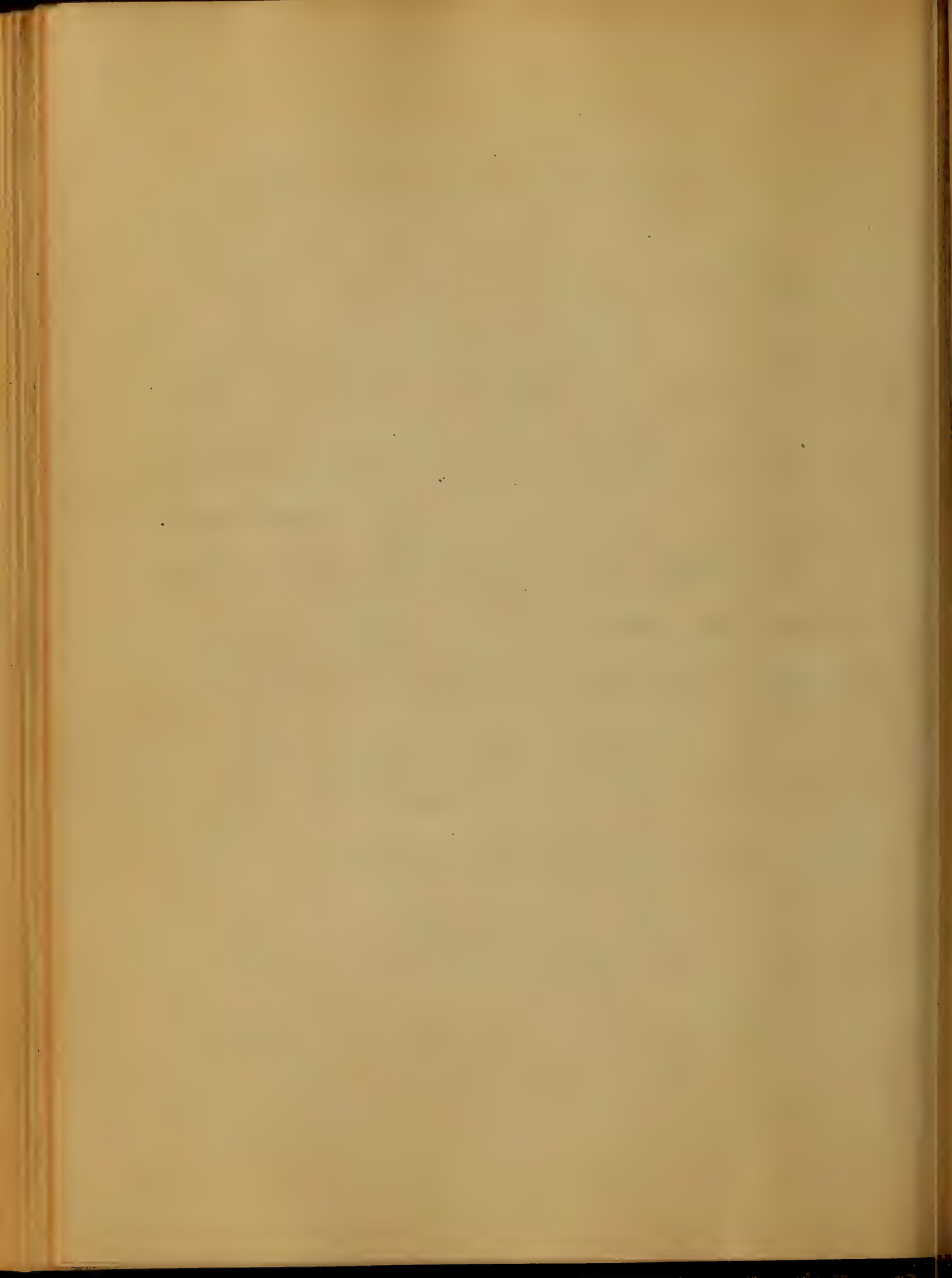
practice shall continue, we may have little fear for the bad effects of it, in this, or any other disease.

The insomnia is known to be the most troublesome feature of all cases, and I therefore think, that the force of all remedies should be directed against this symptom of the ailment in every stage of its course; although due care should be taken to allay the gastric derangement. For the production of sleep, Opium, of all drugs, held the greatest favour and for the longest time. Of Calo, Bromide of Potassium, in many cases supersedes the employment of the opiate.



I have myself witnessed the happiest effects of this drug, in the treatment of Ulcerum Femoris in cases occurring at the Hospital attached to this College. Besides drugs, there are many precautions advantageously employed in the care of such cases.

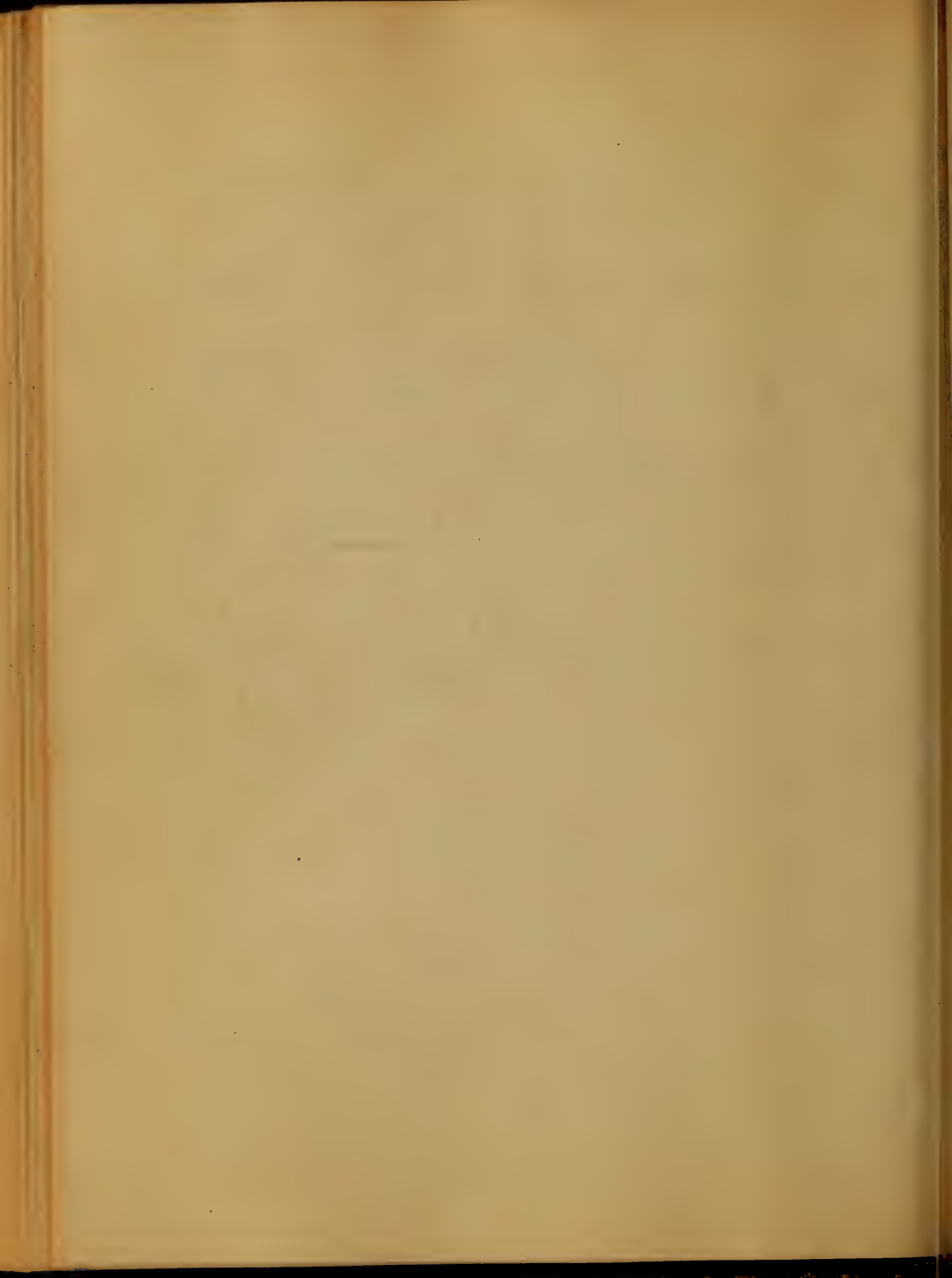
The Patient should be carefully watched to prevent him from hurting himself, and be kept in a dark room, surrounded by every thing calculated to bring about the desired sleep. He should be allowed small portions of the agent producing the disease, and after carefully clearing out his alimentary canal, should be fed with articles, both nutritious,



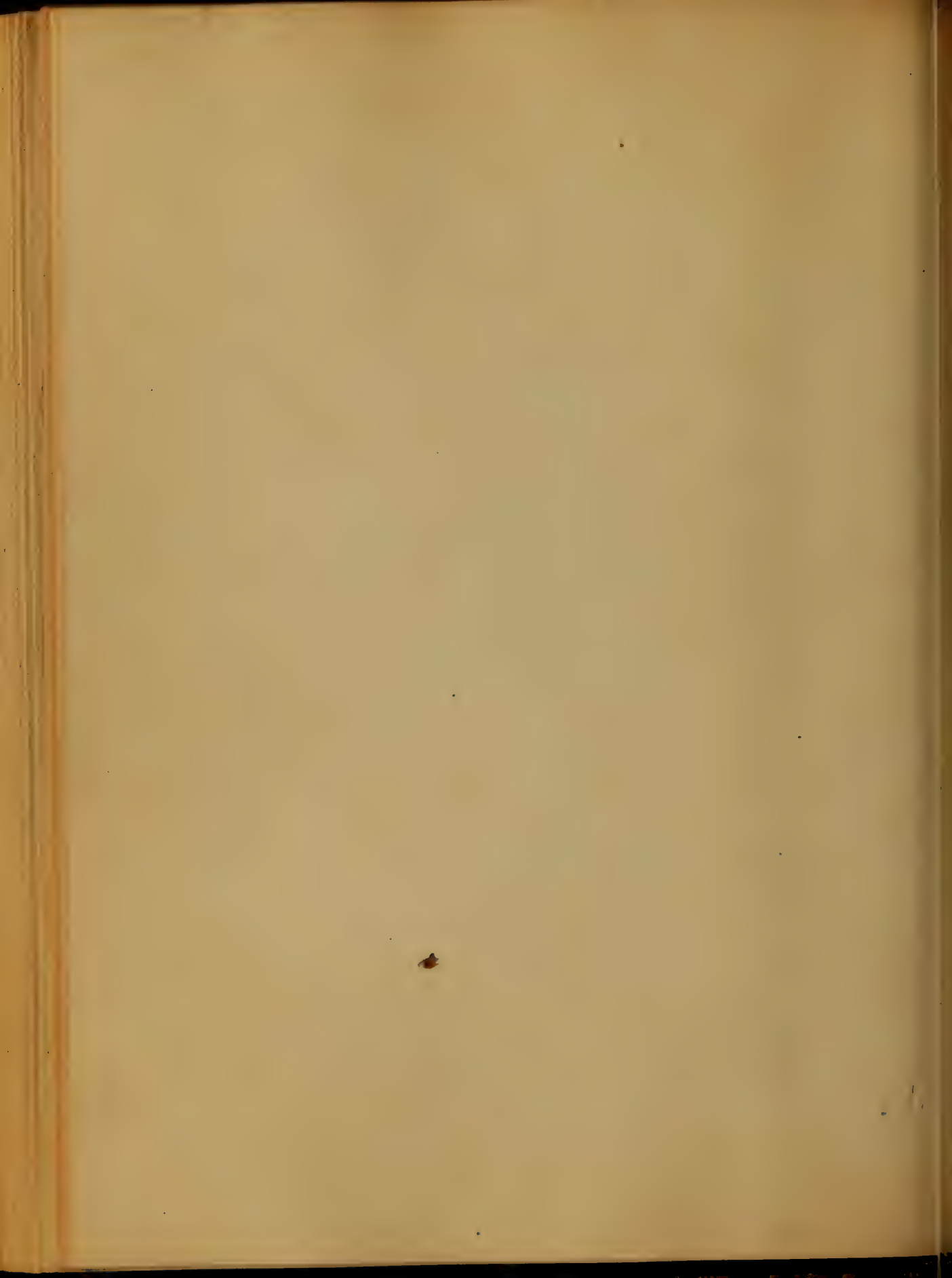
and easily assimilated. As regards
complications, these should shape
to some extent the course of the
medications in each case, taking
care to make every step taken in
the treatment accord with both
rational and scientific principles.

By Charles A. Jenkins,
Talbot County, Md

1869.







An.

Inaugural Dissertation

on -

Cinchona,

Submitted to the Examination

of the

Provest, Regents, and Faculty

of Physic -

of the University of Maryland.

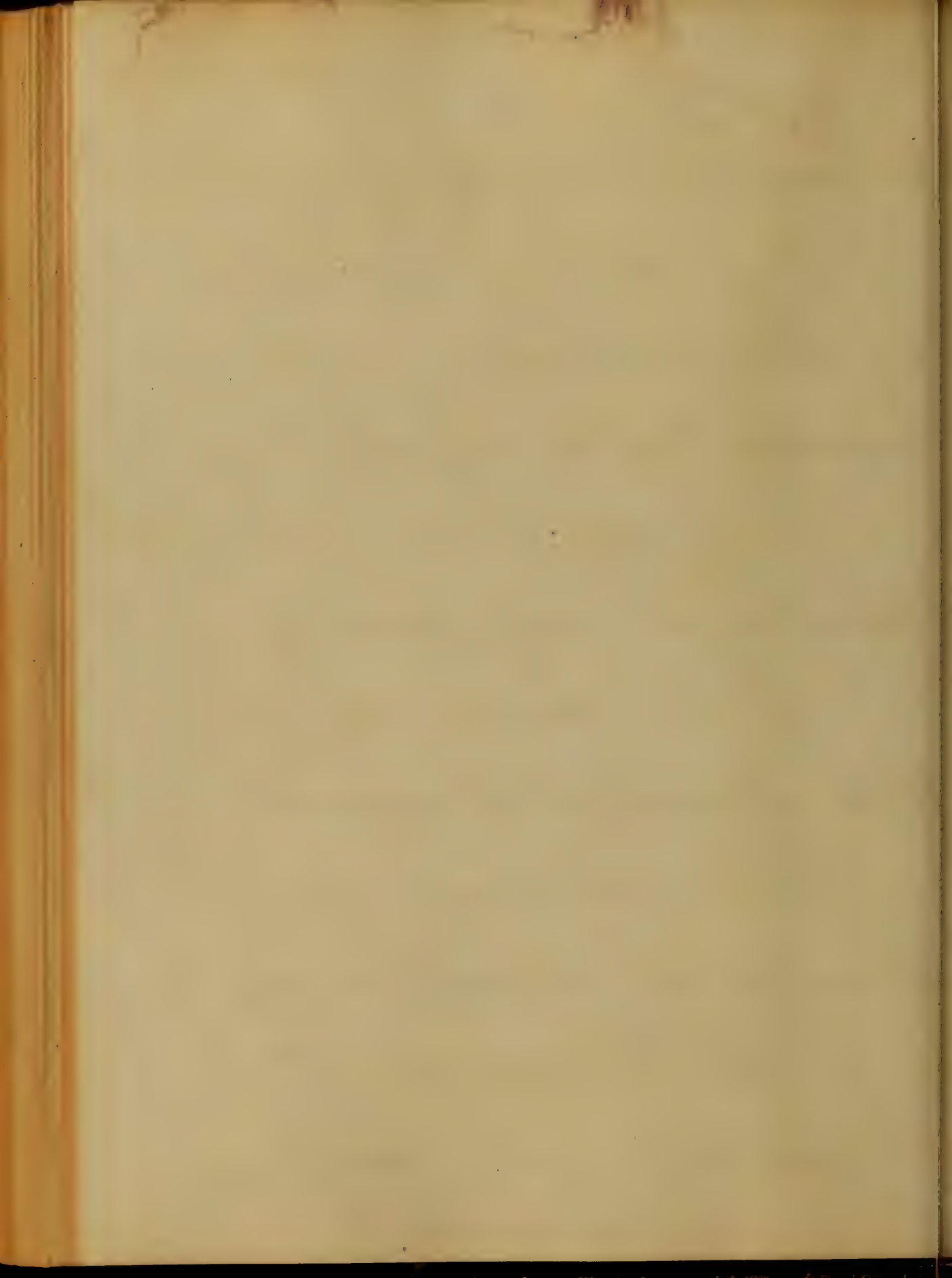
For the degree of

Doctor of Medicine by

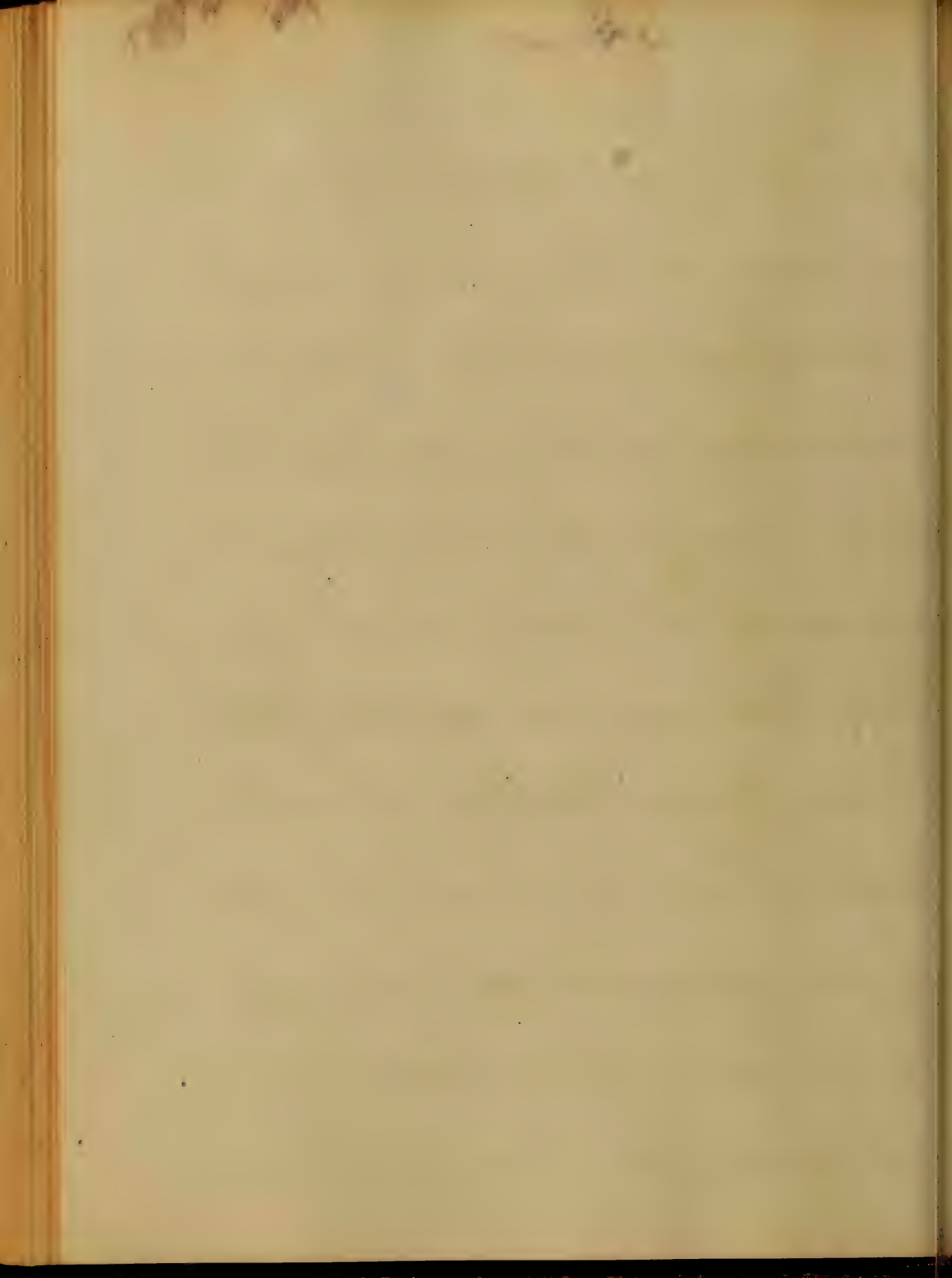
J. W. Downey of

Fredrick County Maryland.

Sept. 1867.

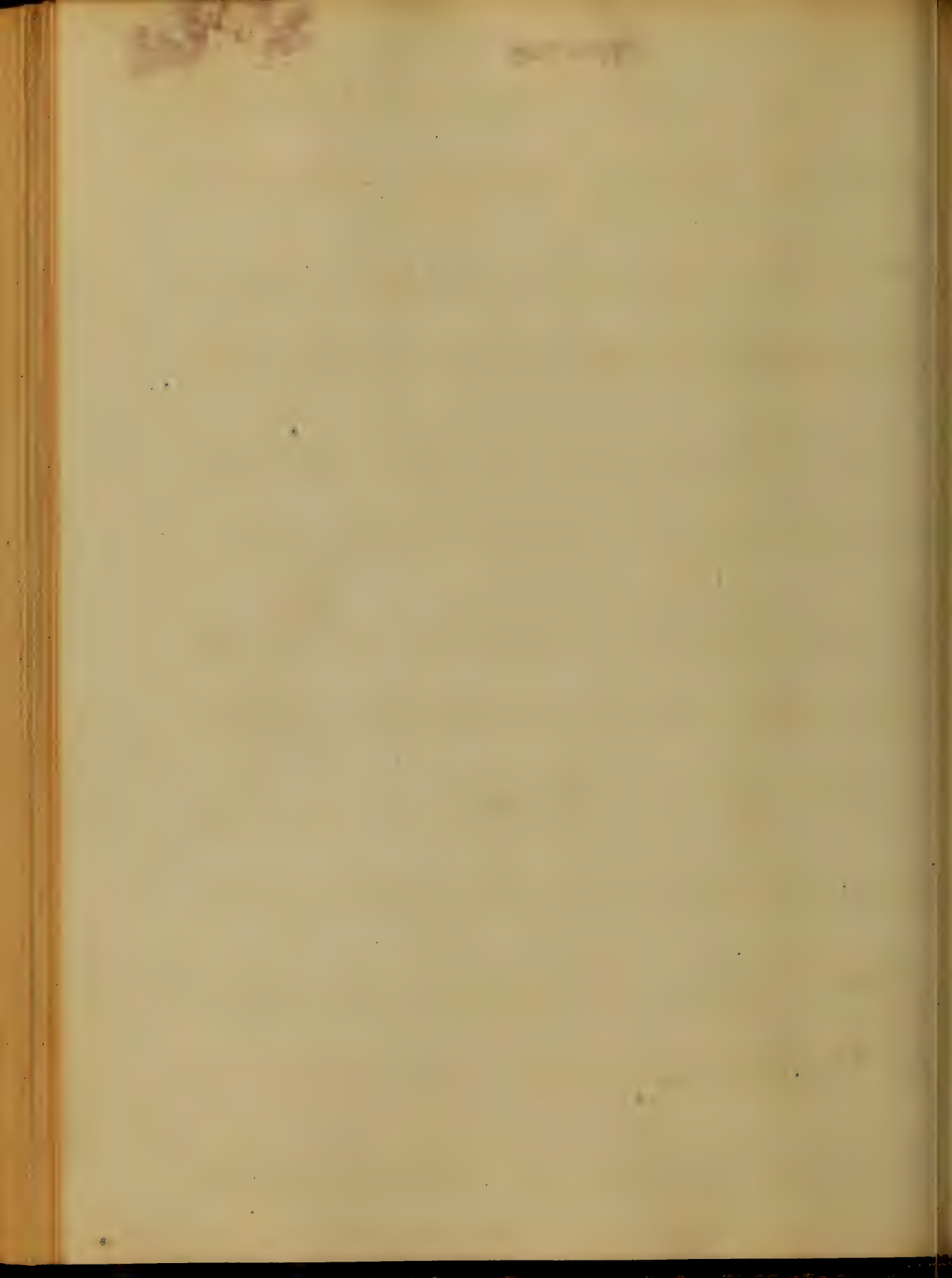


Cinchona, it is parat^{is} ^{the} ^{species} ^{used} -
Cinchona, is the name applied to the
Bark of different species of Cinchona
(Natural order) Cinchonaceae large tree
which grow in the mountainous
regions of the Western portion of
South America, from the 19th of South
Latitude to about the 10th of North
Persons have tried to grow the tree
in various parts of the world but
as yet none have succeeded any where
except in Southern India where



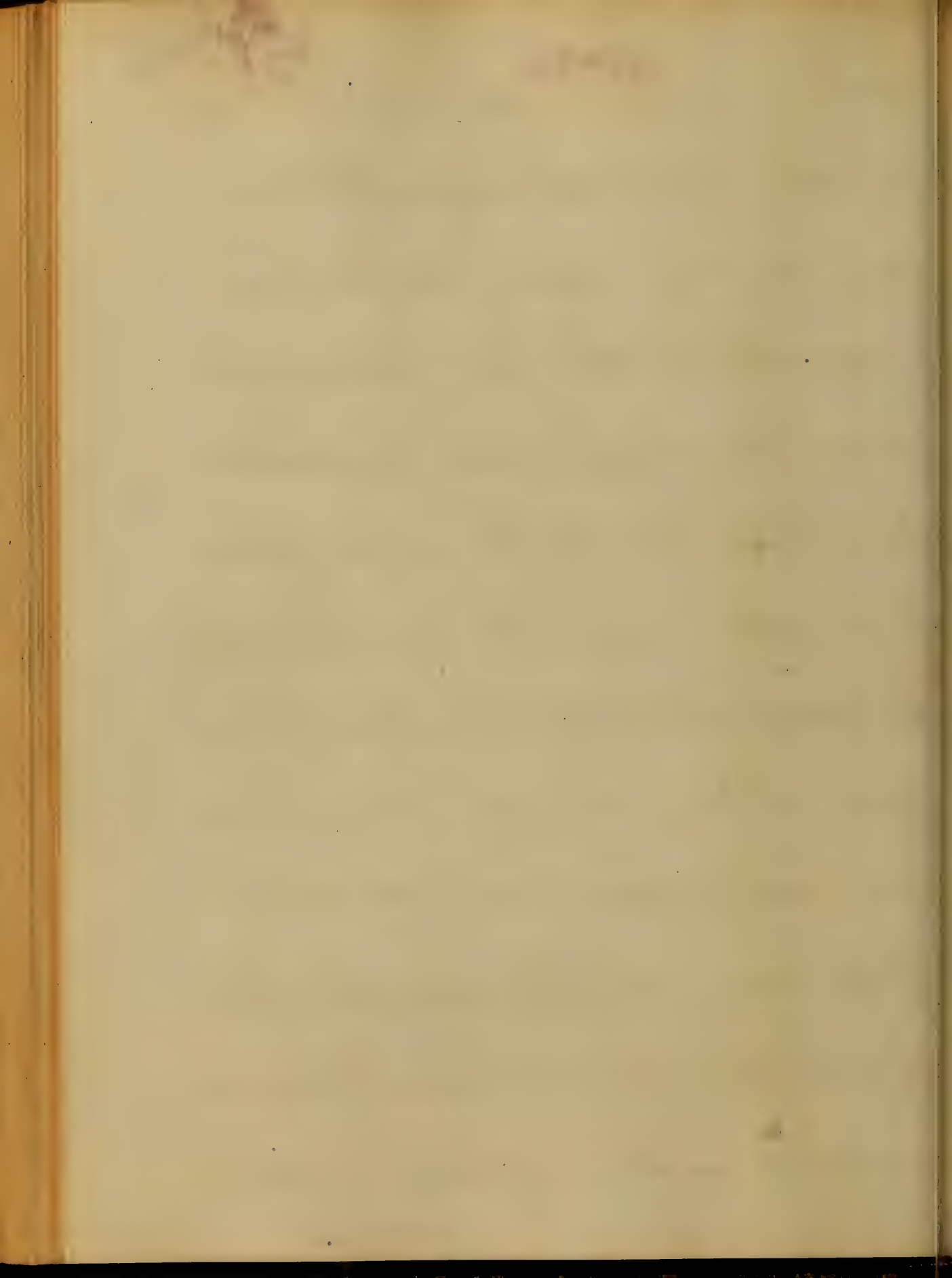
2

within the last few years the cultivation
of several varieties have been introduced
very successfully - and valuable specimens
of Red Bark nearly equal to that of
South America have been sent to
Europe. There are three varieties of
this Bark known as Cinchona Ham
Yellow Bark called in commerce Calisya
Cinchona Pallida - Pale Bark called in
Commerce Soya and Lima Bark and
Cinchona Rubra Red Bark among
the Cinchona Succirubra It is however in
this country from the Peruvian Bot.



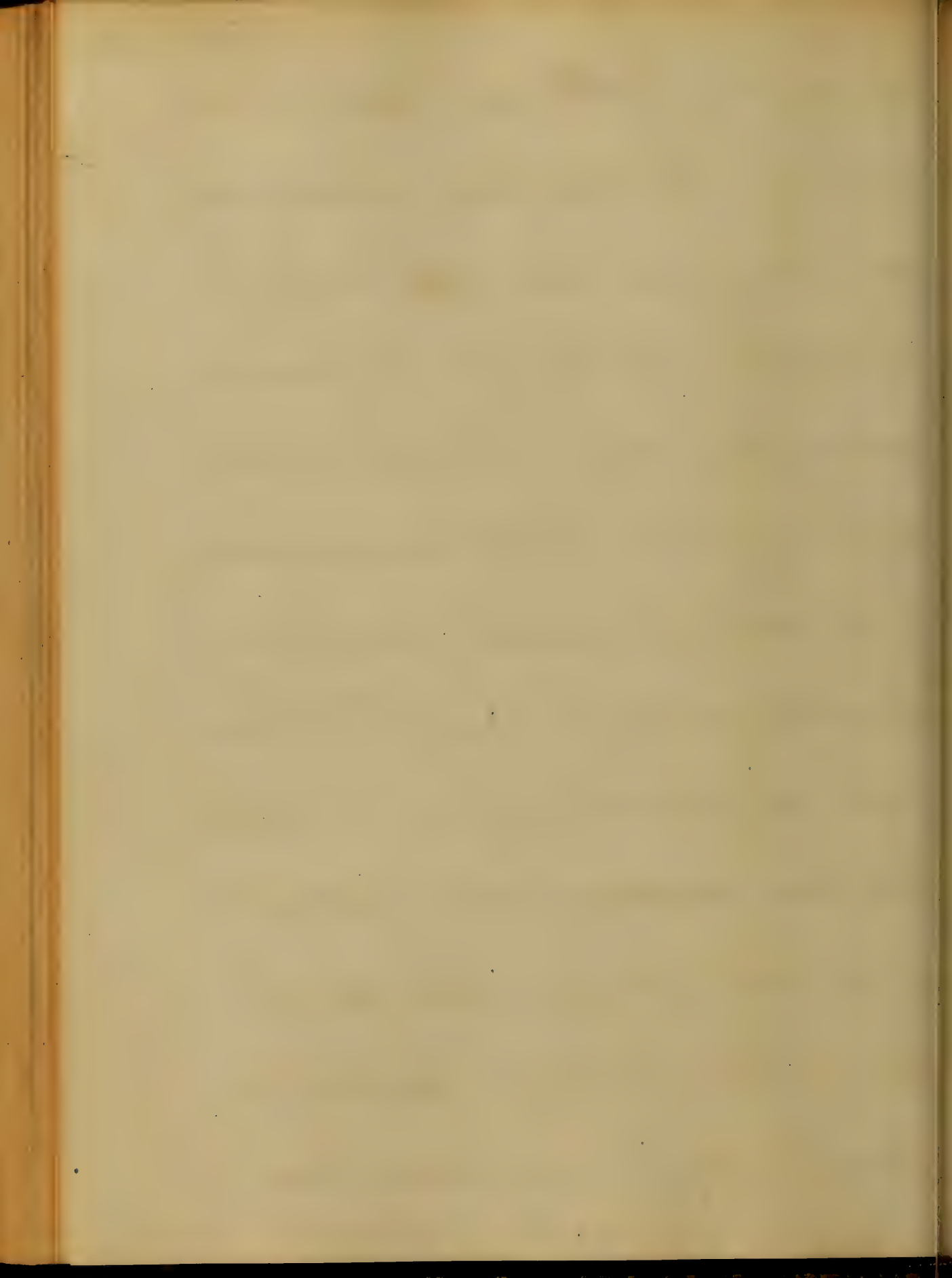
South America. + is obtained by stripping the trunk and branches of the tree during the dry season and is dried by exposure to the sun during, which process it usually becomes quilted.

The Yellow or Calisaya bark comes both in quilted and flat pieces the quilts are from three or four inches to a foot in length and of variable thickness. The bark has a brownish Epidermis which possess none of the virtues of the bark — The flat pieces are taken from the larger branches and trunk and are usually destitute of Epidermis they are



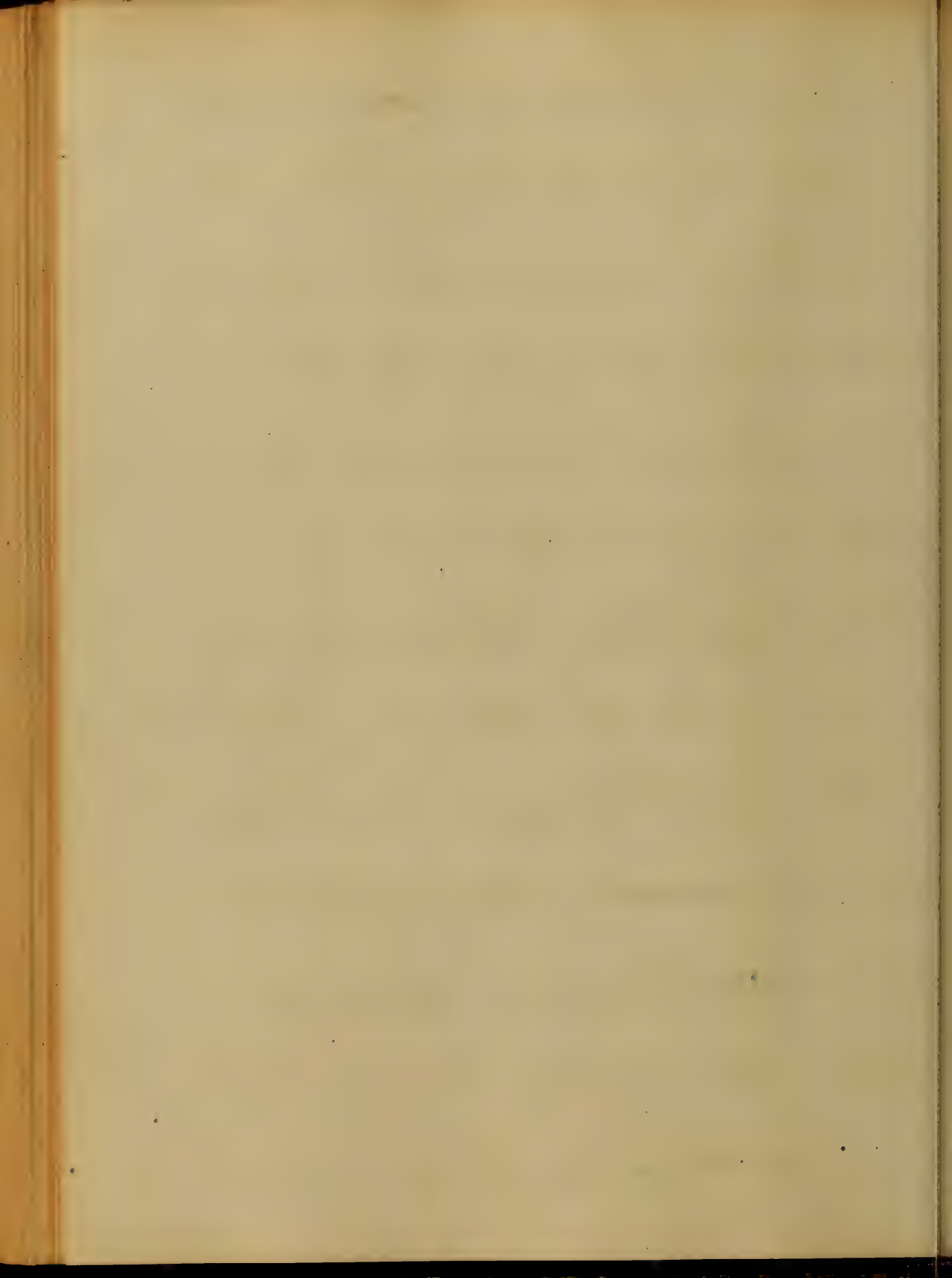
lep compact, bitter, and of lep medicinal
virtue —

The Yellow bark is distinguish-
ed by its much more bitter taste its
comparative freedom from astringency, its
brownish yellow-orange color which is still
brighter in powder and by containing more
of the active principle Quina with
very little Cinchona — The pale bark
comes in cylindrical, of various lengths
sometimes singly sometimes double quills
the best kinds are about the size of a
Goose quill The exterior surface is
rough marked with fissures and of



a grayish color owing to adhering lichens.
 The interior surface is of a cinnamon color
 and the inner sort smooth, the color is
 a Pale Green. Tasti moderately bitter, some
 what astringent - The odor feeble but
 rather aromatic. This bark contains
 a larger proportion of the Principal
 Cinchona than of Quina

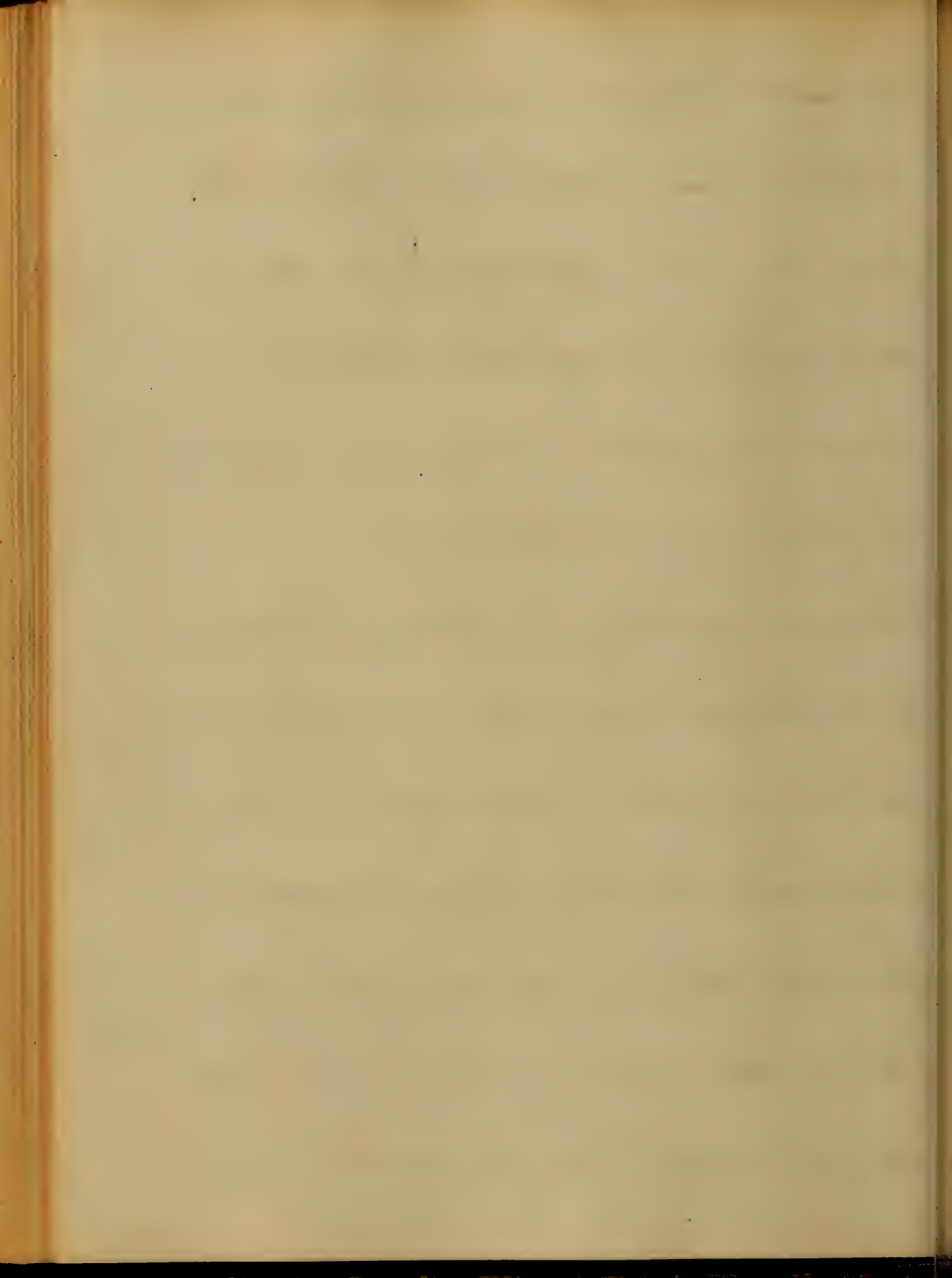
The Red Bark comes in large thick
 flat pieces, sometimes also in quills
 from a half to two inches in diameter
 they are covered with a reddish brown
 rugged epidermis beneath which is a



6

dark red brittle and compact layer the interior being woody and fibrous the taste is bitter and astringent its odor not differing from the other barks, powder reddish It contains about equal proportions of Quinia and Cinchonina.

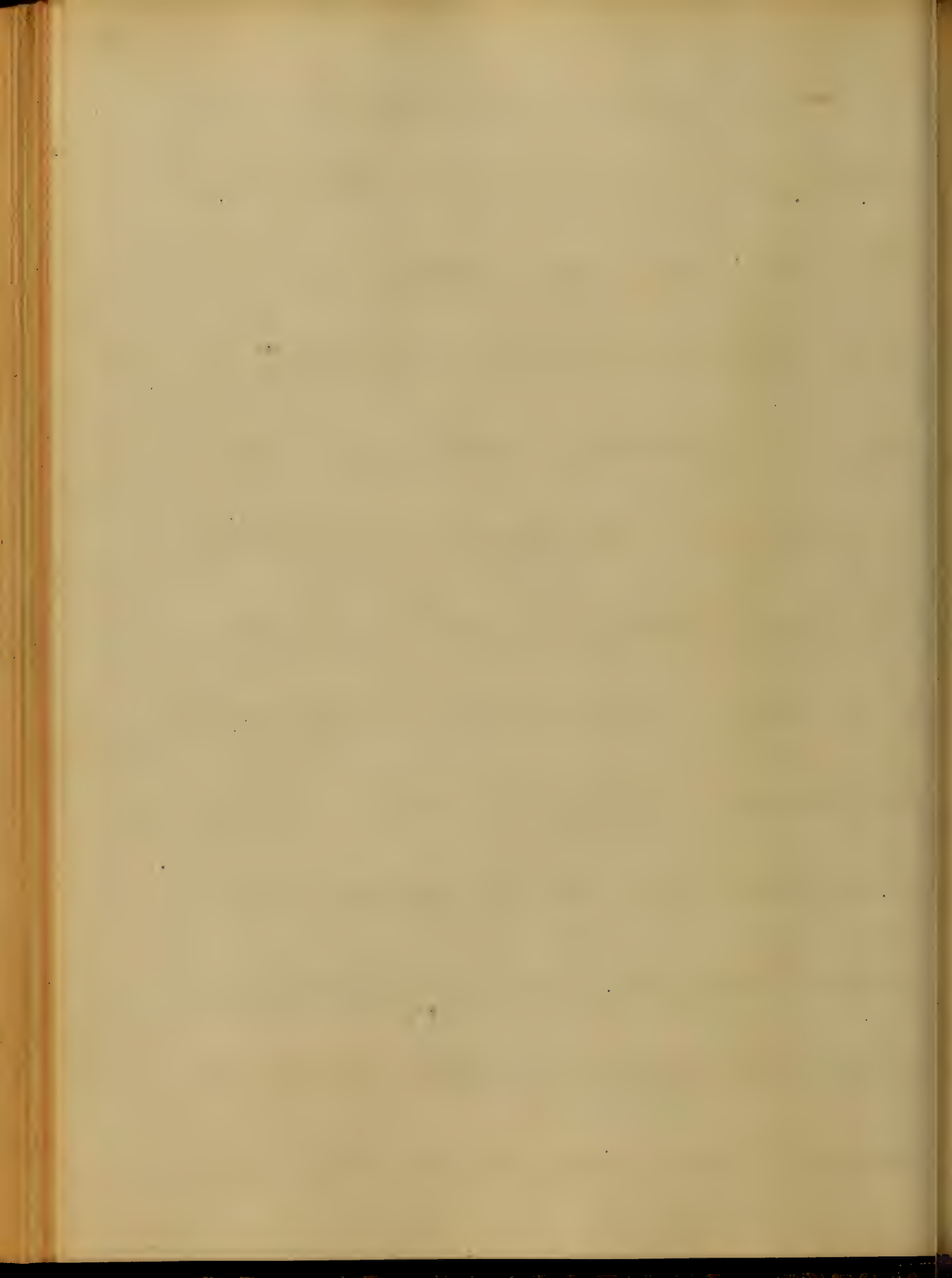
Chemical constituents. Bark owes its activity to certain principles. The most important are two alkalies, called Quinia and Cinchonina They are believed to exist in the bark chiefly in combination with Kinic acids. They are found in different proportions in the different barks



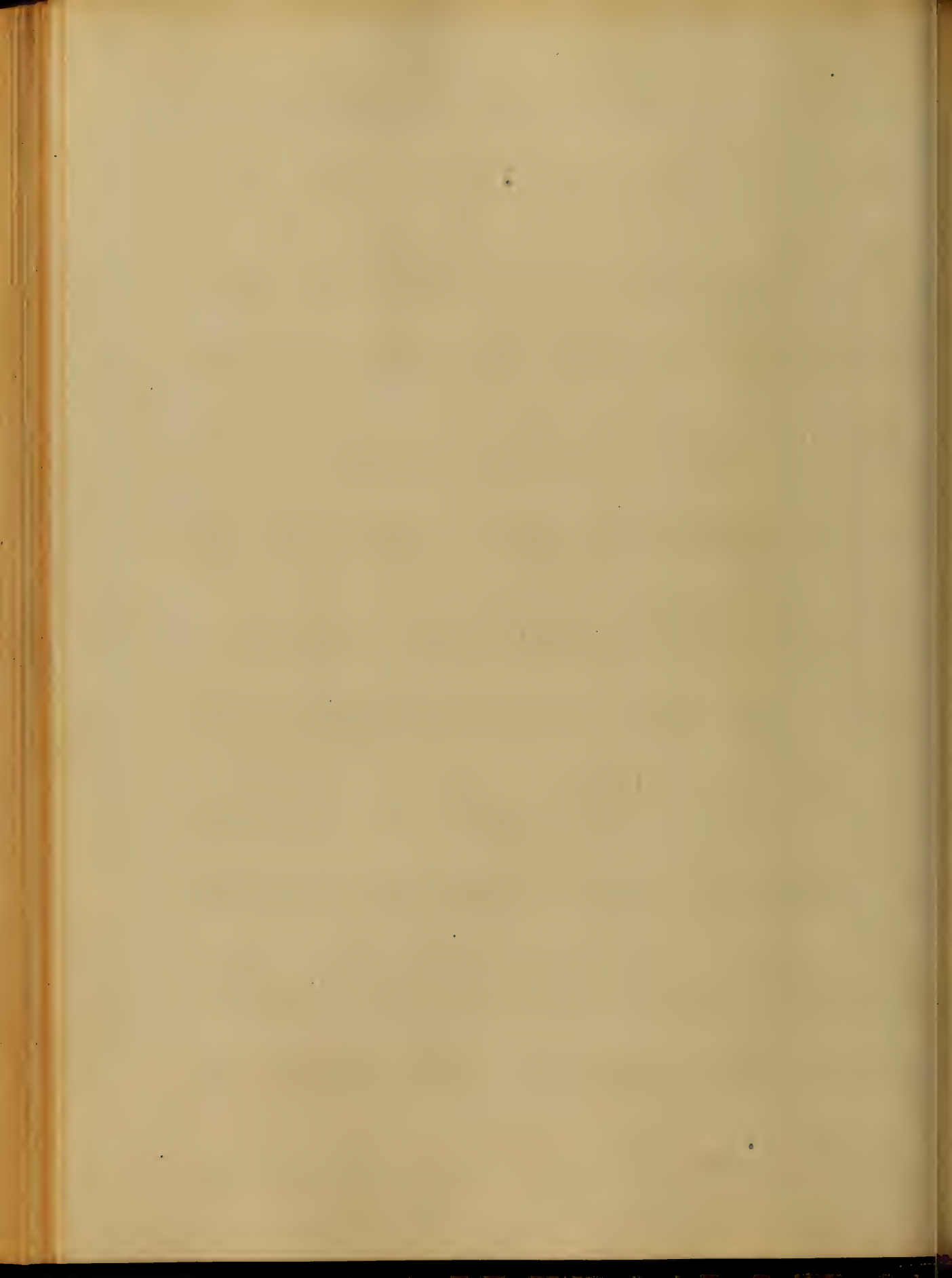
Quinica being most abundant in the
Yellow and Linchonia in the Pale -
two other valuable constituents are

Quinidia and Linchonidia they are
found to a certain extent in all
the barks but most abundant in the
Pale and Carthagenia. Others are Resin
acid Tannic acid coloring matter starch
fatty matter Resin of Lime &c.

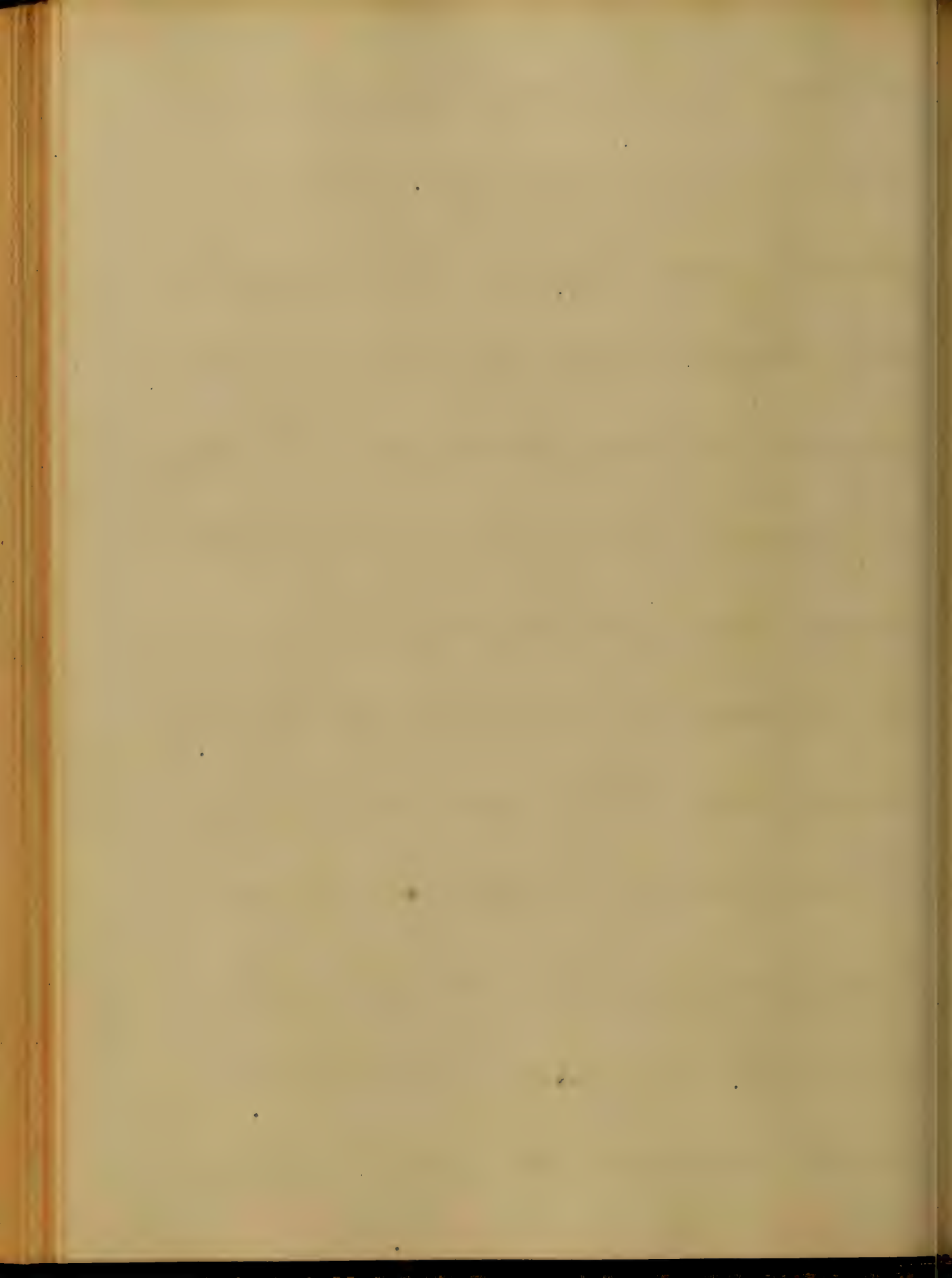
Incompatibilities: The alkalies and their
carbonates and the alkaline salts pre-
cipitate the alkaloids of Linchonia and
Tannic acid forms with them insoluble



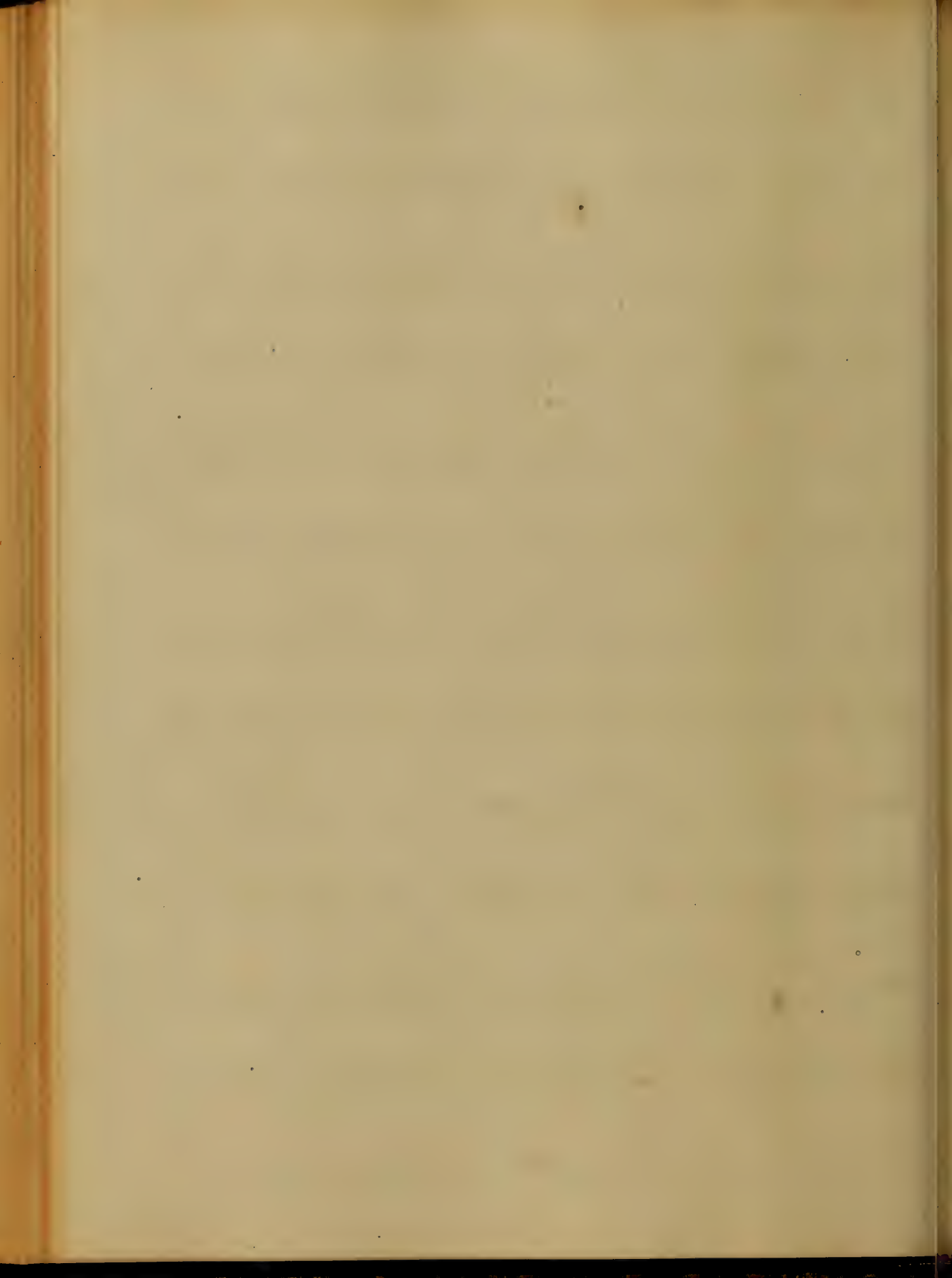
compound effect on the system.
 I will first treat of the principal form
 when it is given to healthy persons in
 quantities not exceed[ing] five or six grains
 daily, in doses of half to a grain, it pro-
 duces effects identical with those of
 simple matter, viz. it is an emetic,
 effect may be experienced, but after
 a short time the appetite is increased
 and the food appears to be more
 rapidly digested, the pulse becomes
 fuller and stronger, the temperature
 of the body is slightly elevated, and



it operates as a pure tonic. Given in
 from six to twelve grains daily in
 divided doses it excites a tendency to
 act especially upon the brain and often
 produces decided effects upon that organ.
 The quantity to be given, varies in dif-
 ferent persons greatly, some requiring
 an extraordinary susceptibility to some
 smaller doses than above mentioned.
 The great cerebral problem is usually
 buzzing, ringing, and ticking noise
 in the head along with the sometimes
 partial loss of the entire intellect.

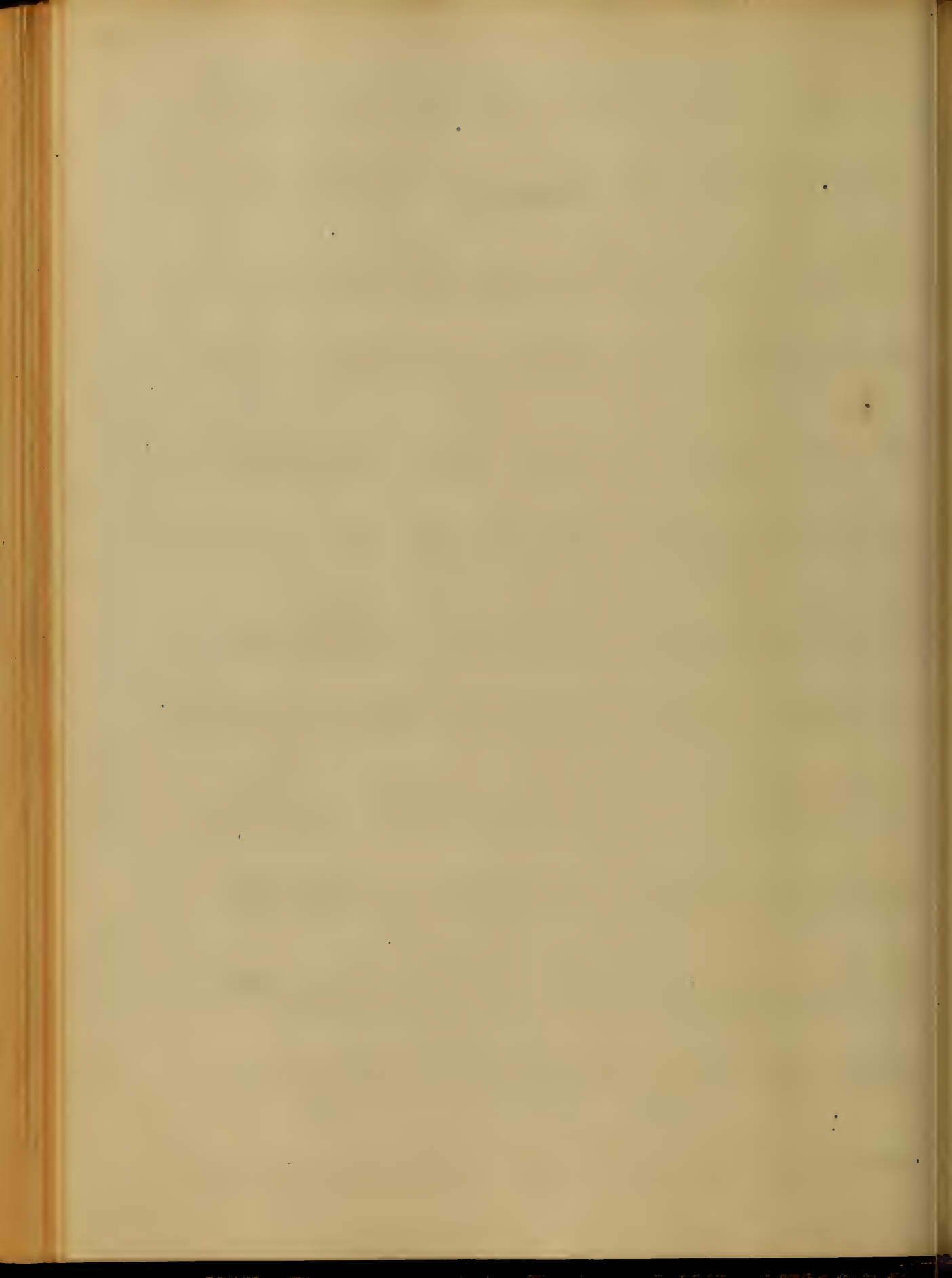


the most characteristic effects. The
 instead of the greater layers or
 given as from twenty to thirty grains
 the effect upon the cerebral circulation
 an increased and a decided sedative
 influence upon the circulation pro-
 duced, as evinced, by a diminution
 of the force and frequency of the pulse
 proportionate to the amount of the
 Salt used - There is more quietness or
 dizziness, the individual often staggers.
 The hardness of hearing is not enlarged
 by increased to positive deafness. But

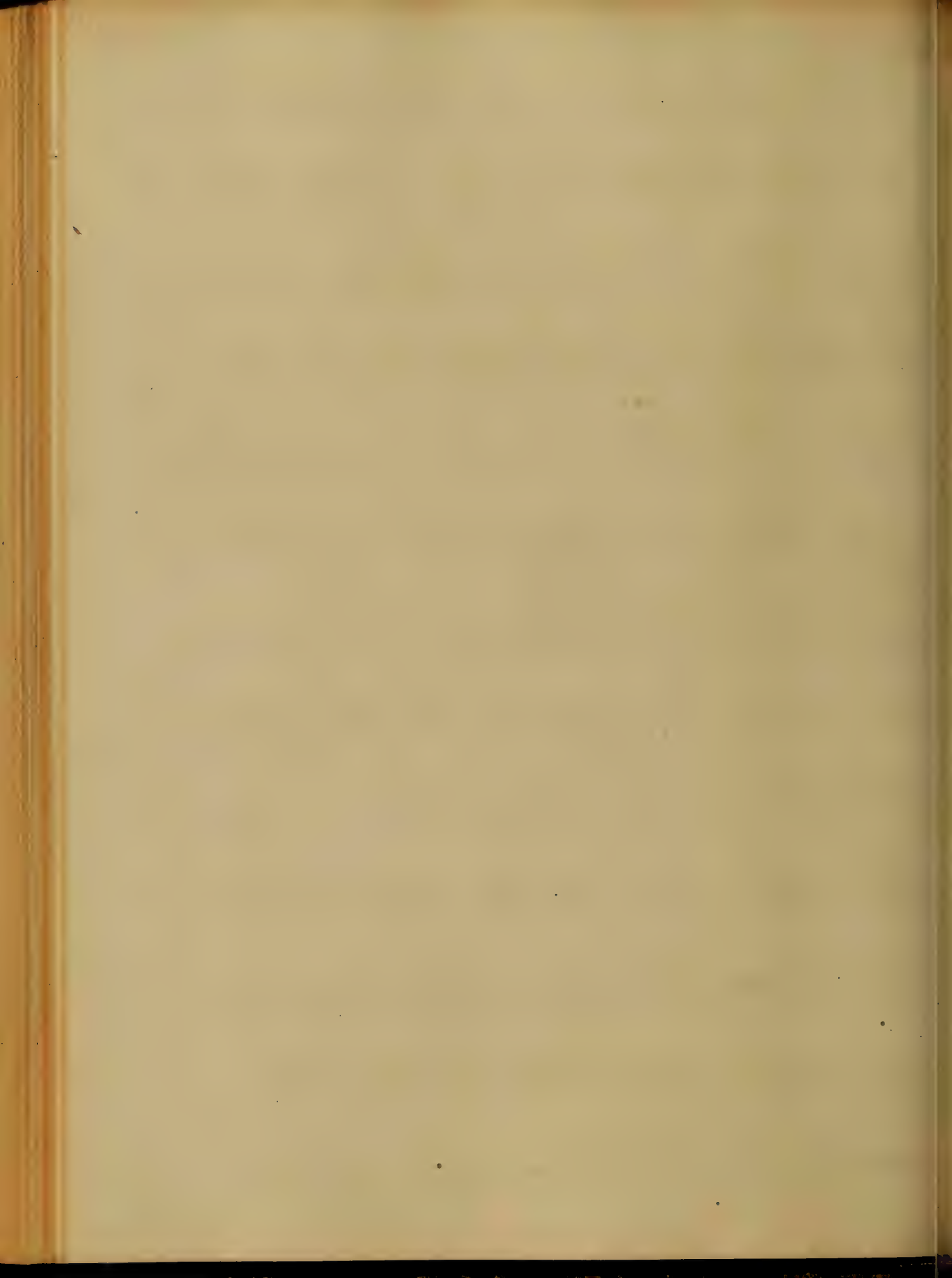


11

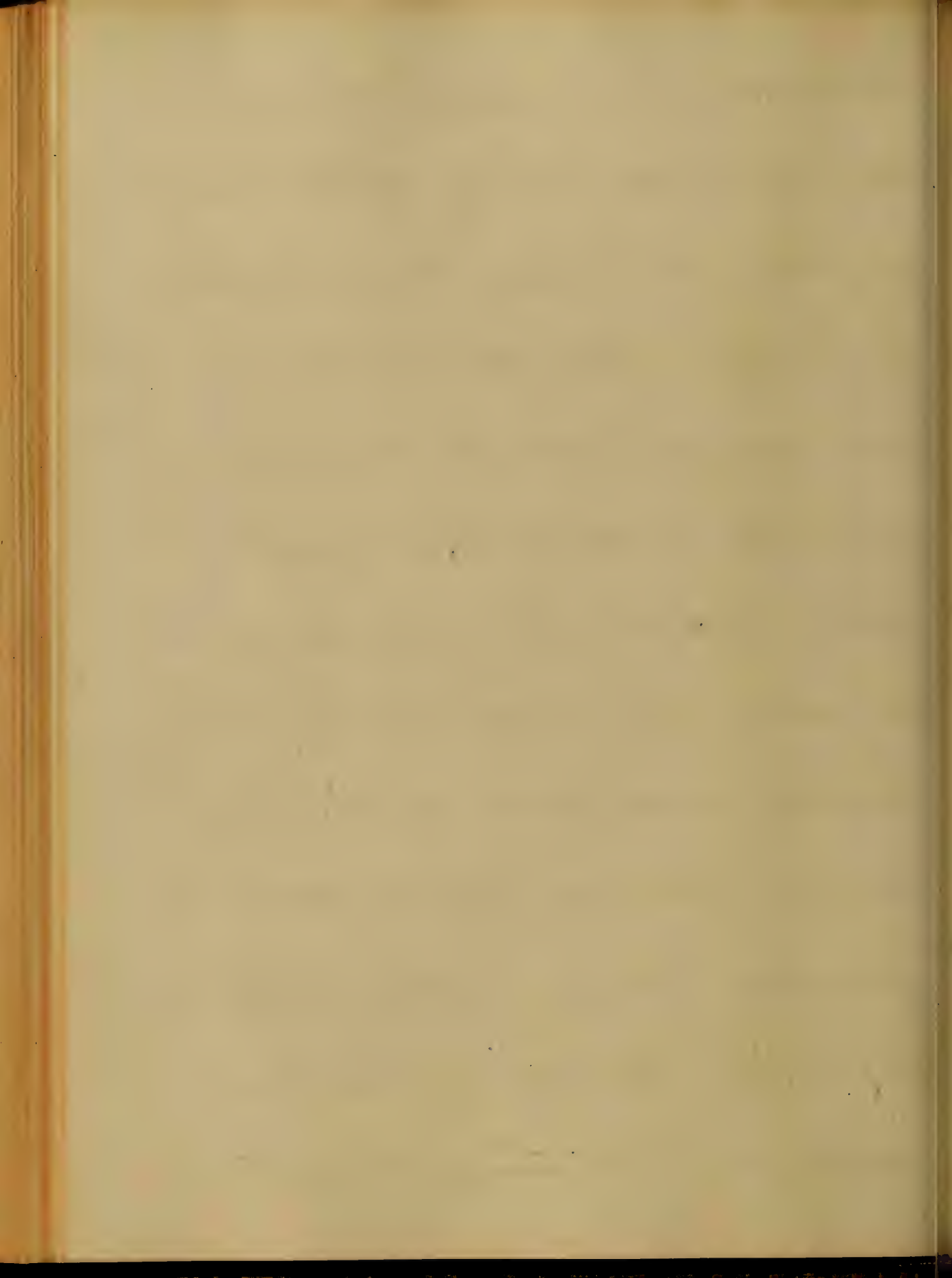
It also produces other effects it has
been supposed by some to render the
blood more fluid and to lessen its
coagulability but more numerous experi-
ments have gone to prove the fallacy
of this argument. In the urinary
passages it occasionally produces
irritation probably by its direct contact
with the mucous membrane of these
passages as it escapes with the
urine. Sometimes it irritates the
stomach considerably causing a
sense of weight or oppression, pain



pains and nausea or vomiting. This is especially the case in Cholera disease when the stomach is already irritated or strongly disposed to it. Sometimes acts upon the bowels causing griping pain and diarrhoea. The constitutional effects are the same no matter how it enters the system whether given by the mouth, the Rectum or injected Hypodermically when applied to the skin. A small dose of it cuticle it produces so much irritation so materially to interfere with the

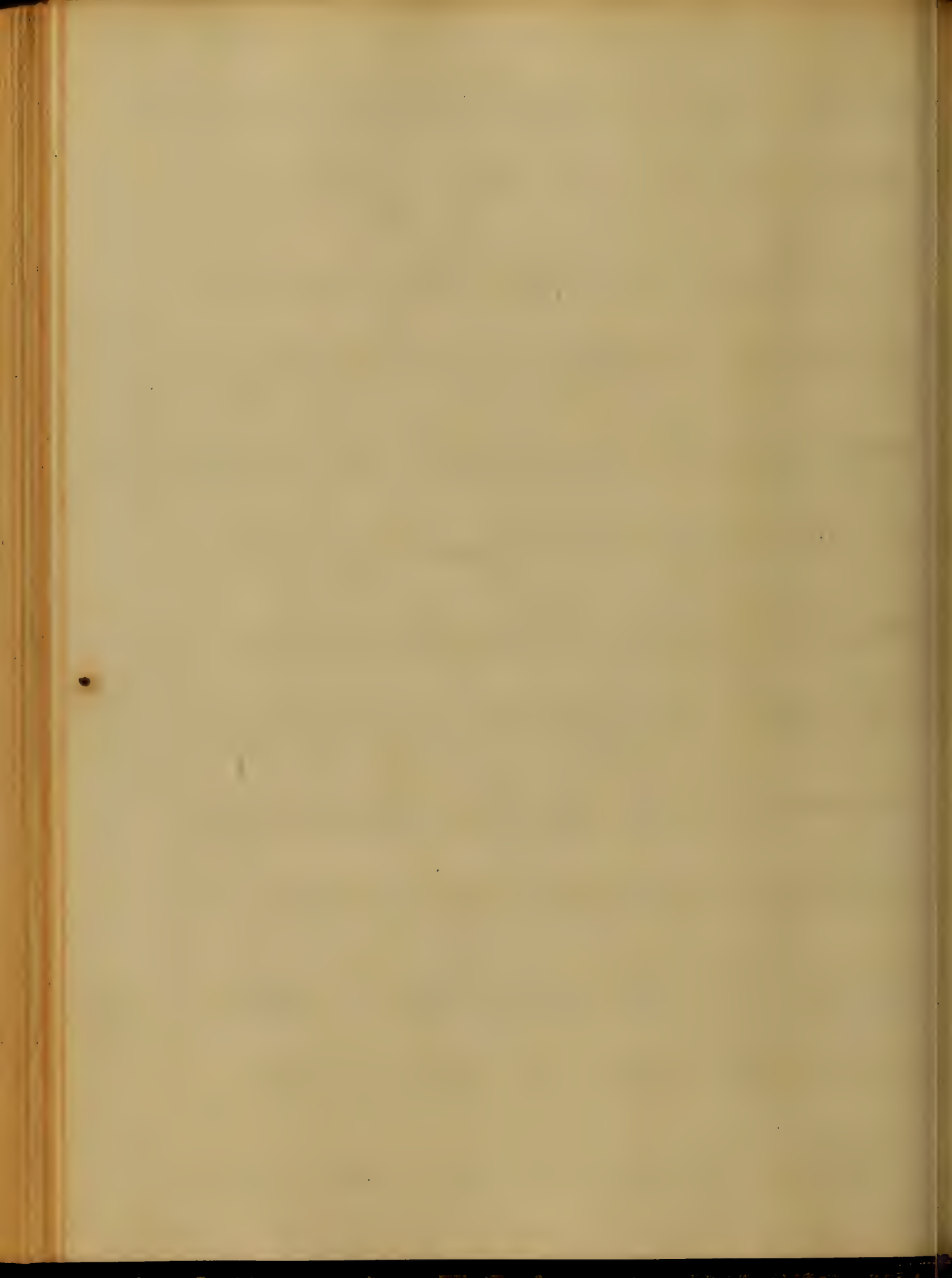


absorption. In relation to the taste
the effects are essentially the same
as those of Quinia but on account
of the size of the dose to be given
it is not now much used, it
may not produce the same ir-
ritation of the Stomach and Bowels
as quinia, on account of the an-
alkaline principle contained
in it - When very largely given it
generally becomes extremely offen-
sive to the Stomach, so that it is
difficult to obtain from it the



Sedative and prostrating effects pro-
duced by excessive doses of Quinia.

Cinchonia has been found to
be nearly identical in its action
with quinia except that it is about
one third weaker requiring to be
given in one third larger doses.
The other principles are not
much used so I will not refer
to them at any length. Quinia
appears not to differ from quinin
in its operation on the system
whether physiologically or therapeutically.



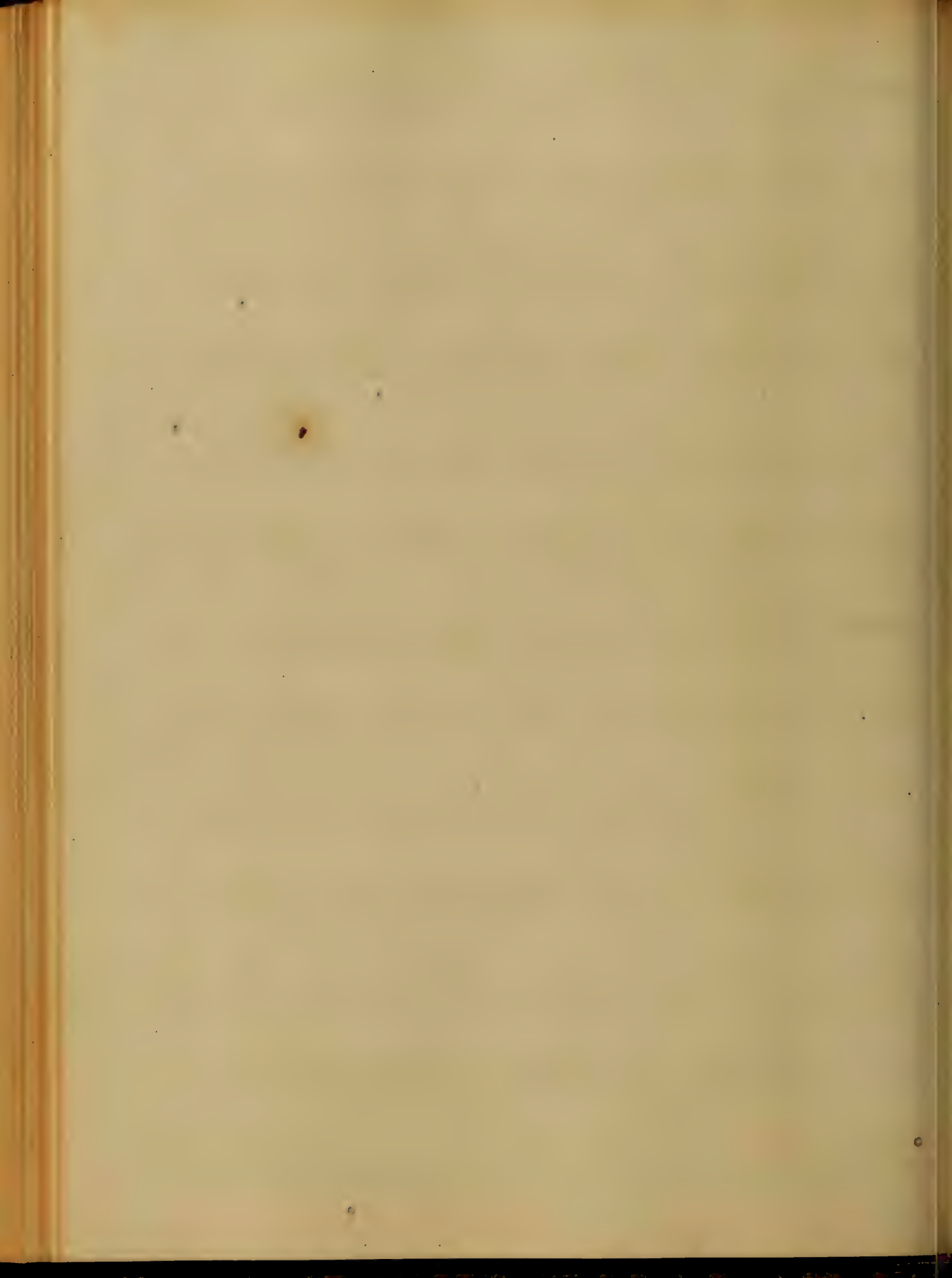
it is much more soluble in water
than quinine.

Injurious effects often arise from
quinia when given in excessive
doses as for instance the unpleasant
symptoms from congestion or over
excitement of the brain among
which a great degree of deafness
is common. Generally this deafness
subsides with the other phenomena
in a period of a few hours or days
but sometimes continues much
longer and has proved permanent.



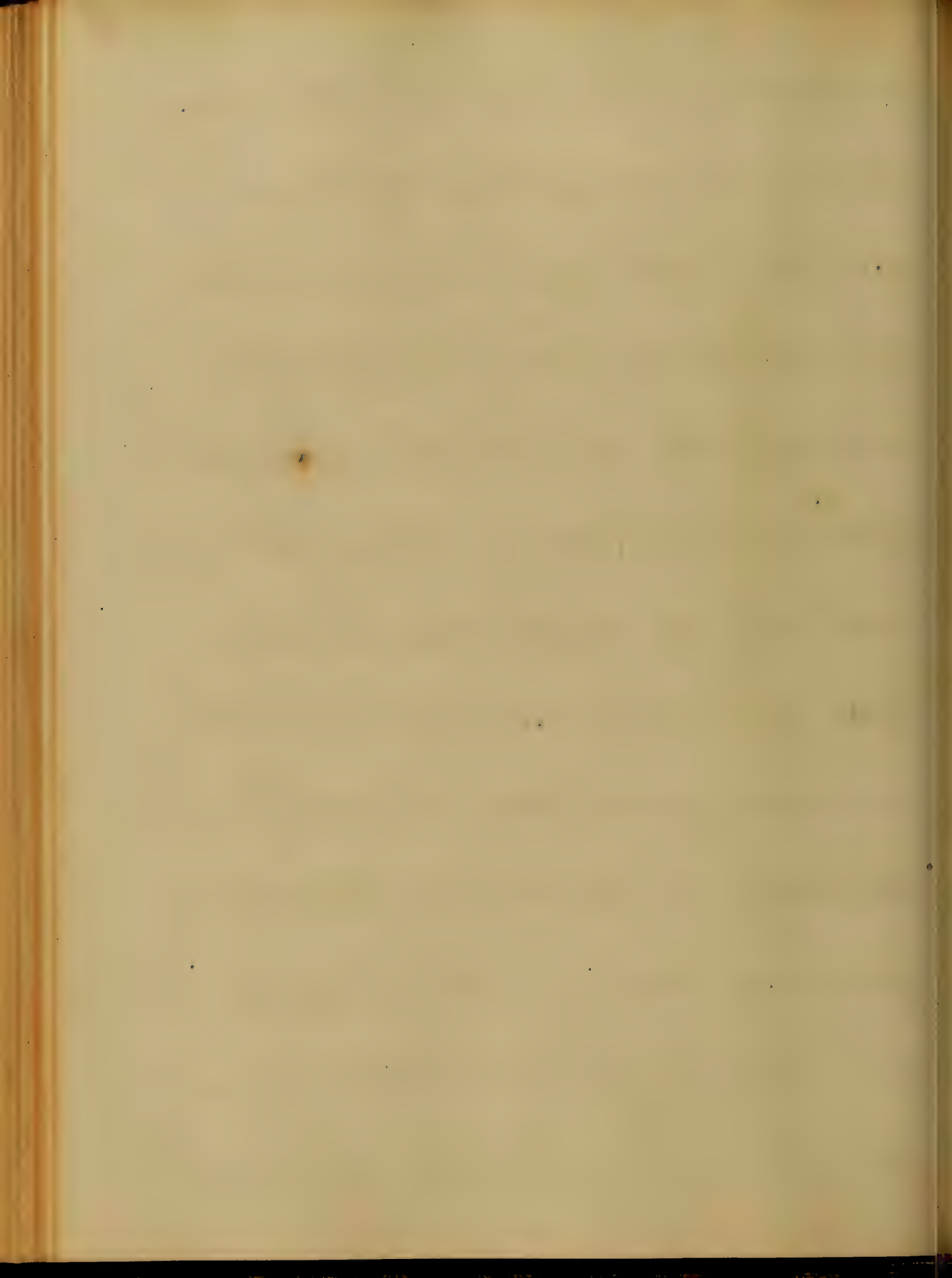
and incurable, Cases are on record
in which death has occurred from
inflammation of the brain, under
the excessive use of quinia, another
danger arising from its use is the
great secondary prostration from
enormous doses in persons already
feeble may possibly prove fatal.

It is strange, however, considering
the powerful effects often produced
by comparatively moderate doses
how far the quantity may be in-
creased without fatal results, I can

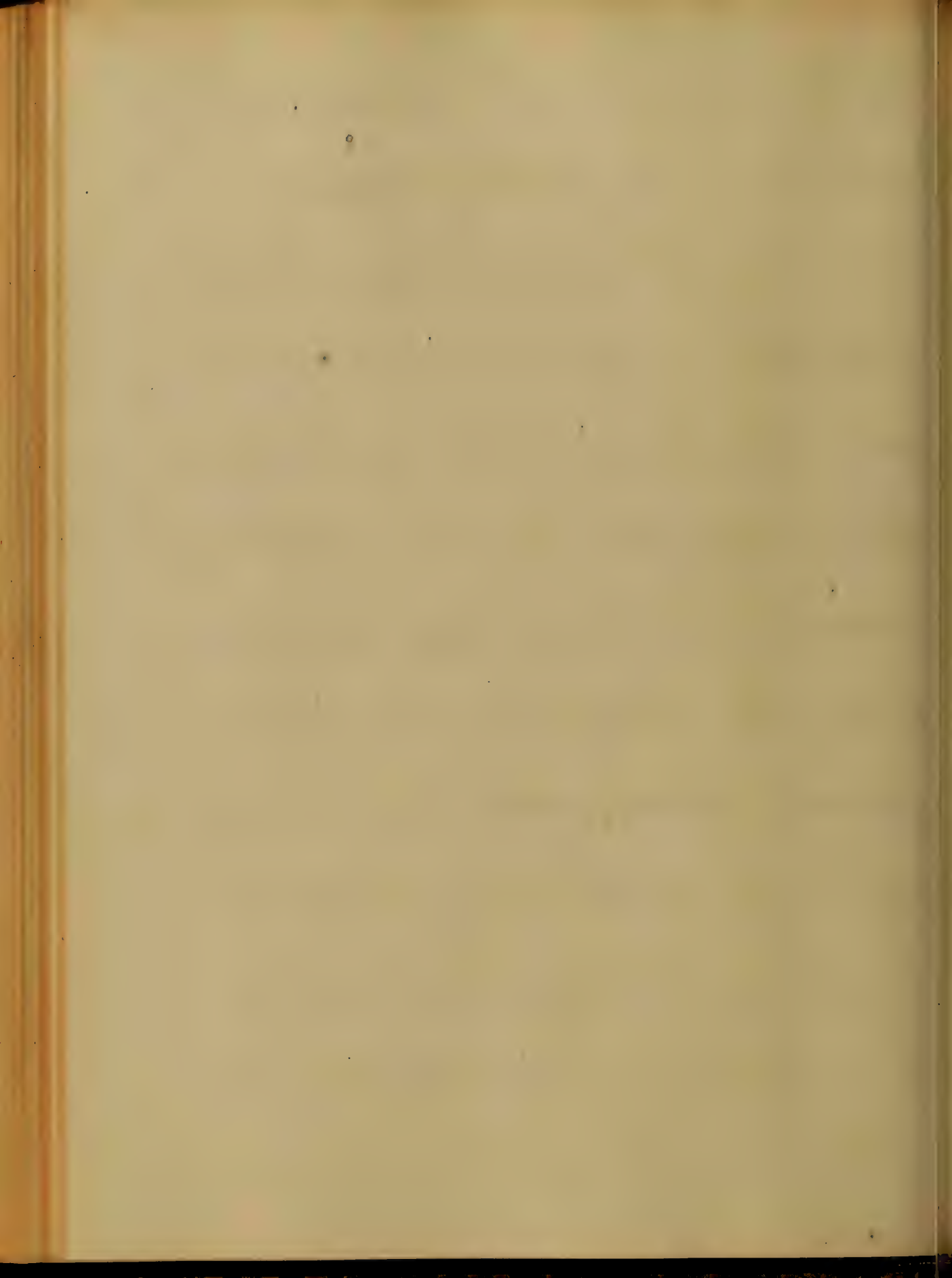


is mentioned by Dr. Hall when a
 person believing himself to be
 attacked with pernicious fever took
 in a short time nearly $\mathcal{Z}i\bar{i}$ of
 quinia by the mouth and then

Symptoms of great prostration
 with loss of sight and hearing
 came on which he ascribed to the
 pernicious fever and hoped to
 counteract by a continuance of these
 enormous doses. in the course of
 nine or ten days he took additional
 $\mathcal{Z}v$ of the salt of Pyrogenium &c



called in found her covered with
cold sweat, completely insensible
blind, with difficult and rattling
respiration, profound stupor and
an expression of countenance like
that of drunkenness he was partially
aroused with much difficulty, so
as to give rational answers but
quickly became delirious as in
another is mentioned by Biquet
in which about ʒx was taken
in a few days the patient lost
for a time sight hearing and



speech and became as cold as
a corpse, but ~~the~~ the leg recovered,

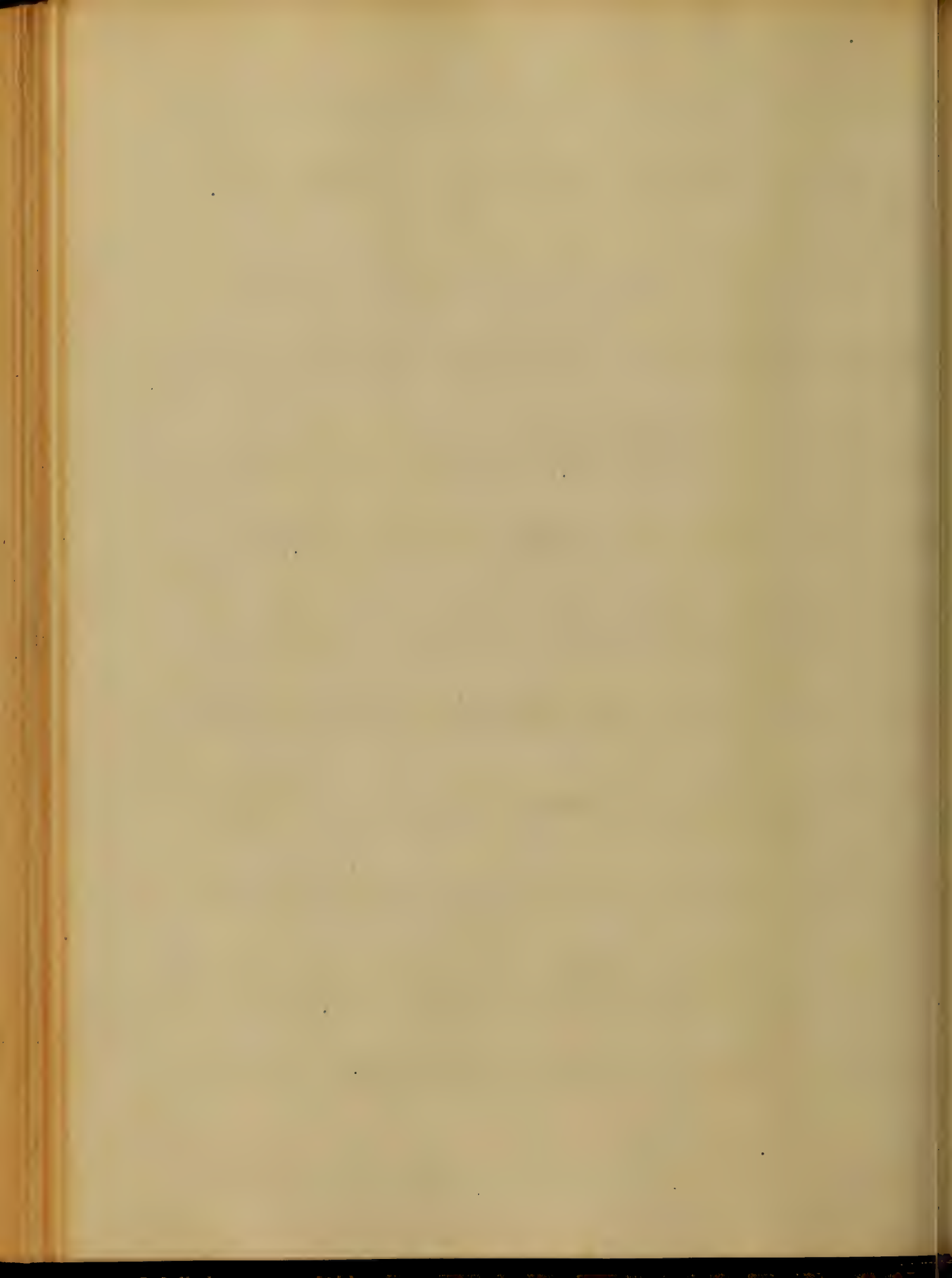
In all cases in which the Salts
of the Cinchona alkaloids have been
given too largely, Tannic acid or
an astringent infusion should
be administered internally, for
though the tannate formed is not
without effect on the system it is
certainly less rapidly absorbed than
the soluble salt. We now come
to its Therapeutical applications

The most important Therapeutical

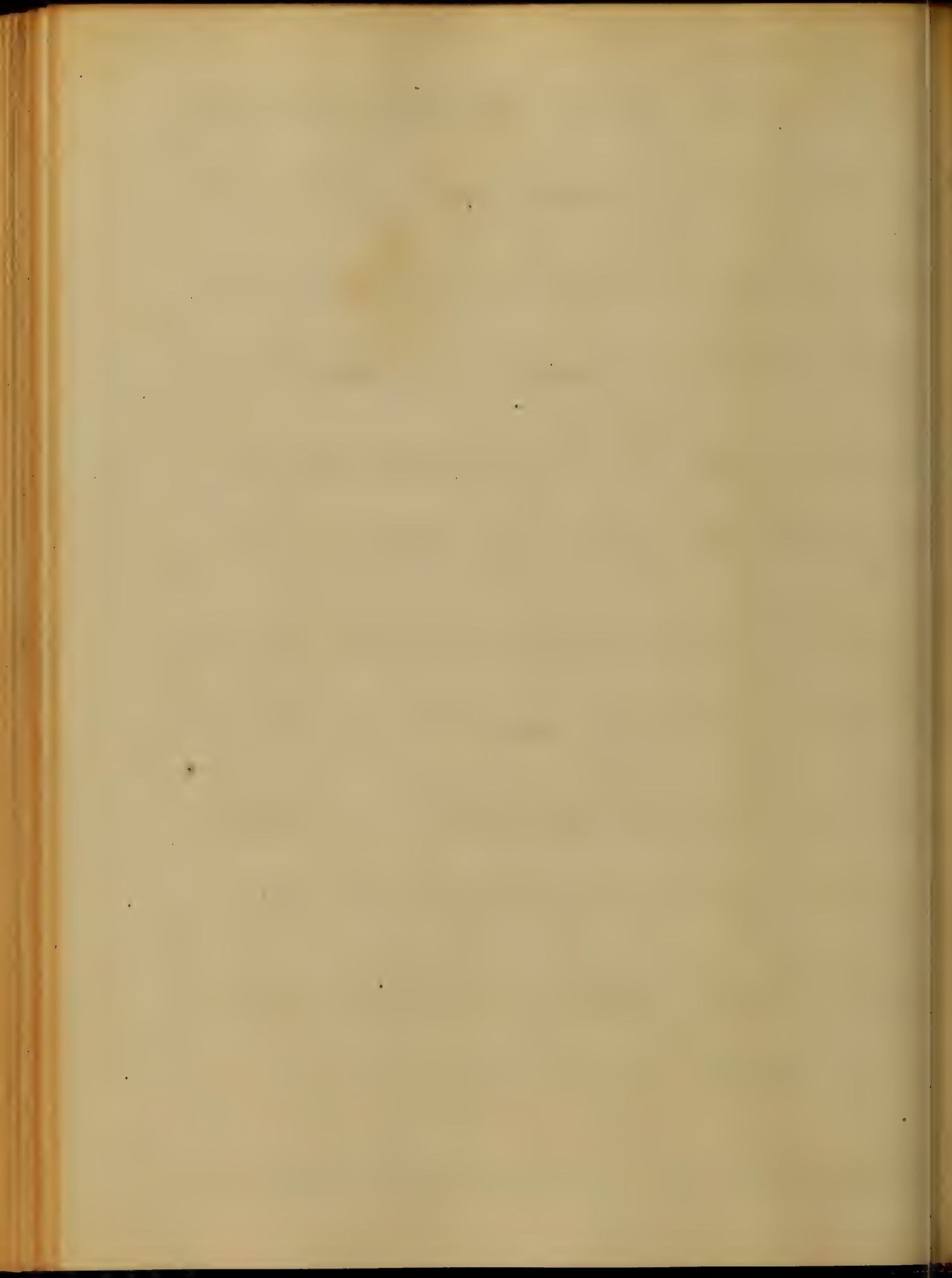


25

employment of bark is as a febrifuge in the treatment of fever of a malarious origin. Its efficacy in these cases was first made known to the world by the Jesuit Missionaries in Peru, from whence it was called *Jesuit's powder*. The type of malarious fever in which the *febrifuge* of bark are most strikingly displayed, is intermittent; the non-malignant and uncomplicated forms of which it rarely if ever fails to control. It may be given in three ways, as the way

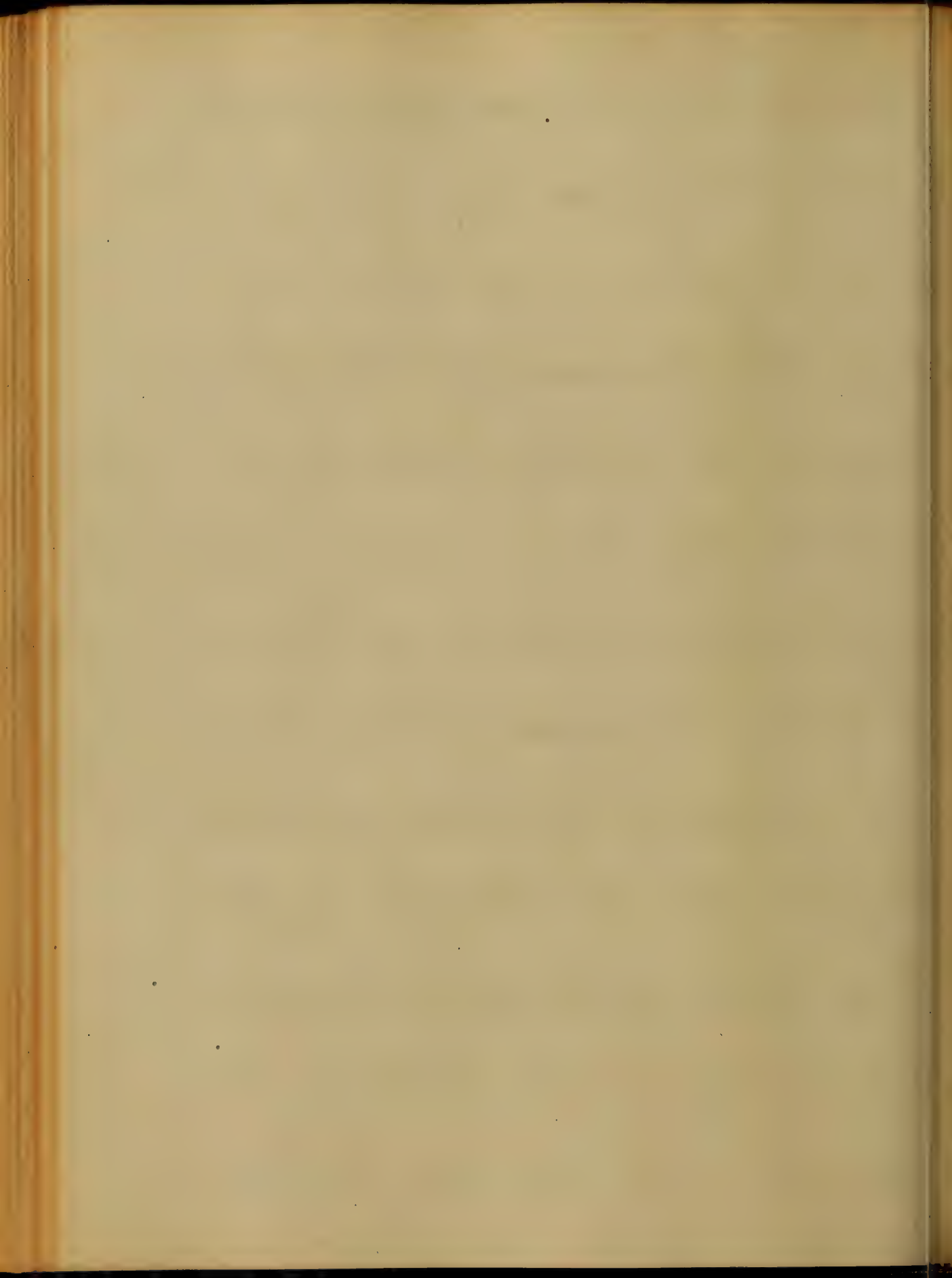


onset of the attack unless contraindicated by the presence of gastric irritability, which must be removed by an emetic or mercurial purge. In remittent fever bark is scarcely less useful than in intermittents, and most Physicians who practice in malarious districts now concur in recommending its exhibition in these fevers, as soon as it can be borne well by the stomach, without waiting for a remission. In the periodic or agyptic forms of intermittents and

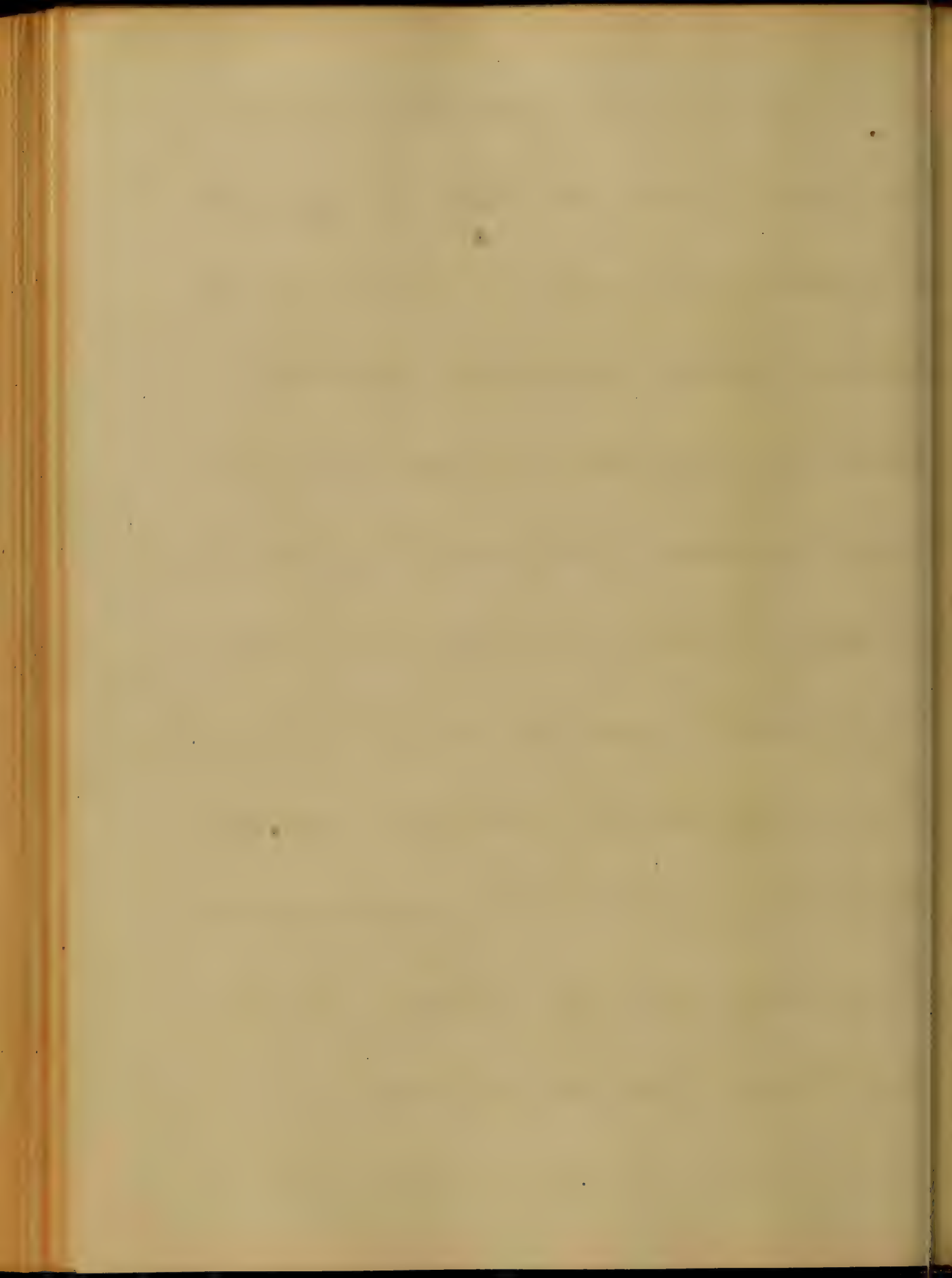


27

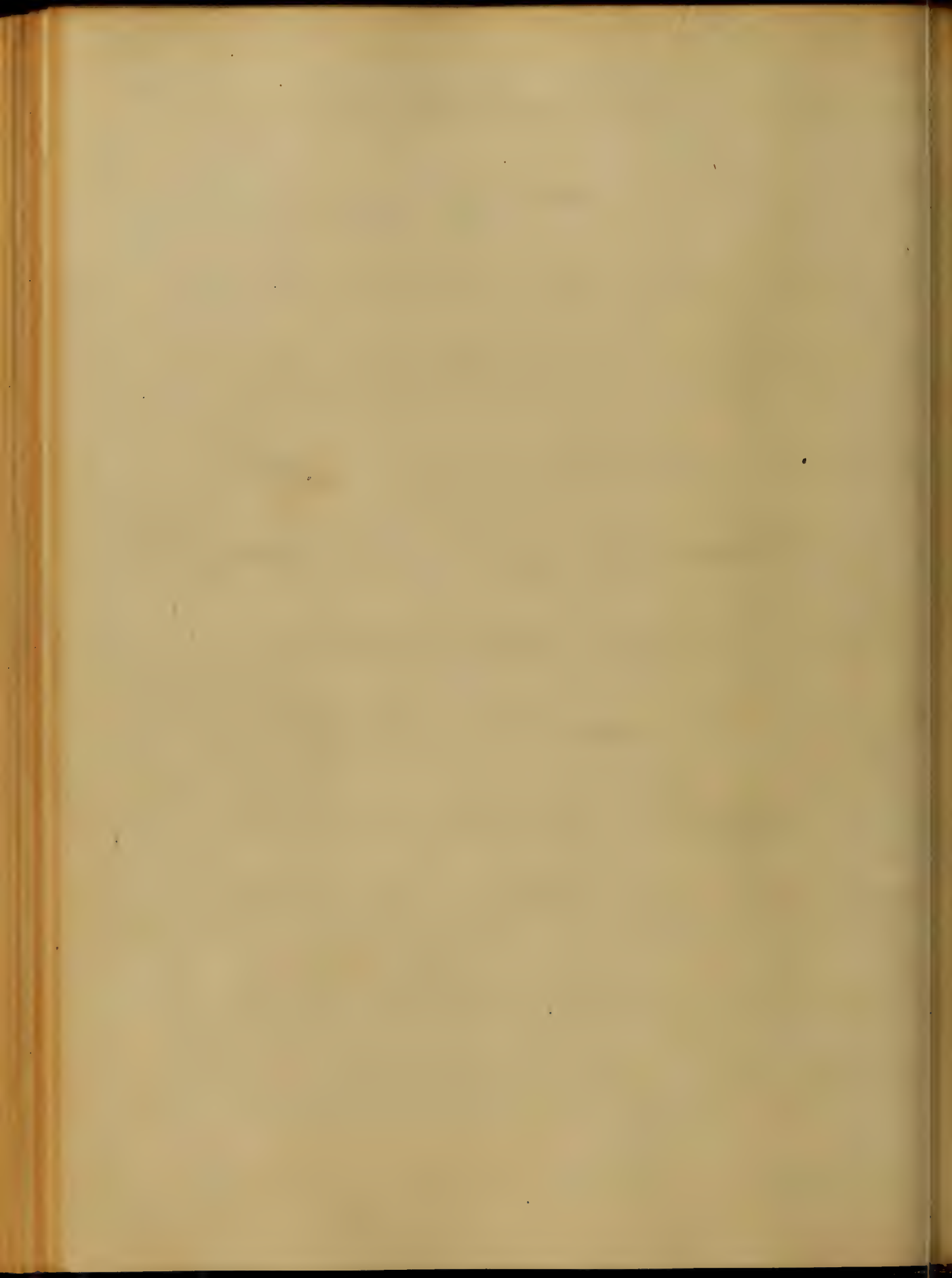
remittent fevers, the early administration
of large doses of bark with preparations
Sulphate of Quinine, in combination
with stimulents, is imperatively de-
manded. As a prophylactic against
malarious fever, the use of the preparation
of bark is very efficacious. In the vicinity
of Syphus including that termed cerebral
fever meningitis the Salls of quinine
in full doses constitute the very best
treatment, in conjunction with stimulation
and nourishment. In Yellow fever, the
declining stages of dysentery the medi-



23
malignant exanthemata, gangrene, malignant
erysipelas, carbuncles, extensive suppuration,
the typhoid forms of disease generally, the
hectic of phthisis, acute rheumatism,
diarrhoea, dysentery, and cholera, and
various disorders of the nervous system, as
neuralgia, tetanus, and chorea, bark and
its preparations are constantly employed.
It is also much used as a stomachic and
general tonic, but where gastric sensiti-
vity exists, as in convalescence from scar-
fever, some of the simple bitters are pre-
ferred. Especially bark is employed in



an astringent and antiseptic I believe
that are the principal forms of disease
in which bark and its preparations
are employed. The preparation are
first the Sulphate of quinine which
is administered in about $\text{gr} \times 11$ daily
in doses of $1 \text{ gr} \times 28$ - though a more may
be given - the dose of bark in powder
is about $\text{ʒ} \text{ij}$. then there is an in-
fusion $\text{loze} \text{ʒ} \text{ii}$, Extract, of yellow bark.
dose $\text{ʒ} \times$ to $\times \times$ fluid Extract, dose $\text{ʒ} \text{ij}$
Tincture, dose $\text{ʒ} \text{ij}$ to $\text{ʒ} \text{iv}$ Compound
or Houston tincture, dose $\text{ʒ} \text{ij}$ to $\text{ʒ} \text{iv}$



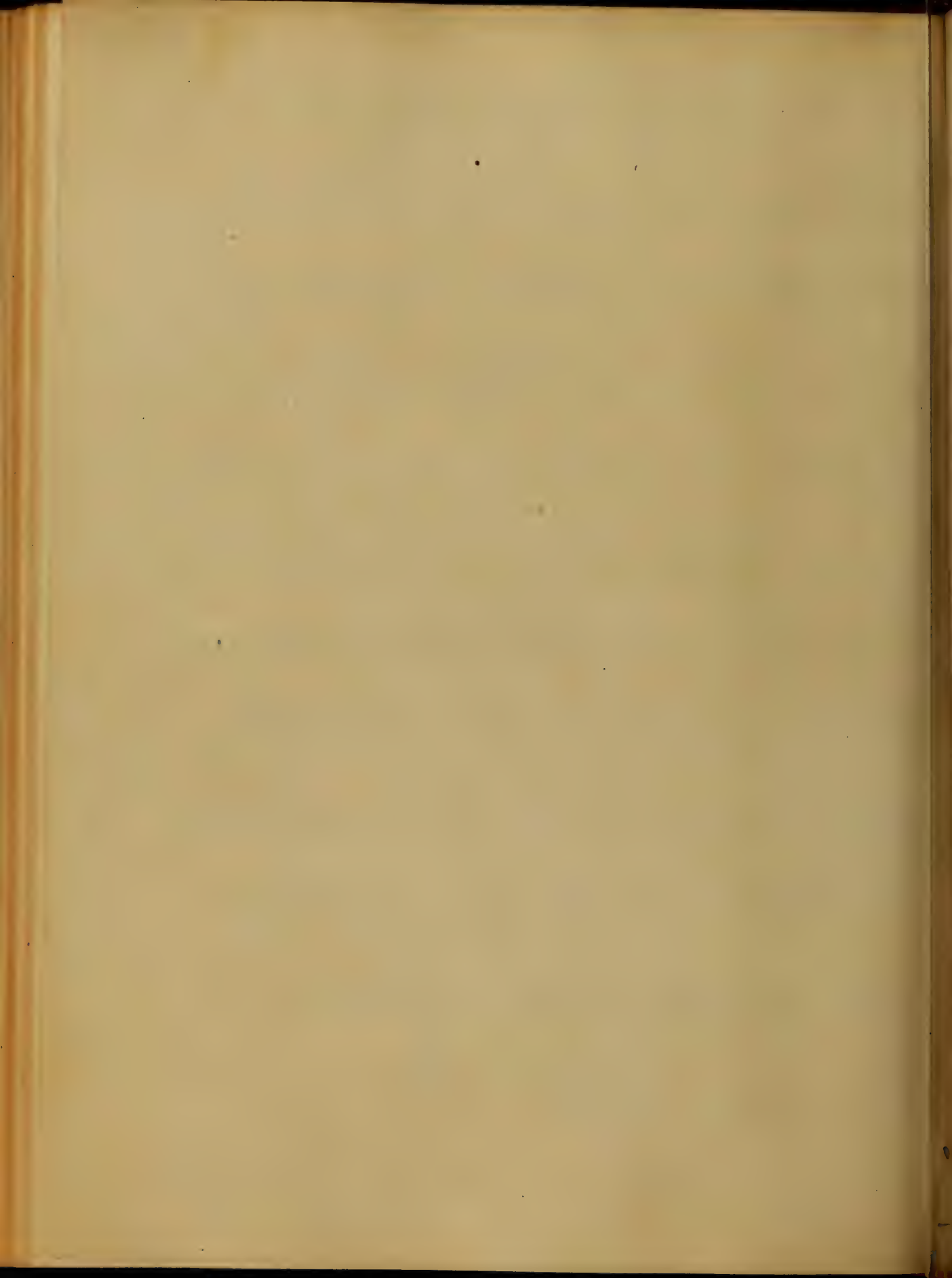
with Strychnine and ...
the ... is ...
Sulphate of Cinchona is administered but requires ...
you ... than the Sulphate of quina -

Enclosure

I lay this before you, in a rough, un-
corrected state, and I beg you, to excuse all the
technical, and other errors, that may be seen.
giving as my excuse, that I am but
a Student, and have a great deal yet
before me, unlearned.

Respectfully,

John ...



AN
Inaugural Dissertation

ON

Tetanus: its nature and treatment

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

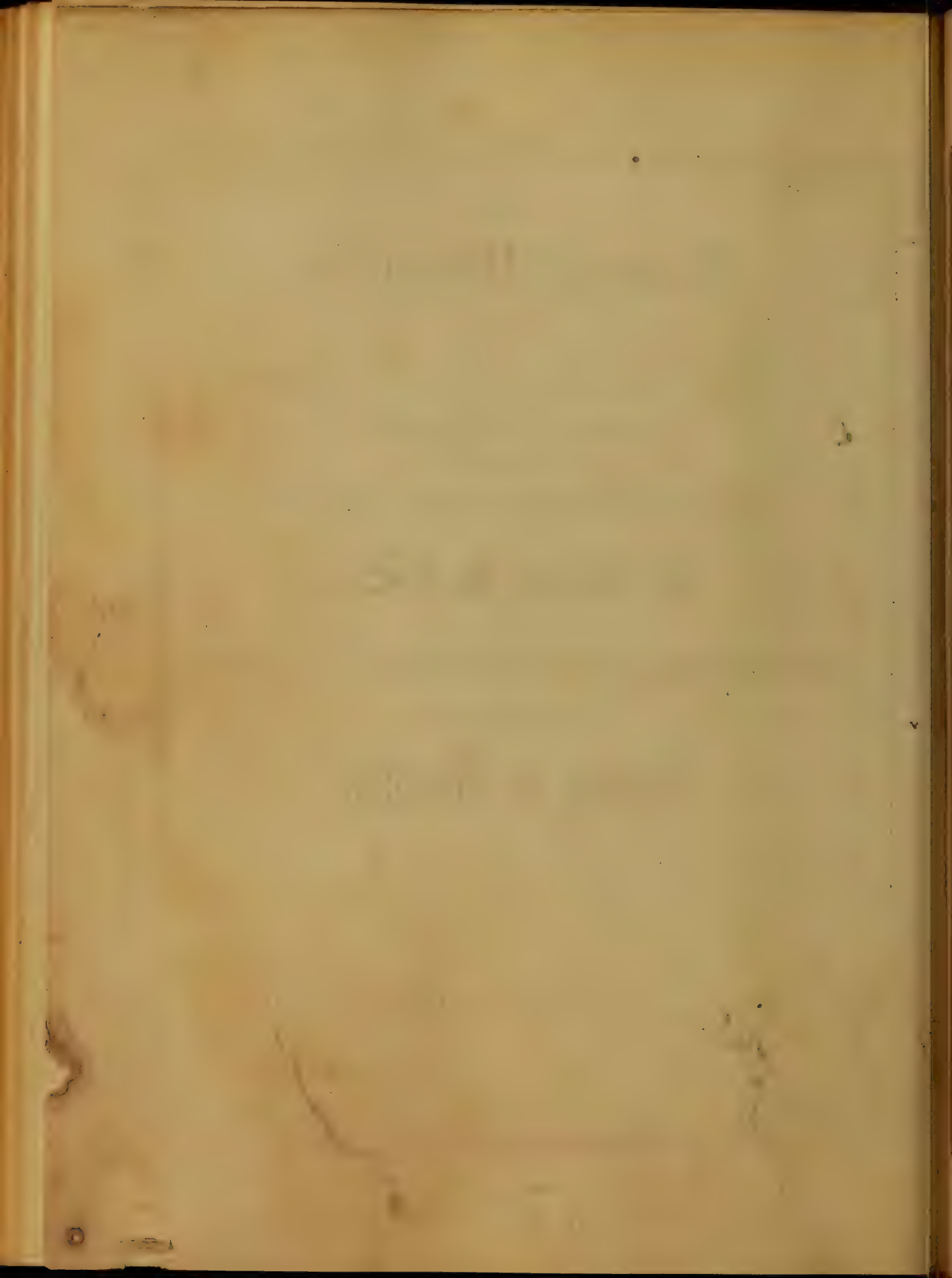
DOCTOR OF MEDICINE,

By
John J. Liggett

of
Maryland

Session of

1865-66



Introduction

Of the several systems identified with the human body, none can surpass in point of interest to the student of Medicine, that of the nerves. It presents to him, in its thorough consideration, a subject fruitful indeed, in thought and investigation. Aware of the peculiar properties with which the nervous system is endowed, and the controlling influences it exerts upon associate systems, he desires to know, naturally enough, all that science has revealed upon the subject of its mysterious action. General anatomy affords to the diligent student, complete information upon its structure and properties, while descriptive anatomy furnishes a view of its arrangement in the body. Physiology treats of its functions, and teaches that these can be neither physical or chemical in nature, as they do not correspond in their mode of operation, with any known phenomena belonging

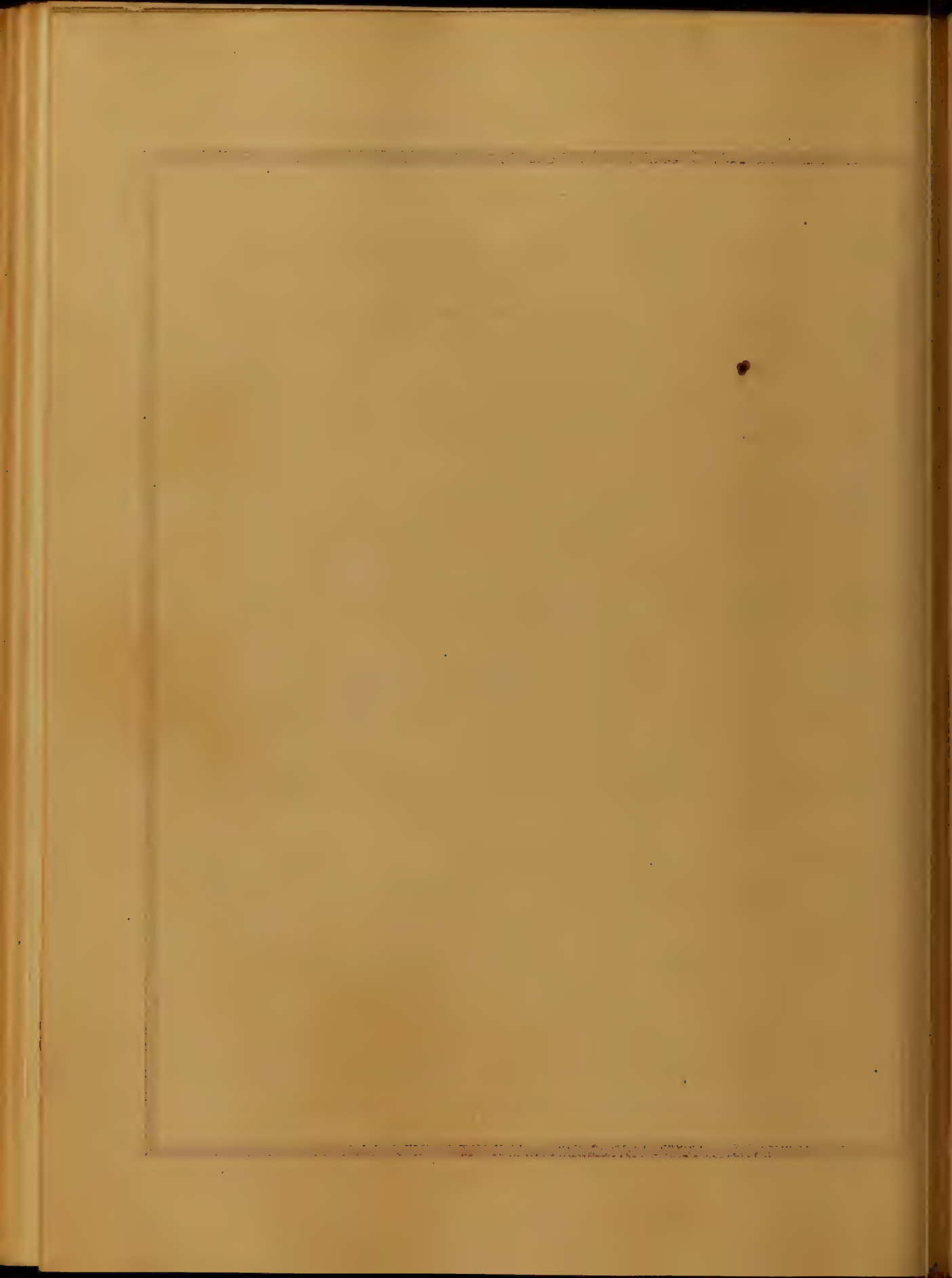


to these two orders. That it is not an apparatus which acts for itself, but a medium of perfect kind, for the transmission of influences from one part to another. Beyond this, as regards understanding the mode by which impressions are conveyed, we cannot go. This yet remains unexplained, and will probably remain so, as do many other phenomena, the effects of which we are perfectly conversant with in every day intercourse with nature. The rapidity and accuracy with which impressions are conveyed, show the nerves to be possessed of most exquisite sensibility, and therefore, of delicate structure. Can it be strange then, that such complicated and sensitive machinery should be liable to derangement, or that its disorders be ranked among the most frequent and troublesome that affect our race? The Class of Neuroses, is recognized by the physician as comprising

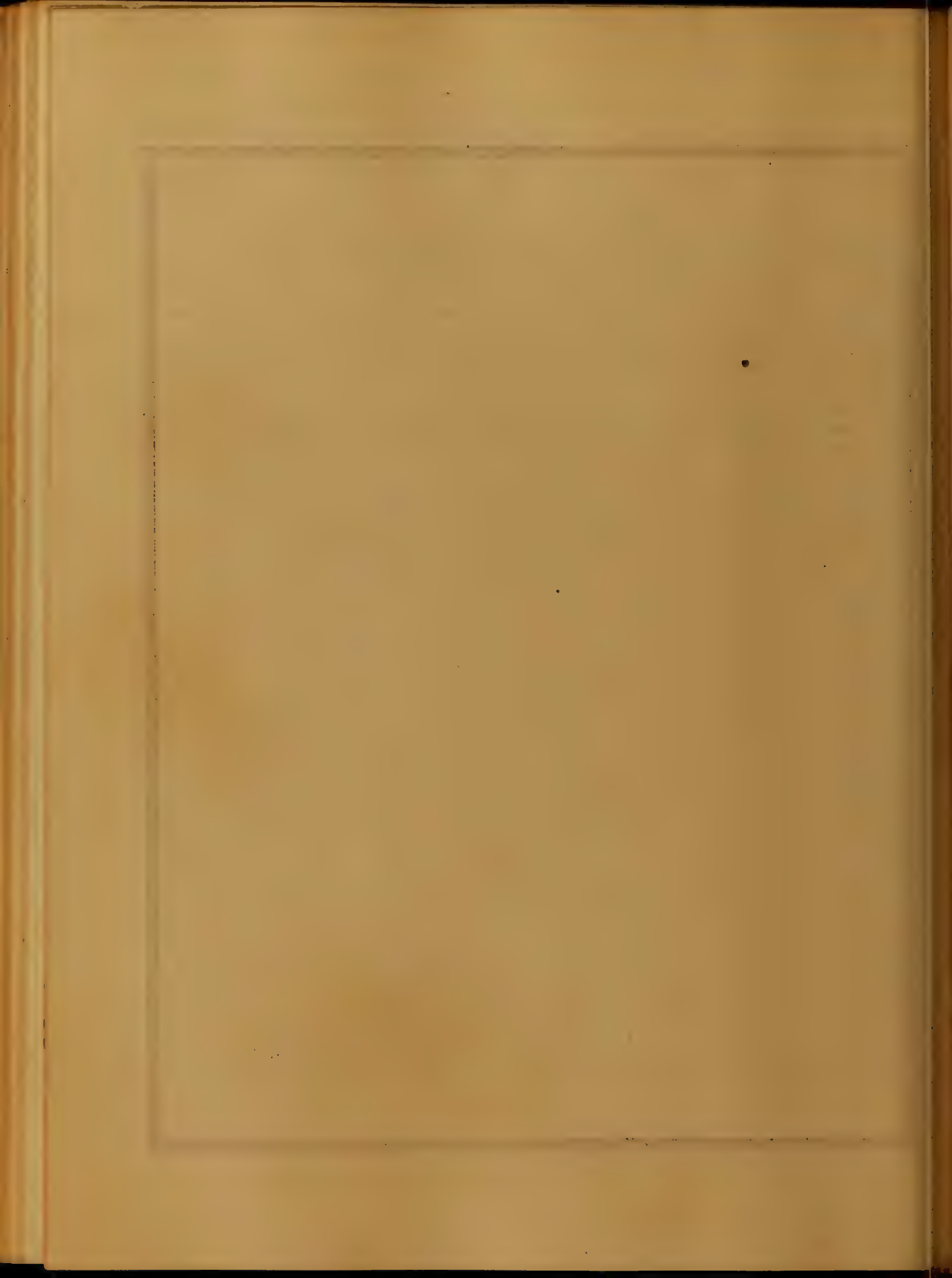


within its limits, the most obstinate, violent, and dangerous diseases, against which he has to oppose the resources of his art. None more frequently resist his remedies or baffle his skill, than these. The disease chosen as the subject of the following pages belongs to this class.

Tetanus is an affection which has been endowed with singular interest to the Author, since commencing the prosecution of the study of Medicine. Its frequent origin in causes apparently most trivial, the violence of its seizure; its intractability to treatment, the terrible sufferings entailed upon the patient; and in the majority of cases, when fully confirmed, its great fatality; all combined to attract his attention and impress him with the importance of understanding its correct pathology. In submitting this essay to the notice of the Faculty of Physic, of



the University of Maryland, he feels that its many imperfections will be kindly considered, even as its merits will be justly and impartially decided upon by them; and that however much it fails to reach the standard of a thesis in their estimation, yet the degree of effort made will partly, at least, compensate for the want of consummation.



Tetanus

The nature of Tetanus has always afforded a subject of ample scope for discussion in the Medical world. Many theories have been advanced from time to time upon the ratio Symptomatum and proximate cause of tetanic affections, that may be said to possess the property of skillful reasoning combined with a certain degree of probability, but none have been of such character as fully to accord with all the phenomena attending their singular course. Discrepancies will appear in endeavoring to adapt these theories to the known characters of the disease. Obscurity yet prevails as to how a minute puncture of the skin, a contusion, laceration or incision, and exposure to cold with moisture, can produce a lesion of such dangerous kind. It is our design to introduce some of the theo-



ries referred to, and accompany their notice with such remarks as may be suggested by their consideration.

Galen referred the seat of the disease to the spinal marrow, but left no theory as to the condition in which it was necessary for that part to be, to cause its production.

Willis, of England, and Hoffman of Saxony, who flourished in the 17th century, concurred in the opinion entertained by Galen, and supported the same by adducing the evidence furnished by post-mortem appearances, and the fact that the muscles supplied by spinal nerves, were almost exclusively affected. Hoffman, however— who has the merit of first turning the attention of practitioners to the morbid affections of the nervous system— went still further, and taught



7

that it consisted essentially in "violent contraction of the membranes surrounding the spinal marrow, and the nerves proceeding from it, which produced impetuous influx of the nervous fluid into the affected muscles." That "the convulsive irritation might be induced in two ways: either the membranes, being directly irritated, were convulsed themselves, and drew into consent other parts connected with them; or, some of these parts, being first spasmodically affected, communicate stricture to the spinal marrow, from which it extends by consent to other parts, between which there is no evident connection, unless through the medium of the brain." This doctrine, based evidently upon the Humoral pathology, needs no refutation, as its defects are sufficiently apparent. The fact that the membranes above mentioned are possessed of no contractile power, destroys this theory



at once.

The theories indulged in by Medical men upon the nature of Tetanus, since the time of Hoffman and up to a recent period, offer us but few essential points of difference (as far as known to the Author) from those already given.

We shall therefore, next notice the opinion of Dr Geo. B. Wood, of Philadelphia, upon the question, as expressed by him in his "Practice of Medicine." Dr Wood believes the disease to be undoubtedly seated in the spinal marrow and Medulla oblongata. That the morbid action may extend also to the white substance of the brain. That the morbid action present, is not inflammatory as such condition seldom leads to such an excess of function, but rather induces the reverse. This principle being well illustrated by the fact, that one of the most common results of inflamma



L

mation within the spine is paralysis. He admits that inflammation of one part, may communicate an irritable action to another and sound part; and that tetanic spasms are sometimes really mingled with the other symptoms of Myelitis. But, in the occasional cases of tetanus, originating in inflammation within the spinal Column, that the inflammation does not constitute the disease: it is merely a cause of it. In such cases the presence of the characteristic symptoms of the Myelitis or Spinal ~~Spasms~~ Meningitis revealing plainly their complication. He defines the infected state of the spinal and cerebral Meninges, and the slightly infected appearance of the nervous substance exhibited by dissection, to be the result, not of inflammation, but of congestion. The latter he regards as the result, and not the cause of the disease, and alludes in support of this view, to its frequent absence in fatal cases.

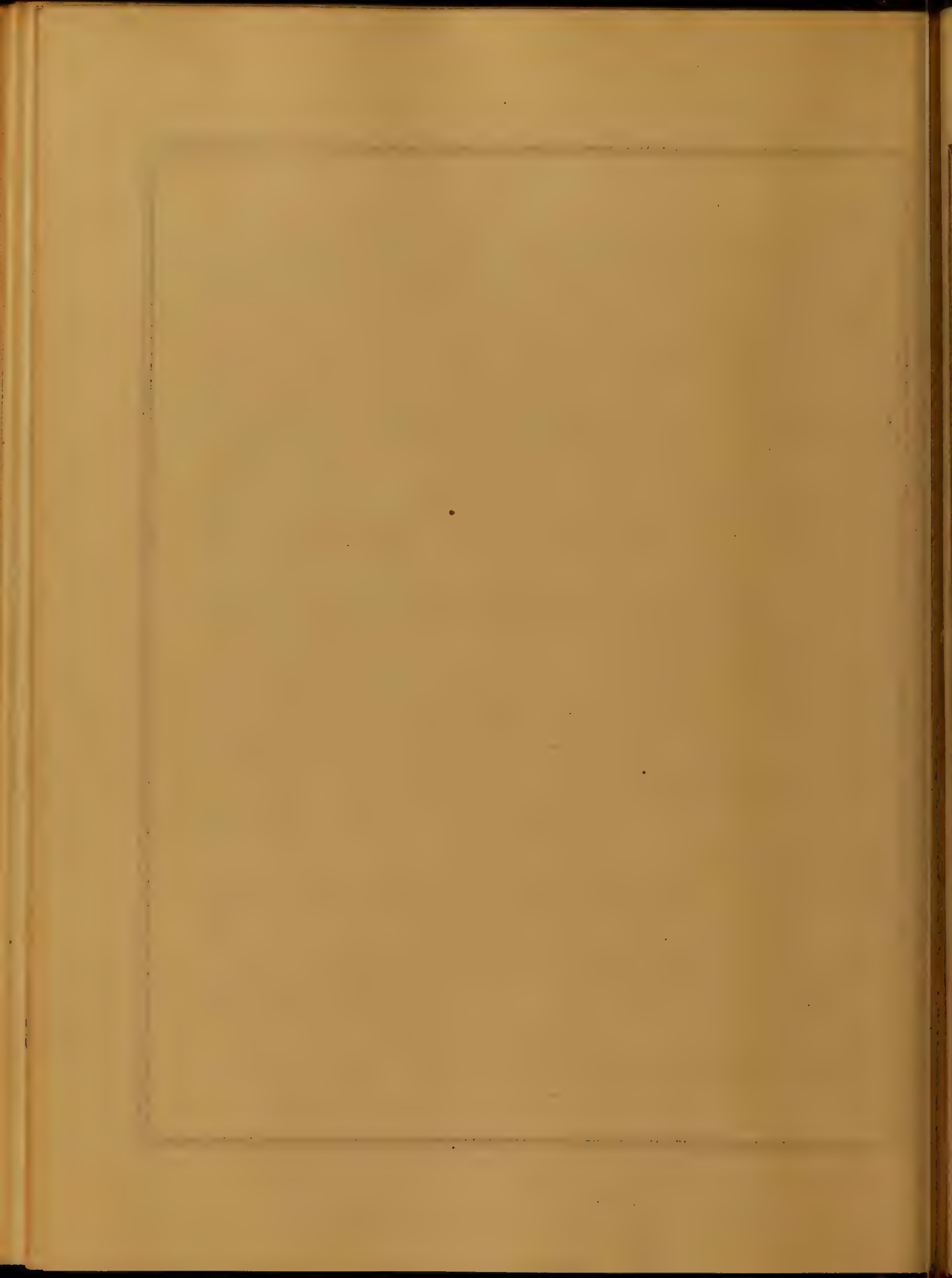


Dr Wood's special theory is: "That the disease is a mere irri-
 tation of the spinal marrow, including the medulla oblong-
 ata, and possibly, to a certain extent, the white cerebral fibres.
 This irritation may be propagated from the injured extrem-
 ities of the nerves, as in wounds; or from other sources of
 excessive excitement, as the intestinal mucous membrane in
 verminose affections; or it may originate in the spinal mar-
 row itself through causes acting on that structure, such as
 cold or rheumatic influence. The irritation thus excited in
 the medullary columns, is extended to the muscles, and pro-
 duces tetanic spasm, exactly as the same effect is caused
 by irritating the spine directly by running an iron wire
 into it, or by mechanical injury of one of the motor nerves
 proceeding from it. The vascular injection, without other marks
 of inflammation within the spinal canal, is the result of the



17

irritation, just as redness of the conjunctiva is produced by neuralgia of the eye. How it should happen that the nerves of the wounded part should remain apparently quiescent for some time, occasionally even till the wound has healed, is one of the mysteries of which so many remain unsolved in relation to nervous action. We may conjecturally say, that at one period of the wound, the requisite irritability of the spinal marrow which constitutes the predisposition, is not yet in existence, and is to become developed by the circumstances under which the patient may be placed. But, if this were true, it would only remove the difficulty a single step. It has been well ascertained that, though the spinal irritation may be set on foot by the local cause, it is afterwards capable of sustaining itself, and may continue even though the cause has quite ceased to operate."



Having concluded our notice of Dr. Wood's views, we shall next refer to those entertained by Demme. From laborious researches (the results of which were confirmed by Flechner and others) this gentleman ascertained the presence of new growths of Connective tissue in the cord, in various fatal cases examined by him. Upon being convinced by observation of this fact, he appears to have arrived at the conclusion, that upon this pathological condition the disease essentially depends in all cases. As a natural sequence to this idea, he proposes to accord to Pot. Iod., the preference as a remedial agent. A course of treatment of so thoroughly unpractical a nature, as hardly to obtain the assent of the inexperienced practitioner.

Reiberq concludes that "Tetanus is not a nerve disorder, but an affection of the blood localizing itself in the muscles. This localization expresses itself by deposits in the muscular



13

tissue, and metamorphosis of the same probably directly induced by altered or diminished innervation. The immediate result of this is shortening and stiffness of the muscles; the tetanic convulsions are consequently not spasms but contractures."

The reflex spasms which he admits do occur are only accidental, and do not belong essentially to the disease. If this theory be correct, we ask why should this localization of a blood poison in the muscular system, be confined to a particular portion of the muscular structure? Or, why is not the whole muscular system similarly affected, when every portion is equally permeated by the noxious principle contained in the blood?

Richardson, Roser, Wells, Thomson and Betoli, regard tetanus as "the result of a poisonous matter formed in the blood, or absorbed into it from an unhealthy secretion of the wound. This acts like strychnia, setting up that peculiar irritable state



of the cord which is the essential condition of the phenomena, and without which the various slight excitants which produce the spasms would take no effect." They, with reason, urge the prime necessity of accounting for this condition of exalted polarity, which in their opinion cannot be explained upon the sole view of peripheral irritation. They argue in addition, that their theory gives an explanation of the idiopathic form, and of the occasional epidemic or endemic prevalence of the disease. The close resemblance of hydrophobia, a disease undoubtedly of toxic origin, and tetanus, is referred to by them to further substantiate their doctrine; as also the fact that division of the nerve proceeding from the seat of injury in traumatic tetanus has by no means proved as frequently successful as one would expect on the view of peripheral irritation being the sole and essential cause.



18

C. Handfield Jones in noticing this theory, says. "There is much in this theory to commend it, but until it is proved that any secretion of a wound can, on being inoculated, give rise to tetanus, it must remain a mere hypothesis. We have no example of any similar morbid production, setting up notable nervous disorder. In glanders and farcy, in malignant pustule, in pyæmia, in syphilitic and smallpox inoculation, and in the action of snake poison, the phenomena are much more those of disordered circulation and blood crisis than of nervous derangement. It is certainly extremely rare, if it ever happens that a foul ulcer, not the result of traumatic injury, becomes the cause of tetanus."

We would add in relation to the resemblance existing between hydrophobia and tetanus, that the idea of the latter being dependent upon any material poison would seem to



be disproved by the circumstance, that in the former affection, the presence of a poison is evidenced by the *Vis Medicatrix Naturæ* attempting to eliminate the poison through the agency of the Salivary glands (by largely increased secretion), while in tetanus no such effort is made.

C. Handfield Jones in his work on "Functional Nervous Disorders," concedes that the theory which assigns to local irritation the chief place in the causation of the disease has, especially if somewhat modified, much evidence in its favor. He quotes the testimony afforded by Mr. Poland's figures obtained from the records of Guy's Hospital, as being strongly in its favor. These show that in the institution mentioned, when wounds were made by a clean, sharp knife, tetanus occurred in the proportion of 1 case in 1364, while in those resulting from accidents and where the nerves were injured, the proportion was 1 in 55.



Clearly, to his mind, there must exist in all cases, a certain predisposition of the cord, before the spasmodic symptoms declare themselves. As a means of throwing some light upon this dark subject, he proposes to note some points of affinity between tetanus, and other nervous disorders. The well known fact that prolonged exposure to heat has a considerable influence in promoting the occurrence of tetanus, as also that it enfeebles the nervous system, and renders it more liable to a variety of derangements, is introduced. That exposure to wet and cold may give rise to tetanus, as also, according to Maisonneuve, it may be the proximate cause of epilepsy, is likewise noticed by this author. The production of cramp by cold is a familiar fact, and one in which the question of poison cannot be entertained. Yet it is a minor tetanus. He argues that the super-vention of tetanus upon exposure



to wet and cold, bears perfect analogy to the invasion of paralysis under similar circumstances, and, though the results of the spasmodic + paralytic affections differ widely in character, yet there is much to justify the view that both are varieties of deranged action of nerve cells. "Just as numbness and pain," he says, "which are certainly very different sensory disorders, are co-products of the cause giving rise to neuralgia, so it may be with spasm and paralysis."

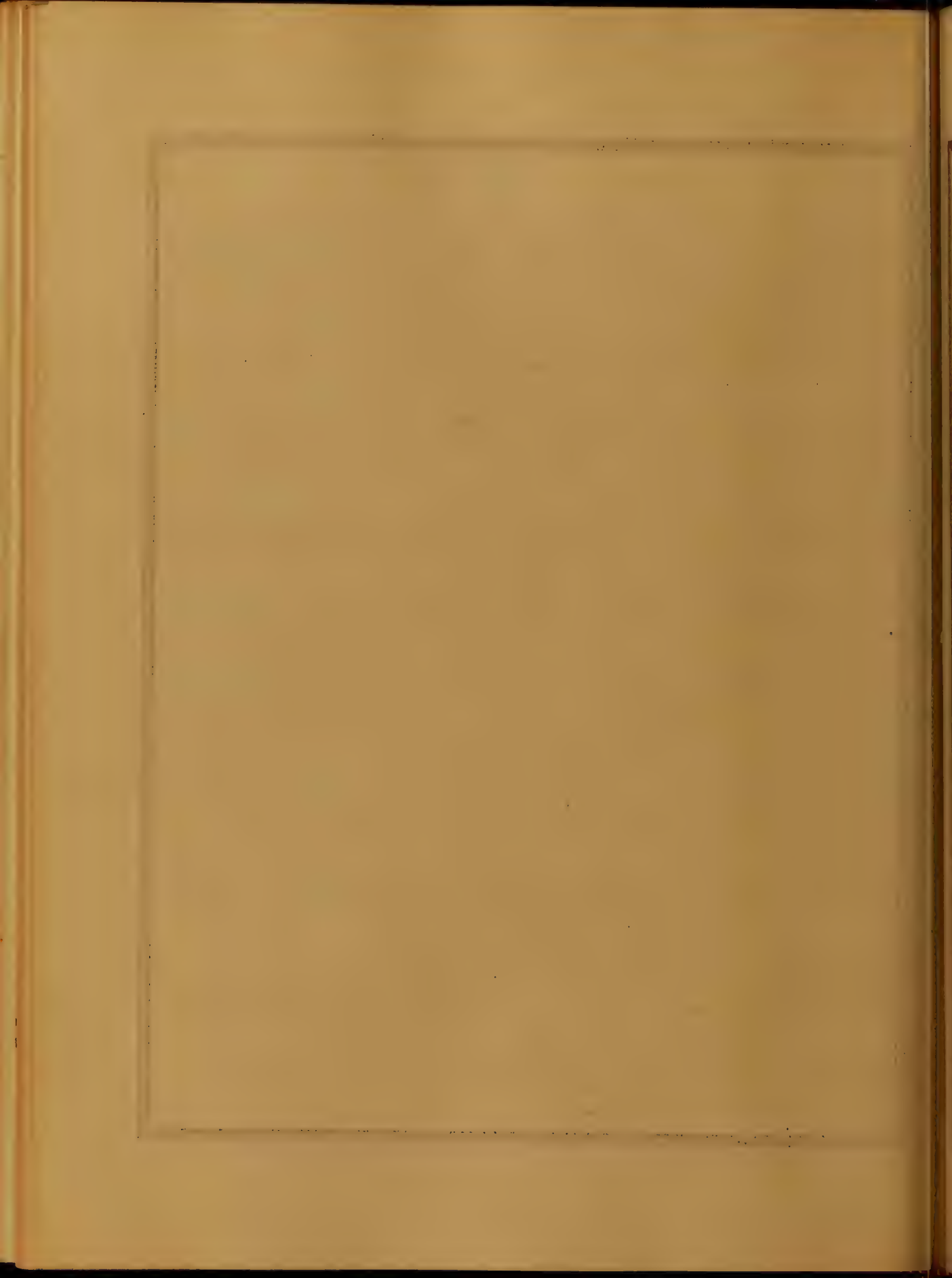
"If prolonged action of our muscles causes fatigue, the same when one position is maintained for a long time causes cramp. These facts go to show that causes producing impairment of nerve power may give rise to spasm."

Dr Jones is inclined to the opinion, from the case quoted by Pflüger from Dieffenbach in which a tetanoid state of one arm, and general epileptic paroxysms, resulted from the

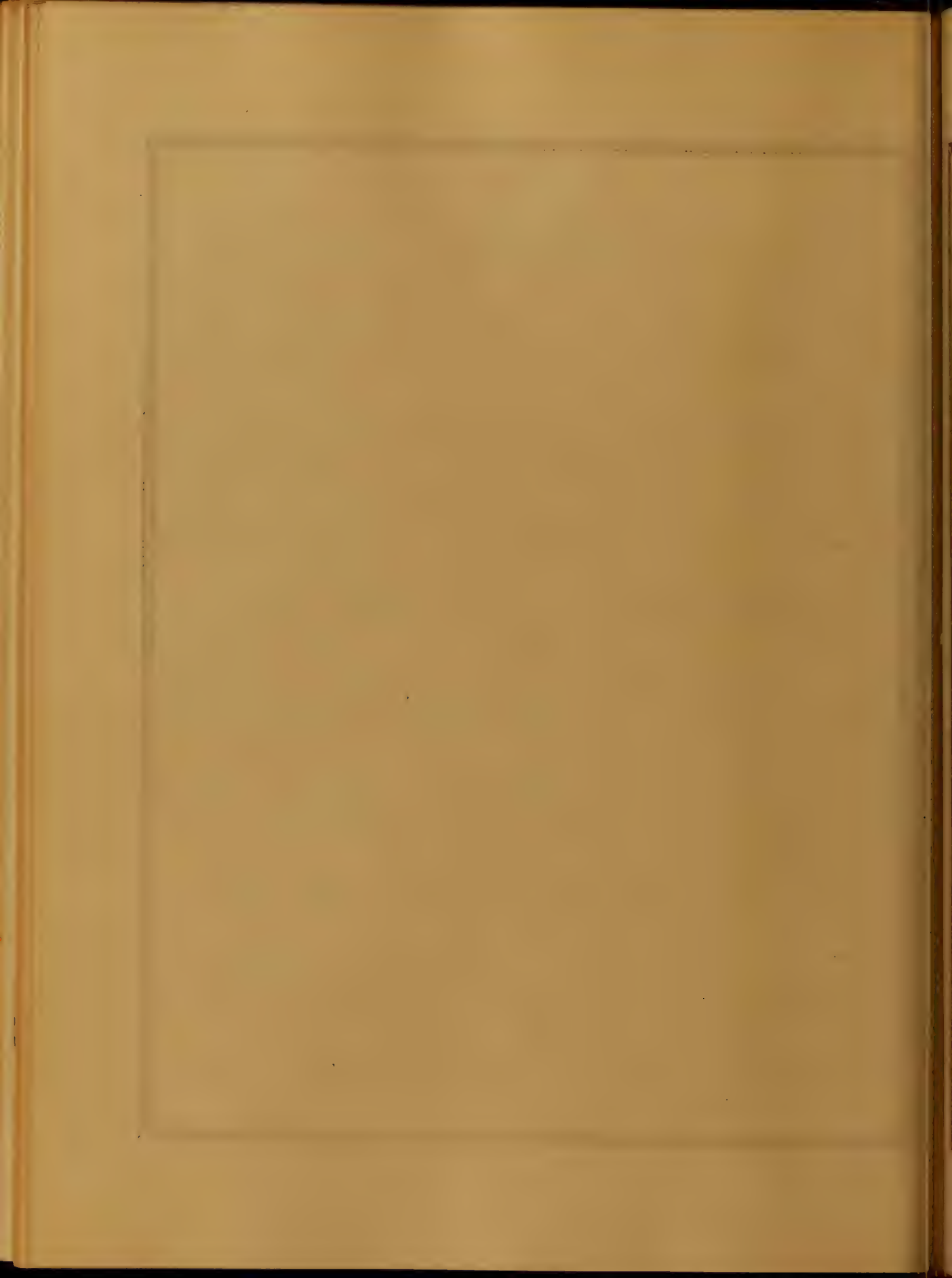


same traumatic irritation, and ceased with its removal; that in both these affections a morbid condition of a diathetic, rather than toxic character, is indicated. He thinks it worthy of consideration, that the muscular contractions in tetanus are accompanied with severe pain, the pain of cramp. That this shows of itself that they are very different from voluntary muscular contraction, which how forcible soever are never painful. He believes the association of pain approximates the nerve disorder to neuralgia.

We will now introduce some points contained in an interesting communication, which appeared in the "London Lancet" of Aug. 12th 1865, by Mr. J. Lockhart Clarke, and originally addressed to the Royal Medical and Chirurgical Society, upon the condition of the spinal cord in six cases of tetanus. In every one of these there was not only more



or less congestion of the bloodvessels, but there were also definite and frequently extensive, lesions of structure, such as have never yet been discovered. These lesions consisted of disintegrations of tissue in different stages of progress, from a state of mere softening to that of perfect fluidity, and were accompanied by certain exudations and extensive effusions of blood. They were found chiefly in the gray substance, which, moreover, was in many places strangely altered in shape - unsymmetrical on the opposite sides, or partially fused with the adjacent white column in a common softened mass. Although lesions of this kind existed, in one form or other, in every region of the cord, they were absent in some places; nor did they ever, for long together, maintain the same shape, size, or appearance, but were constantly & alternately increasing, diminishing or disap



pearing, at short but variable intervals. These lesions in tetanus are precisely similar in character to those which the author (Mr. Clarke) has discovered in the spinal cords of many ordinary cases of paralysis; and on comparing together the lesions and symptoms of both kinds of diseases, he finds good ground for the support of the following conclusions:

1st That the lesions are either not present, or are present only in a slight degree, in those cases of tetanus which recover.

2nd That they are not the effects of the great functional activity of the cord (manifested in the violent spasms) but are the effects of a morbid state of the bloodvessels.

3rd That they are not alone the causes of the tetanic spasms.

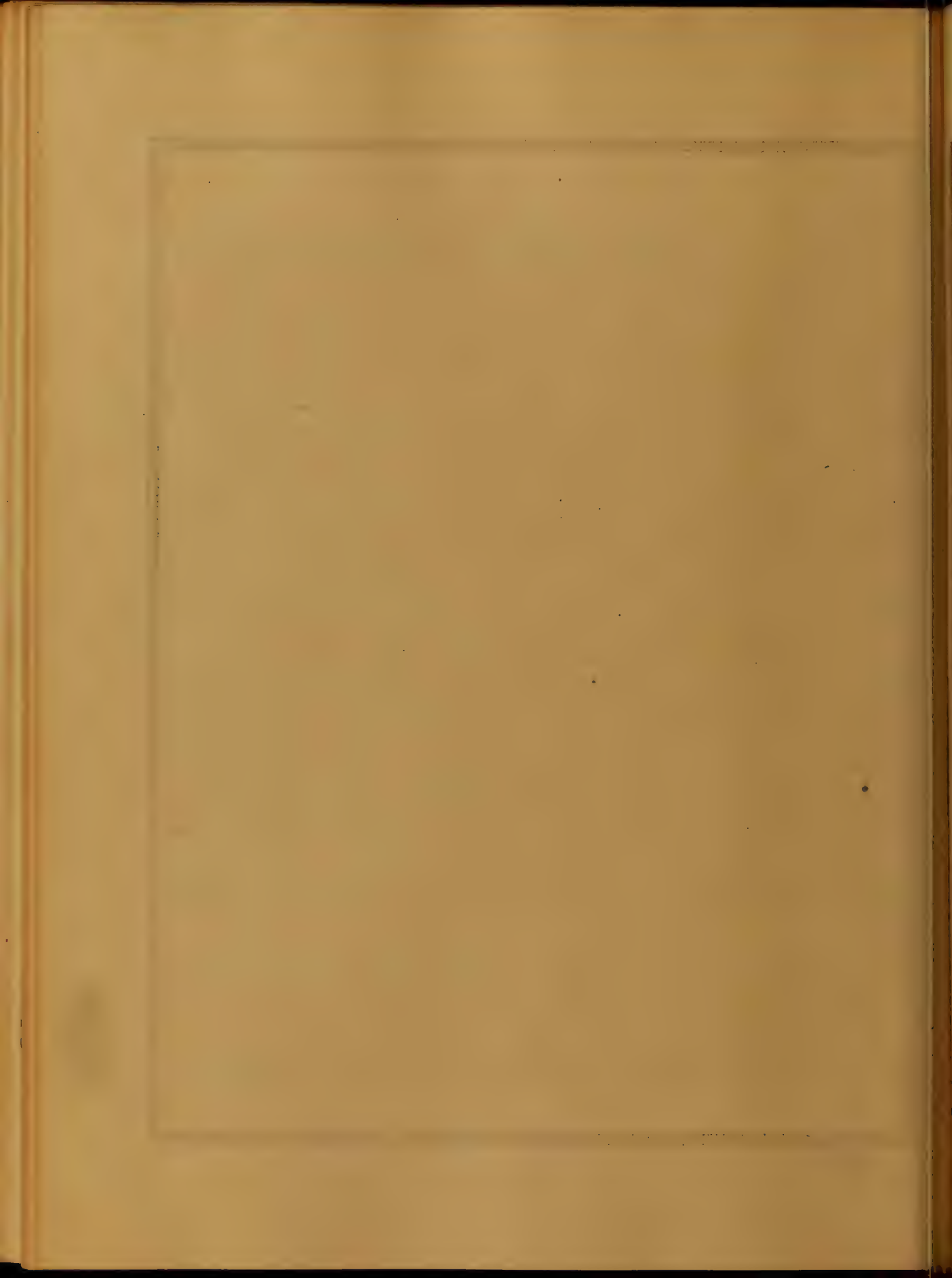
4th That the tetanic spasms depend on two separate causes



firstly, on a morbidly excitable condition of the gray substance
of the cord, induced by the hyperaemic and morbid state of its
 bloodvessels, propagated from the injured nerves and resulting
 in exudations and disintegrations of tissue; and, secondly, on
irritation propagated and spread through the morbidly excitable
 cord from the same source - from the periphery, by the diseased
 nerves.

Mr. C. stated that the observations described in the paper were
 made on the spinal cords of six cases of tetanus; and that since
 the communication of the paper, he had examined the cords of
 three more cases with precisely similar results. The lesions and
 alterations of structure, though numerous, were in some places ex-
 ceedingly small, and appreciable only under glasses of consider-
 able magnifying power.

In the report of the ¹⁸⁴⁴ Transactions of the Medical Society of



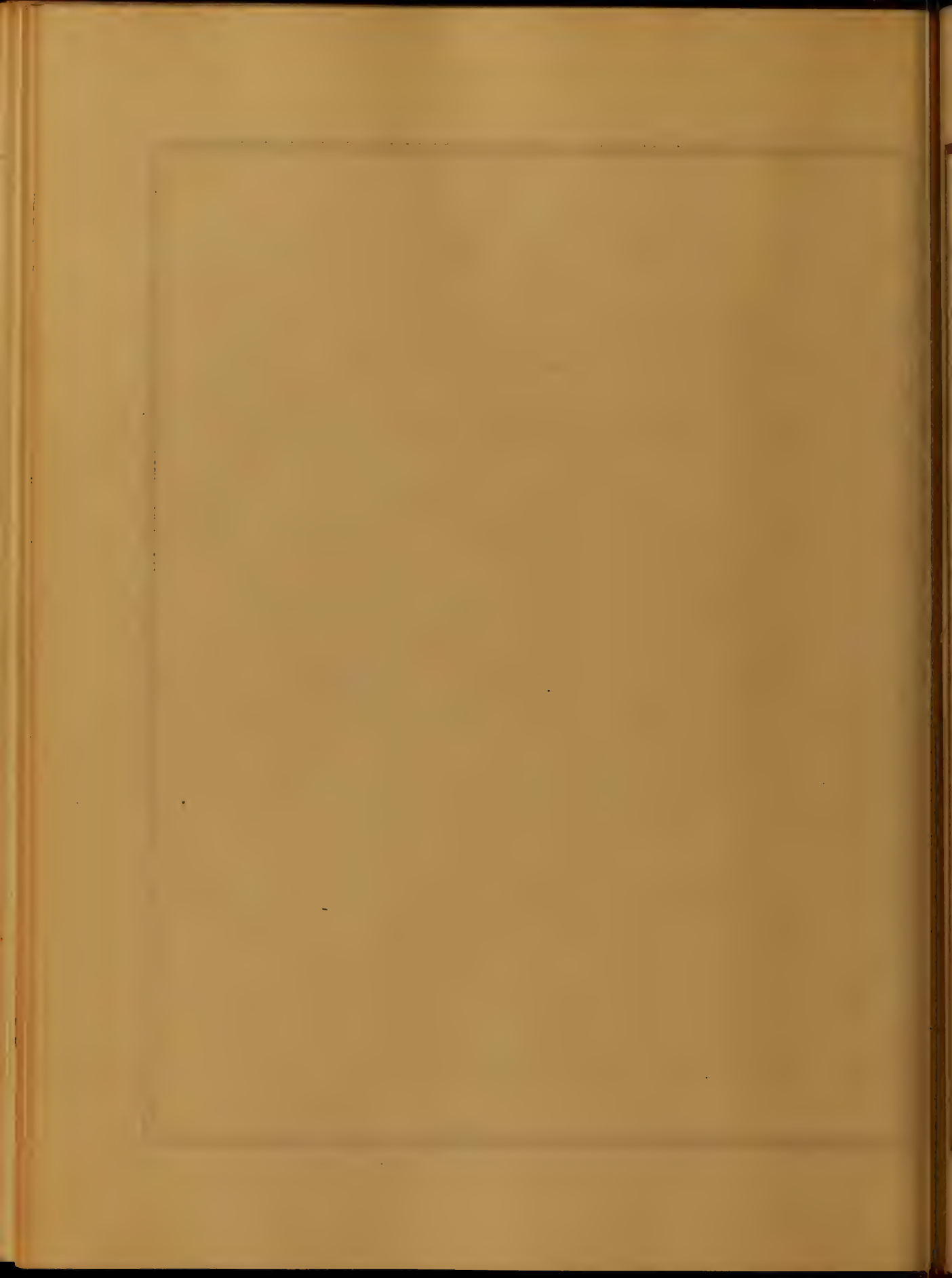
the State of New York for 1861," we find the first paper to be upon traumatic tetanus, by Dr J. McNulty, of the city of New York. This gentleman assumes and defends in this paper, the position that in the blood of certain persons, there circulates a morbid principle, which produces in them a tetanic diathesis, which, when sufficiently developed, and then only, will give rise to tetanus, whether the patient shall receive any local injury or not. Dr McNulty disclaims the ability to demonstrate the morbid cause of tetanus, or to show in what manner it operates to produce the result; these points he reserves for future investigation.

The chief argument in favor of the position referred to, is the unquestionable fact, that tetanus has occurred idiosyncratically without the infliction of any injury whatever; while, on the other hand, the very class of injuries, the infliction of which is reputed



to be those most apt to occasion tetanus, occur daily, in a very large number of cases, and under all the conditions which are usually esteemed as those increasing their tendency to give rise to tetanus, without any tetanic symptoms being produced.

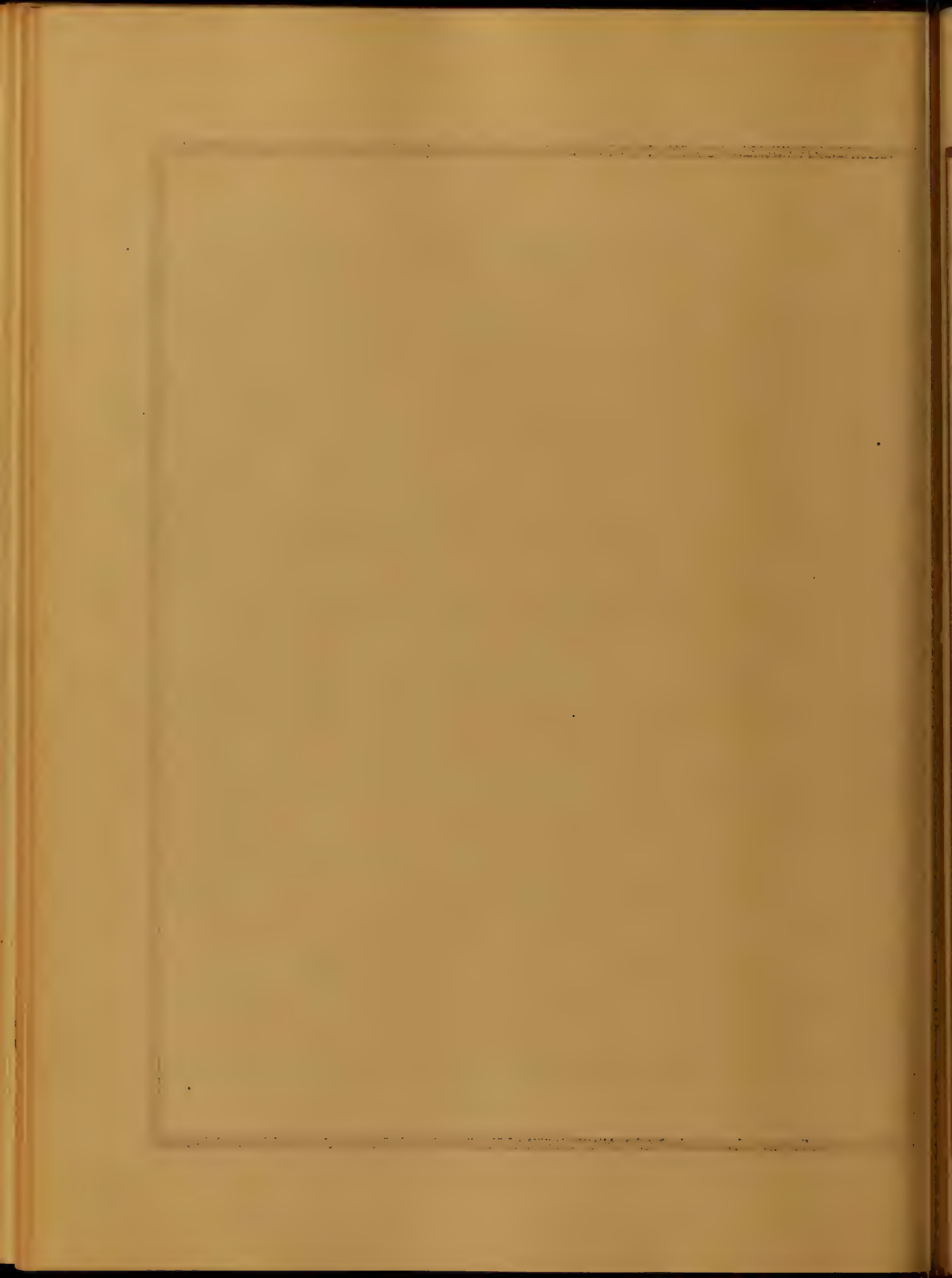
We have aimed thus far to collate the views of different pathologists upon the nature of tetanus. In doing this the writer has availed himself of all the sources of information within his reach, and endeavored to briefly embody the opinions obtained in a single paper. These opinions, though not numerous, must be considered as having considerable influence upon a correct appreciation of the nature of this disease, coming as they do, with perhaps one or two exceptions, from men of eminence in the medical profession. In deducing inferences from the opinions given, we conclude:—1st That the scale of medical opinion inclines towards the view, that tetanus is dependent



upon a morbid condition of the spinal cord; and 2nd, That said morbid condition depends essentially upon a certain predisposition which must first exist in the spinal column.

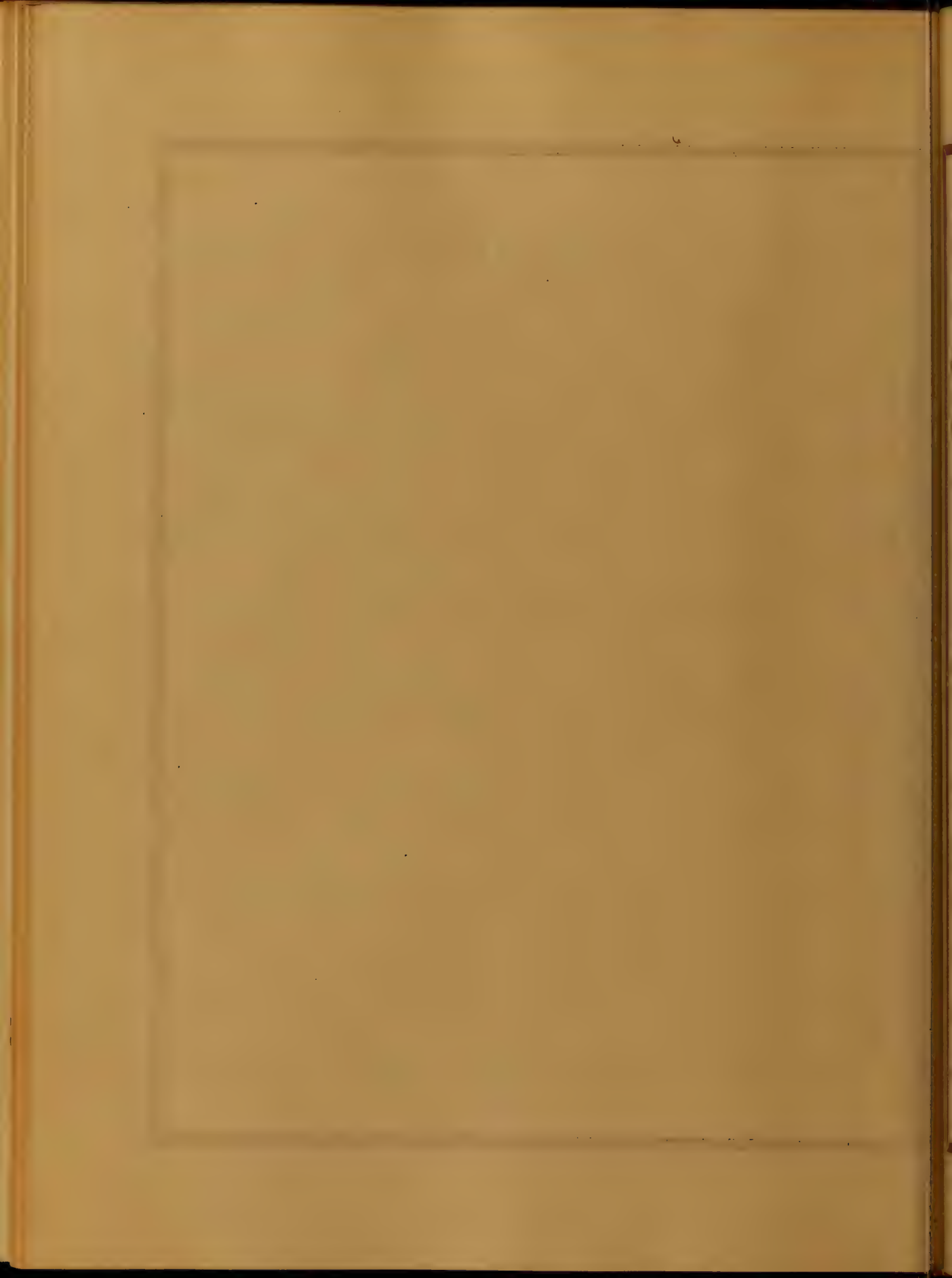
What this morbid condition is, and what constitutes the predisposition, are questions upon which some diversity of opinion exists. Prof. Wood thinks the morbid condition is "a mere irritation of the spinal marrow including the medulla oblongata." Dr C. Handfield Jones says it is "a variety of deranged action of nerve cells." Mr. J. Lockhart Clarke that it is "a morbidly excitable condition of the gray substance of the cord." Richardson, Roser, Wells, Emerson and Detoli say that - "a peculiar irritable state of the cord, is the essential condition of the phenomena."

Our own humble opinion is that tetanus essentially depends upon a morbid excitation of the vital properties of



the spinal cord, and that such excitation is due to increased activity of the circulation in that structure. This view would seem to be justified by the following facts:—

Muscular contractility is a property inherent to the muscular fibres, and acts through stimuli conveyed by the nerves. In tetanus the tonic spasms produced by continuous nerve stimulation, indicate the source from whence this stimulation proceeds, to be in a state of exalted activity. This exalted activity or morbid excitation of the spinal cord, can alone be dependent upon an increased circulation of blood through its vessels, as the fact has been demonstrated conclusively, that nutrition is the source of the vital properties. Brown-Séquard divided the spinal cord in the dorsal region of a mammal, and then killed it by dividing the Carotid artery. A few minutes after the cesu-



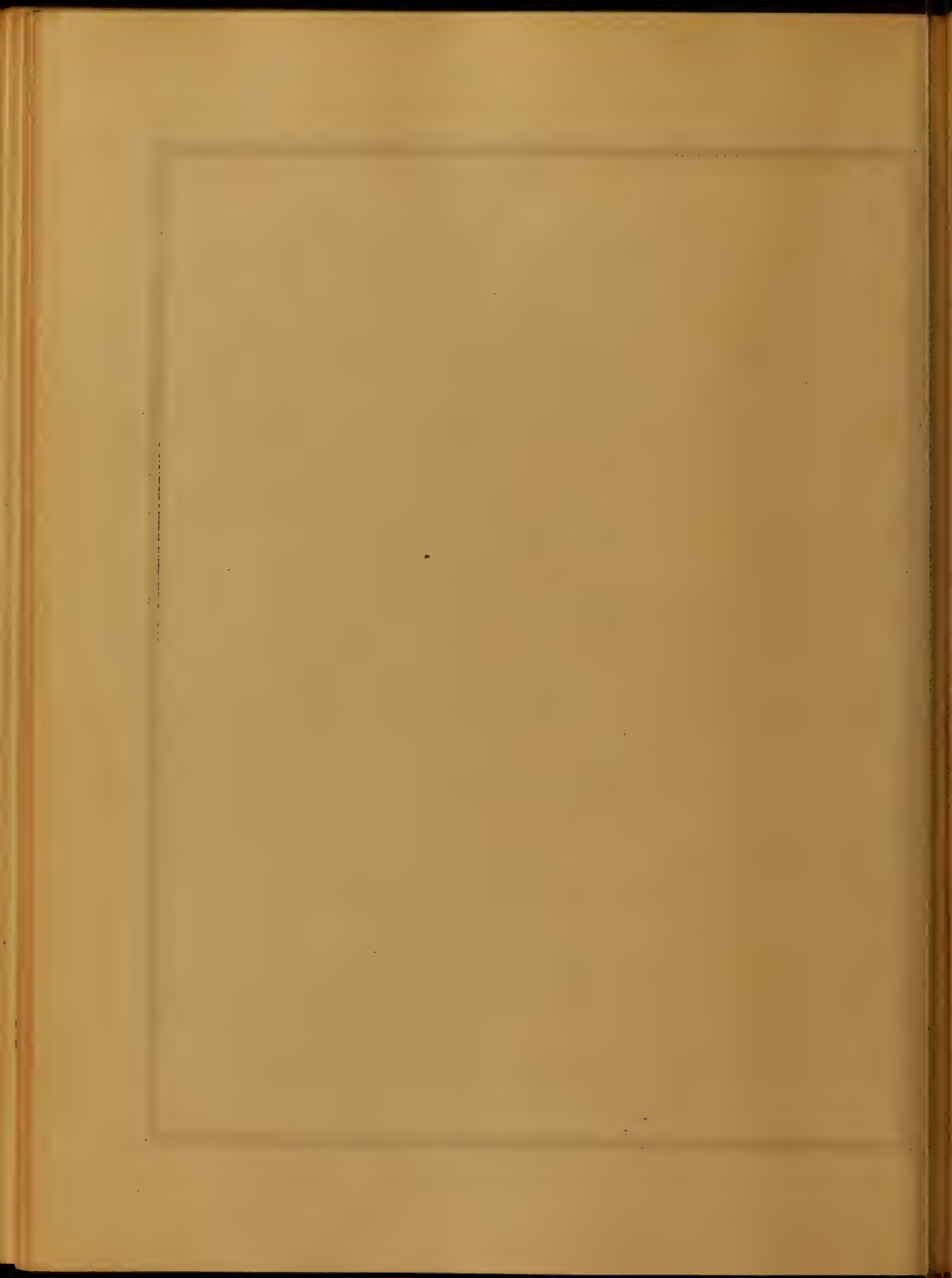
tion of reflex action, he injected blood by the opening made in the carotid. Life returned and with it the reflex faculty. This experiment proves positively that the reflex faculty is a vital property belonging to the spinal cord, and that its source is in the nutrition which maintains the organization of that nervous centre.

Admitting that increase of nutrition produces increase of nerve power, we can better understand the effects of climate and temperament in acting as predisposing causes of the disease. Titanus is well known to prevail to a greater extent in hot climates than in cold ones. To account for this we have but to consider the fact that in such climates the whole dermoid system is in a state of exthiasm; hence, through continuous sympathy, the spinal cord is similarly affected, producing afflux of blood, and consequent in



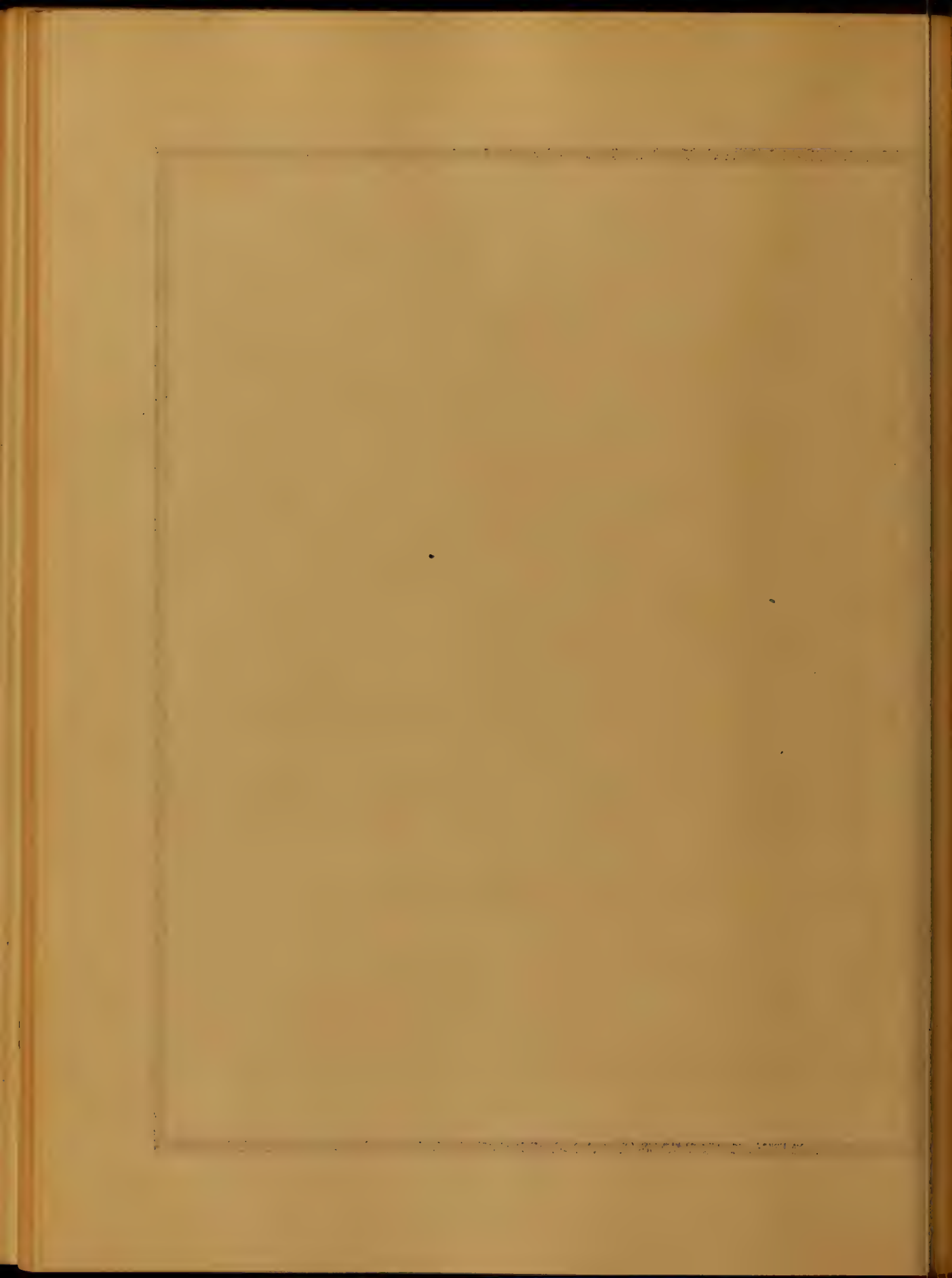
crease of sensibility and nerve power. This nervous centre being thus kept continually at nearly its maximum healthy standard of nutrition, must naturally, when it becomes the seat of still greater activity of circulation, through the irritant influence conveyed to it by the nerves implicated in a puncture, contusion, laceration or incision, or those exposed to sudden vicissitudes of temperatures, give evidence of morbid excitability by the exercise of preternatural reflex power.

That temperament exerts some influence upon the contraction of tetanus is a fact which comes to us substantiated by observation. Baron Linnæus observed, while with the army of the first Napoleon in Egypt; that the temperaments of the majority of those affected with the disease, were of the dry or irritable kind, as he termed it. We therefore conclude



that persons of a nervous temperament are particularly predisposed to attacks of tetanus, because in them the cerebro-spinal system is in excess, or peculiarly excitable. Hence, causes of most trivial character, may produce the disease, even in cold climates & without the aid of a high temperature, by increasing the already great excitability of the spinal cord.

Cases of idiopathic tetanus may be explained upon the principle, that where there is a high state of nutrition of the spinal cord produced by the influence of climate or temperament, causes of so slight character as not to attract notice, may produce the disease by augmenting the already high stimulation of this nervous centre. The fact that division of the nerves leading from the wounded part in traumatic tetanus frequently fails to check the disease



30
may be accounted for, by remembering that the violent pain accompanying the involuntary muscular contractions, may afford the requisite irritant influence to the spinal column.

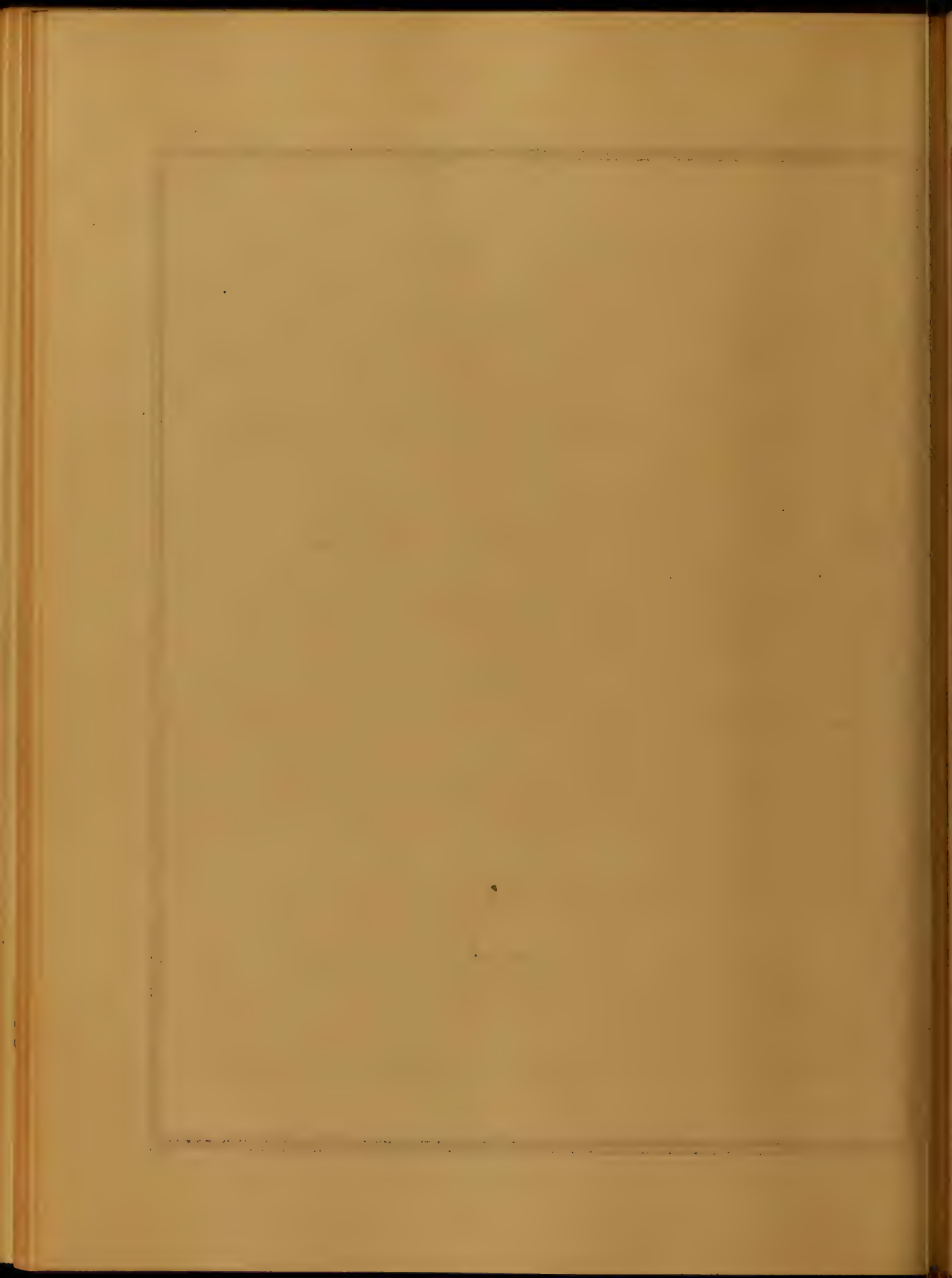
Treatment of Tetanus ~~~

The treatment of tetanus is both local and constitutional in character.

The local treatment has for its object the removal of the irritation that has induced the tetanic condition. Although it is true that when tetanic excitement has been set up in the cord, it has a tendency to continue after the ablation of the primary irritation; yet it is only reasonable to suppose that other treatment will best succeed if local irritation be removed, as otherwise the general remedies will have not only to combat already existing disease



but also to overcome the continuous excitement maintained by the local disturbance. If the case be seen in the very onset, the nervous communication of the wounded part with the spinal cord, should be broken by dividing the mediate nerve or nerves near the wound. Amputation of the wounded extremity has been frequently resorted to, but is not generally advocated, unless the injury has been severe, and the part has passed into a state in which whether from sloughing or otherwise, its recovery is doubtful. If no special nerve appears to have been injured, Liston recommends a \wedge shaped incision above the part, down to the bone, so as to insulate it completely. The injured part should have poultices applied to it, having Sol. Morphia Sulph.; Chloroform; or some narcotic Ext. incorporated with them; and the limb above wrapped with lint soaked



in laudanum or chloroform.

The constitutional treatment is directed to the arrest of spasm, and to the support of the patient's strength. To attain the first object, the application of ice to the spine, is to our mind, the most efficient remedy. The hyperamic condition of the cord evidently calls for this procedure. One of the first phenomena produced by the action of cold, is (according to M. Pouchet, of Lyons, who communicated a long series of experiments upon the congelation of animals, to the French Academy of Sciences) the constriction of the capillary vessels. If sufficiently long continued, so great is the contraction, that no globule of blood can gain admission, so that these vessels remain entirely empty, whence the pailor of frozen parts. The use of ice in this disease is recommended by Dr Todd, as well as Mr. Erichsen, who direct that an ox's

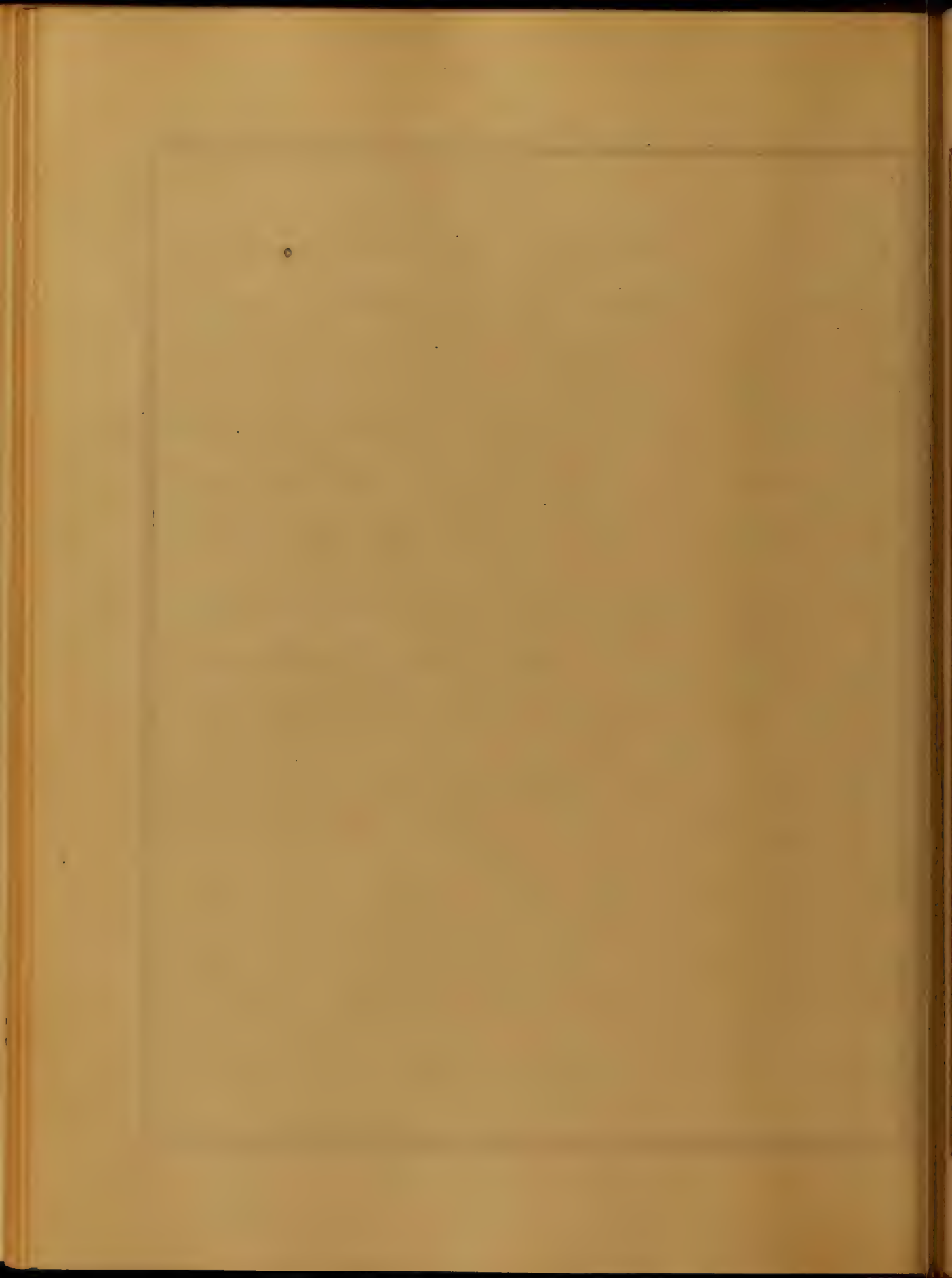


gut or gullet be filled with ice and applied to the whole length of the spine. Being in their estimation a powerful depressing agent, they caution against the longer use of it than six, eight or ten hours, the condition of the patient being looked to in the meanwhile. Dr B. D. Carpenter, of Cutchogue, Suffolk Co., Long Island, reports two cases of severe traumatic tetanus, which recovered under the use of ice applied to the head, and along the whole length of the spine. The application was repeated at intervals varying from 2 to 8 hours, and continued from ten to thirty minutes each time. The results derived from the application of ice in these cases, must be admitted to confirm the view we have expressed upon the condition of the spinal system in tetanus, as by such measures, the quantity of blood circulating in the cord, is evidently reduced, and depression of

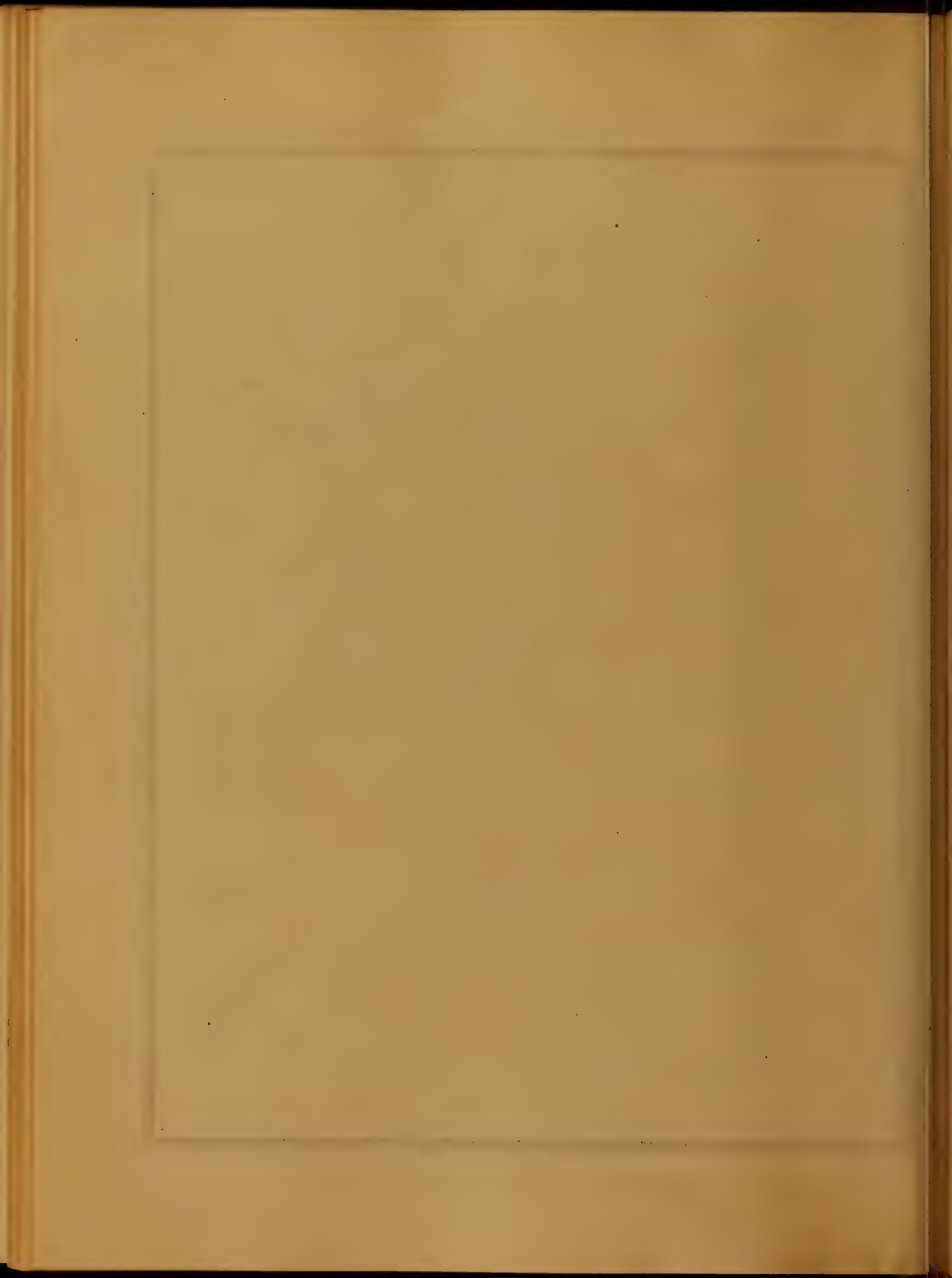


function issues to the relief of the spasms. The bowels should at once be attended to by the practitioner, and active doses of Calomel with Jalap or Scammony, Senna and Sulphate of Magnesia; or other brisk cathartics be given. If deglutition is difficult, a drop of Croton oil placed on the posterior part of the tongue, will fulfil the indication. To diminish the susceptibility of the nervous centres, recourse may be had to the narcotics or cerebral stimulants. Of these, Opium or some of its active principles, come first. Cannabis Indica, Belladonna, Stramonium, Nuxomara, Hemlock, or Aconite may sometimes be employed with considerable advantage.

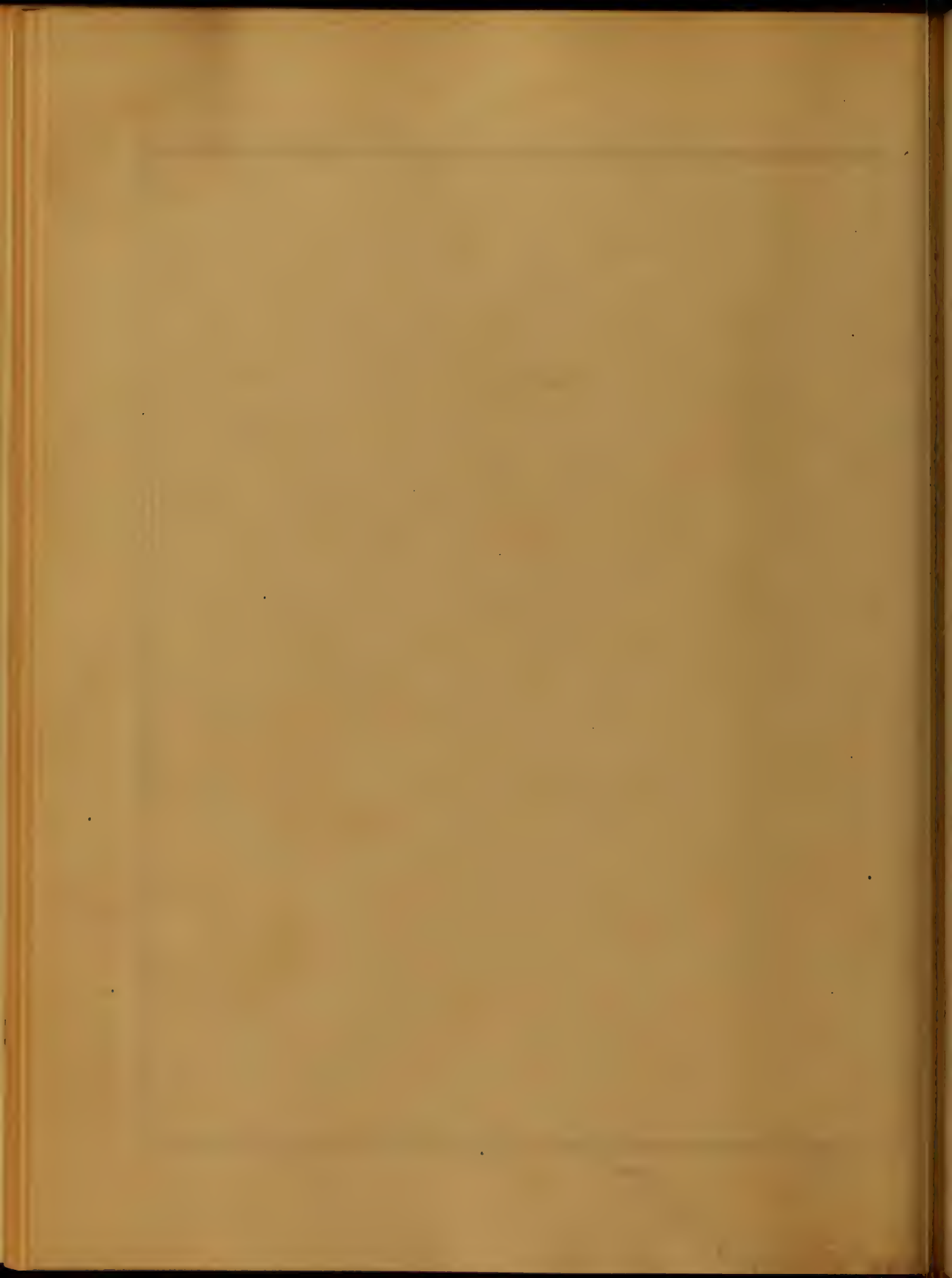
To support the strength is an important indication. The disease being one of exhaustion from the intense suffering and violent muscular contraction, the system speed-



ily fails, if not plentifully supplied with nourishment and tonics. Wine, beeftea, milk, animal broths, eggs, and similar articles of concentrated fluid nutriment should be given if possible by the mouth. Should the jaws be found too firmly fixed, nutritious enemata may be available. Experience has shown Sulphate of Quinia to be apparently efficacious, when exhibited not merely as a tonic, but with a view to its peculiar influence on the system in heroic doses. Oil of Turpentine in the dose of a fluid-dram every 2 hours, until it evinces some effect or the patient recovers, has had no little reputation in the treatment of tetanus. Dr Elliotson has spoken highly of the preparations of iron in this disease, and especially the sub-Carbonate. The latter has been given in enormous doses. In one instance it was given to the



extent of half an ounce every 2 or 3 hours, and even of a pound daily. In the more acute cases all remedies seem to fail, the patient being speedily destroyed by the disease ~~~



An
Inaugural Dissertation
on

Gun-Shot Wounds

submitted to the examination
of the

Provost, Regents & Faculty of Physics

for the
Degree of Doctor of Medicine

by
Edw^d H. Dunn.
of Md.

Session of 1868-69.

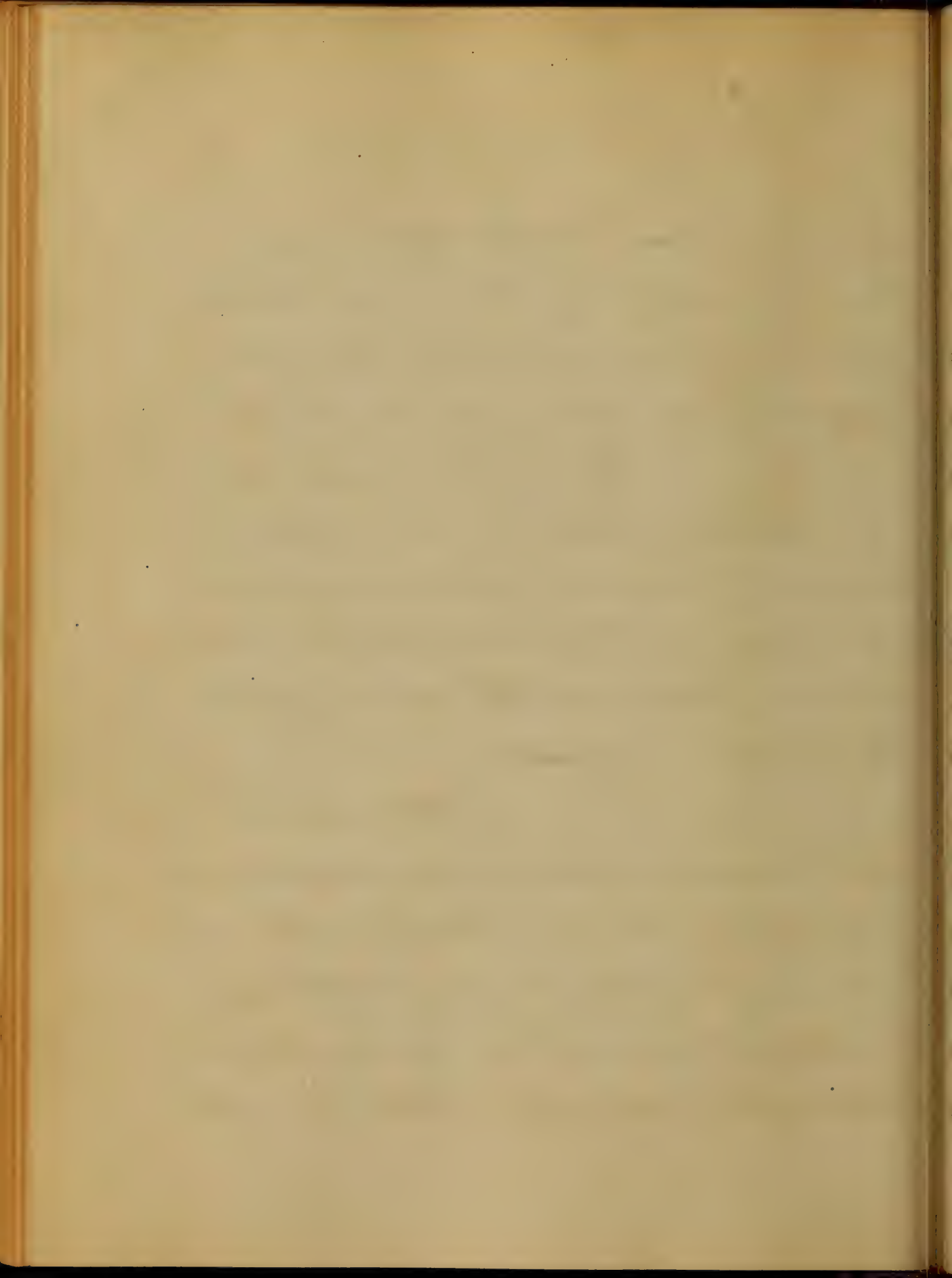
[Faint, illegible handwriting, possibly bleed-through from the reverse side of the page.]

Gun Shot Wounds

In accordance with the requirements of your honorable body I hereby respectfully present a brief dissertation upon the subject indicated by the above heading

Gun shot wounds include all accidents and injuries occurring from an explosion of gunpowder, and all of course, as various as the missiles propelled by the explosive force and the regions wherein the injury is inflicted.

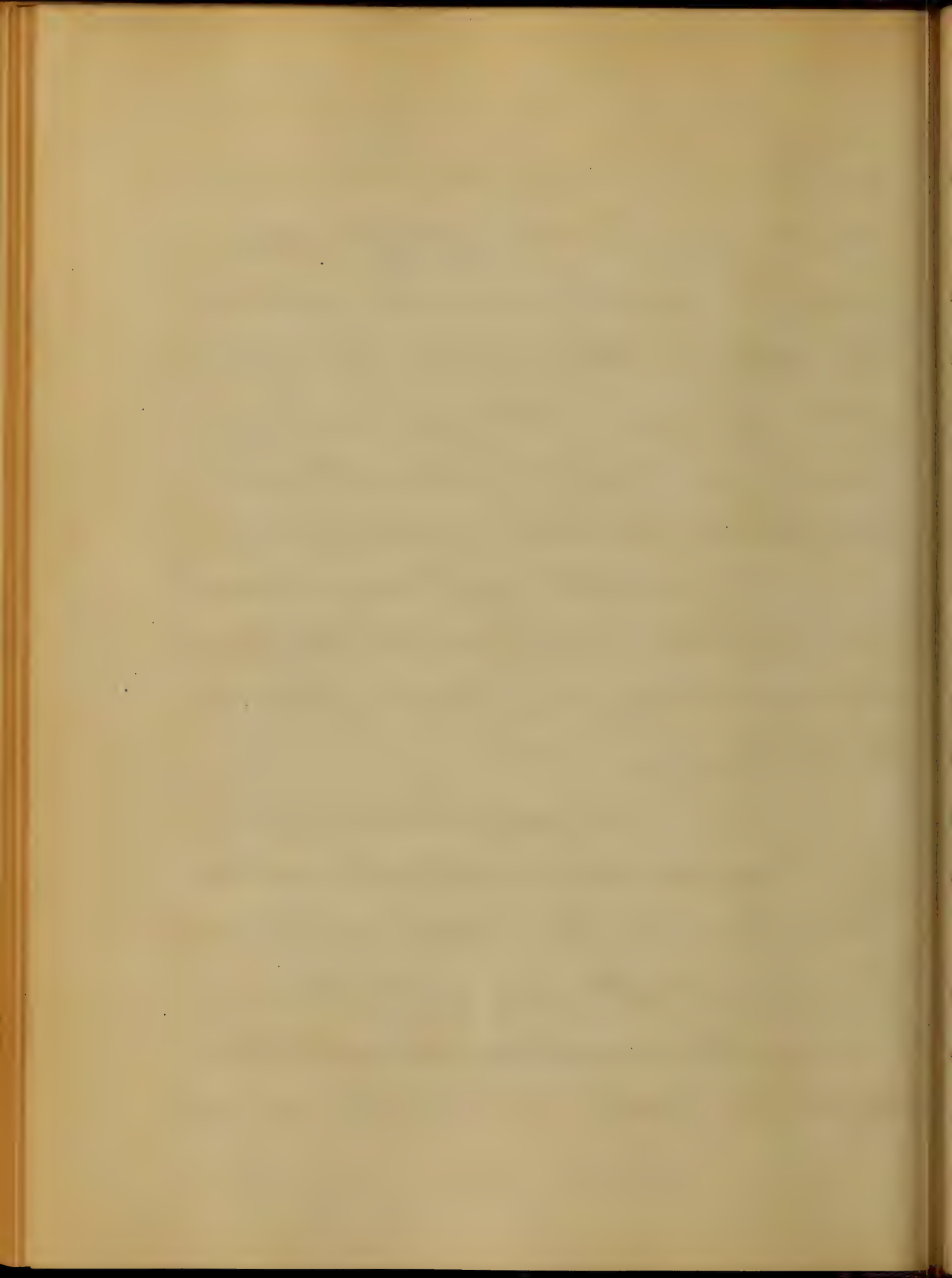
In this article I shall endeavor to confine my subject mainly to injuries sustained in actual warfare and shall aim to follow the rules of "military surgery" in contradistinction to that of "civil practice"; the treatment being to some extent different



and the prognosis very far different in the two situations; a limb instantly condemned on the field, would be saved in civil practice where the patient could be surrounded by all the comforts and attention of home life, and ready access to all the modern appliances and apparatus for treatment of such injuries.

No portion of the body is exempt from gun shot wounds; hard and soft tissues, bone and muscle, viscera and nerves are all liable to injury.

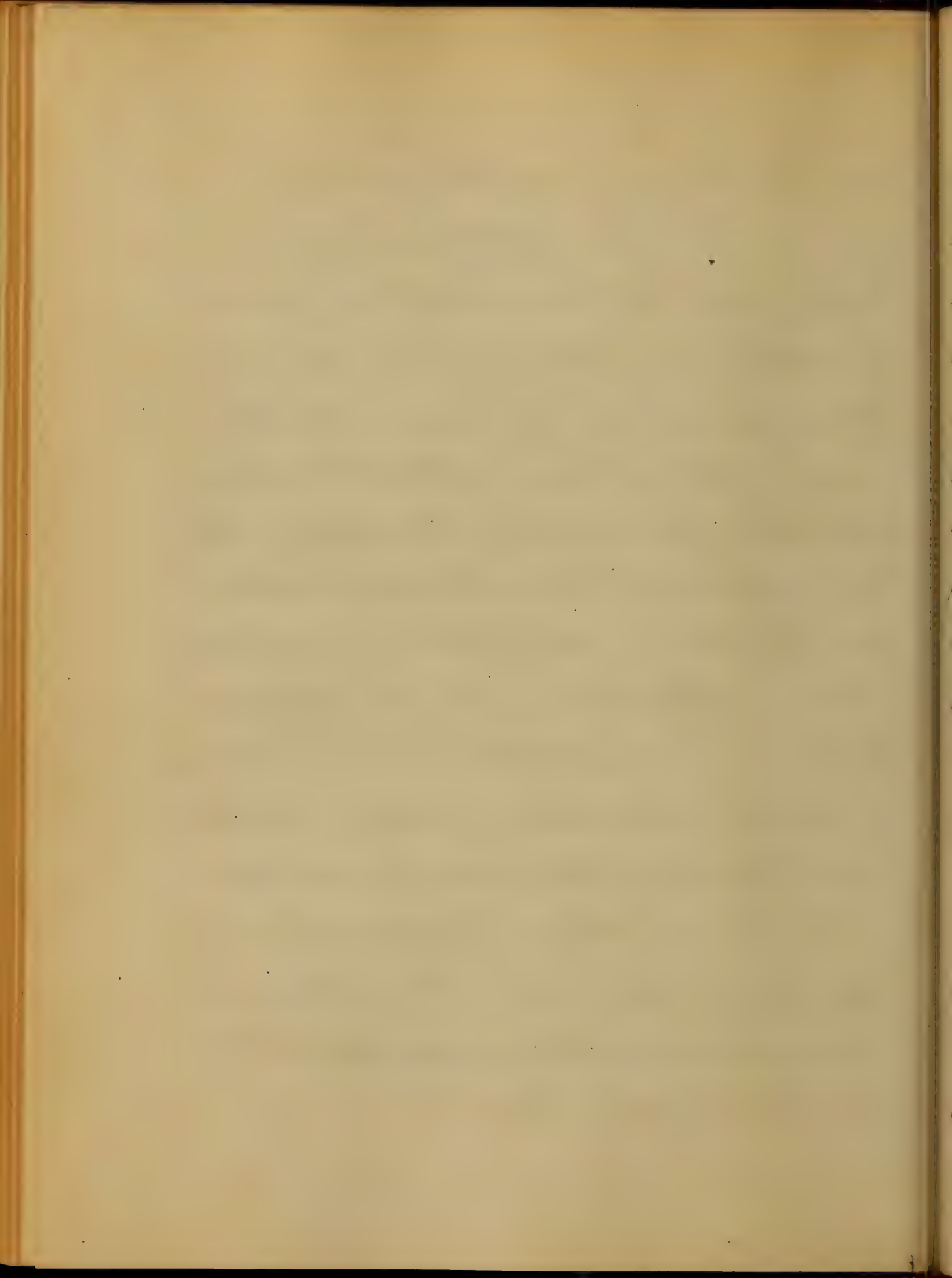
A comparatively trifling injury may result in death, while an extensive, and horrible looking, wound may pass favorably through all the stages to recovery; the smallest missile may inflict terrible and lasting injury, while a common ball



63
may cause only a slight contusion

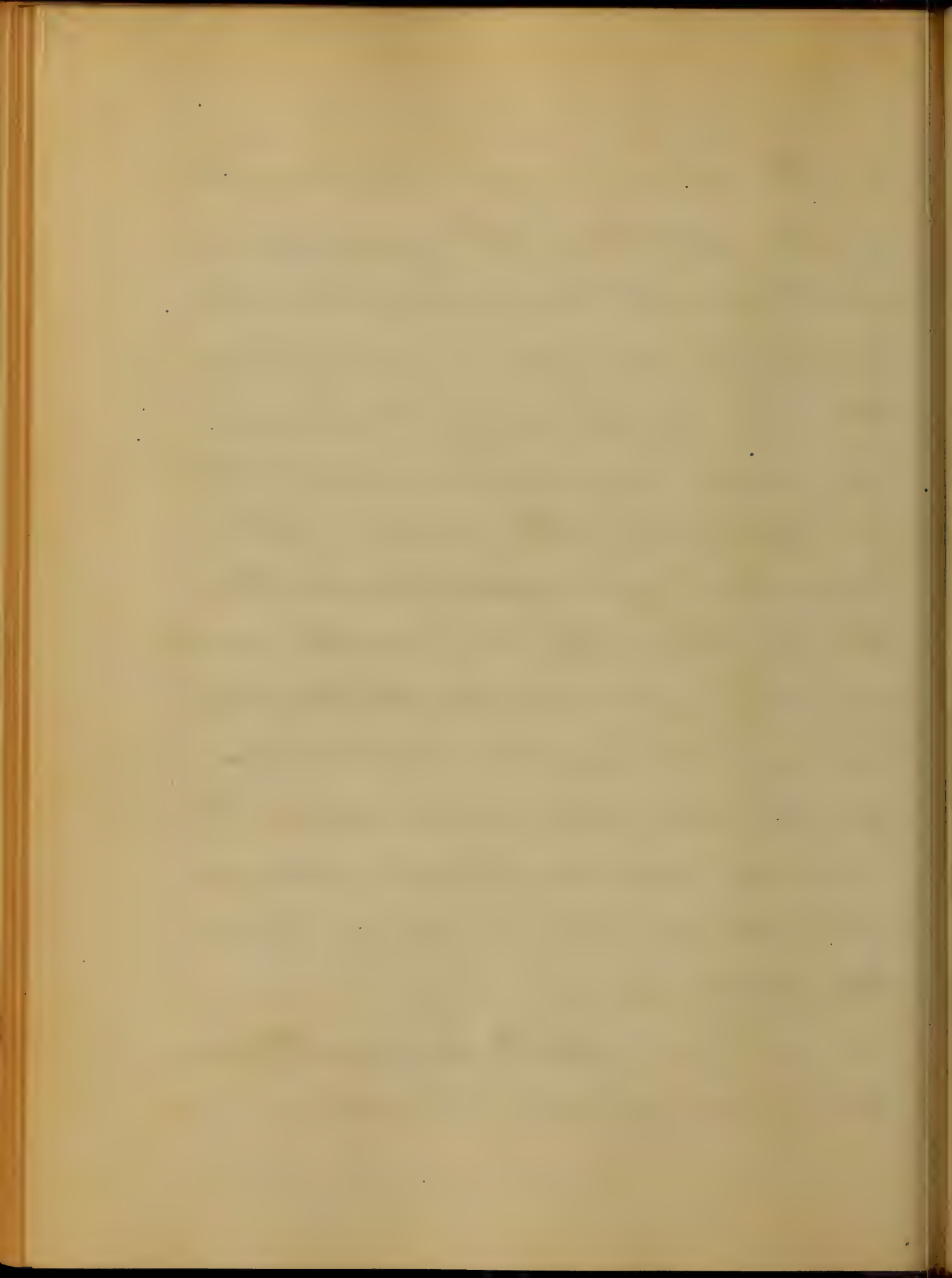
Gun shot wounds come strictly under the head of contused and lacerated wounds, they are nearly always attended by sloughing and profuse suppuration owing to the extensive destruction of tissue immediately surrounding the track of the ball: in former times this profuse suppuration was thought to be due to the poisonous character of the wound, this theory is however exploded, the tissues are lacerated, torn and bruised, and the sloughing is the result of nature's effort to rid herself of these, now, foreign bodies.

These wounds are, as a rule, dry wounds, except where a large vessel is torn across or the lungs perforated, then we have haemorrhage



The degree is due to the lacerated condition of the tissues, the mechanical injury, and the heat of the ball; it is very well known that torn and lacerated vessels bleed less than when cleanly incised; The heat of the ball is due, in my opinion, in part to the heat engendered by the ignition of the gunpowder, by its rapid passage through the air, but mostly to its sudden arrest upon coming in contact with the parts injured; wounds from spent balls slough less, to a marked degree. These wounds received at short range where the missile is rapidly propelled through the air.

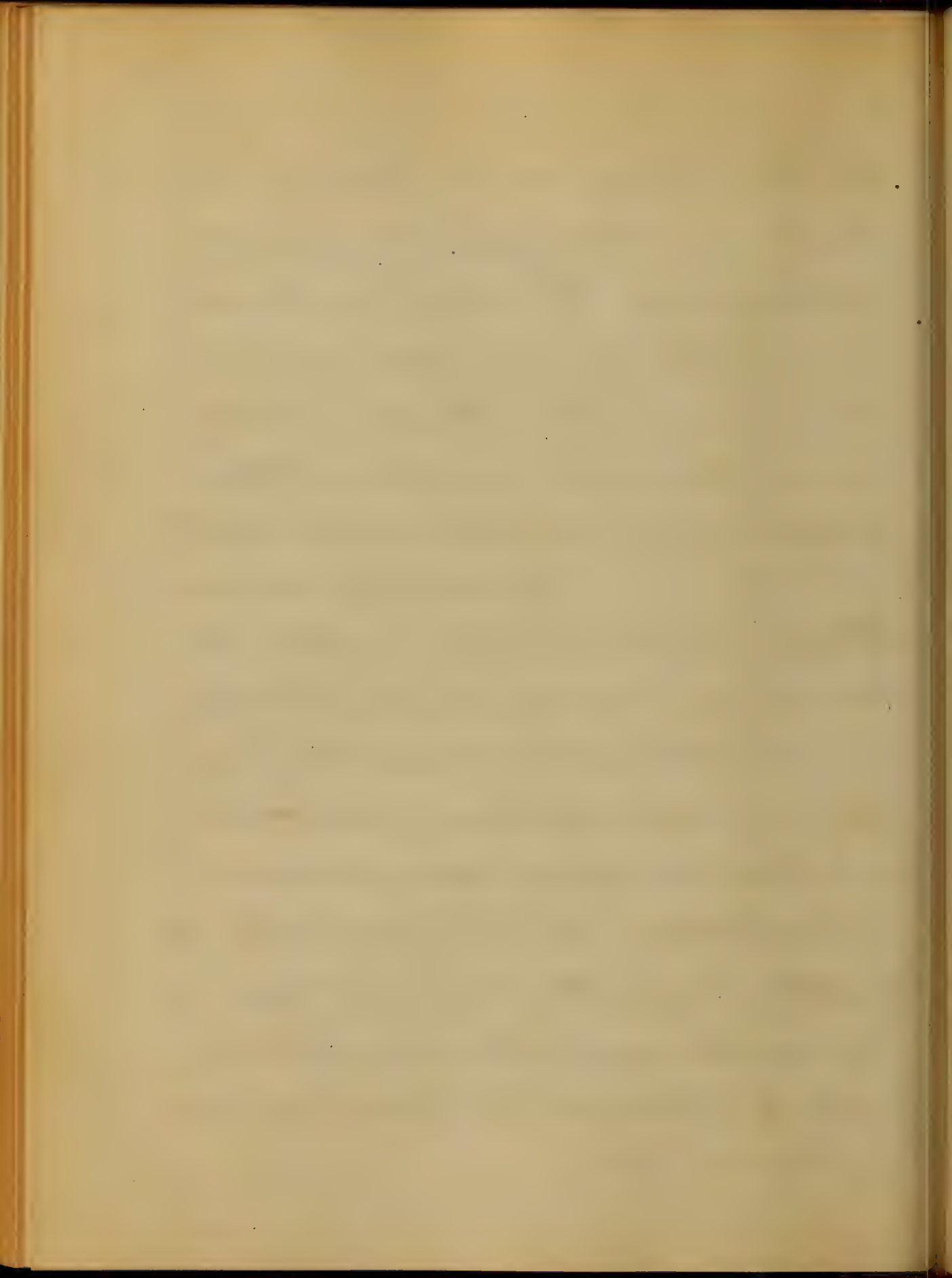
At short range the modern ball makes the opening of entrance and



that of Exit nearly opposite, ploughing through
all opposing substances in its course, but
at long range this rarely if ever the case.

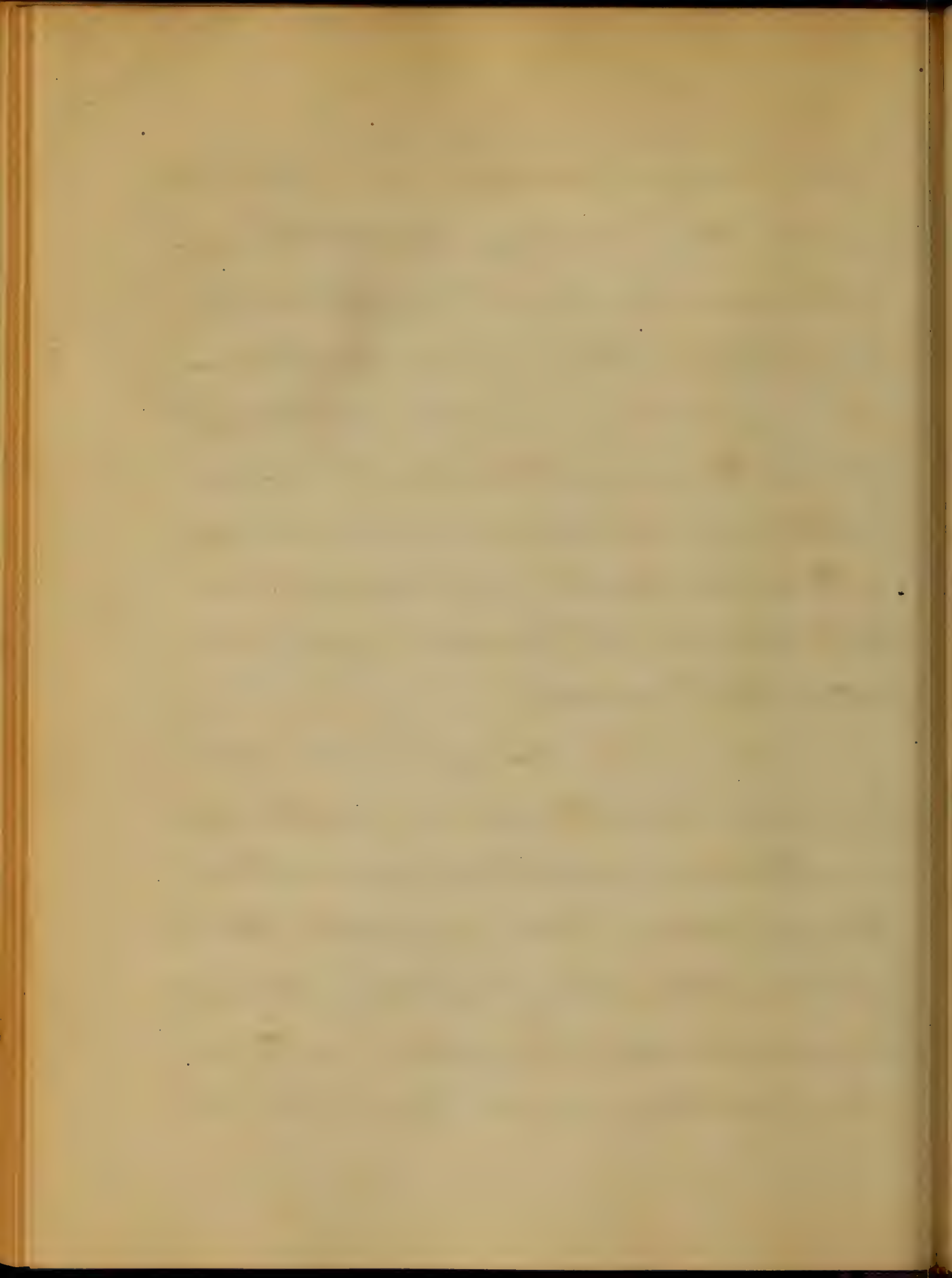
The course of the modern comical
ball is very erratic, a tendon or bone
or even a vessel will change the
direction of a ball, if it be near spent.

A ball in its course
through a limb, on coming in contact with
the edge of a bone, may divide into one
or more portions, and each portion may
cause a separate orifice of Exit; again,
balls have been tracked between vessels in
intimate relation without injuring either, ap-
parently not doing them harm, but secondary
inflammation may in these cases cause
occlusion of the vessels or ploughing that will result
in haemorrhage.

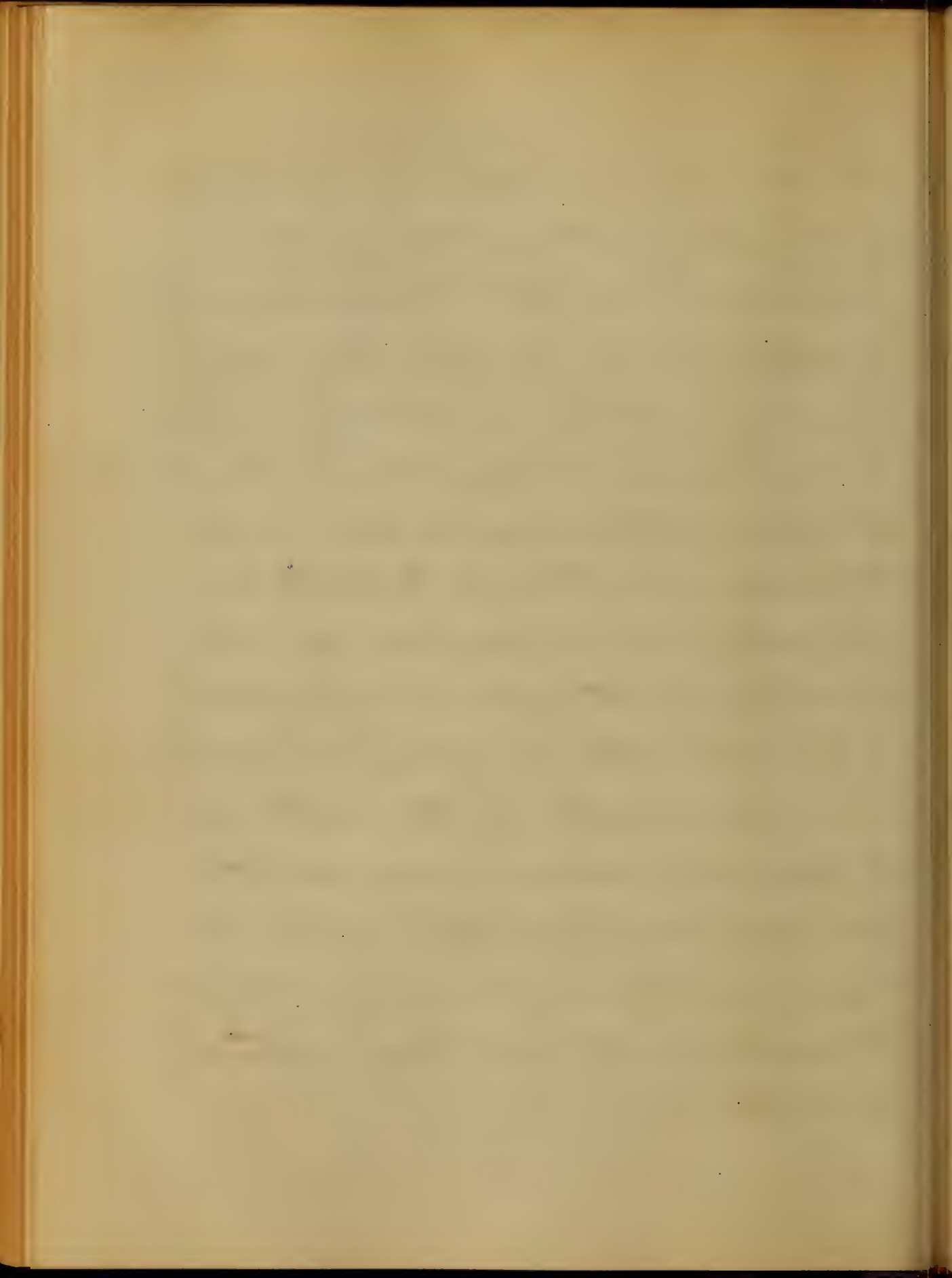


It is always important in gun shot wounds to study them carefully, to note the course of the ball, to ascertain if possible the position the person was in when shot, and the immediate result the reception of the injury had upon his nervous system, as upon a correct knowledge of these few facts will depend, in a great measure, the prognosis, and to some extent the treatment.

As a general rule the orifice of entrance and of exit can be determined at the first examination, that of entrance will be inverted, that of exit everted, that of entrance will be of a smaller diameter; the orifice of entrance will be stamped or punched out, while

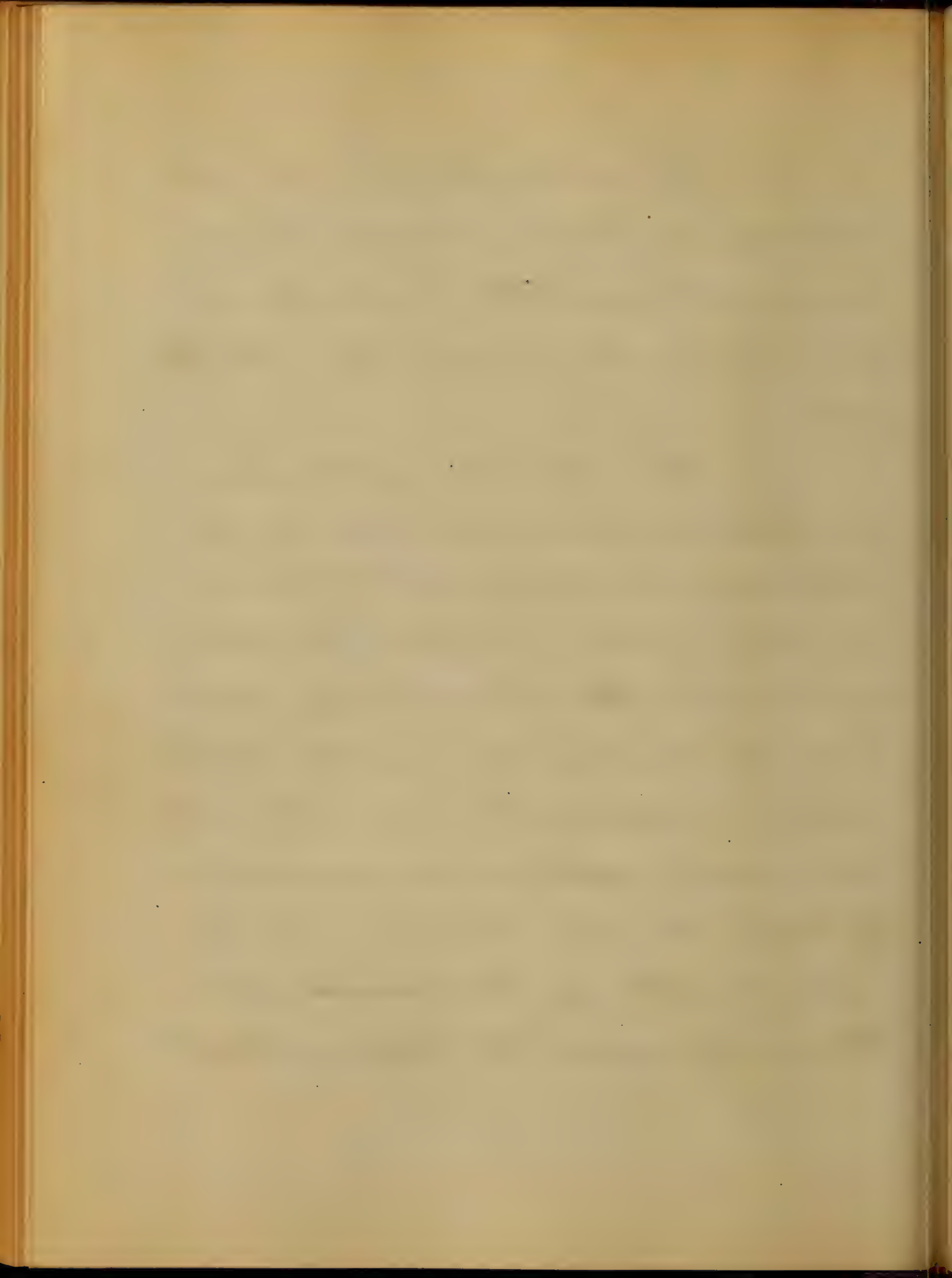


The edges of the wound at orifice of Exit will be torn and everted; entrance will be continued, exit lacerated. There are frequent exceptions however to the foregoing, the ball may divide after having entered and only half, or less, of it pass out, a portion of the mans clothing may be driven into the wound with the ball, the cloth may slip aside and the ball pass on out, in which case the exit will be of smaller diameter than that of entrance, a rule laid down by some authors is, that on introducing the finger into a wound, soon after it has been received, the direction of the torn fragments, splinters of bone, etc, will indicate the direction of the ball from entrance to exit.



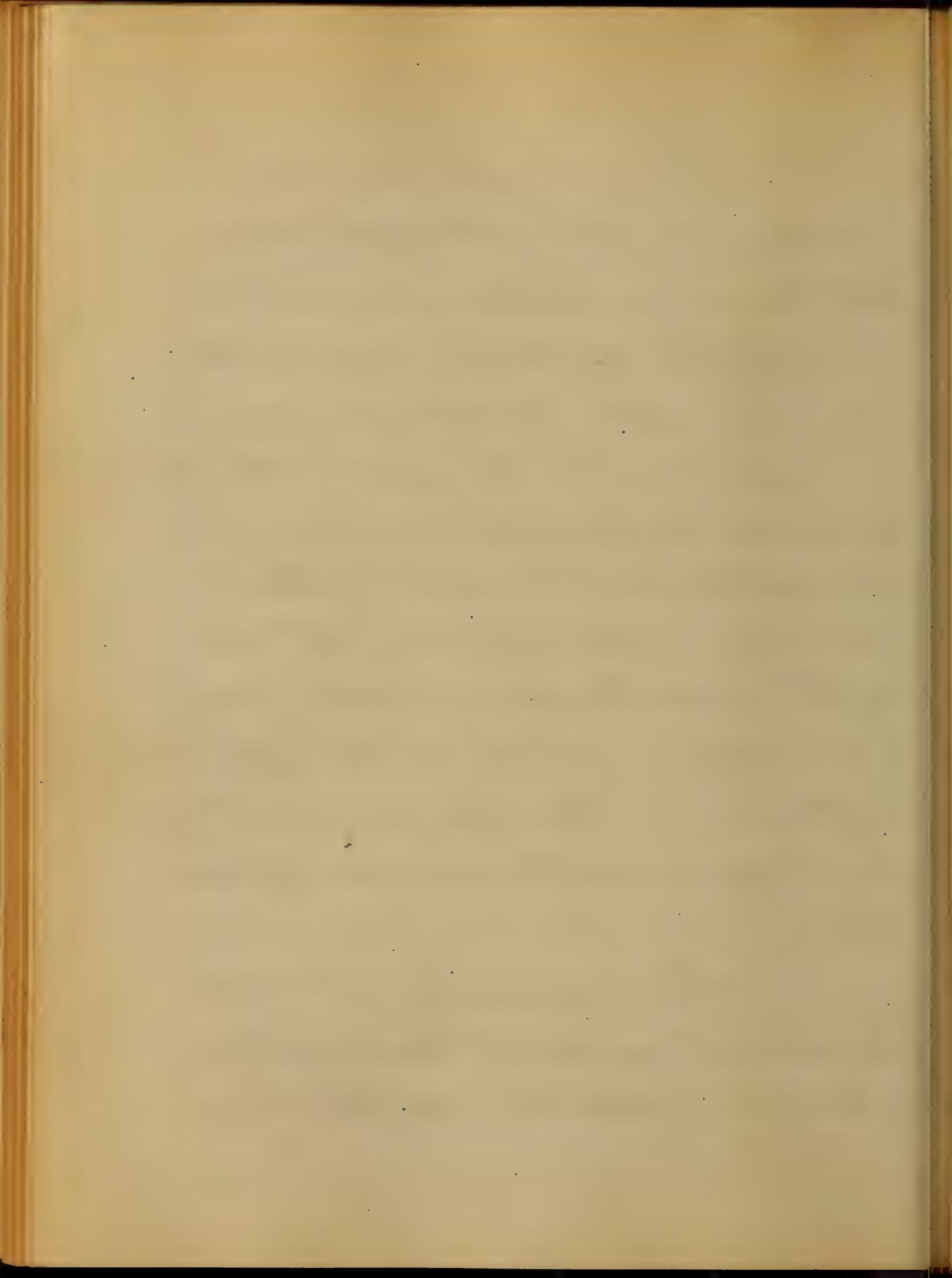
After suppuration has commenced the points of entrance and exit can be easily determined, that of entrance will always slough to a greater extent than that of exit.

From the nature of the injury gun shot wounds necessarily slough in the process of healing; if the wound is caused by a ball at short range, sloughing will be greater than when caused by a spent ball; the sloughing will be greatest at the orifice of entrance, it will continue until all irritating substance are removed from the track of the ball; sloughing will begin about the sixth day, the sloughs will be thrown off about the tenth or twelfth



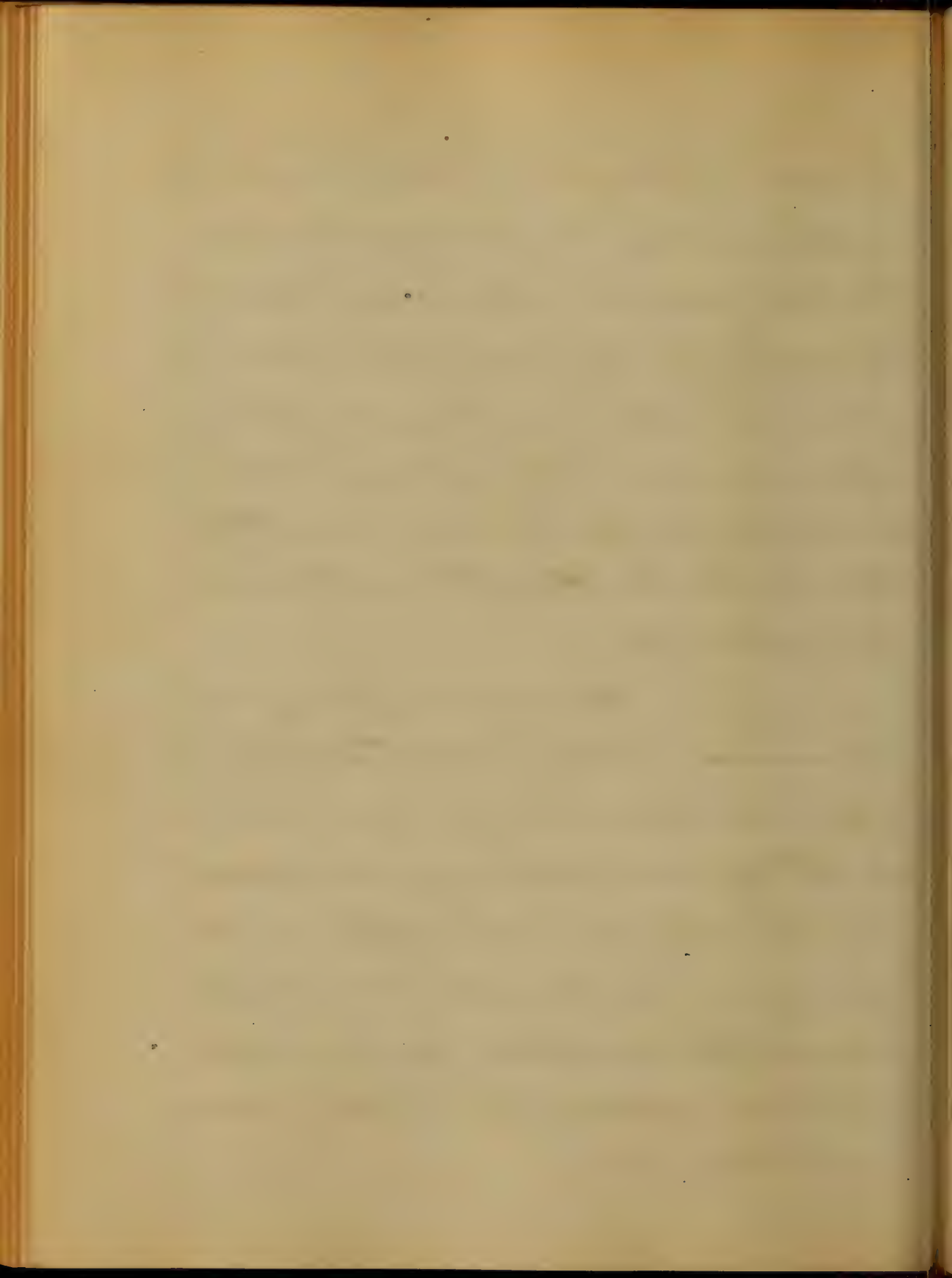
"In wounds of muscular parts inflammation usually occurs from twelve to twenty-four hours after the injury; a reddish serous fluid is discharged and the limb becomes stiff and nearly incapable of motion, from its causing an increase of pain; the inside of the wound as the process of separation proceeds, changes from a blackish-red color to a brownish yellow, moistened by a little good pus; after sloughing the suppuration begins, which is more or less profuse according to the injury sustained, granulations form, under favorable circumstances, and the wound closes by 'second intention'."

Where wounds are in the neighborhood of vessels, the sloughing will extend and involve them, clots that have

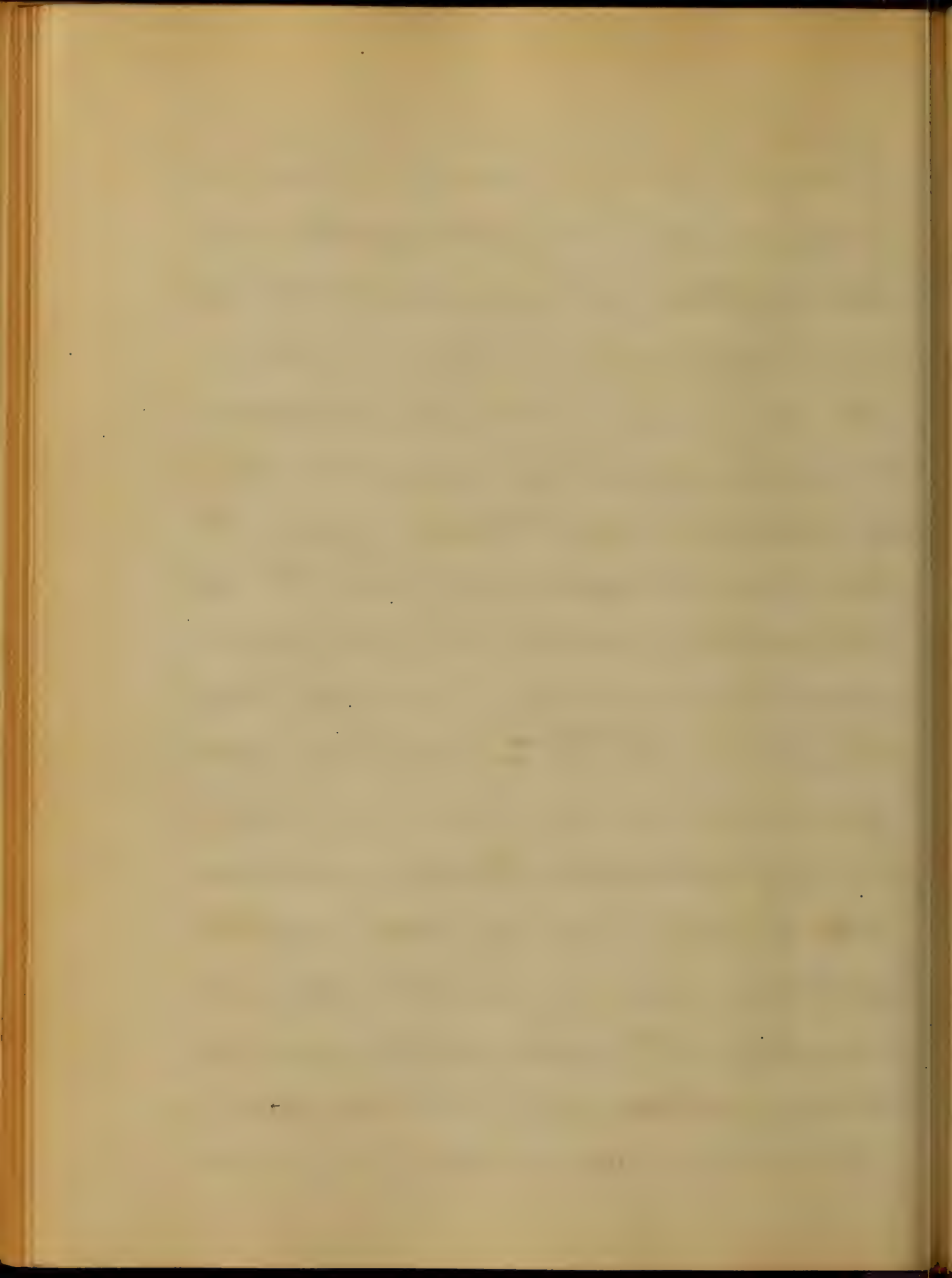


formed in the mouths of bleeding vessels may slough out, giving rise to secondary haemorrhage, this latter accident most usually happens to the distal orifice or mouth of the divided vessel, its nervous supply being cut off its "tonicity" is lowered and it does not possess the power to retain the clot that has formed, with that tenacity that the other portion of the vessel is endowed with.

Haemorrhage from gunshot wounds is fatal in about twenty per cent of the cases; primary haemorrhage is comparatively rare, secondary more frequent; in action where large and important vessels are wounded, as the aorta, the root of the lungs etc, the man falls and dies before assistance reaches him, death is almost instantaneous.



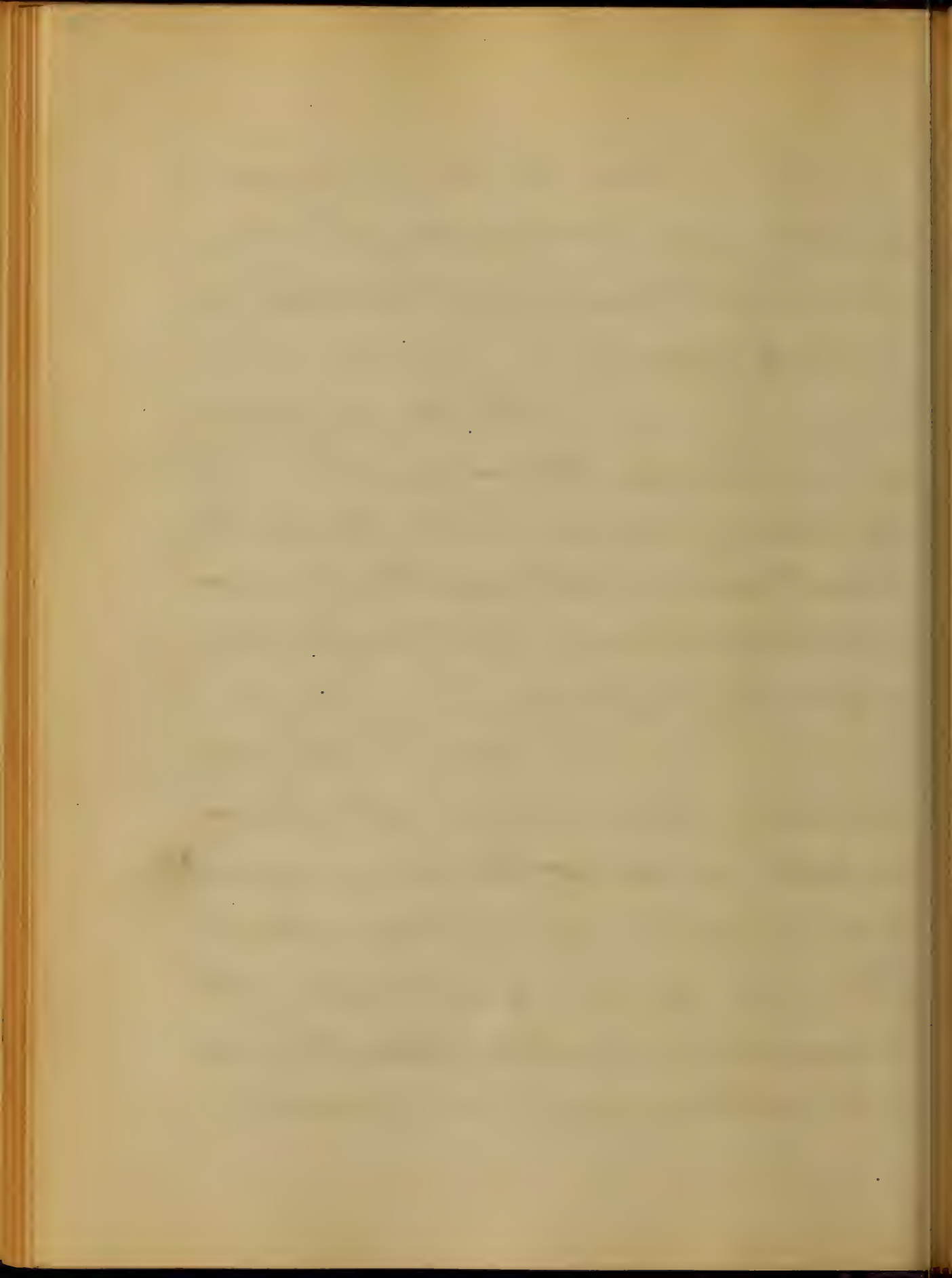
if smaller vessels or branches are wounded
 the bleeding ceases sometimes spontaneously
 after faintness has been induced, the heart
 action becomes feeble, blood is propelled
 with less force, a clot is formed, first on
 the outside of the bleeding orifice, then within
 the contracted and retracted coats of the
 vessel; in a majority of cases this clot
 will suffice to control the hemorrhage
 until the wound heals "secondary hemor-
 rhage, ^{of any importance} from small vessels does not
 often occur"; when limbs are shot or
 torn off, destructive bleeding will cease
 with faintness and syncope "nature's
 effort to save life", and if the sufferer can
 be reached in time, before reaction comes on
 with recurrent hemorrhage, he can probably be saved
 certainly saved from immediate death from hemorrhage.



Consecutive Pain is always present in gun shot wounds, primarily, pain is not very marked and may be entirely absent.

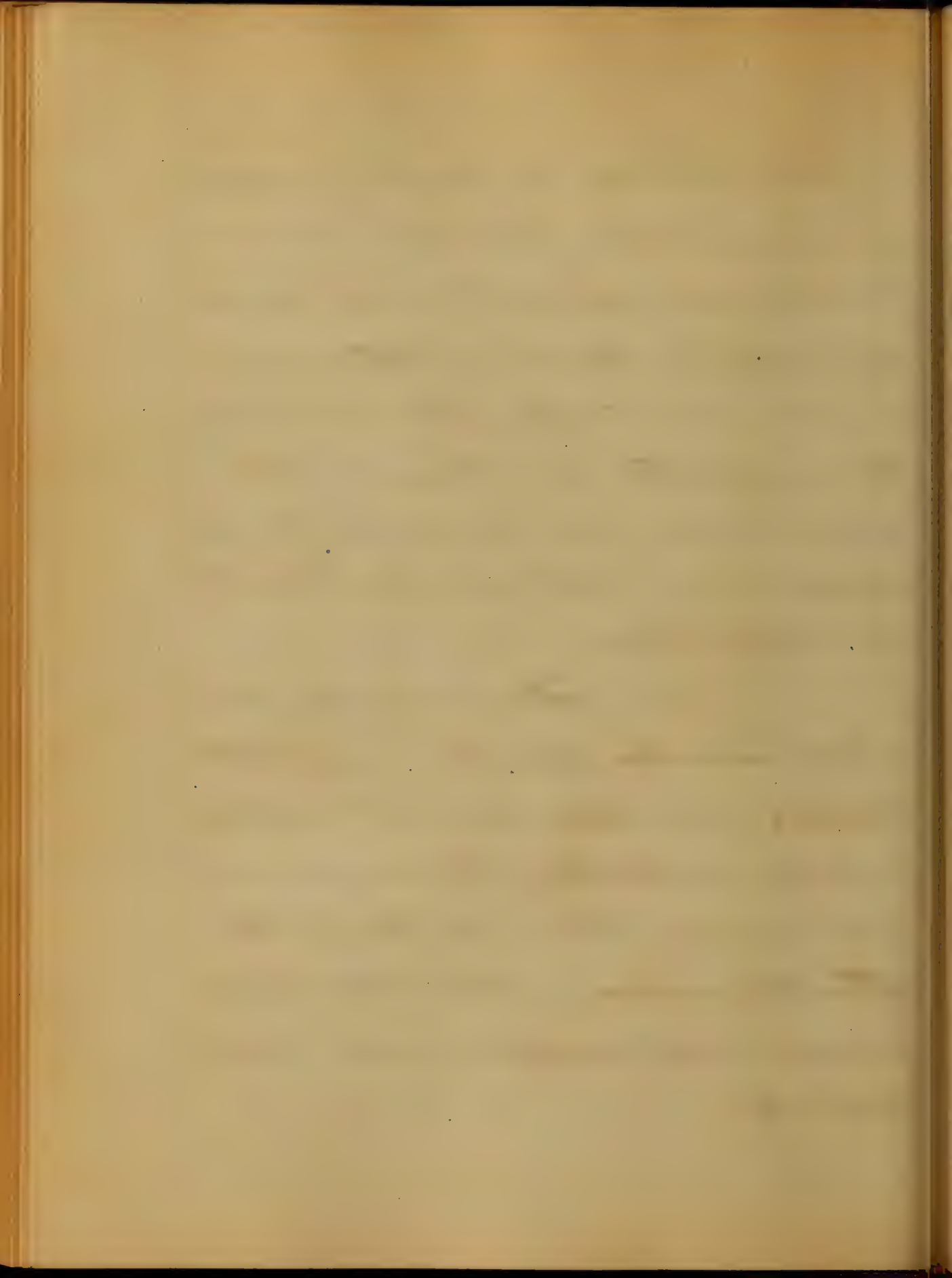
A certain constitutional alarm or shock follows every serious wound, the degree of shock is not of the greatest importance, but its persistency is, and when long continued is of the gravest import in forming prognosis.

Fever is almost always present, it is caused by the local irritation set up at the seat of injury, lasts five or six days until the suppurative process begins, a line of acute inflammation is defined, it is here that ulceration begins in ten or twelve days the line of demarcation



is fully established, the slough is ready to come away and suppuration commences, the discharge increases, the wound becomes less painful to the patient although more sensible when touched, the wound contracts the middle portion of the tract first closes, orifice of exit will heal first, the entrance wound will heal in from four to six or ten weeks.

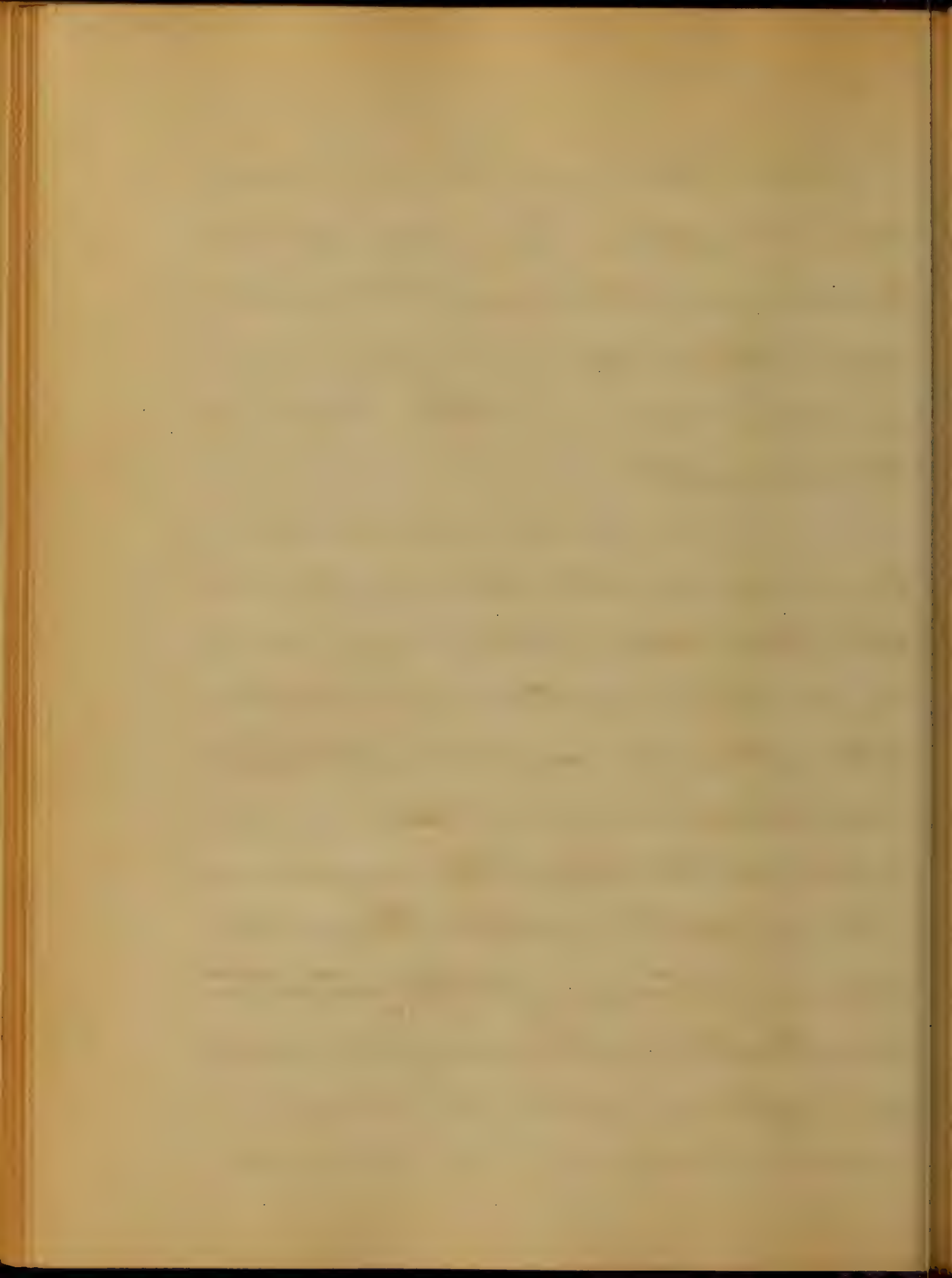
The gravity of a gunshot wound depends in a great degree, as a rule, upon its locality, wounds penetrating the cavity are more serious than wounds of the extremities, unless in the latter large vessels and principal nerves are severed.



The treatment indicated is, in general terms, to suppress hemorrhage, extract foreign bodies when present, if it can be done without too much injury to surrounding parts, and attend to the general state of the system.

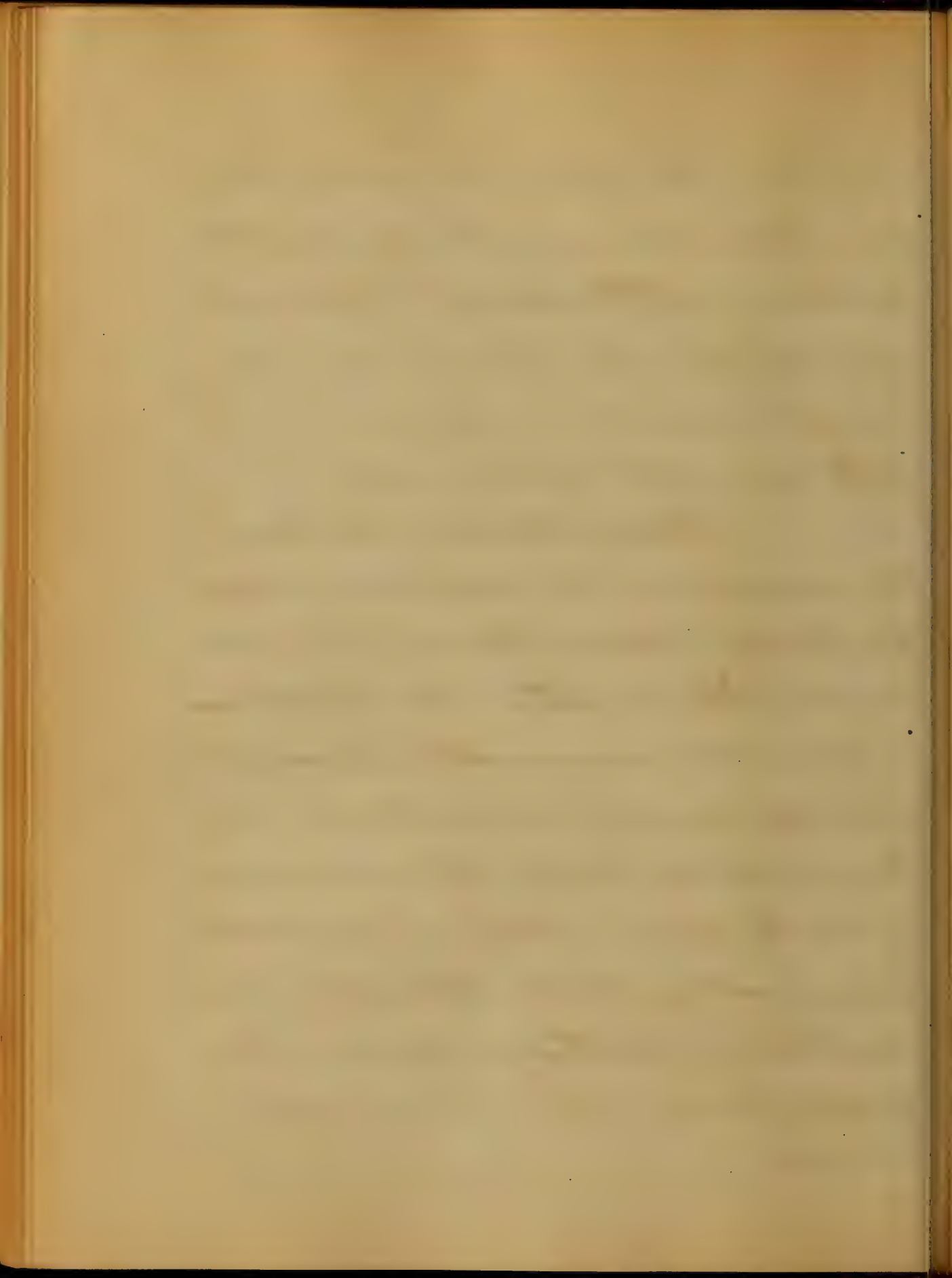
When called to a case of gun shot wound the first indication is to stop hemorrhage, if there be any, secure any vessel of size, that may be divided, either by torsion or cyatime, if it bleed; "no vessel is to be tied unless it bleed at the time the surgeon sees it;"

The infiltration of blood through the surrounding tissues, with the contraction and retraction of the coats of the vessels will suffice to control the bleeding in most instances, if it prove otherwise

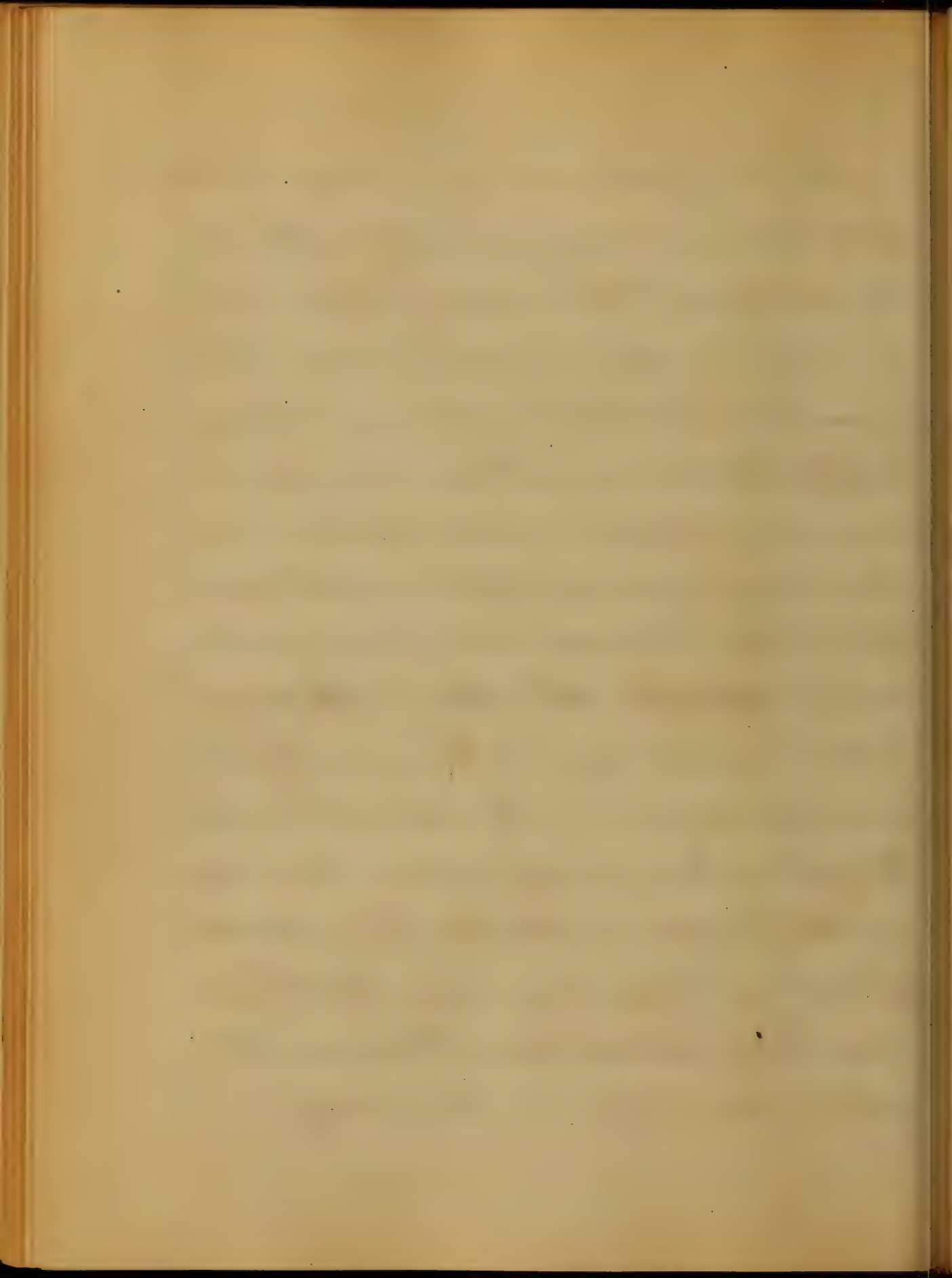


pressure in the track of the vessel, and by graduated compress in the wound, with the addition of styptics, must be first resorted to, if this does not control it open the wound, enlarging it if necessary, and tie both ends of the bleeding vessel.

After controlling the bleeding the wound is to be examined carefully for foreign bodies that are likely to be present, in this connection it is to be borne in mind that comminuted fragments of bone, pieces of divided tendon & tissue etc, are, to all intents and purposes, as much foreign bodies as are bullets, fragments of shell, splinters of wood, portions of clothing etc. etc; all foreign bodies are to be removed if possible;

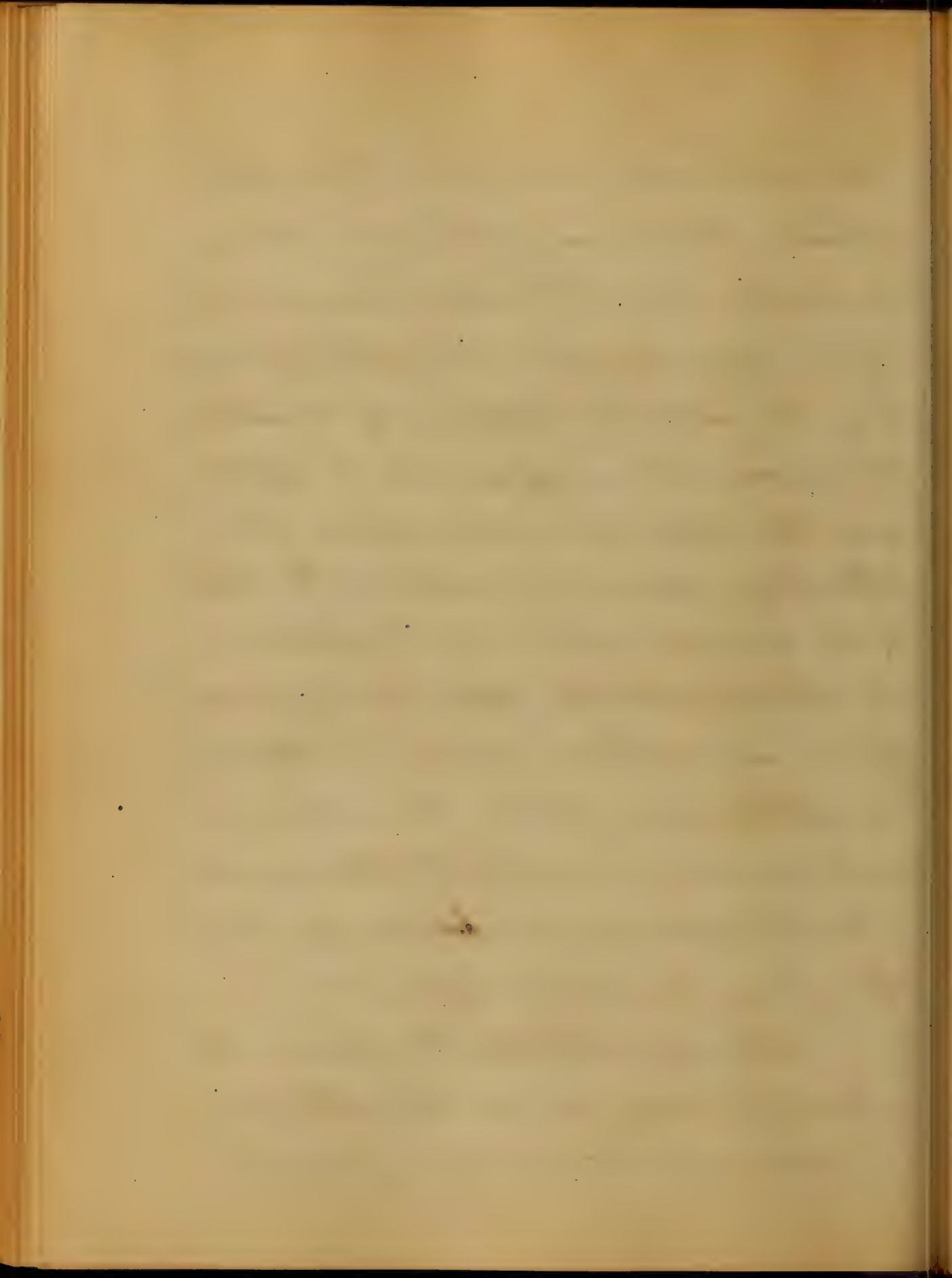


a single orifice does not always indicate that a foreign body is present, neither does the existence of two or more orifices of itself furnish us sufficient evidence that none is present; in the first instance a ball may penetrate the tissues, strike a bone and rebound, leaving the wound empty and clean, or, a piece of shirt, or cloth, may be carried forward into a wound without being perforated. When this is withdrawn by the wounded man or his comrade the ball may be drawn out without their noticing the fact; in the second instance, where there are two orifices, a ball may have divided against a sharp bone or a stout tendon one half driven on through the other remaining in the body.



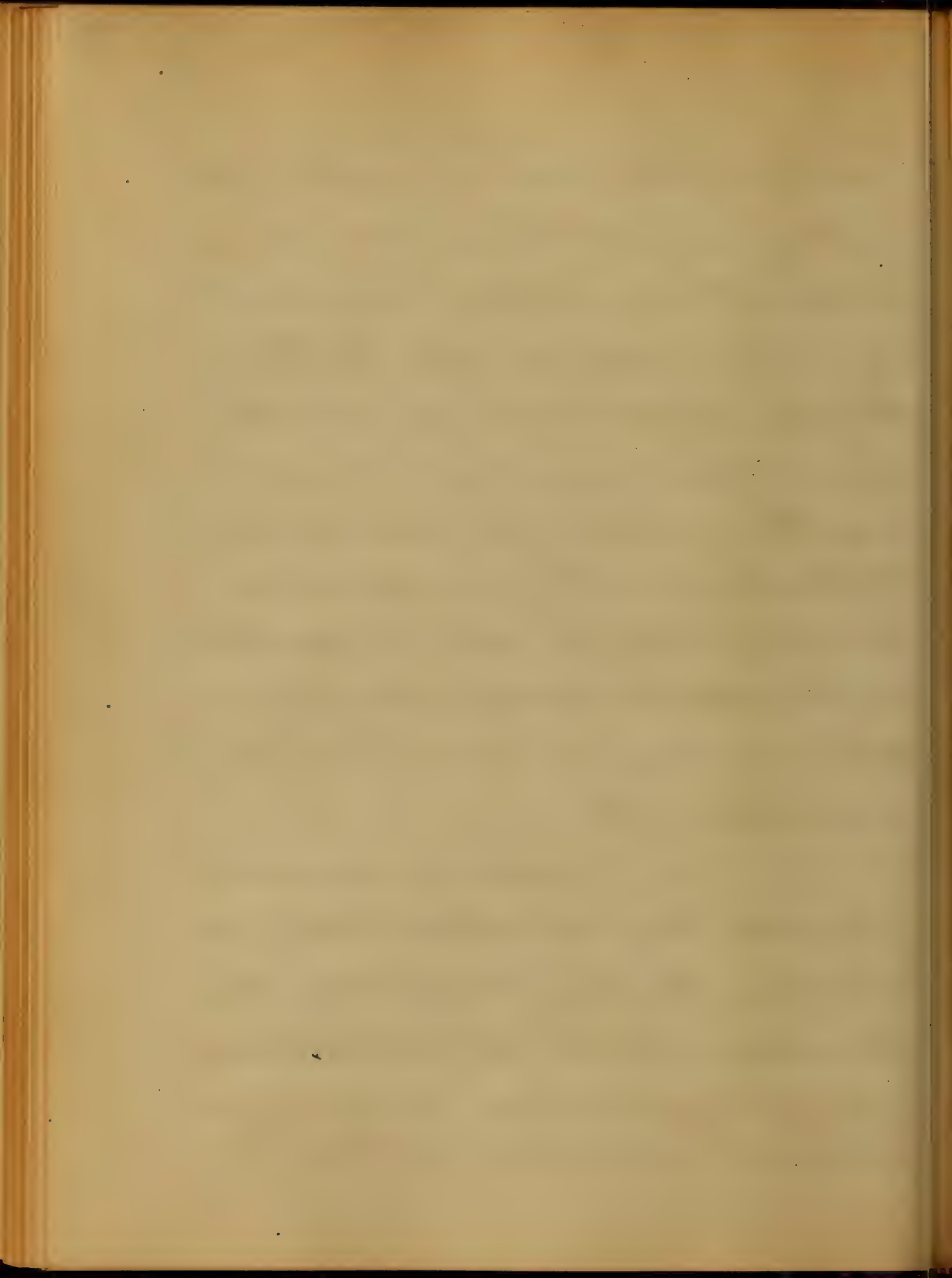
The best probe to be used in these applications is the finger, it should always be used where the orifice admits of it; in most localities the external orifice may be enlarged sufficiently to introduce the finger, where orifice admits of it use the index or middle finger, the little finger may be used if the depth of the wound admits of it exploring the whole extent; after passing one finger in its whole length another can be introduced at the other opening and passed in until the two approximate when the presence or absence of a foreign body can be determined.

Having detected the presence of a foreign body we are directed always to remove it, but we are never to

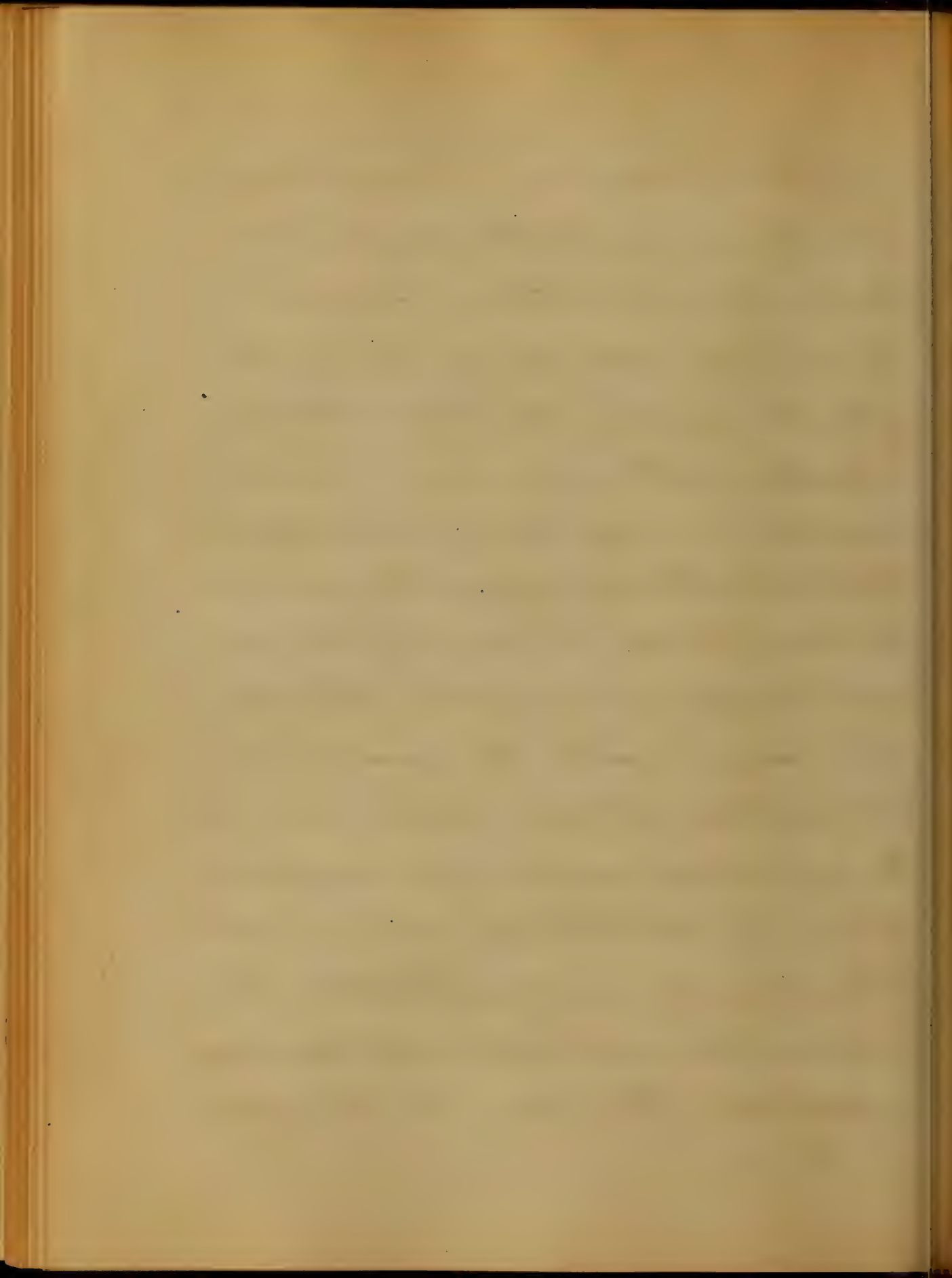


make exploratory incisions in search of balls
 or other foreign bodies, except in cases
 where continued irritation and constant
 drainage is kept up, thus threatening
 the life of the patient from exhaustion,
 even in these cases it is seldom to be
 resorted to; when the spot is indicated by
 the threatened pointing of an abscess or
 marked fluctuation with pain upon pressure
 over the supposed locality of the ball, an
 incision may be made if patient is
 much exhausted.

Unless a large vessel
 is involved there need be no hesitation about
 introducing the finger, the displacement of
 the outside clot, after fifteen or twenty minutes,
 will not bring on hemorrhage; "not one case in a
 hundred where primary hemorrhage has
 ceased will it spontaneously, again come on"

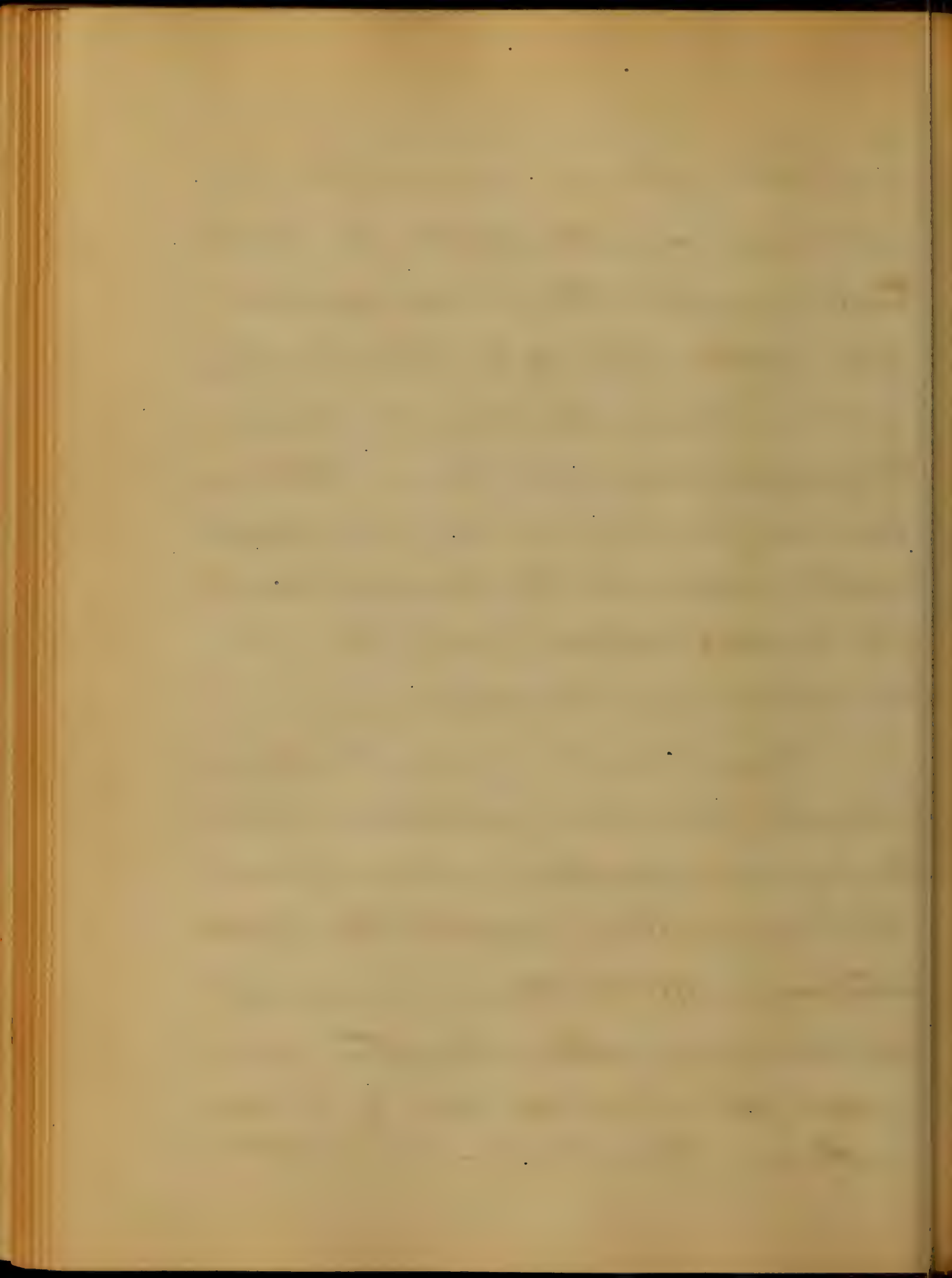


When "shock of injury" is marked, reaction must first be brought about, give the fresh air, cold water to drink, as thirst is almost always very great, often the assuring the patient that his wound is not a serious one will suffice to rally him, if the shock prove to be from extensive injury, stimulus must be given, brandy, whiskey etc with or without opium or morphia internally castor oil internally give ammonia to nostrils etc; after reaction comes on, the wound examined and carefully cleansed. The patient is to be put to bed, placed in as comfortable position as possible and cold water dressings applied to the wound, the dressings

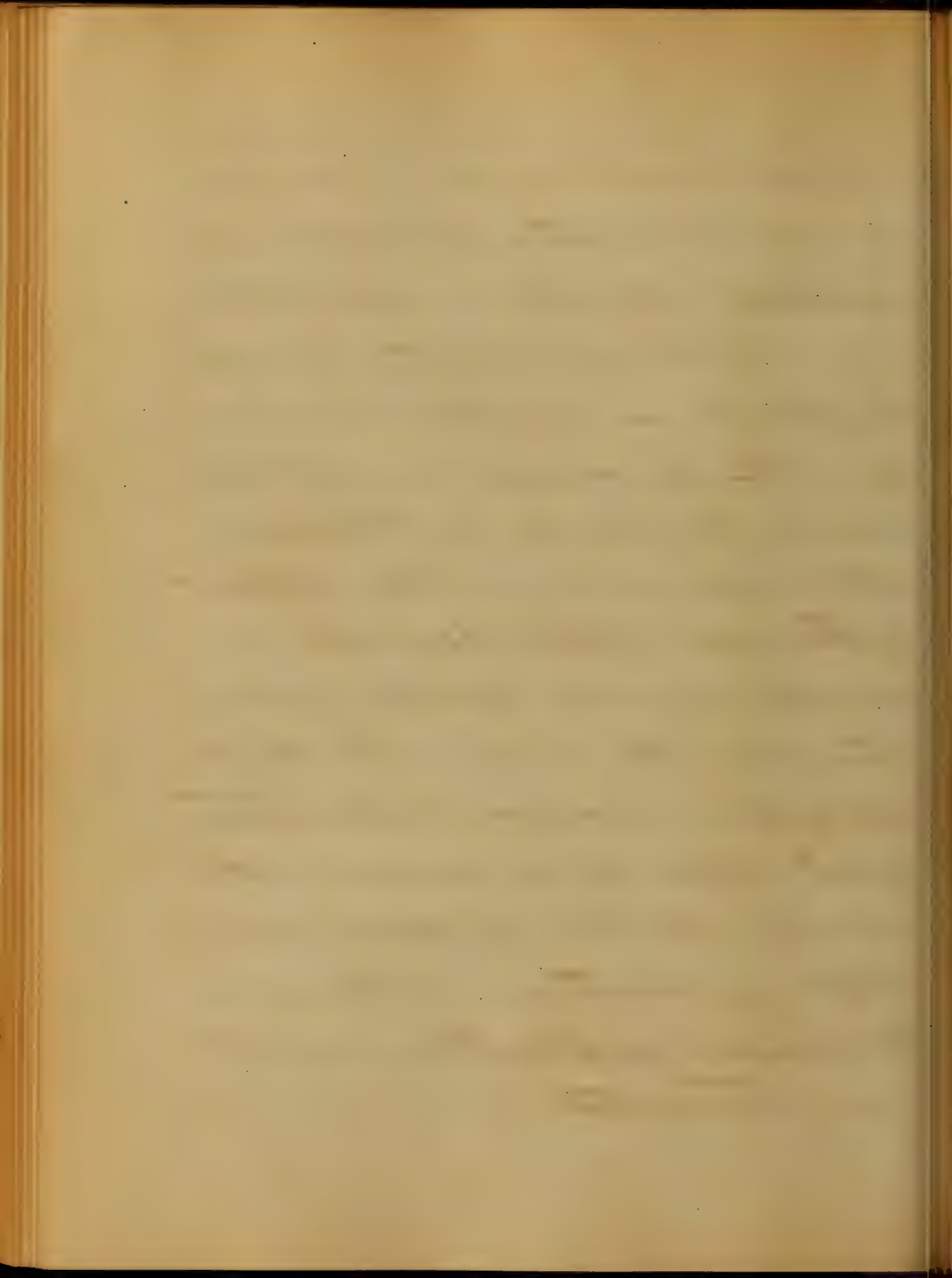


must not be heavy, a single fold of old linen or cotton cloth will be plenty thick enough. This is to be applied and kept constantly moist. The dressing is to be frequently changed during the first forty eight hours, afterwards four or five times a day will be sufficient; to prevent the too rapid evaporation of the moisture a piece of oil silk may be applied over the dressing.

Any wound is almost always followed by general constitutional disturbance the prominent symptoms of which is fever. This "surgical fever" is best treated by not interfering with it. There is no necessity for bleeding, active purgation and calomel, as laid down by some authors; the patient is to be kept in

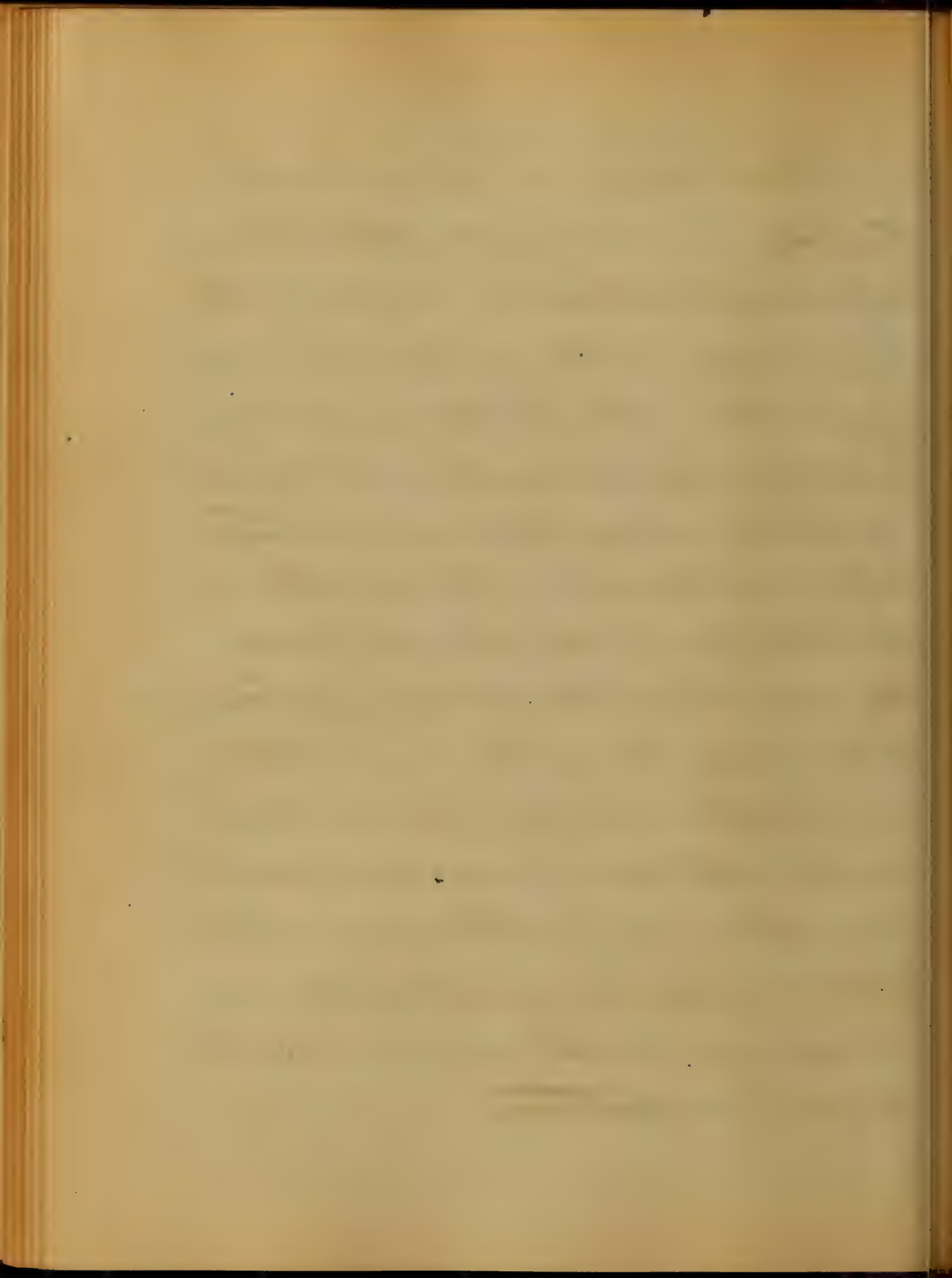


bed, perfect quiet and rest must be insisted upon, the apartments should be well ventilated, if fresh air cannot otherwise be obtained the patient had better be out doors, in a tent well warmed if weather be severe, limited diet during the febrile disturbance, afterwards, generous diet and plenty of stimulus, mild opients if bowels are constipated, opium throughout the whole treatment, to allay pain and for its stimulating effect, tonics to be combined with the stimuli when they are deemed necessary treat complications as they arise the various complications cannot be anticipated.



When large joints are involved the prognosis is very doubtful, likewise ~~extensive~~ fractures of shaft of the long bones in the neighborhood of joints, as the fracture is likely to extend longitudinally into the joint, in these cases primary amputation is the best practice, the operation should never be delayed unless the advantages for subsequent treatment and nursing are of the very best.

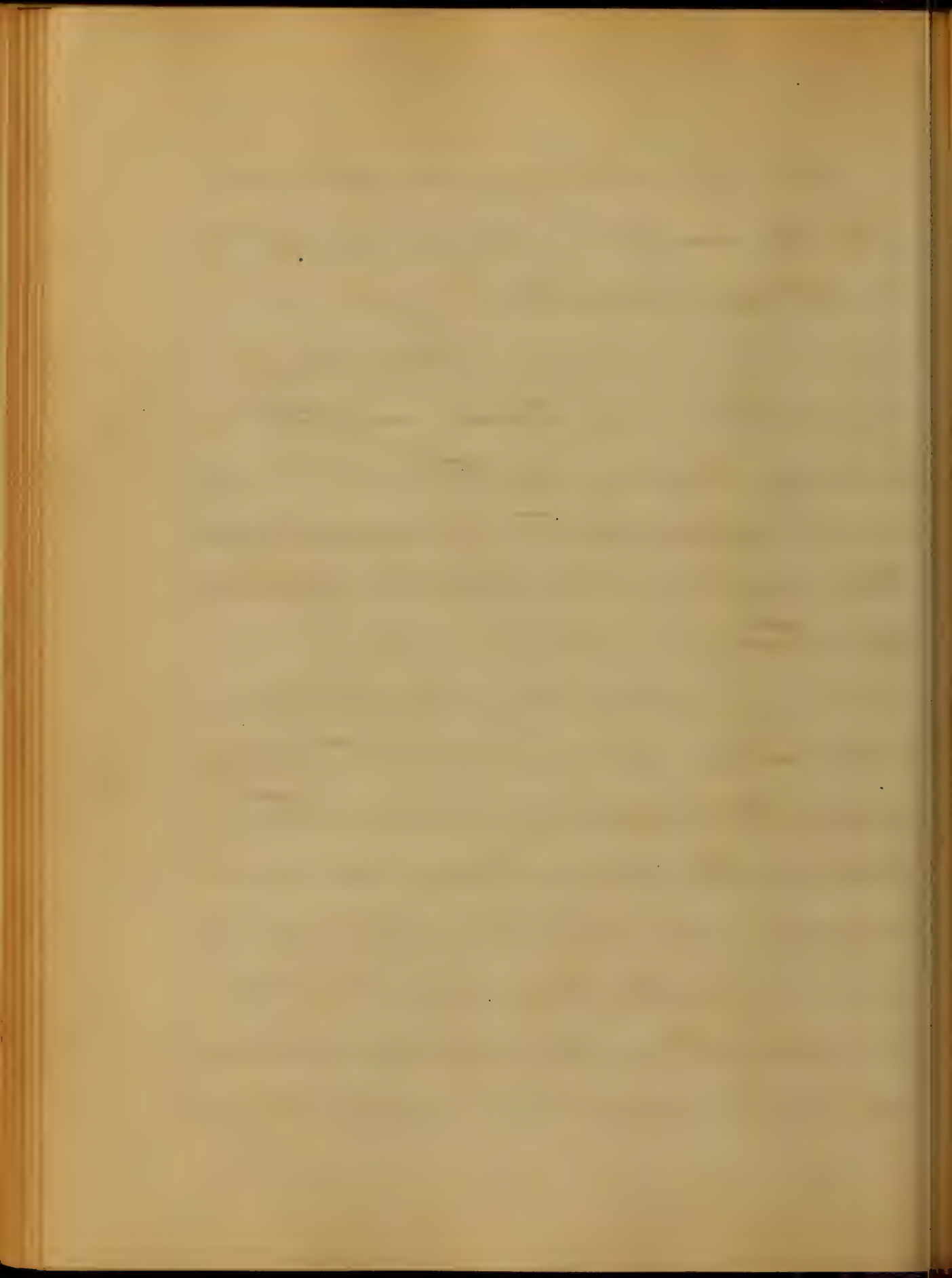
In extensive injury of large blood vessels, without a probability of collateral circulation being established, amputation will be necessary, as mortification will set up and death ensue unless the limb is amputated.

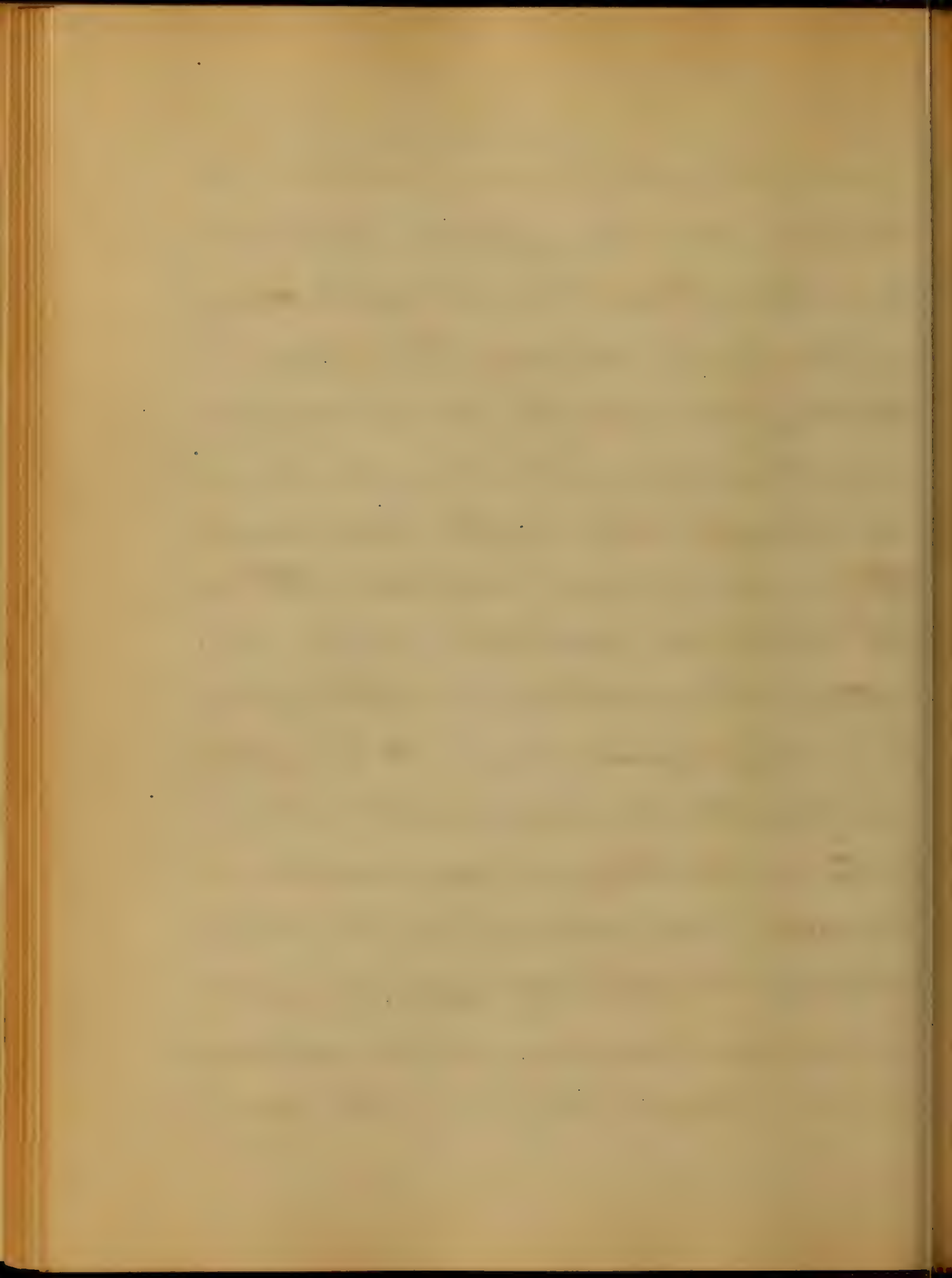


Where the great nerves are implicated with the vessel in the injury, amputation is certainly indicated.

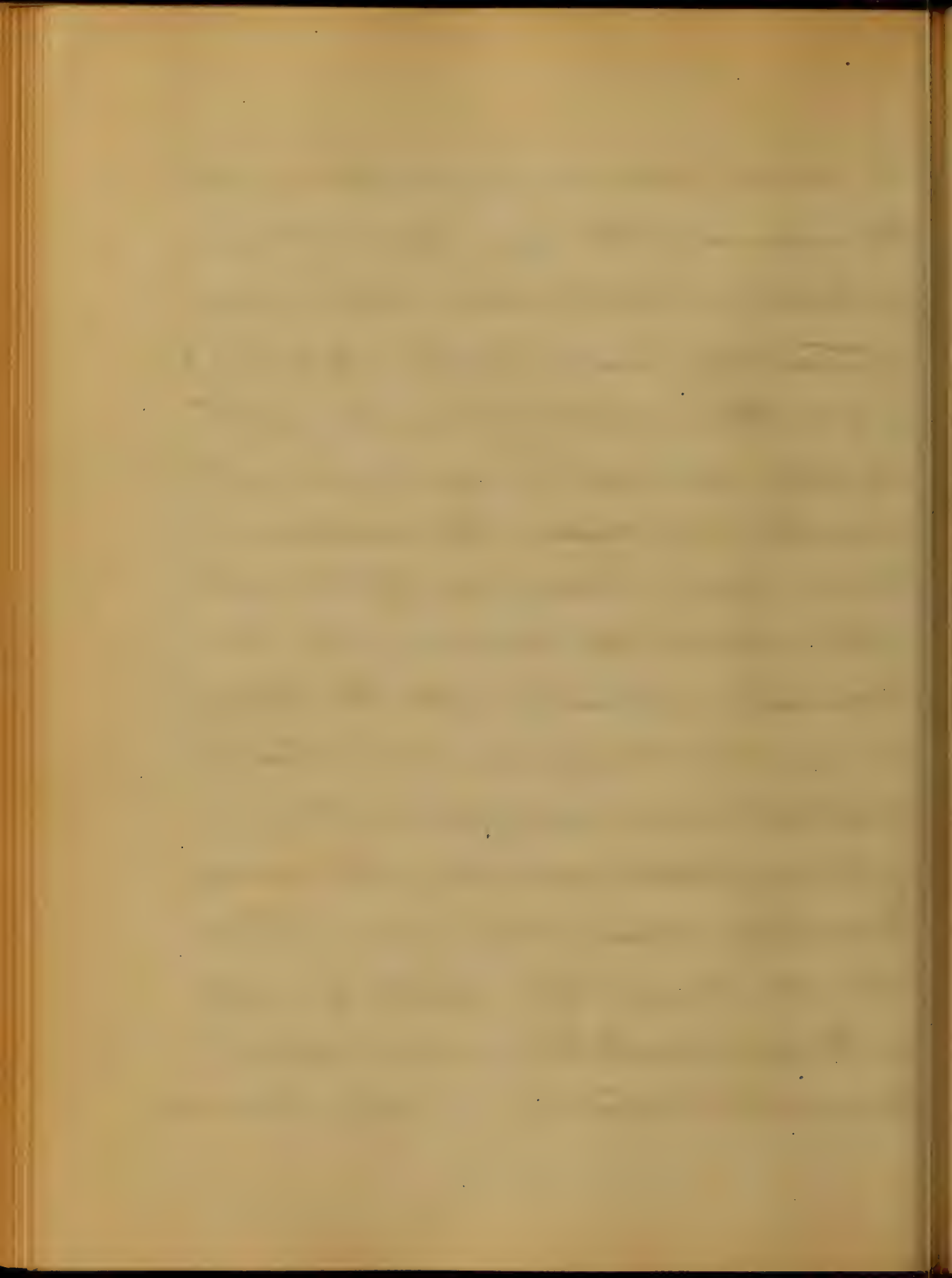
Secondary amputations are twice as fatal as primary; primary amputation will obviate necessity for ligation of numerous vessels that will have to be ligated in a secondary operation.

Secondary hemorrhage is that which occurs after the third day during the process of suppuration, prior to this, hemorrhage is known as primary; secondary hemorrhage commonly occurs from the lower mouth of the divided artery, the distal portion being deprived of its nervous supply, it is not





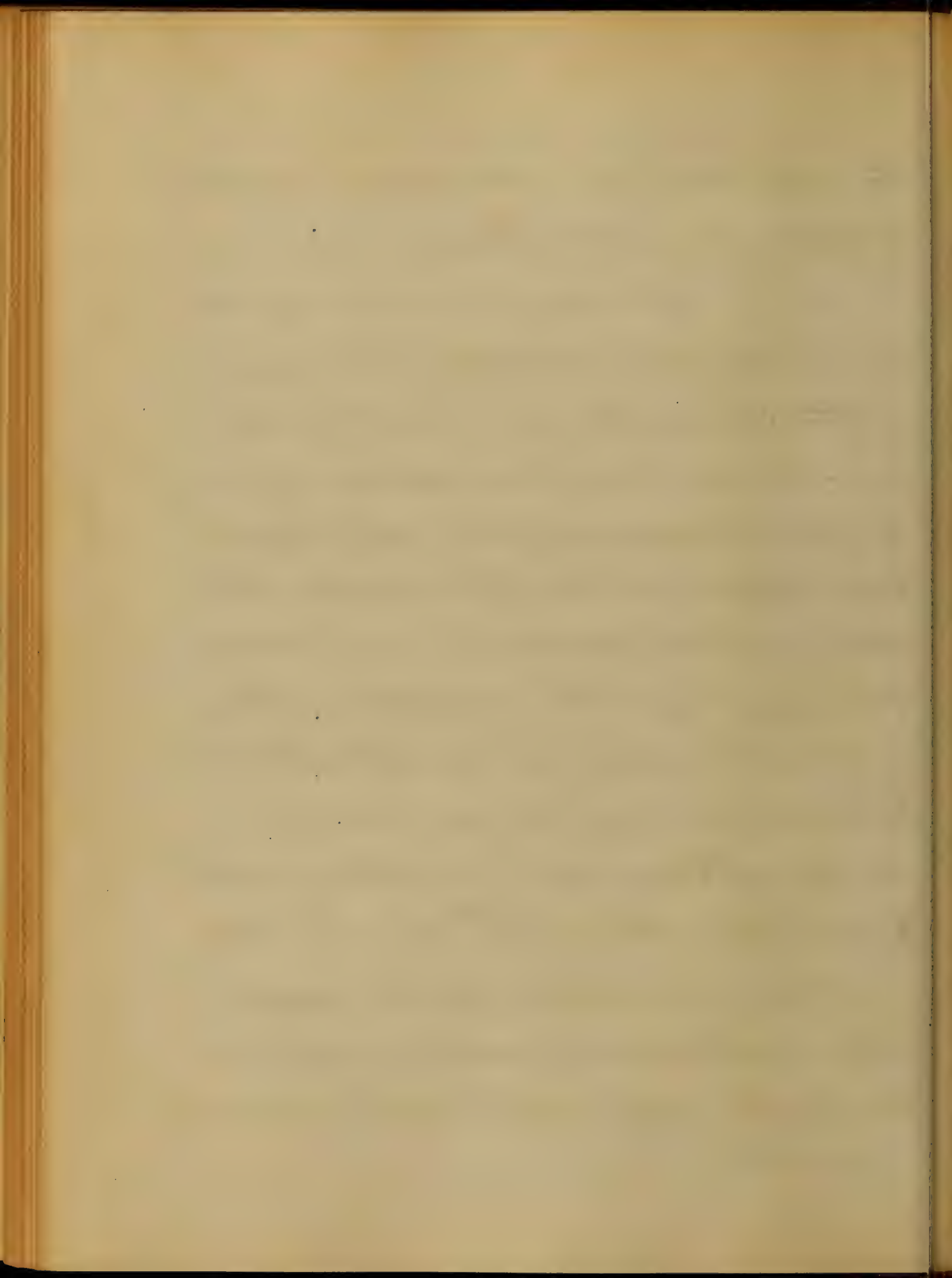
The bandage is then carried on up, covering
 the compress, to the lower edge of the wound
 a pledget of lint, previously dipped in some
 styptic (Lij Ferri per Sulphatis, if at hand)
 is to be thrust into the wound and the
 bandage carried on up, covering the
 wound and binding the compress
 firmly, for a distance of two or three
 inches above the wound; upon the
 hemorrhage recurring after this treatment
 we are not to rely upon it further, but
 dilate the wound and ligate both ends
 of the divided vessel; where secondary
 hemorrhage comes on a second time
 it will almost to a certainty - do so
 a third, a fourth time, or even often,
 provided the patient is not exhausted sooner.



The only safety in such cases is a ligature to both ends of the vessel.

If a main vessel is injured at a point where, at the best, but indifferent collateral circulation can be established or if a branch of any considerable size be injured at a point where, after diligent and careful search, the mouths of the vessel cannot be found, and it becomes necessary to ligate the main trunk, there is almost a certainty of mortification of the limb ensuing. The case should be closely watched and amputation resorted to before the patient's strength is exhausted.

Where hemorrhage from a wounded artery is controlled by means of a ligature above the wounded point, it is only an accidental circumstance.



Ligatures should not be applied to main trunks of arteries for hæmorrhage from its branches, pressure and styptics will or gradually suffice, if not, tie both ends of the divided vessel at the wound.

In the application of a ligature care should be taken to apply it as far as possible from any large collateral branch, the clot formed under these circumstances is not firm and will be washed away by the flow of blood in the immediate vicinity.

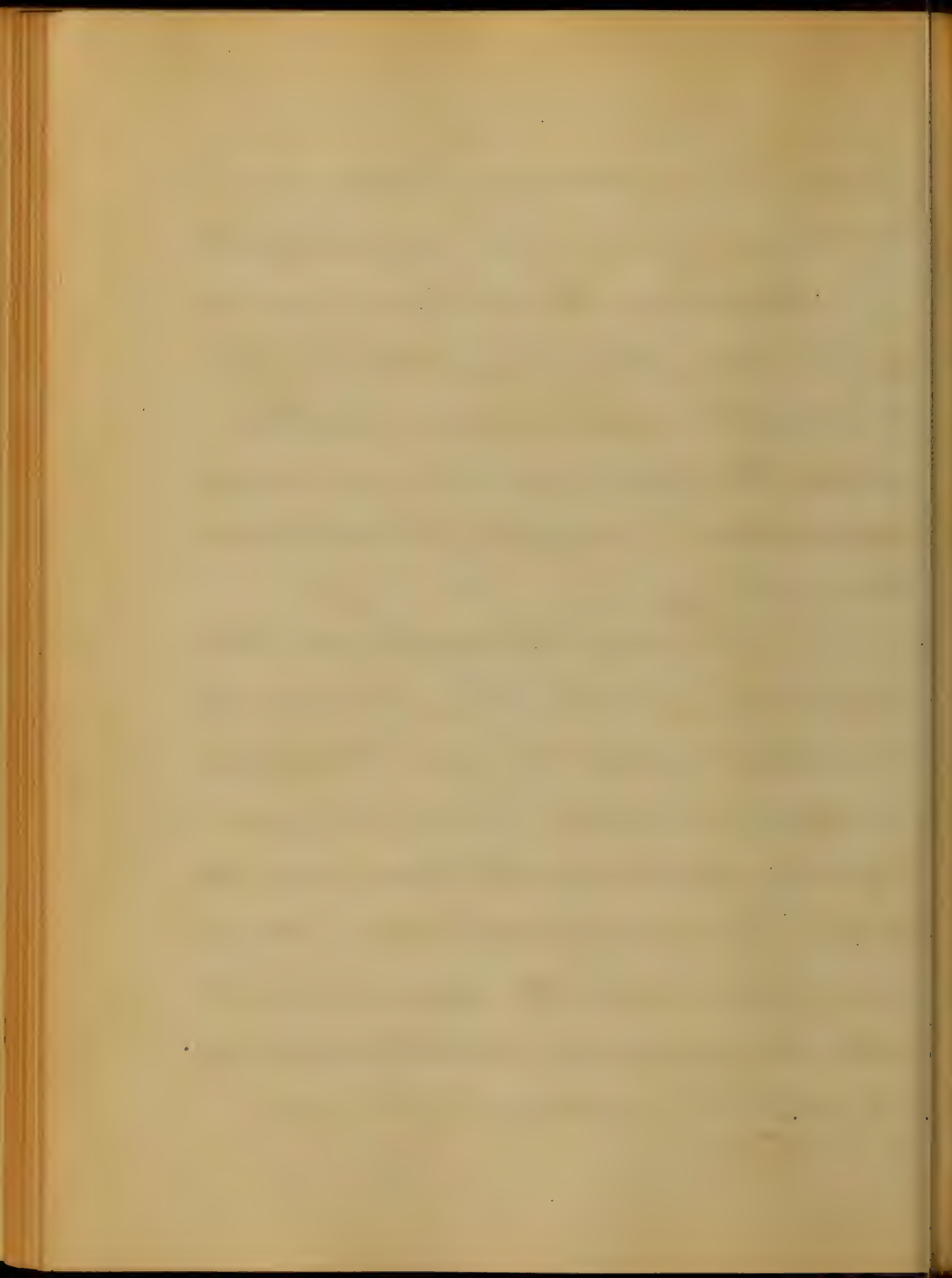
Gun shot injuries may consist of simple, comminuted, or compound fracture; where the ball impinges upon the limb with sufficient directness and force to penetrate the soft parts it causes



Of course a compound fracture, and in most cases a compound comminuted fracture

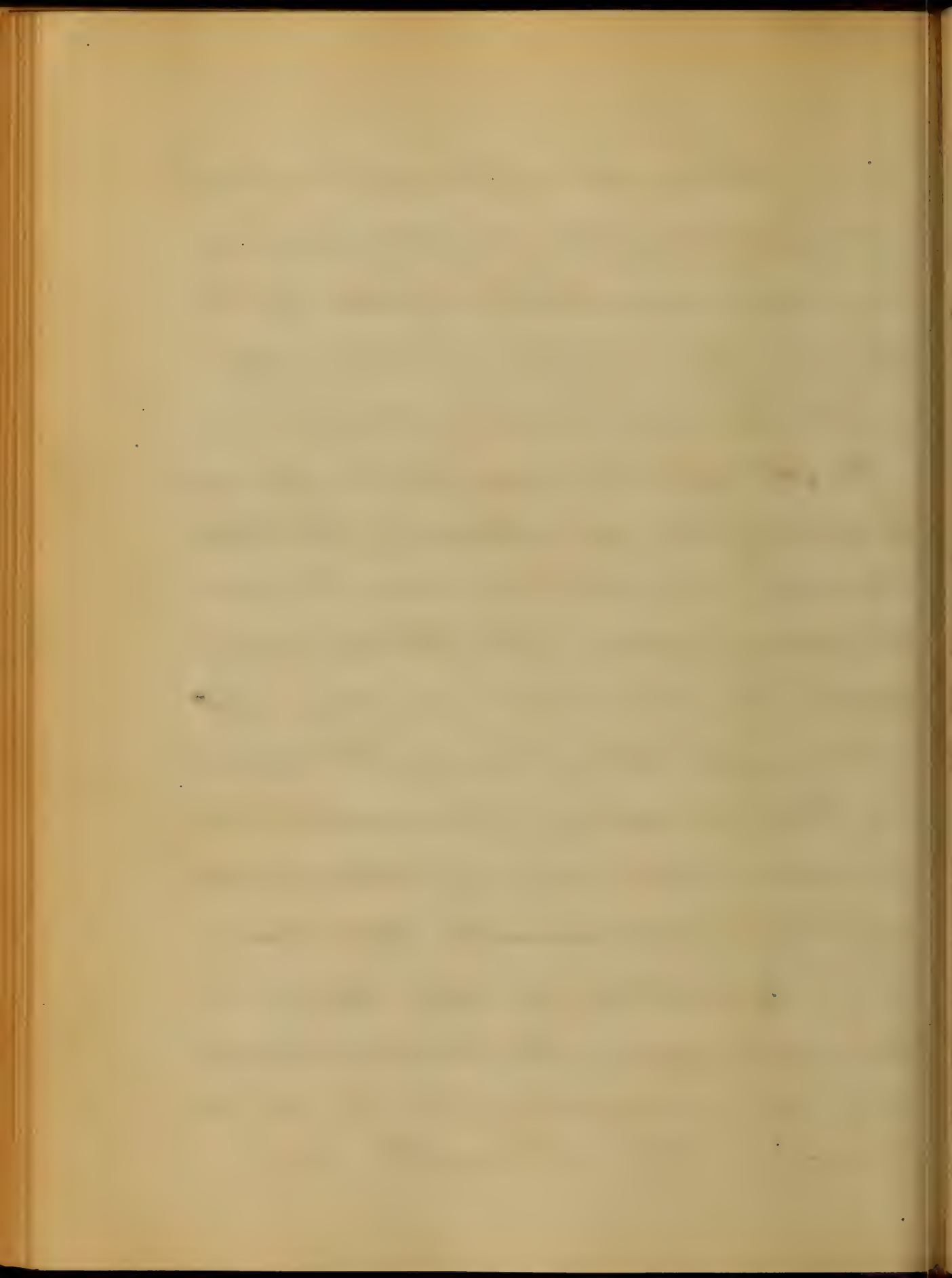
As a general rule an arm or leg should not be amputated in the first instance for compound fracture, unless the large vessels and nerves are divided, an effort should be made to save it.

The arm when fractured should in almost every instance have the advantage of an effort to save it, if an artery yield to suppuration it should be laid bare and a ligature applied to both bleeding ends; "Amputation should rarely take place in the first instance, and only in the second when mortification has commenced or the strength and health of the patient can no longer bear the drain upon them"



In gun shot fractures of the leg the splinters and fragments of bone should be carefully removed, irregular portions sawed off, the periosteum being preserved as far as possible and the limb placed in a splint;

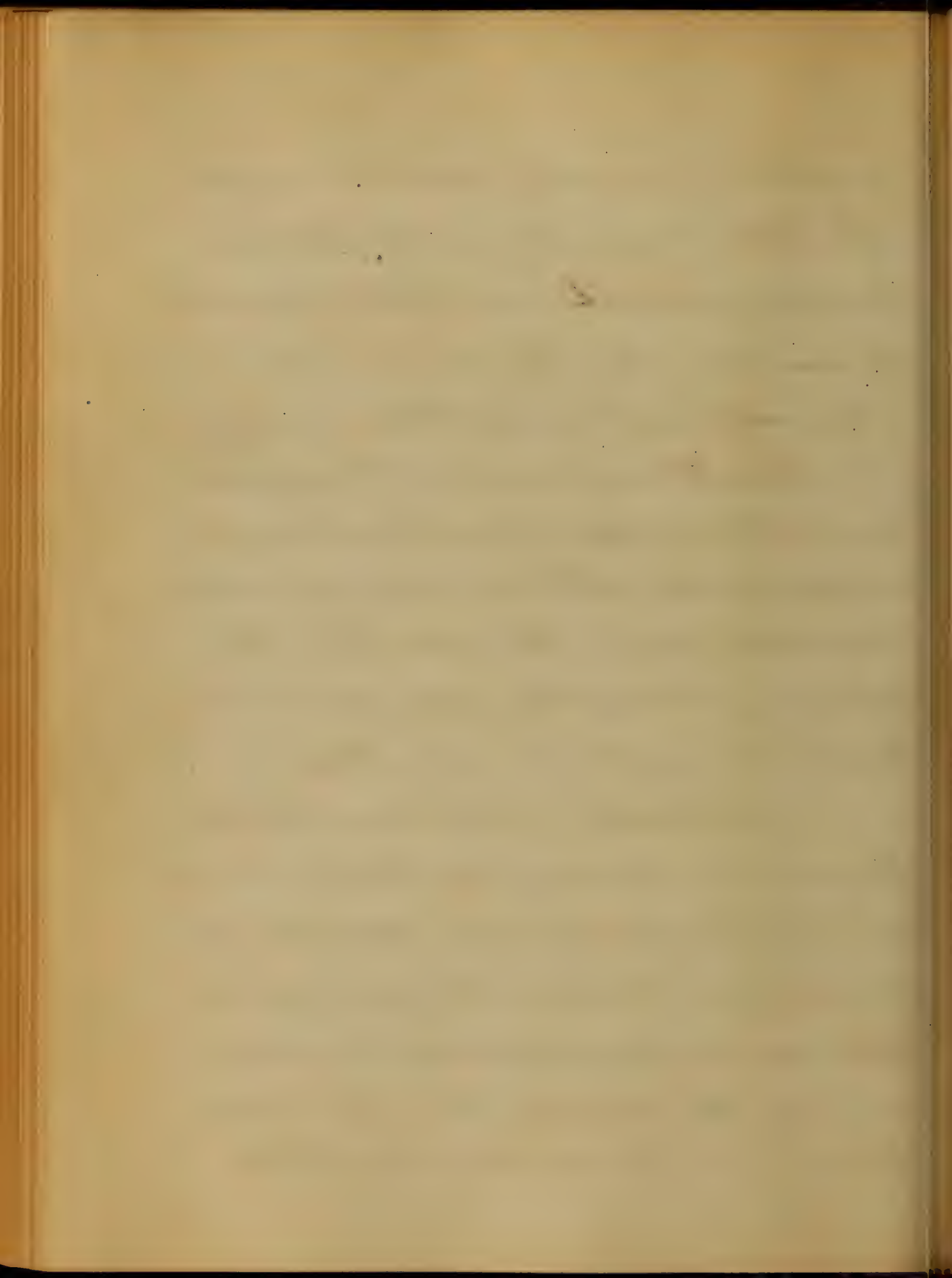
The best splint, in my opinion, for any fracture of the lower extremity is the "Smiths Anterior", in compound fracture it presents the great advantage of the attendant being able to dress the wound every day, or often if necessary, without removing the apparatus; all that is necessary, in compound fracture, in addition to the ordinary method of applying this highly valuable apparatus, is an additional bandage applied over the seat of injury; the principal bandage being applied from the extremity up to the wound, is there interrupted and



reapplied immediately above the wound, when thus dressed and the splint properly adjusted, all that is necessary to remove when the wound is to be dressed is the additional bandage that covers it.

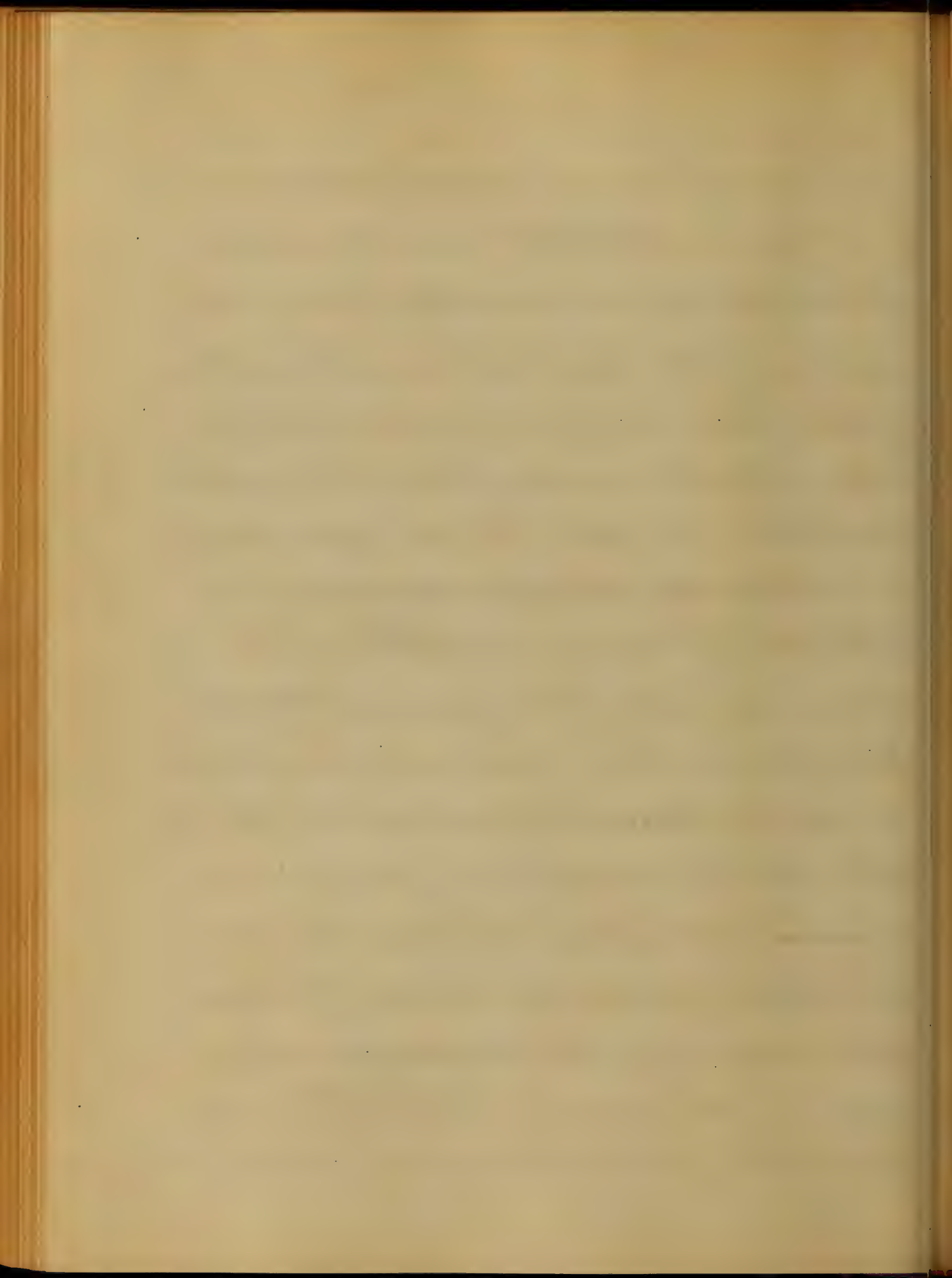
Fractures placed in this apparatus can be transported great distances over rough roads without any very marked inconvenience; in this apparatus the patient is not rigidly confined to one position, as in most other apparatuses.

In fracture of the lower third, if the advantages for subsequent treatment are apt to prove highly favorable, an effort may be made to save the limb, if the injury is not too extensive, the fragments should be carefully removed, the limb placed in the anterior splint, the patient made comfortable

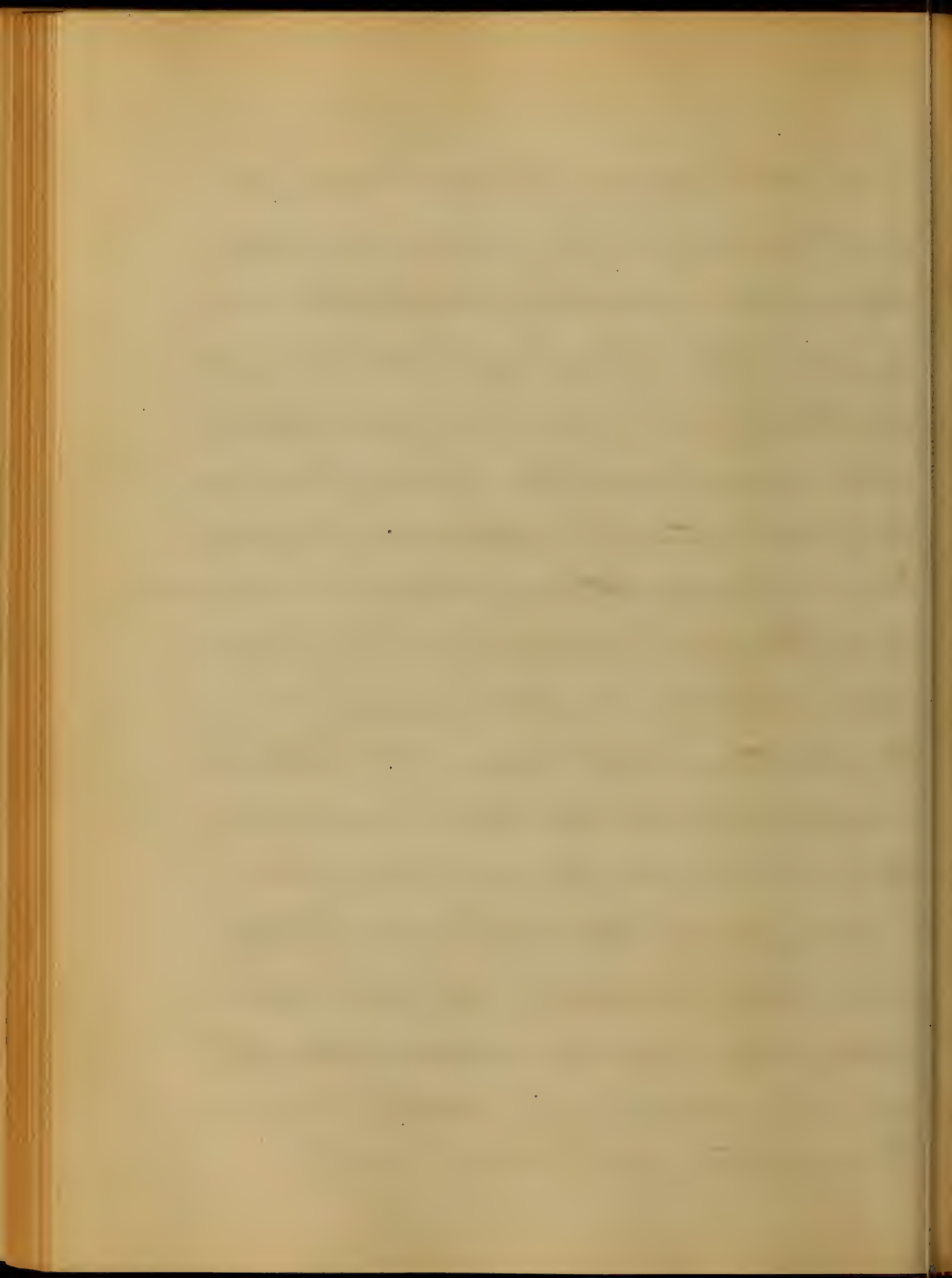


liberally nourished and his strength carefully husbanded

Fractures of the thigh above the lower third had better be amputated in the first instance, as the suppuration from such an extensive surface will almost beyond doubt exhaust the patient's strength; in addition he has the continual irritation arising from the broken fragments coming in contact with the buried and lacerated soft parts, whereas in amputation he has only to bear up under the suppuration that takes place from a clean incised wound. Of perhaps in most instances, no greater extent than that of the original wound; the constant dread of secondary hemorrhage in these extensive sloughing wounds, is annoying to the surgeon and alarming to the patient; in case of recovery the limb will ^{in all probability} be shortened to such degree that it will prove a burden and an incumbrance



In gun shot wounds of the head there may be fracture, more or less comminuted, with depression; a ball may penetrate the brain directly, when a ball penetrates it is not often that it can be removed and the sufferer rarely survives longer than a few days, where the scalp is torn, the depression marked, the usual symptoms of ^{concussion} depression present and thought to be due from the rugged fragments of the inner table impinging upon the substance of the brain, the Trephine should be applied, the splinters carefully removed the skull elevated, the wound should then be carefully closed, the patient kept strictly quiet, cold applications to the head, opium to allay pain, towels kept moderately relaxed and general attention paid to the condition of the whole system.



In penetrating wounds of the chest the patient should be placed upon the wounded side, so as to evacuate the chest of all accumulating fluids, if ribs are broken fragments of bone should be carefully removed the ball removed when it can be found and the wound carefully closed; if fluids accumulate in the cavity - the wound should be reopened or a canula-trochar inserted at the most dependent portion.

In gun-shot wounds of the abdomen, if bowels protrude they are to be carefully cleaned and returned, the lips of the wound approximated, patient to be put to bed, kept strictly quiet and treated with large doses of opium, to allay pain and keep the bowels quiet; where the bowels are not torn and should ensure it will in all probability be the result of peritonitis.

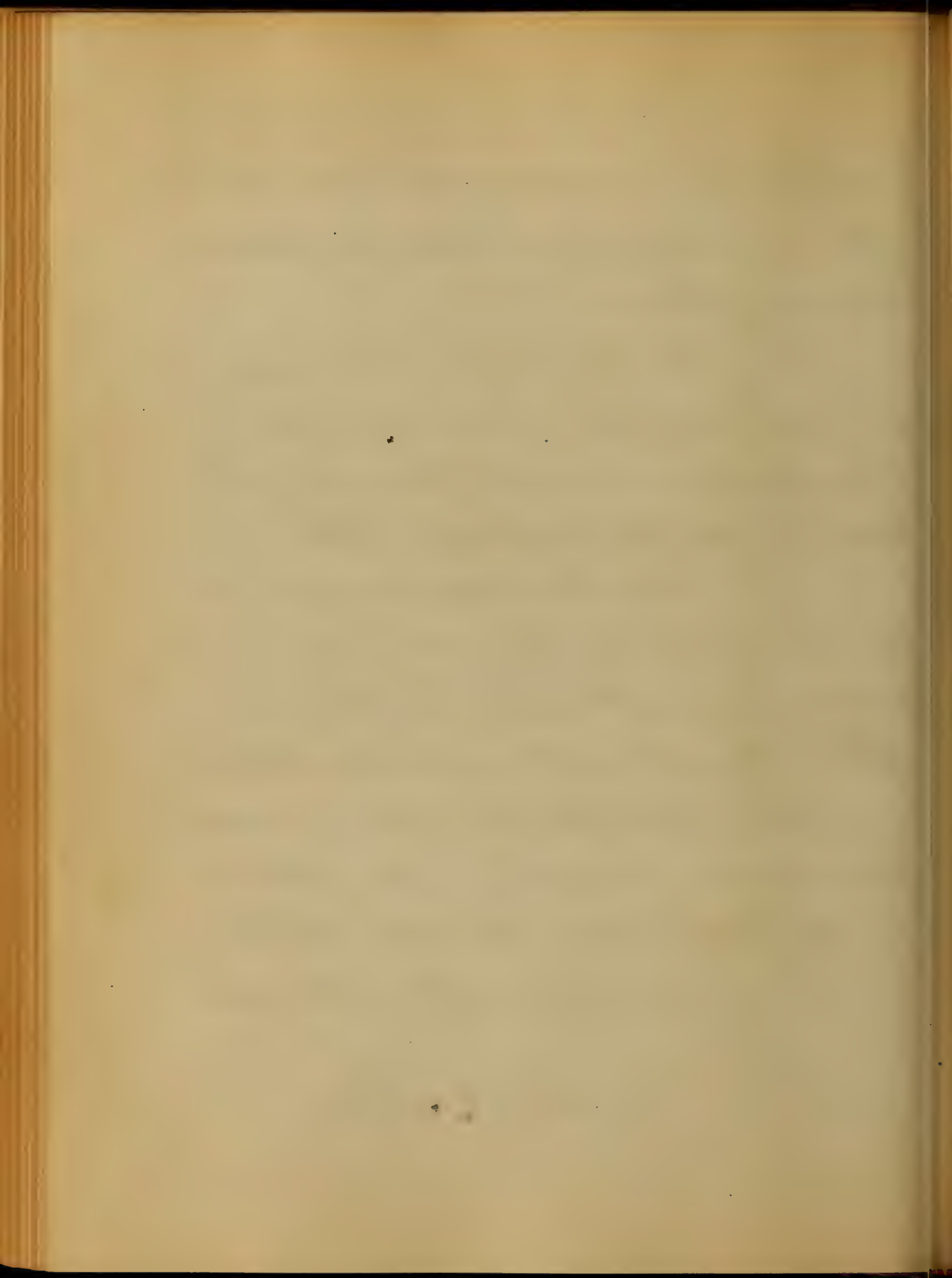


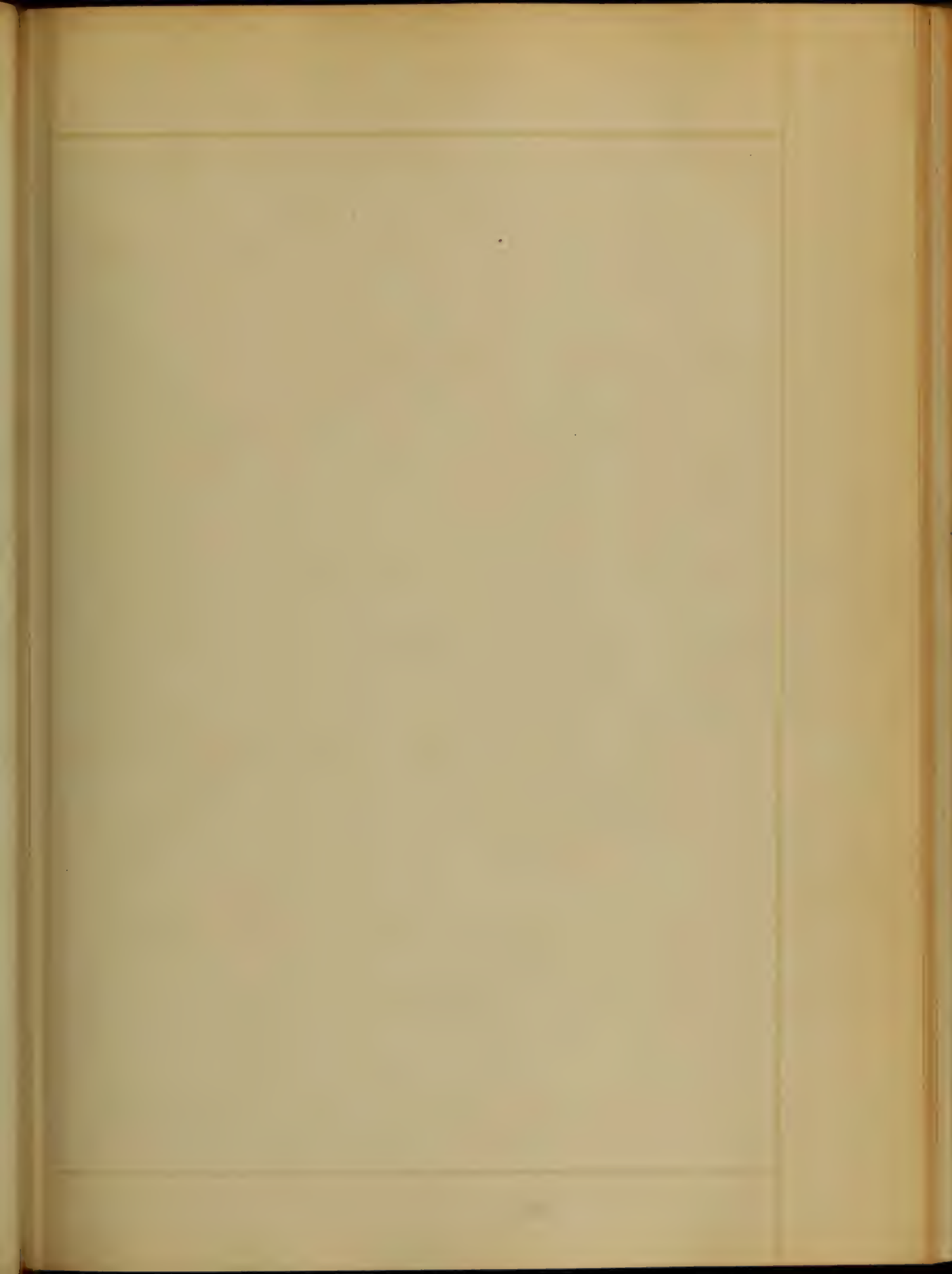
in protrusion of omentum. if it cannot be returned a ligature should be applied to base of tumor.

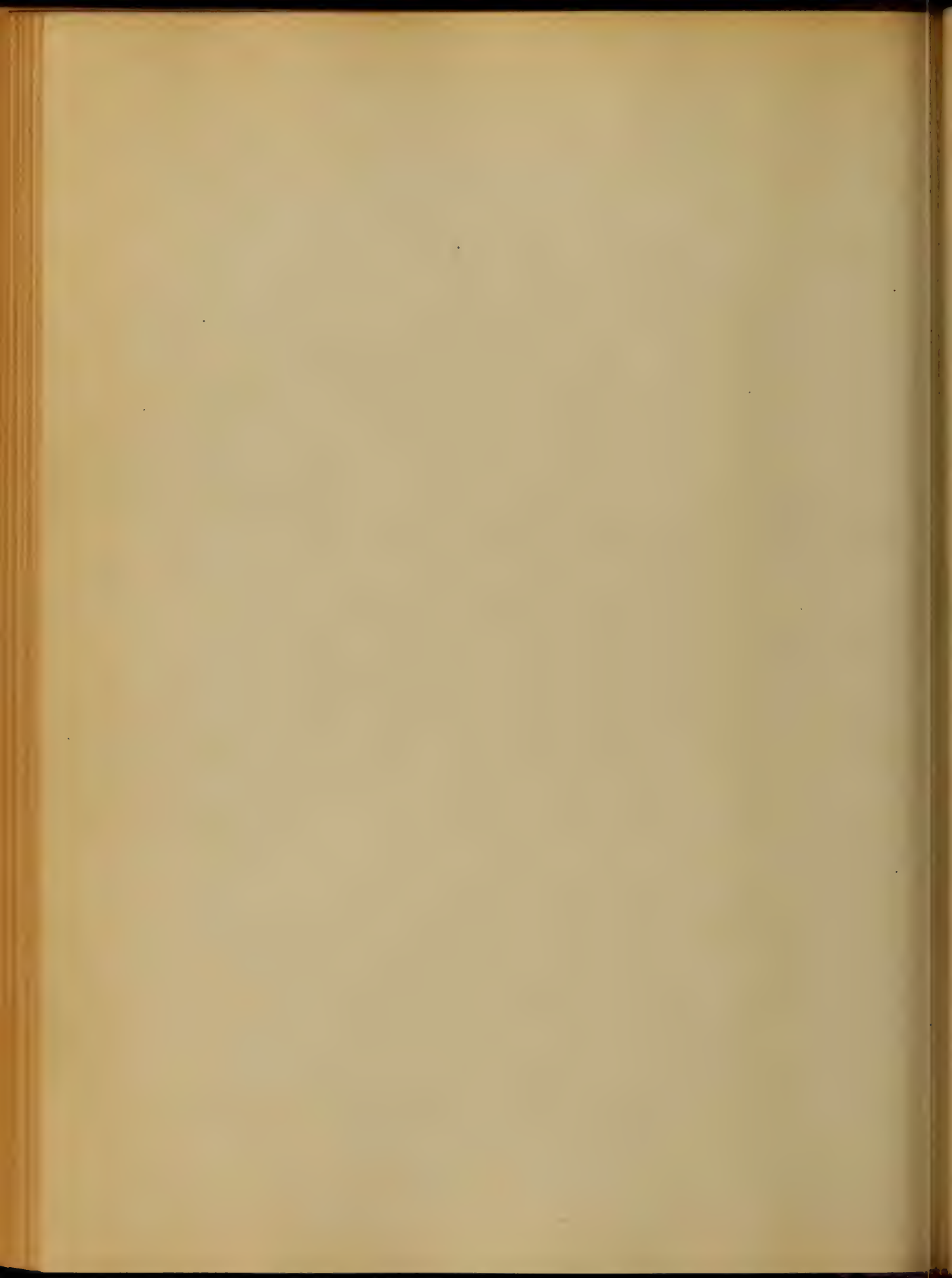
Gun shot wounds of the bladder are for the most part fatal; persons rarely recover in whom urine finds it way into the cavity of the abdomen, they die of inflammation.

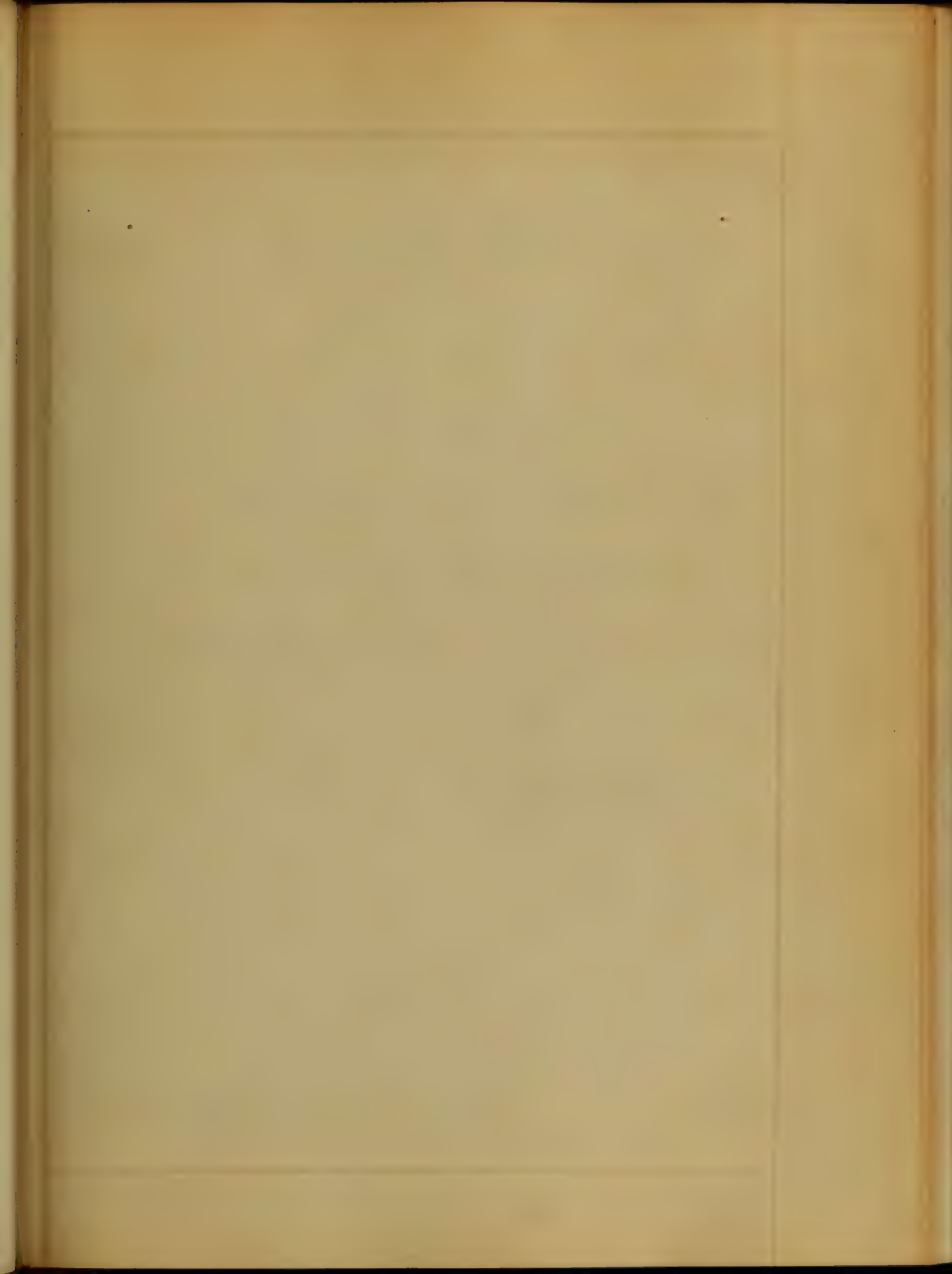
When the bladder is wounded below where it is ~~not~~ covered by peritoneum, persons do sometimes recover by the ^{almost unaided} efforts of nature; a catheter should be introduced from the first and fixed in the bladder, being removed occasionally and cleaned; opium is the important remedy, with perfect rest, strict attention to diet and the general state of the system.

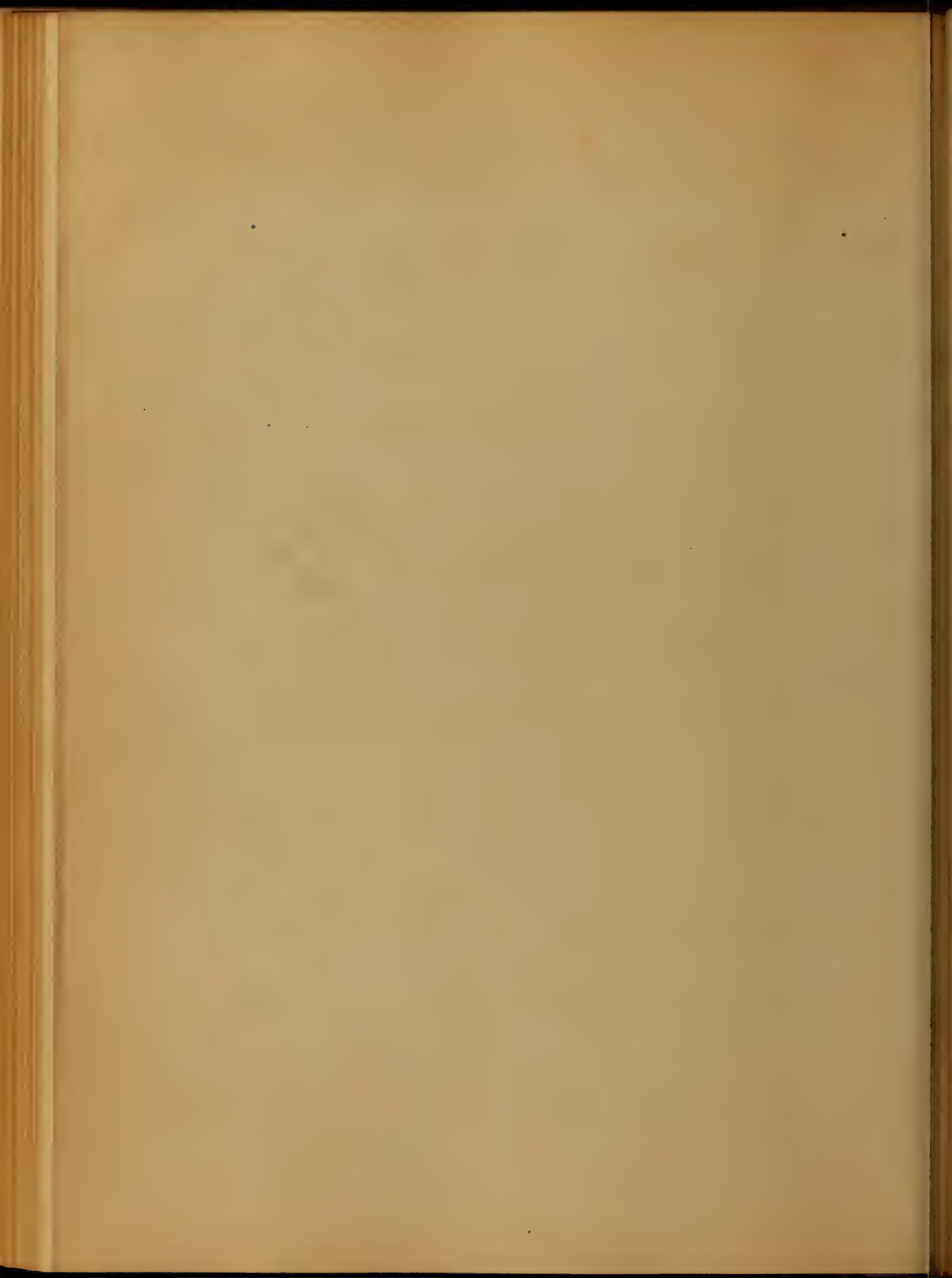
Edw. W. Drummond









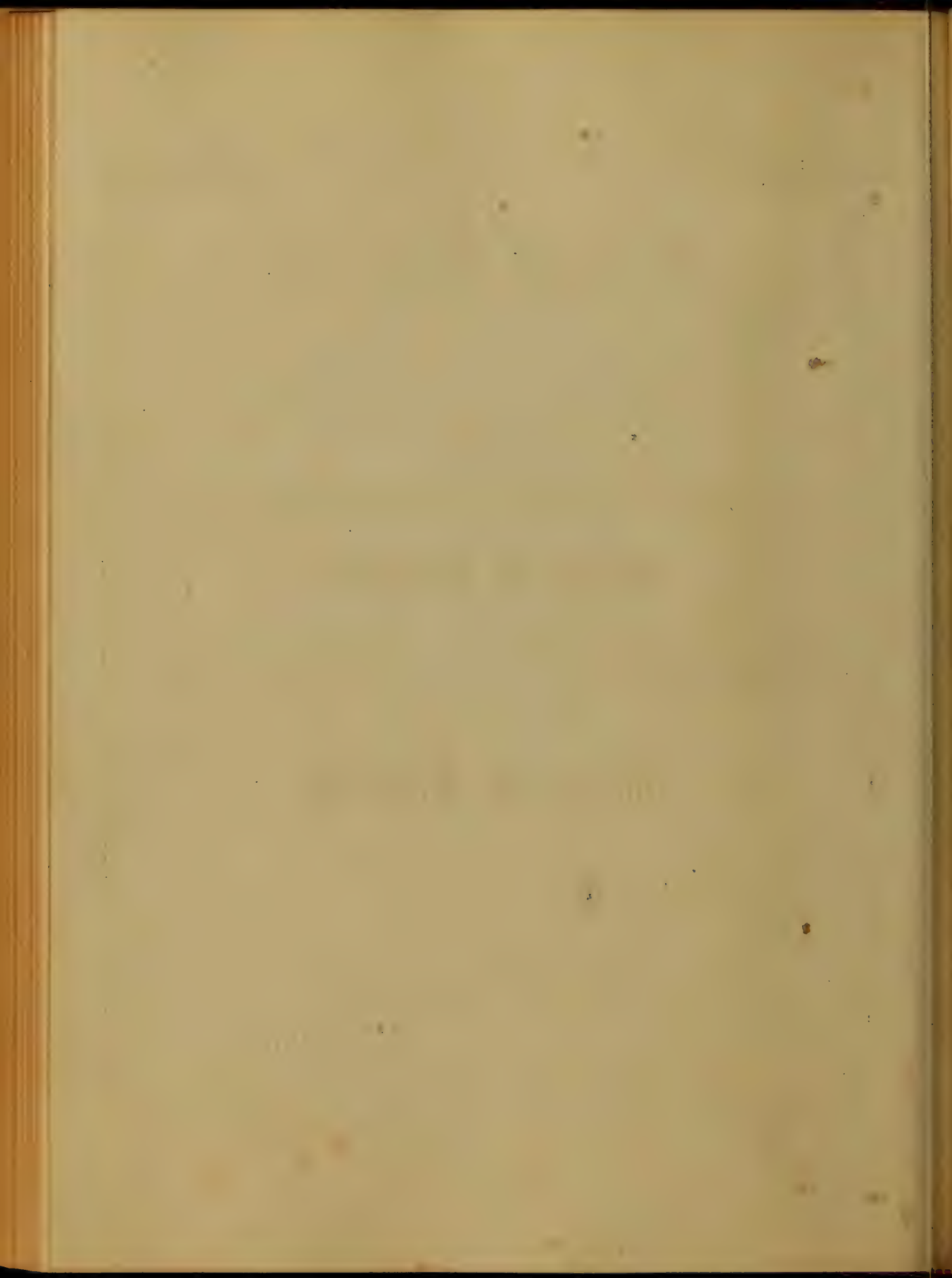


AN
Inaugural Dissertation
ON
Pain, its Nature & Cause
Submitted to the Examination
OF THE
Provost, Regents and Faculty
OF
PHYSIC,
OF THE
UNIVERSITY OF MARYLAND,
FOR THE DEGREE OF
DOCTOR OF MEDICINE,

By
James M. H. Howard,
of
Baltimore.

Maryland
1857

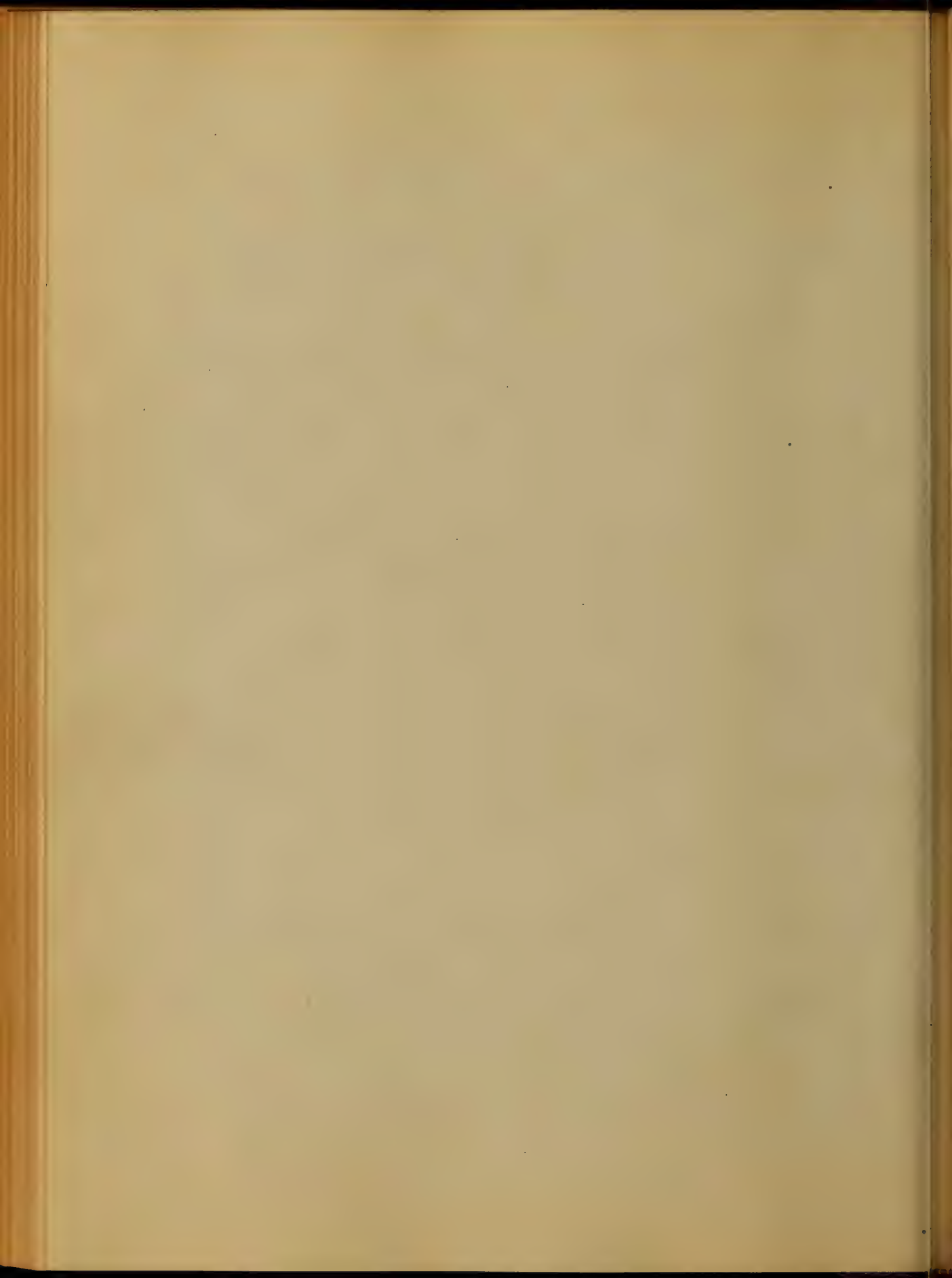
Session of

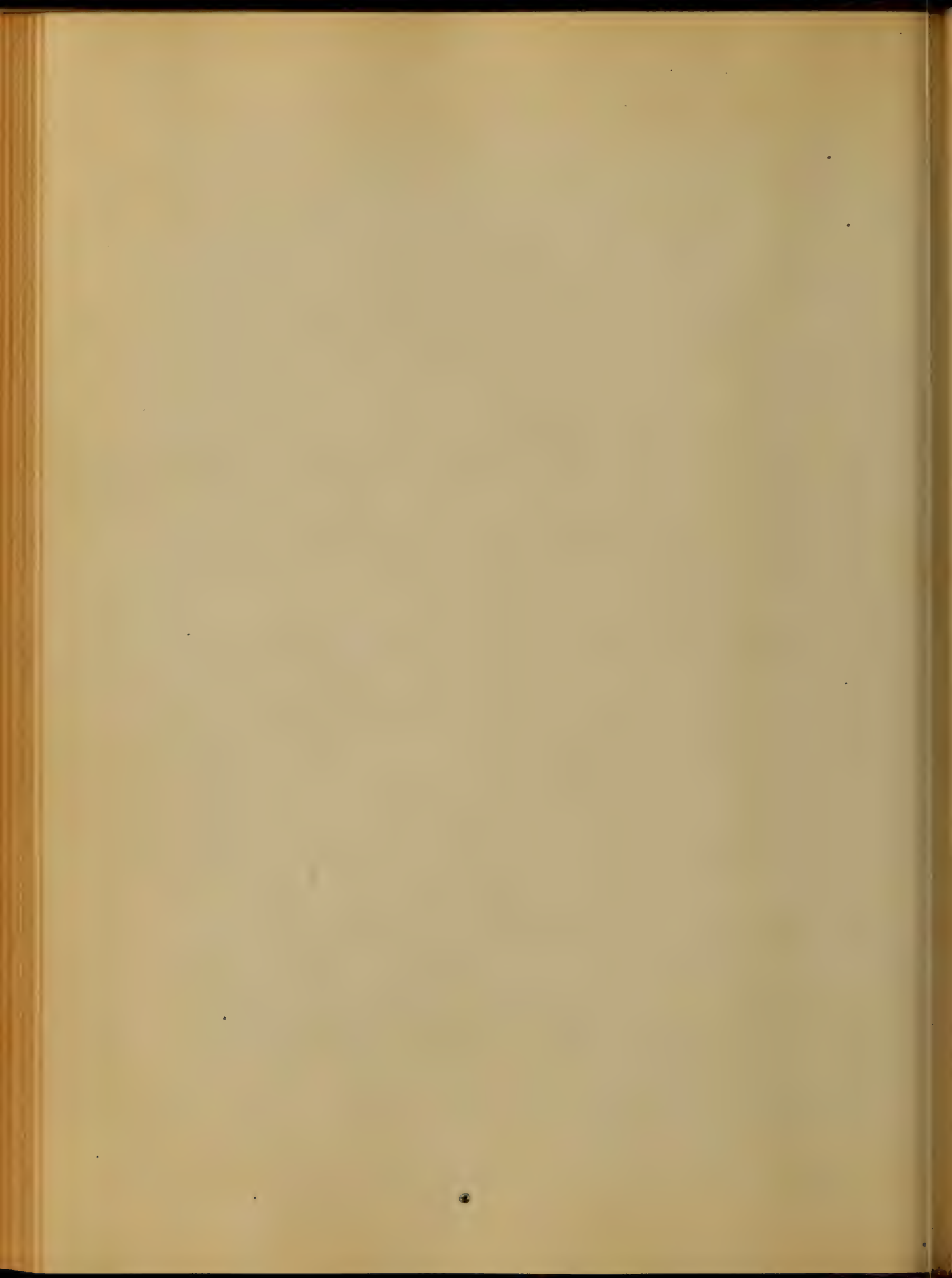


The study of medicine has a peculiar interest to the
thoughtful mind, but when the student passes from the lecture
room and goes among his fellow men - such is the force of the theories
which have been taught him, he will soon discover that he is not
he accepted as certainties are by no means so, and that instead of
having obtained into his mind a solid mass of knowledge,
made but slight impressions in his mind.

This is nearly always the case. When the mind first attempts
to reduce its ideas to practice, it is surprised to find that it
finds some conditions which are not in the theory, and that
the application of the theory is not so simple as it was supposed to be.

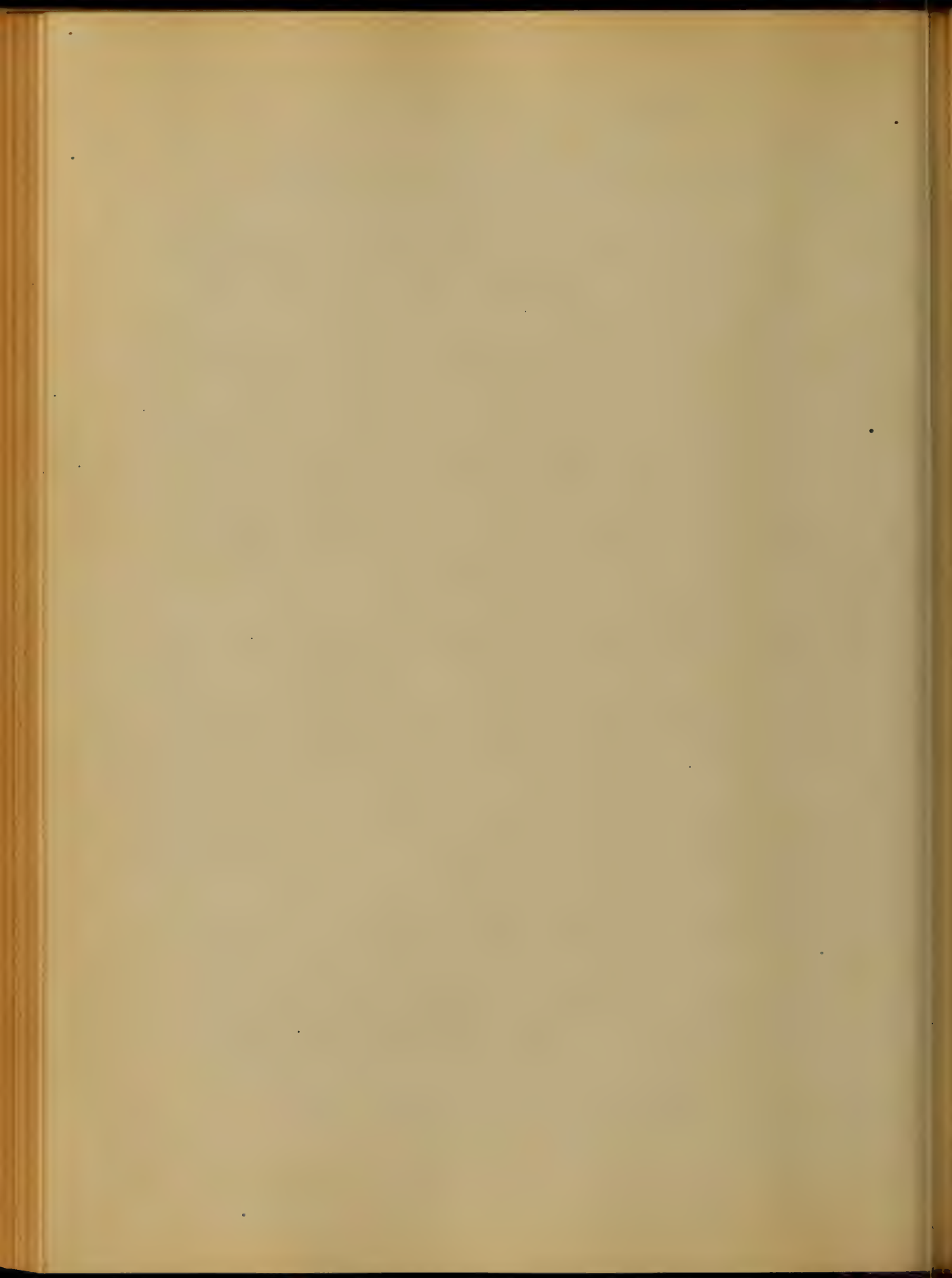
The reason why this is so is that the mind is not
and is apt to accept the appearance for the reality and to be led
by the appearance - till error has become a habit, or a habit
of truth for its own sake, and it is not till the truth is
exists or is dangerous, while absolute truth is so seldom
that we must regard truth not from an absolute point of view.





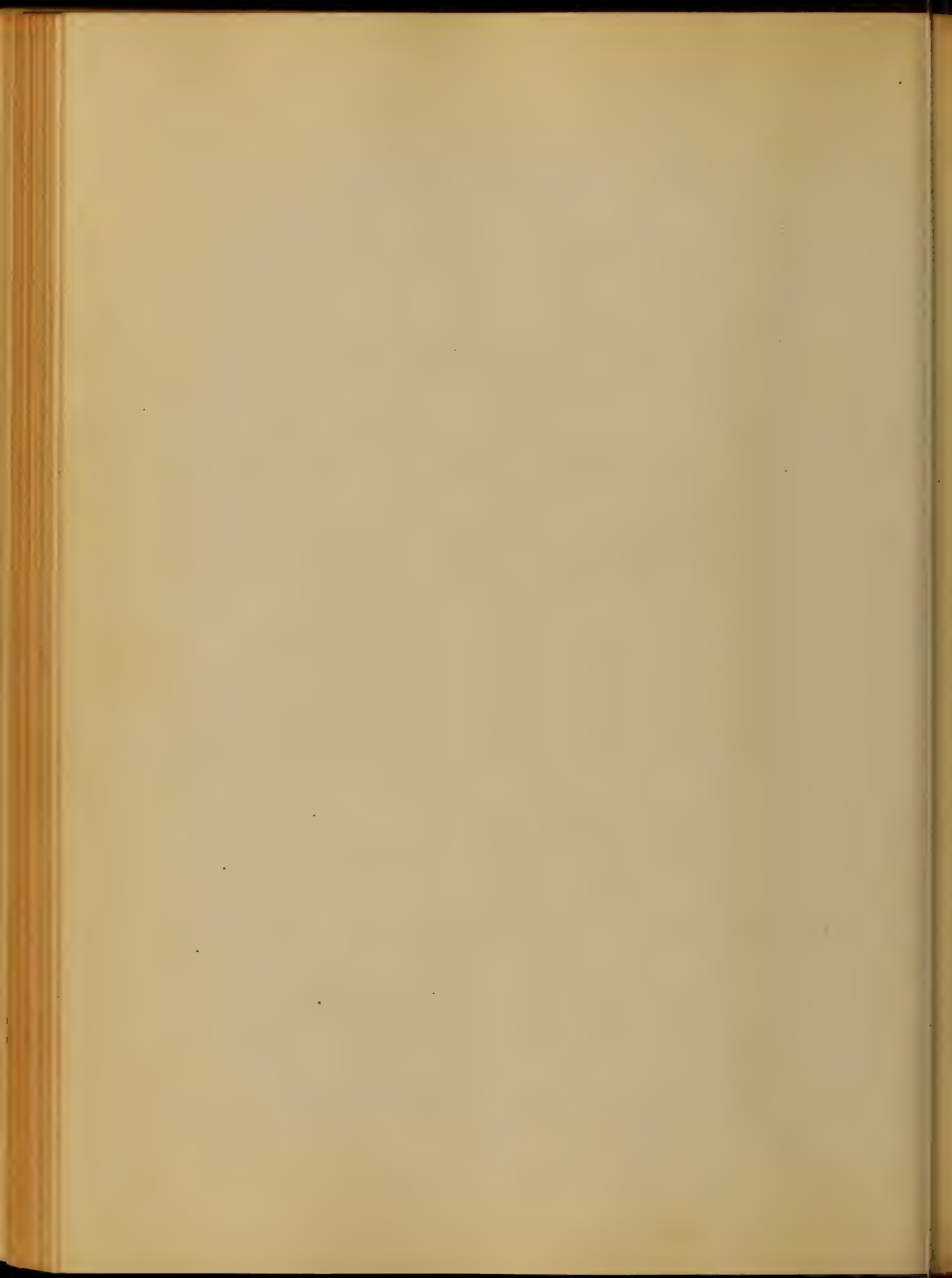
Man uses it as a means to induce the cerebral mechanism of the
vital reaction which is the basis of the organic reaction
and yet we may regard it in another aspect - while on
the one hand it may be justly called the organ of the
vital life and intellect, on the other hand it is the
organ of the organic reaction, and the organ of the
vital reaction - as the organ of the organic reaction on both
sides the organ of the organic reaction.

3
Pain is an irritation of a sensitive nerve or an organ of the
Sensorium Commune and recognized by the intellect; or as the
vital life, as follows. Pain is an abnormal sensation received by a
living body and is sent to the brain - It is a form of organic
reaction by external subject of the organic reaction. It is an
abnormal sensation and is sent either from the matter of the
organ which causes, or from the state of the organ which causes
and transmits the irritation, or from the state of the brain which
receives it. (All these conditions being equal?)



"The peculiar state of the brain bearing the name of epilepsy is
induced when the different ligues in relation with the
the medulla of the nerves have been made of various degrees of
disorder by any cause whatever. Firstly, the disease of the
brain is due to an abnormal mode of its constitution resulting from
the overaction of its parts which may arise in that case of itself
either the affection of organic life or the part of the brain
presiding over the intellect, or from the influence of external
faculties of understanding and expression, or the faculties
circumscribing the ~~activity of the intellect~~ ~~of the brain~~"

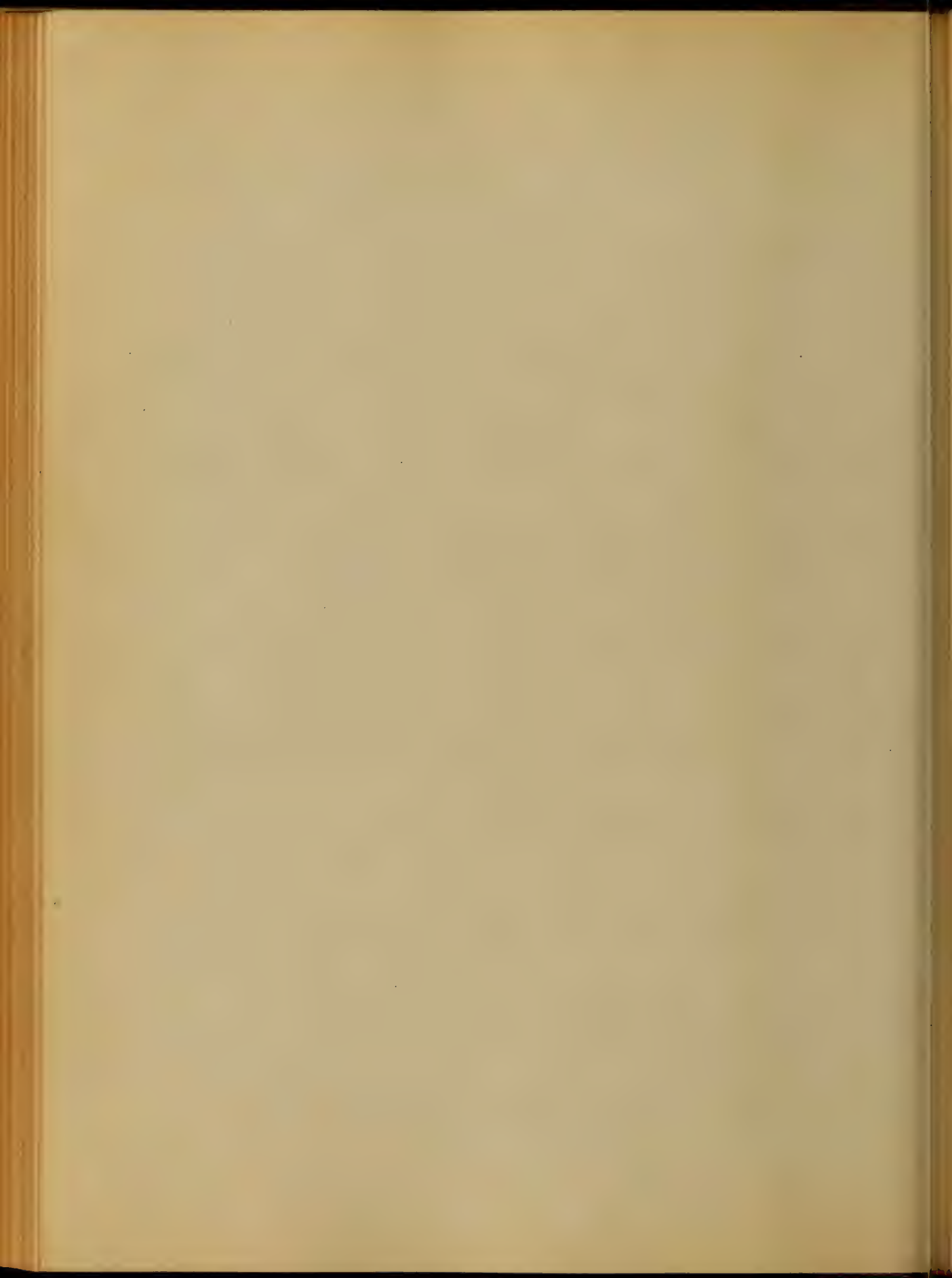
It will be seen that the author of the above has not considered
the whole subject in view so as to refer to the various
causes which cause the disease. True will not allow
me of his points scribble, so I shall proceed with my subject,
dividing it into two classes - i.e. True pain, and tenderness.
True is of a kind which is generally ascribed
to structural change or pressure - True pain (algia) may



...
Upon mental cause of ...

... is usually accidental and ... a ...
... in ...
... parts of the organism, and is ... - yet the two
...
... whether ...

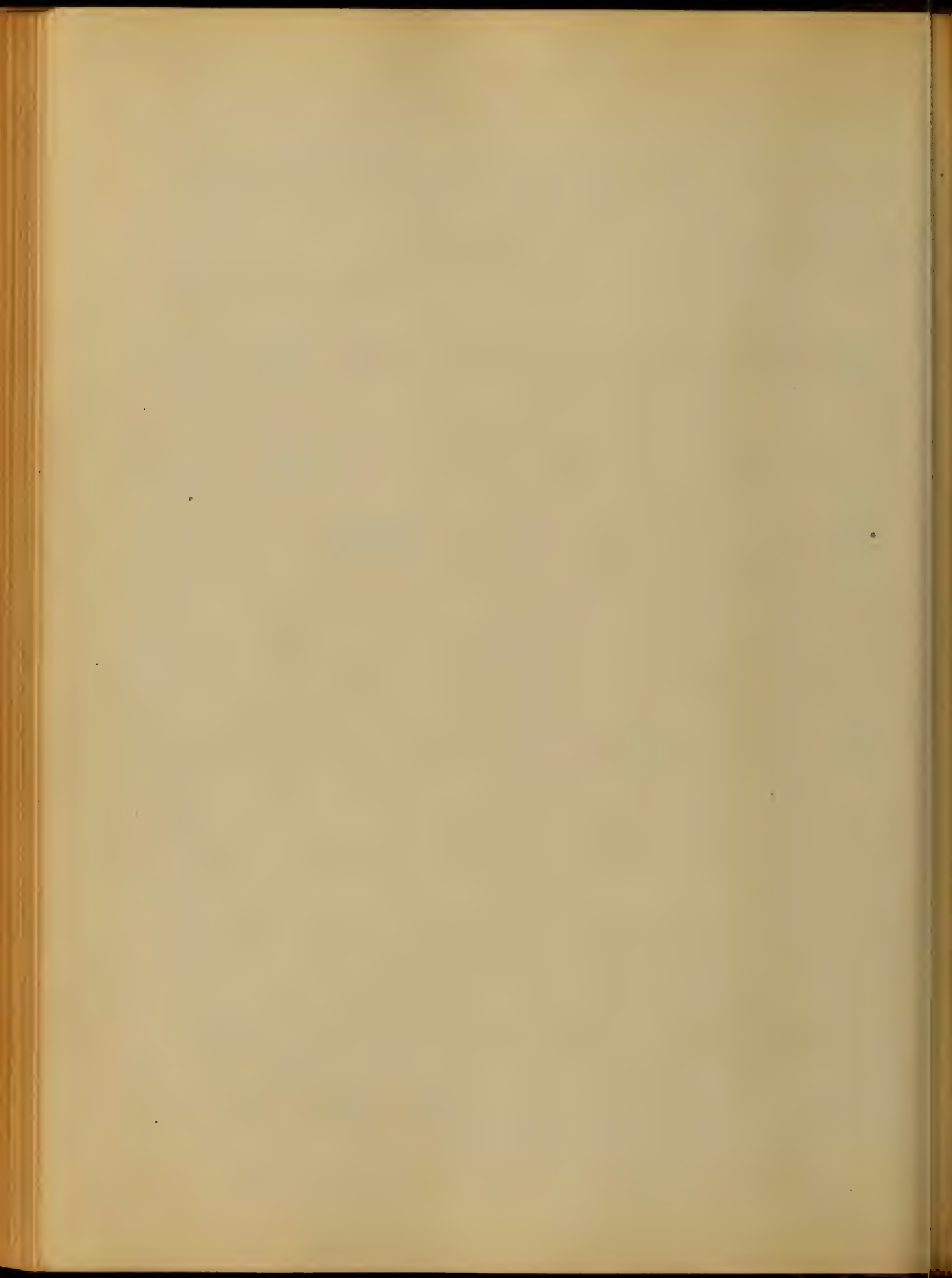
This may be caused by certain conditions of the circulation -
certain conditions of the nervous system, certain conditions of
... and certain conditions of other parts of the system,
and we can even ...
of attention upon a particular part can produce real pain
and even structural change as in the case of a patient of ...
... and we know that they are ...
... various disorders very accurately, ...
still the suffering exists as really as in the ...



Subjects should not receive credit for their cases deserve
the best medical attention and sympathy.

That the circulation has a great influence upon the existence
and character of pain we cannot doubt as instances are given
of starved and the well nourished may have pain in certain
conditions differing very much in degree as well as duration
and many peculiar conditions of the circulation have been
found so that the state of the blood accounts for several varieties
of pain.

Mr Radcliffe thinks that neuralgia must be distinguished
with a deep seated condition of the circulation, and that pain of
such character would seem to be only produced in the hands
by an over action of the circulation. He argues the first
of these opinions by stating that the majority of persons affected
with neuralgia are of a feeble and excitable constitution
with a circulation in keeping with such condition; he is
also of opinion that pushing their excited state and the resulting

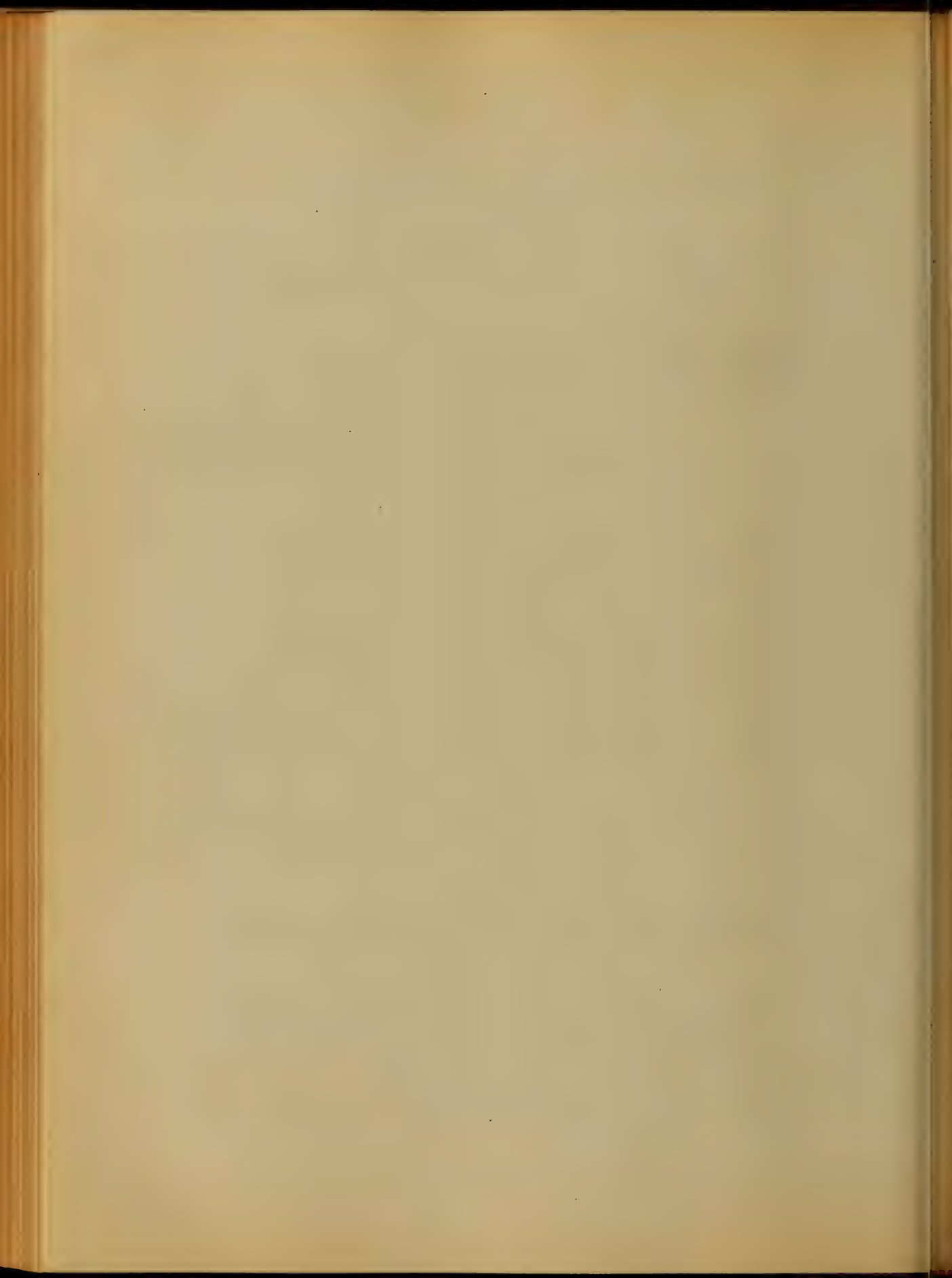


of its manifestation, with that of the cold stage.

The second one of his theories is opposed to the common
view as to his cases of Rheumatism, and that, in
Rheumatic fever, pain may have subsided in spite of general
rejection and local inflammation, then though the body
may become cold and rigid, the pain is not necessarily
relieved.

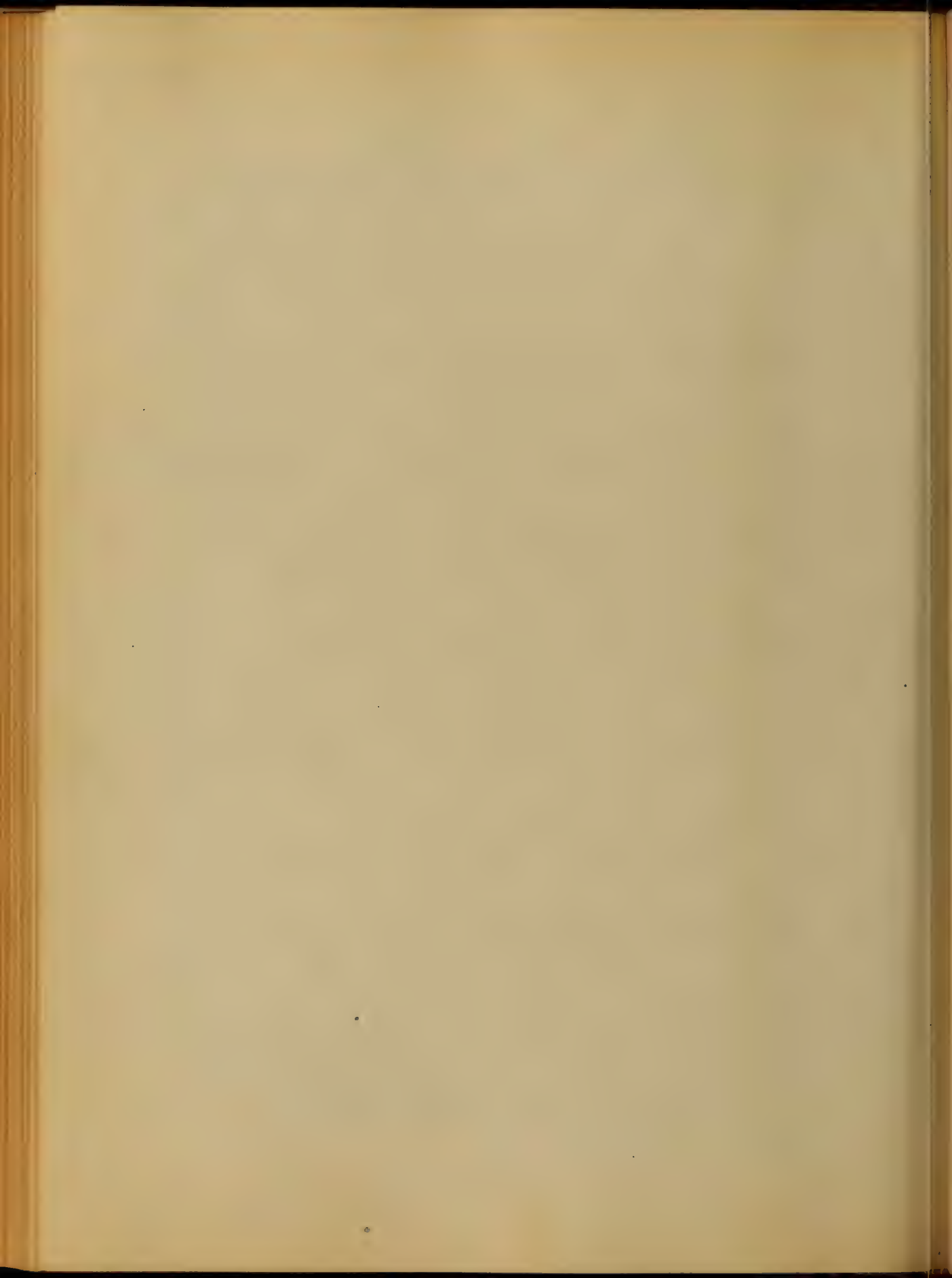
It is not sudden in its onset, but is a result of disease
agency, - but in some cases it is a result of a
change in the state of the system, after the disease has
subsided, swelling, redness, and heat, but there is no
pain. Is the inflammation, therefore, not necessary
for the pain, but because the pain is a result of the
inflammation, temporarily deaden the sensibility of the part? Both of
these would be sufficient to explain the fact, and
are in fact, according to Ratchiff's theory.

After stating his theory of the nature of the disease, he



and antagonistic conditions of the system. It is not
"that in the early stages of the disease the patient is
active Congestion or inflammation"; in this we fully concur as
we have already acknowledged. The fact that the disease
is succeeded by a period of torpor is not a necessary
proof of remission. His idea that the pain is not, in
other than nervous irritation, is not a sufficient
reason why we are to suppose that when such condition is
established it is succeeded by torpor, for the course of the
neurotist after such condition of Torpor with almost insidious
as well as insidious, Lesion, will be the same as if
The pain has existed he may not find any such.

A course of five or six months must be allowed to elapse
and it is that Torpor does seem to be a period of such
inflammatory condition. But I think it is not
likely there may be one of nervous irritation in one
in which the disease is not attended by one



of analgesia & excitation of sensibility, and it is not
the case that true pain is a condition, and it is not
what the cause of such condition may be, whether from
deficiency of nutrition or excessive stimulation, or any
of its various or possible causes.

Now whether the inflammatory excitement of the
nervous system is a consequence or a cause of the state of
which pain is the exponent I am not prepared to say,
though I am rather inclined to think that it is a consequence,
as we may have the pain without it, and when it (the
inflammation) supervenes, the pain disappears, to be succeeded by
Tenderness.

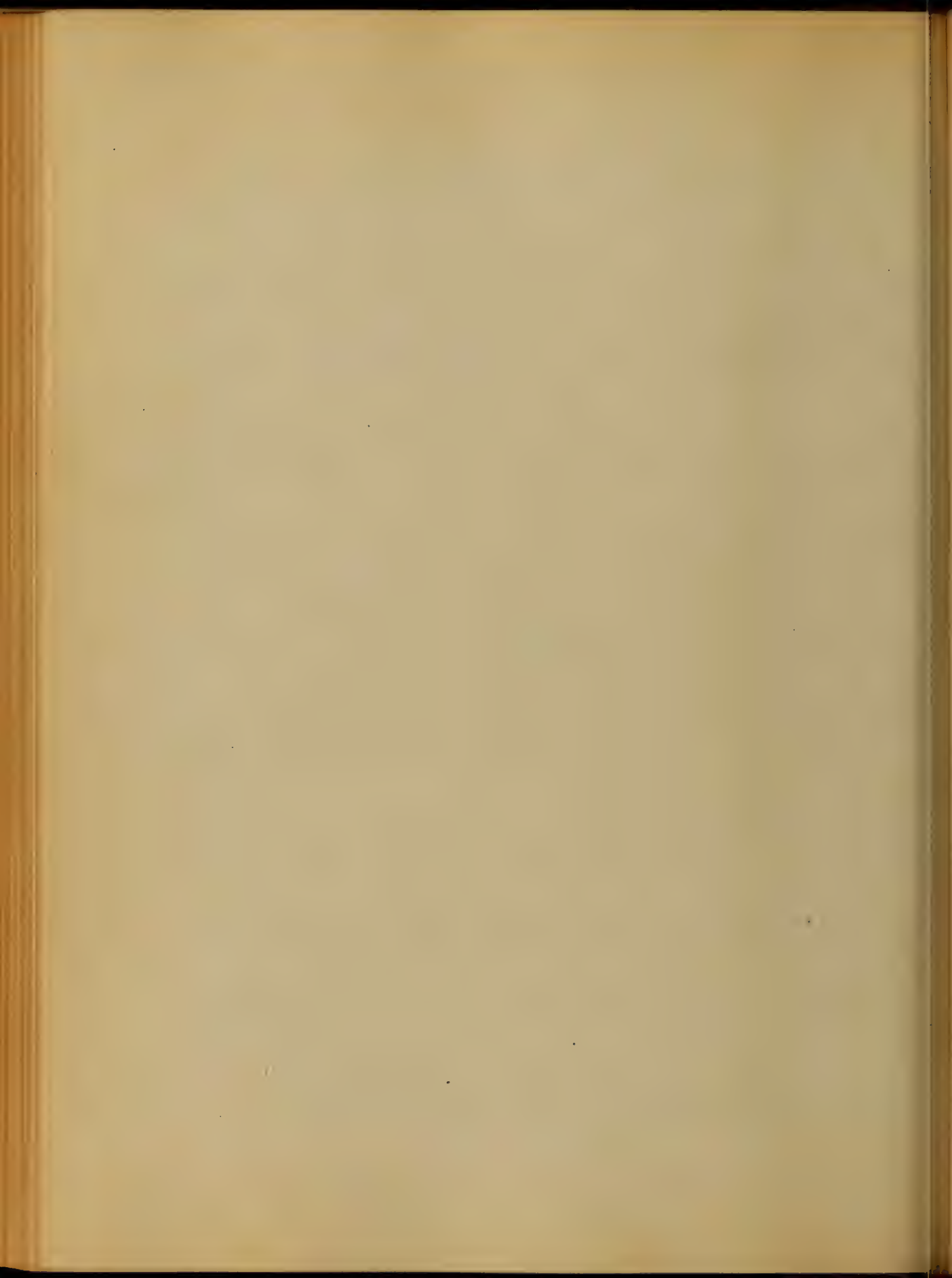
I cannot however come to the sweeping conclusion
of Mr Radcliffe "that true pain should be regarded
always as an evidence of defective vitality, and as a
general and of defective vitality, and as a
sign of a contrary state of vitality, and as a

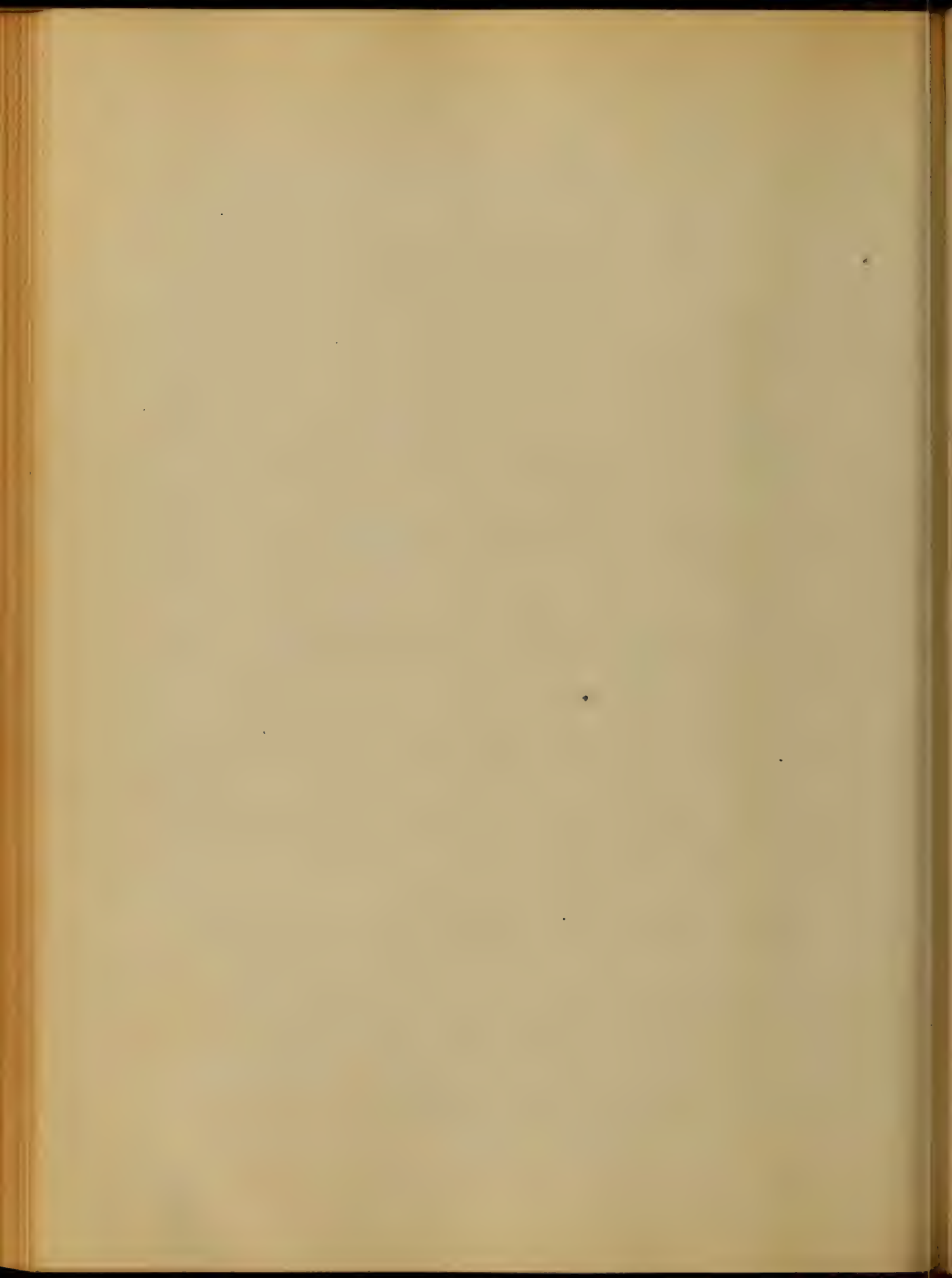


should in all cases receive the same treatment
indicates the increase or supply of such defective process
uniform and universal plan of treatment, although it may be
very different for any two cases, it is not necessary to
vary from a certain course of treatment. True, the treatment may
be correct, but I cannot make it any more correct by any
universal application.

Pain in its localities and modes of propagation may be as
various as are its causes. At one time the local and distant
extremities of central pain, at another, the local injury, or
irritation may have long subsided while the irritated or
irritated centre still continues to increase its excitement
and excite its reflexions of pain throughout
connections; or again it may exist in one locality
perfectly sound and uninjured, as the result of an injury
in some remote part.

Exposure to cold and damp atmospheres

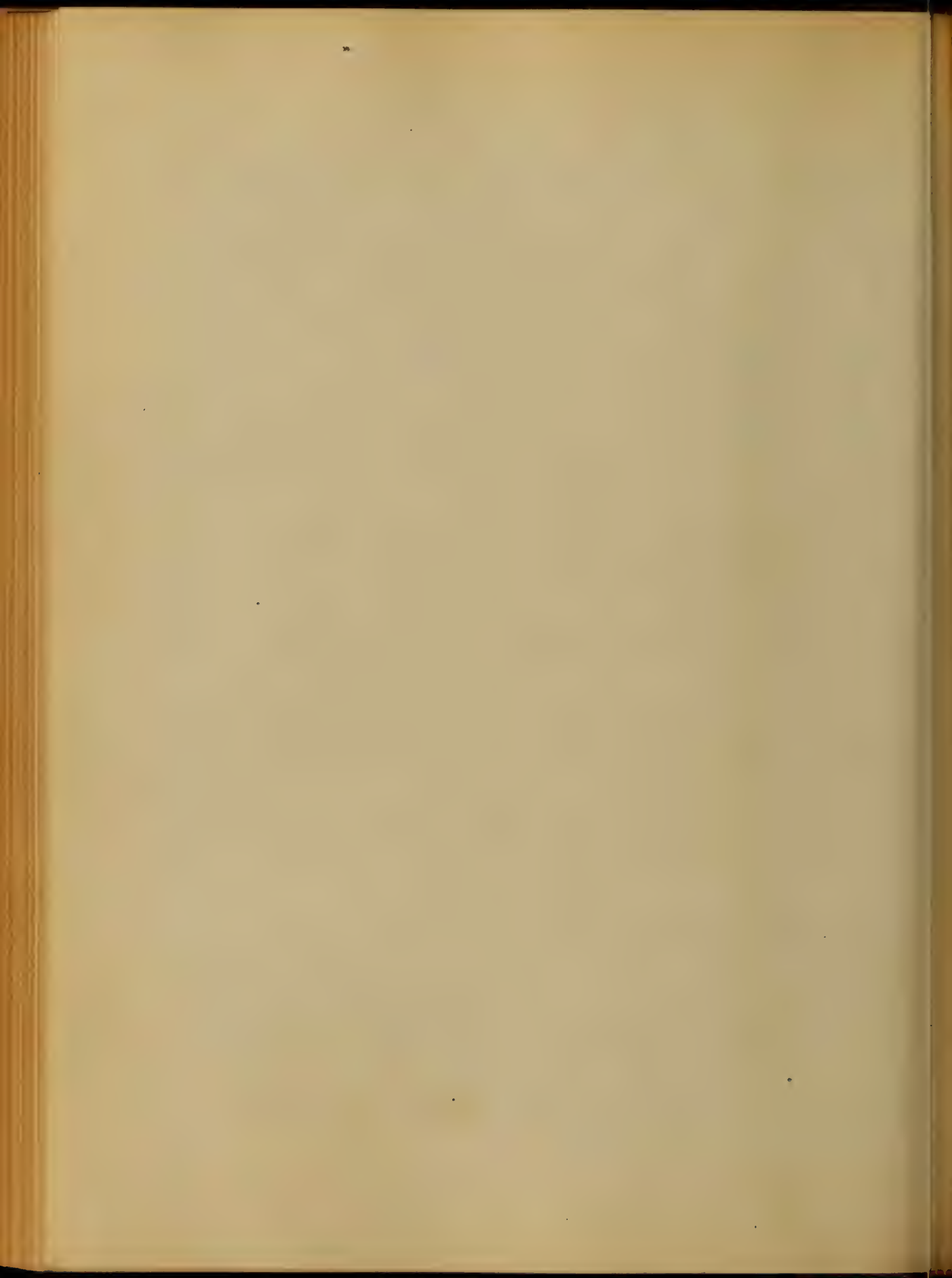




this force not being supplied then pain ensues which still
in the absence of the force of the body, and
then we see arrest of secretions and the accumulation of
poisonous materials in the system.

In Syphilis, Rheumatism, Gout, Scabies, and various
other diseases which affect the nervous system, the
depends upon some poisonous principle in the blood or
some other - and this in a great measure or
affecting the nutrition of nerve tissue, disturbs the
various functions of the system and thus may allow either
an accumulation of waste material, or waste of tissue.

The sensation of pain caused by certain irritations
made upon the nervous system and conveyed to the sensorium
conscience, which by the way is not confined to any
particular part of the body, is recognized or manifested in
the intellectual faculties, and the habit of mind that
without even intellectual faculties, which is manifested



and recognize as pain would scarcely exist, though if we should judge of physical sensations only, they would seem to be what we might call unconscious sensation or pain.

It is a general rule the less the intellect the smaller the capacity for appreciation of pain - In its operations self intellect enables us to bear without consciousness or experience of suffering, and persons whose faculties have been blunted by Ether or Chloroform undergo the most serious operations without any or at least much pain as far as we can judge. We could still have in the work of creation and the further we go in our examination the less appreciation of pain do we find. Even under the general impression.

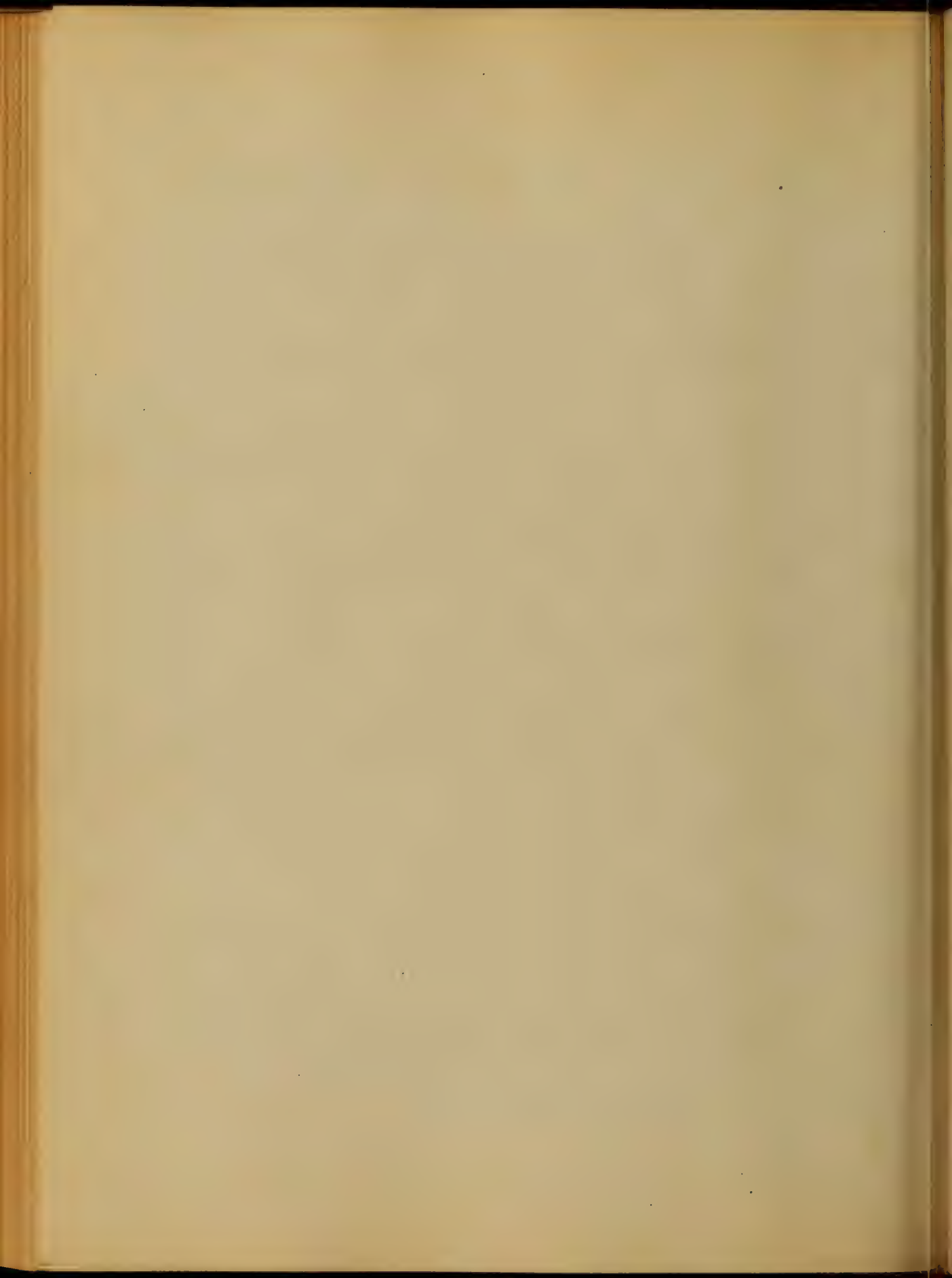
There are also those different persons of different degrees of endurance and different susceptibility and so it is, for I myself have often seen one man suffer at a very intense pain from an operation the less sensitive than



man will be more susceptible than another of the
same cause, and the difference is not in the
intensity of the cause, but in the susceptibility,
and this difference helps to make our
individuality.

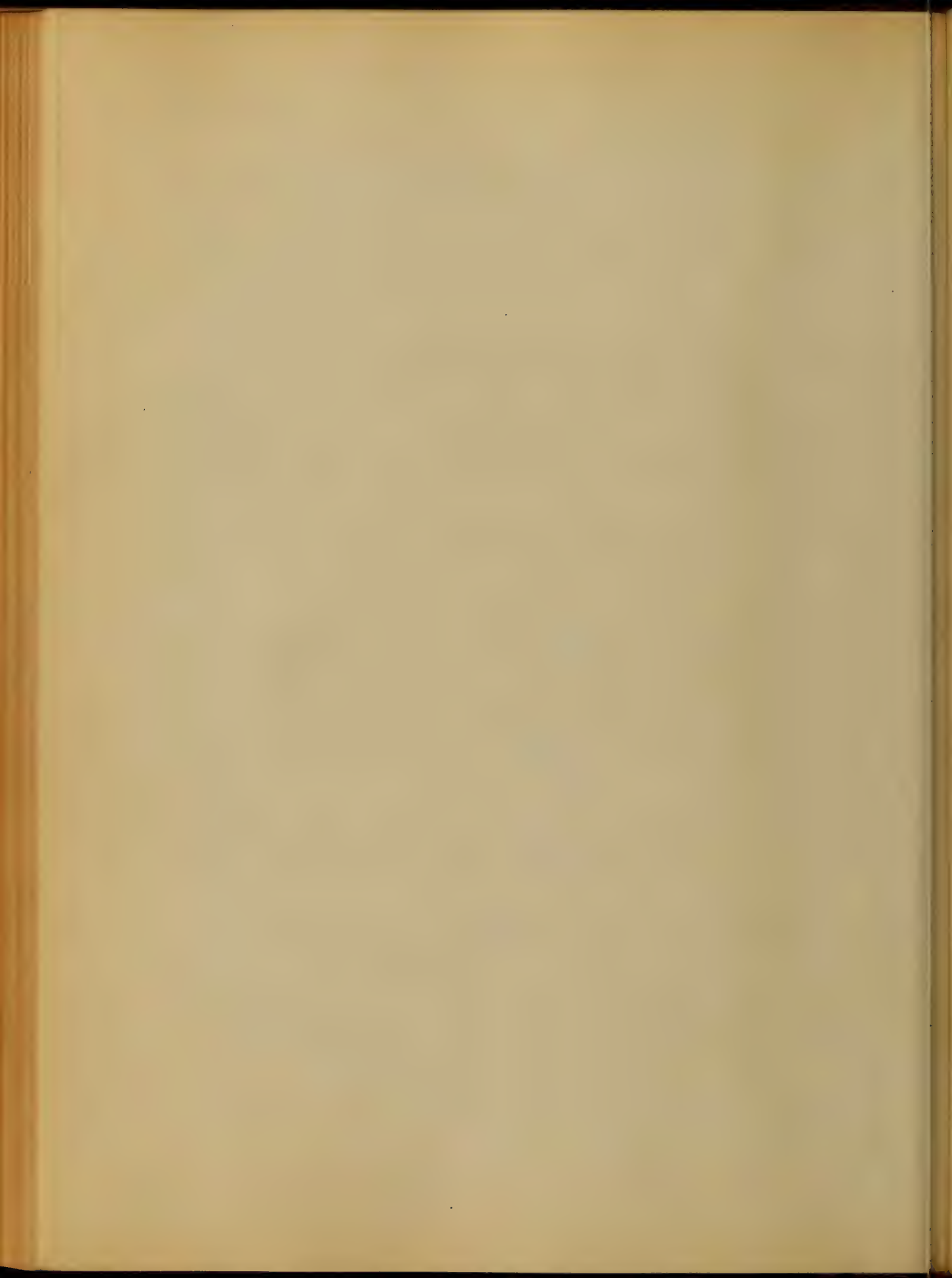
A man may suffer more at one time than at another, or
may calculate himself to a certain limit of endurance, but
which when first encountered exceeds that limit, and
and it is always better to know the limit of our
our being, that such is the case, and that we are so
constituted as to be able to learn to bear what would
otherwise be intolerable -

The novelist has recognized the fact, and in the
character of Robinson Crusoe, has shown a
and mental being who in high health, and in the
injury, suffers little or nothing from a
slight injury.



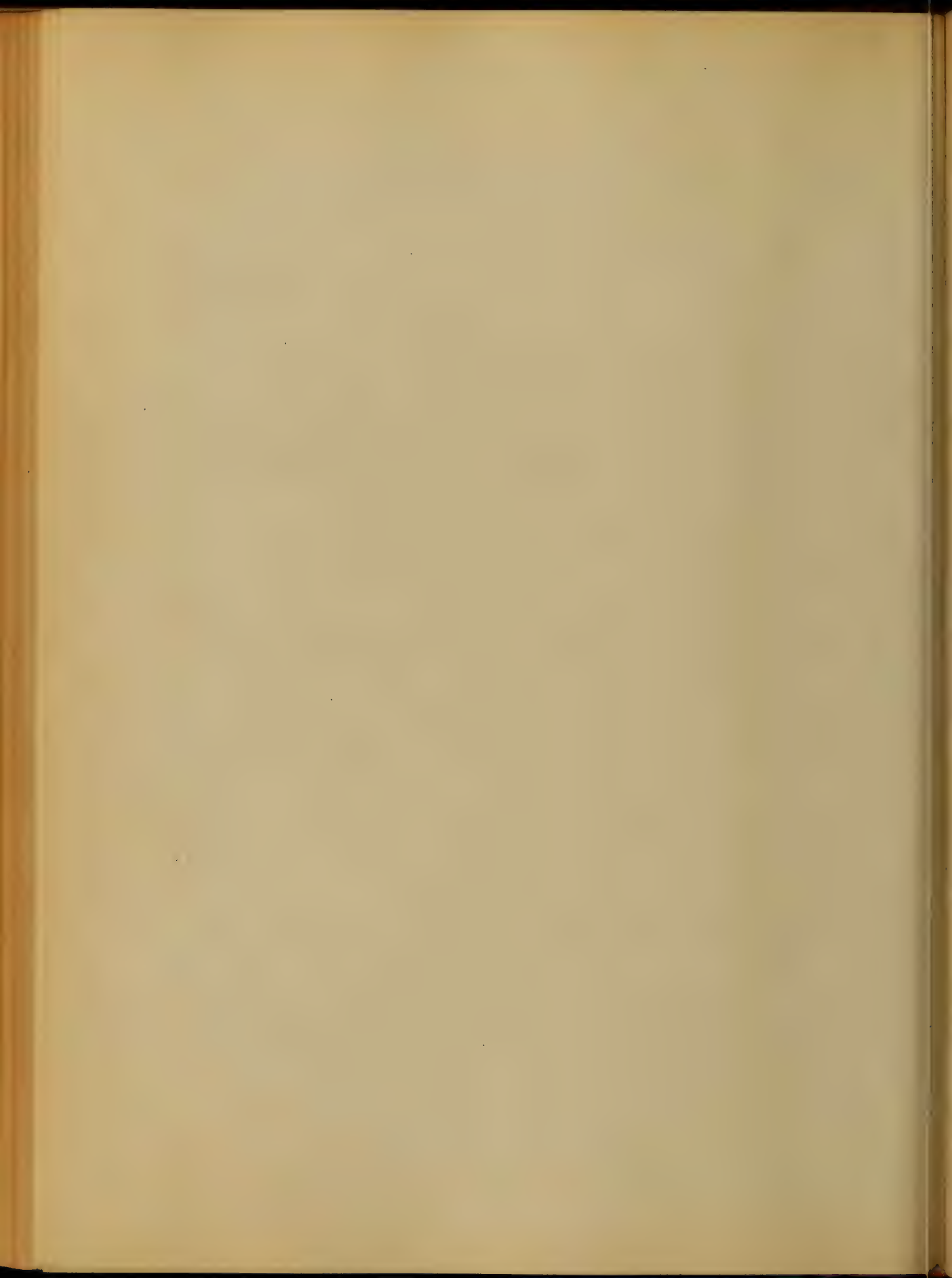
It is singular how the locality of pain may modify
and affect its character, as we know how the pain of
an affection of one part of the body differs from
of a like or similar affection in another organ -
Head, Chest, Stomach, &c. &c. &c.
is a shade of difference according to the nature of the texture
involved - Is this difference of kind or degree? or
degree of fancy.

The character and degree of pain cannot always be
taken as an evidence of the severity of a disorder -
frequently we have severe pain without any other
appreciable disorder. It can always be regarded
as a consequence of the intensity of the disorder - It may
be indicative or expressive of trouble at some distant part
from its own seat, as for example the pain in the
indication of disease not in the knee but of the
joint.



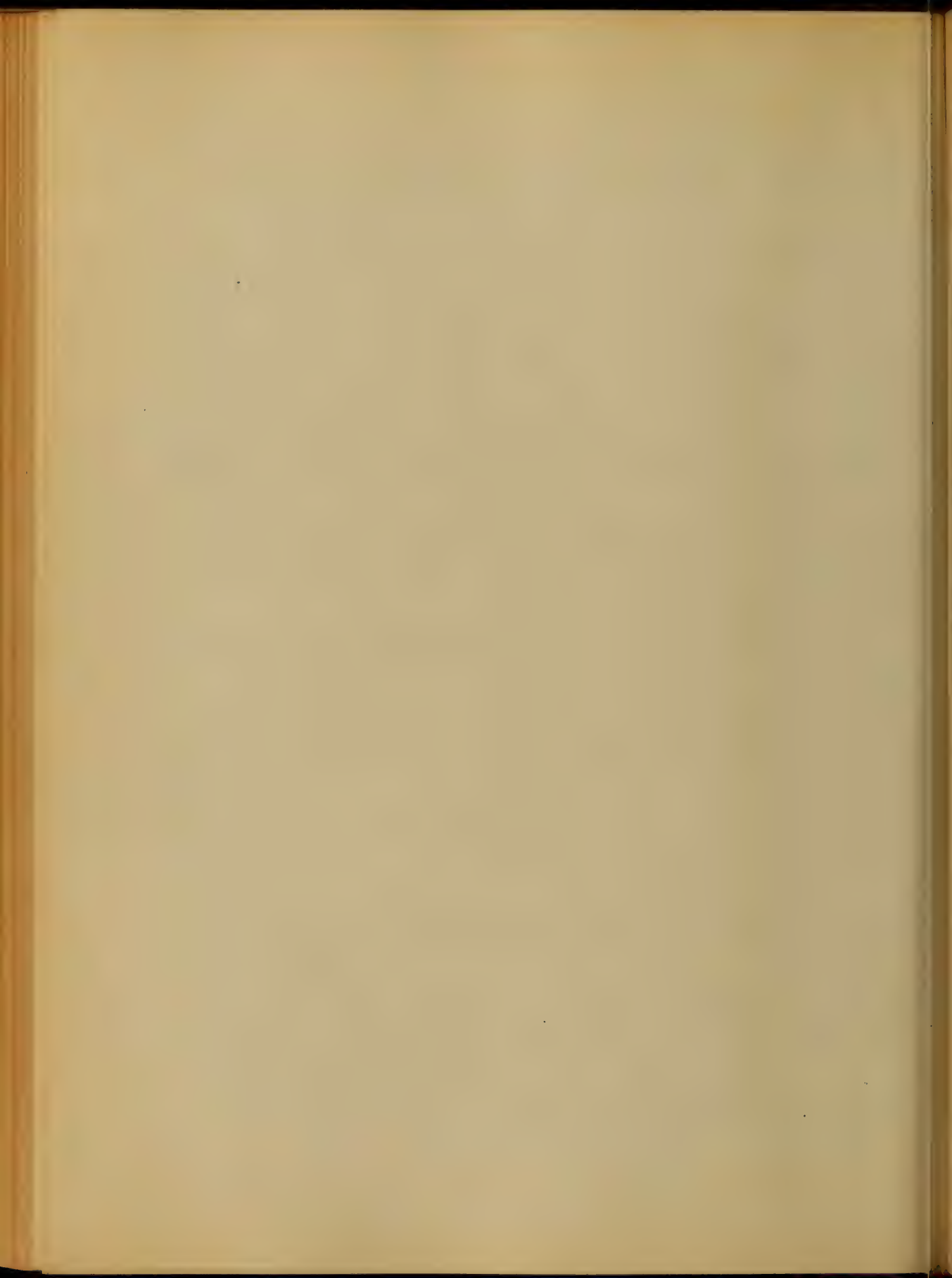
In severe accidents one great source of danger to life
is from shock with a prostration of nervous force and a
state of collapse - at times we witness this in the most
and violent accidents that we see in life for a long time
after the injury, but sometimes the brain may be so injured
as to result in the sudden shock - then when the patient
recovers he is in a condition of prostration and
condition continue and if there has been extensive injury
of the brain, some of the brain matter is removed by the
Surgeon as an evidence of vitality in the injured part.

The Surgeon's duty is to see that the patient is
kept comfortable and regarding the treatment we must be
grateful that we have it to warn us of the approach of
disease or injury which might otherwise creep upon us,
it is more to be feared in the present state of the
Sensitive Stomach and of the disposition of every
individual.



When we lose this natural sensibility, disease may make great advance without being perceived and in some instances the nature of the disease that has ensued - not so much from the traumatic injuries which caused the original lesion, as from the changes which result from the latter in connection with the large bed of nerves (unperceived by the sufferer and his attendants) which cause the disease.

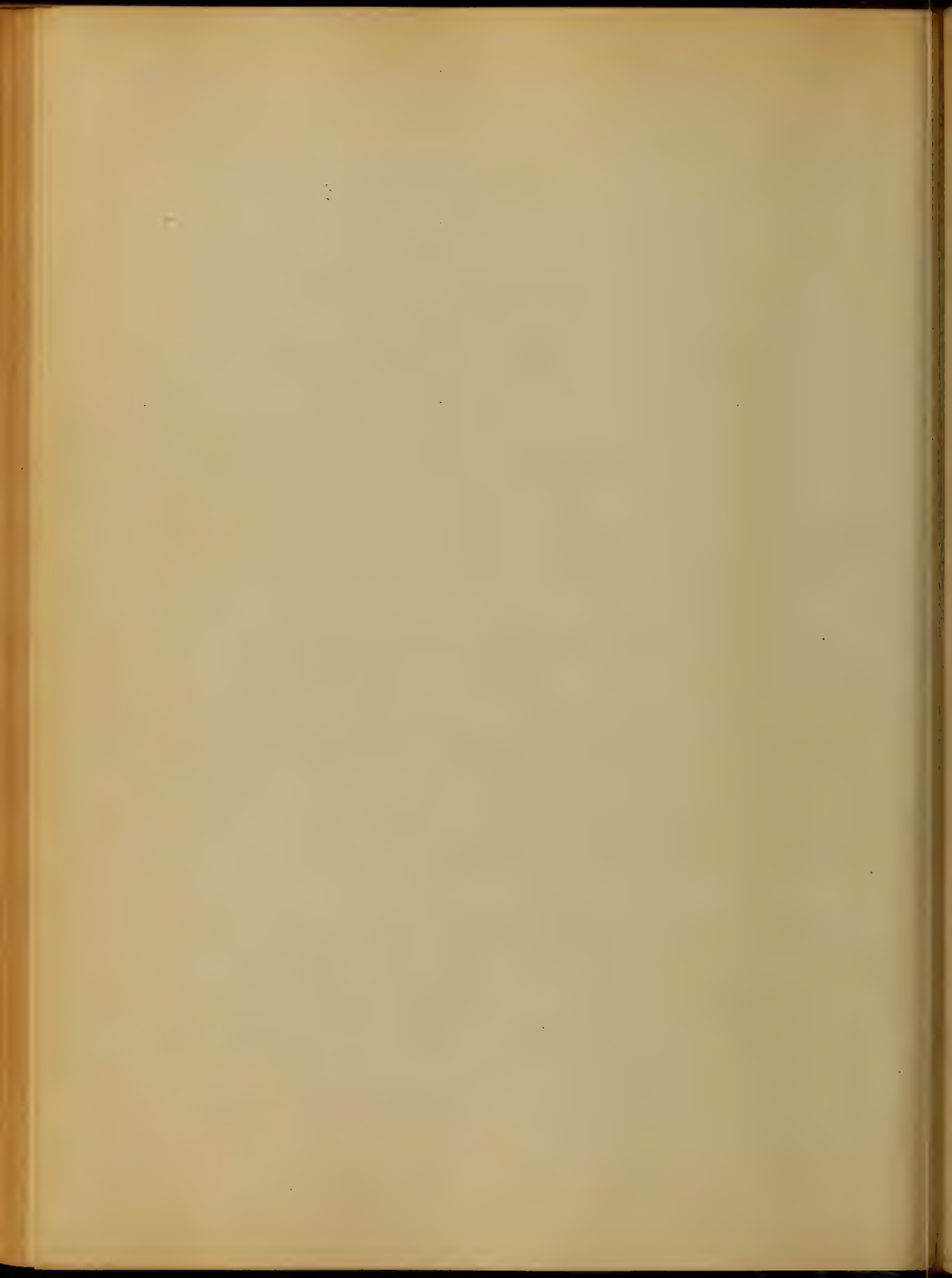
I shall not in this paper attempt to indicate the particular treatment for the type of disease of which I have written - The good old maxim "Remove the cause" is an excellent one but there is a condition implied which cannot always be fulfilled i.e. "Find the cause", for both finding the cause and removing it are things to be done, but unfortunately there are many cases where the cause is not found, and the disease cannot



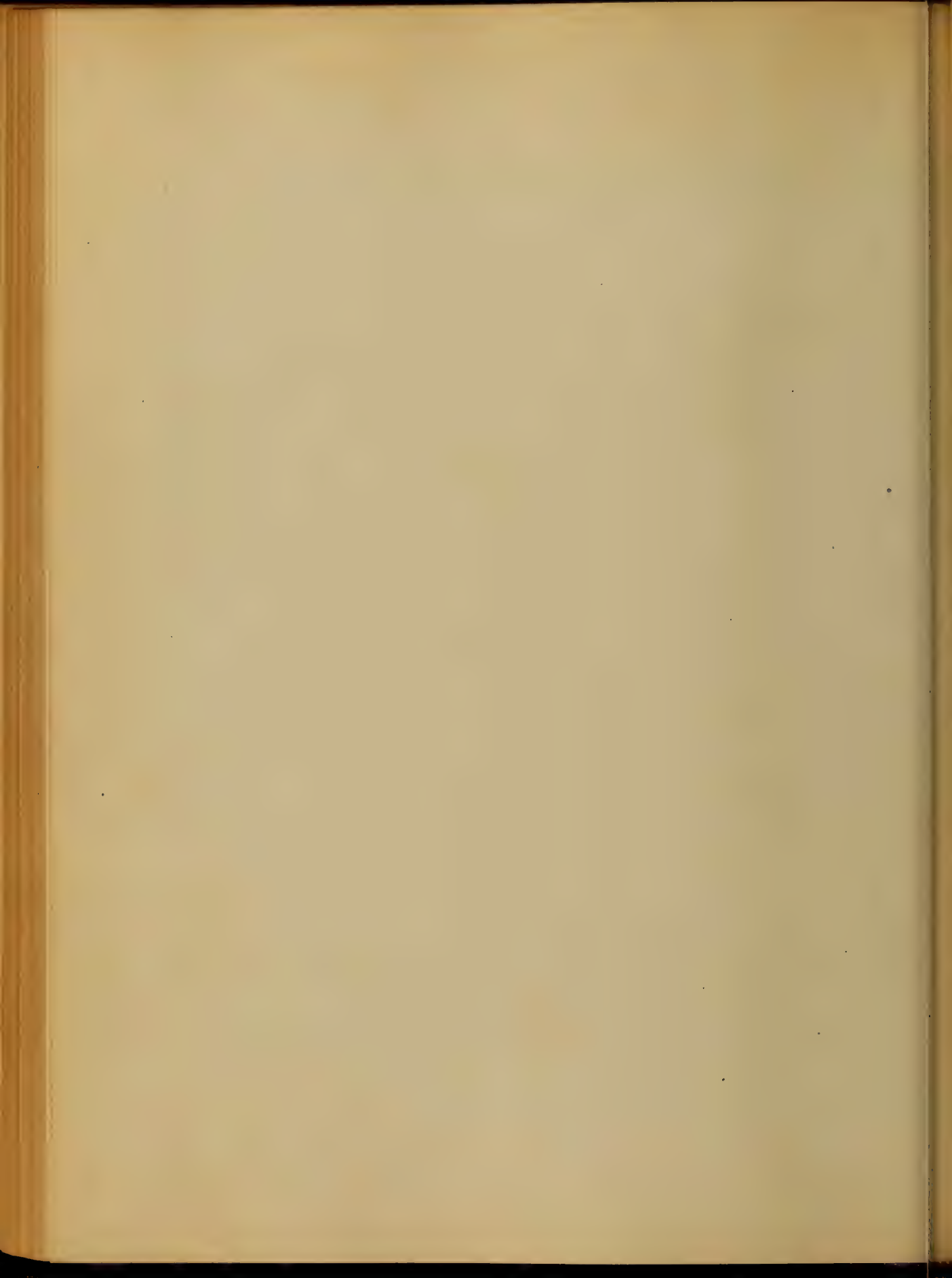
...else medicine must
become a certain art.

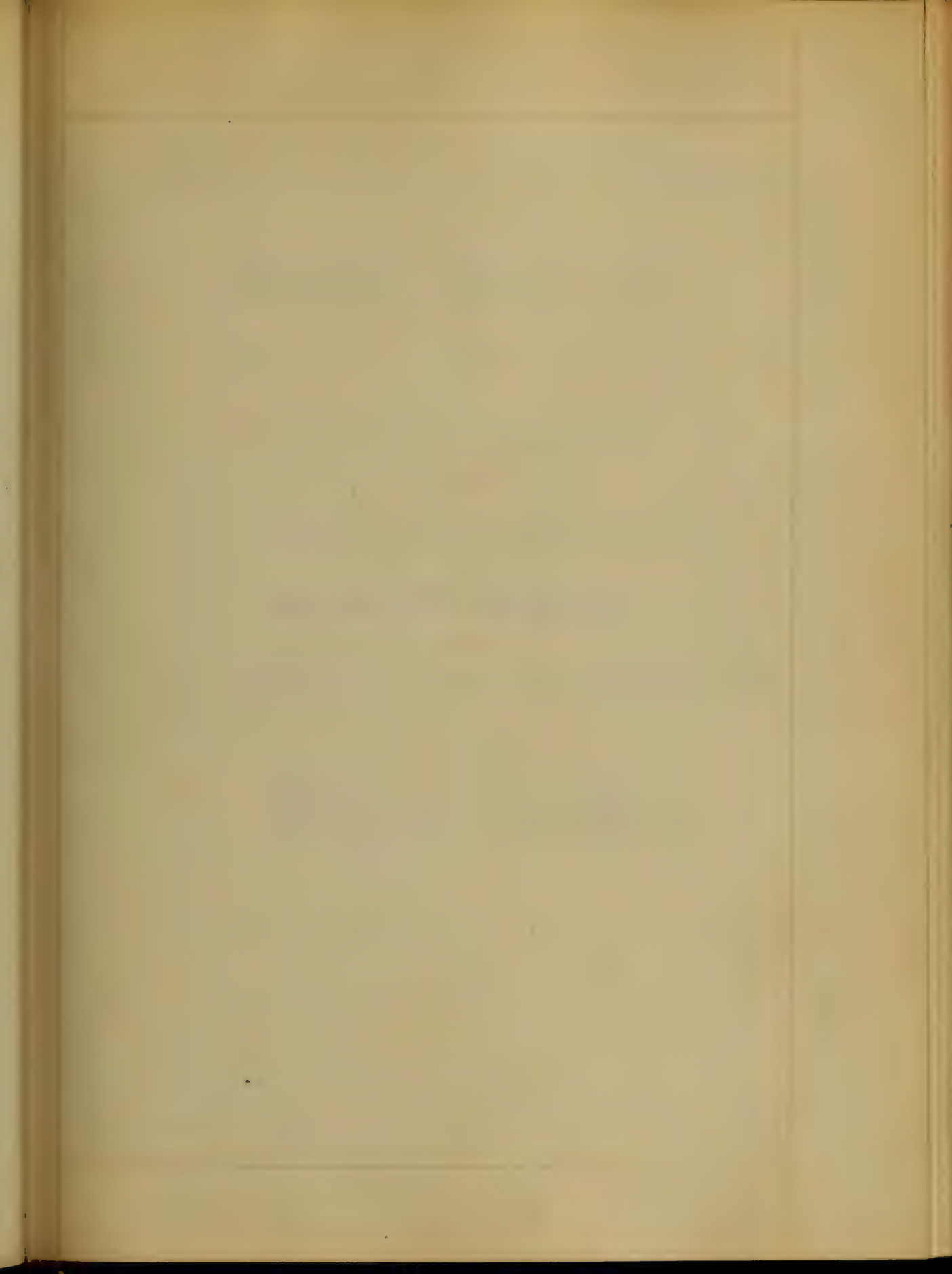
If we ascertain the cause, of course we can then
act more intelligently and effectually than we can
otherwise be able to do, but we are frequently prone
to mistake cause for consequence, and consequence for
cause.

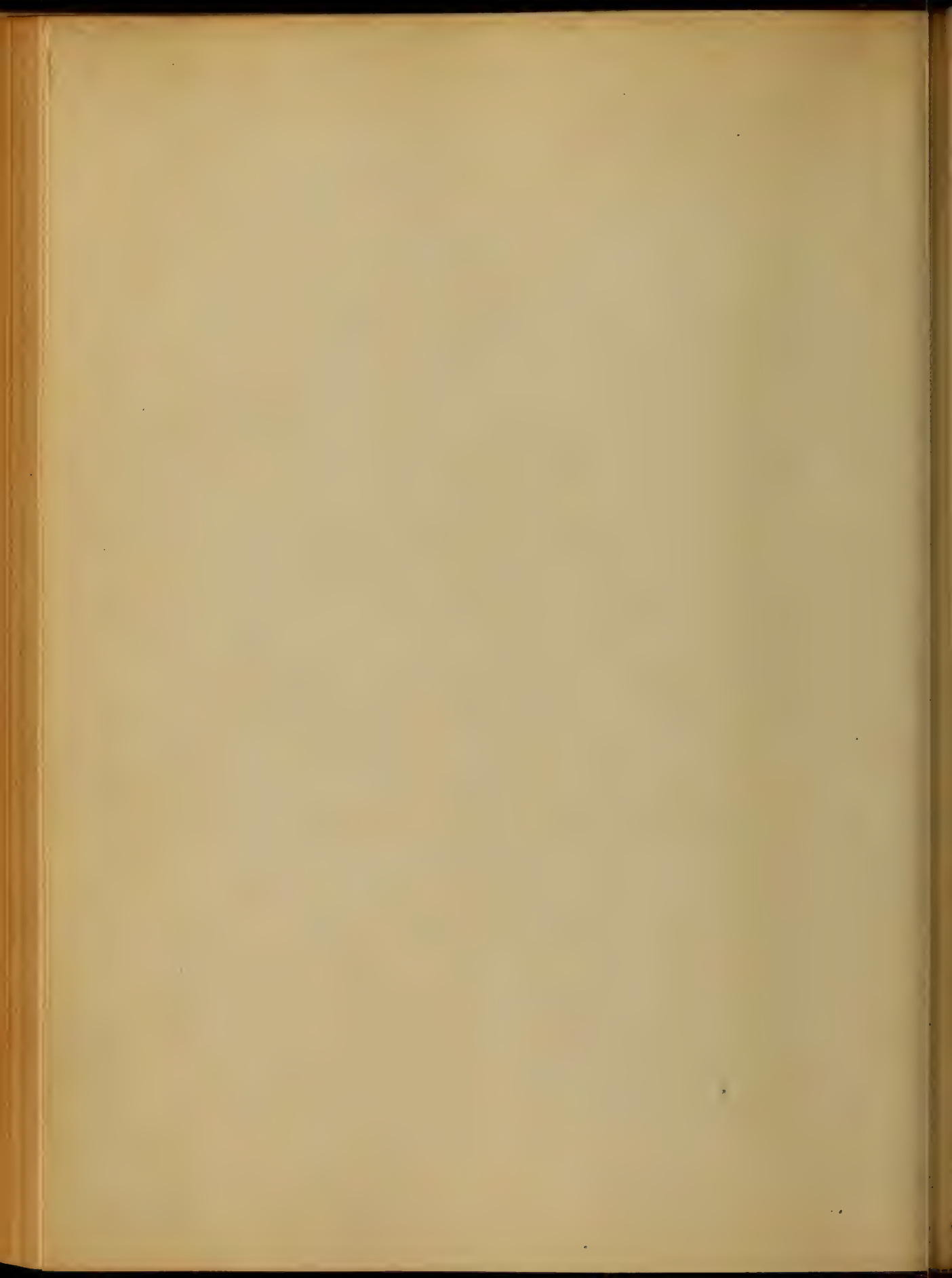
As a general rule of treatment I would not employ
various quantities of the blood, as follows:
Bleeding, Emulsion, Elixirs, &c. as
a resource, Purging, Humidity, Solutions, &c. as
baths. Irritants, Electricity or Blood letting: or in short I
would resort to every measure the nature of the case
might demand, or my own judgment direct, and would
not be restrained in my action by any ancient dogma
either of the Sangrado or Boerhaave's school or of the opposite
extreme of Mesmerism and Hahnemann.



Universal Journal for the Year 1787







AN
Inaugural Dissertation

ON

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

G.

Session of

18



Q. Circulation of the Blood.

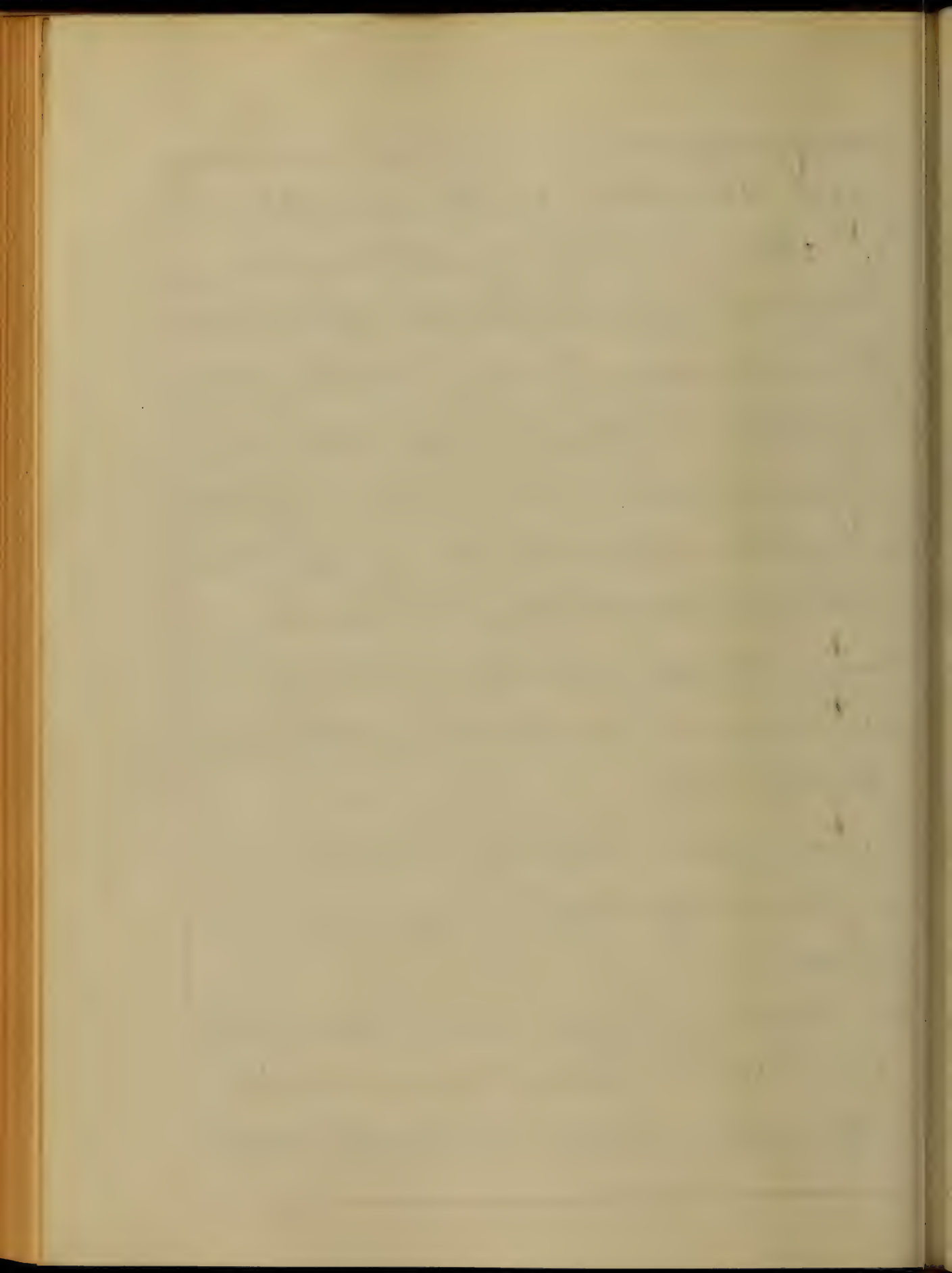
Q. Direction of the circulation of the blood does not allow to be a simple circuit to one direction. It is a circuit to one direction and to substitute parts for the same each other. It is a circuit. The limited space resembles the limit of the circulation of the blood.

1. That the arteries are the main artery.

2. That the veins are the main vein.

3. That the veins carry blood to all parts of the body, instead of bringing it back to the heart.

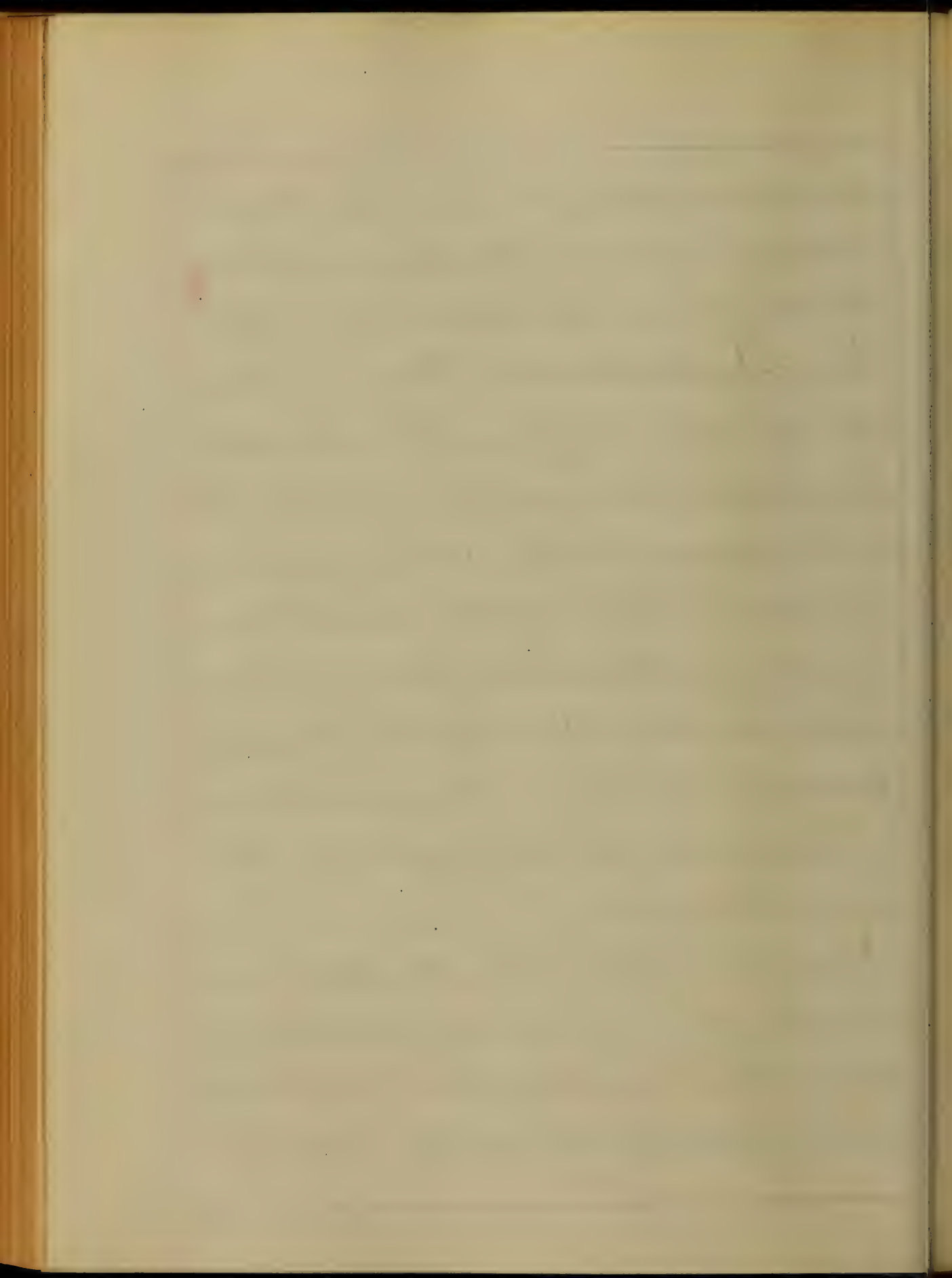
4. That the veins are the main vein, and the arteries are the main artery. The blood is carried to all parts of the body, and the veins are the main vein.

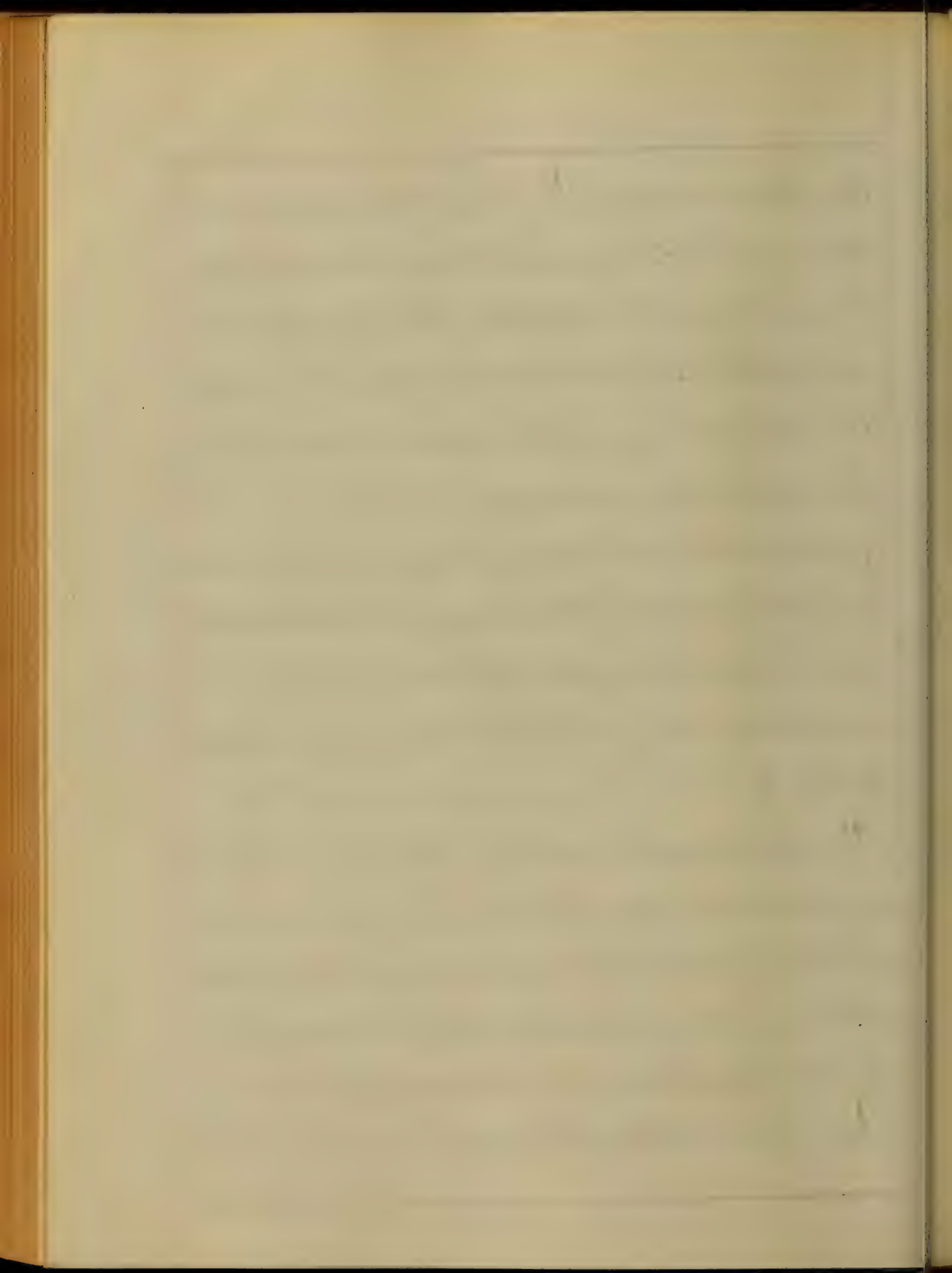


He included Earth and Air, that blood,
instead of Air issued. He therefore stated
that the Arteries contained Blood only.

In the year 1661, William Harvey was
born, when Andrew Borelli after
being satisfied himself of the existence
of the assumed inter-vent. in the
arteries, that the system was not
closed, and the second great
artery was
written in the year 1669. The
was
omitted upon the assertion of
of Borelli that the
of the vein.

The different parts of the
was
separate and
was



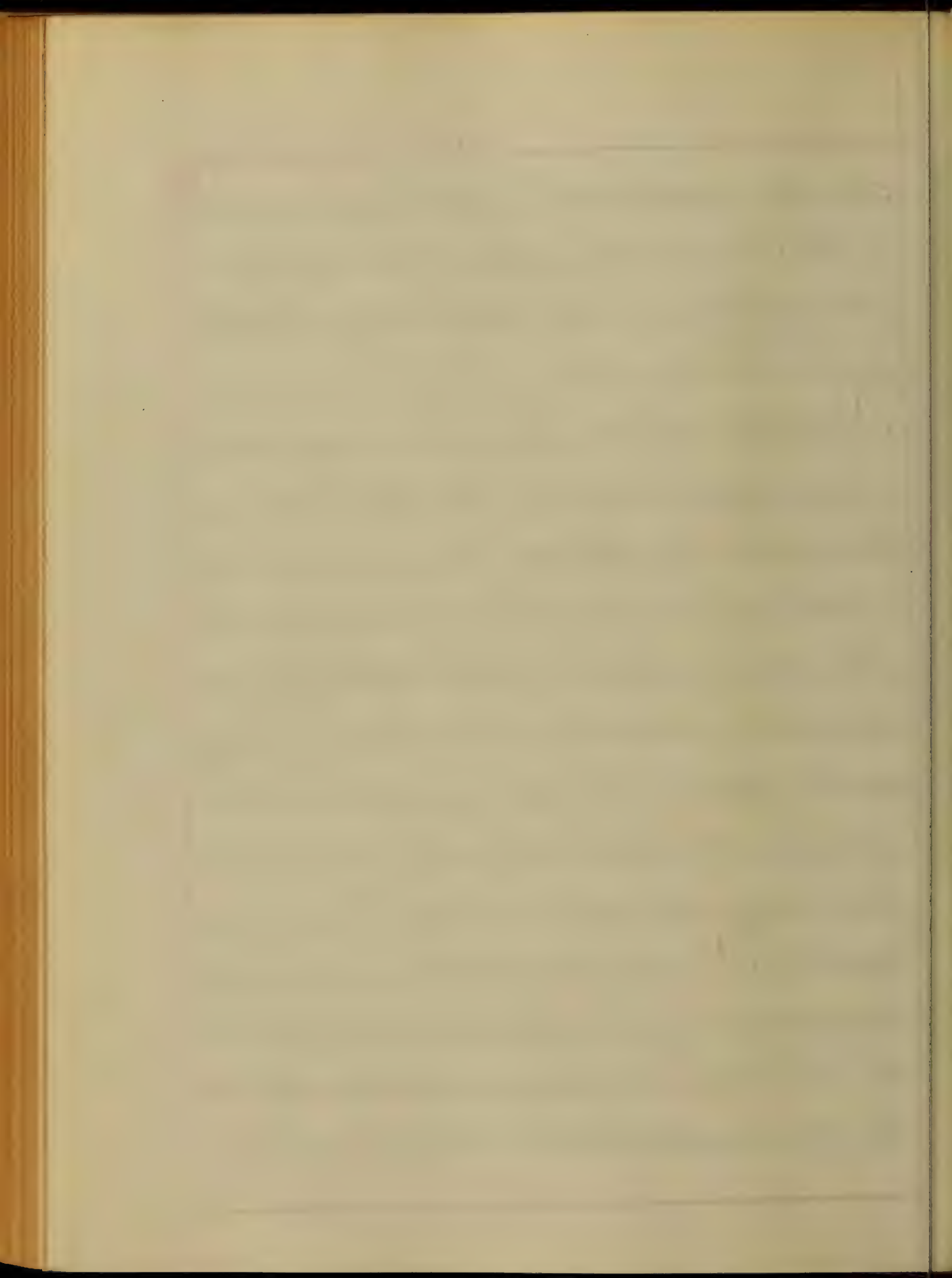


Account of the Subterranean ...
 which ...
 ...
 ...

The first ...
 ...
 ...
 ...

The ...
 ...
 ...
 ...



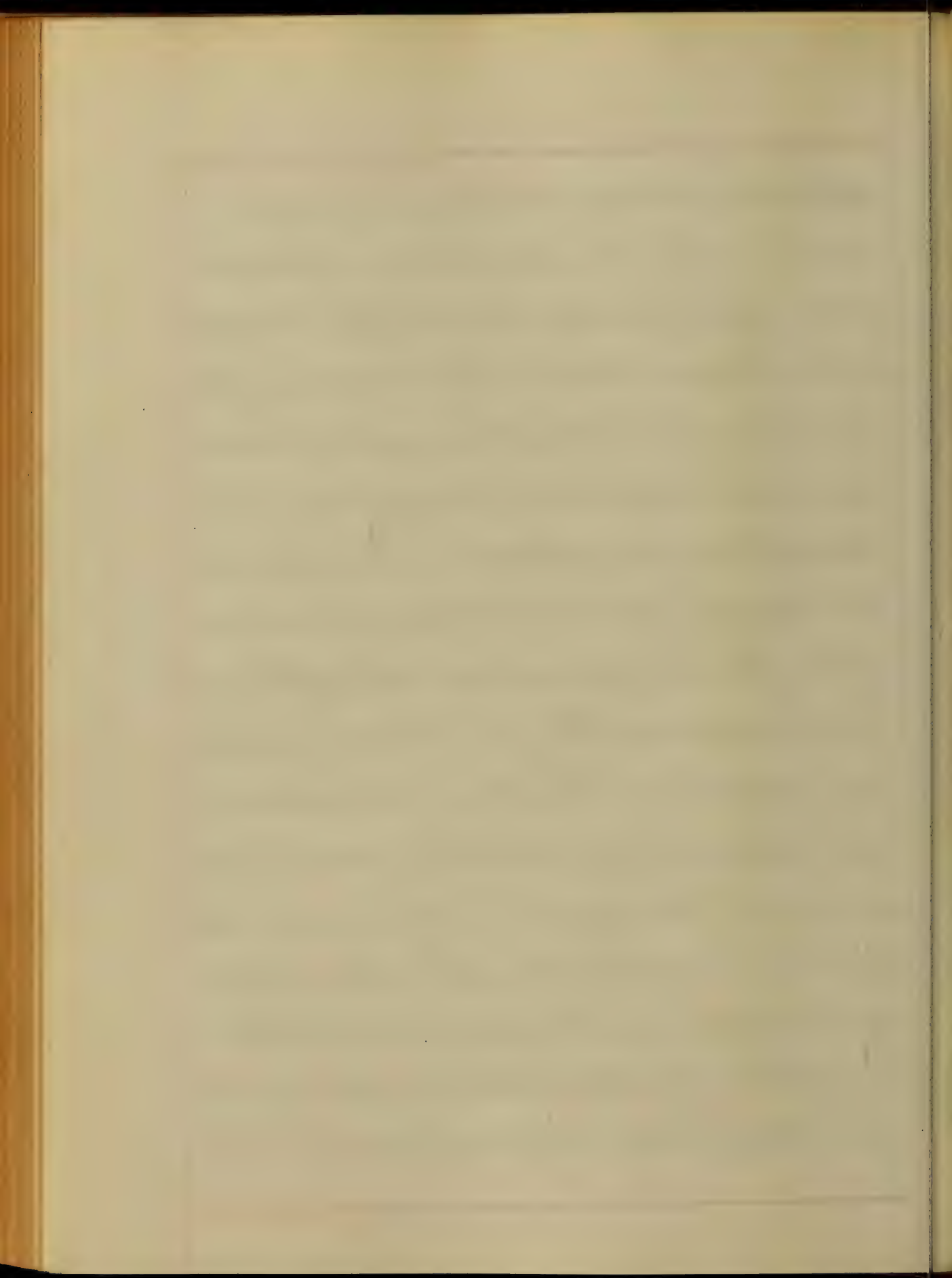


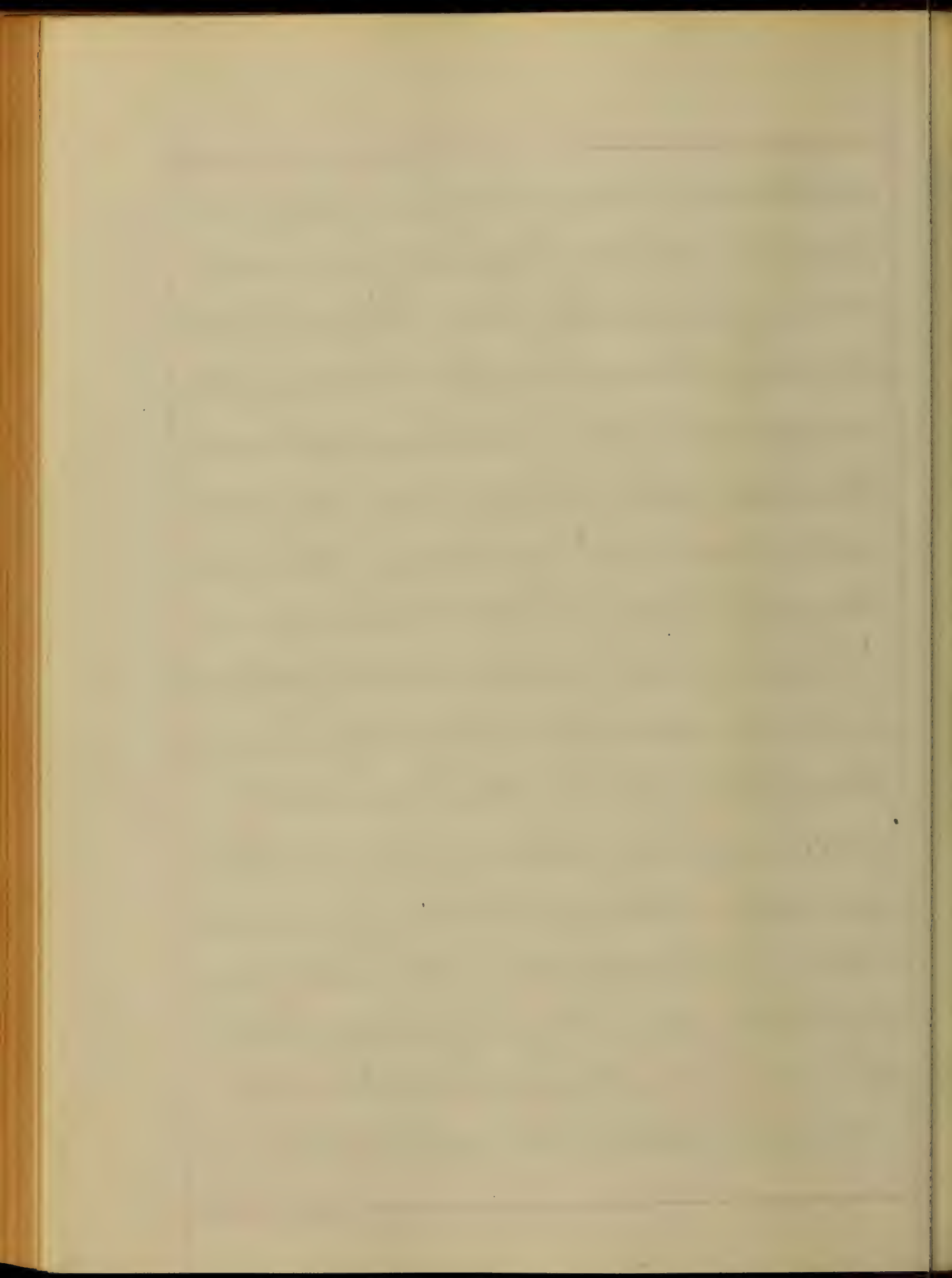
other by inter-auricular and inter-ventric-
 ular septa, which in simple heart is common
 to the relative chambers which they divide
 and are constitutive of the septum in the
 double ventricle. The ventricle is situated at
 the upper end, posterior part of the heart
 and has a much smaller capacity and
 thinner walls than the ventricle. The
 auricle and lower portion of the ventricle
 consist of the muscular wall which is
 in fact situated partly on the same
 plane: the right auricle being situated
 in front of the left, covering the heart in
 front. The left auricle covers the
 back of the heart. The right ventricle is situated
 in front of the left ventricle and
 is on the left side of the heart. The

thick wall, the right auricle being about
one inch, that of the left auricle about
half. The proportion of the ventricles
being as one to two.

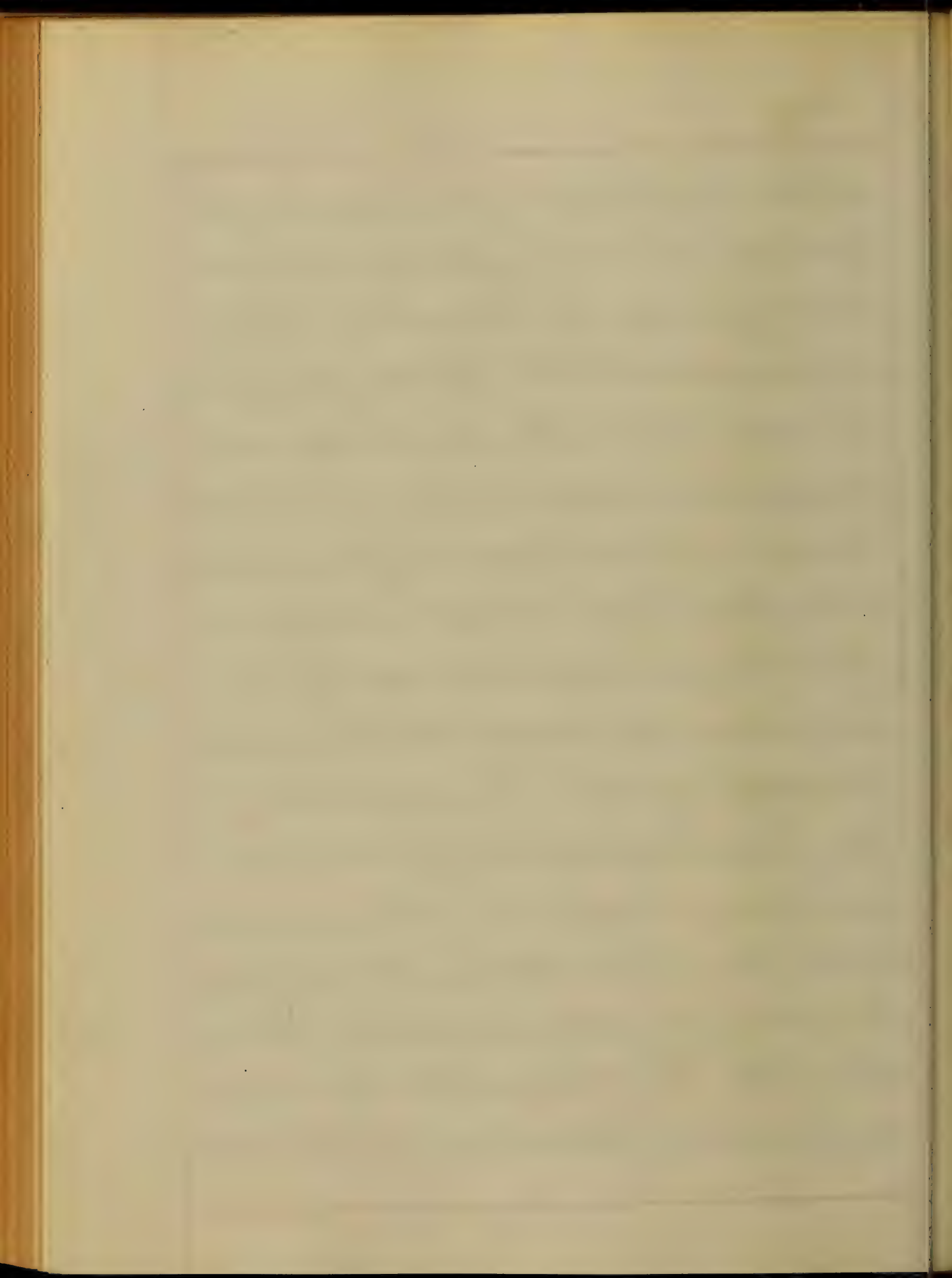
The auricles and ventricles of the heart &
the branches of the pulmonary blood vessels
are separated from each other by
however partially separated by constriction
of their orifices. They are recognized by the name
of auricles, auricles & ventricles, as the
ventricles are called. The auricles are
situated at the base of the heart, opening
into the right and left ventricles. The
auricles ventricles are known by their
having two. The auricles & the ventricles
are separated by the coronary artery
between the ventricles and the coronary and





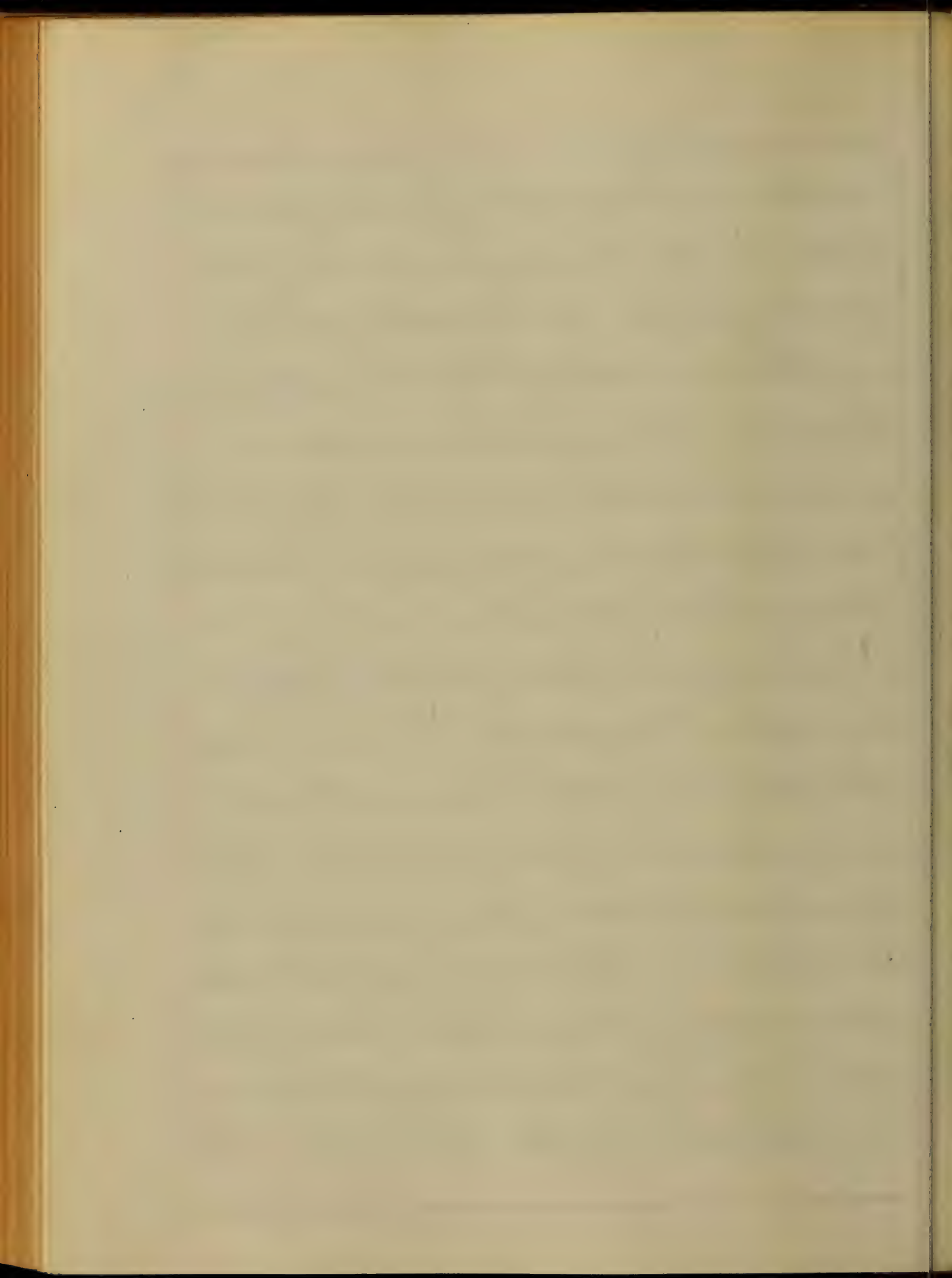


subject to the force of the lungs being
 then subjected to the influence of the res-
 piration process, it is brought to the sur-
 face of the vessel, the left auricle, and
 when it passes through the valve
 into the left ventricle, the left auricle
 and closure of the mitral valve it is
 propelled into the aorta and from
 artery and its branches distributed to
 the entire system. The pulmonary
 circuit through the heart, lungs,
 vessels and lungs is termed the pulmonary
 circulation, that from the rest of the
 the system the systemic or general. The cir-
 culation of the blood through the heart is ac-
 complished by various valves, the

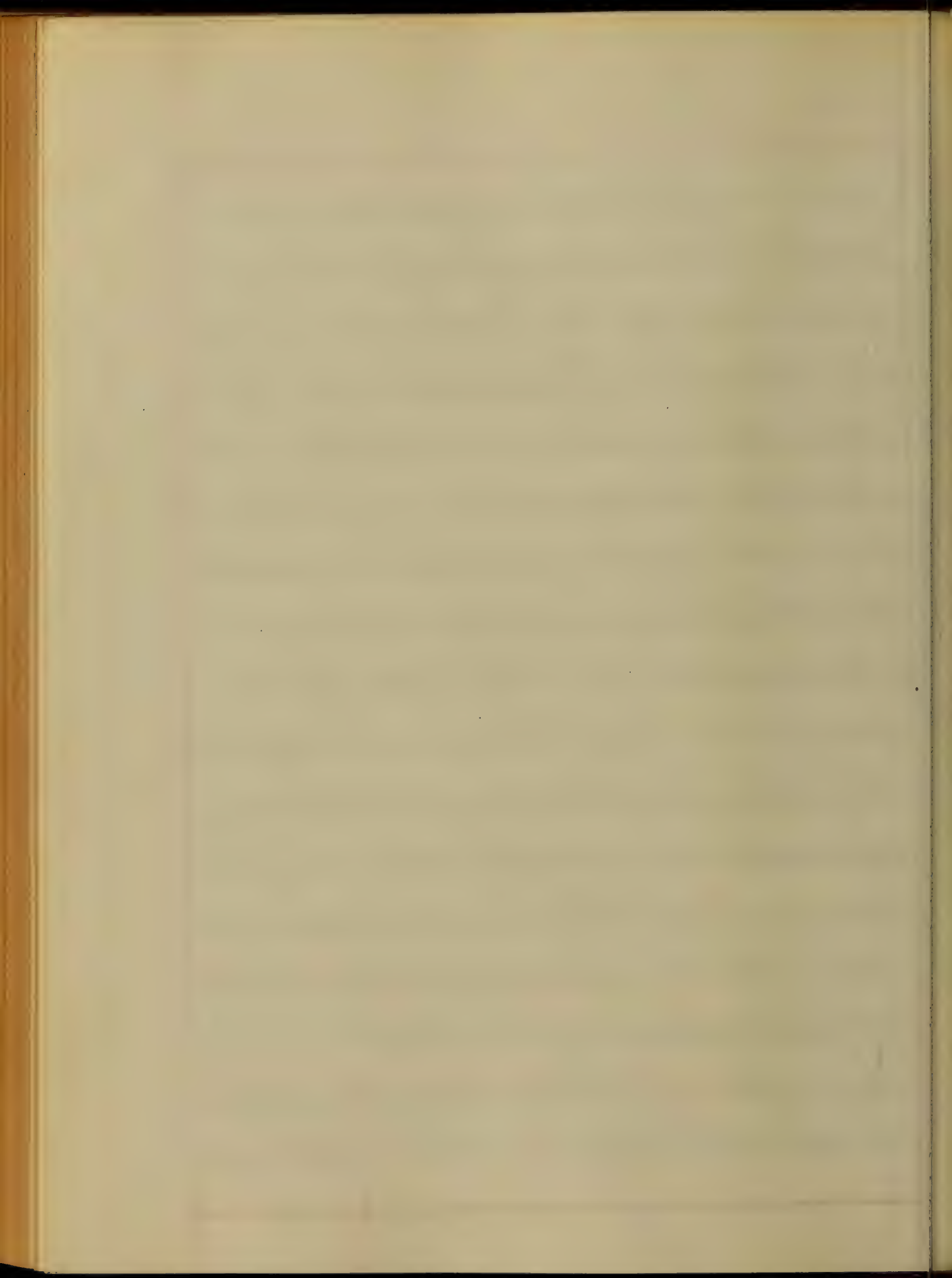


relaxation of the muscular fibres of that
cavity. The auricle, receiving a portion of the
blood it into the ventricle, and then
in, then from there it into the aorta.
Each one of these successive actions is
called a pulsation or beat of the heart, and
each pulsation is accompanied by a certain
movement and impulse.

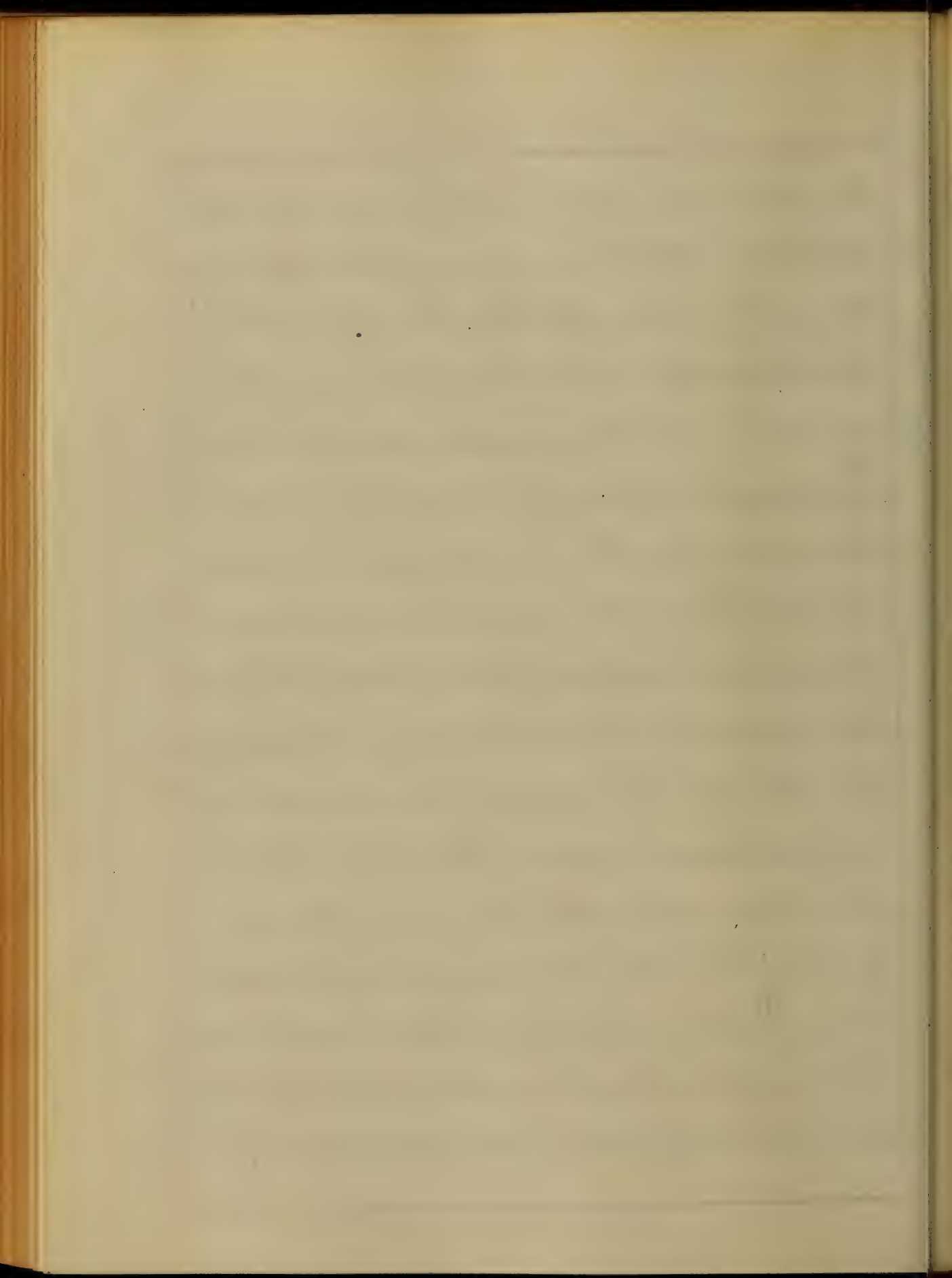
The sounds of the heart are three in number
the first is the sound of the first, second, and
third sounds. The first is the
sound of the heart, the second is the
sound of the heart, and the third is the
sound of the heart. It is heard most dis-
tinctly over the 5th rib and 7th intercostal
space, and the intensity of the sound
is caused by the closure of the aortic
ventricular valves. With the first



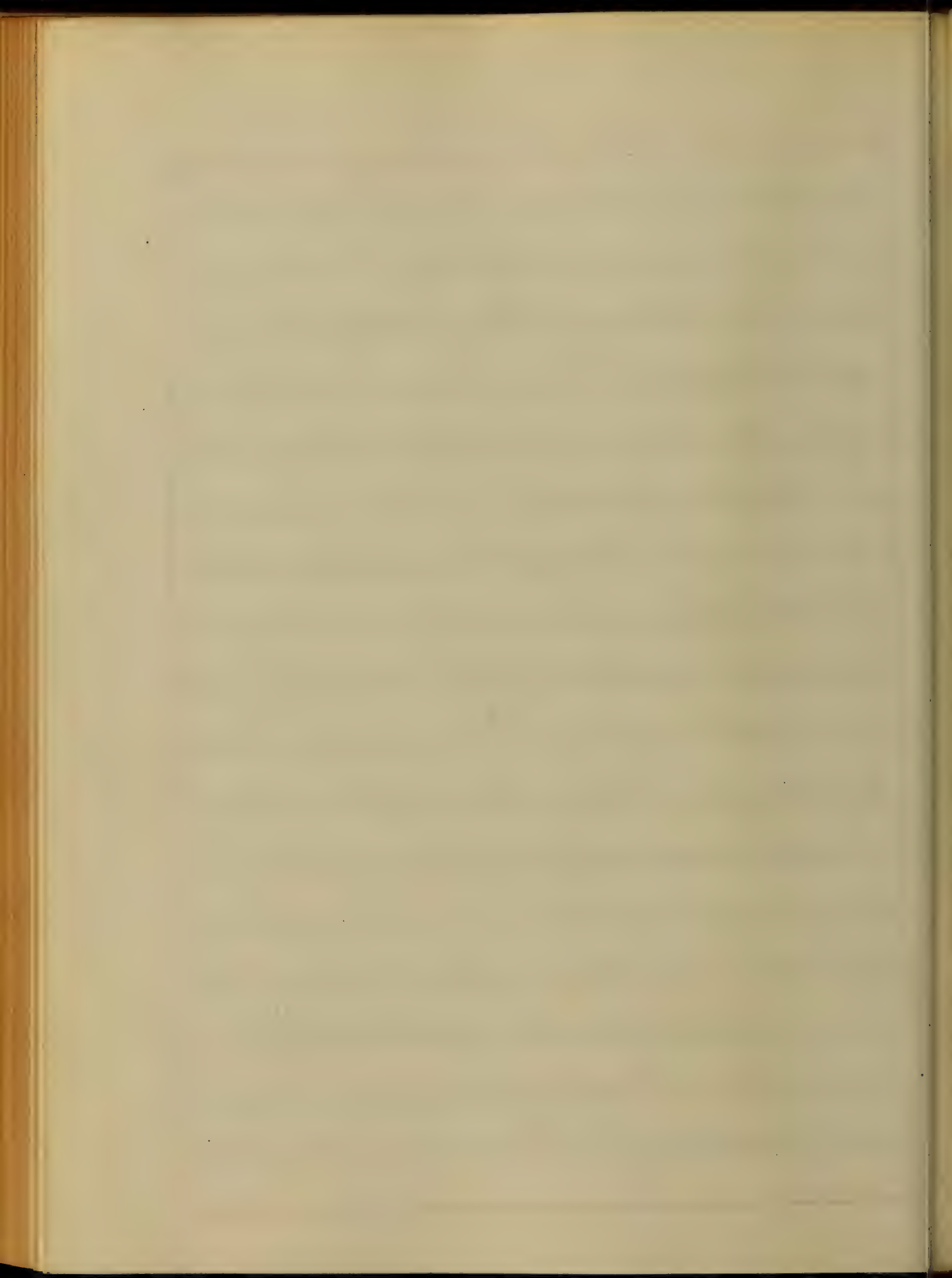
Handwritten text on a page with red horizontal lines. The text is extremely faint and illegible, appearing as a series of light-colored scribbles and dots across the lines.







[Faint, illegible handwriting on lined paper]



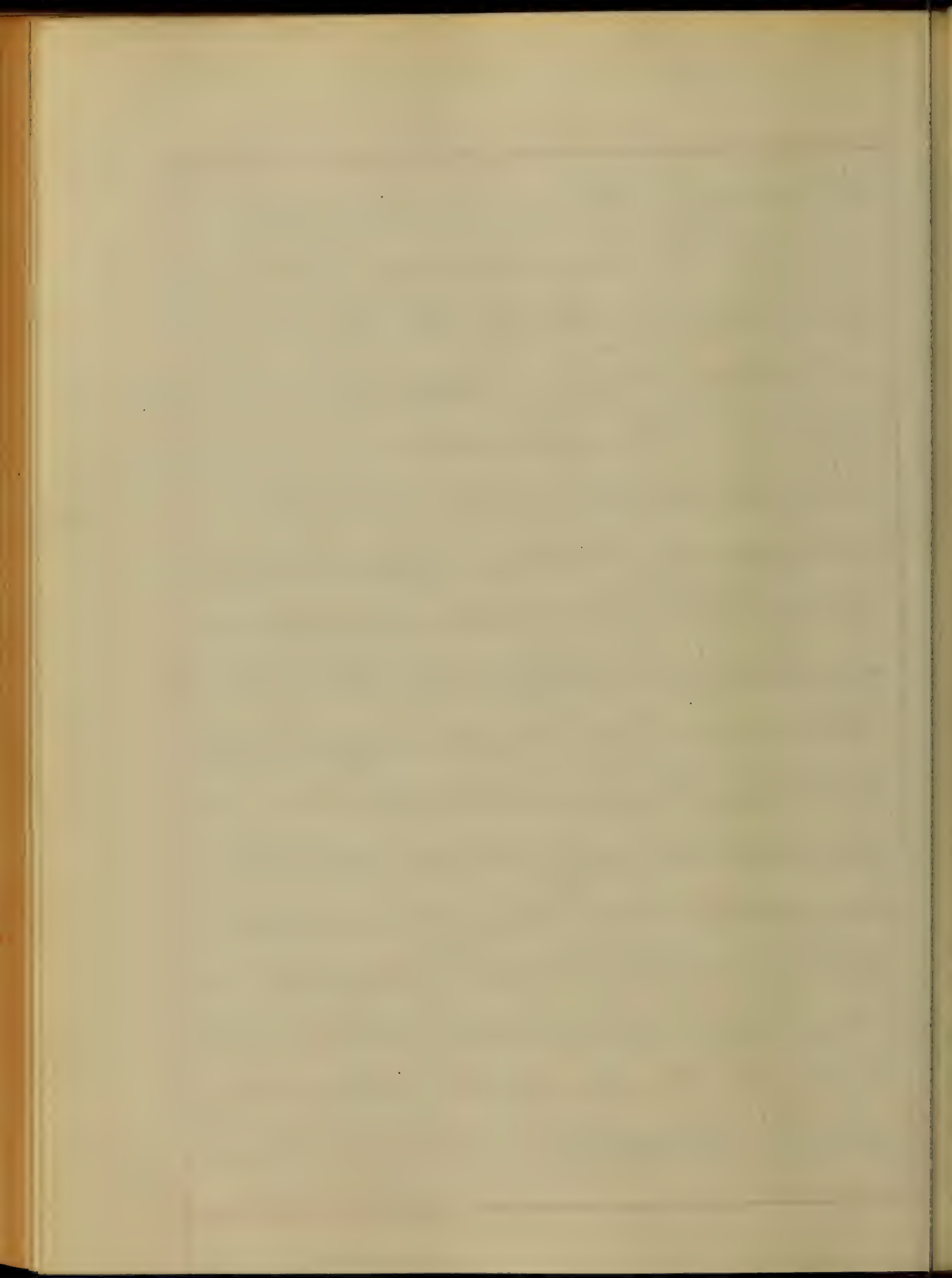
... together the heart, being ...
... the ... of the heart, ...
... and to render these violent ...
... of the heart ...
... the ...
... follows the heart ...
... and ... the ...
... to ...
... out ...
... the ... of the heart ...
... of the heart during a pulsation ...
... follows. The contraction ...
... the ...
... the ...
... its ...
... against the ...
... view ...



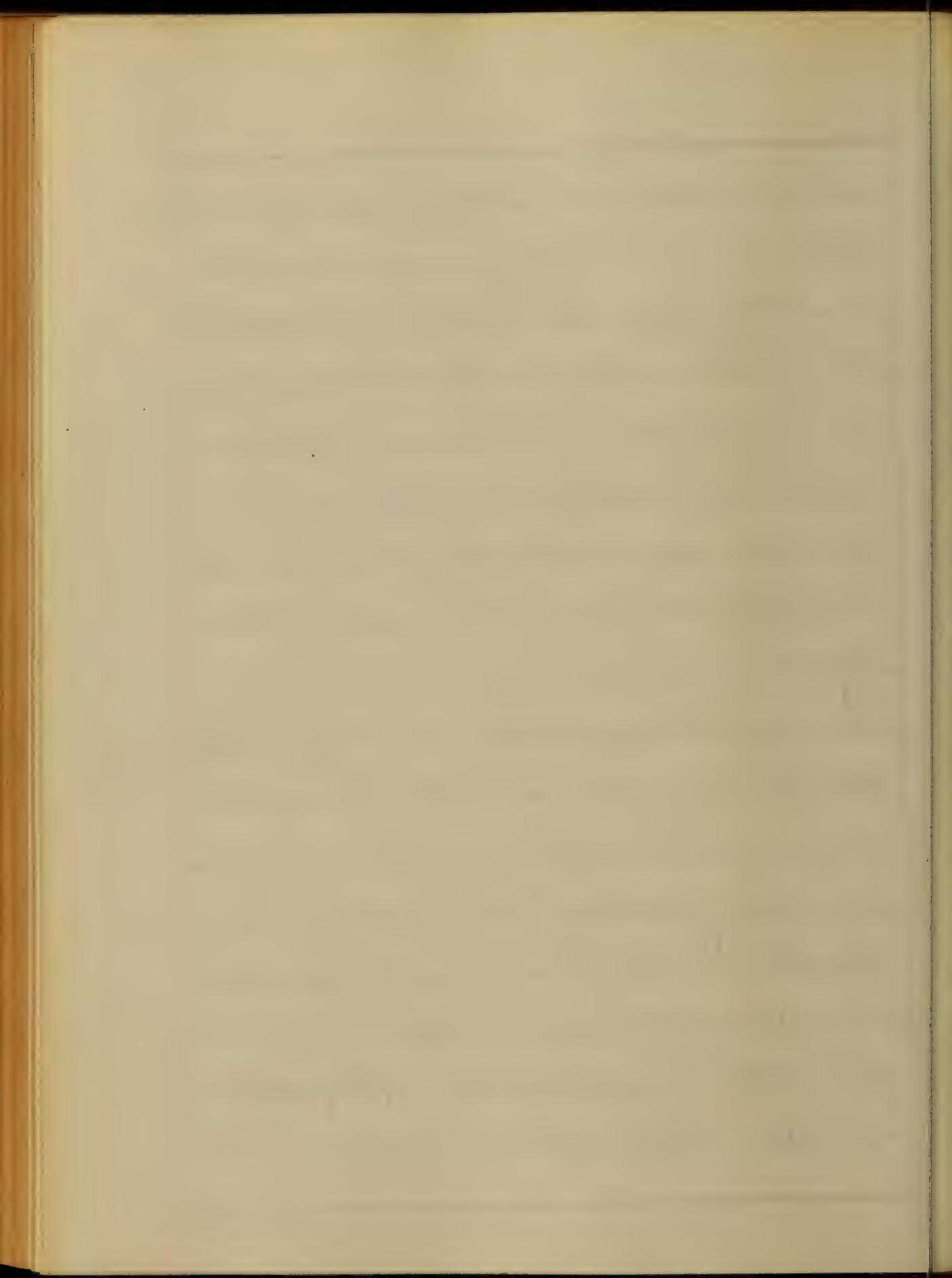
The opening of the aortic valve
is the first of the heart's work. The
blood is then forced into the
aorta. The ventricle
takes up one half of the circulation
beat. After this the ventricle is immediately
relaxed and a sense of repose follows. During
this repose the blood is flowing into the aorta
and through the aorta into the arteries
gradually until the whole body is
supplied. Then the aortic valve contracts forcing the
blood back into the ventricle. This
action is repeated over and over again
the aortic valve contracts in its turn contracts
and forces the blood into the arteries. This
movement continues to be repeated alter-
nating with each other and forms the
cardiac pulsation.

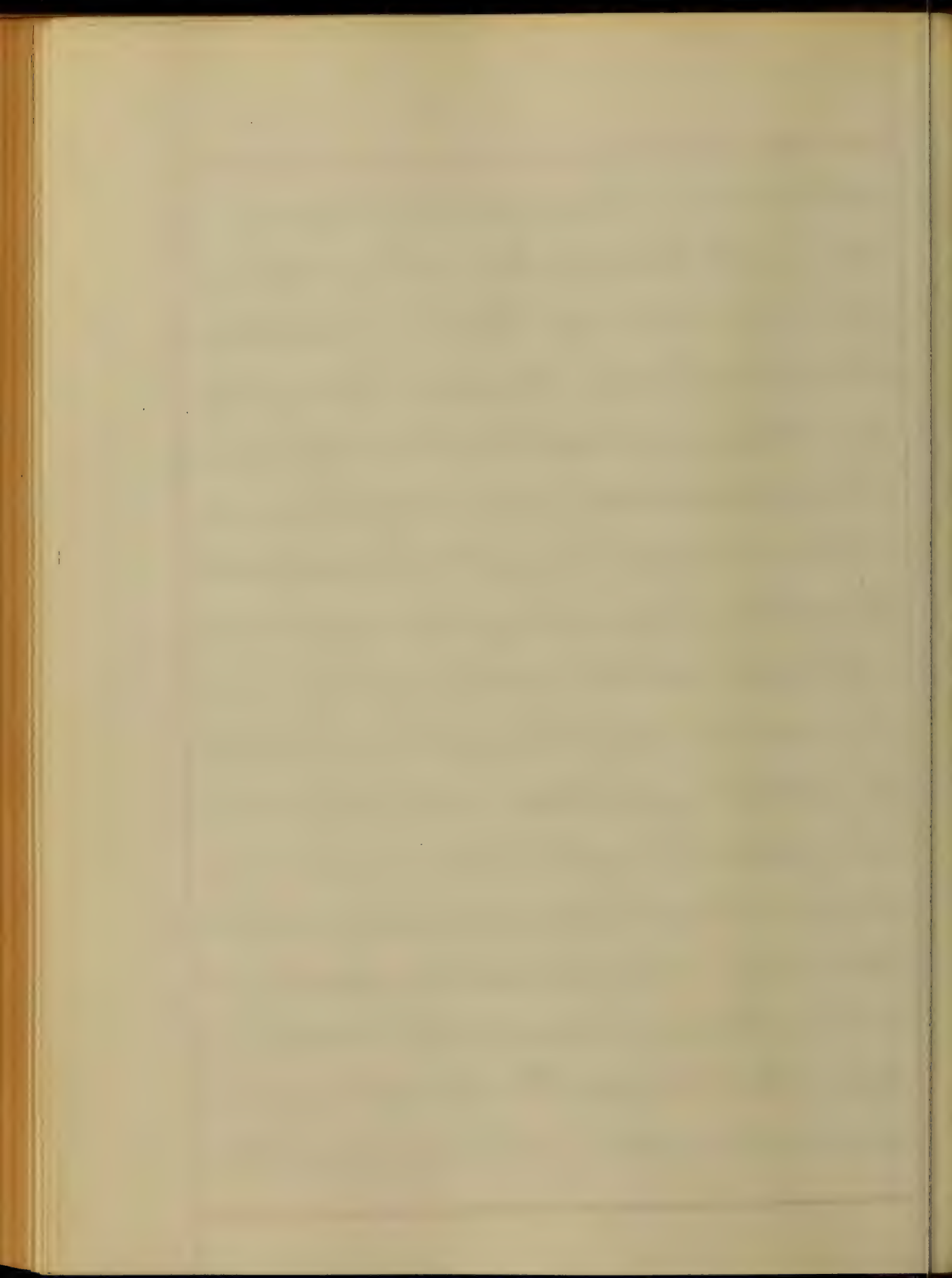


[Faint, illegible handwriting on a page with red horizontal lines.]

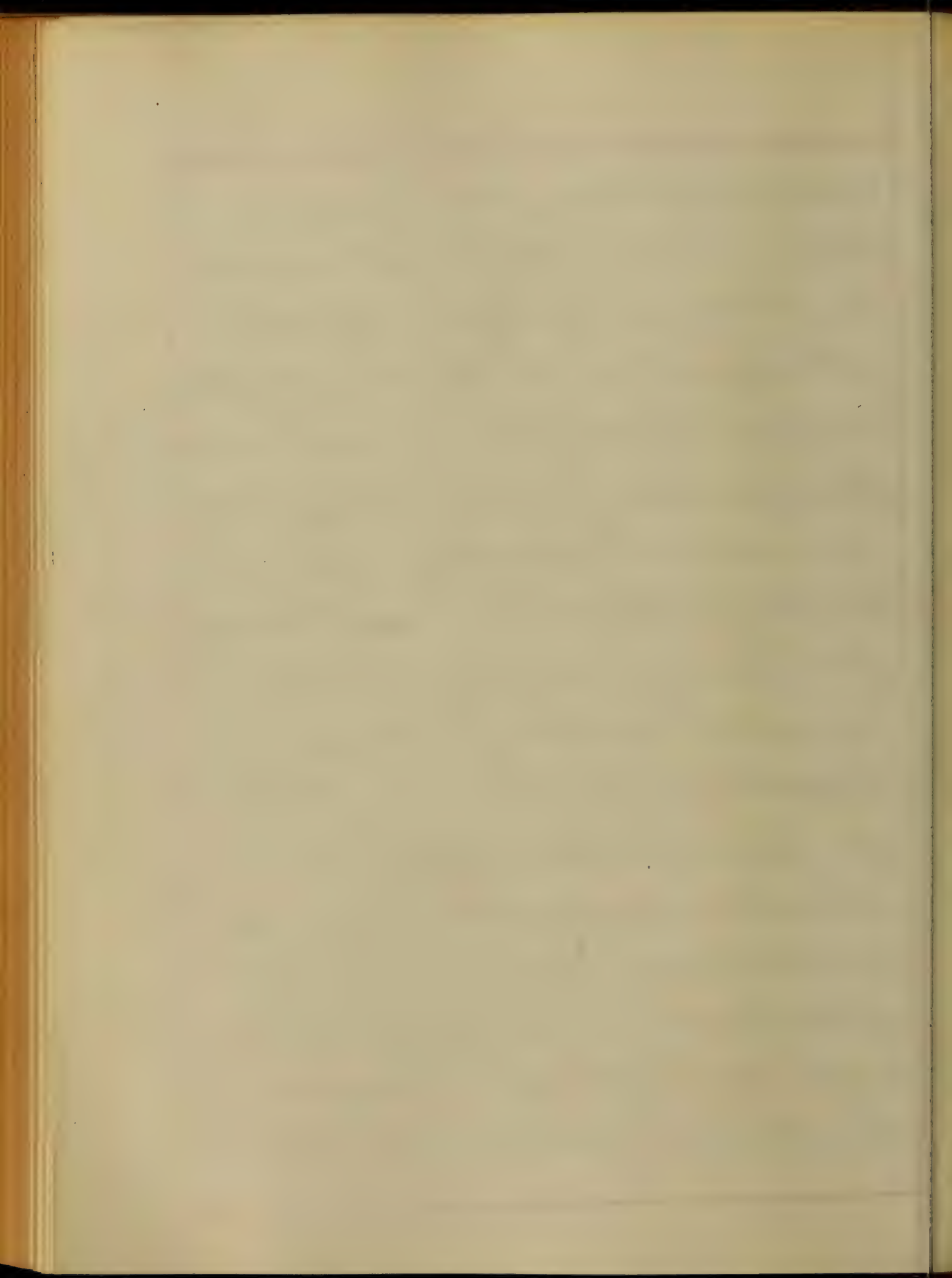




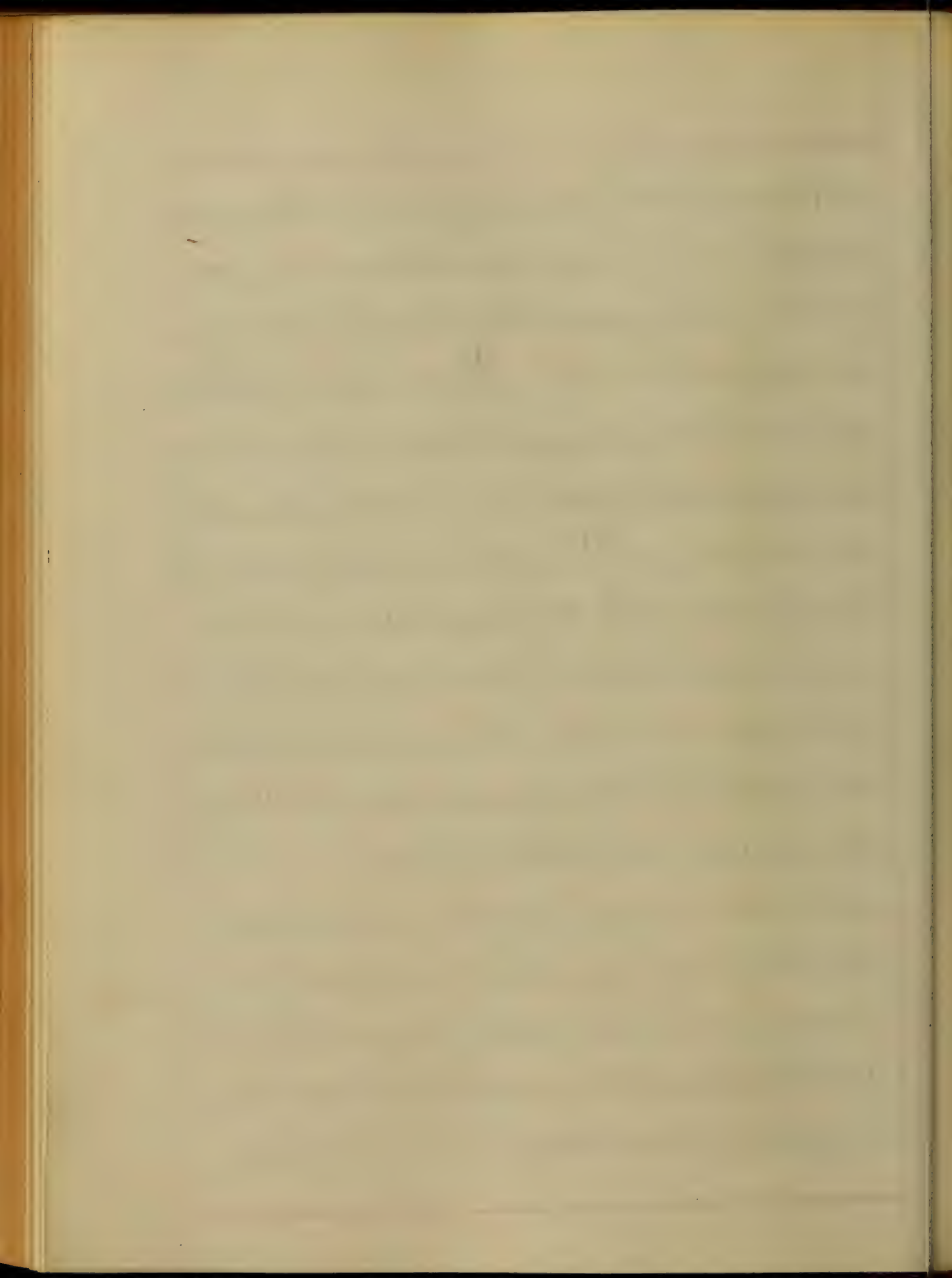


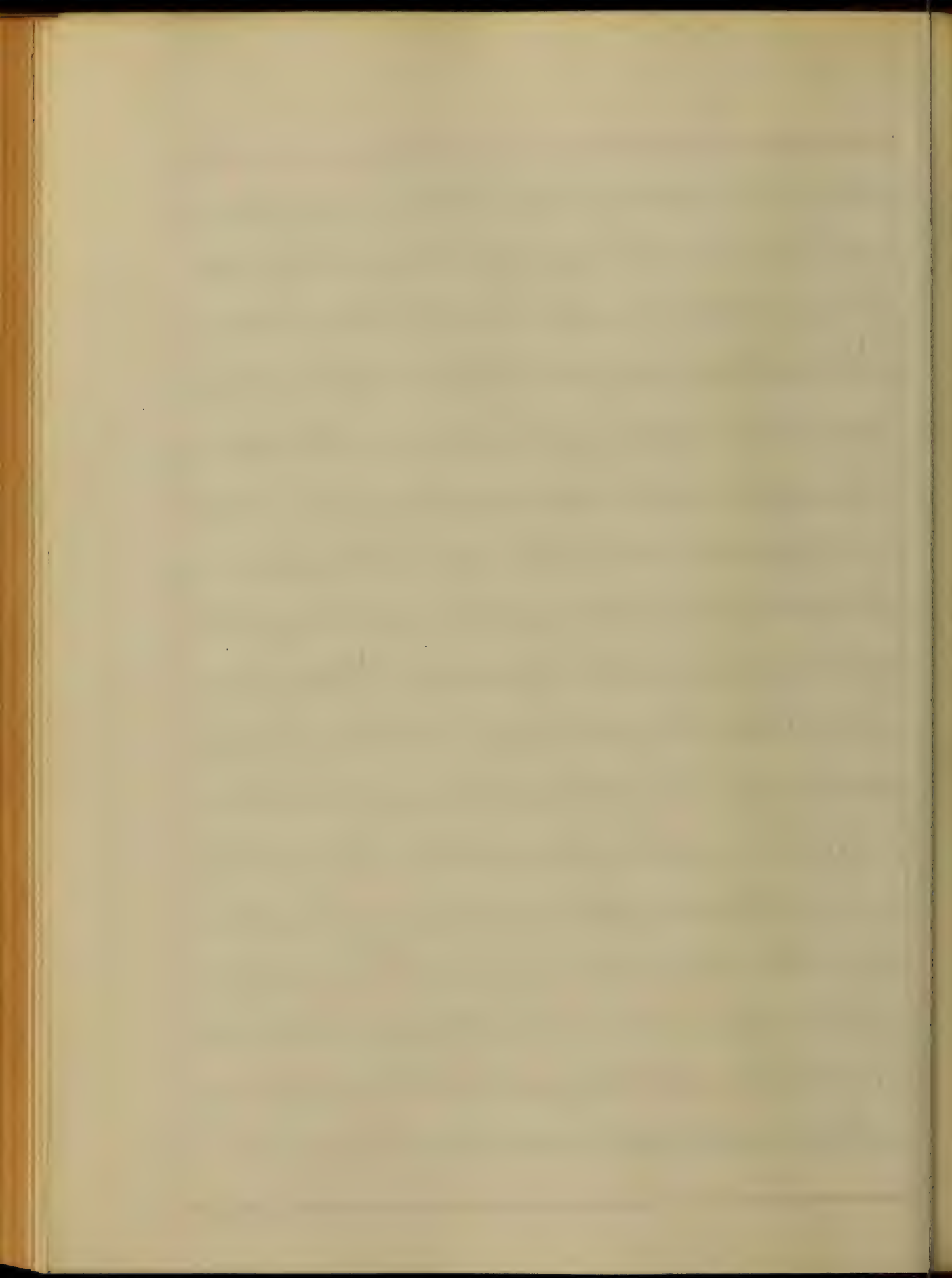


but, what a thing, it is in
 nature of soundness. The distance is
 ever not the same throughout the whole
 system. For, if the distance between
 the particles is not the same, the
 velocity is not the same. The velocity
 is received. The particles all seem to be
 distended at the same time. But the
 distance between the particles is
 and rapidly transmitted at a distance in
 the system. The particles are not
 ever, but the distance between the
 relaxation of the particles to the more
 distant particles. Therefore, the distance
 of the particles is not the same. The
 distance between the particles is not
 the same. The distance between the
 particles is not the same. The distance
 between the particles is not the same.

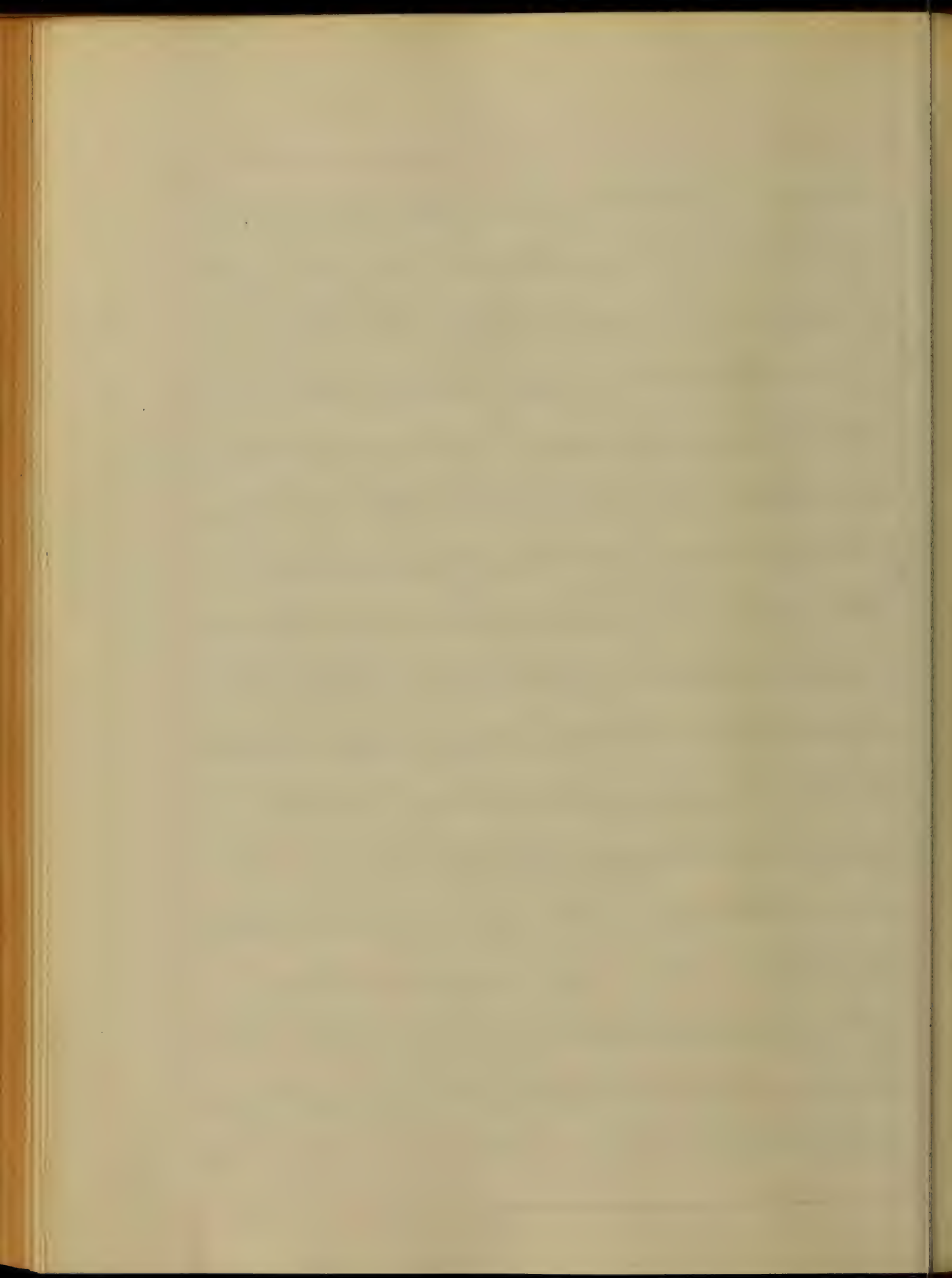


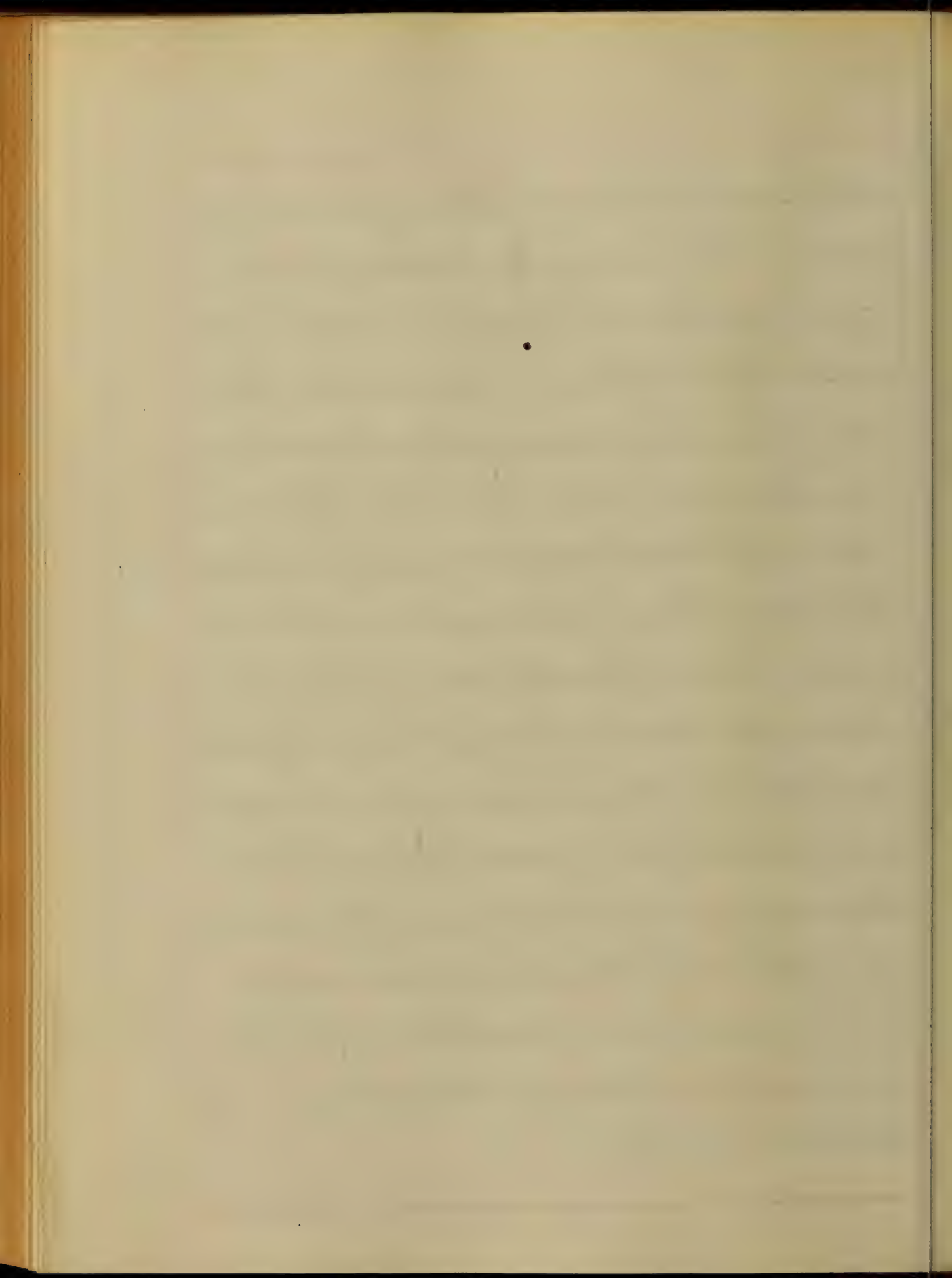
is known to the certain purpose of being
equal in the length of its vessels and
outside to the inside of a inch. It is very
white and soft. It is very fine and
more or less of the quality of the same
size of the most fine of the same
the same. It is very fine and
is known to the different quality of
being to the same quality of the same
of the same quality of the same
is that the same quality of the same
and blood is 12 inches in size.
In the arteries as in each the same
they diminish in size and color
external coat, then as the same
of the same quality of the same
of the same quality of the same
of the same quality of the same



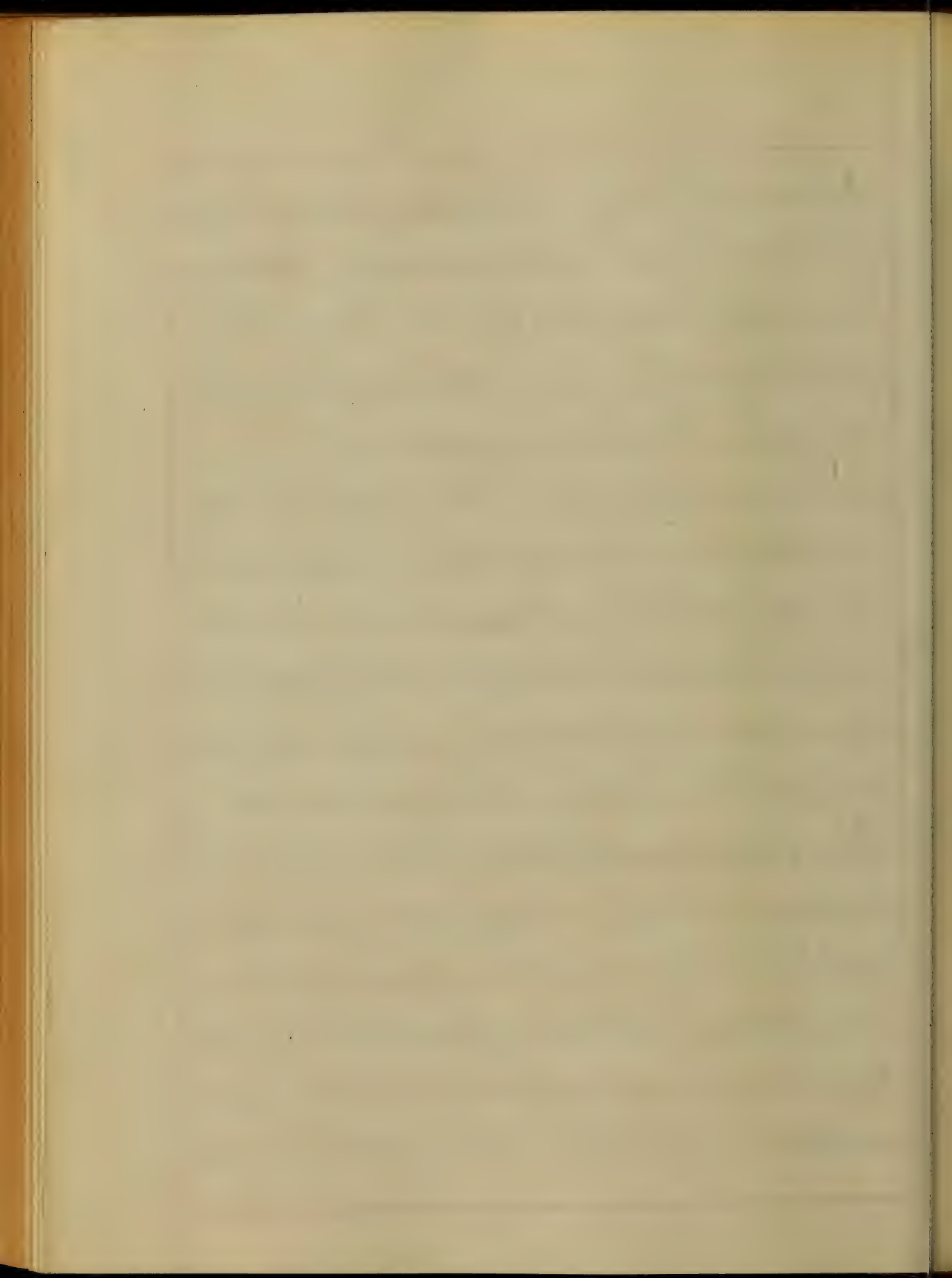


[Faint, illegible handwriting on lined paper]

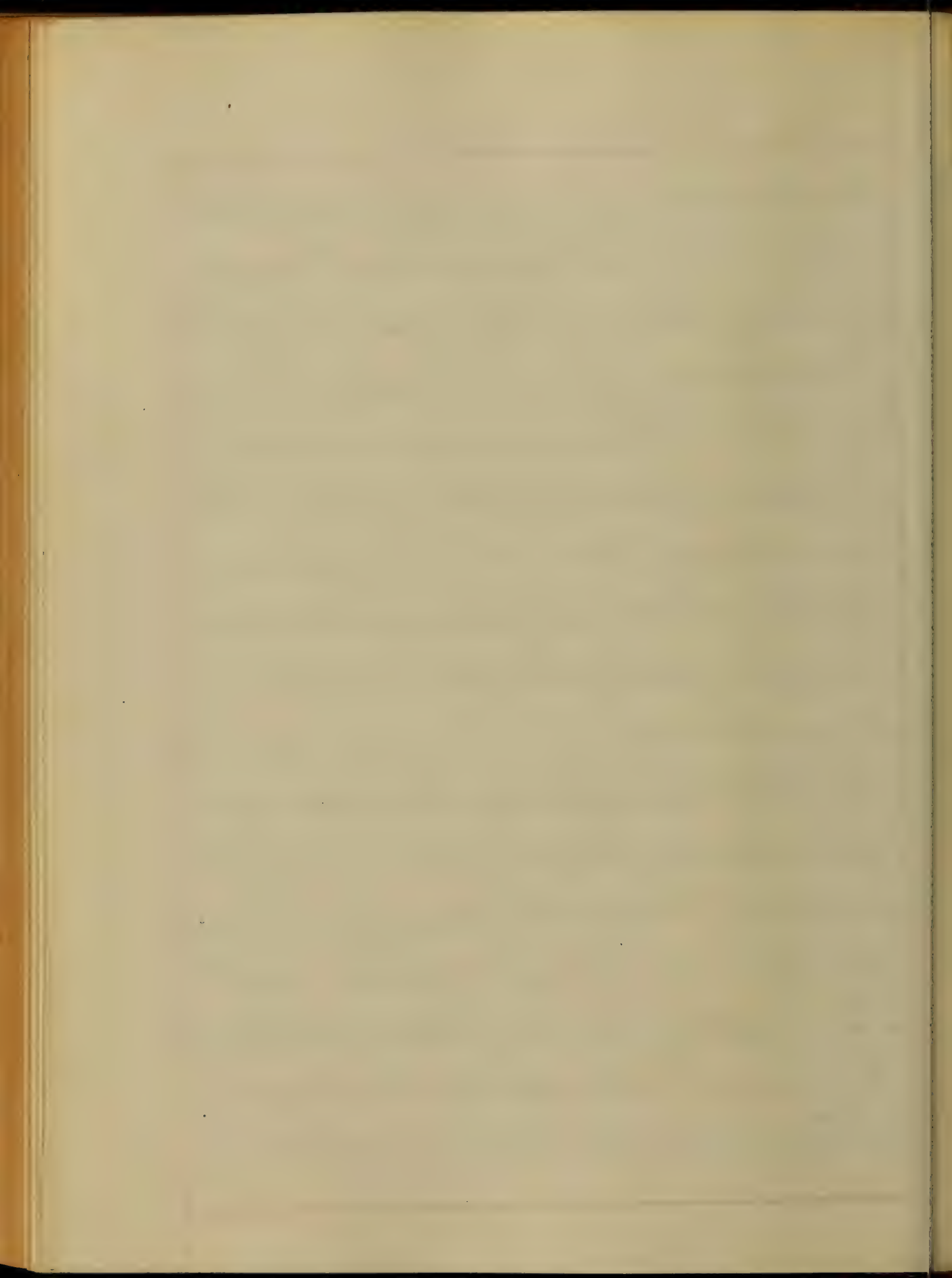




The circulating fluid having now performed its
office, it is returned to the heart, & the
fluid is carried into the veins in order to pass
back to the lungs, & be re-oxygenated.
The veins are composed of three coats, a
serous, middle and an external. The inter-
nal coat consists of a thin membrane
the contents is elastic and muscular but more
compliant than the wall of an artery.
The external coat is thicker than the other
and similar to the external coat of the artery.
The walls of the veins are very much dilata-
ble, & elastic. The veins of the body
they can however resist more pressure than
instance given by the Education of the

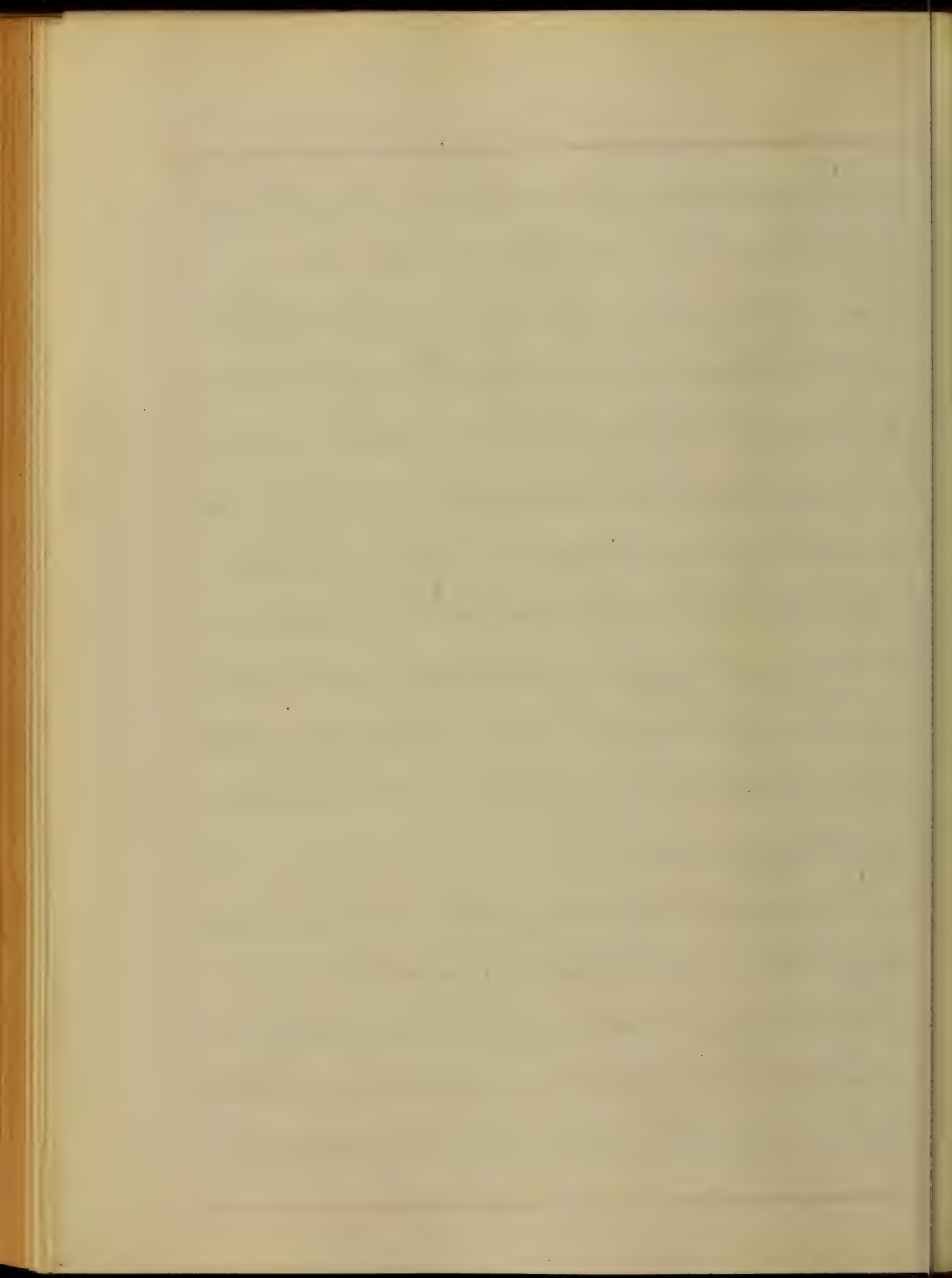


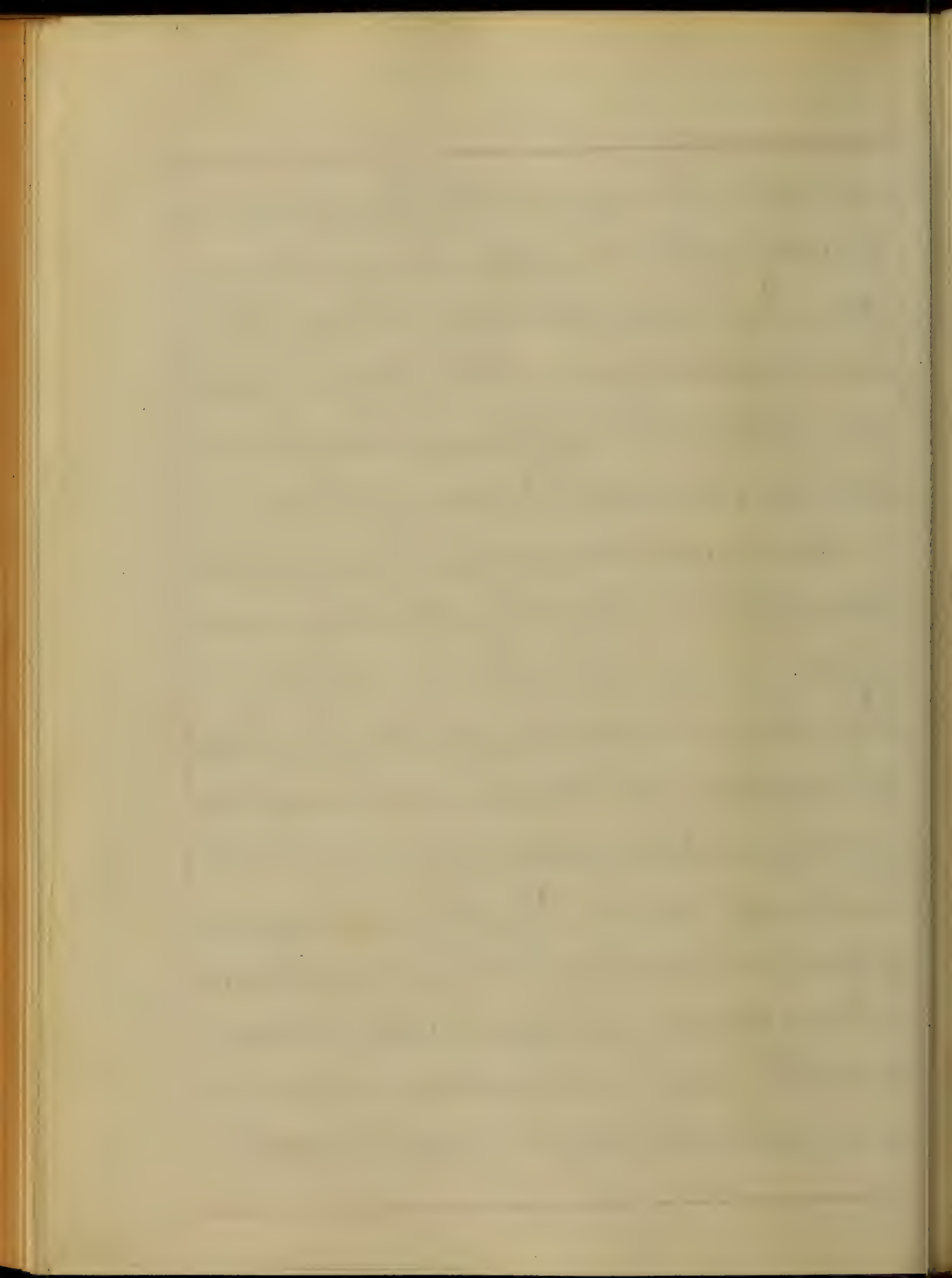
[Faint, illegible handwriting on lined paper]



2. The contraction of the respiratory muscles.
3. The contraction of the diaphragm.
The chest being expanded by the inspiration
of the atmosphere, the air is drawn
down all the passages of the lungs,
to be equally lodged in all the
arteries of the lungs, and the
arteries in the lungs, being
contracted, the blood is
drawn into the chest, and
is also sent into the whole system
of circulation, and the
arteries are
contracted.

The veins which convey the blood through
the lungs, and the arteries which
convey the blood to the
respiratory muscles, which muscles are
a little contracted, and
relaxed. The veins are
relaxed.

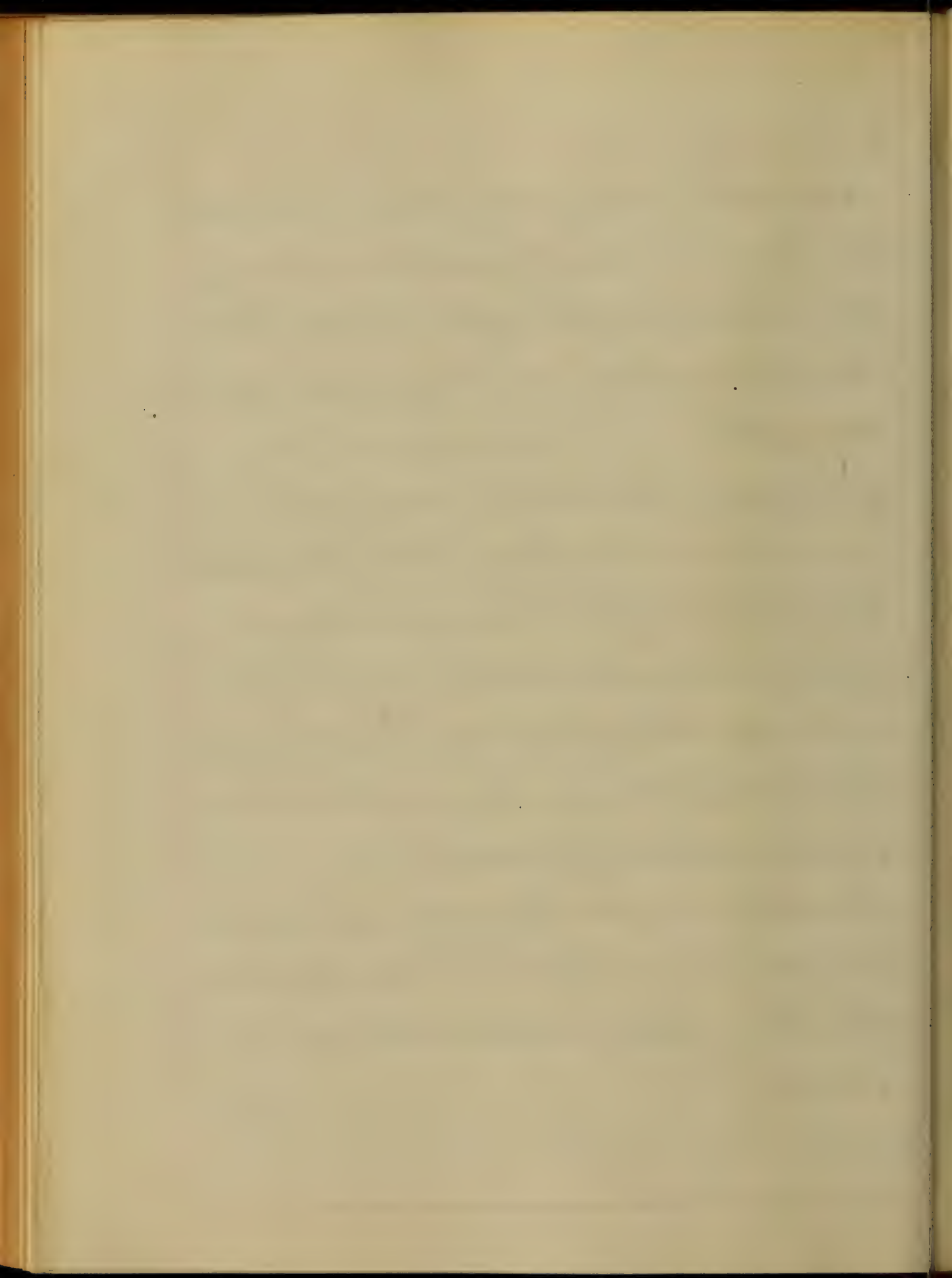


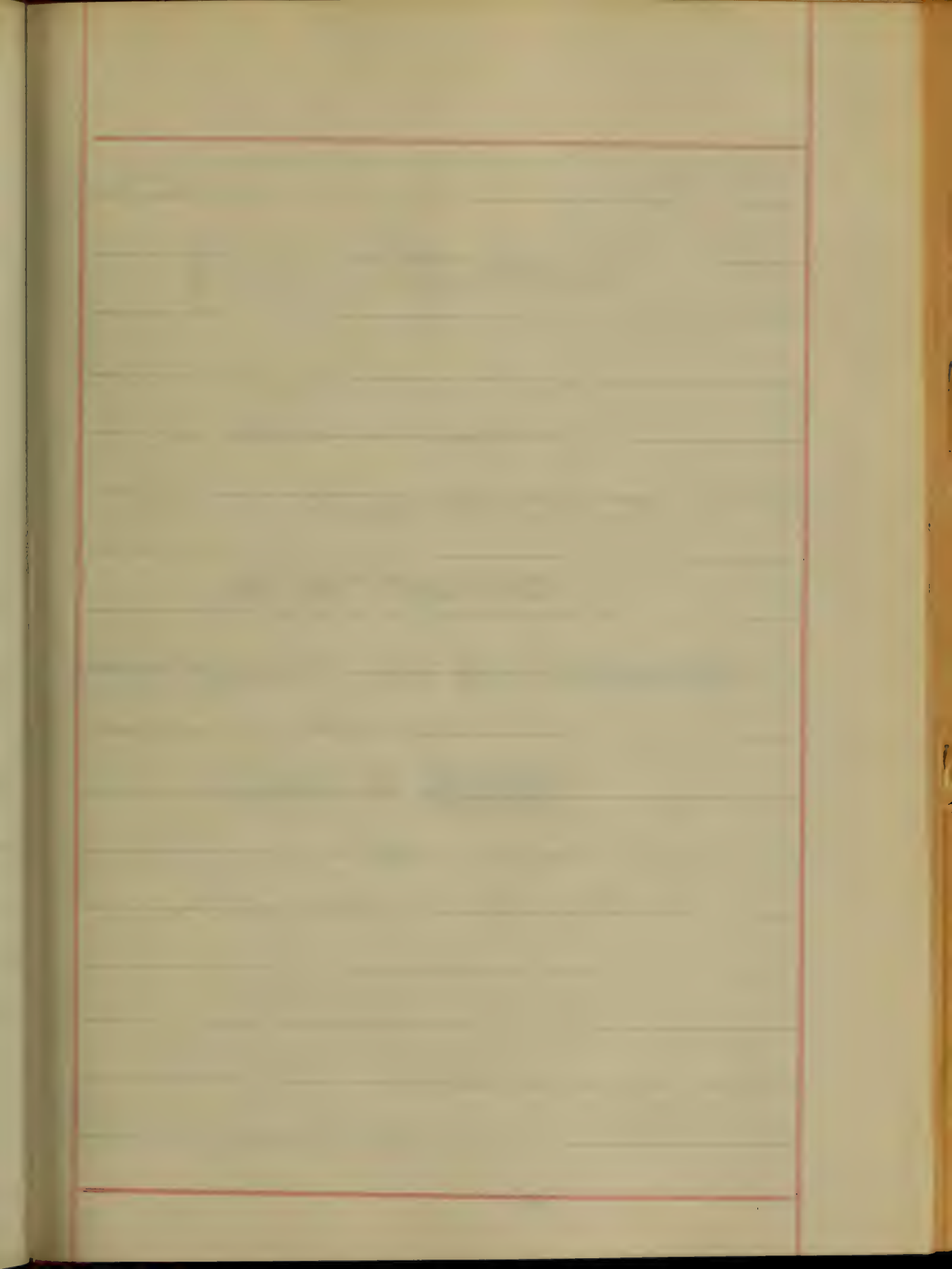


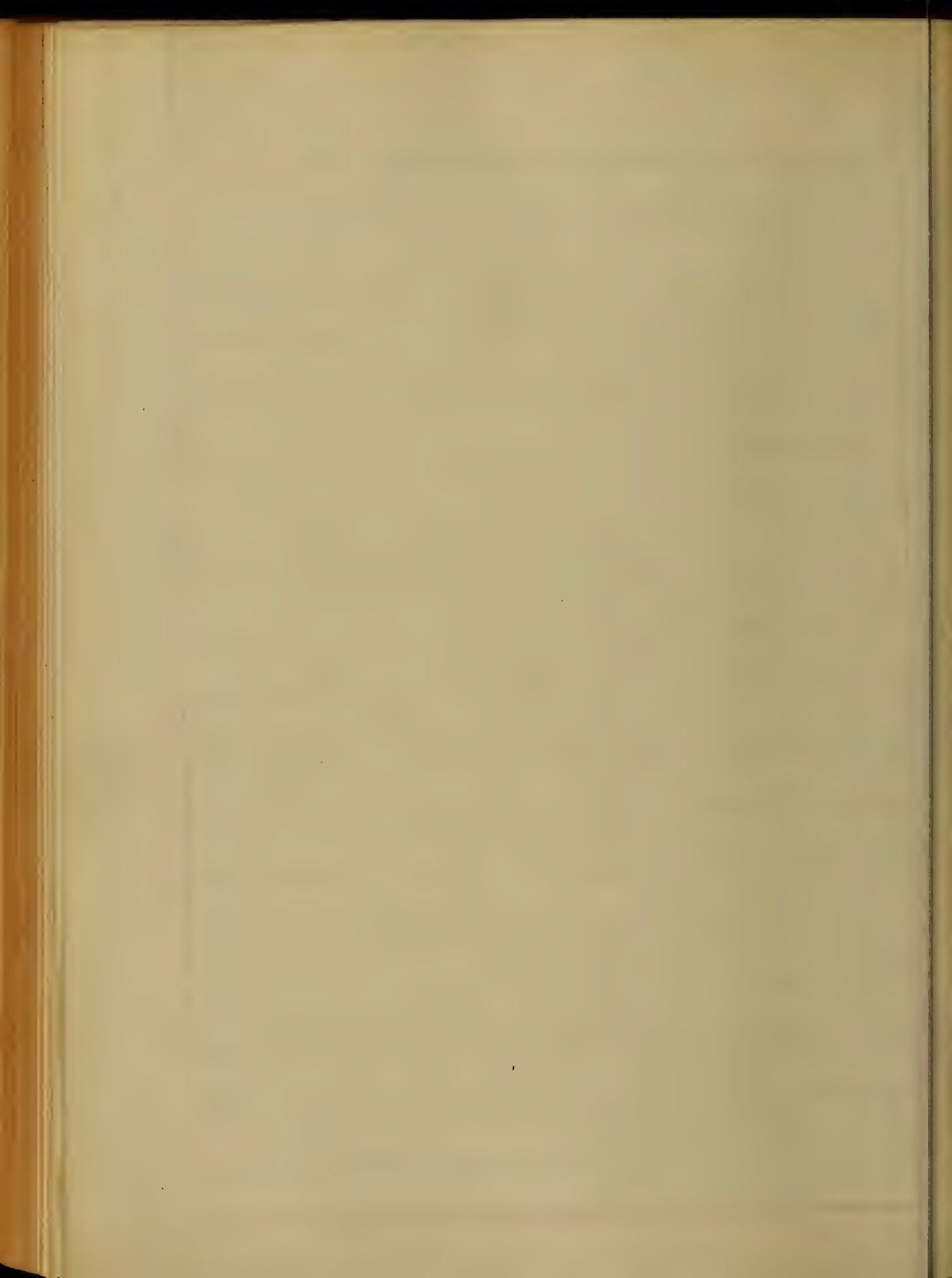
extension of the arteries, & the
the vessels succedent to them, & of
the vein, & of the artery, & of the
the vein, & of the artery, & of the
is common.

The quantity of the blood is
which injected about twice that of the water
in the vein. The blood is
more or less discolored with blood as
in the vein with the arterial. The
The blood is more or less
colored with the water.

According to the measurements of the
been calculated that the blood flows through
the veins, & the arteries, & of the
seconds.







AN
Inaugural Dissertation

ON
Tuberculosis.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

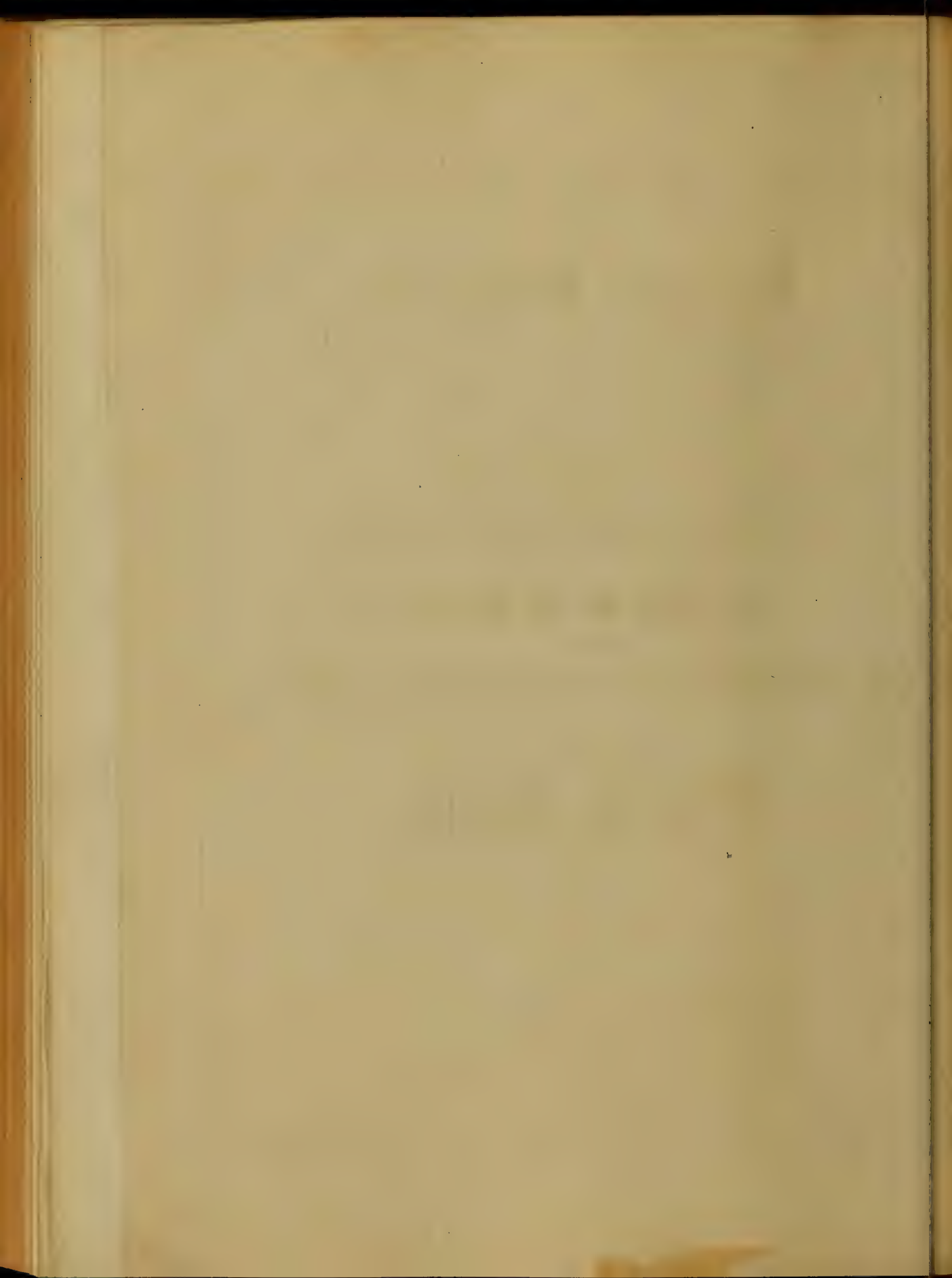
FOR THE DEGREE OF

DOCTOR OF MEDICINE,

Wm. L. Russell.

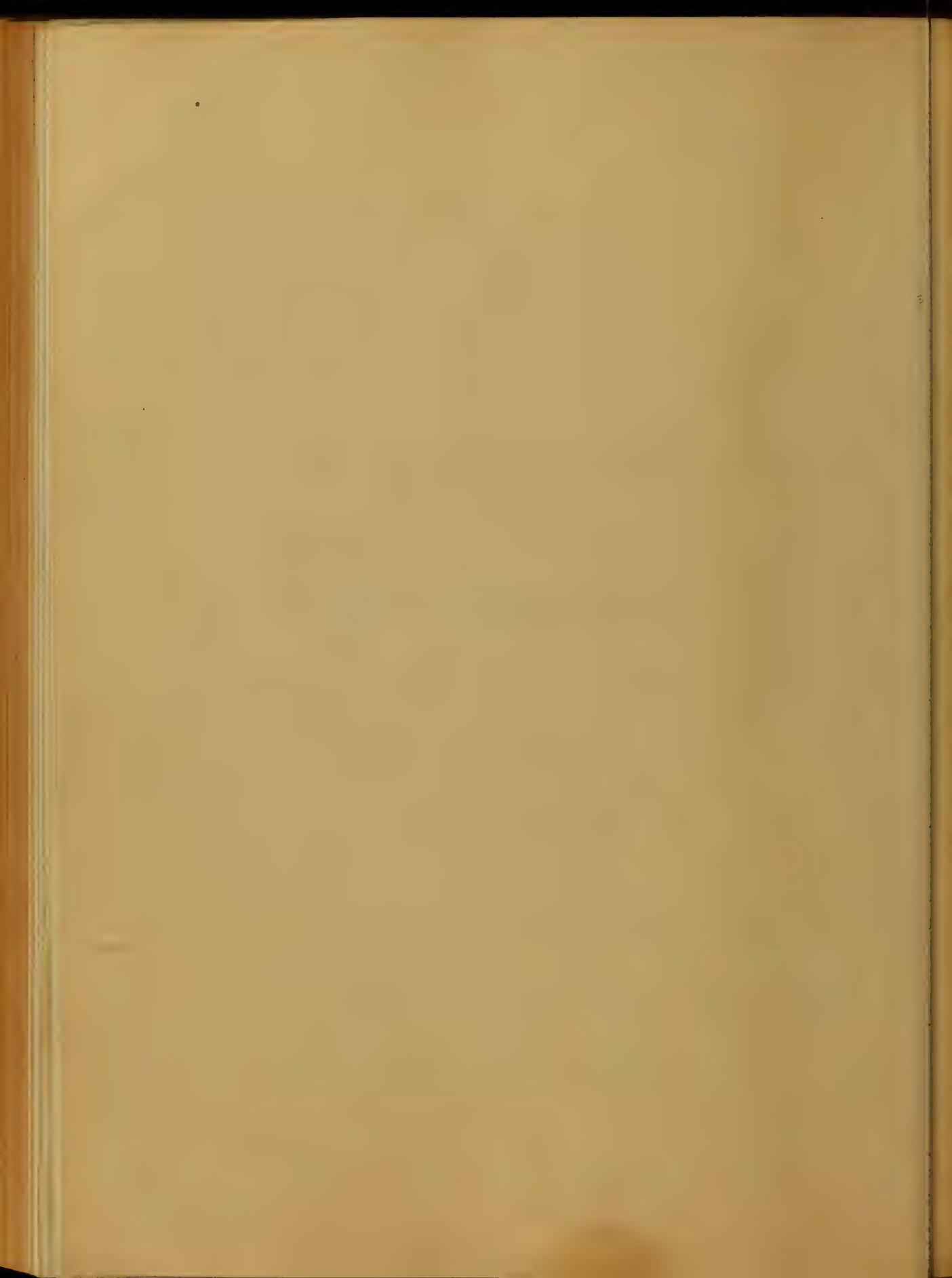
Maryland.

Session of Anno Domini 1868 & 9.



Tuberculosis.

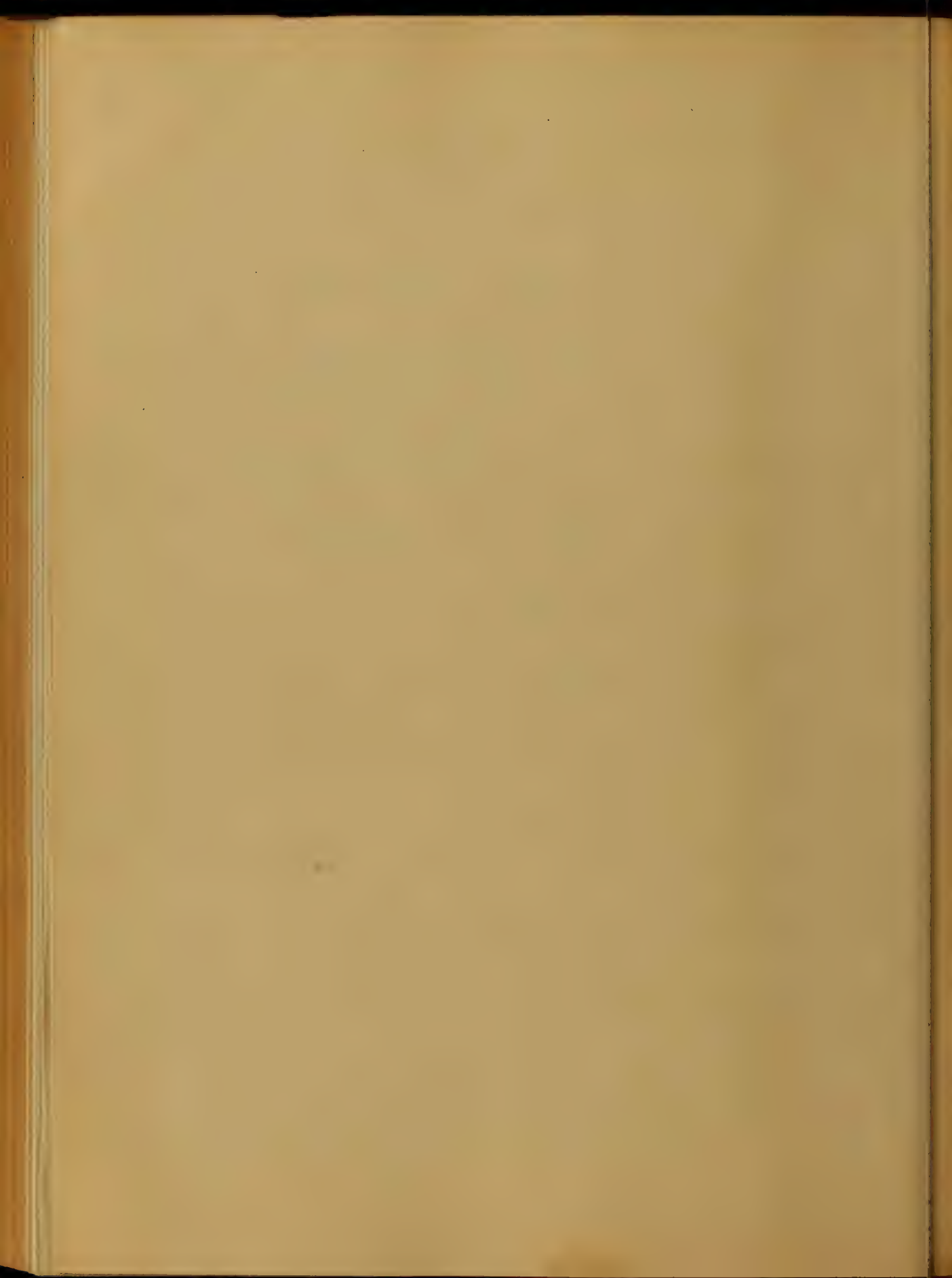
Tuberculosis is the
commonest and most fatal disease
to which the human race is li-
able. Occurring at every age,
and in every rank of life, it se-
lects the most beautiful and
gifted as its victims, and induces
months or years of weary suffering.
What need, then, for further



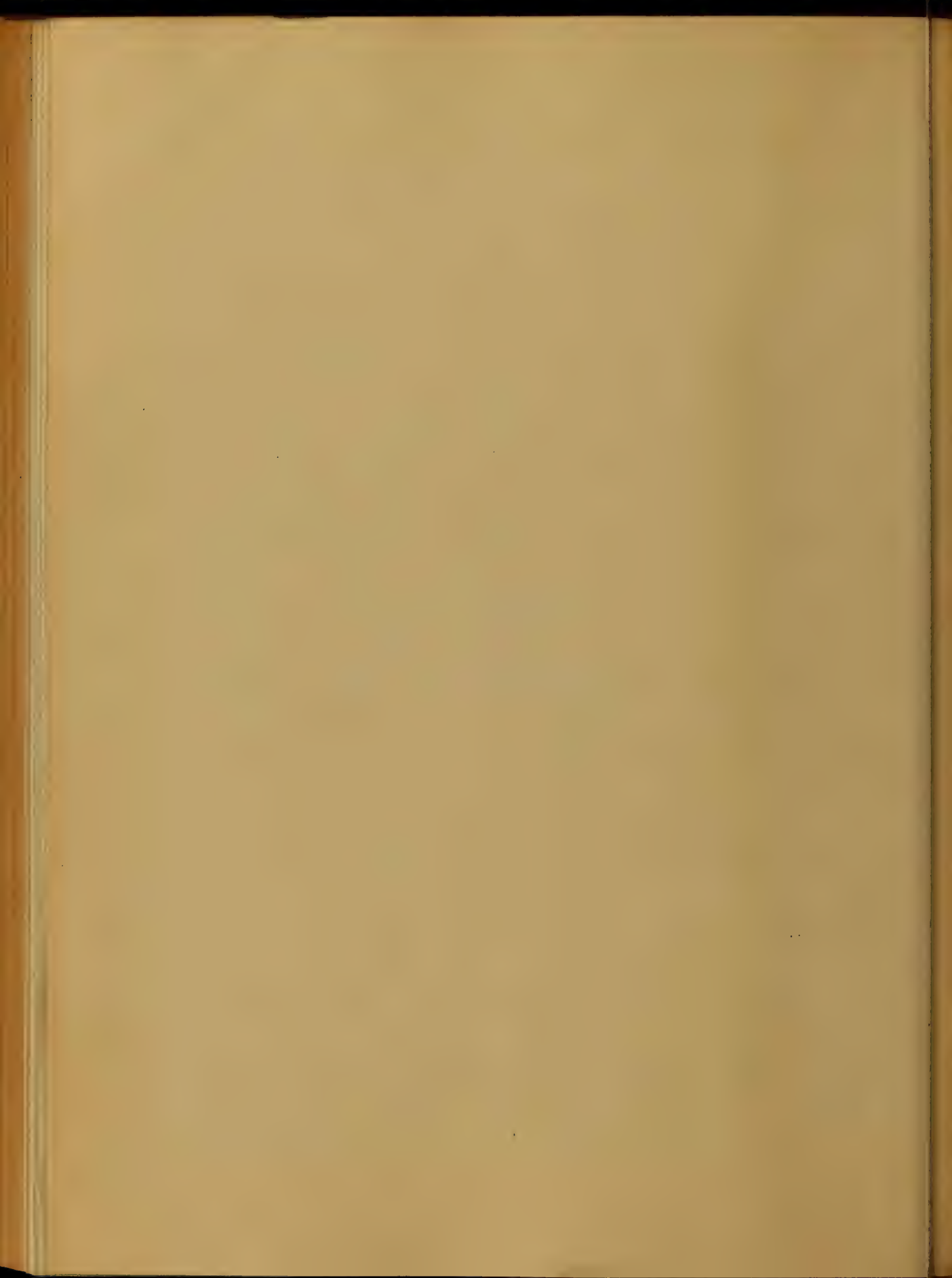
inducement to a careful study
of its character —, to a diligent
inquiring as to whether something
may not be done to prevent its
occurrence, to retard its de-
velopment, or arrest its progress?

With a view to at-
taining accuracy it will be de-
sirable to commence by an inquiry
into the nature of Phthisis,
and ~~into the part which is~~
played by pneumonia, ~~the cause~~
in causing the fatal result
of the disorder.

It may be stated
that Tuberculosis is essentially



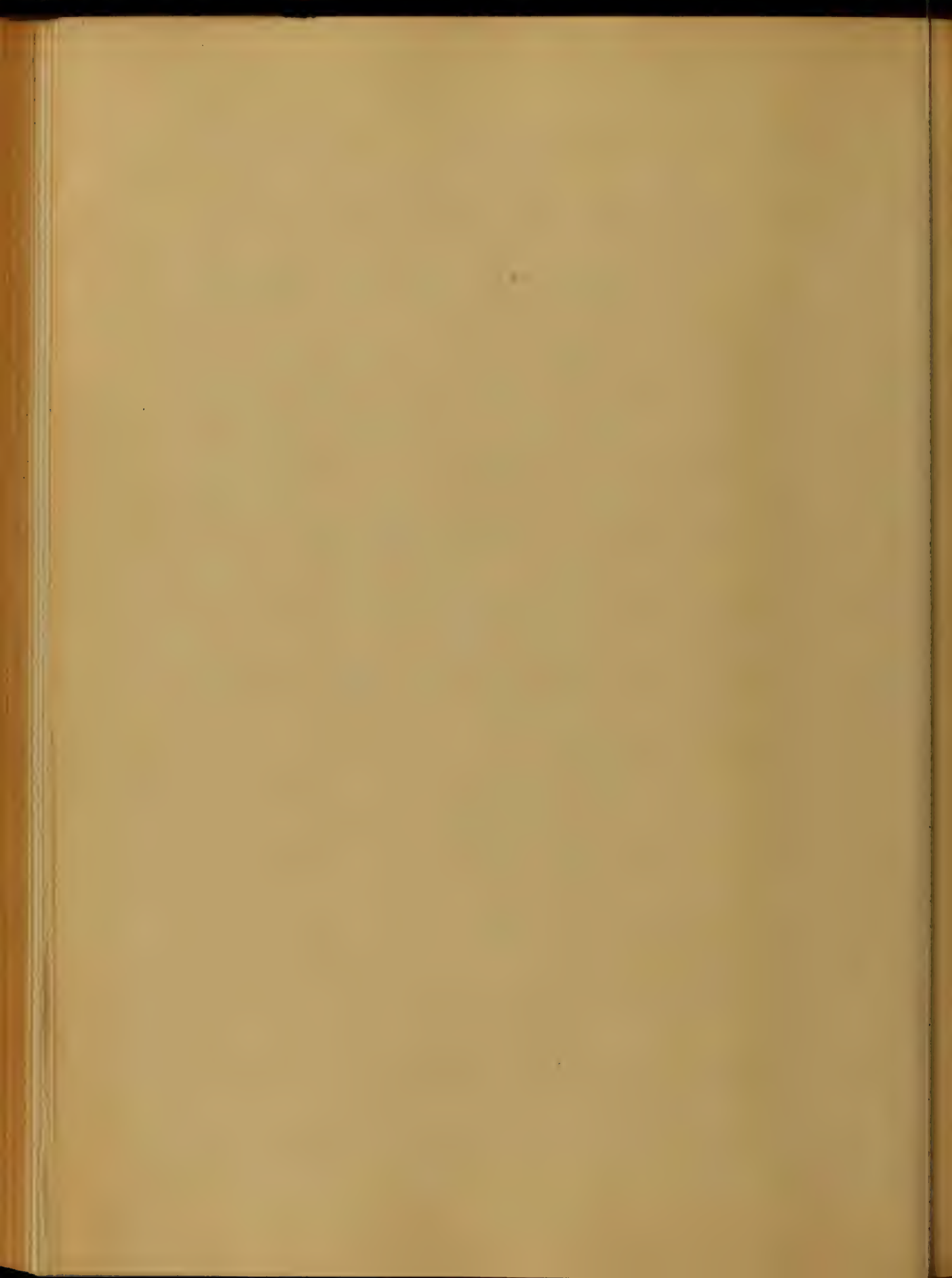
a Constitutional disease, and is closely connected with, perverted nutrition and imperfect sanguification, when, the blood, having become vitiated to a certain point, an unorganized substance, which has been termed "Tubercle," is deposited in various parts of the body. This product or material is not deposited indifferently in all parts of the body. It affects certain organs or parts in preference to others, and none so frequently as the lungs. Hence the disease is often designated by the term Phthisis Tuberculatis Pulmonum.



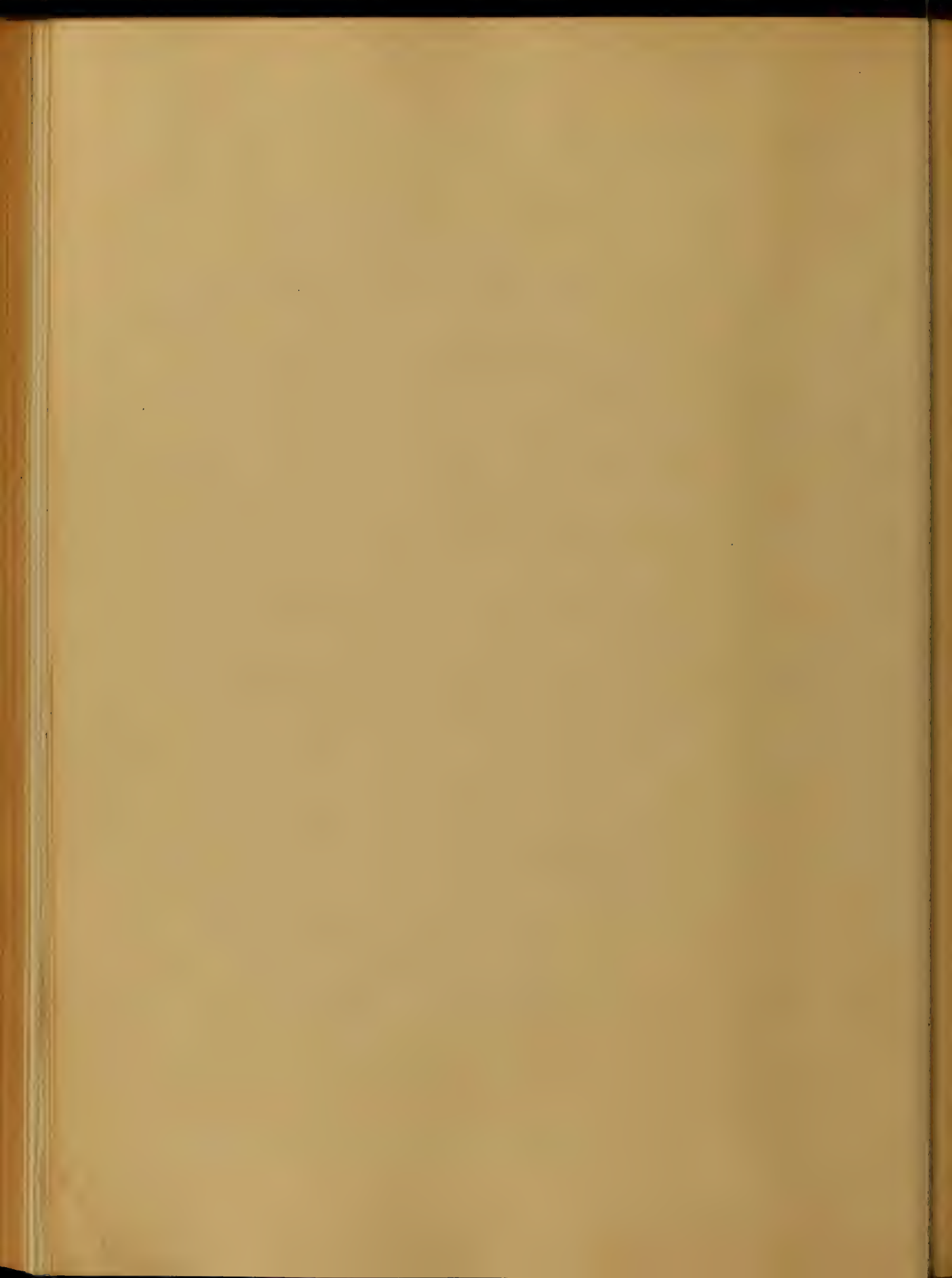
Consumption &c. — Terms, which, though expressive of one of its commonest and most characteristic features, ignore its constitutional origin, and for that reason it follows that more appropriate titles are Consumption, Phthisis or Tuberculosis, which do not convey the incorrect idea that the disease is of pulmonary origin.

The inquiry to be made is — "In what does this constitutional derangement consist?"

It is not so easy to give a definite answer to this question, but a few points may be indicated



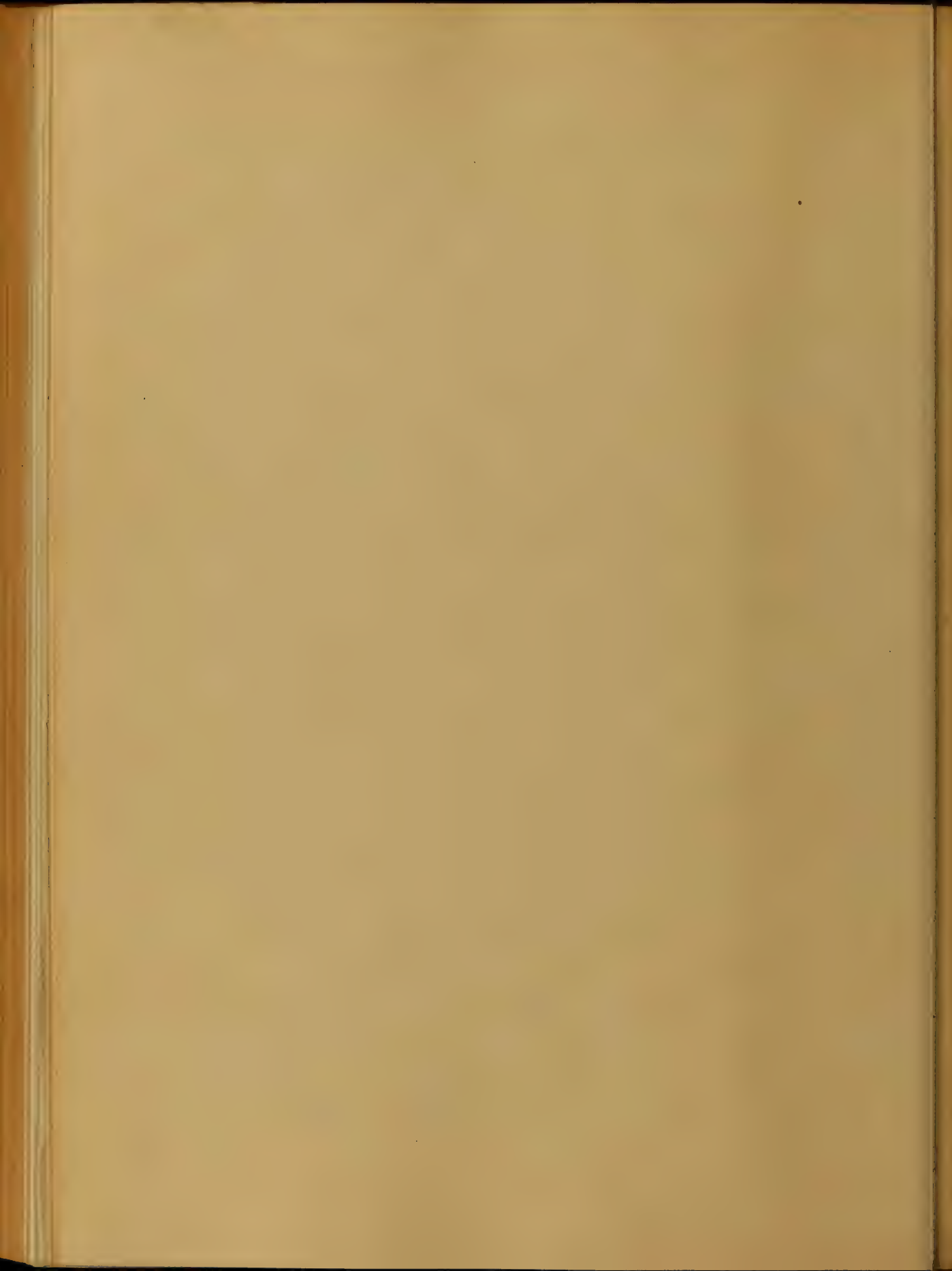
which may throw some light on
the subject. Chemistry has
shown that the blood in Tubercu-
losis contains an excess of water, in
proportion to its solid ingredients,
that it exhibits a relatively increased
amount of Albumen, and is defi-
cient in Fat and Red Corpuscles,
is less Alkaline than in health,
and is otherwise altered in Charac-
ter, while the general tendency
of Combined Chemical Analysis,
Microscopical research and Clinic-
al observation has been to prove,
not only that the nutrient
fluid is vitiated and impoverished



ed, but that its vitality is below
the natural standard.

The same inherent defect
or infirmity is traceable throughout
the organization of the body.

The structural peculiarities
which characterize the disease are
indicative of imperfect cell form-
ation, and extreme delicacy of
the tissues, whilst the function-
al derangements, in their ever chang-
ing variety, afford evidence of
the weakness of the different
organs, and of their liability to
become disordered by the slightest
exciting cause, so that although

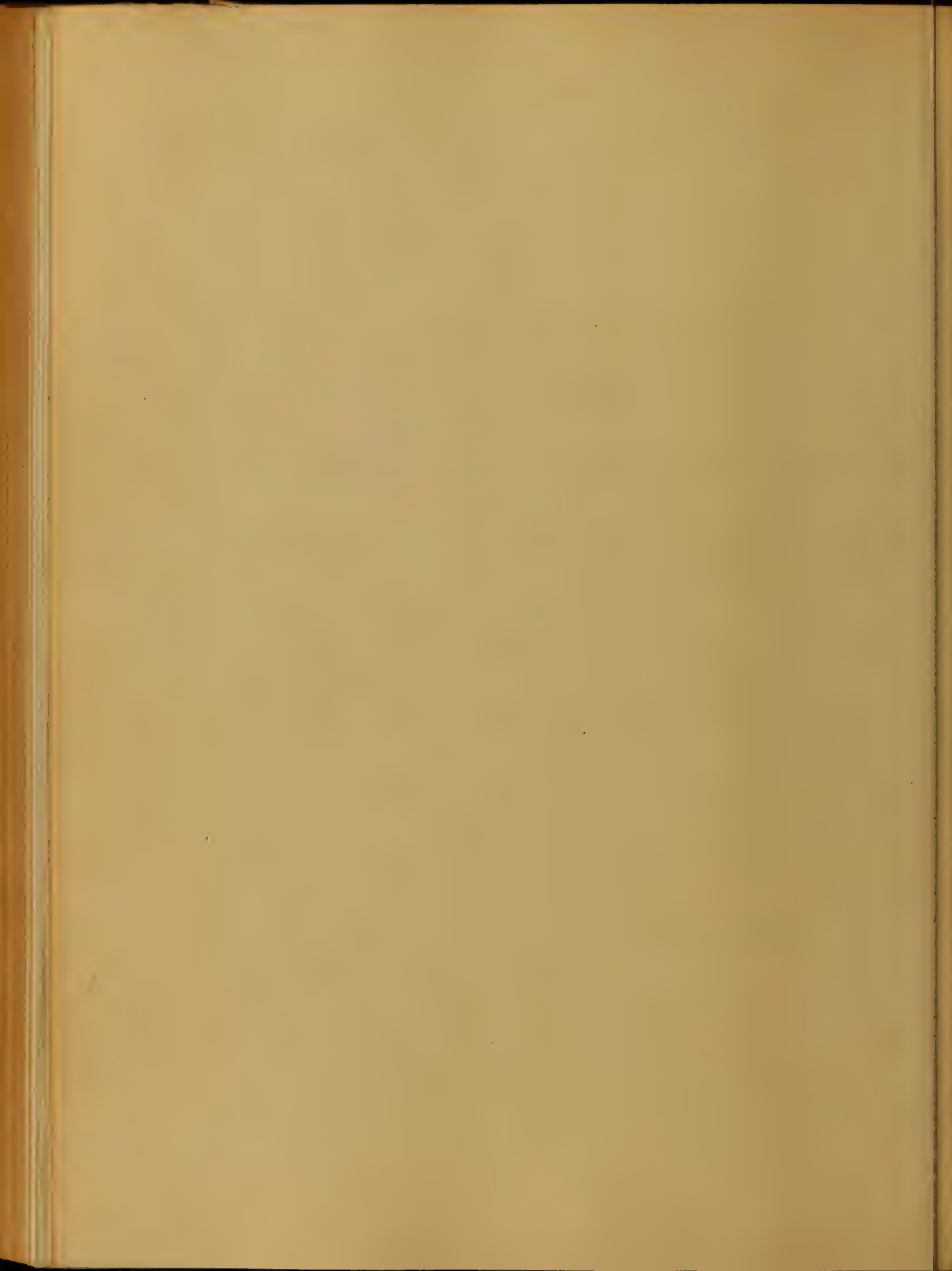


Consumption is attended by local symptoms produced by corresponding local mischief, there is not in the whole Catalogue of human ailments a malady which more strictly deserves to be placed among Constitutional disorders.

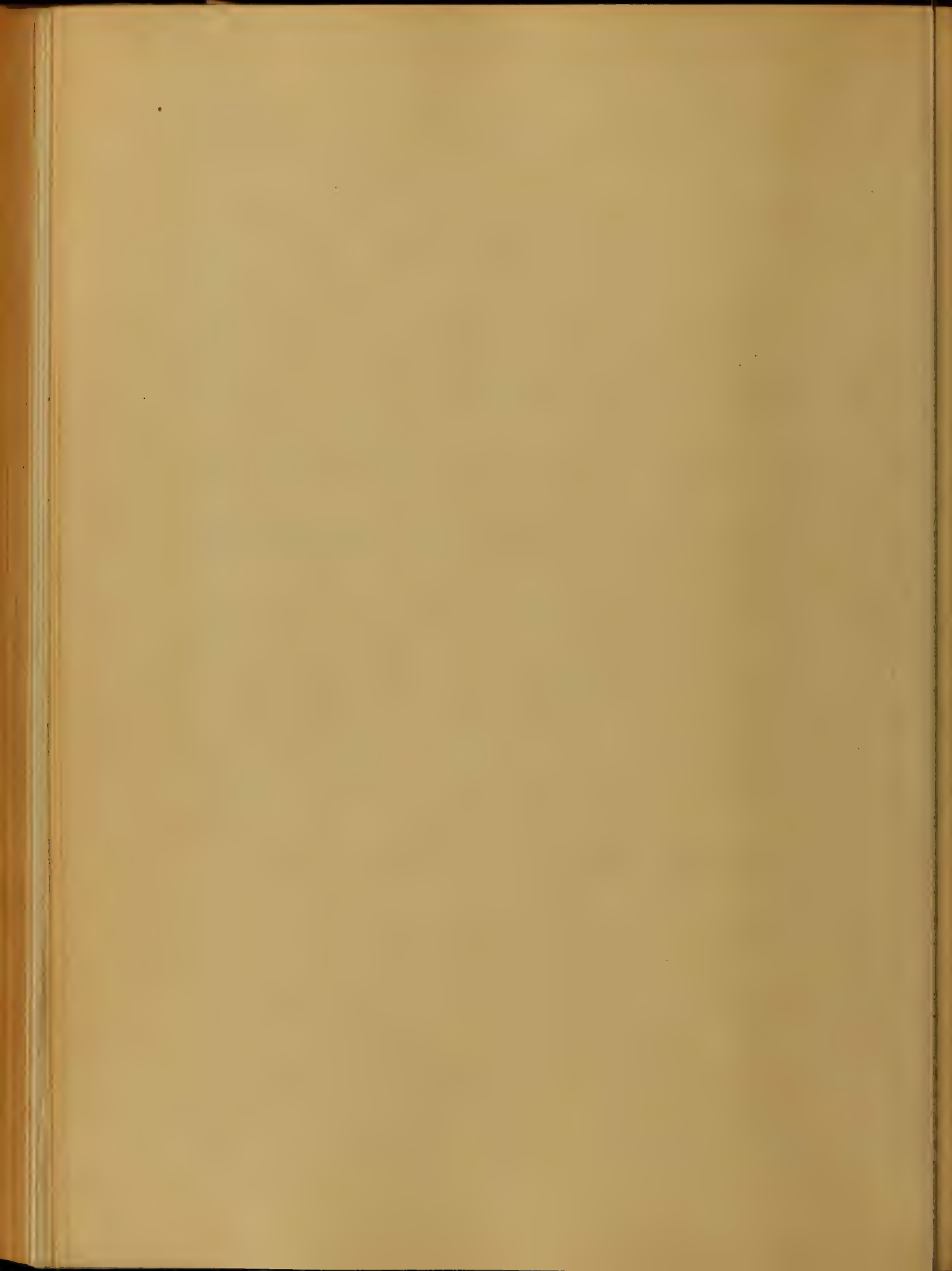
But what is the starting point of this derangement?

A variety of theories have been advanced on the subject.

Some have referred the disturbance to imperfection of the primary processes of digestion, some to secondary mal-assimilation and mal-nutrition of the tissue,



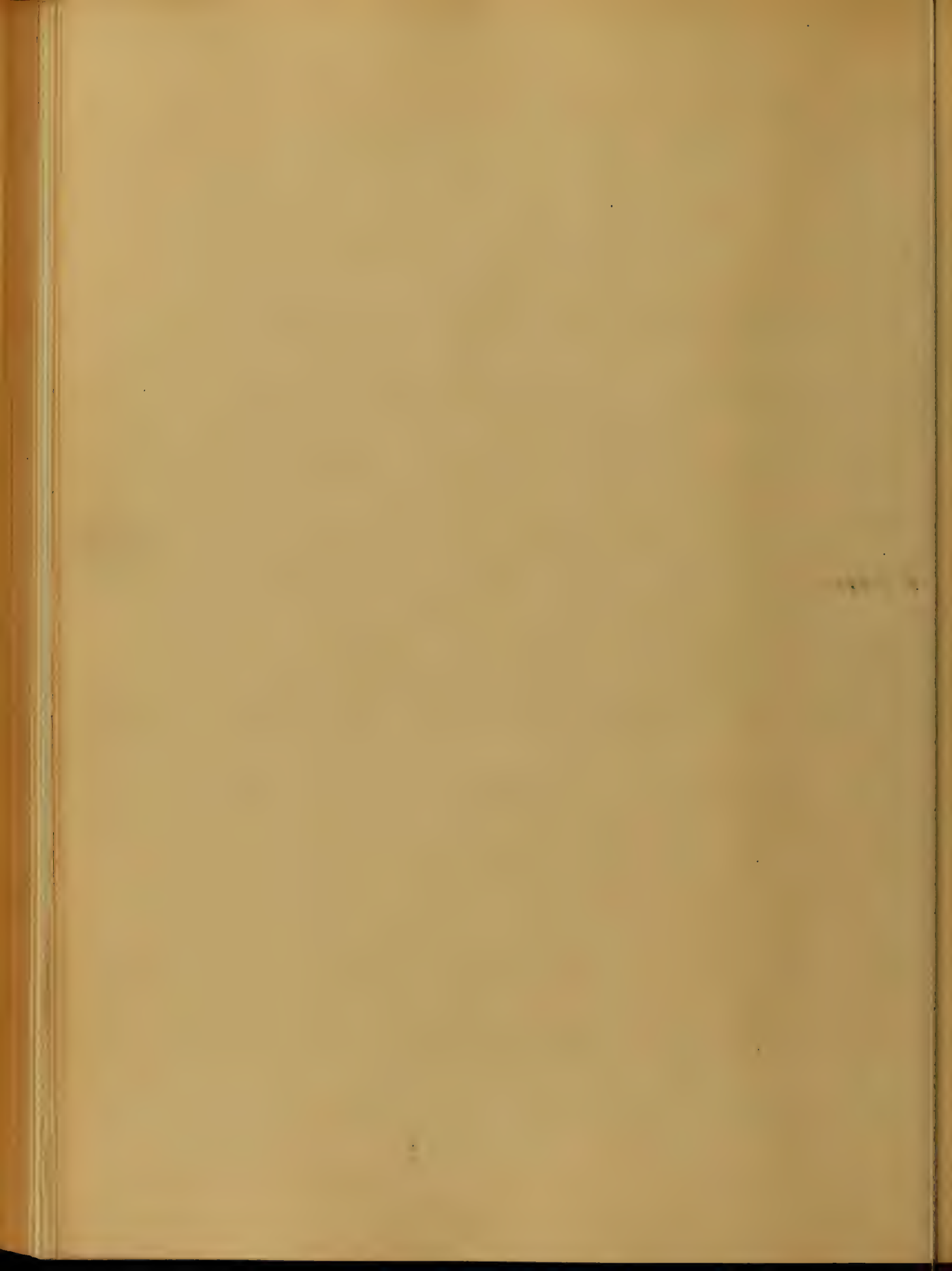
—, some to a morbid condition of the lymph —, some to a specific poison in the blood —, some to want of power in the organic nervous force —, some to imperfect respiratory action —, some to deficient oxygenation of the blood, and others to a variety of causes needless to enumerate. Whatever the disturbing cause may be, the conditions which are invariably antecedent to the formation of Tubercle are — defective vital formative power, impoverished blood, imperfect assimila-



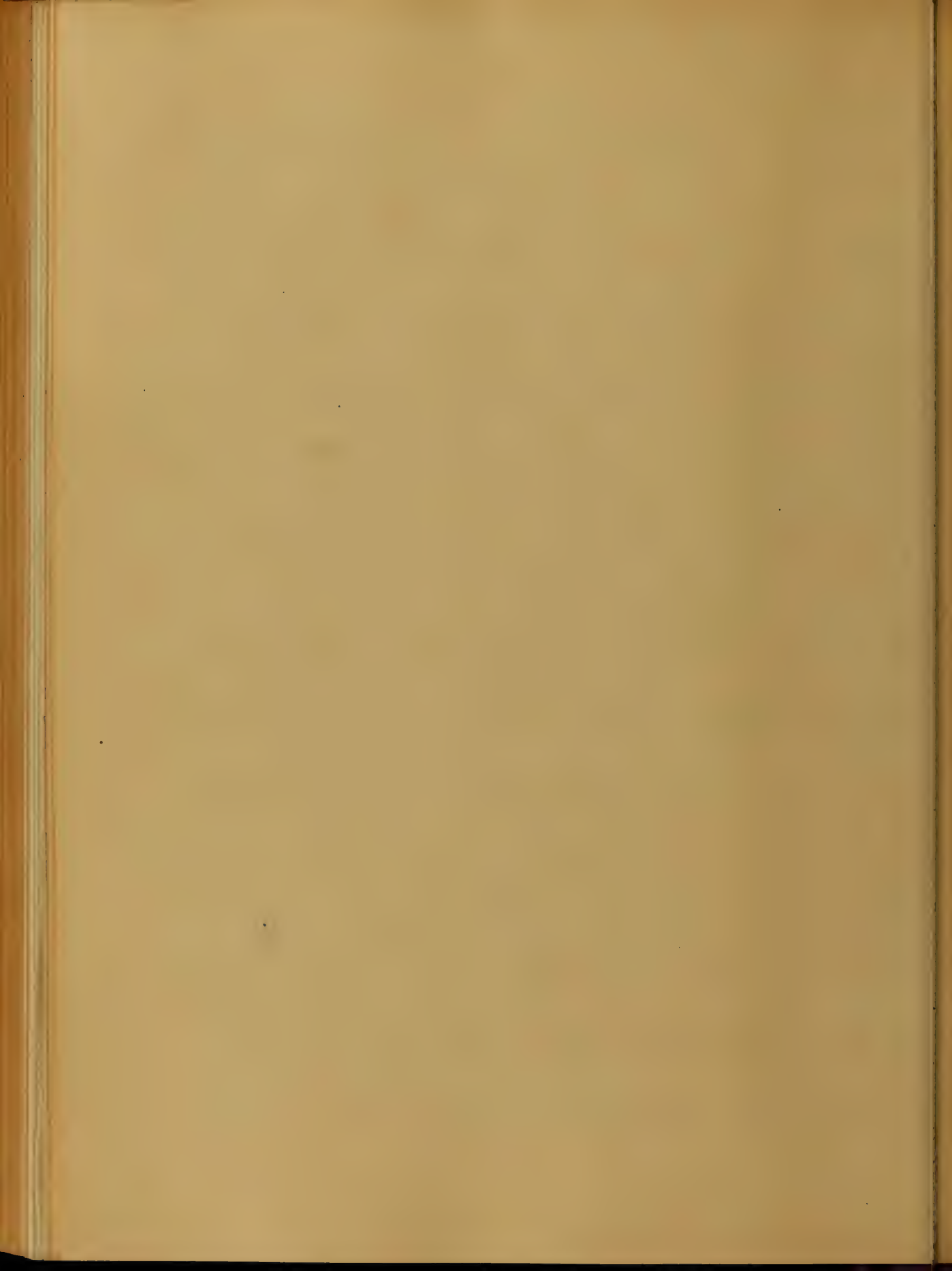
tion, and general mal-nutrition.

These constitute the essence of Phthisis, and this leads to a consideration of the predisposing and exciting causes of the disease.

It will be manifest from what has been stated that among these must be classed a great variety of agencies: first, the inheritance of a tuberculous tendency; second, long-continued exposure to cold and wet, improper or insufficient diet, irregularity of living, insufficient exercise, unhealthy and sedentary occupations, the con-

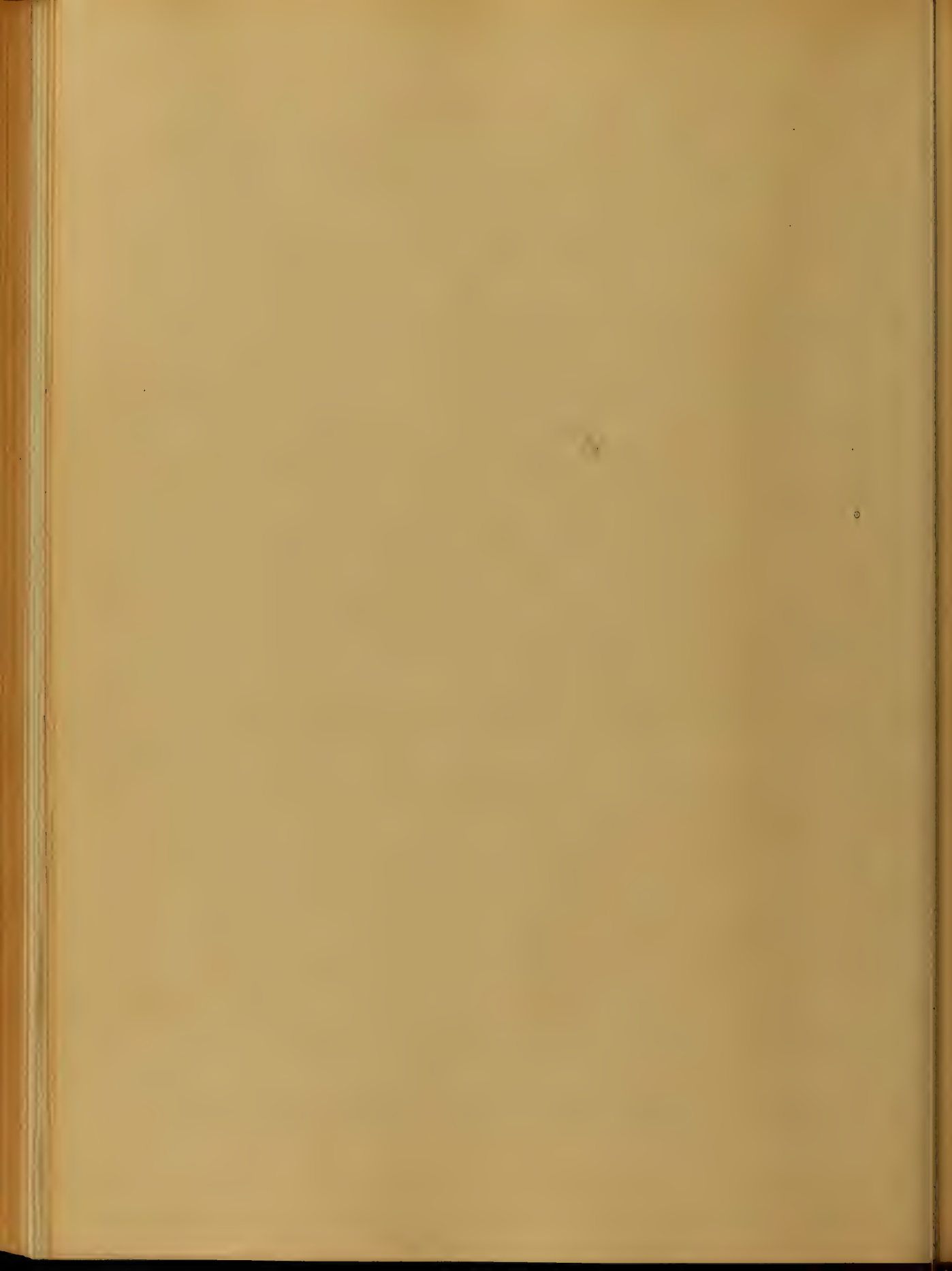


stunt inhalation of an impure atmosphere, the depressing influence of an unsuitable climate or locality, the indulgence of excessive sexual intercourse, vicious habits, overprotracted lactation, and long continued grief and mental anxiety, are among the causes which most powerfully predispose to the inroads of Consumption, whilst irritation and congestion of the lungs, whether produced mechanically or through the agency of diseases which in the absence of a predisposition



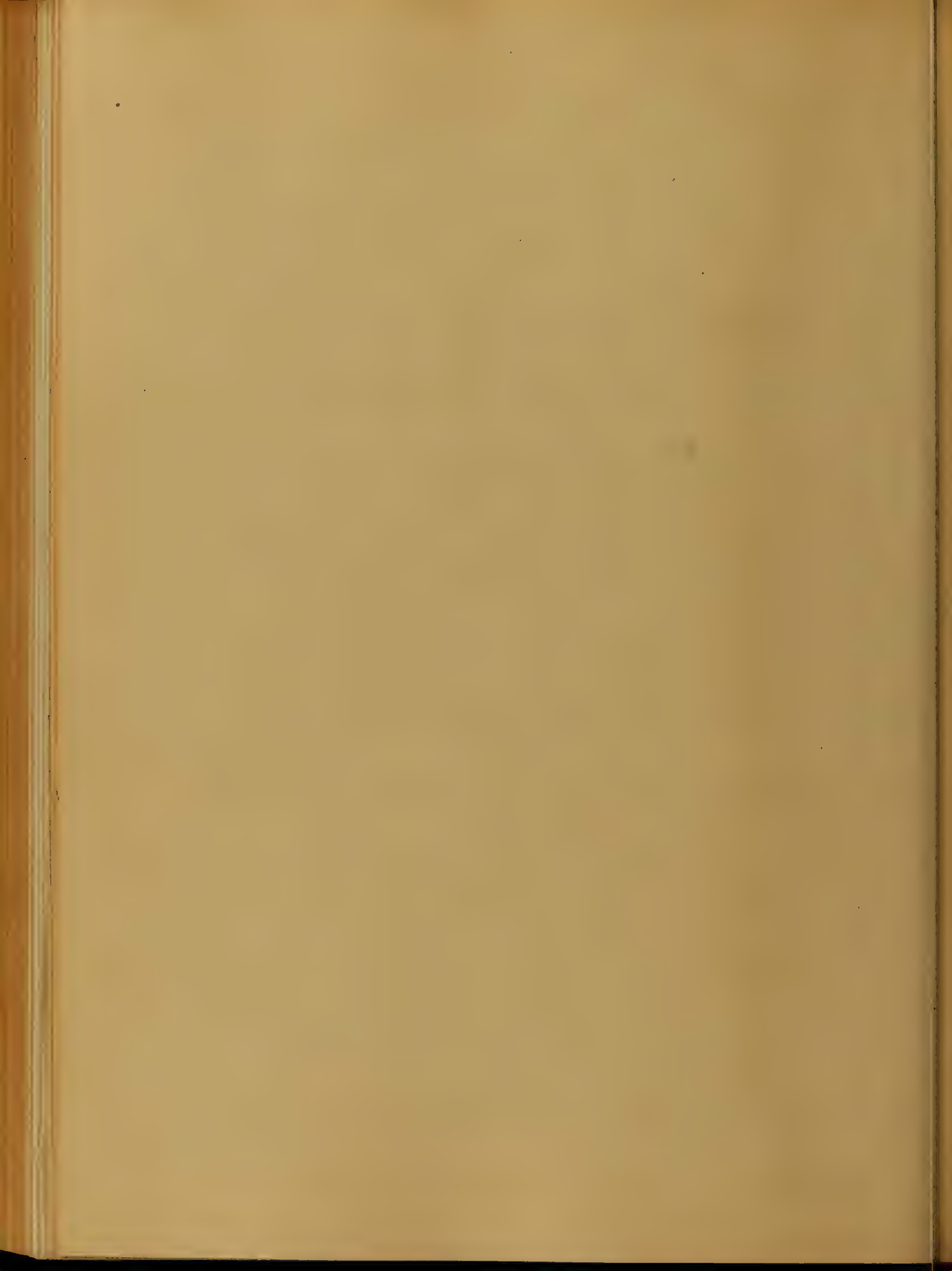
To Tubercle, would pass away
without producing the develop-
ment of Consumption, may
be regarded as its most com-
mon exciting Causes.

Common observation
has stamped Consumption as an he-
reditary disorder, and among the
laity the opinion is entertained
that in a vast majority of cases
the disease is traceable to heredi-
tary Taint: "We have no Consump-
tion in our family" is considered
a conclusive reply to the inquiry,
whether certain symptoms may not
be attributable to that disease.



Facts show the Tuberculous diathesis, in a certain proportion of cases, to be 2. genital and inherited. Why a peculiarity of Constitution, rendering a person specially liable to the development of this disease, should be transmitted from parent to child cannot be explained, any more than the fact that peculiar traits of physiognomy or mental character are inherited.

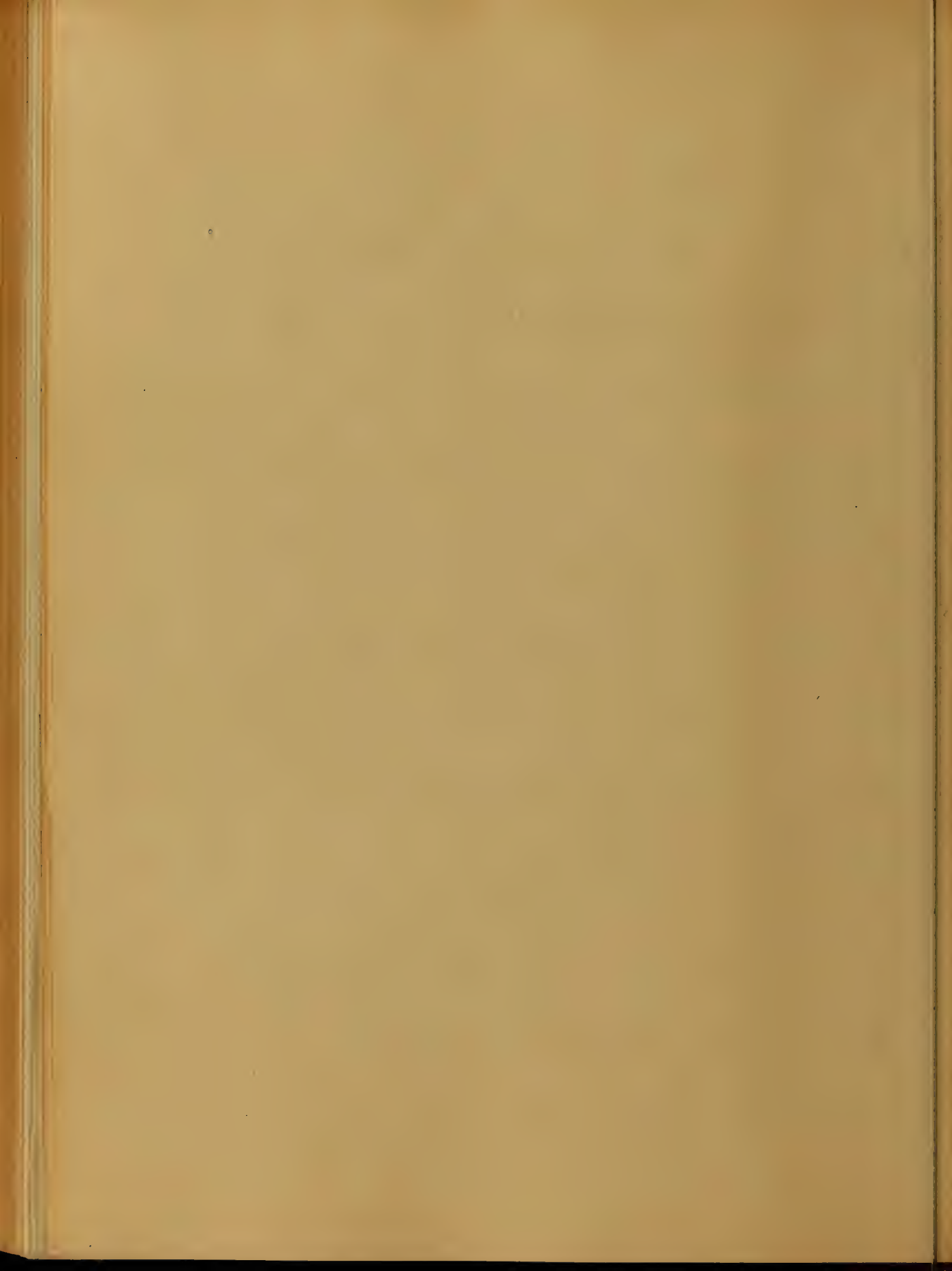
But it is also to be borne in mind that, owing to the frequency of the disease, a large proportion of tuberculous parents may have Consumption by mere co-



incidence, and it may be true that, sufficient consideration, not having been given to this fact, hereditary influence may have been over-rated.

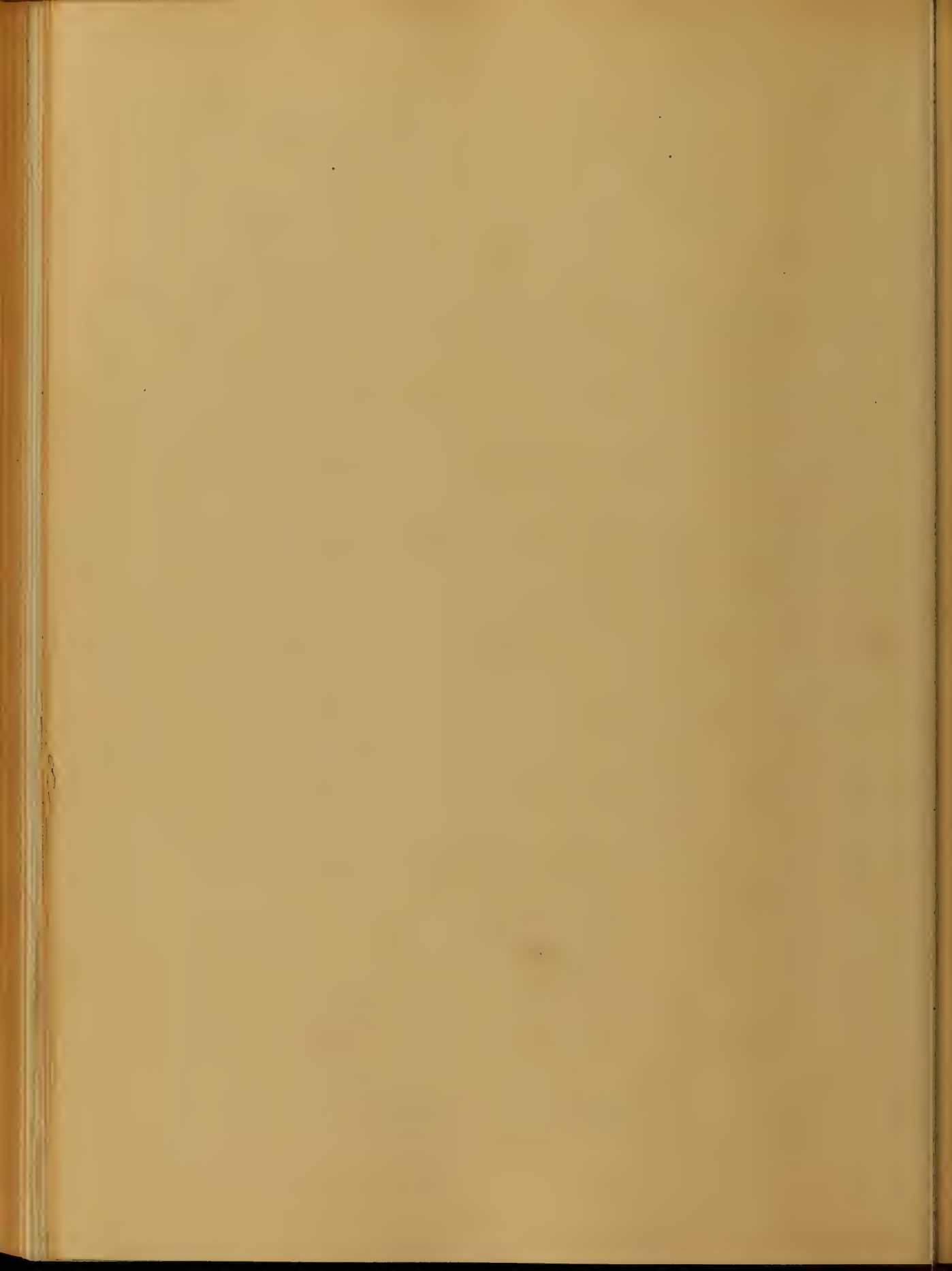
Without farther discussing the predisposing causes of tuberculosis, let us pass on to the consideration of tubercle, the material which forms the characteristic element of the disease.

Tubercle is a substance formed from the blood, to replace material lost by the ordinary retrograde metamorphosis.



It is of imperfect organization and low vitality, unfit for the construction of new tissues, or for the performance of the ordinary functions of the organ in which it may be deposited. The organ selected is not constant sometimes one being attacked sometimes another but in every instance it plays the part of a foreign body, and damages, both by the extent of its own area, and by the inflammatory action it causes, the organ in which it may be imbedded.

On appearance it varies greatly, the variation observed to

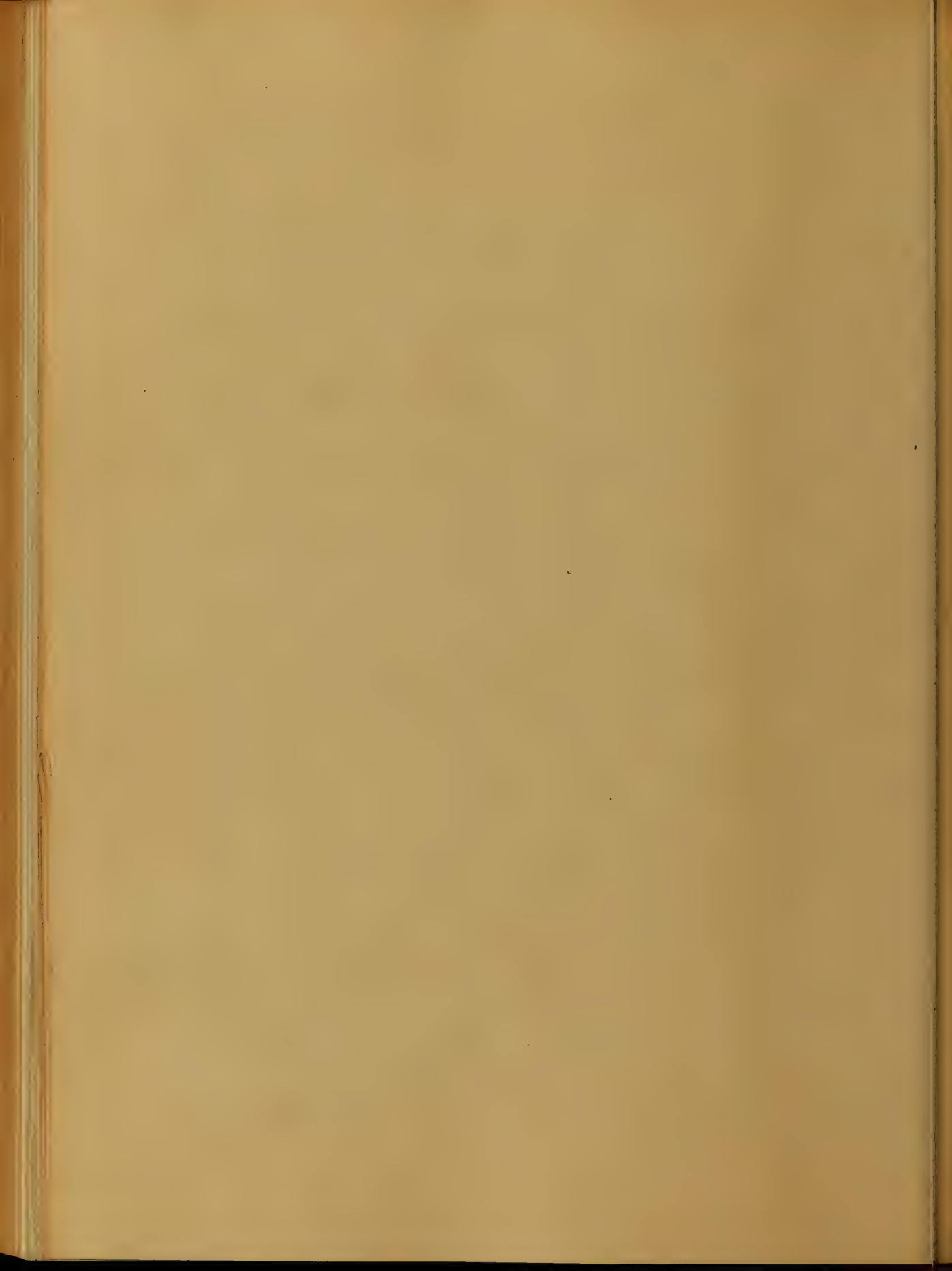


ing. in part referable to differences in structure, but in part also, to the age or stage of development and extent of the deposit.

There are two forms in which it is chiefly recognized.

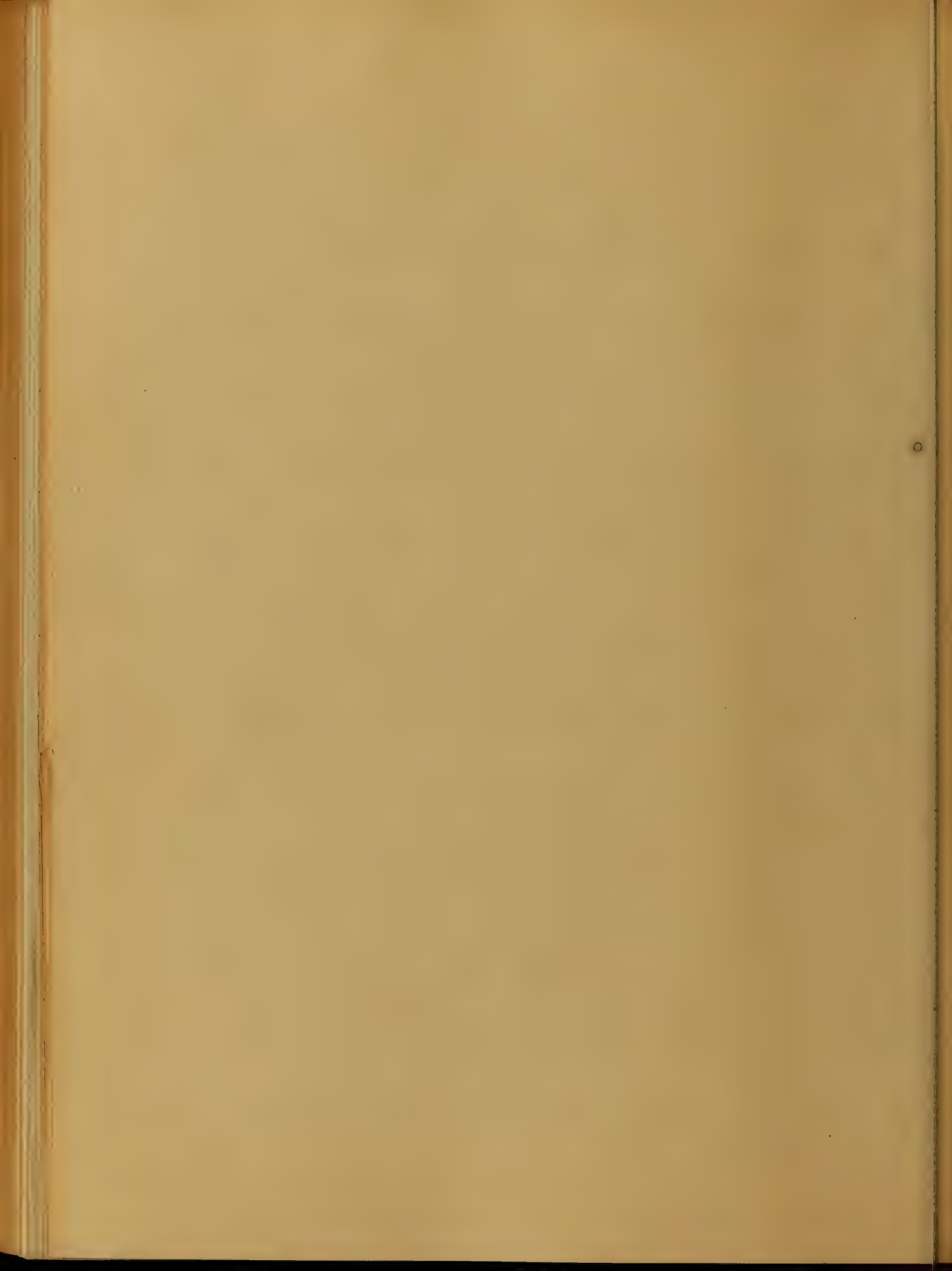
In the one it appears as minute, firm, semi-transparent granules, of a bluish gray color, very different from ordinary mica, and known as "Gray, military Tubercle". These may be sparsely scattered through the lung, or may crowd their entire tissue.

In most instances they are isolated, and sometimes are so minute



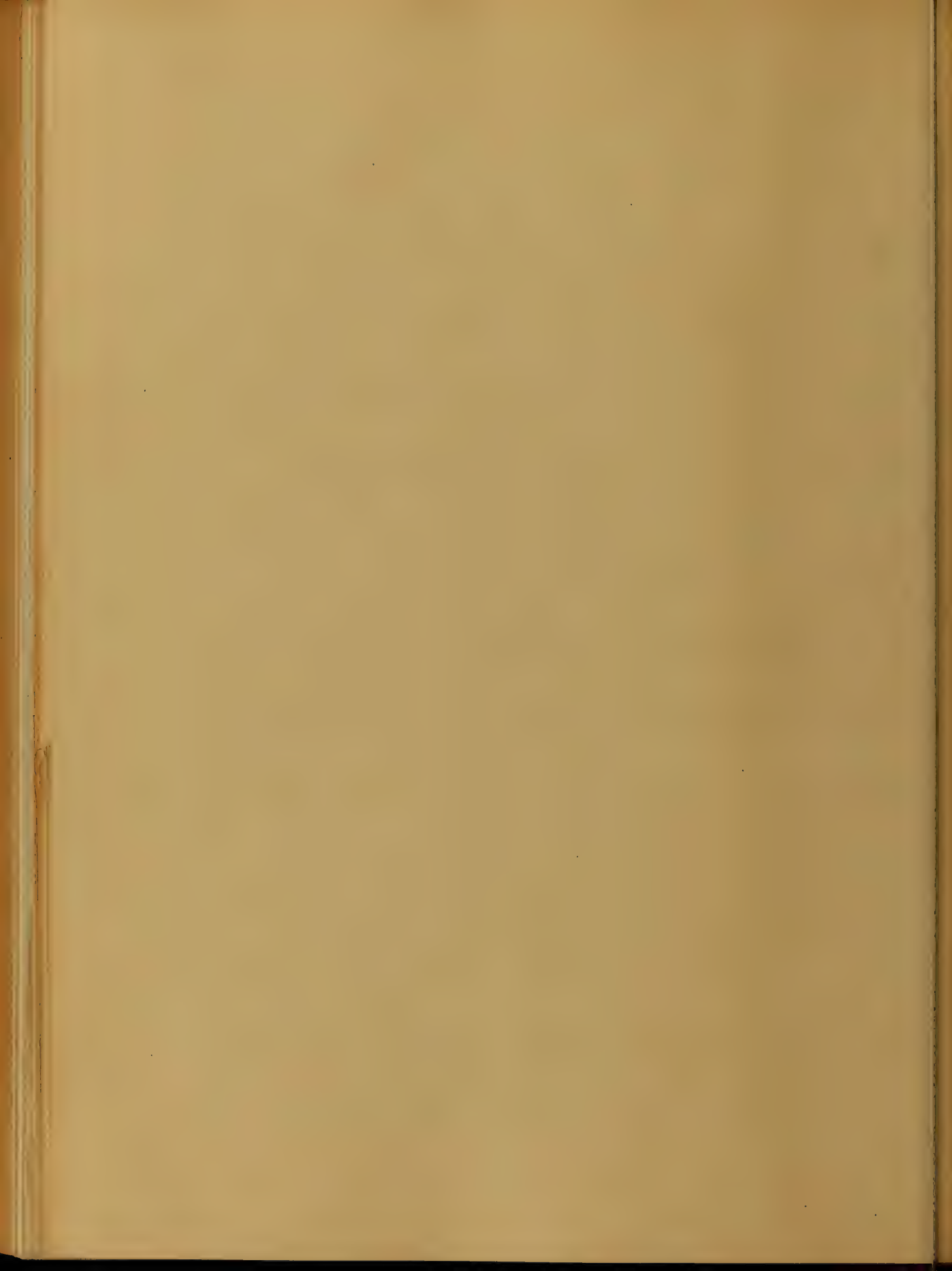
as to be scarcely discernible by
the naked eye, but more common-
ly they are about the size of a
millet seed, and, occasionally,
when several of them coalesce,
they may form a mass as large
as a pea. Usually firm, and
of a semi-cartilaginous hardness,
they are occasionally softer
and less resisting, and admit
of ^{being} readily crushed between the
fingers, whilst, not infrequent-
ly, they are mixed with black
pigmentary matter, or else are
surrounded by it.

The other, and



more common form of deposit, is that known under the title of "Yellow Tubercle". This form is quite opaque, and varies in color from a dirty white to a drab or a bright buff, and in consistence from that of firm tough Cheese, to that of diffident Cream Cheese.

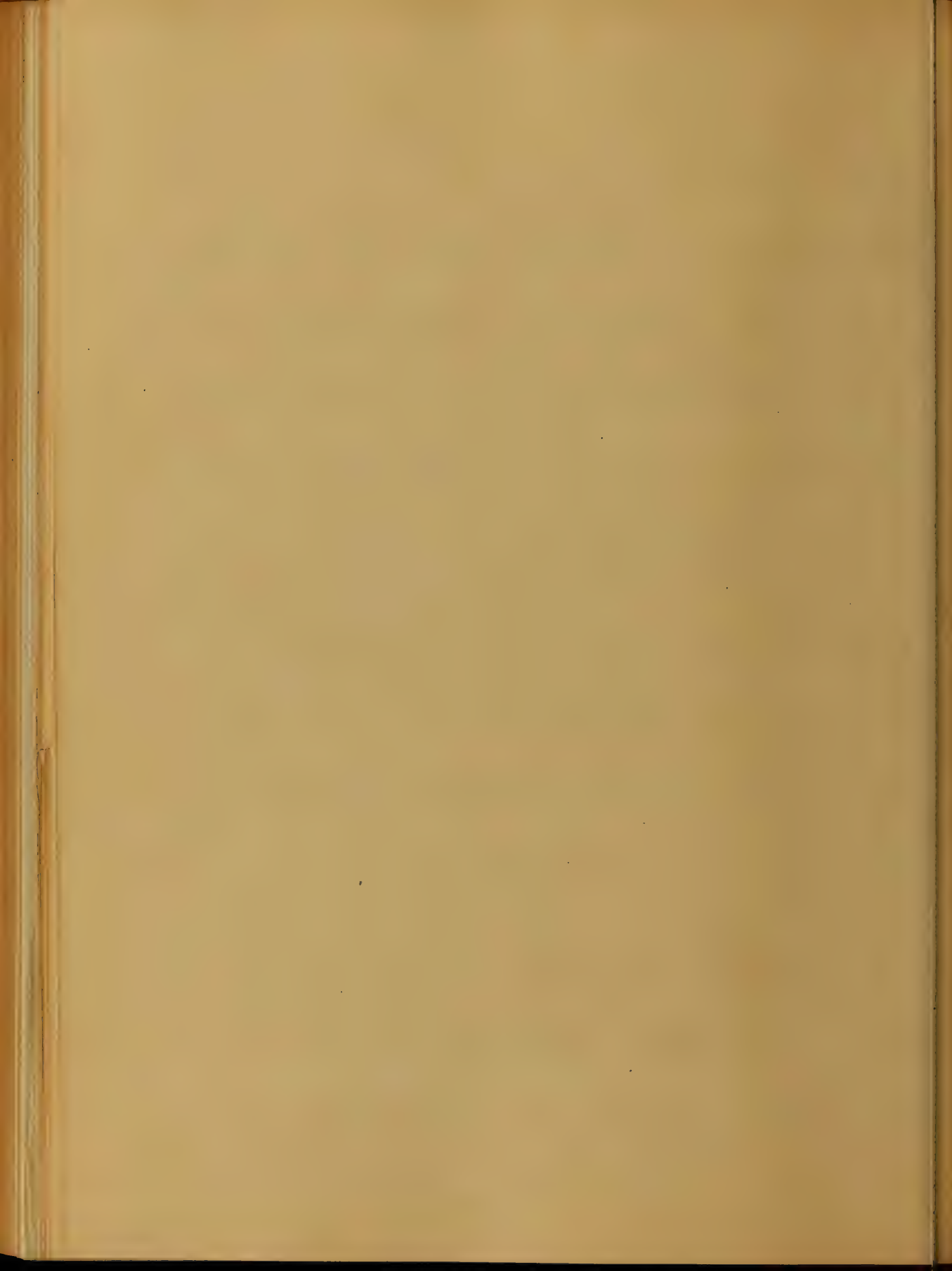
In many instances it exists in roundish or irregular-shaped isolated masses, in others a large proportion of the lung is infiltrated with it, and in others again it exists in isolated masses in one part of the lung, while in another part it infiltrate



Large portions of the lung tissue.

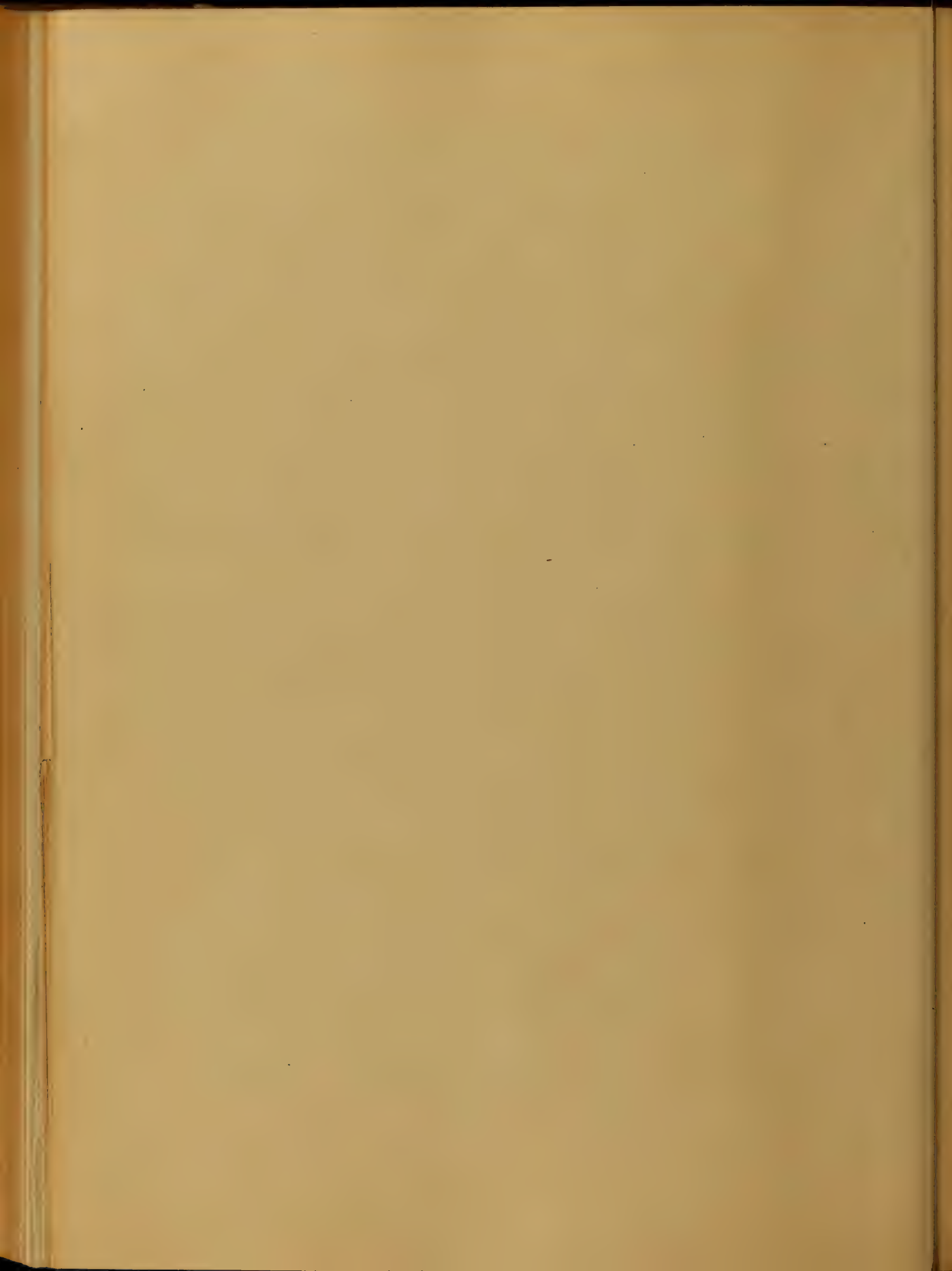
The isolated deposits may vary in size from that of a millet seed, to that of a hazel nut, or a large walnut. The larger masses being formed by the aggregation of the smaller deposits, which give rise to compression and atrophy of the intervening tissue. Thus the size of the mass is determined by the extent of lung tissue implicated in the mischief, and the shape by the form of the space in which the deposit is made.

Not infrequently the deposit is soft and glutinous in



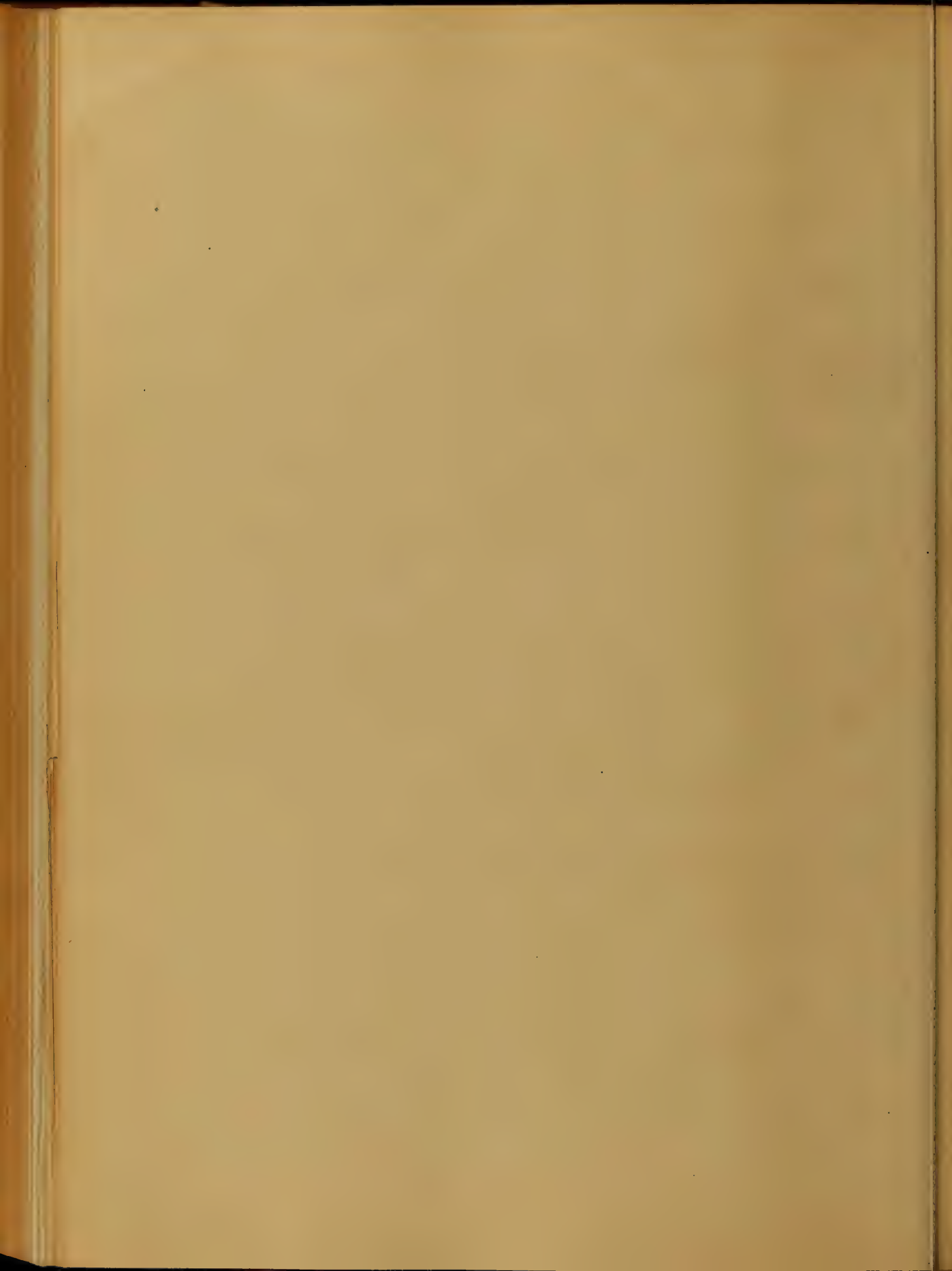
one part of the lung, and tough and firm in another, extremely friable in yet another, or if the deposit be old it may have undergone Calcareous or Petaceous degeneration, and may prove of stony hardness. In another class of cases the tuberculous matter becomes mixed with a dark-colored Carbonaceous deposit, which not only colors the tubercle, but gives a bluish-black tinge to the pulmonary tissue.

Tubercle, when once deposited may long remain very nearly in statu quo, or may,



Slowly, or speedily, undergo transformation, and the precise nature and rapidity of the change will depend in part on the original constitution of the deposit, and in part on the condition of the patient's system. The gray, milky tubercle does not ordinarily break up, or undergo softening.

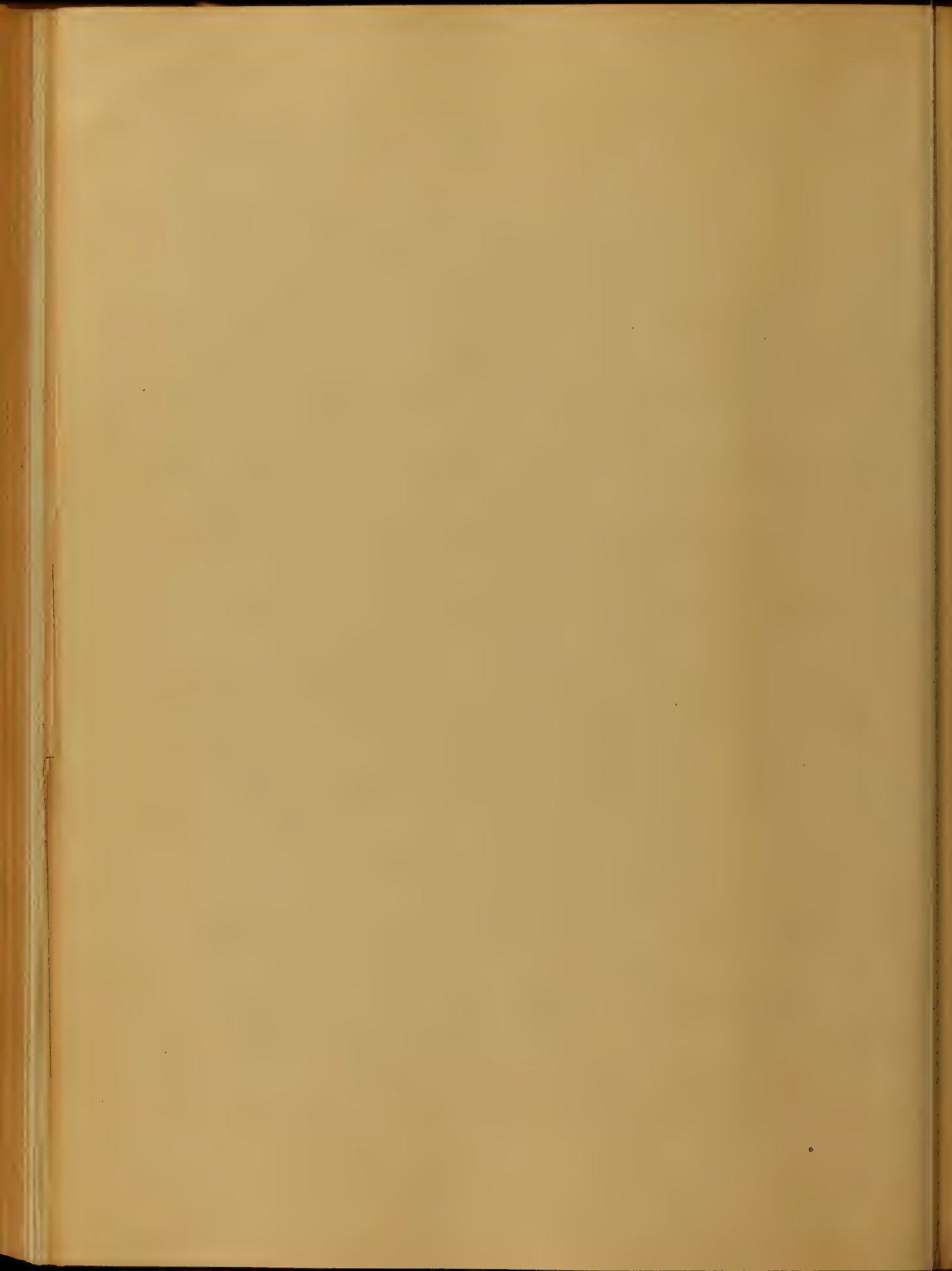
It loses its transparency and ultimately shrinks into a dense, hard tough mass; in certain instances however, in which it becomes the seat of yellow tubercular deposit or undergoes transformation into yellow tubercle it loses this



character, and is liable to soften
and break up; in others it becomes
the seat of slight earthy deposit.

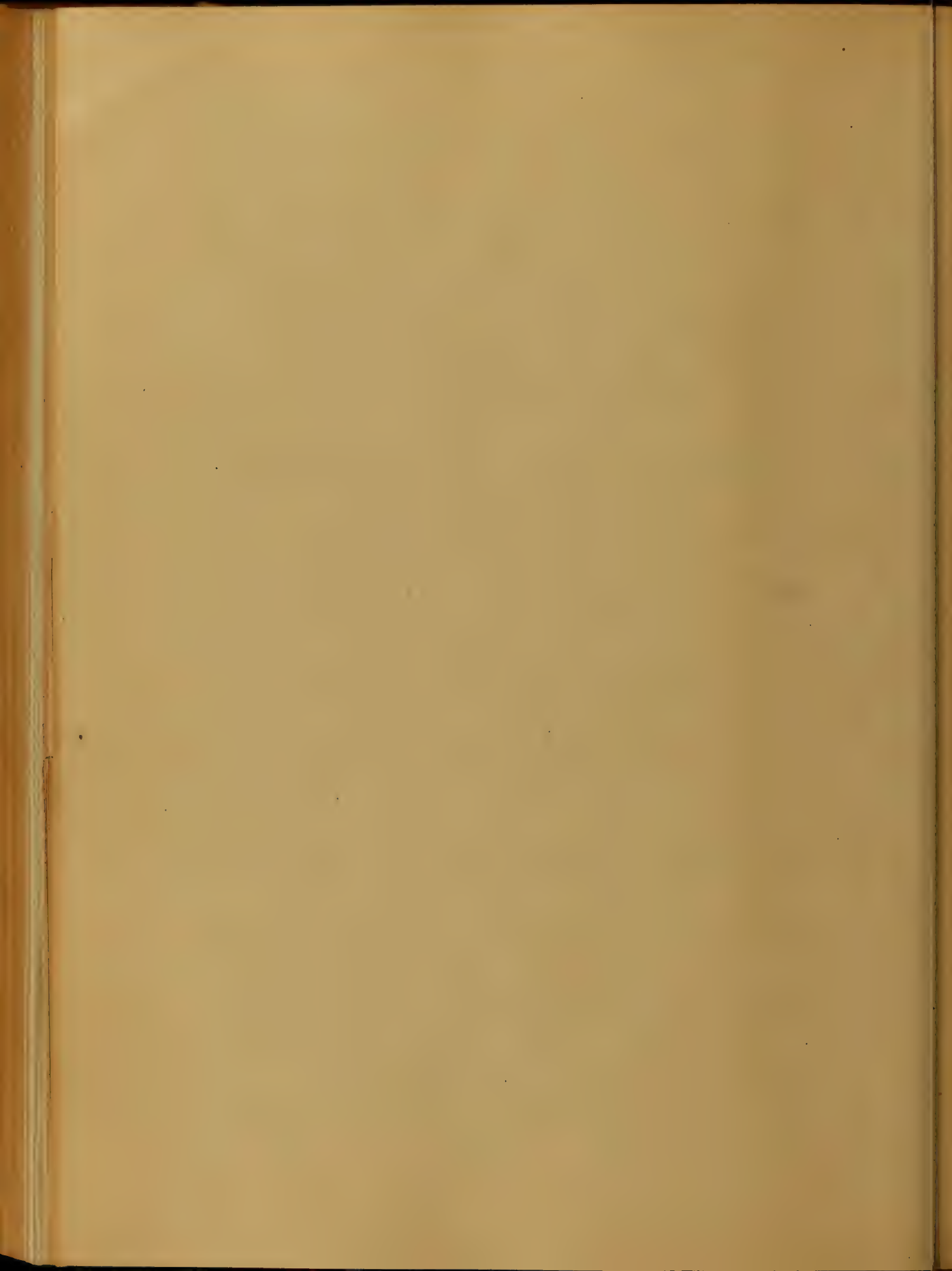
Yellow Tubercle, on the contrary,
is prone to soften, the process of
disintegration, ^{sometimes} commencing in the
centre of the tuberculous mass, but
more commonly at its periphery.

Softening, however, does not ne-
cessarily occur in yellow tuber-
cle. It usually takes place
sooner or later if the patient's
health continues to fail, in which
case the tissues entangled in the
tuberculous mass, or immediately
surrounding the softened tubercle



Becomes inflamed and suppurates,
The softened tubercle mixed with
portions of the disintegrated lung
tissue finds its way into the air-
passages, excites cough, and is
then expectorated, leaving cavi-
ties or *Bonicae* in the lungs.

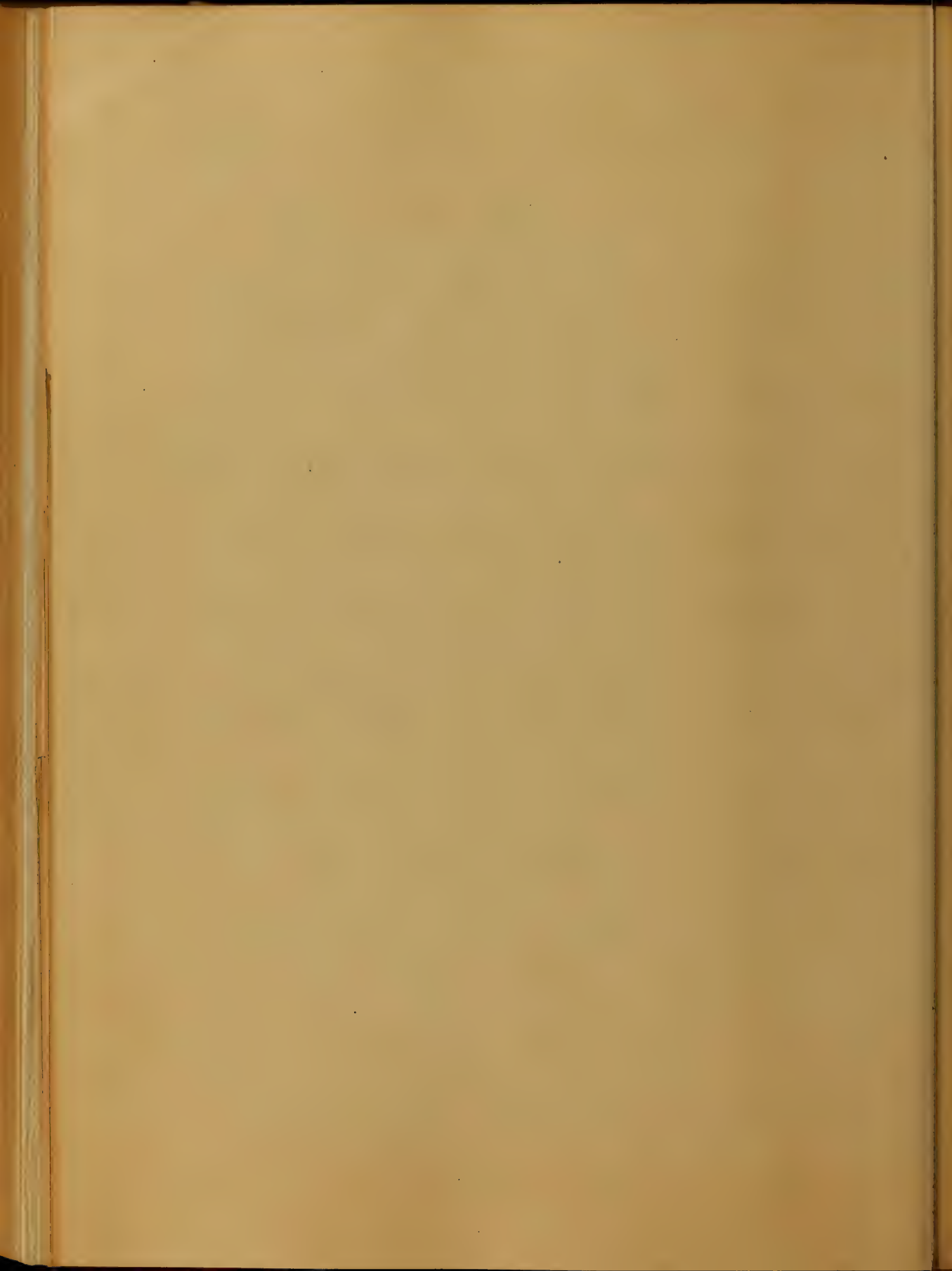
After softening has taken
place, and the disintegrated tuber-
cle has been removed by expecto-
ration. The cavities which remain
may cicatrize under the influence
of returning health and increased
vital power. In cases of acute
Phthisis, and especially when
the deposit of the gray matter



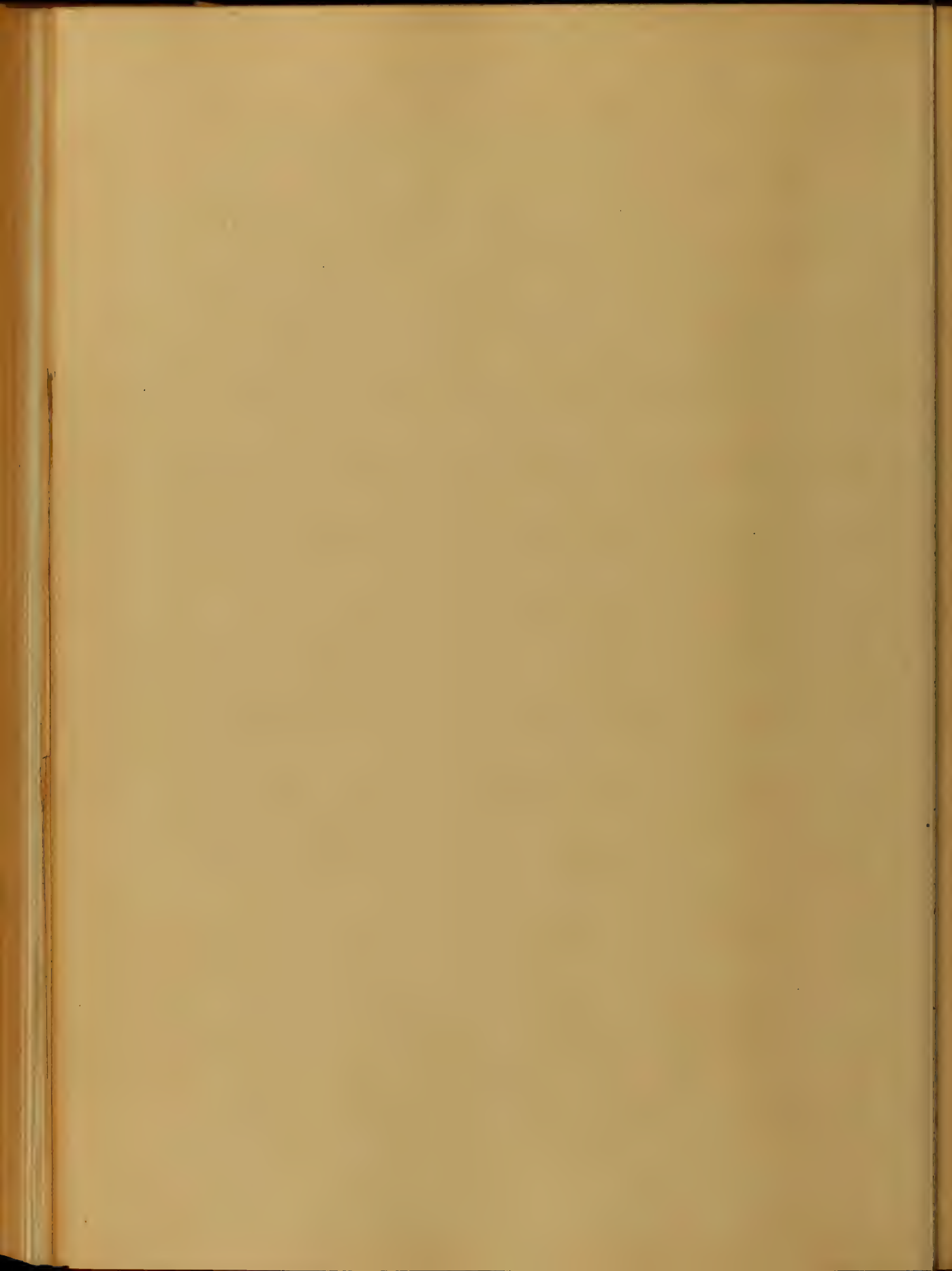
variety, Tubercles are apt to be disseminated through all parts of the lungs, and, in children, the same fact is frequently observed; but in chronic cases, and in adults the deposits usually commenced in the apices of the lungs, (the left most frequently), and are sometimes altogether absent in the lower lobes.

In a diagnostic point of view this fact is of the utmost importance.

In most instances both lungs are affected to a greater or less extent, but the tubercle is

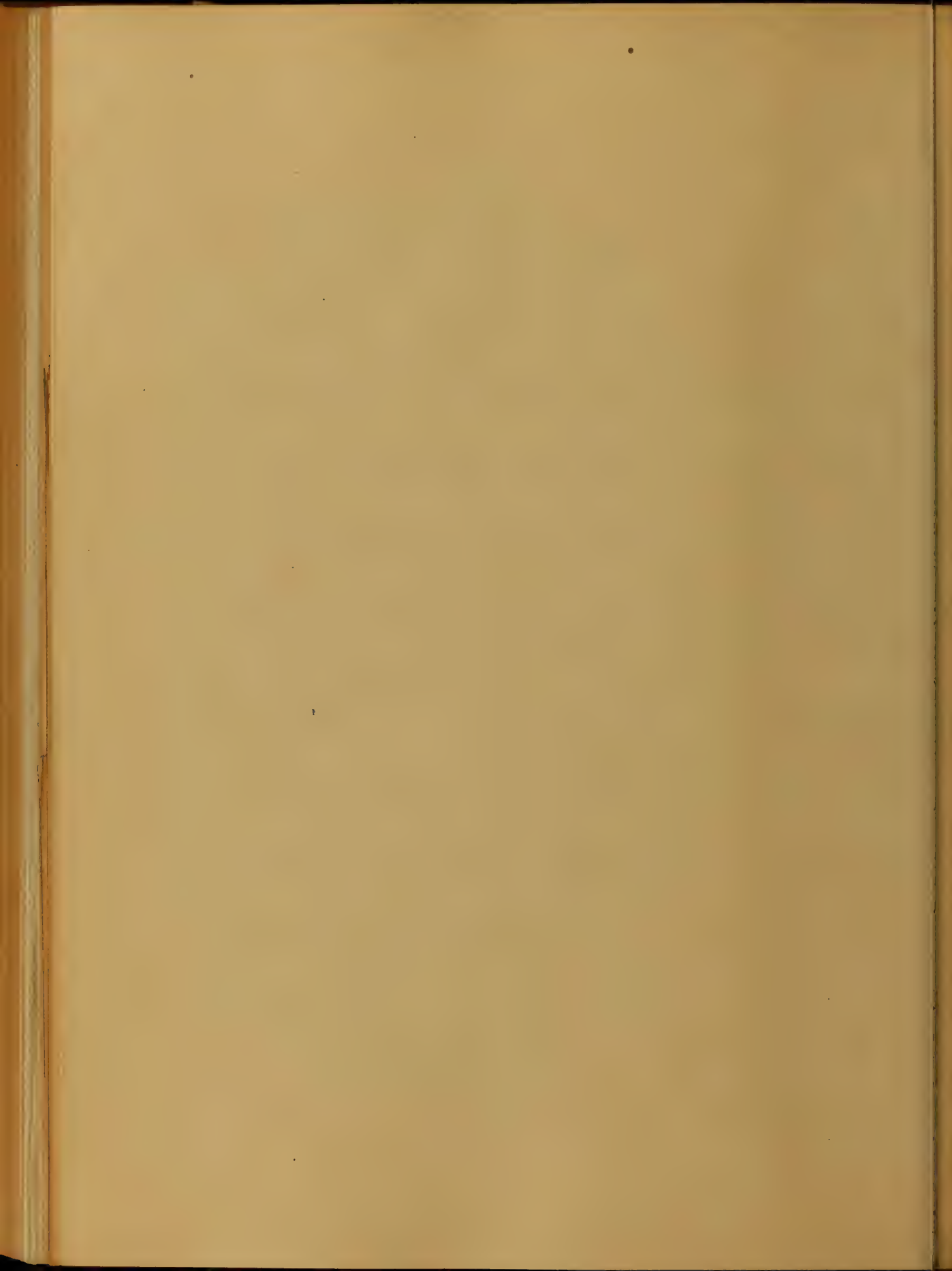


deposited earlier, and the deposit is larger in amount and in a more advanced stage of softening at the apices than in the middle or lower portions, so that when large cavities exist at the summits of the lungs, smaller and more recent vomicae are found lower down, and crude, unsoftened tubercle, or healthy lung tissue at the base, but sometimes the middle or base of one or both lungs is alone or principally affected and at other times one lung may escape altogether, while the entire struc-



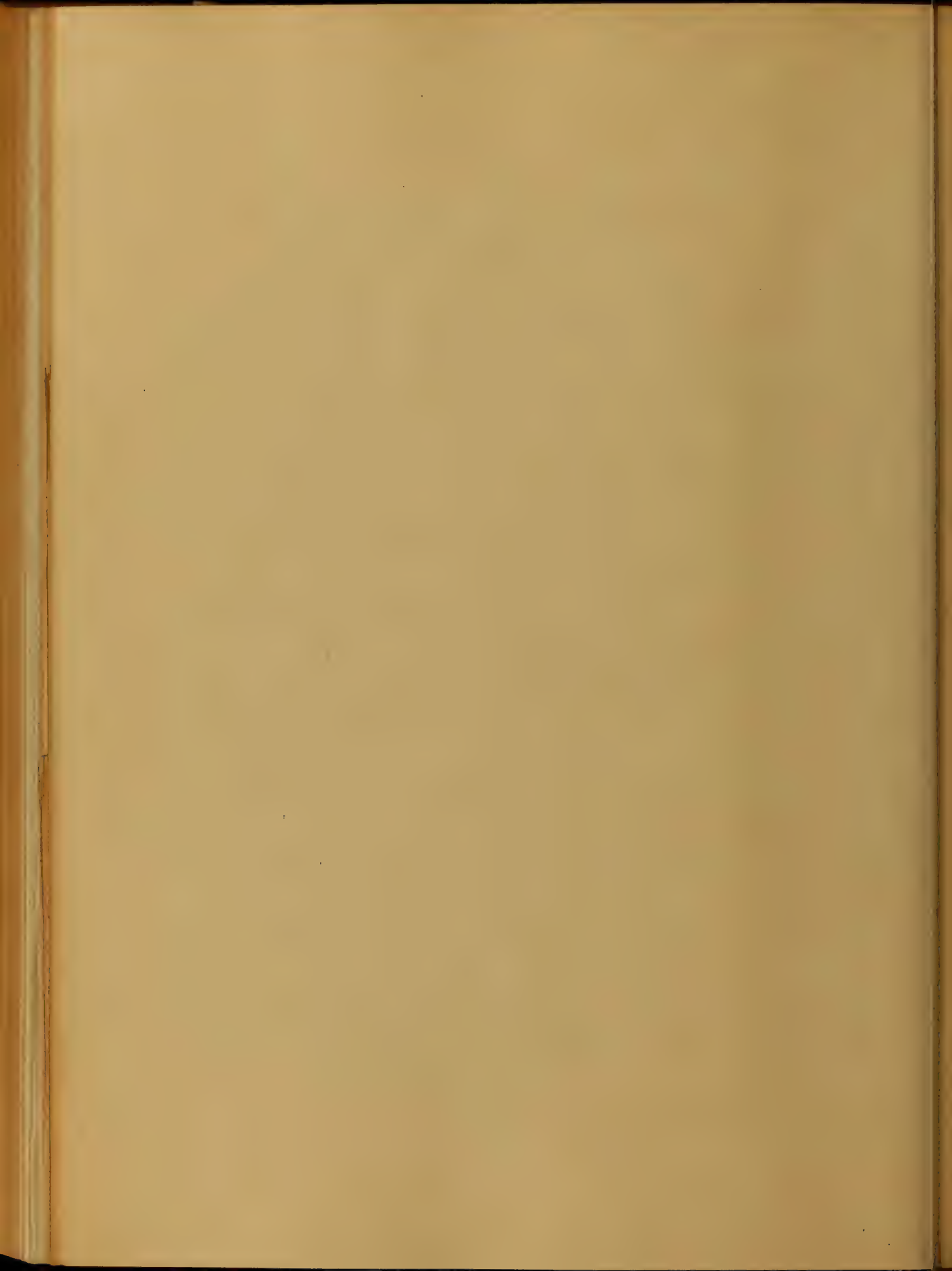
ture of the other is infiltrated with tubercle, or broken up by vomicae. Sometimes, again, both lungs may be partially or extensively implicated, but the tubercles may have undergone degeneration and softening in the one lung, whilst they are firm, and present all the characters of recent deposits in the other.

Clinical history, in sketching the course of this affection, should devote special care to the first stage, as being the period in which there is most promise of benefit from



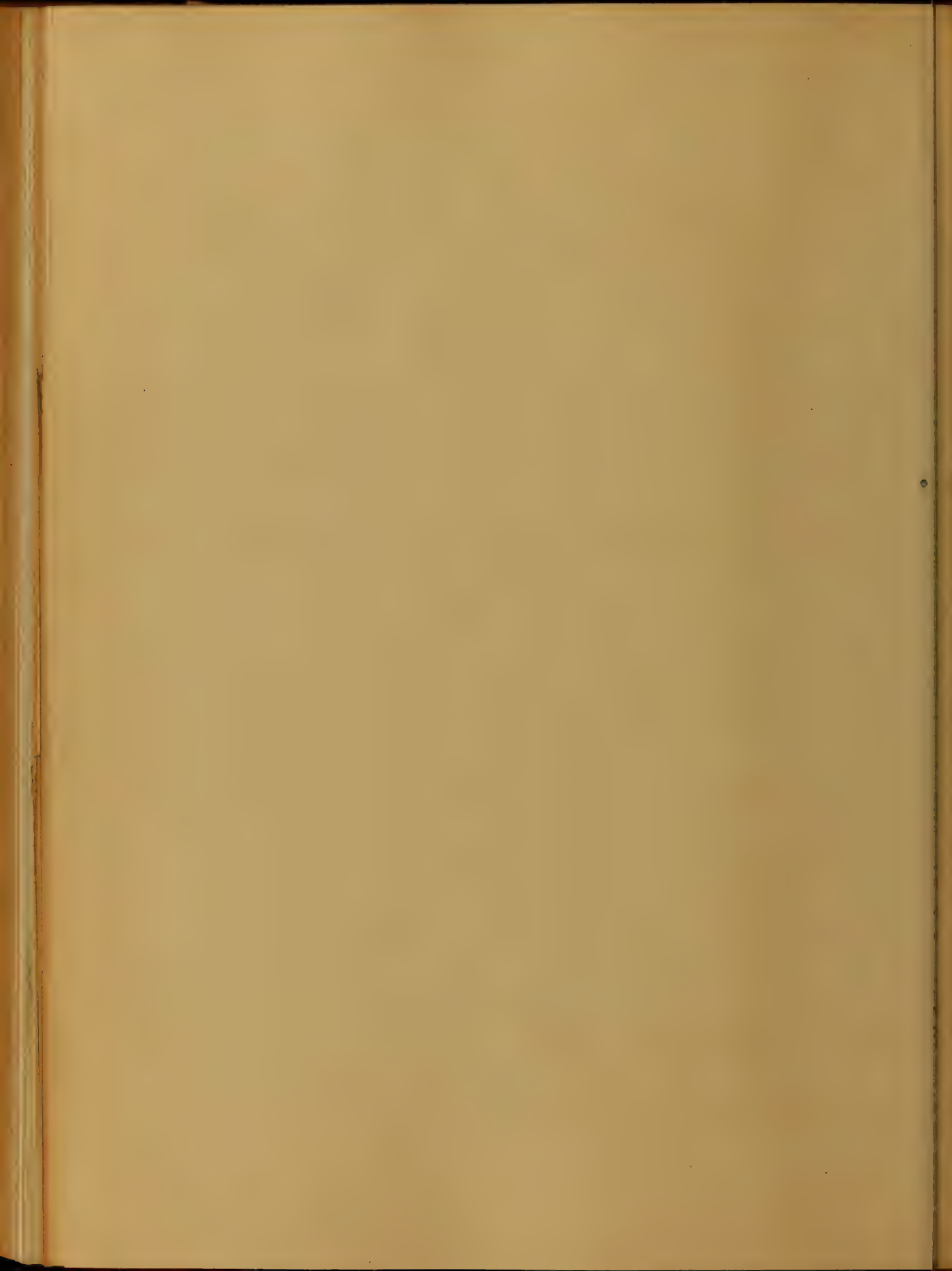
professional advice.

In many instances the earliest, and for some time the only symptoms of its approach are dyspepsia with sick headaches, loss of appetite, gradually increasing languor and debility, and depression of spirits. The patient feels unequal to his ordinary avocation, his nights are restless and in the morning he rises weary and unrefreshed. After a time emaciation commences, the flesh becomes flabby, the countenance pale, the pupil of the eye dilated, and the conjunctiva



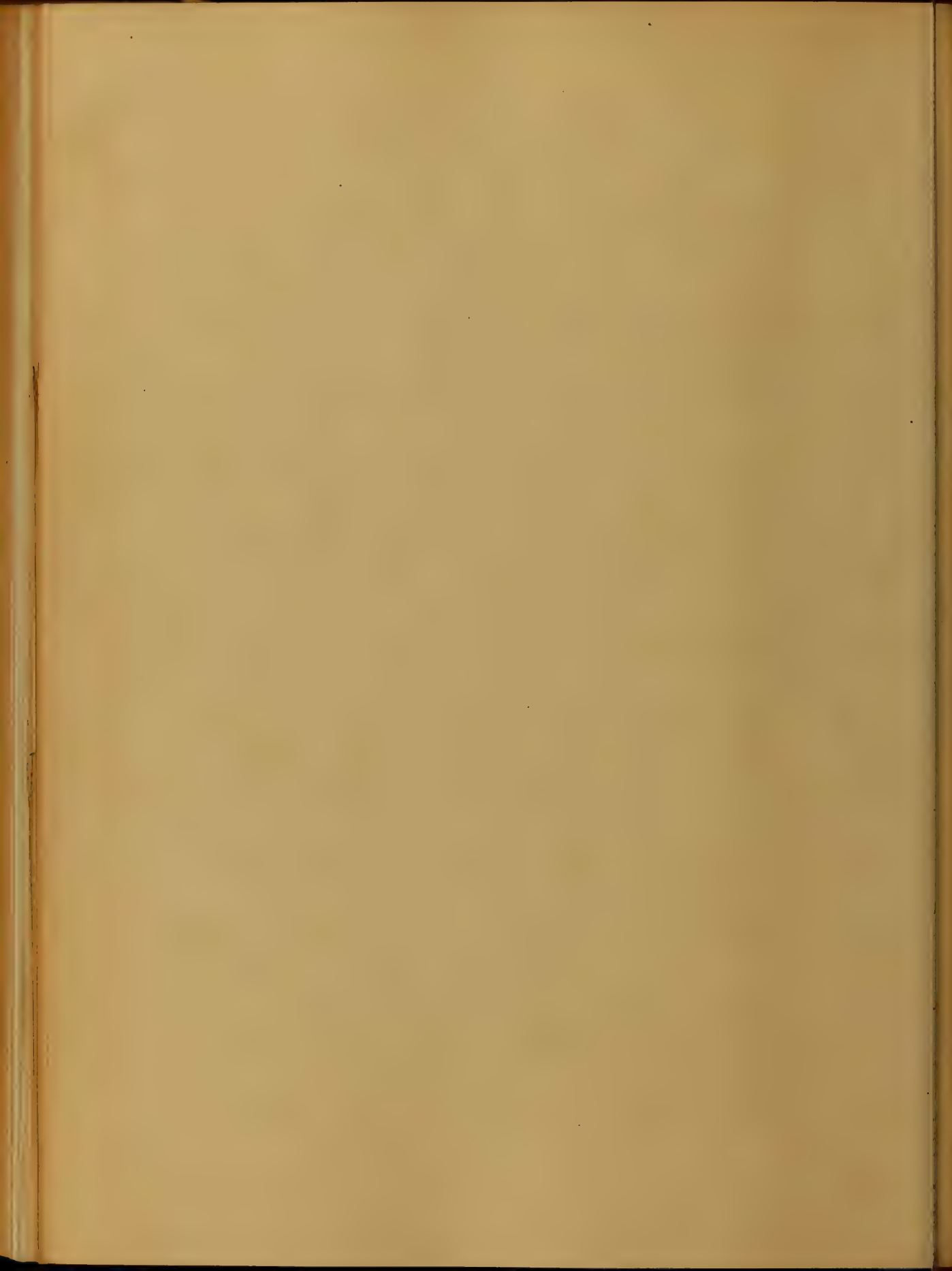
of a pearl-like whiteness. The hair falls, and in many instances the finger-nails become incurved, and the ends of the fingers themselves become clubbed.

Sometimes the patient suffers from weakness and huskiness of voice, soreness of the throat and a tightness across the upper part of the chest, with fugitive dull, aching pains about the Clavicles or under one or both Scapulae, and although he has no Catarrhal symptoms he fancies he has taken a cold for he feels chilly and un-



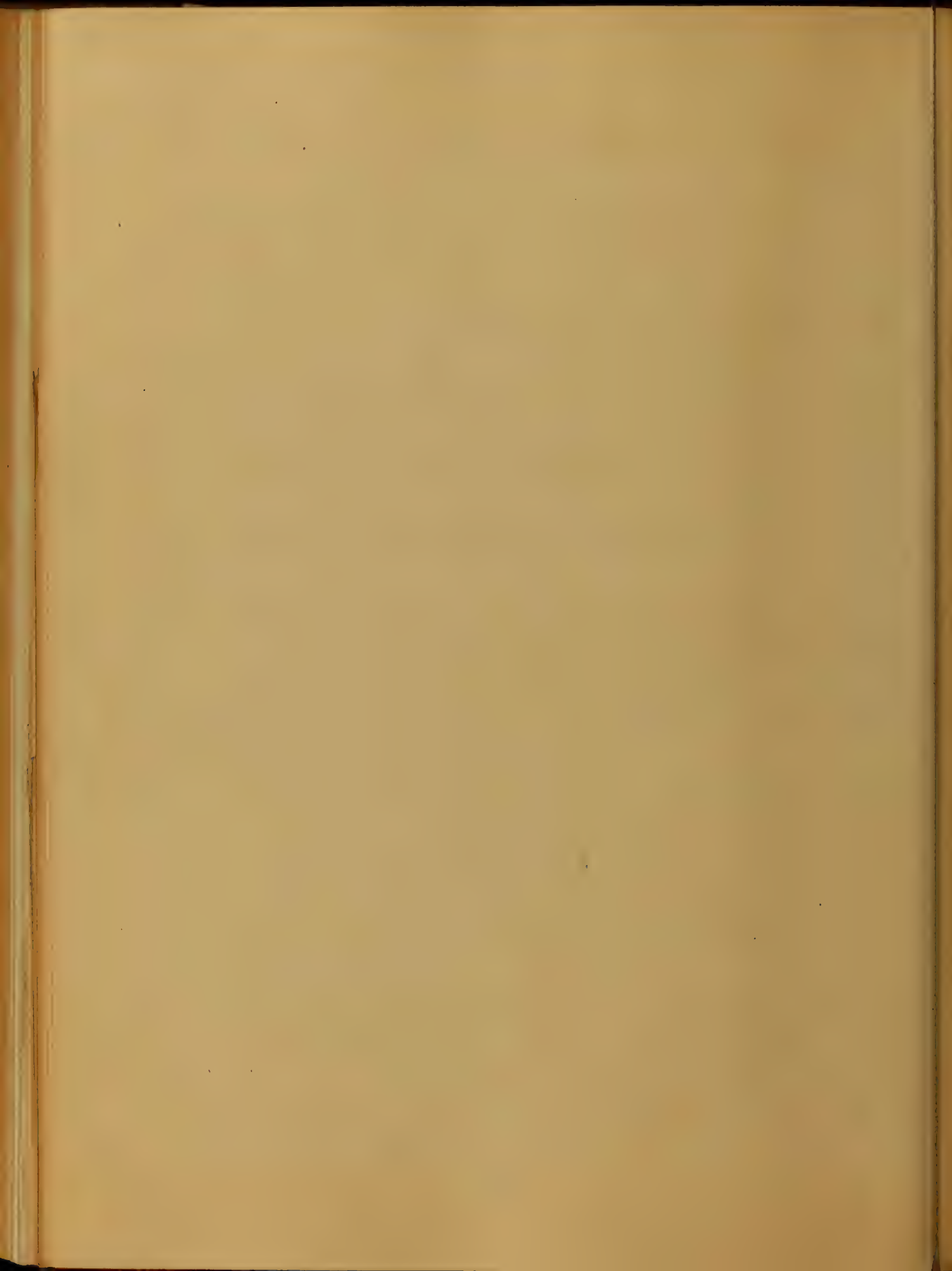
Comfortable, and has a short
hacking cough, troubling him
principally night and morning.

At first the cough may be
so slight as not to cause him
any annoyance, or even to excite
the apprehension of his friends,
being regarded simply as a clear-
ing of the throat. It appears
to be caused by relaxation of
the vocal, or by irritation of
the pharynx, which, in the ear-
lier stages of Phthisis is often
rough, red and covered with
mucus, but after a while the
cough increases in frequency



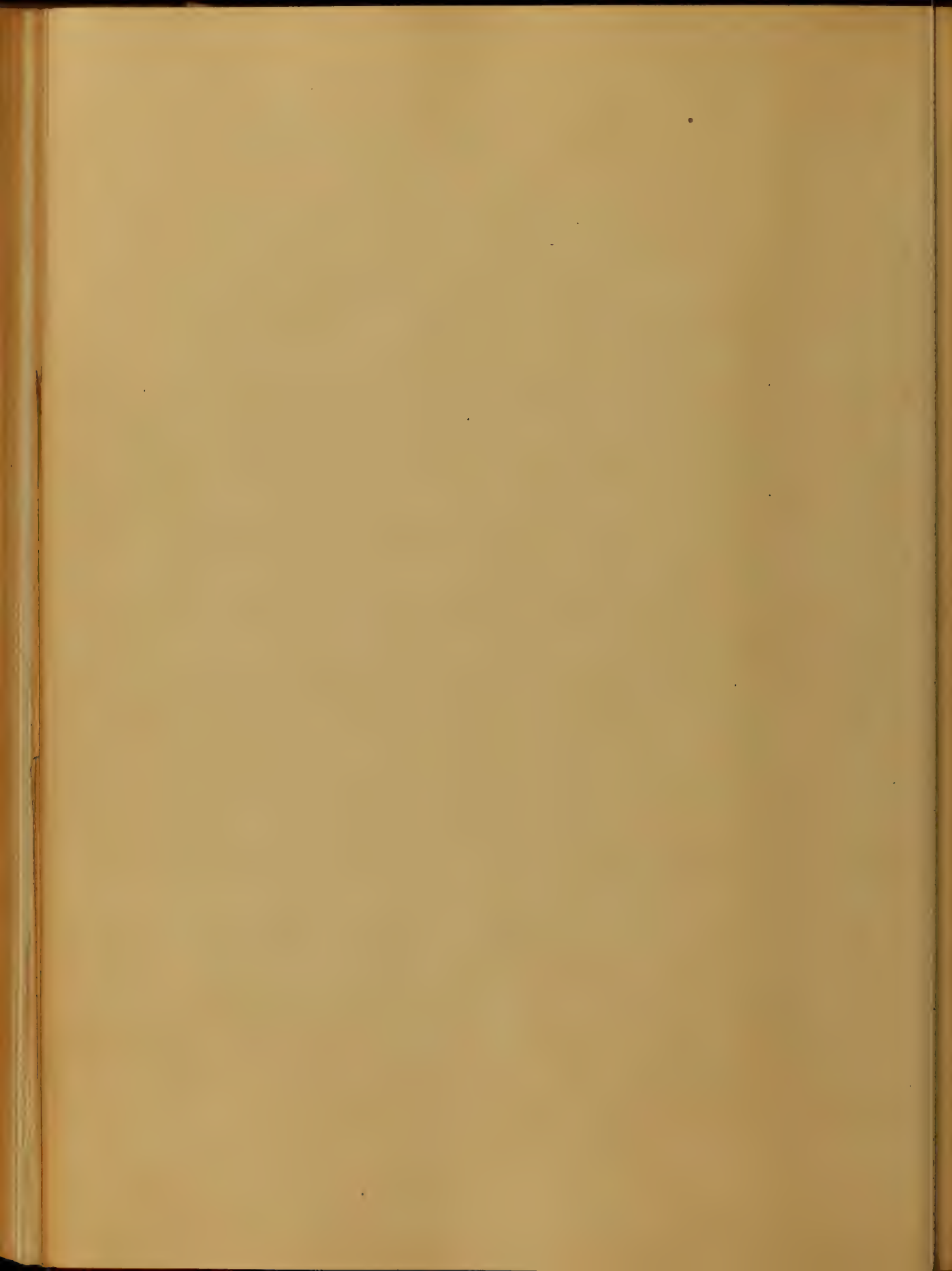
and violence, recurs at intervals throughout the day, especially after exertion, and is attended by a scanty expectoration ofropy or glairy mucus, speckled tinged or streaked with blood.

Little suspecting the cause of his ailment, the patient complains that he is short-breathed on going up stairs, and is soon exhausted by the slightest active exertion, and the physician finds that breathing is quicker, and the temperature of the body higher than natural, usually ranging from 100° to 102,



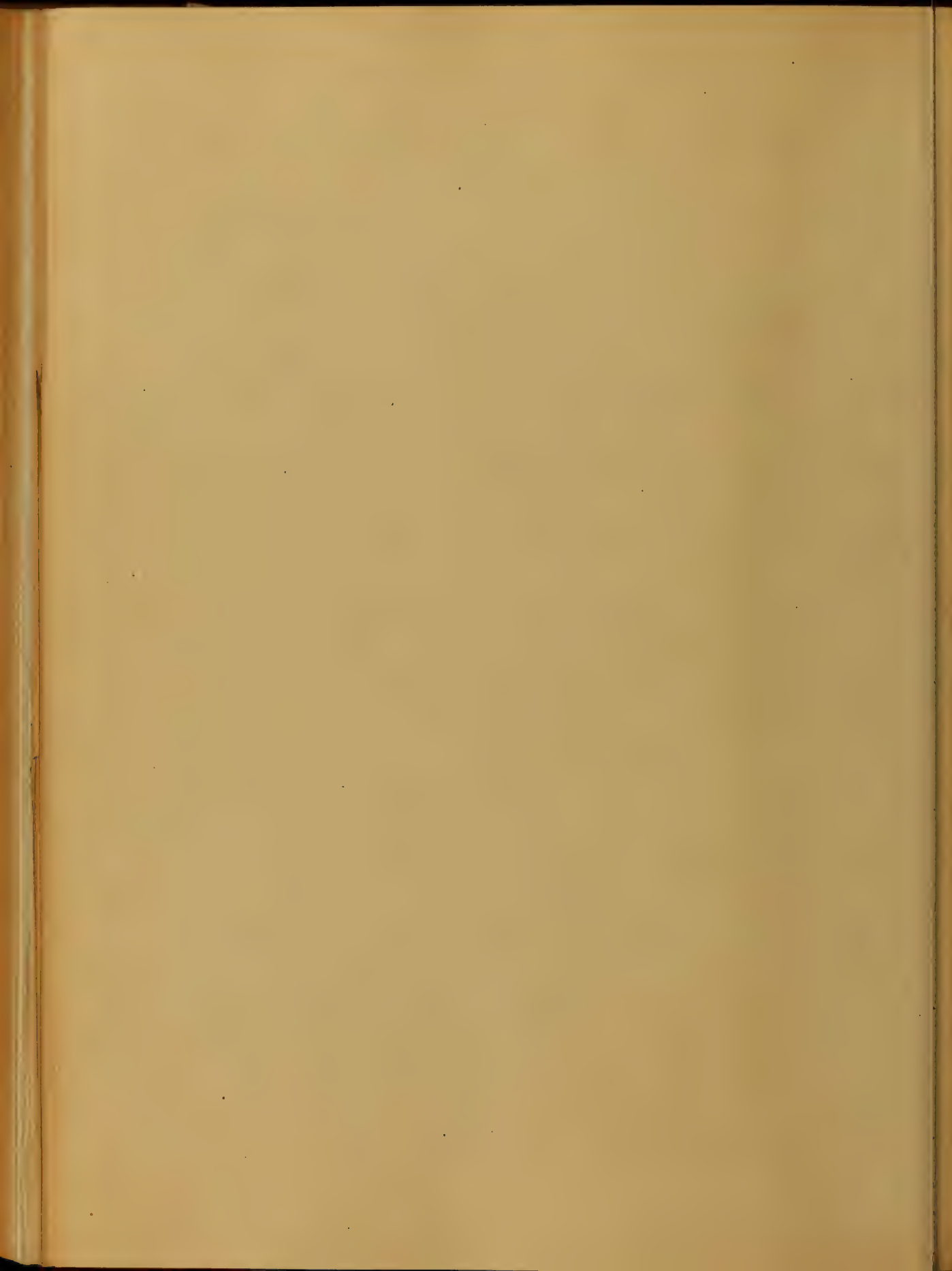
even at midday, and that his pulse is accelerated, especially in the morning and evening, and very deficient in force. His face flushes on the slightest excitement, and particularly after meals while, in some instances, febrile paroxysms marked by alternate chills and heat by night and by perspiration toward morning form a series of gradually increasing weakness and of serious annoyance and complaint. The tongue may be clean or more or less coated, and the pulse weak or irritable, varying in frequency from 60 to 140 in the minute.

The urine is at one time clear



and pale; at another high-colored
scanty and turbid, but it simply
varies with the state of the system,
and throws no light on the con-
dition of the chest.

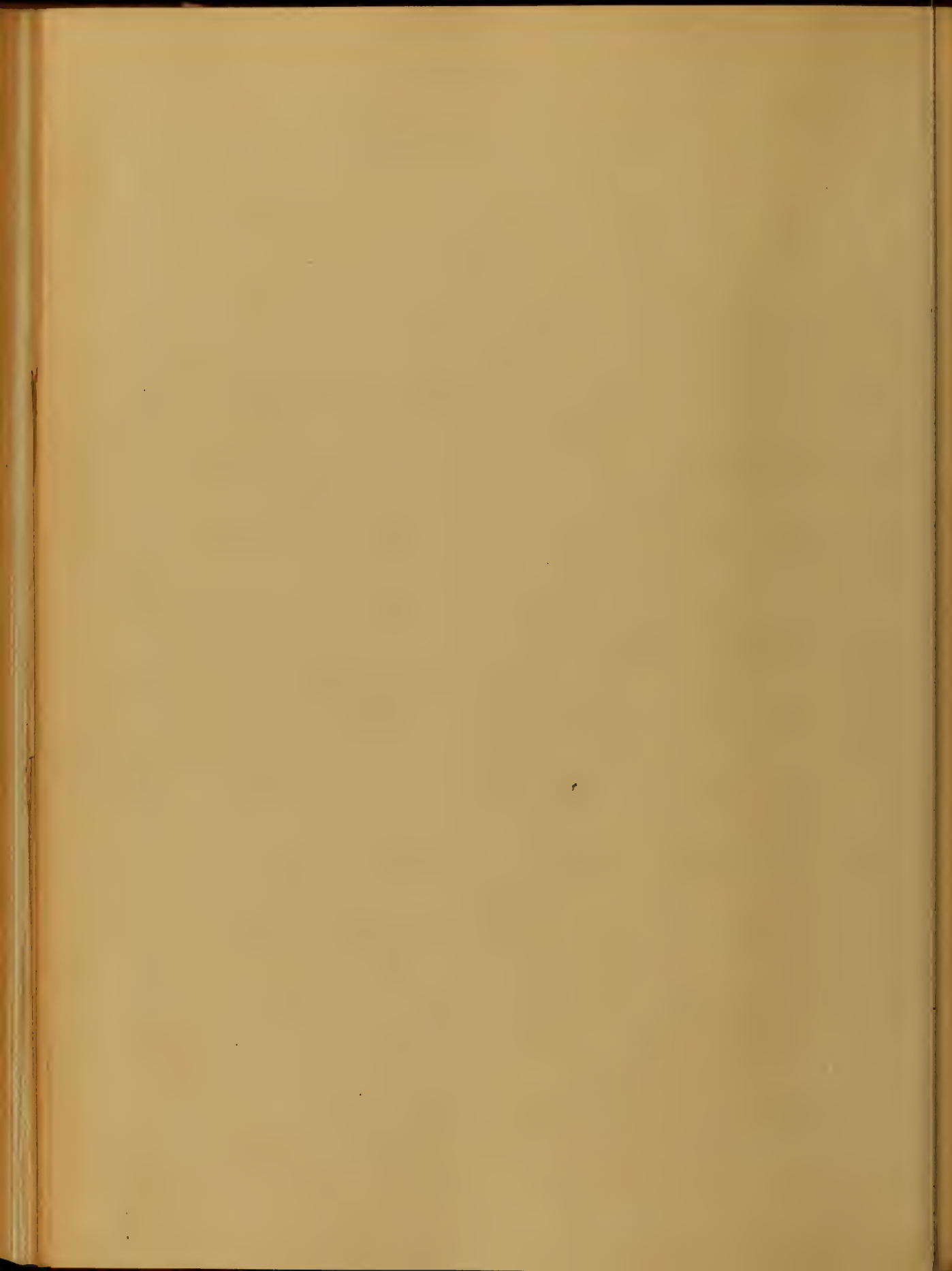
Haemoptoe is often one
of the earliest, and is certainly one
of the most frequent symptoms of con-
sumption. It may vary in amount
from a mere speck or streak of blood
to an ounce, a pint or even a lar-
ger quantity, and in some instances
it proves rapidly, if not immediately
fatal; producing either suffoca-
tion, or proving indirectly fatal
after a few days by exhaustion.



Seldom, indeed, does Consumption run its course without "Spitting of blood" to a greater or less extent, but fatal hemorrhage as the result of tubercle is an event of very rare occurrence. The cause of this is that the larger vessels, resist ulceration to a remarkable degree and before complete erosion of their coats has taken place clots usually form in their interior, and the circulation through them is arrested.

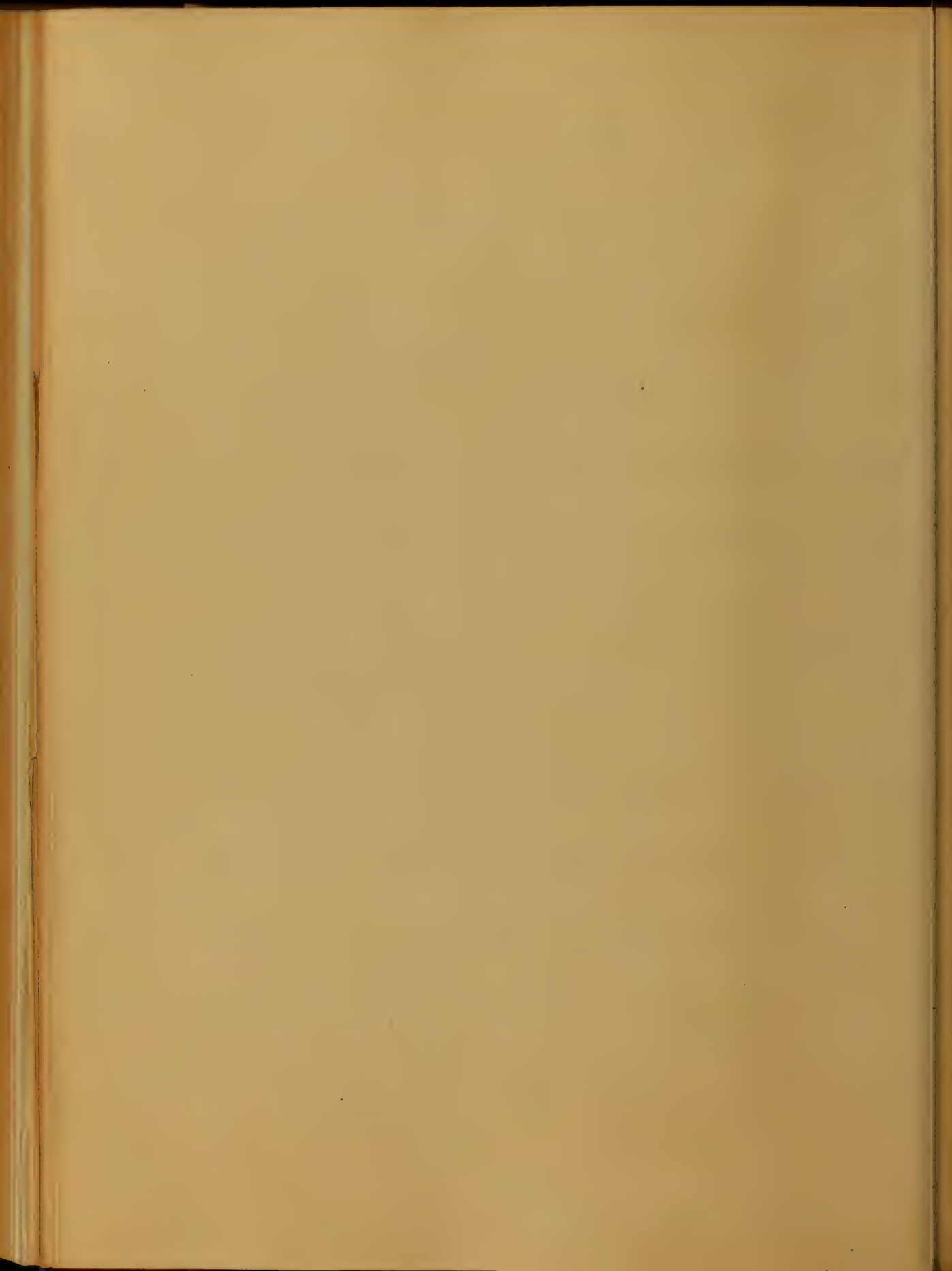
In children profuse hemorrhage is indeed of rare occurrence.

Haemoptysis is very frequently found at the outset of



the disease, and seems at longer or shorter intervals throughout its progress. In most instances the blood is small in quantity, and only produces speckled or striped spūtae, but sometimes profuse hemorrhage is the first or earliest noticed symptom. The blood is usually of a florid red color, but may be not seldom of a brickred hue, and sometimes, though rarely except in the later stages of the disease it may have a viscus tint.

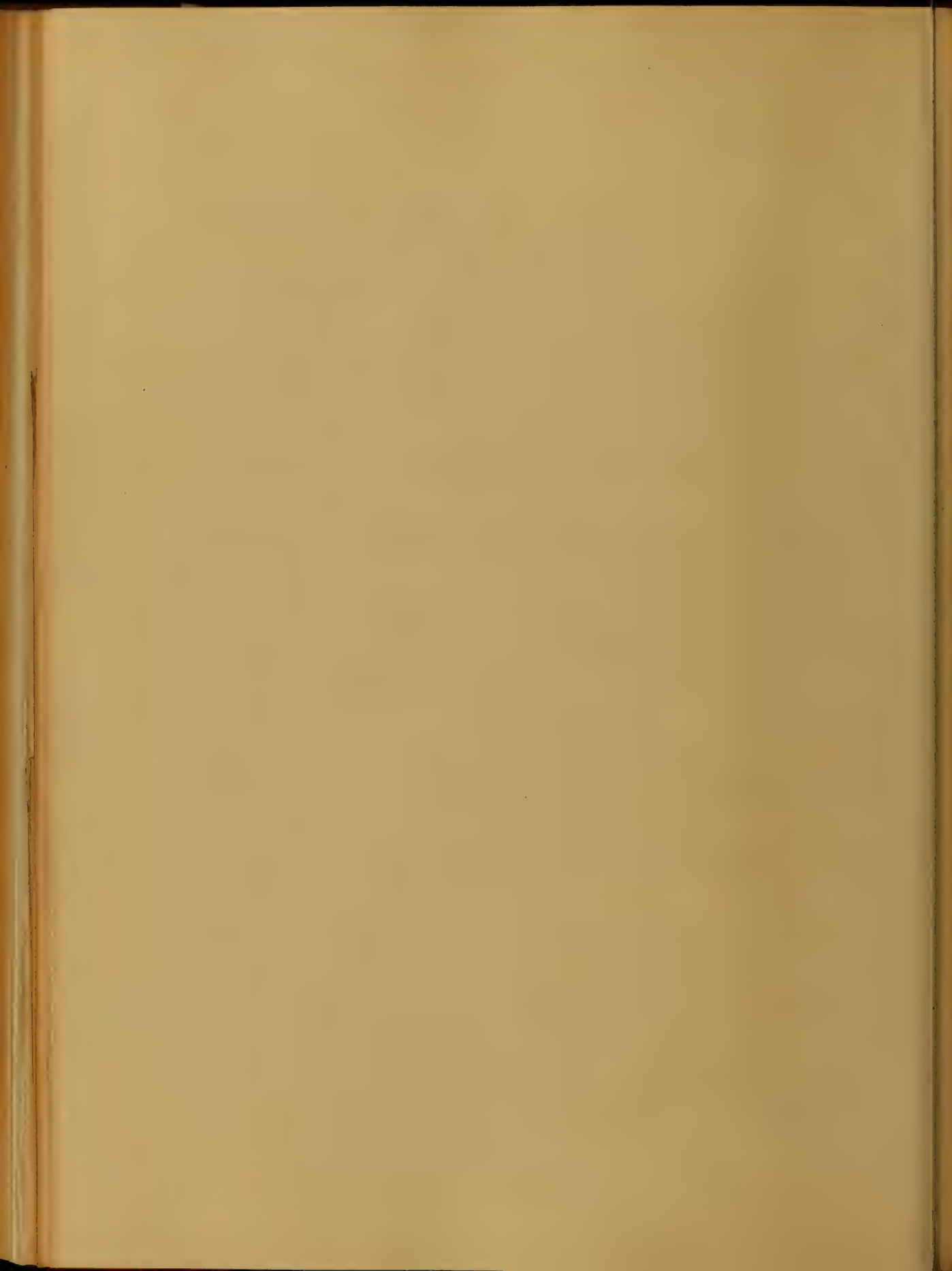
As the disease advances it is ejected more frequently, and in rather large quantities, forming



Small spots, and it is more commonly met with in the expectoration of males than of females, in that of adults than in that of children.

When expectorated in considerable quantities the blood is frothy from the admixture of air.

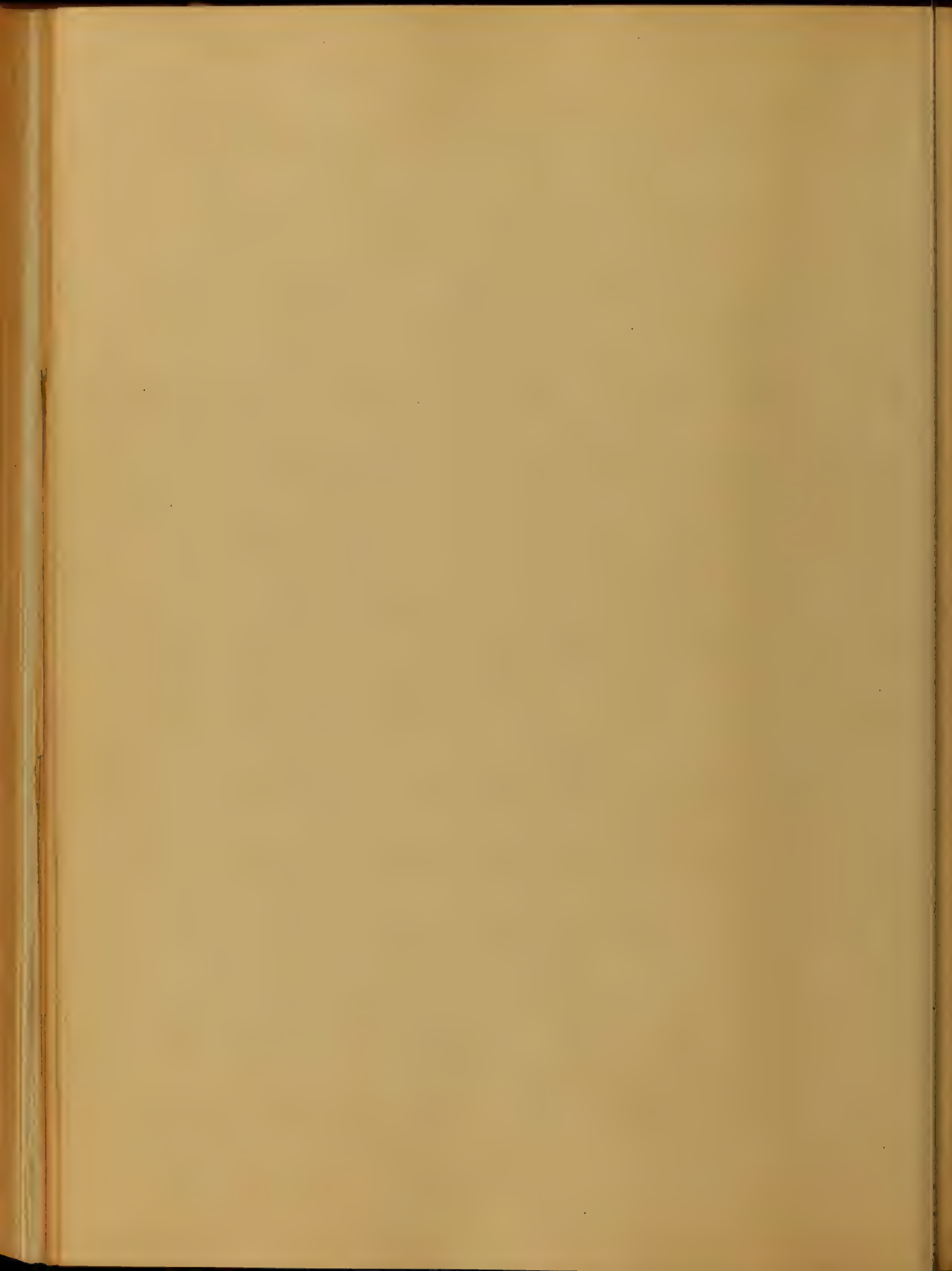
Pain in the chest especially acute pain is rarely an attendant on the early stages of Consumption; but a dull pain, or aching uneasiness under the Clavicles or Scapulae is one of its most constant symptoms. As the disease advances, sharp pain,



Though not very acute or Catching
is often experienced in the Chest
caused, sometimes by simple Neuro-
dynia, or by morbid changes going
on in the lungs, but in most instan-
ces by local attacks of dry Coughing.

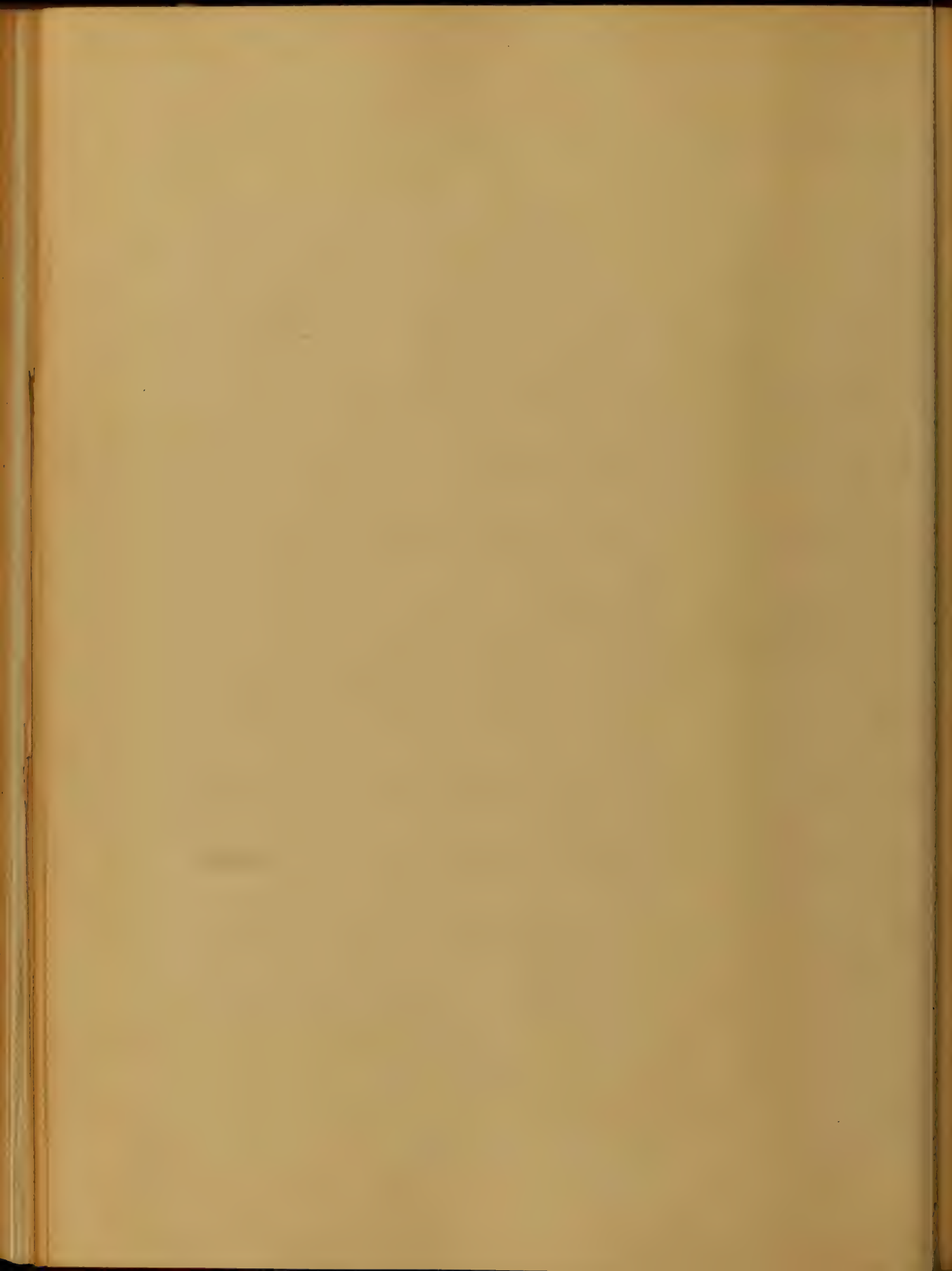
These pains differ from those
which accompany Bronchitis in
being felt in the side, or in the
back, or under the Scapulae
rather than under the Sternum,
and in being increased by in-
spiration almost as much as by
Coughing, which alone produces
much pain in Bronchitis.

Difficulty of breath



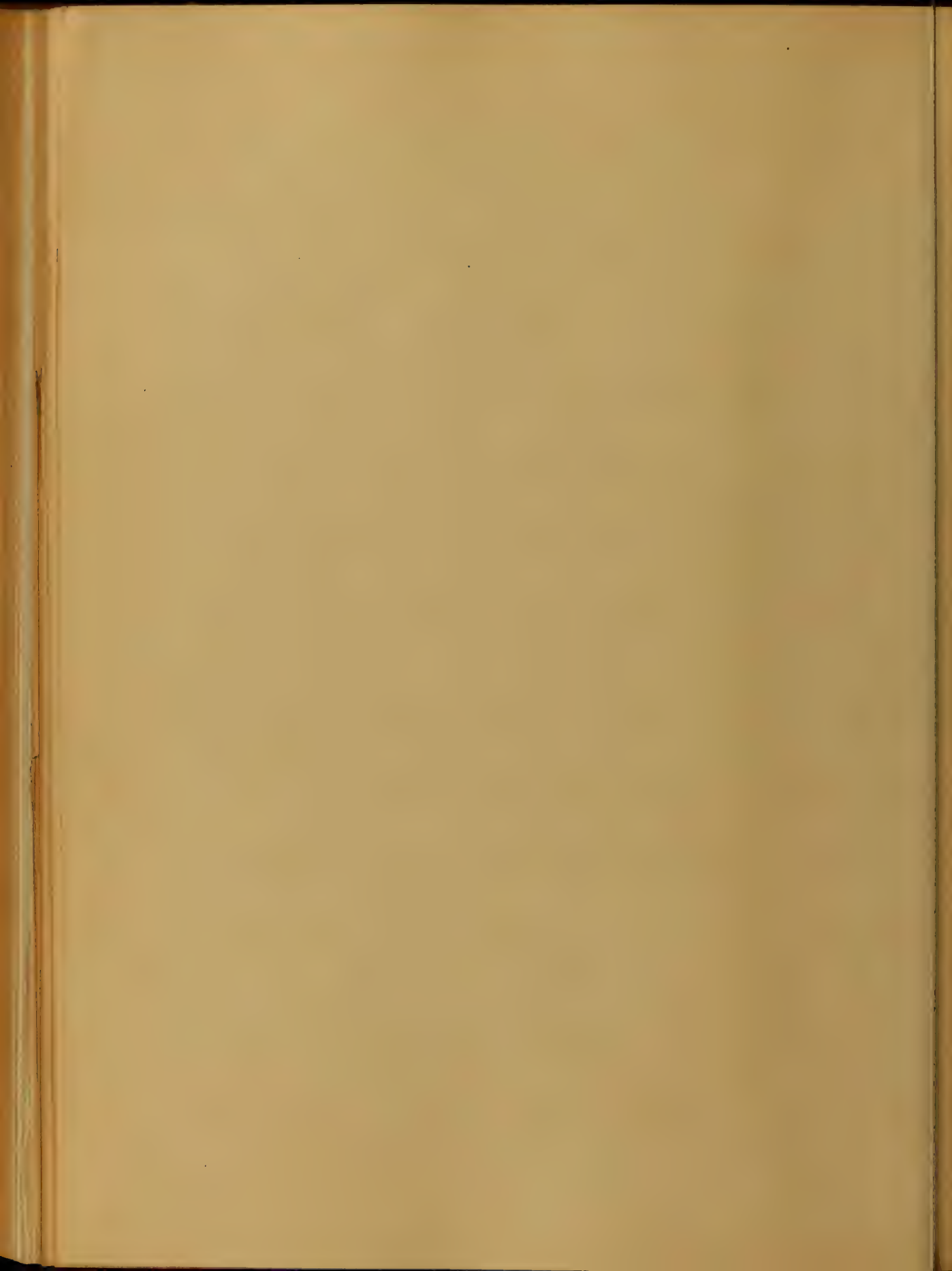
ing is by no means a frequent
Symptom, and when it does oc-
cur in any marked degree it is
not referable to unmineral ~~the~~
sis, but to some Coëxistent
disease, such as Heart Disease,
Pleurisy, Pneumonia, Bronchitis or
Pulmonary Emphysema.

But, though difficulty of breath-
ing is not observed except on active
exertion, acceleration of the breath-
ing is a constant and most valu-
able diagnostic symptom, even
when the patient is at rest and
appears to be breathing tranquil-
ly. The frequency of the



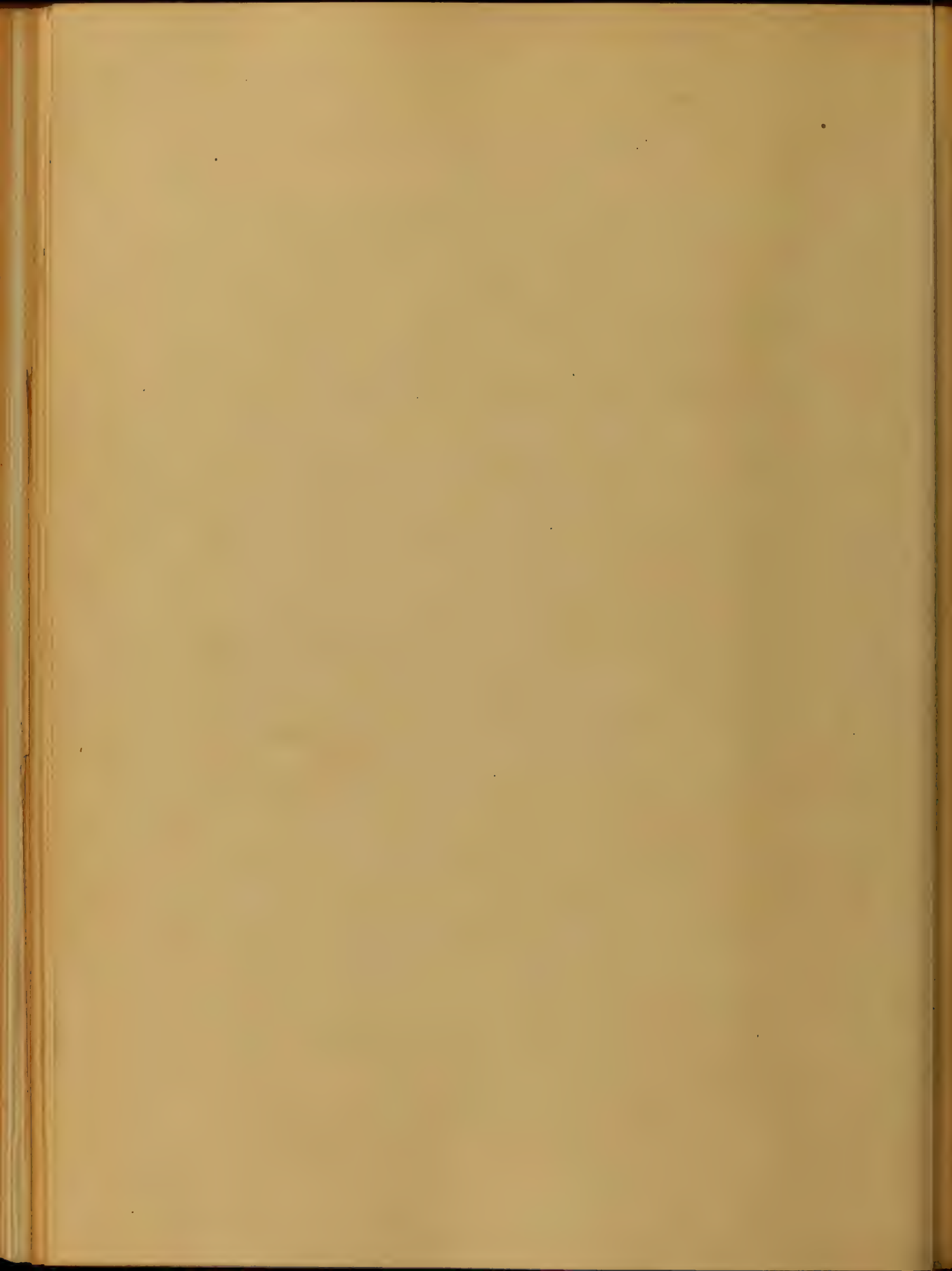
respirations will prove to be above the normal standard, and on the slightest exertion may rise to a degree which is quite inconsistent with a healthy chest.

Febrile symptoms are seldom observed in the very earliest stage of the disease, unless it occurs in an acute form, but they begin to show themselves at a somewhat later period, and in the second and third stages assume the form recognized as hectic. Sometimes, however, in chronic cases, they are not well marked even after scarifications



have been formed in the lungs.

They usually commence with chilliness, followed by burning heat of skin, the temperature of which often reaches 104° , and may range as high as 106° , and these heats are then succeeded by profuse perspiration, and this train of symptoms, which constitute a perfect paroxysm, may occur at noon, and again toward evening; more frequently, however, they occur only at night, and the perspiration continues until early morning. No symptom is more remarkable or more

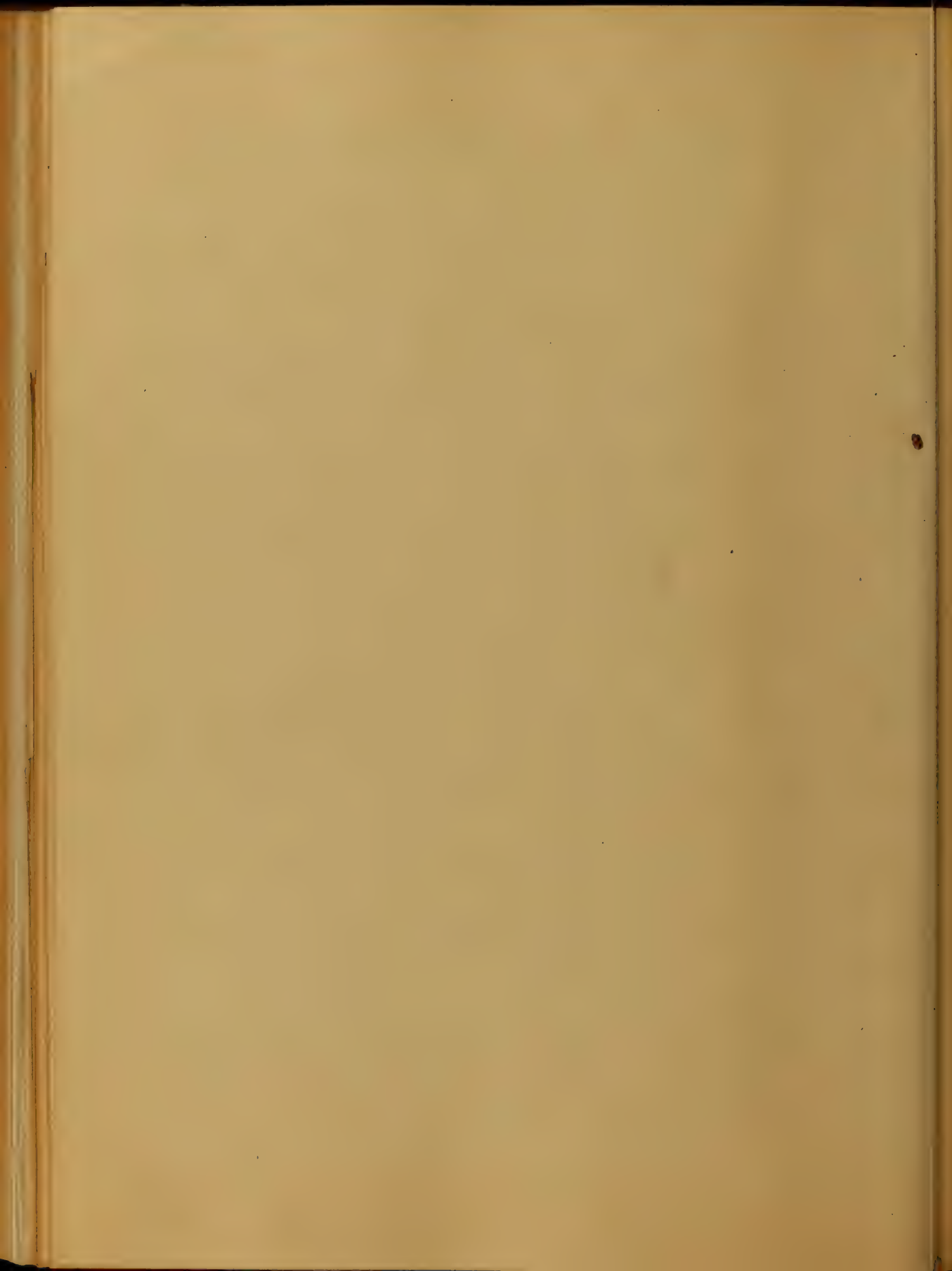


distressing than these colligative
sweats in Phthisis, and no source
of drain on the system appears
to be more exhaustive.

Emaciation is one
of the most striking and charac-
teristic features of Consumption

Cough is another
of the earliest symptoms, and
is that which frequently first
attracts the attention and awakens
the fears of the patient's friends.

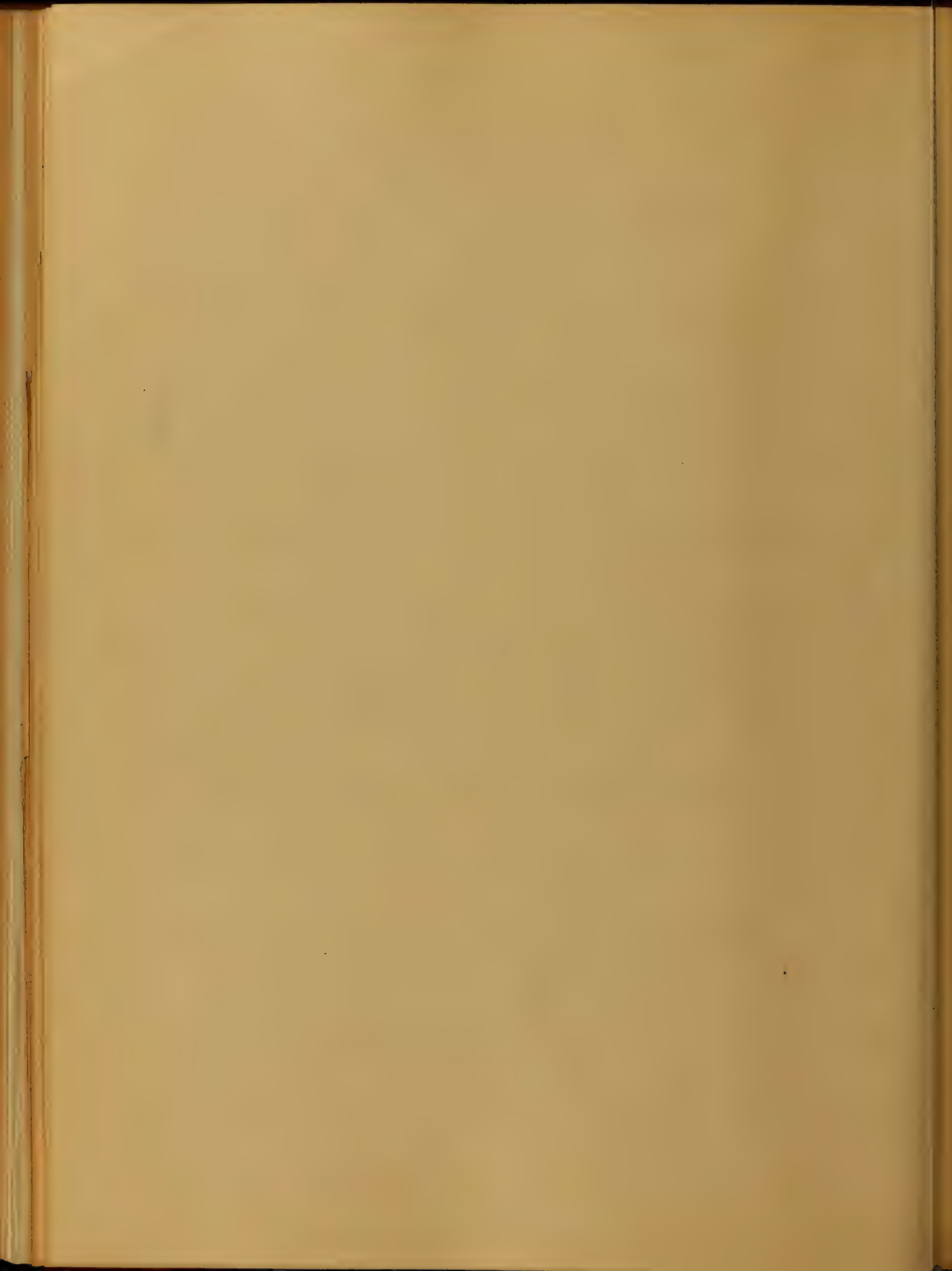
Generally it is a first but
slight, occasional and dry.
It occurs on the patient's getting
out of bed in the morning.



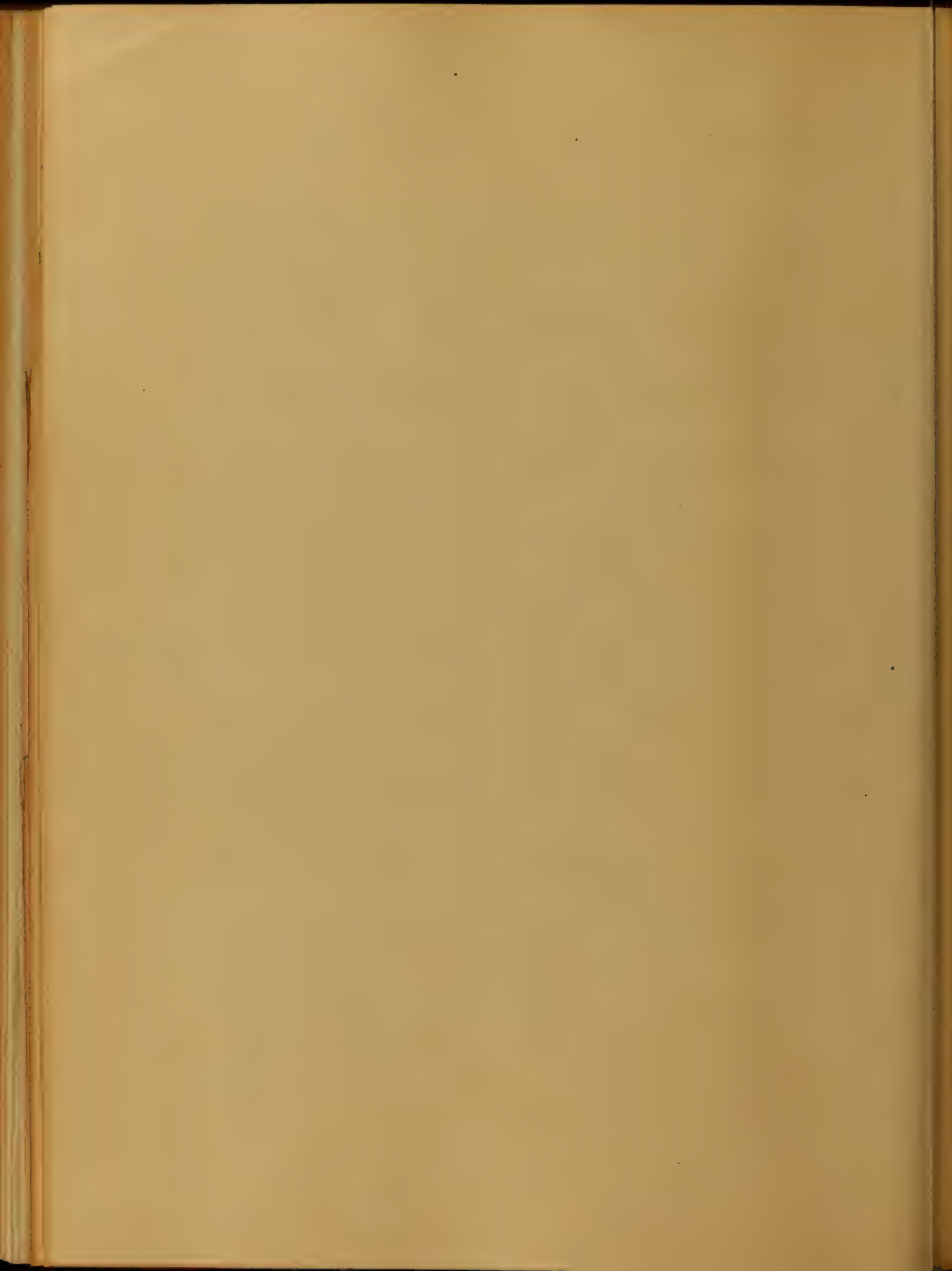
or if he make any unusual exertion during the day. It feels to him as if it were caused by irritation about his throat.

Sometimes it will cease for awhile, as in the warm weather of Summer, and recur in Winter when the external temperature is lower. By degrees it begins to be troublesome at night, and to be attended with more or less expectoration of mucus or mucousulent matter.

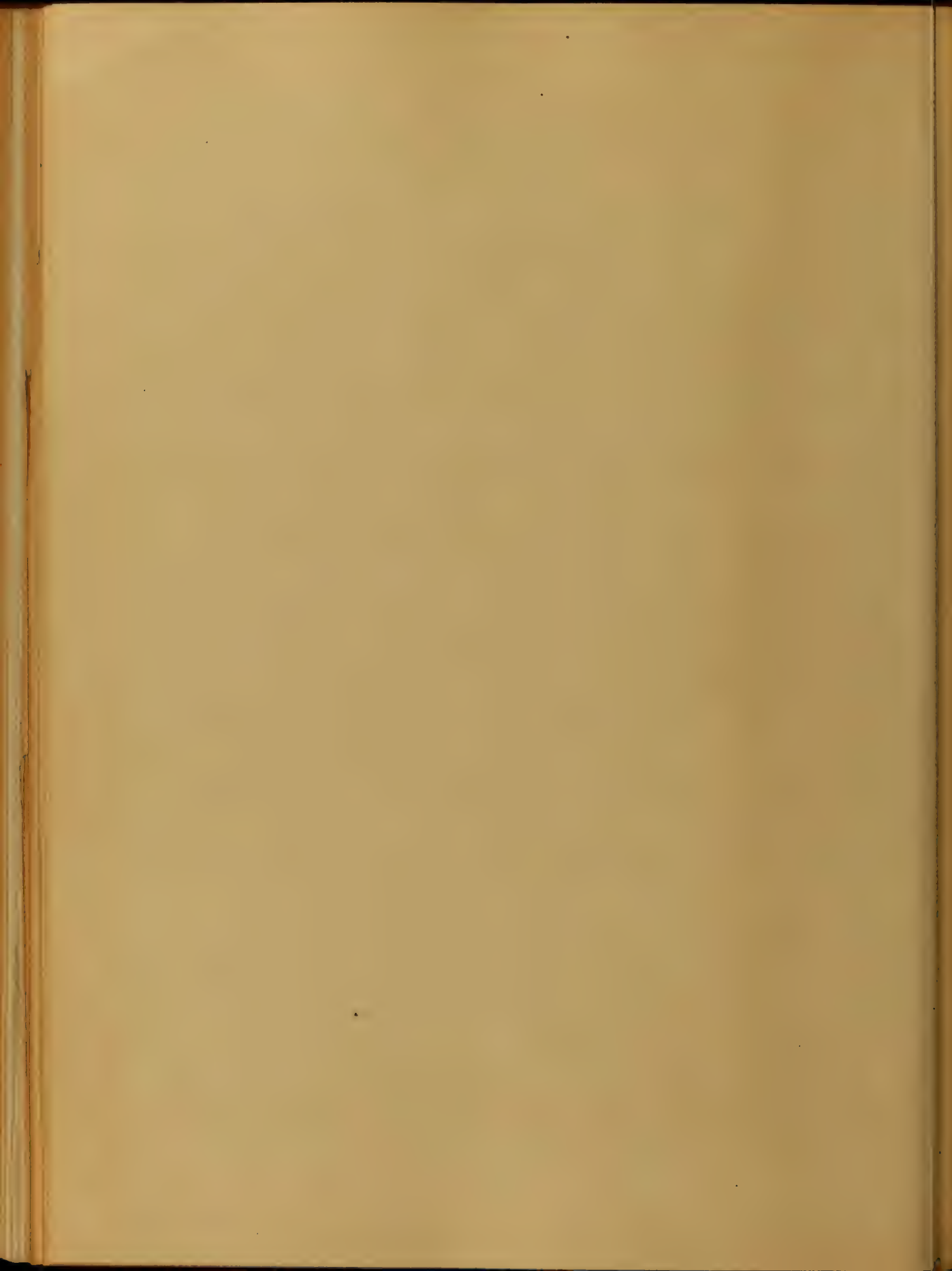
The digestive organs sometimes remain in tolerable order, and the appetite, though exhi-



Pious, is not materially impaired, but, more frequently, the appetite fails and the digestive organs are disturbed to a greater or less degree, even in the earlier stages of the disorder, and at a more advanced period the disturbance is very serious. At first there are pain and tenderness at the epigastrium, increased after taking food, with nausea and vomiting, costive or irregular bowels, and small aphthous ulcerations in the mouth. As the disease advances tubercularization of the mucous glands, and



of the glandular follicles of the
bowels occurs, the abdomen be-
comes tender on pressure, ulceration
of the bowels takes place and Dia-
rrhoea sets in with extremely of-
fensive evacuations sometimes mix-
ed with blood. Nausea and
vomiting after food become
more frequent, and the mouth
and fauces are apt to become sore
and extremely aphthous, so that
deglutition is rendered painful
and difficult. In some
instances Peritonitis is suddenly
lighted up, and occasionally,
though rarely, ulceration of the

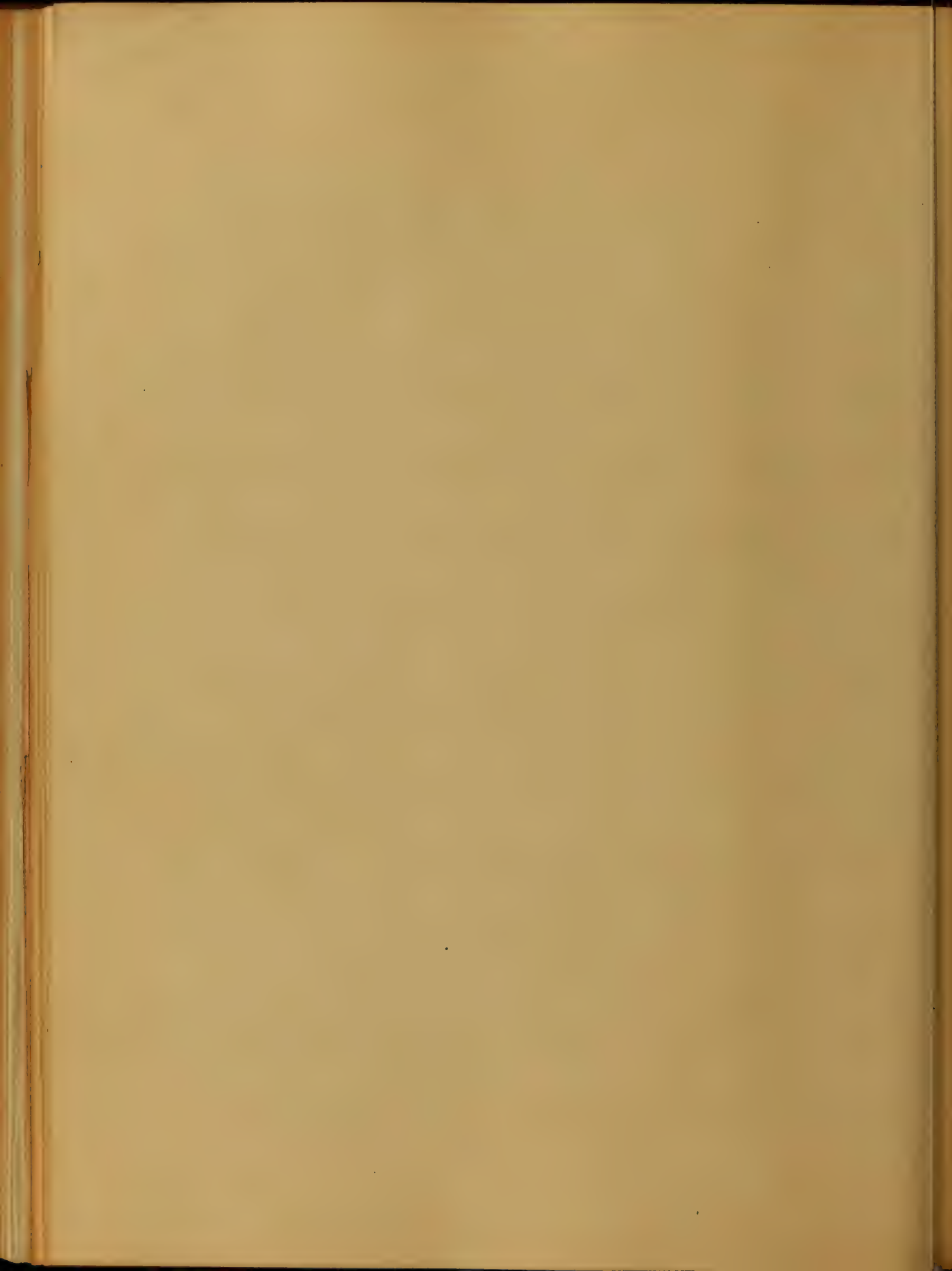


Bowel terminates in perforation
and the escape of faecal matter
into the abdominal cavity.

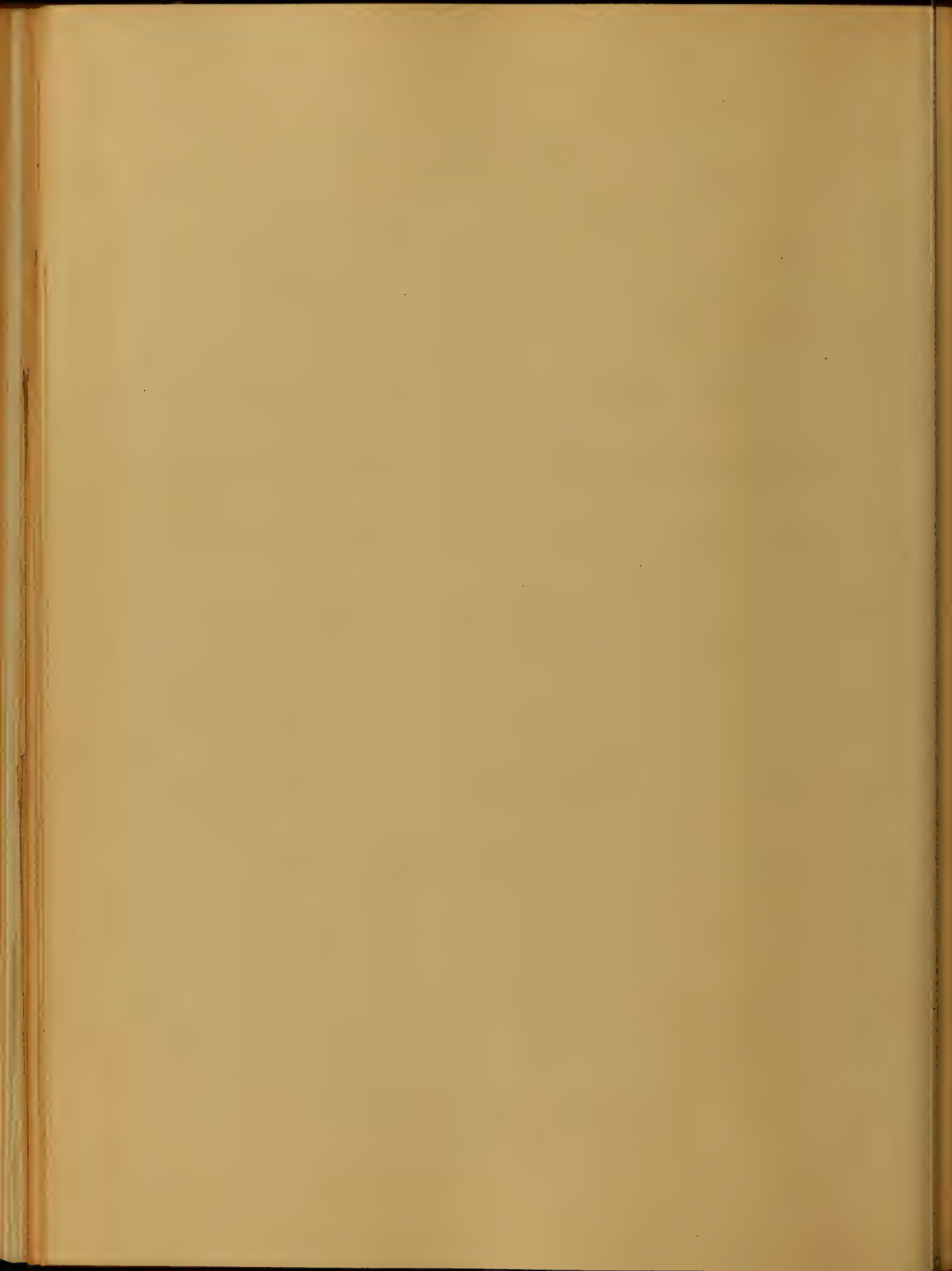
In these cases excruciating
pain occurs in the abdomen,
Collapse ensues, and the patient
usually sinks in a few hours.

Diarrhoea is of common occur-
rence, and is a symptom of grave
signification. The diarrhoea
of Phthisis is not an ordinary
looseness of the bowels, nor is
it due to ordinary causes.

It has a special origin, and is
marked by special peculiarities.
It is troublesome, painful some.



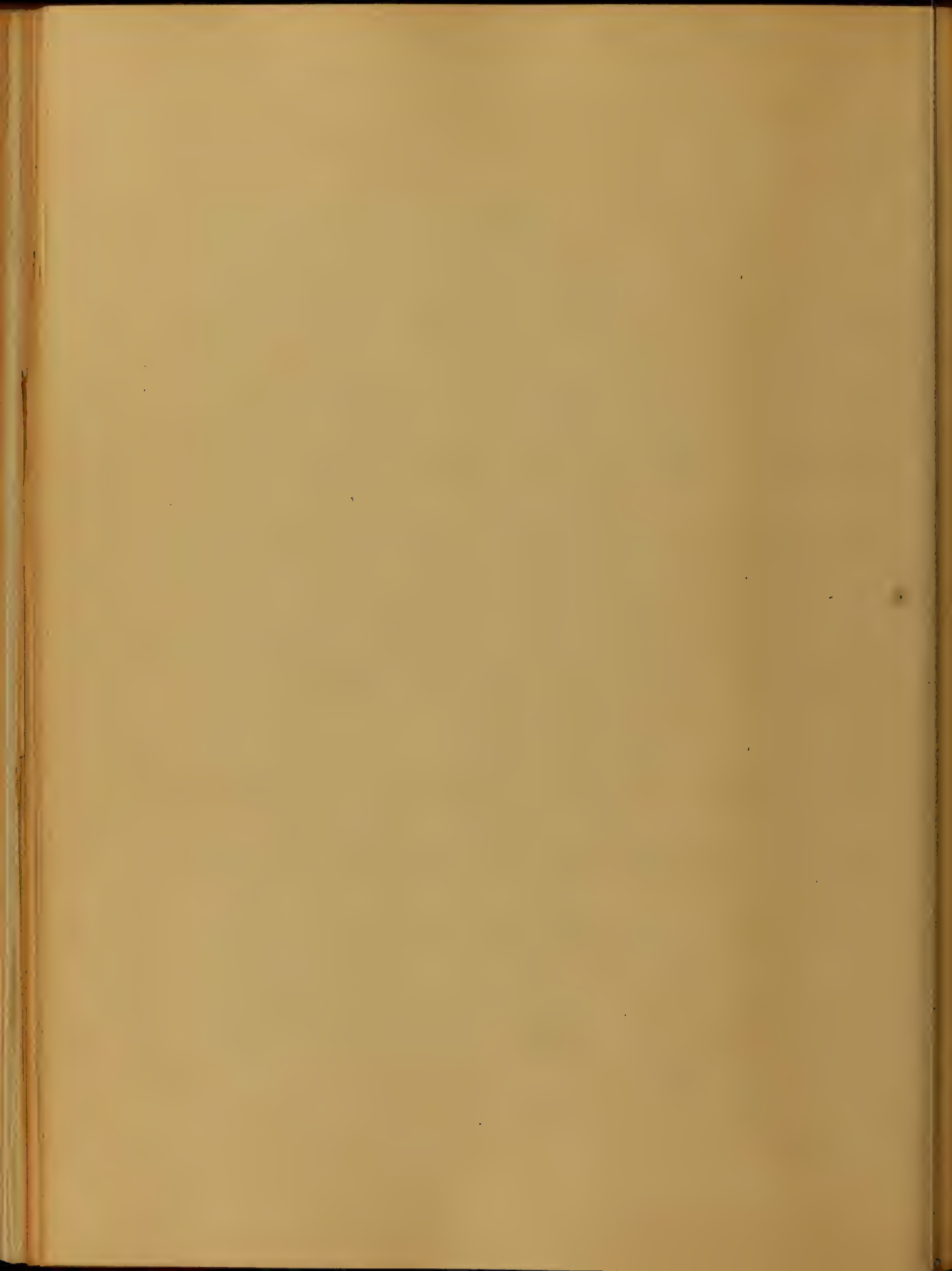
times, but not often; it is very persistent, and is seldom amenable to ordinary remedies. It is apt to recur, and is not unusually accompanied by furring of the tongue, and the sickness and vomiting which attend other diarrhoeas; hence its character may be recognized after a few days observation, and when, in a person suffering from Cough, the bowels, which previously have been costive become habitually loose, and the looseness assumes the characters above mentioned, there can be but little doubt of the true significance of the Cough.



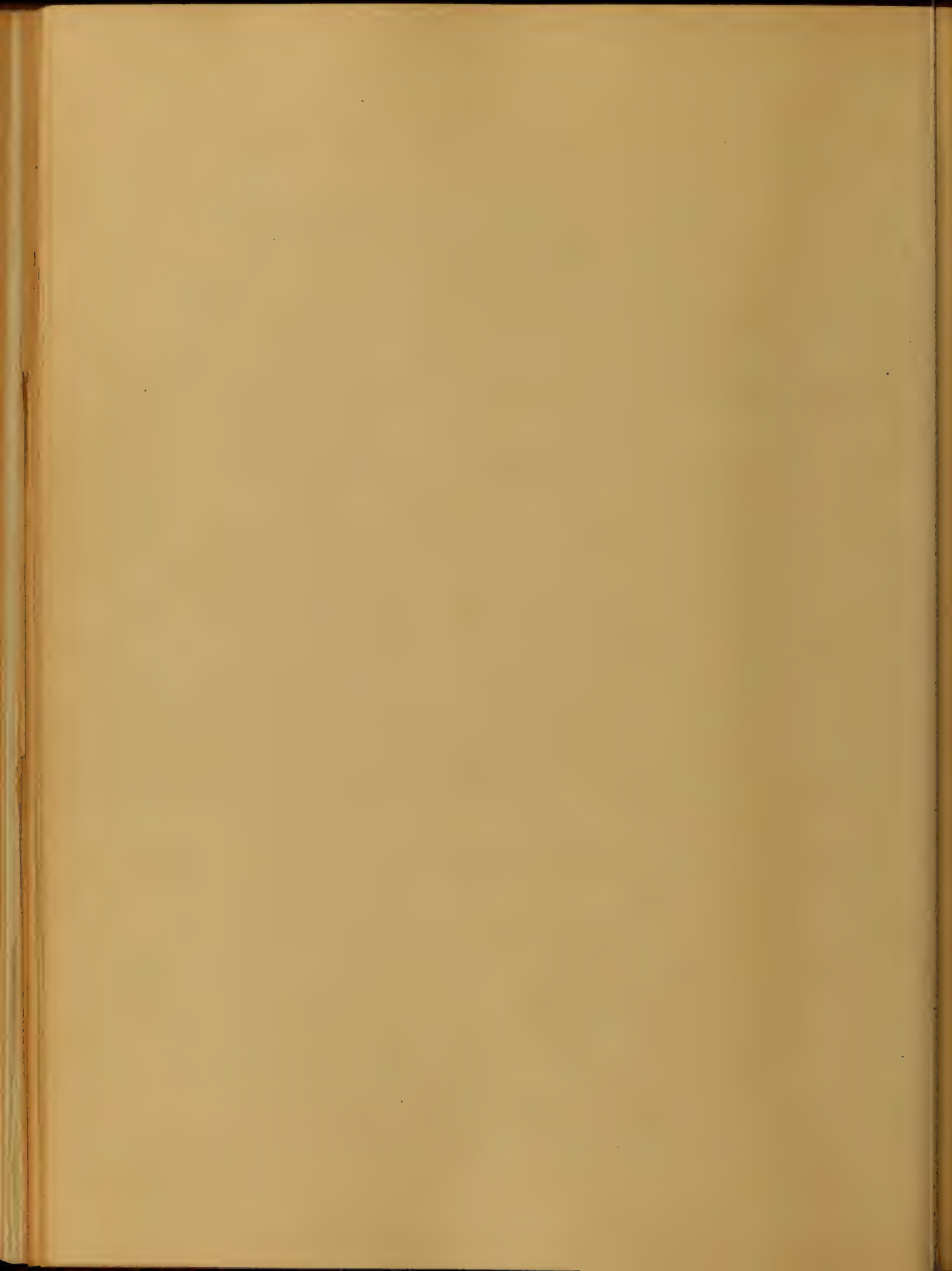
nor of the nature of the coëxisting constitutional malady.

The complications of Tuberculosis are Pleuritis, Pneumothorax, Hydro-pneumothorax, Pneumonia, Bronchitis, Chronic Laryngitis, Cerebritis and Cerebral Meningitis consequent on the deposit of tubercle in the brain or its membranes.

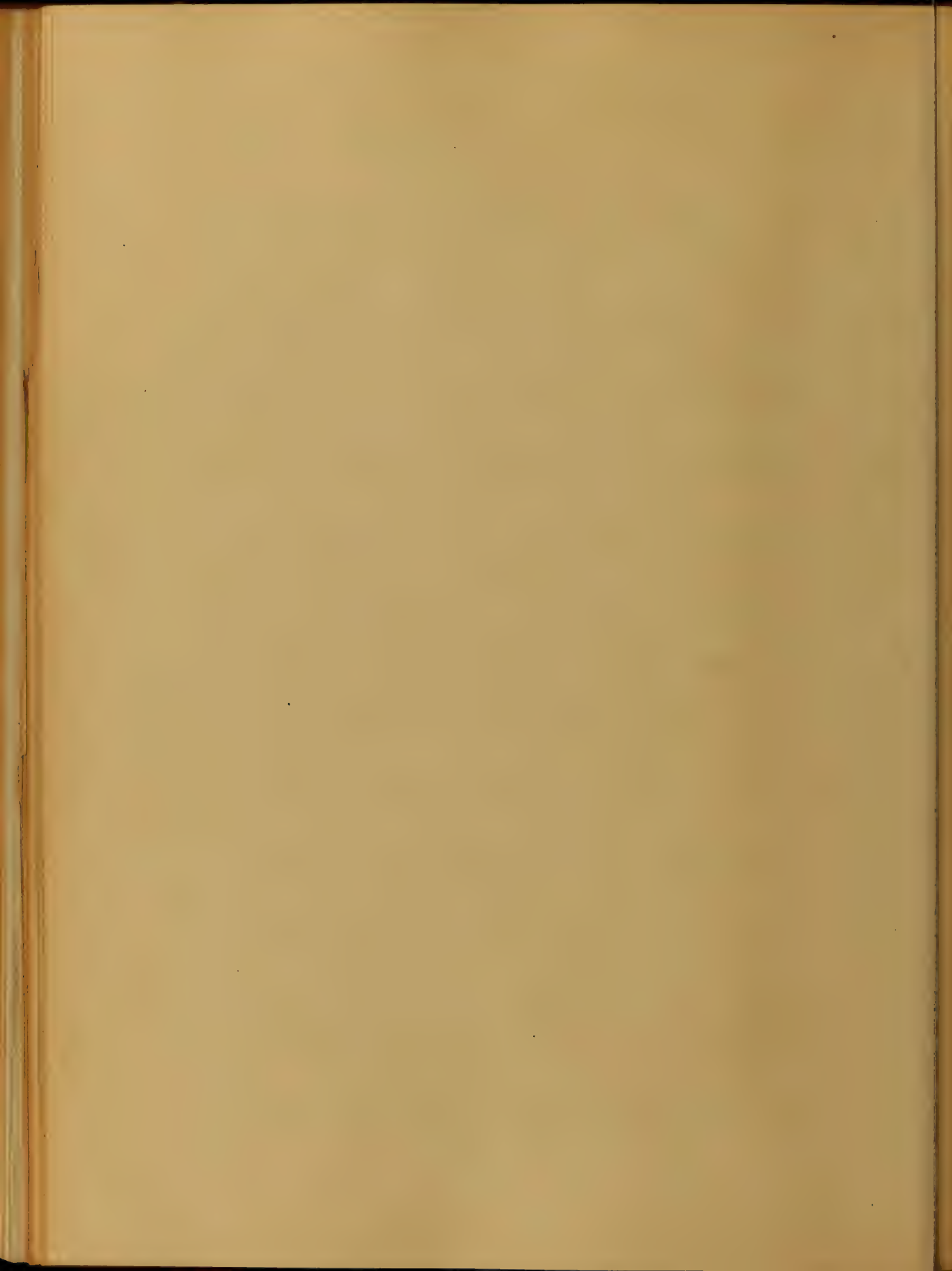
Diagnosis of Tuberculosis must be a matter of extreme uncertainty to a person unpractised in conducting a physical examination of the chest, not only because of the possible ob-



scarcity of the peculiar symptoms
of Phthisis, but that Bronchitis,
Pneumonia or Pleurisy may be
present and mask the true na-
ture of the disorder; and even
the most experienced auscultator
may often find a certain degree
of difficulty; for, in the earli-
er stages of the disease there is
no one sign by which the ex-
istence of the trouble is clear-
ly marked, and the general
symptoms may each, separately
or collectively, accompany Bronchitis,
Pneumonia or Pleurisy. Any more
when referable to the presence of



Tubercle they may be complicated and masked by the existence of either of those forms of disease; and thus it happens that if great care be not exercised in making the examination of the chest, and much caution observed in drawing inferences from the signs observed an incorrect conclusion will be arrived at. In short, the physical signs, alone, are oftentimes as insufficient as the general symptoms, to form trustworthy data for an opinion, and the fact of the existence of Consumption is only to be established

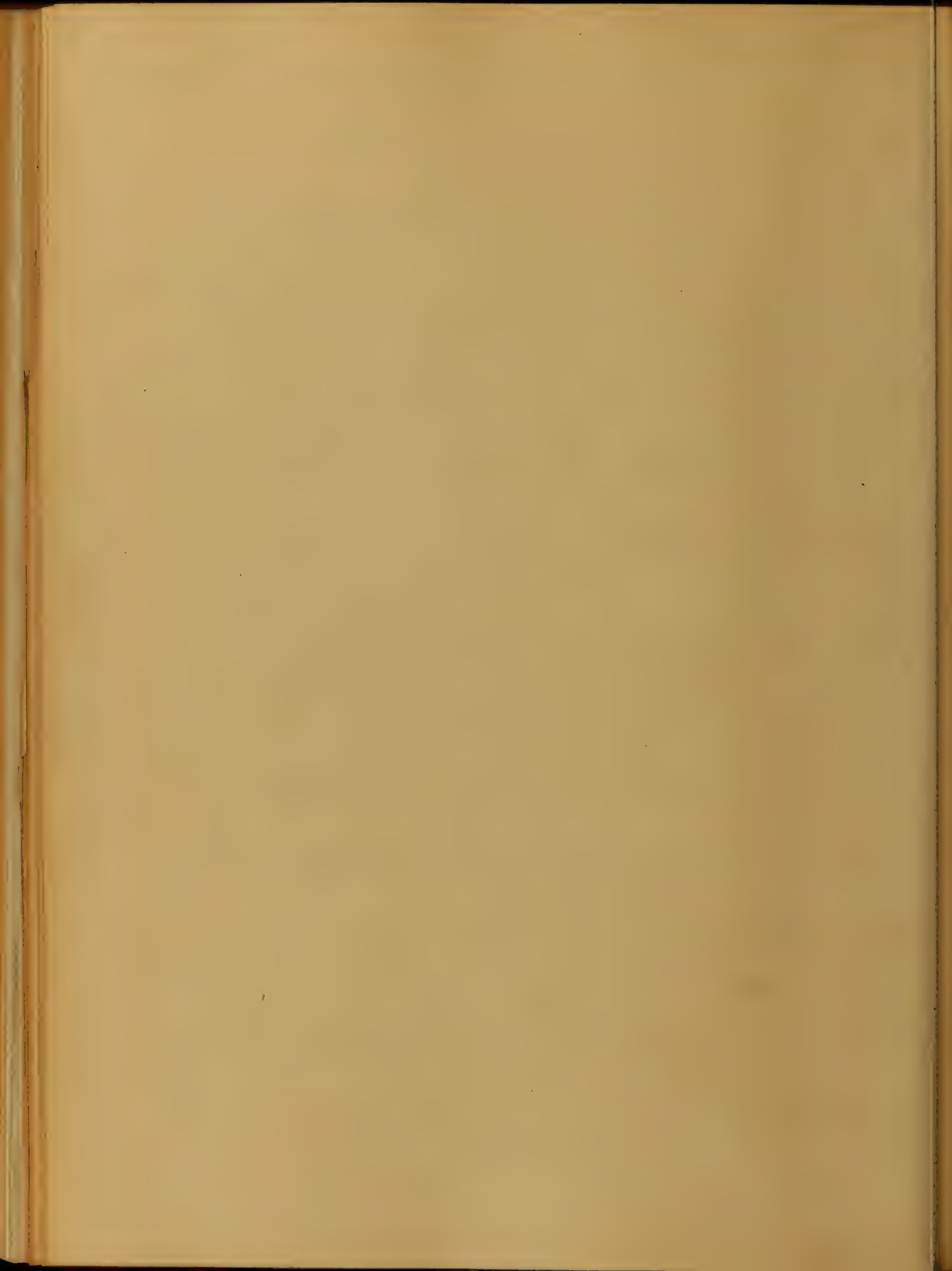


by a careful inquiry into the history of the patient, a jealous investigation into the general symptoms, and by a comparison of those symptoms with the physical signs as revealed by examination of the chest.

Bronchitis is

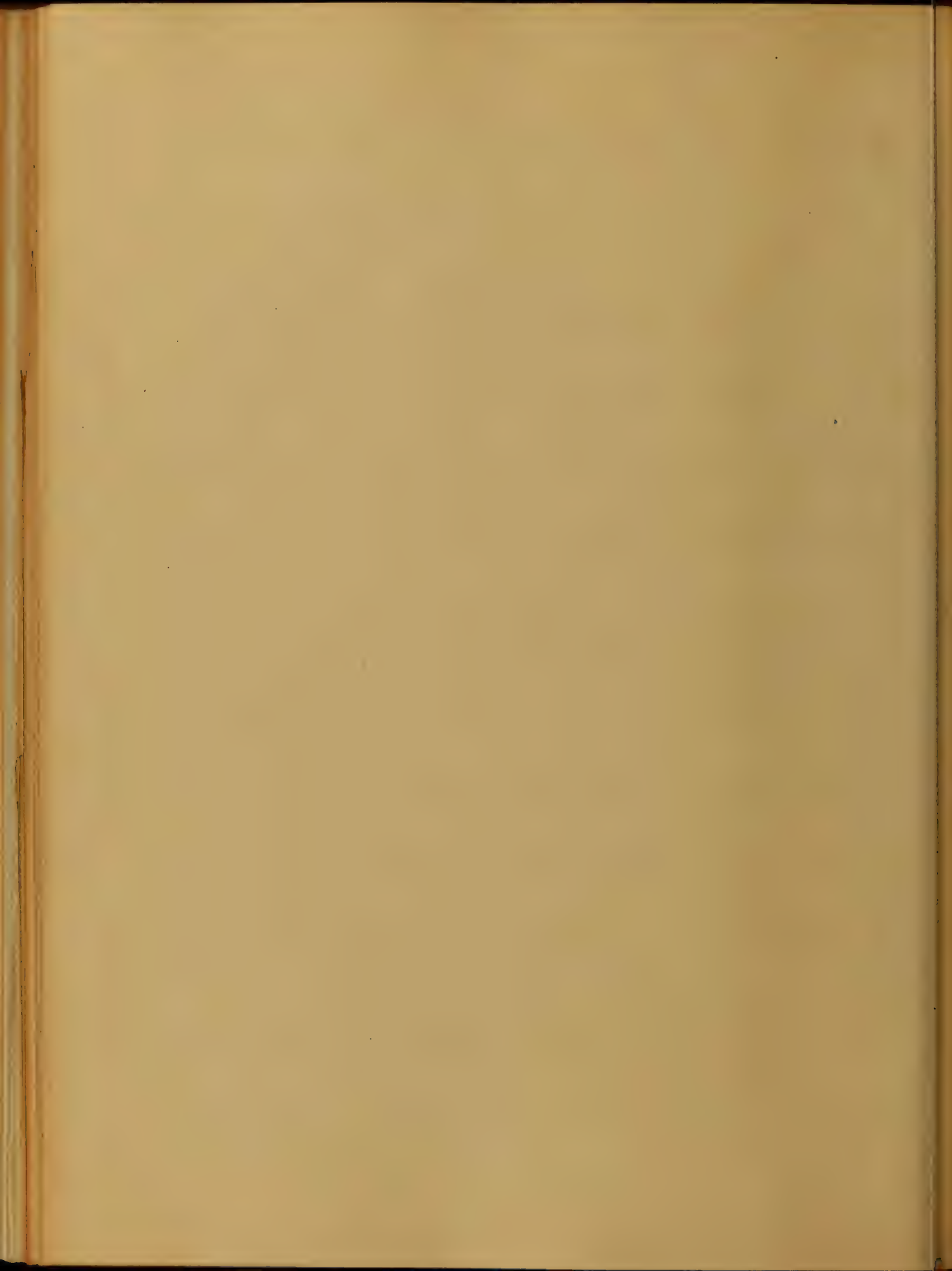
the disease with which Phthisis is most liable to be confounded.

In incipient Phthisis the cough commences gradually, without fever and without the running at the eyes and nose which mark an ordinary cold. The cough is generally dry and hacking for sometime



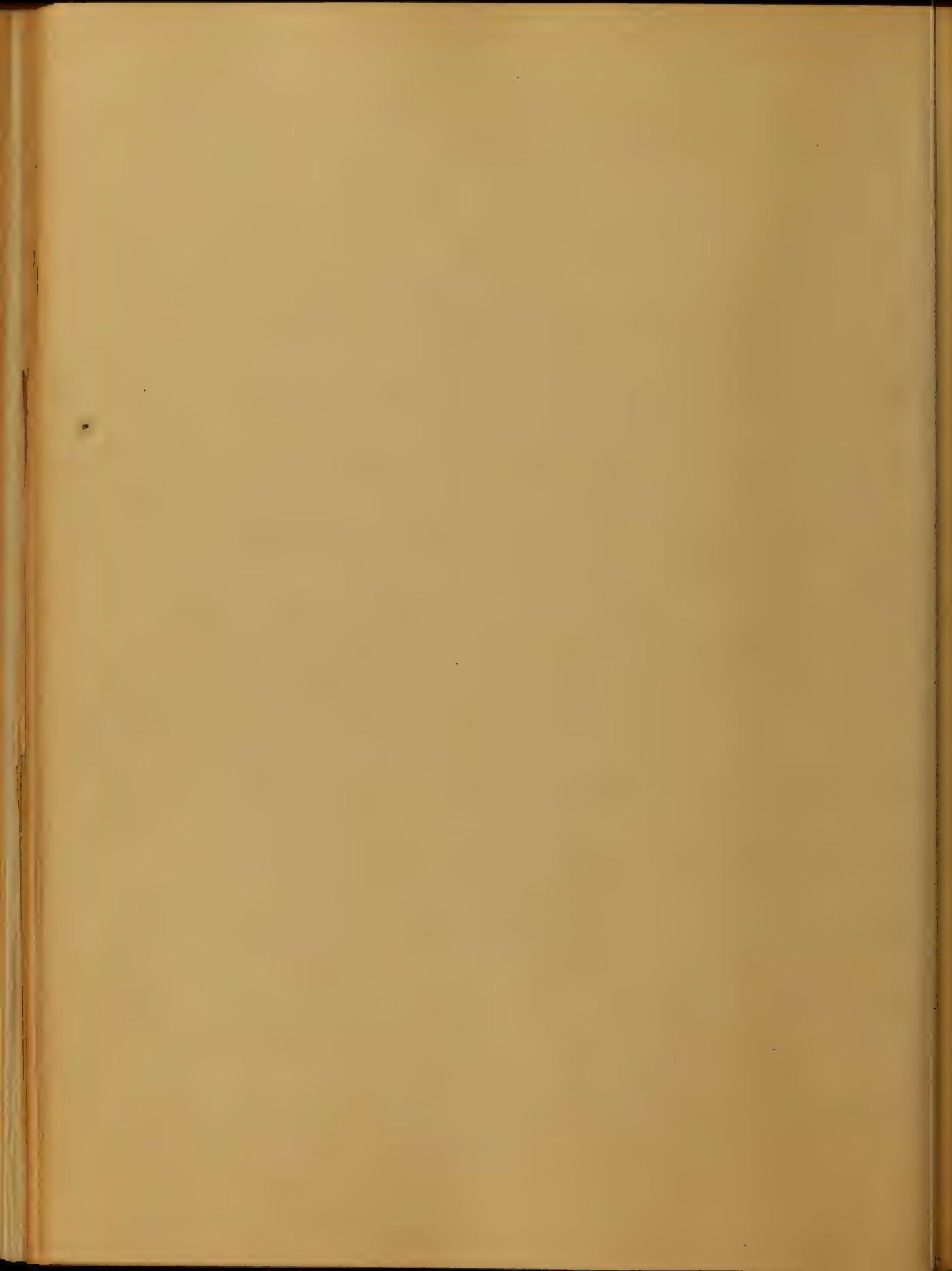
after its commencement. The expectoration is often streaked or speckled with blood, and there is seldom much pain in the chest, and rarely any fixed pain. When pain does occur it is usually of a dull aching character, and is met with under the clavicles or scapulae, or at the sides, and is not usually aggravated by coughing.

The morbid sounds are usually confined to the upper lobes of the lungs, and are often confined to one side of the chest. They are very persistent, and even if met with on both sides at first, are



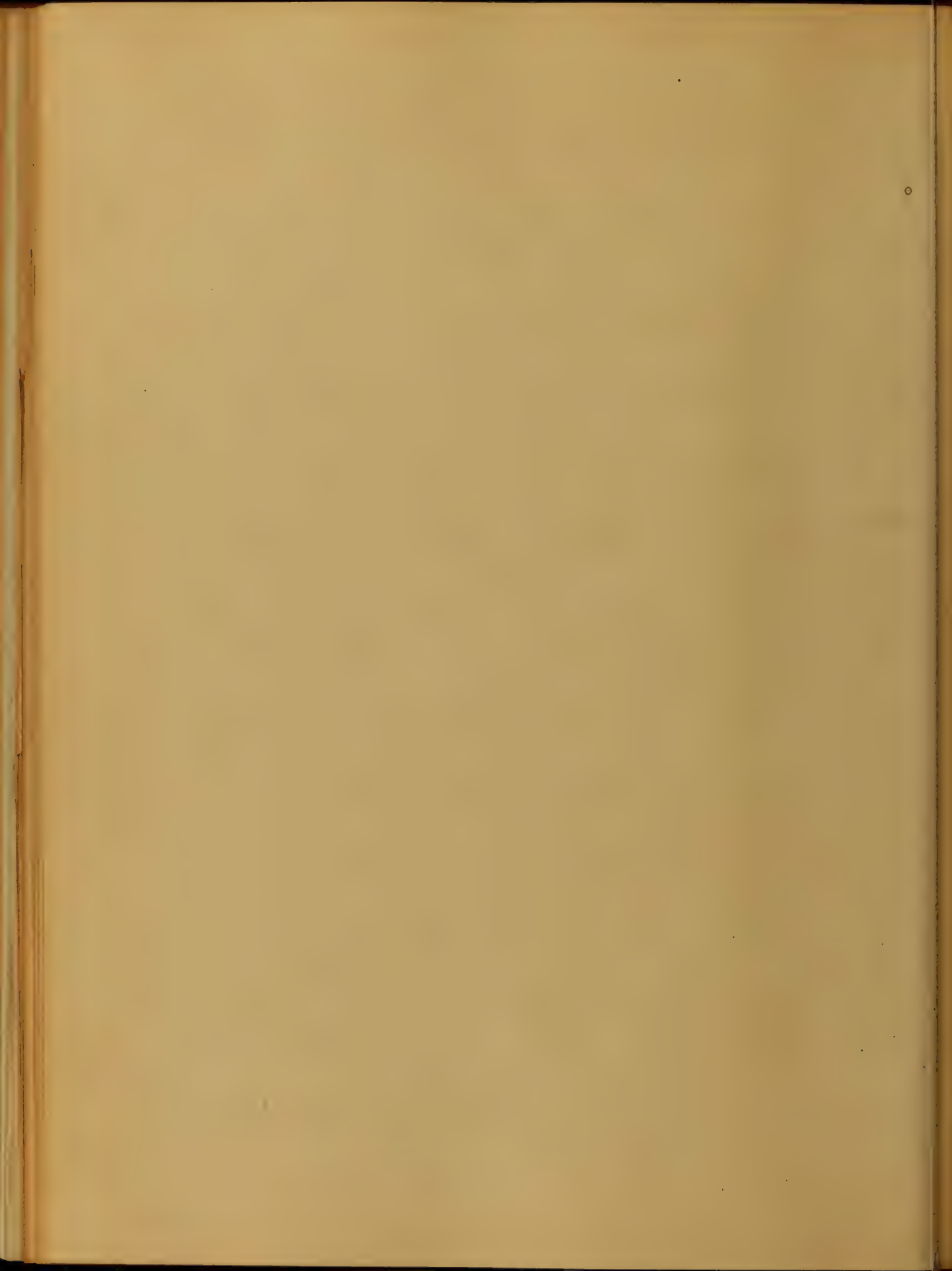
apt to subside partially or wholly,
on one side, whilst they continue,
or even increase on the other.

Certain combinations of Sym-
ptoms may be pointed out which are al-
ways indicative of tubercular disease
of the lungs. Foremost among these
are: Obstinate cough, commencing grad-
ually, dry and hacking at first,
or at least attended by scanty
expectoration, and persisting in
spite of ordinary remedies. Of a
person who has such a cough admits
that one or more of his relatives
has been consumptive, that he
has experienced dull aching



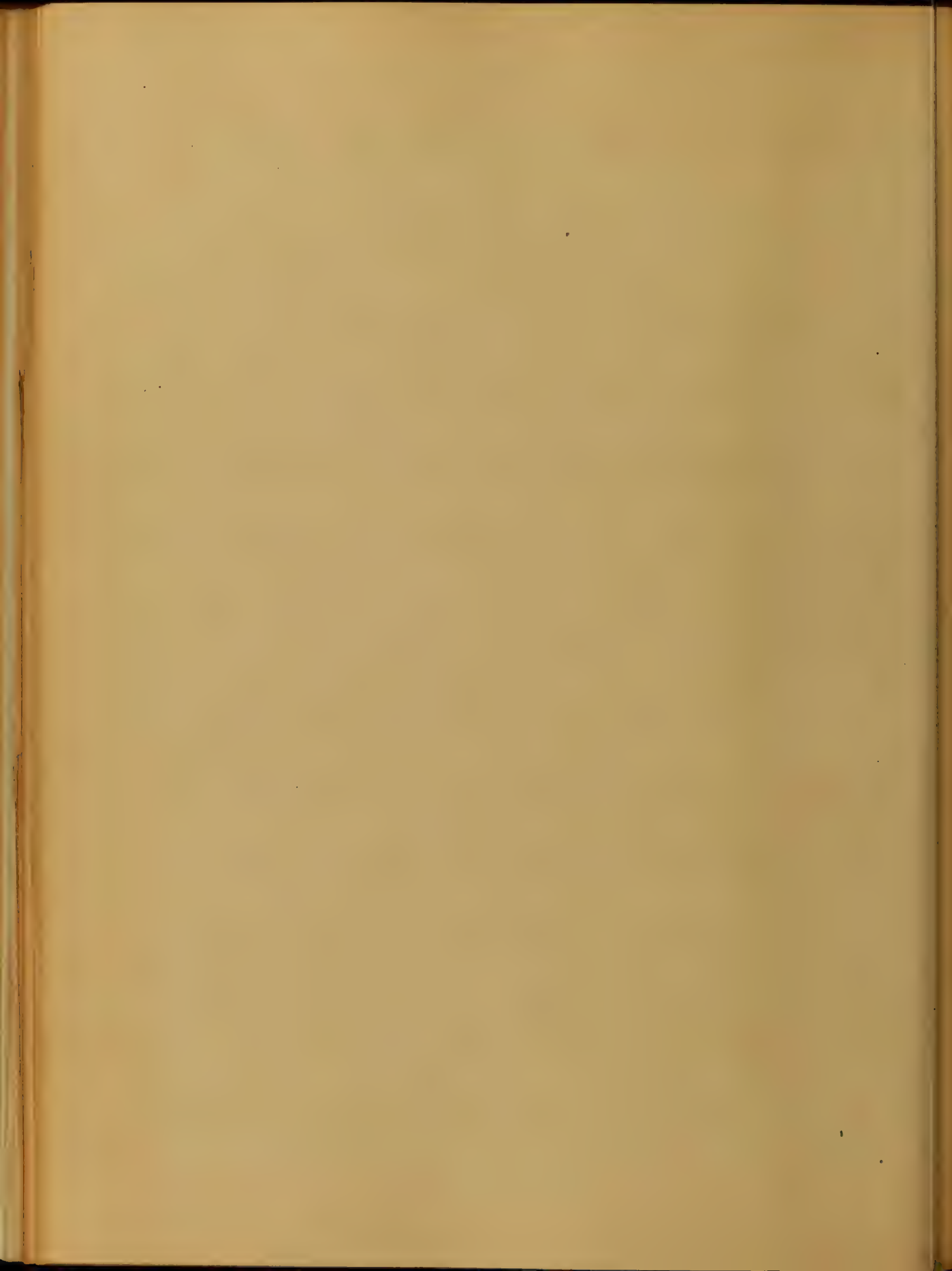
pain about or under the clavicles;
That the Cough and expectoration
have greatly increased and are
most troublesome at night; That on
one or more occasions the Sputa
has been mixed or streaked with
blood; That he has lost strength
and flesh, and has become short
breathed on going up stairs The
general symptoms of Phthisis will
be complete, though it will re-
quire confirmation by means of a
physical examination of the Chest.

So too, if emaciation has oc-
curred without manifest cause,
and especially if it has been ac-

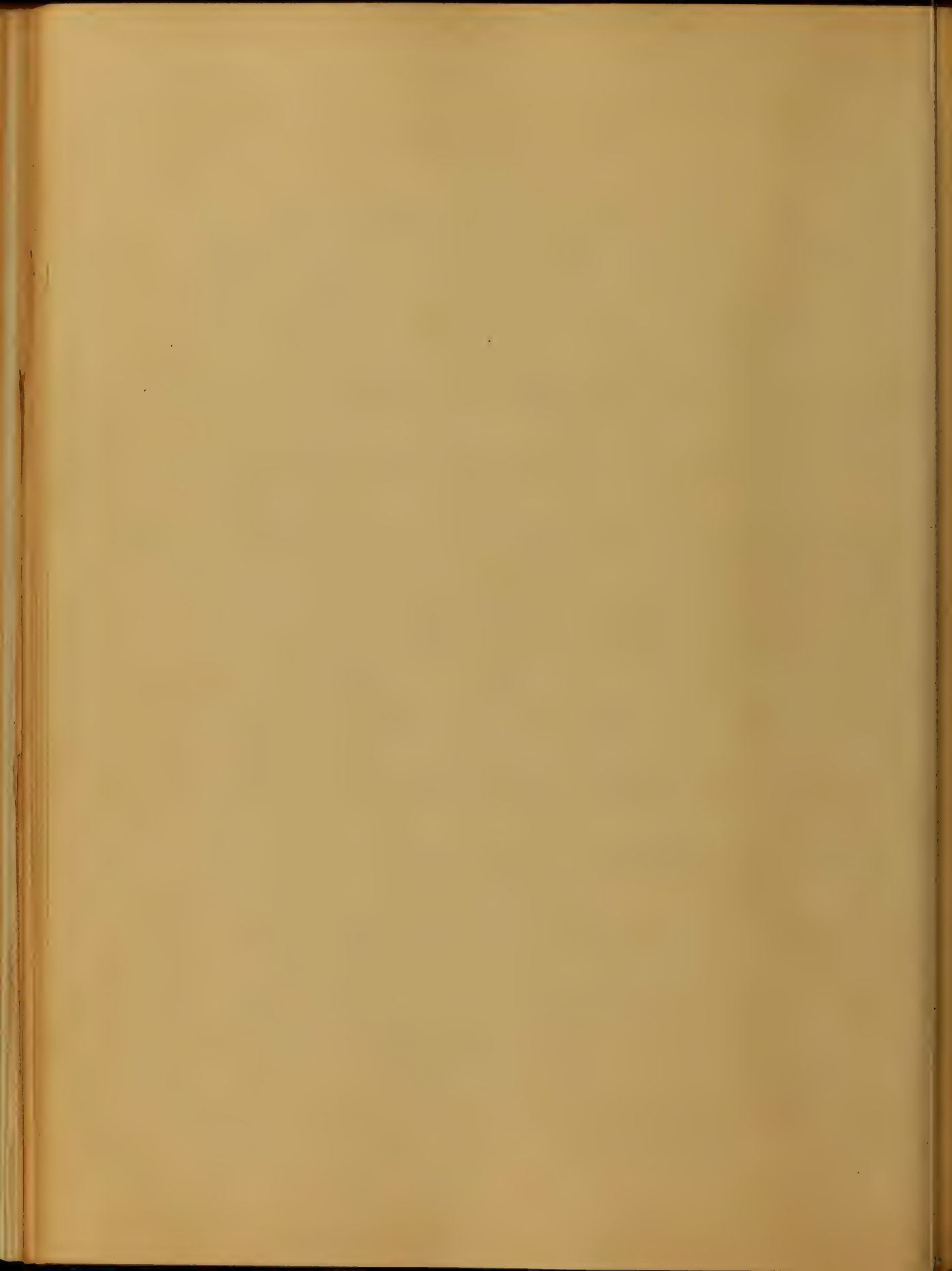


accompanied by any of the general symptoms just mentioned, or by night sweats, or by hoarseness, not connected with a Syphilitic Taint, and does not speedily subside under treatment, the gravest suspicion of Consumption may be entertained, and a careful examination of the Chest is necessary.

Under any of these circumstances a slight flattening of the Chest walls, a deficiency of expansion at the Summit of one or both Lungs; a decrease in the Capacity of the Chest; the occurrence of more or less dulness on Percussion

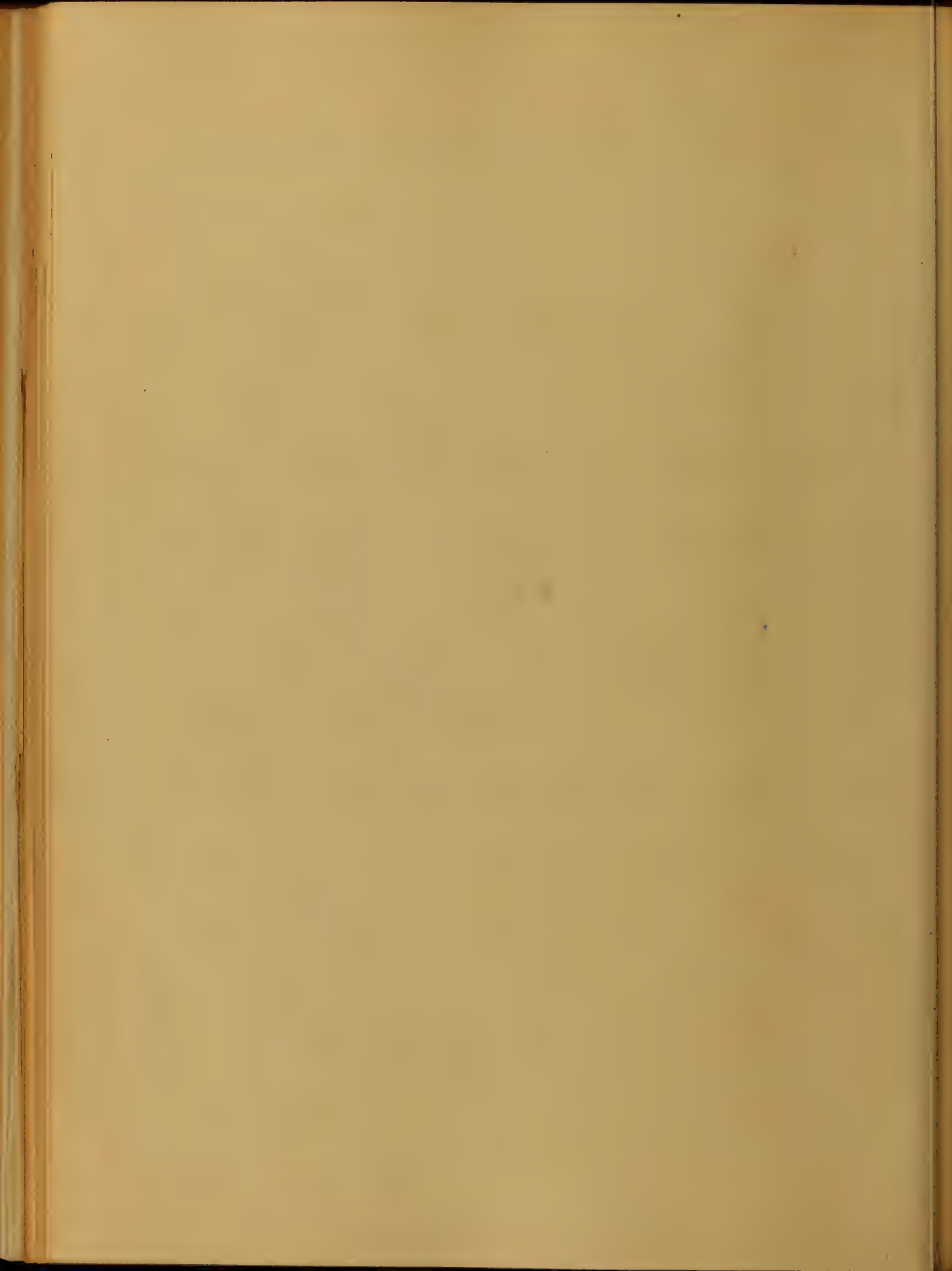


in the Clavicular, infra-clavicular or supra-Scapular region, with a harshness or feebleness of the respiratory murmur, an irregularity in its rhythm; the existence of prolonged respiration or of increased vocal resonance, especially at the left apex, and the occurrence of occasional dry Clickings in addition to râles or rouchi which may be present; râles of any kind or of whatever character, persistent at and confined to the apices of the lungs, and still more so if persistent at one apex only, and accompani-



ed by haemoptysis, emaciation,
night-sweats and other of the signs
of Phthisis, may be regarded as
certainly indicating Tubercular
disease.

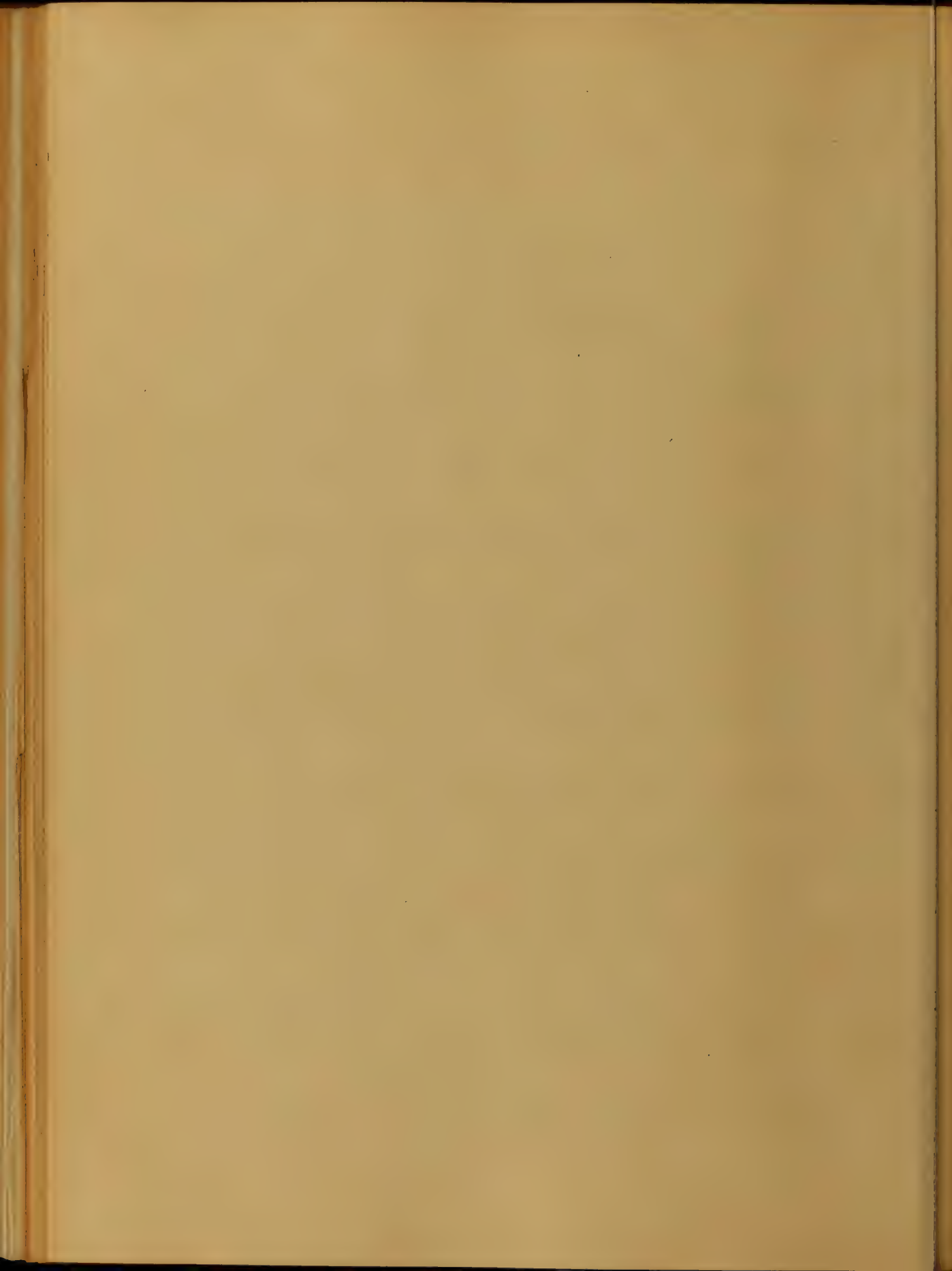
Time is an important
auxiliary in the diagnosis of ob-
scure cases. Rales which are
due to Pneumonia, Bronchitis
or the presence of blood effused
in an attack of haemoptysis, and
dulness referable to pleuritic ef-
fusion or to oedema of the lungs,
or to pneumonic consolidation
will gradually disappear, and
cease to complicate and mark



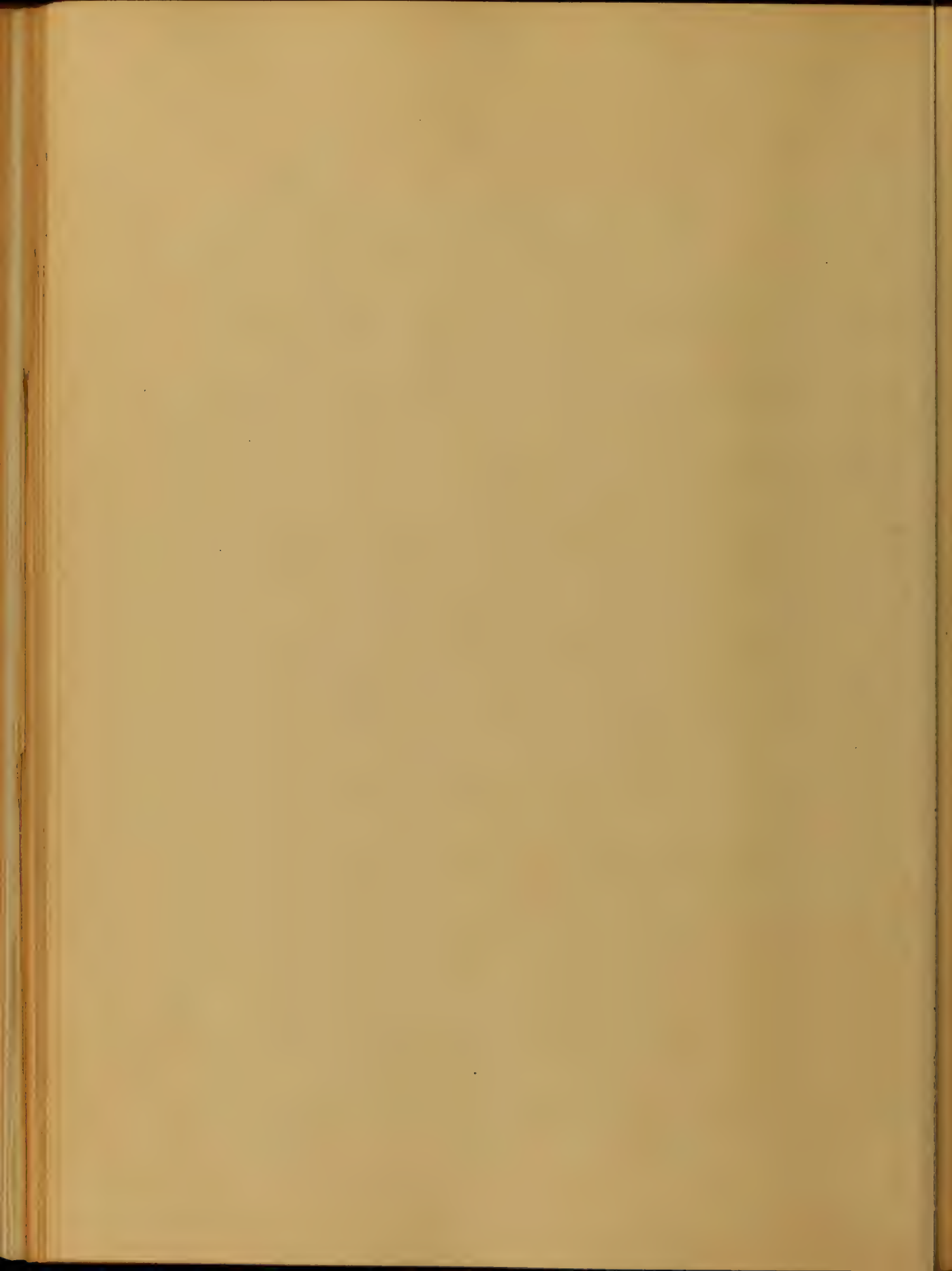
The signs which are consequent on more permanent and organic changes in the lungs.

The prognosis of Tuberculosis is necessarily unfavorable. In acute Phthisis the downward course of the patient is steadily and rapidly progressive; but in certain cases, instances of Chronic Phthisis, the disease is of long duration; whilst in others, and certainly the majority of cases, it runs a less protracted course, but is nevertheless marked by distinct remissions.

The question therefore arises

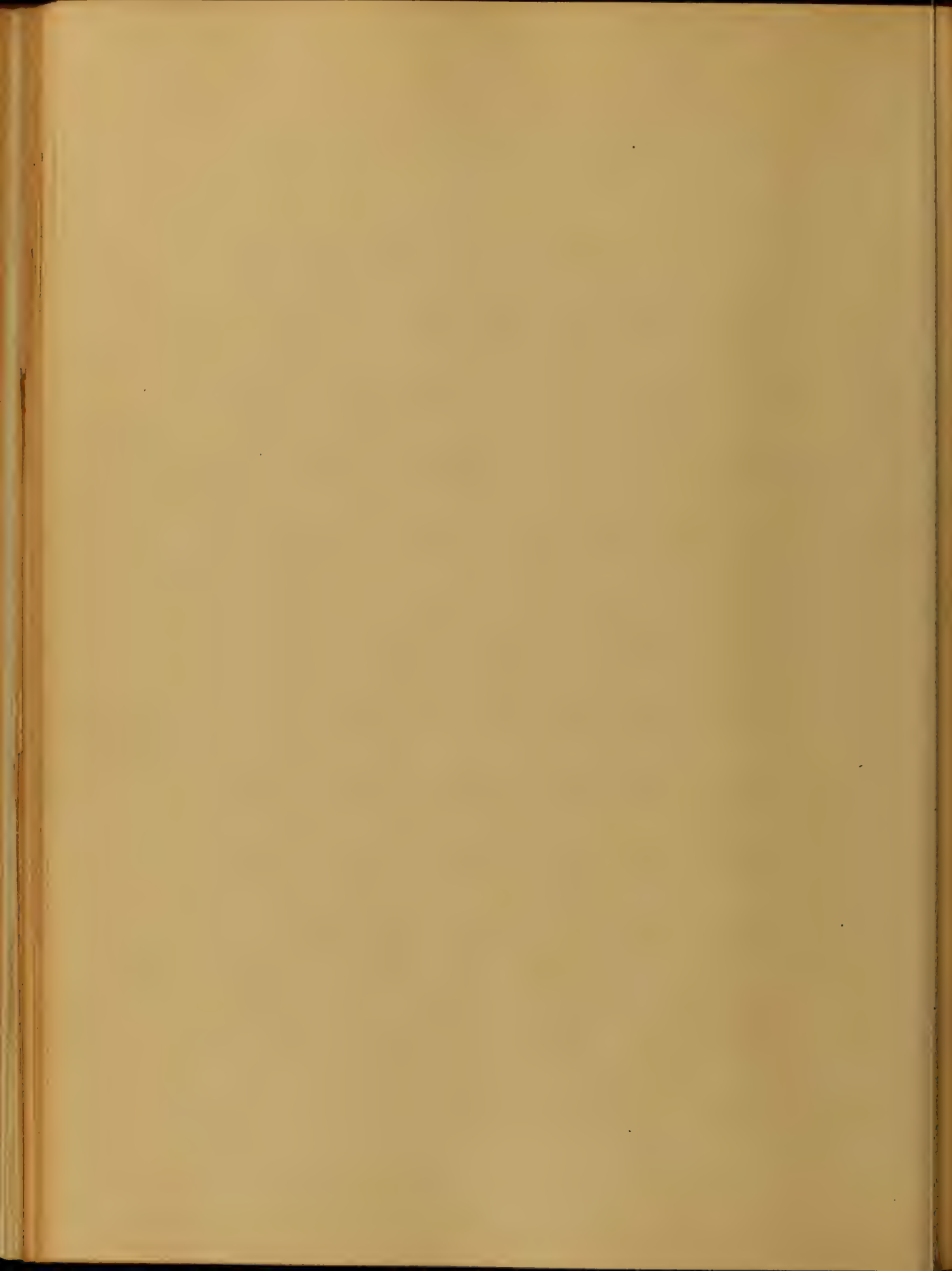


whether it is possible to prognosticate which course it will pursue - by reference to the character of the symptoms which accompany it. In some instances undoubtedly it is possible to do so, but in others there are not sufficient data for our guidance. It has already been stated that Tubercle, when once deposited, may remain for years in "statu quo"; or may specifically undergo softening or disintegration, and these peculiarities are referable in great measure to the ^{the} circumstances or constitutional

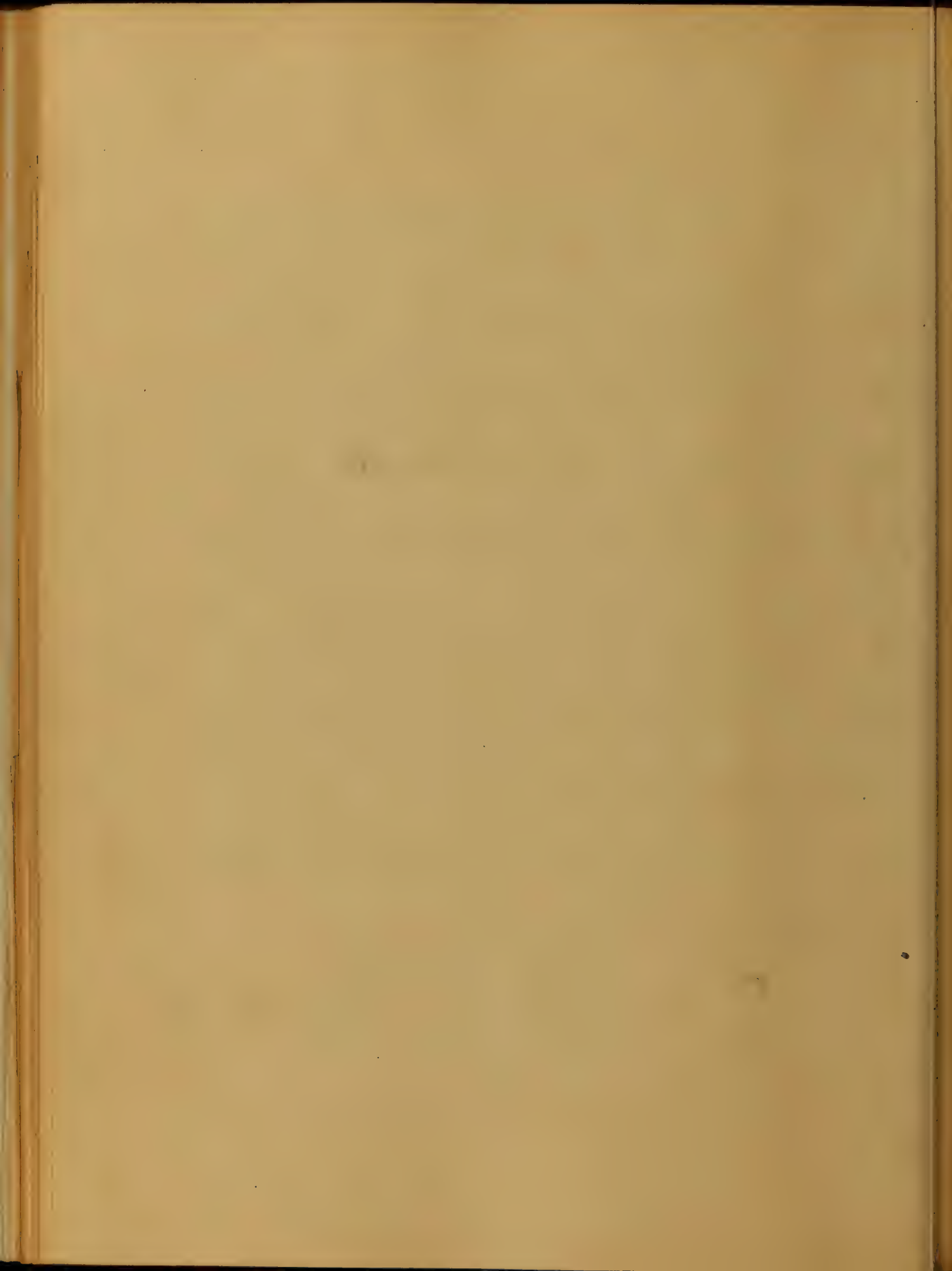


disorder under the influence of
which the Tubercle is deposited:
The same conditions regulate the
entire course of the disease and
modify the effects of treatment.

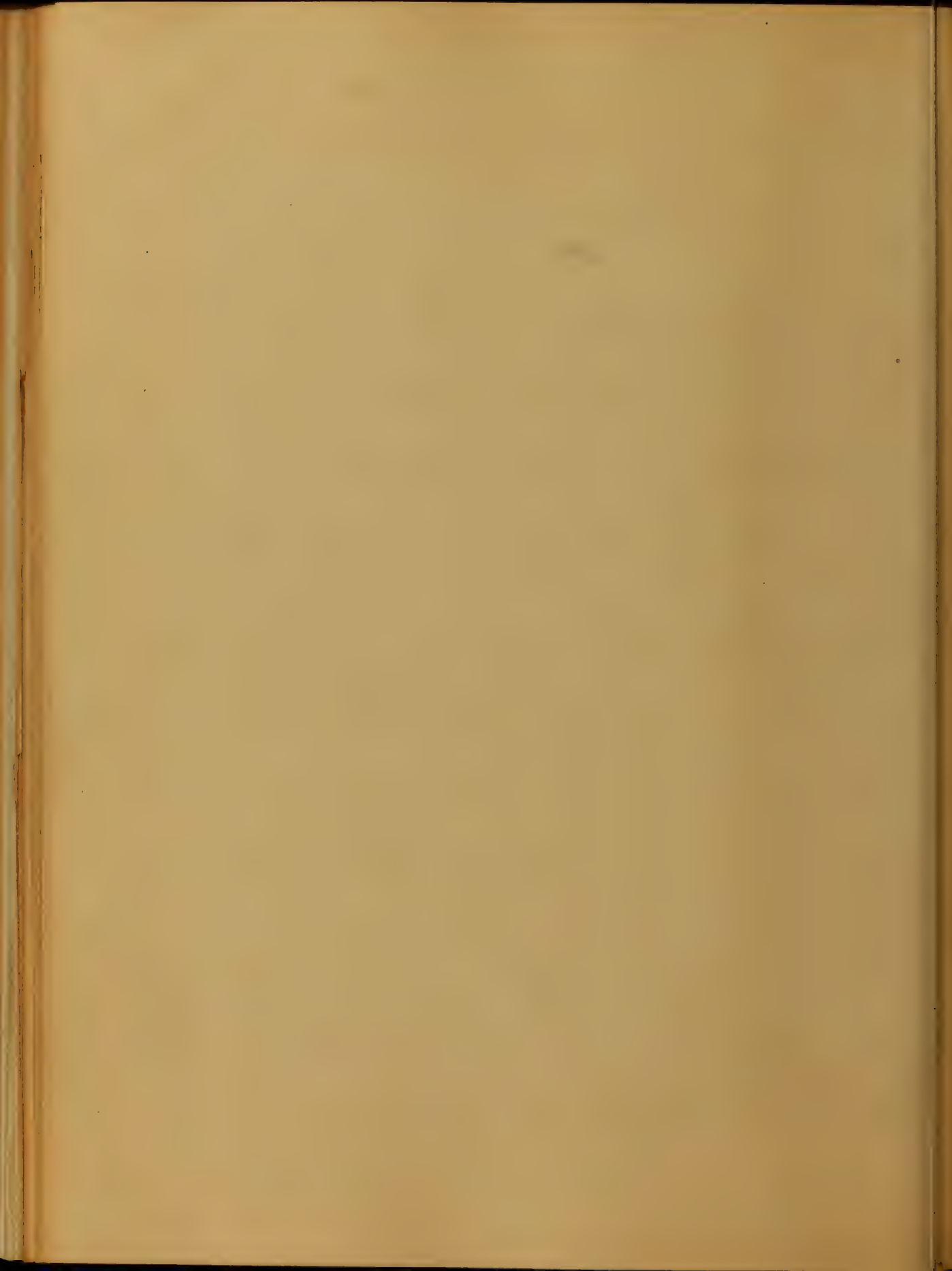
Thus, in any given case, if
the intensity of the Constitutional dis-
order can be ascertained, it will
not be difficult to predicate with
some degree of certainty whether
the course of the Tuberculosis
will be slow or rapid - whether
Temporary remission or suspension
of the symptoms may be expected,
or whether they will run on un-
checked by remedies.



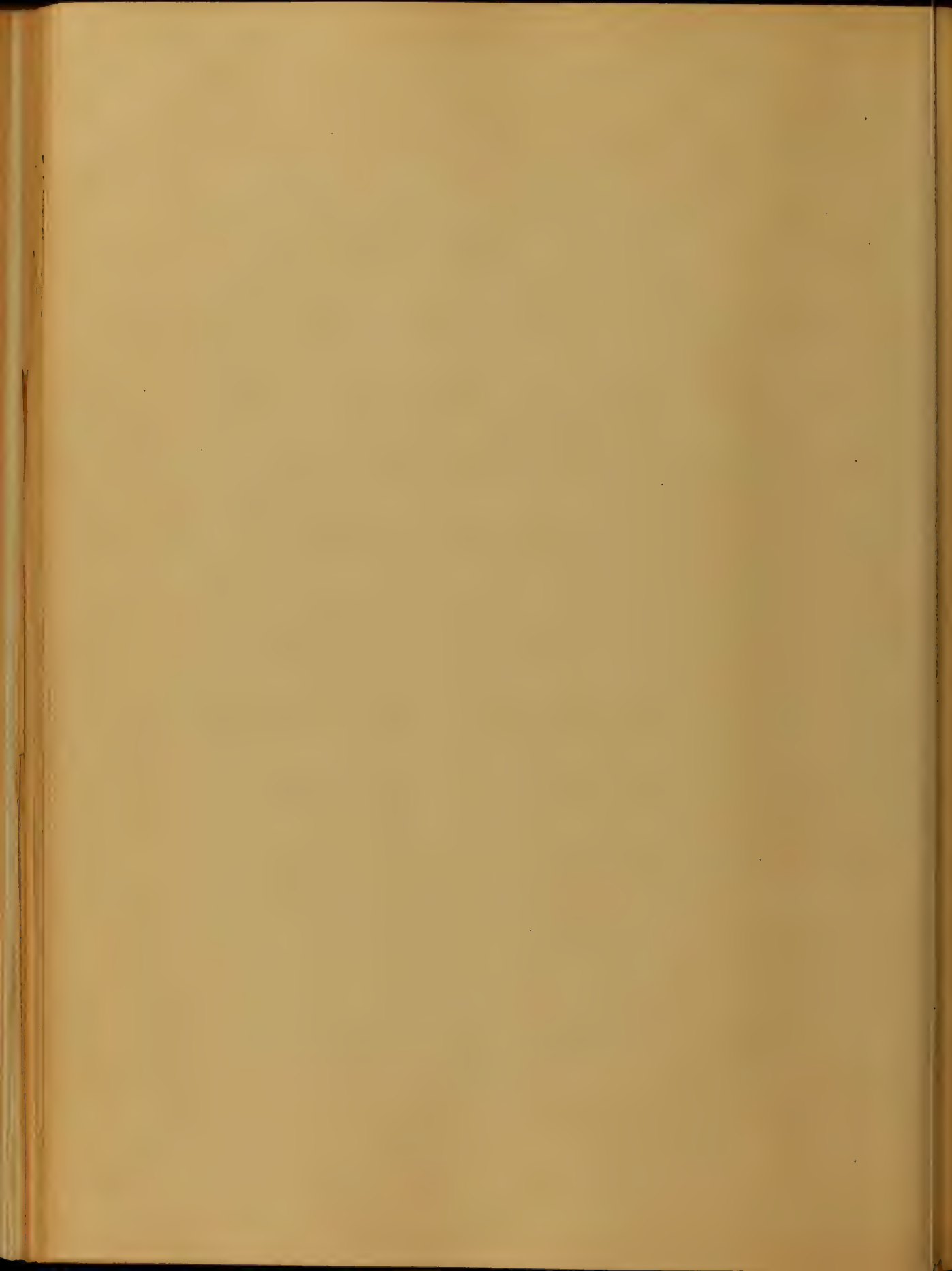
Now it happens that Phthisis, or that condition of constitution which results in the deposit of Tubercle is marked by characteristic symptoms, and when the tendency to tubercular deposit and disintegration is strongly marked, these symptoms are more pronounced. Among these we observe rapidity and softness of the pulse, and unnatural softness and dampness of the skin, the early occurrence of emaciation, and of hectic, with profuse perspiration, sleeplessness, with entire loss of appetite, derangement of



the bowels and diarrhoea; when these symptoms are observed coincidentally with great prostration, hurried breathing and dyspnoea on the slightest excitement, the probability is not only that there is extensive tubercular deposit in the lungs, but that the constitutional derangement is deep-seated and excessive, and that the retrograde metamorphosis of tissue will continue unchecked, and will bring the patient rapidly to his grave. On the other hand, when the pulse remains slow or is but little accelerated

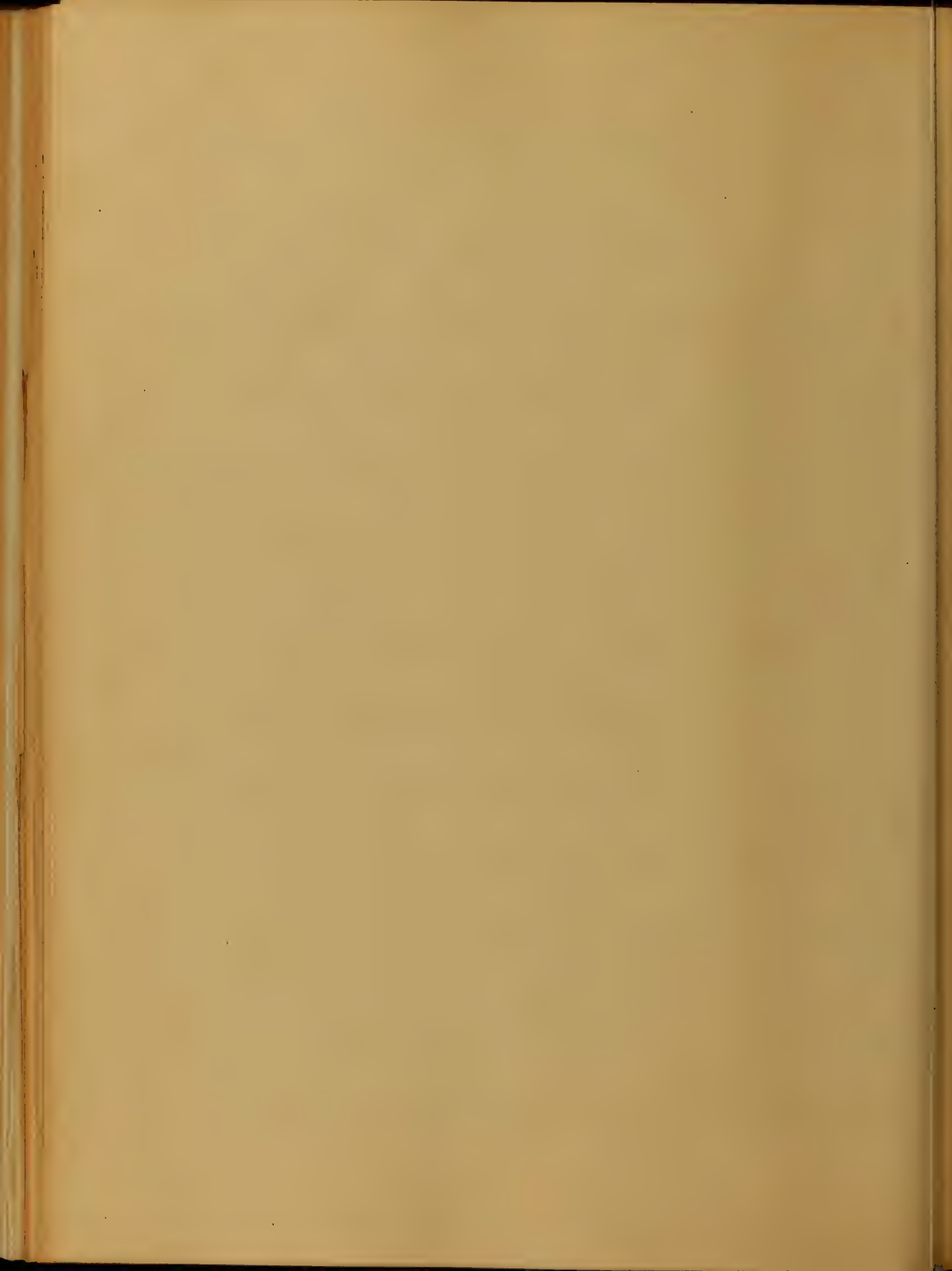


when the skin maintains its normal elasticity, temperature and moisture, when there is little quickening of the pulse - respiration ratio, little tendency to hectic, little perspiration and no diarrhoea, when the appetite remains good and emaciation takes place but slowly - the system is obviously not overwhelmed by the disease, but possesses considerable power of resistance; the progress of the malady, therefore, will be slow, and it is not improbable that, if appropriate treatment be adopted, re-



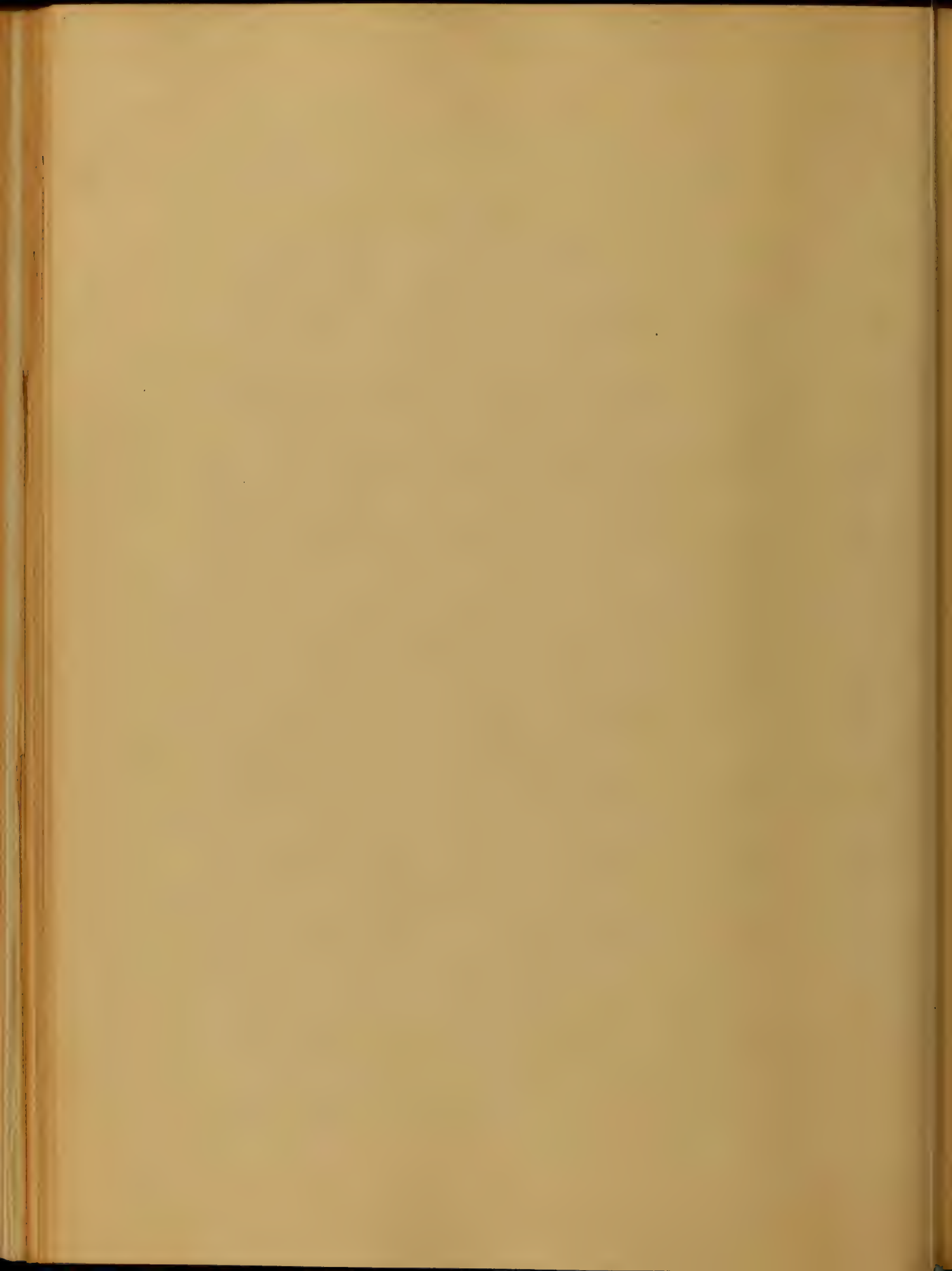
invasions may occur, or the onward course of the disorder may be arrested. In such cases as these, if the patient be placed under favorable hygienic circumstances, the prognosis will be comparatively favorable, and partial, or practically complete, recovery may take place.

In considering the treatment of Phthisis there are three distinct questions to occupy the attention; First: how to prevent the occurrence of the disease in persons who seem predisposed to its invasion; secondly;



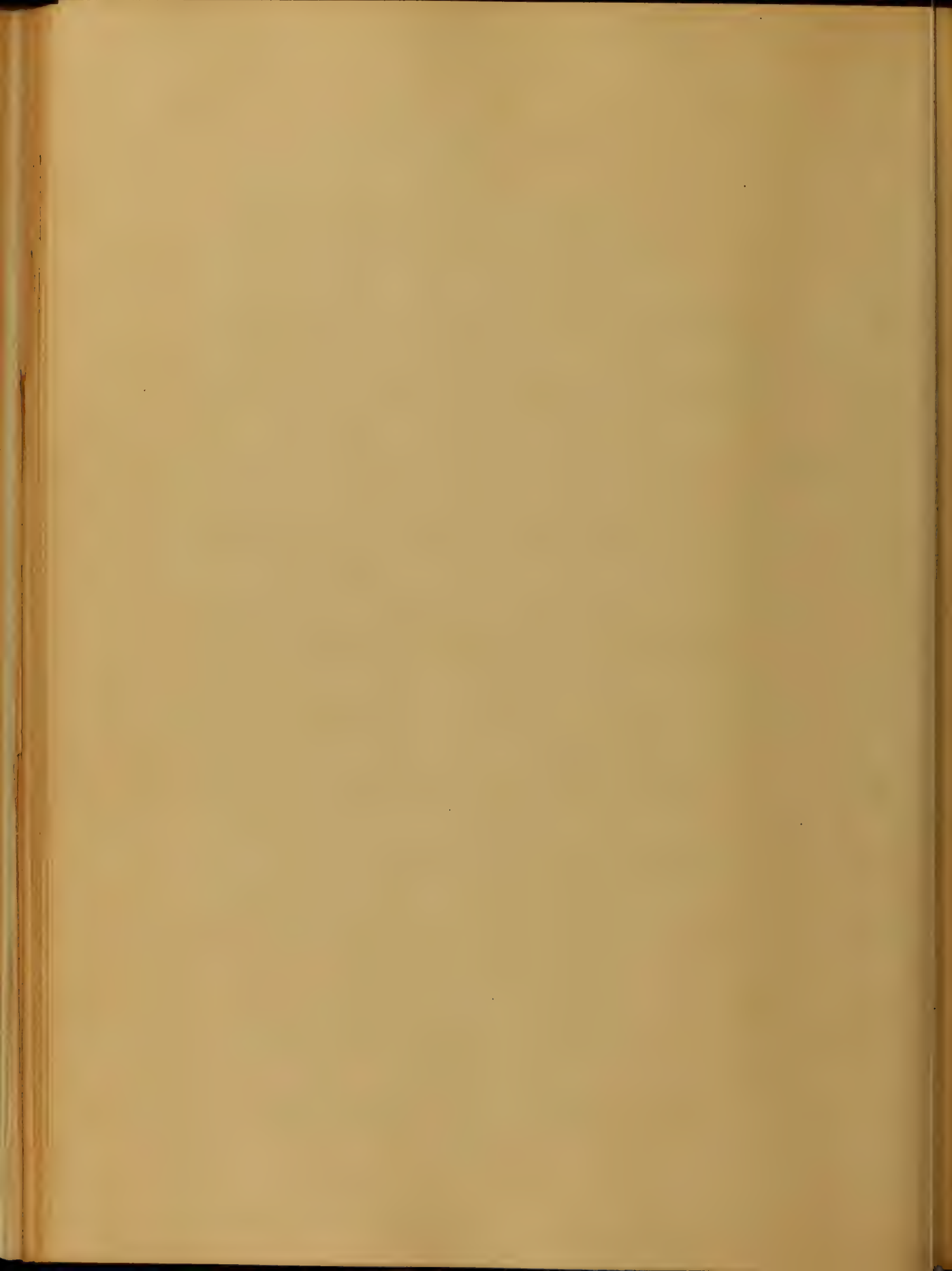
how to arrest its progress while
as yet the pulmonary mischief
is limited in extent; Thirdly;
how to alleviate the patient's
sufferings, and smooth his pas-
sage to the grave when it is be-
yond the power of medical skill
to avert a fatal issue.

The first questions involve
several points on which medical
men are frequently consulted,
and on which much difference
of opinion exists. Modern
research has shown that, by
invigorating the whole system
and improving the functions



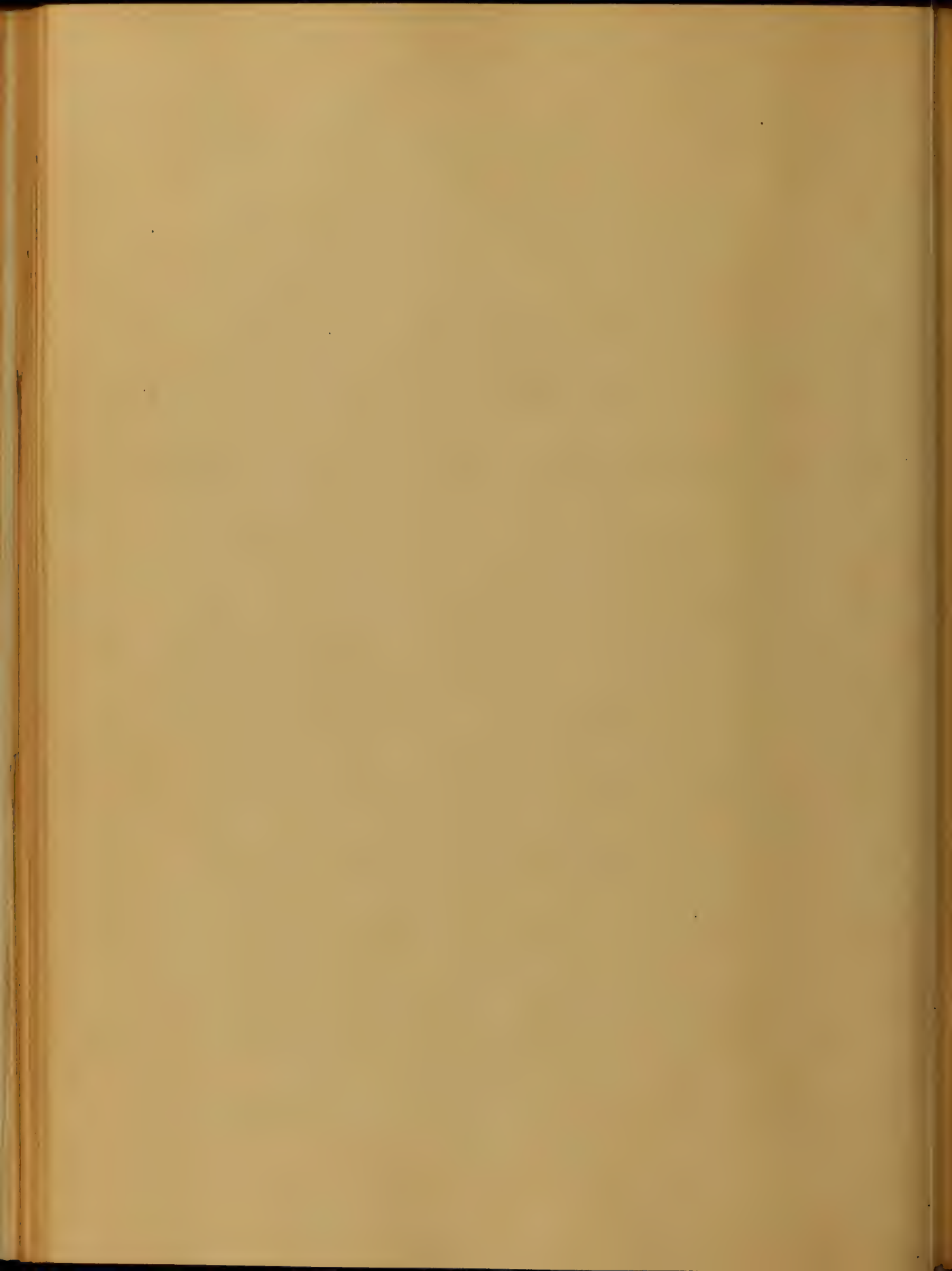
of assimilation and nutrition,
the Tubercular Cachexia may
warded off, the formation of tu-
bercle prevented and its farther
development arrested. The
question then arises—How is
this desirable result to be brought
about?

There are certain cases in
which change of air is indispen-
sible. Persons of a stilly nature,
if resident in a cold and bracing
locality, must change their sit-
uations in order to improve their
health. So, too, must those
who require bracing, whose lot is



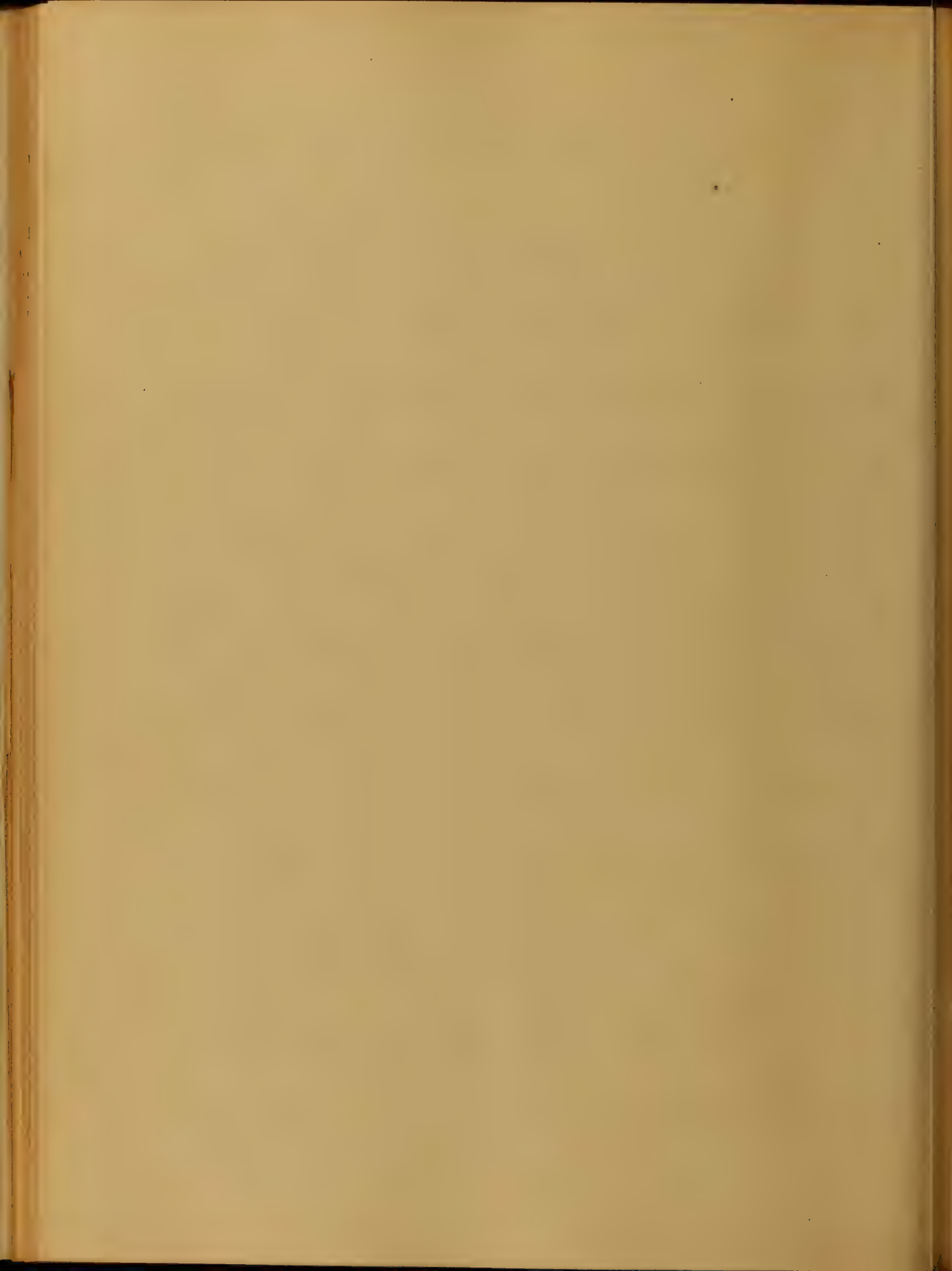
lived in a warm and humid climate, select a cold, dry and uniform location. These, and all others who happen to be placed under circumstances unfavorable to their general health, will do wisely to migrate at the earliest opportunity; but their migration must not necessarily be to foreign climes. There are many spots in our own country which afford to the average of consumptive patients all the changes their organism demands.

All persons will do well to select as their residence a place

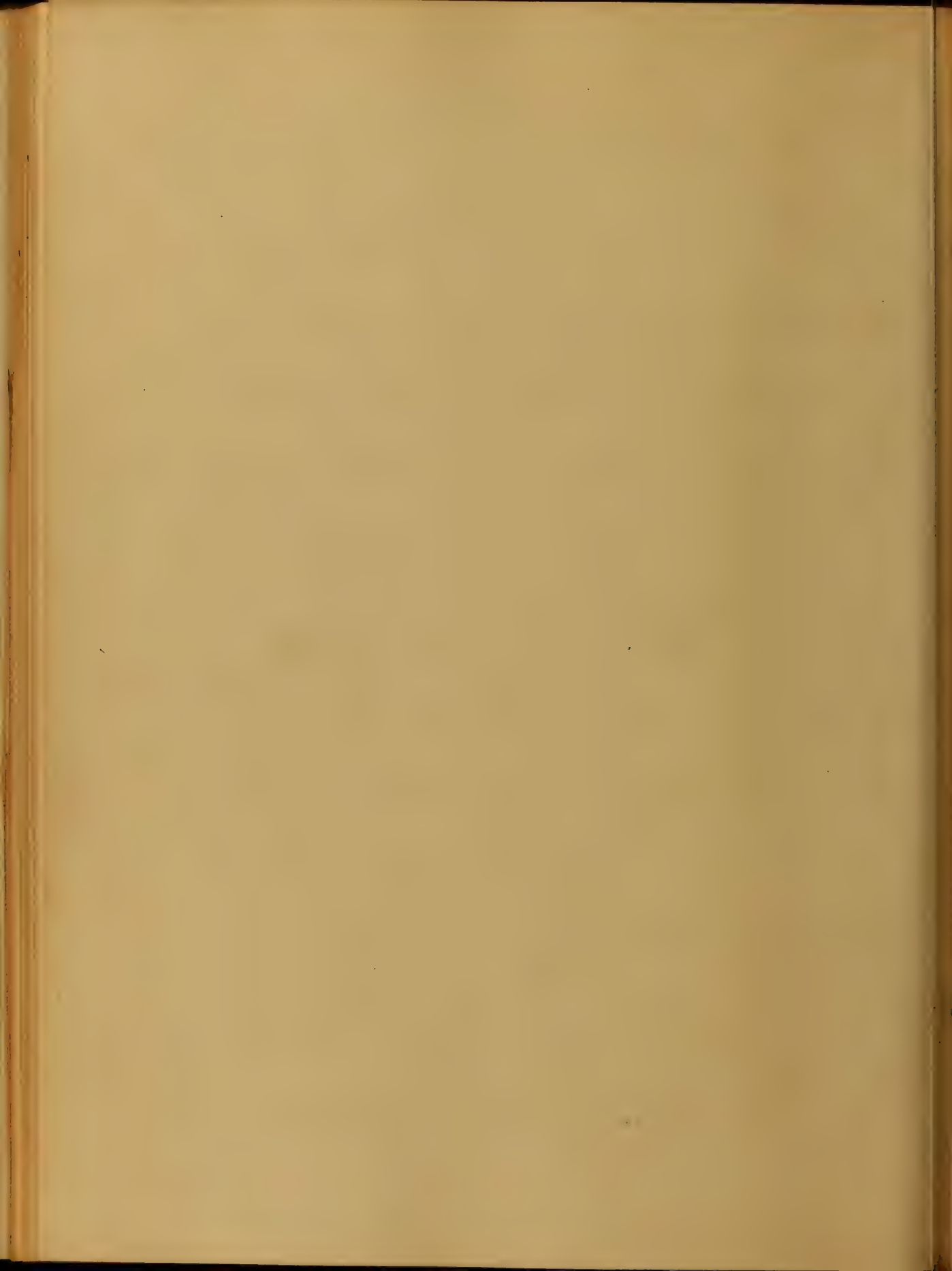


which has ordinarily agreed with them, and if their own houses came within this category, there is no reason why they should leave it for other quarters.

Temporary change of air is useful now and then, by imparting a stimulus which is not to be obtained in any other way, and to persons to whom travelling is a pleasurable excitement, and who, so long as they remain at home, are unable to shake off the cares and anxieties of business, a residence abroad may be almost

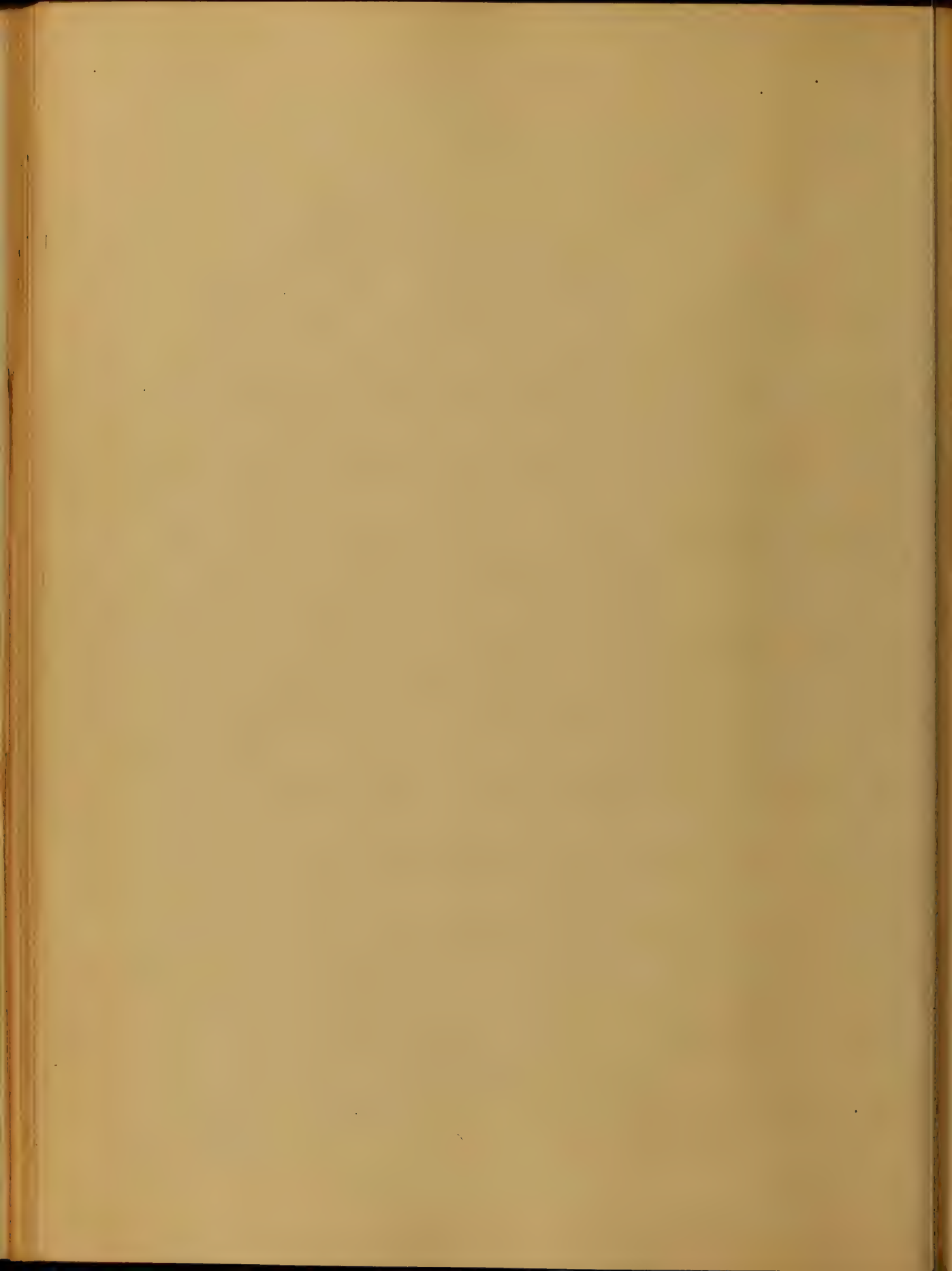


indispensable; but the majority of Consumptive invalids will fare better in their own homes and in their own country than in the most favored regions abroad, especially now that the railways afford facilities for frequent change. Their absence from home and its comforts and associations is to many invalids a constant source of annoyance, and regrets while the fatigue of a long journey and the privations incident thereto are bearing upon an already impaired vitality.



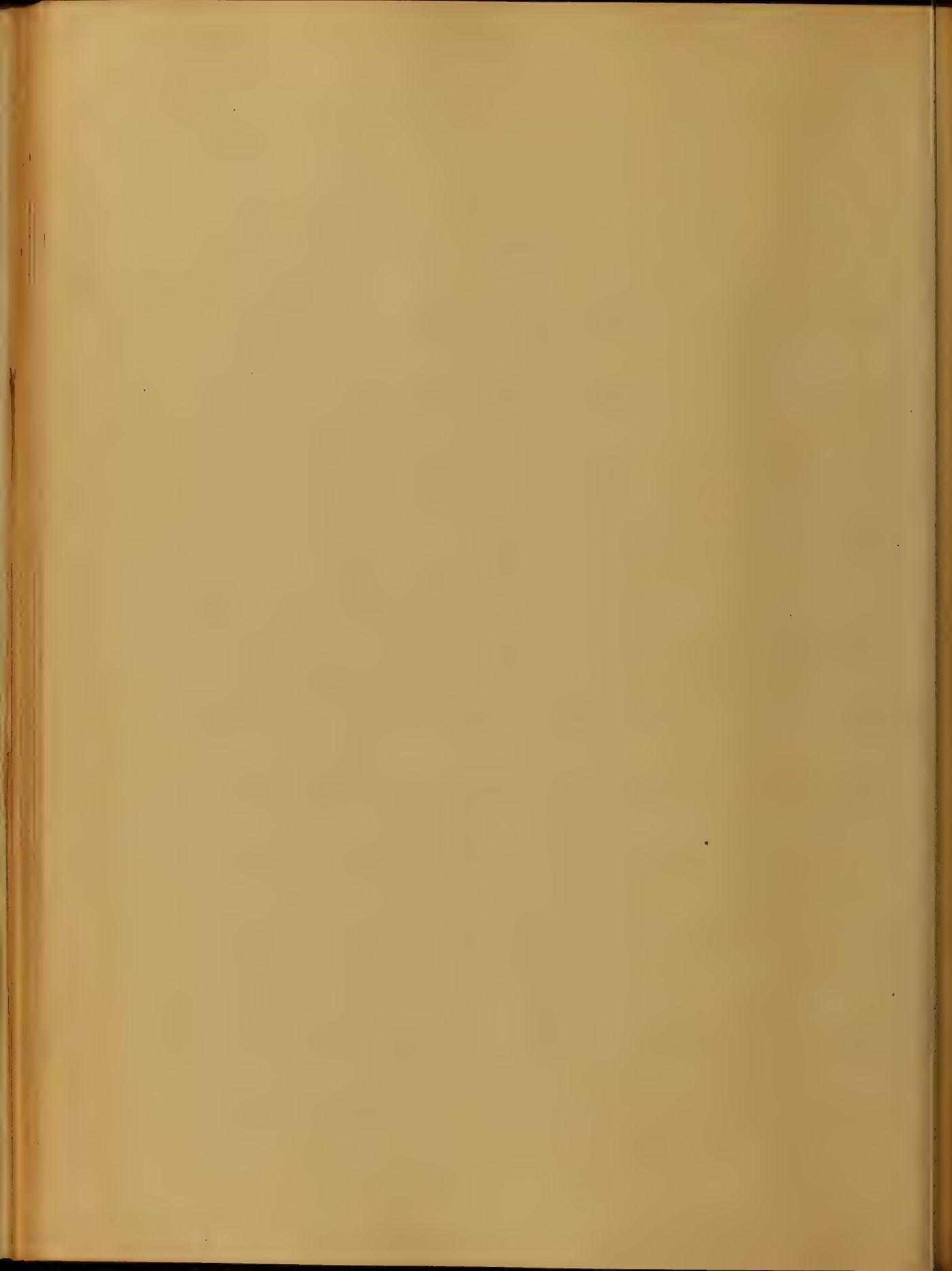
ity, go far toward neutralizing any good effect that might be otherwise produced. Therefore, with this as with other remedies, its efficacy will depend upon the judgment with which it is employed.

As a preventive of the disease, or as a corrective of that derangement of the health which marks its earlier inroads, a residence abroad, or foreign travel, with the pleasurable excitement incident thereto may, for many persons, though not for all, be regarded as one of our most pre-



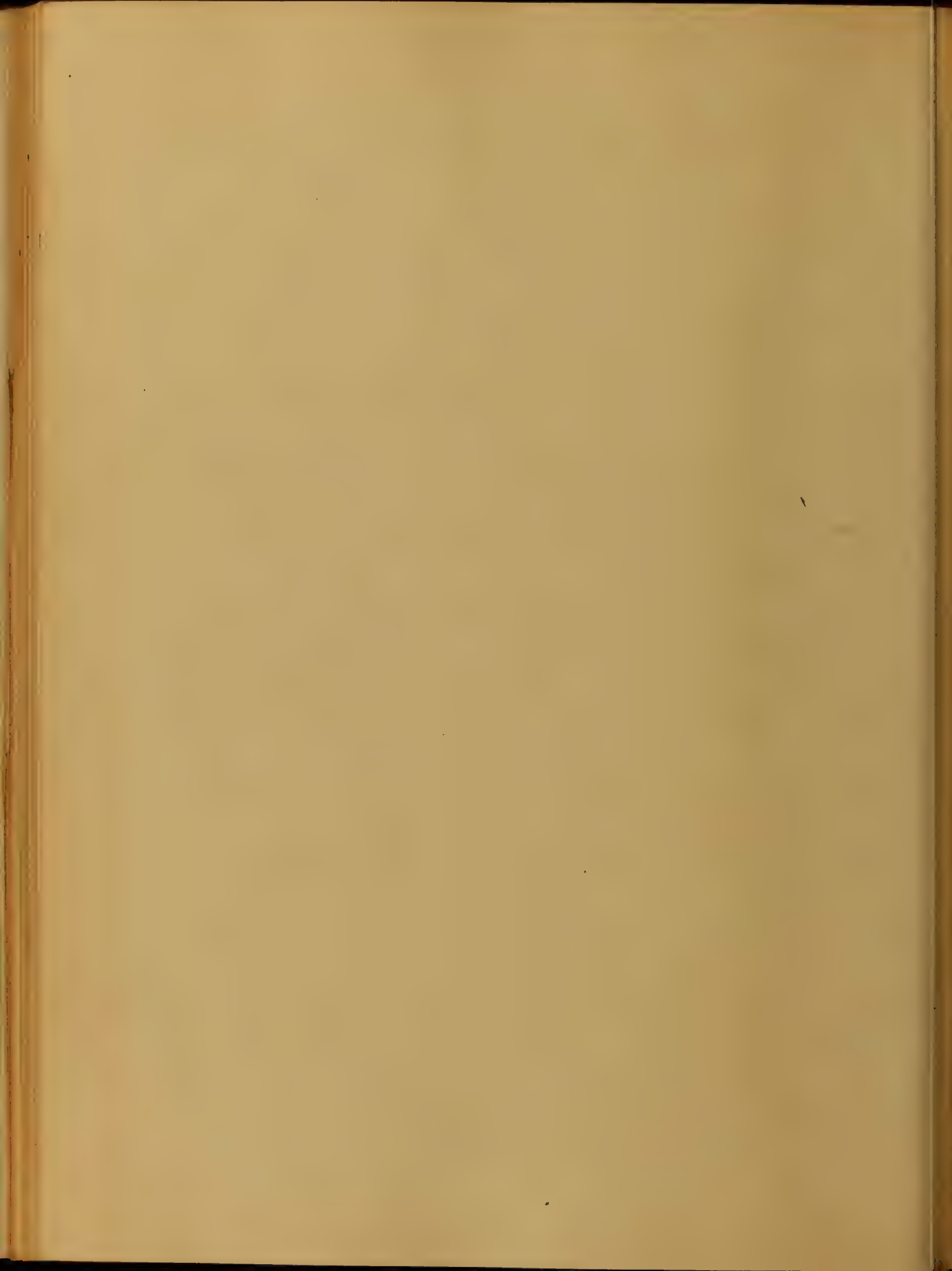
Test and valuable remedies.

During the summer the patient should spend almost the entire day out of doors, walking, riding on horseback, driving, travelling, yachting, or simply sitting in the open air, and even in the winter, provided the weather be fine, he should avail himself of the warmer hours in the middle of the day. To take whatever exercise out of doors his strength will permit. It is essential that his clothing be regulated to meet his necessities under the



various circumstances in which
he may be placed. Flannel
should always be worn next to
the skin.

Diet is a subject of
equal importance with those I
have hitherto discussed. Fresh
air, exercise, change of climate
and judicious clothing are all
subsidiary to our one object of
restoring or reëstablishing the
healthy nutrition. Our prin-
cipal efforts should be direct-
ed to the digestive and assimi-
lating organs, rather than to
the organs of respiration.

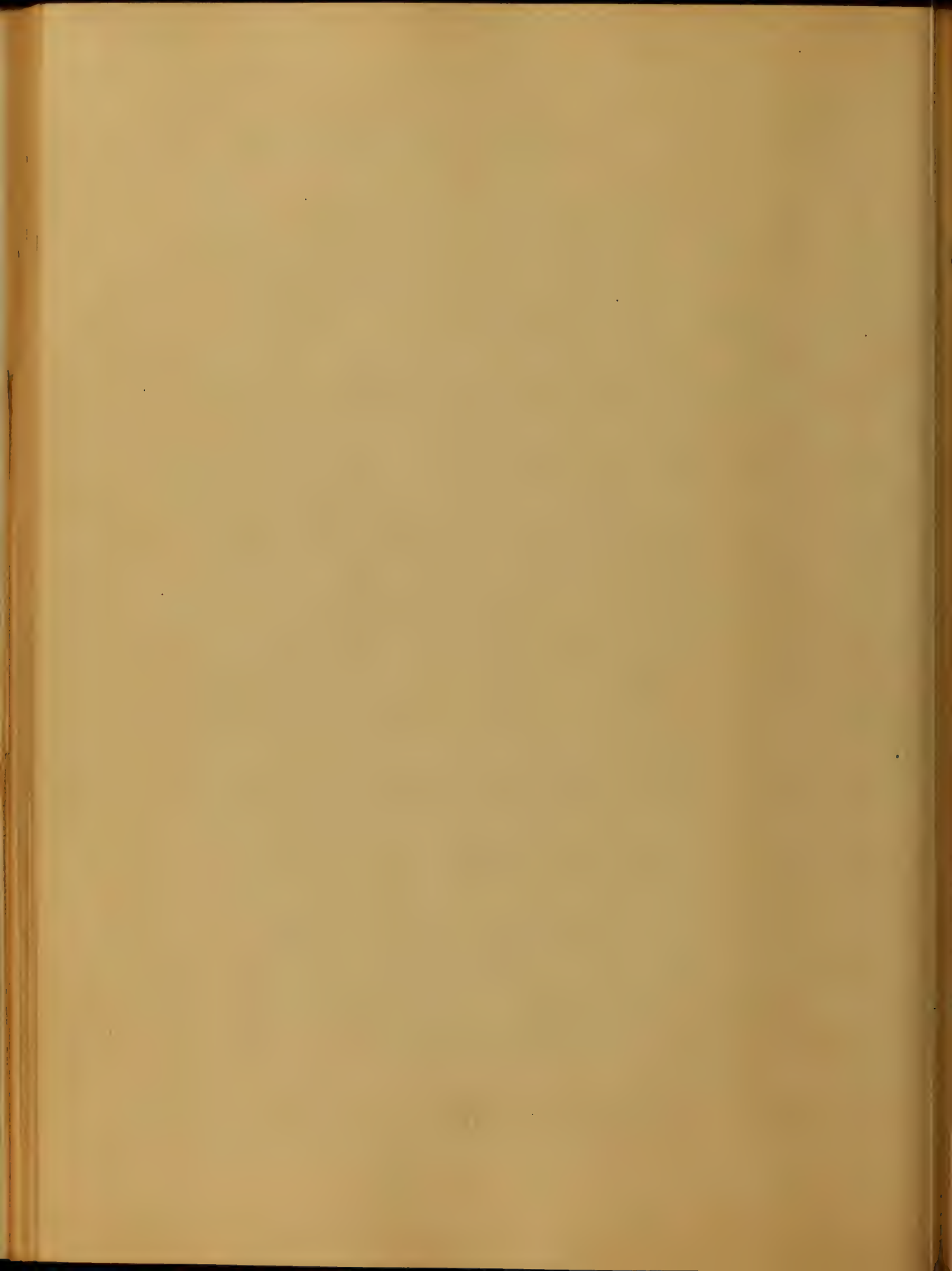


It happens commonly that dyspepsia is one of the most frequent early symptoms of Tuberculosis, and that during its existence the appetite is very capricious, and fatty matters are generally disliked and therefore avoided.

Some modern observer has stated that a certain amount of fat is essential to the due performance of the digestive process, and that oily matter plays an important part in the healthy metamorphosis of the albuminous constituents of the blood, and in promoting cell-development.

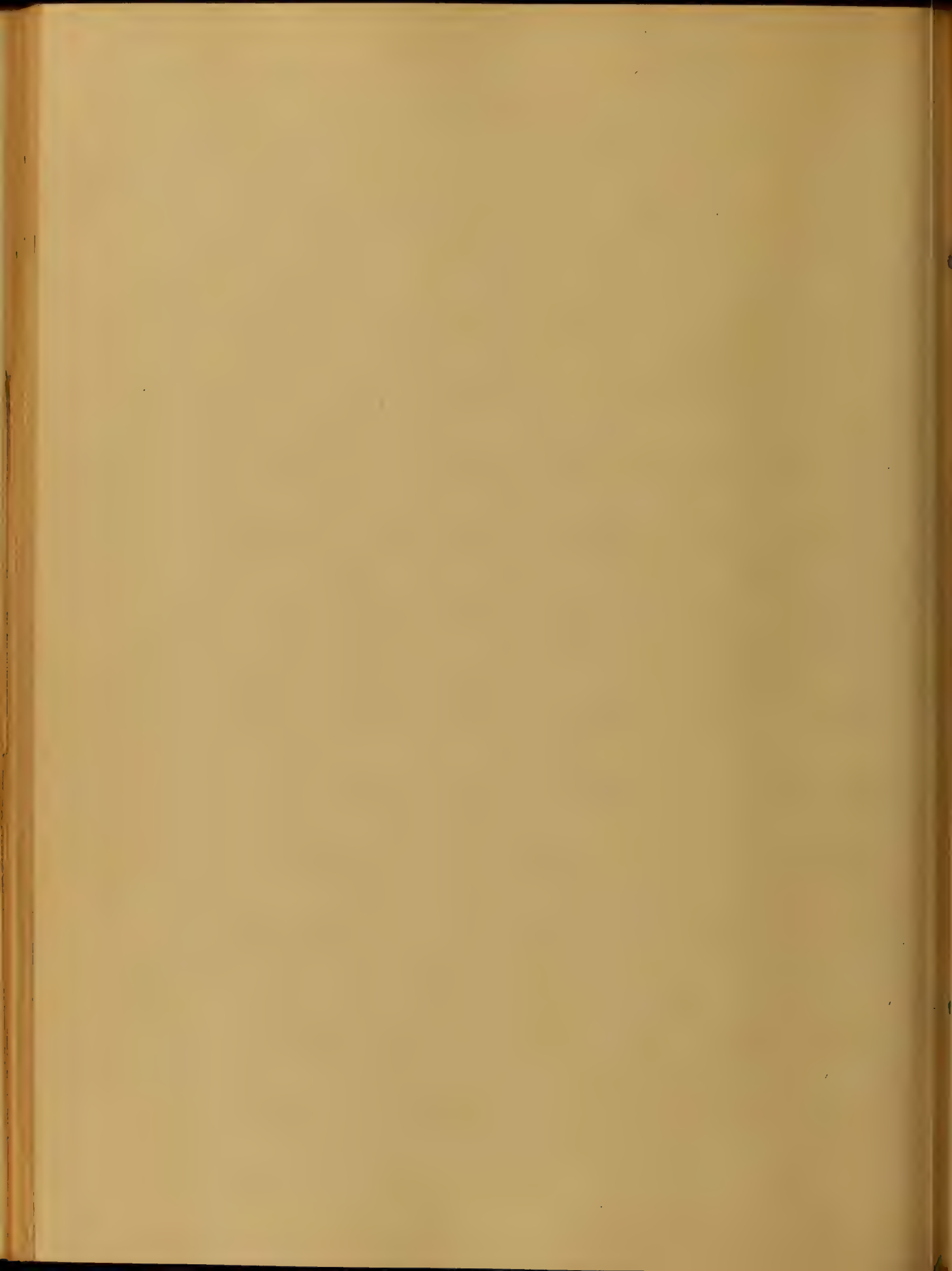


This is sufficiently intelligible, and by the light of the valuable researches of Dr. Hughes Bennett in relation to Cod Liver Oil and other oleaginous and fatty matters in their action in the system, it is hard to doubt its importance in a therapeutic point of view. If then, it be admitted that the assimilation of animal and fatty matter is essential, our main efforts must be directed, on the one hand, to the avoidance of those articles of diet which are likely to prove indigestible and create

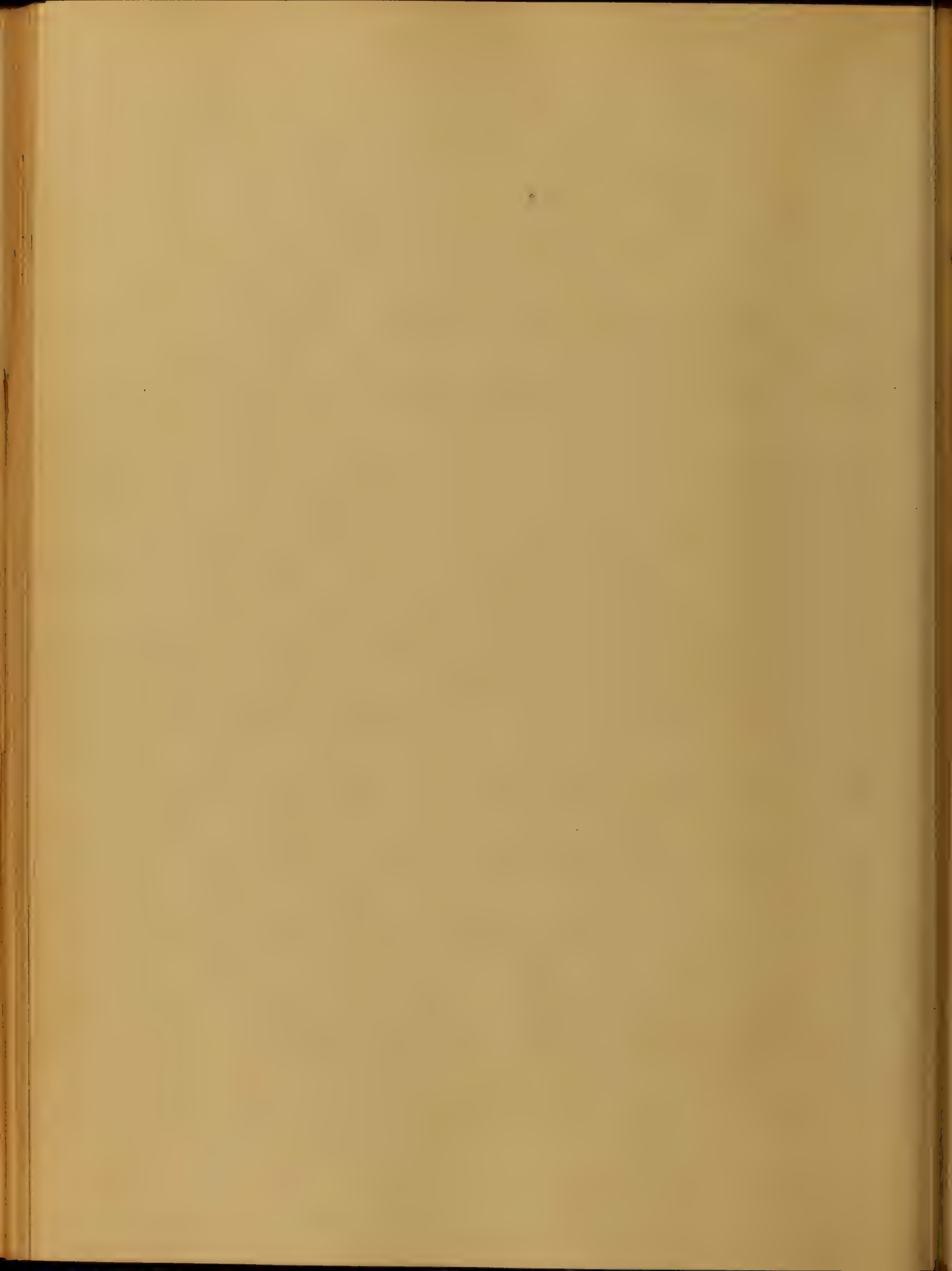


or increase acidity of the Stomach, whereby the assimilation of fatty matter is rendered difficult; and on the other hand, to supply food containing albuminous and oleaginous principles in a form in which the weak and disordered Stomach is able to assimilate and duly prepare them for the nutrition of the body. The most carefully regulated hygienic and therapeutic management will fail if the diet is insufficient in quantity, or deficient in quality.

It may be stated that



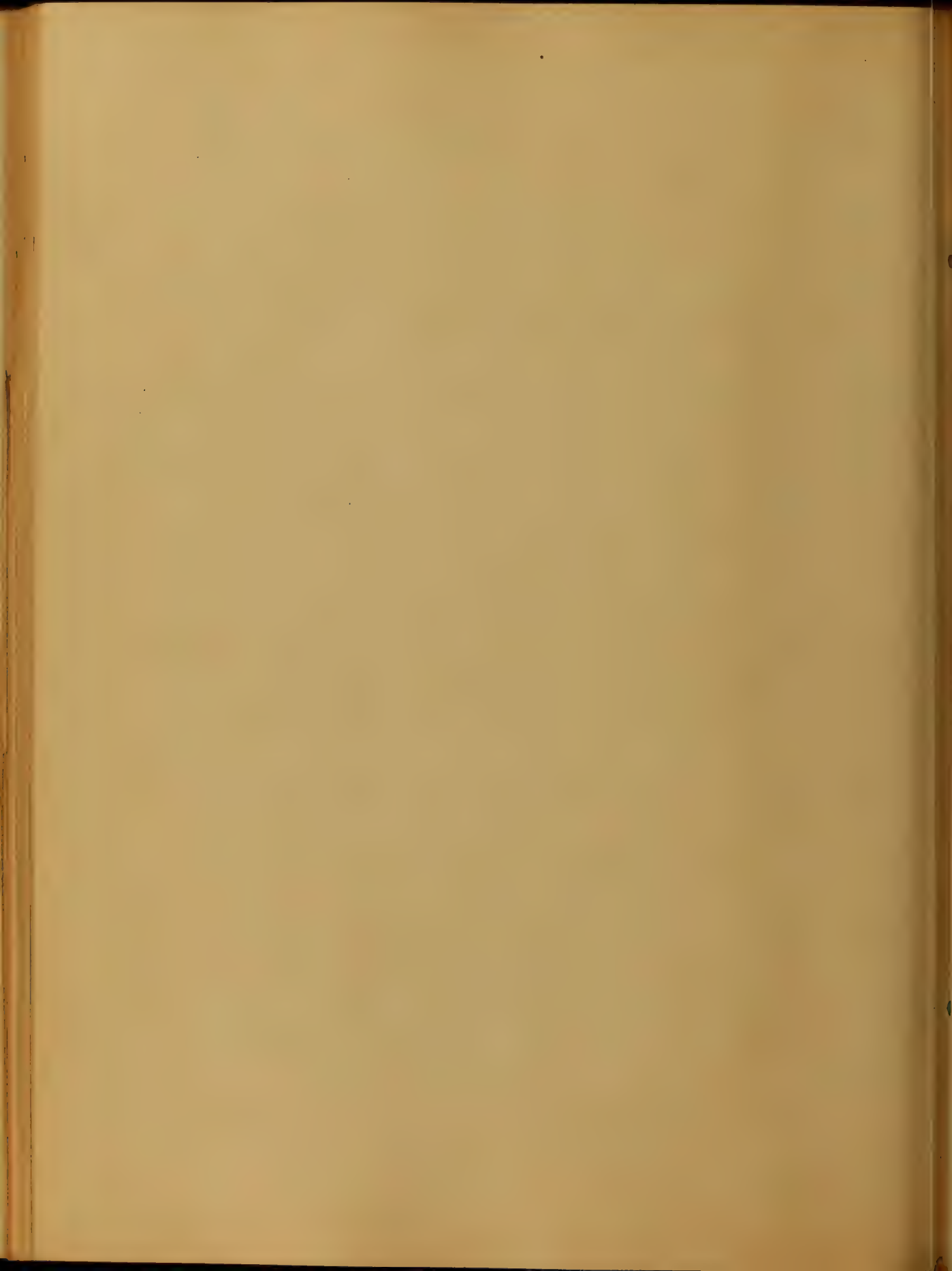
The diet suitable for Consumptive patients must necessarily vary according to their individual peculiarities. The food which is suitable at one period of the disorder may be quite unfit at another. The Stomach may at one time prove able to digest only the lightest and most easily-manageable diet, and at another may have acquired greatly increased tone; so that it is necessary to consult our patient's feelings and constitutional peculiarities from time to time in determining



The question of diet, and individual idiosyncrasies must be carefully brought out and studied if we wish to prescribe food likely to be properly assimilated.

Here we reach the consideration of Cod Liver Oil, which may be regarded partly as an article of diet and partly as a medicinal agent.

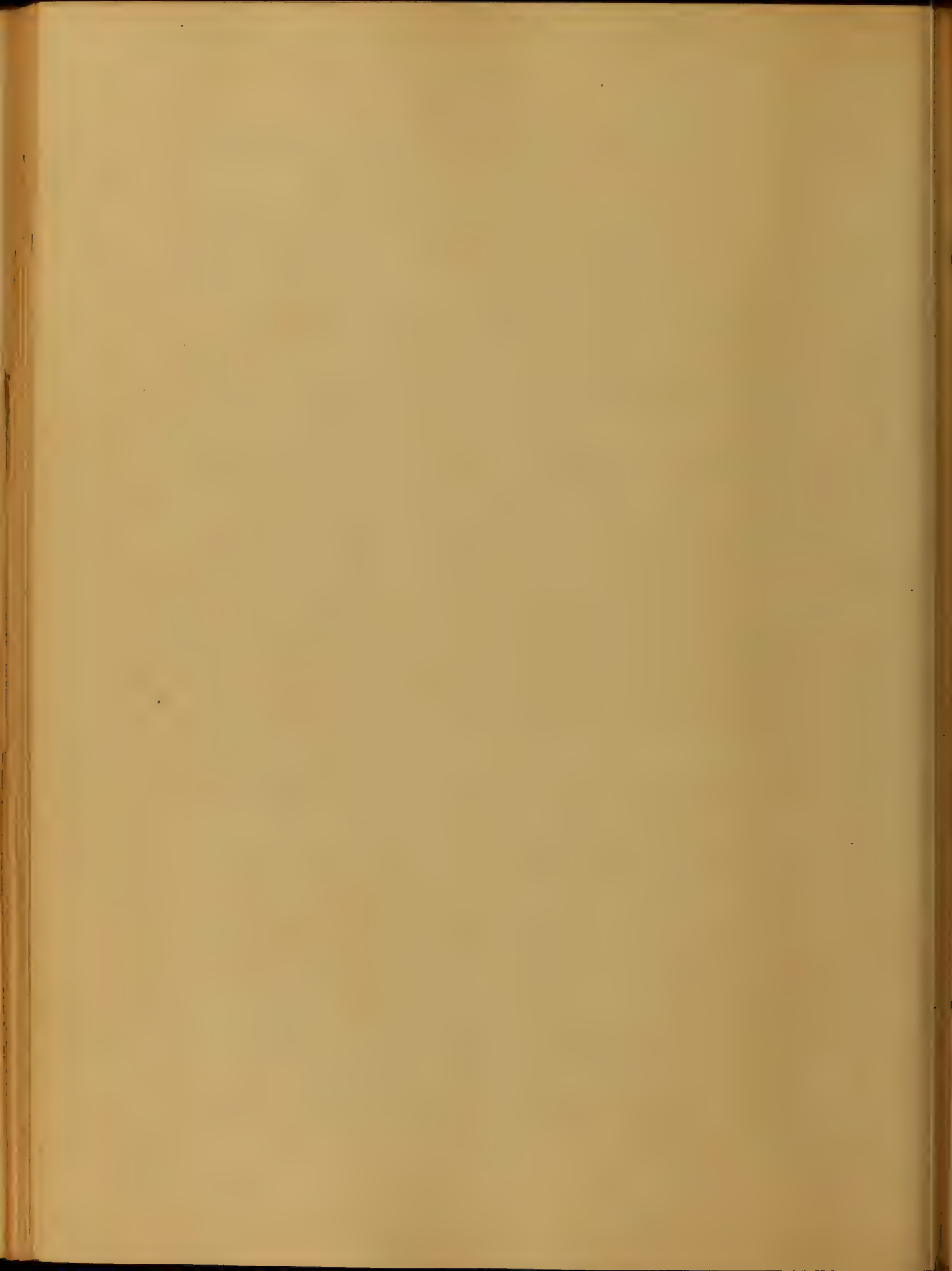
To whichever of its constituents its efficacy may be due there can be no doubt that it is, beyond all others, the remedy on which most reliance



Can be placed.

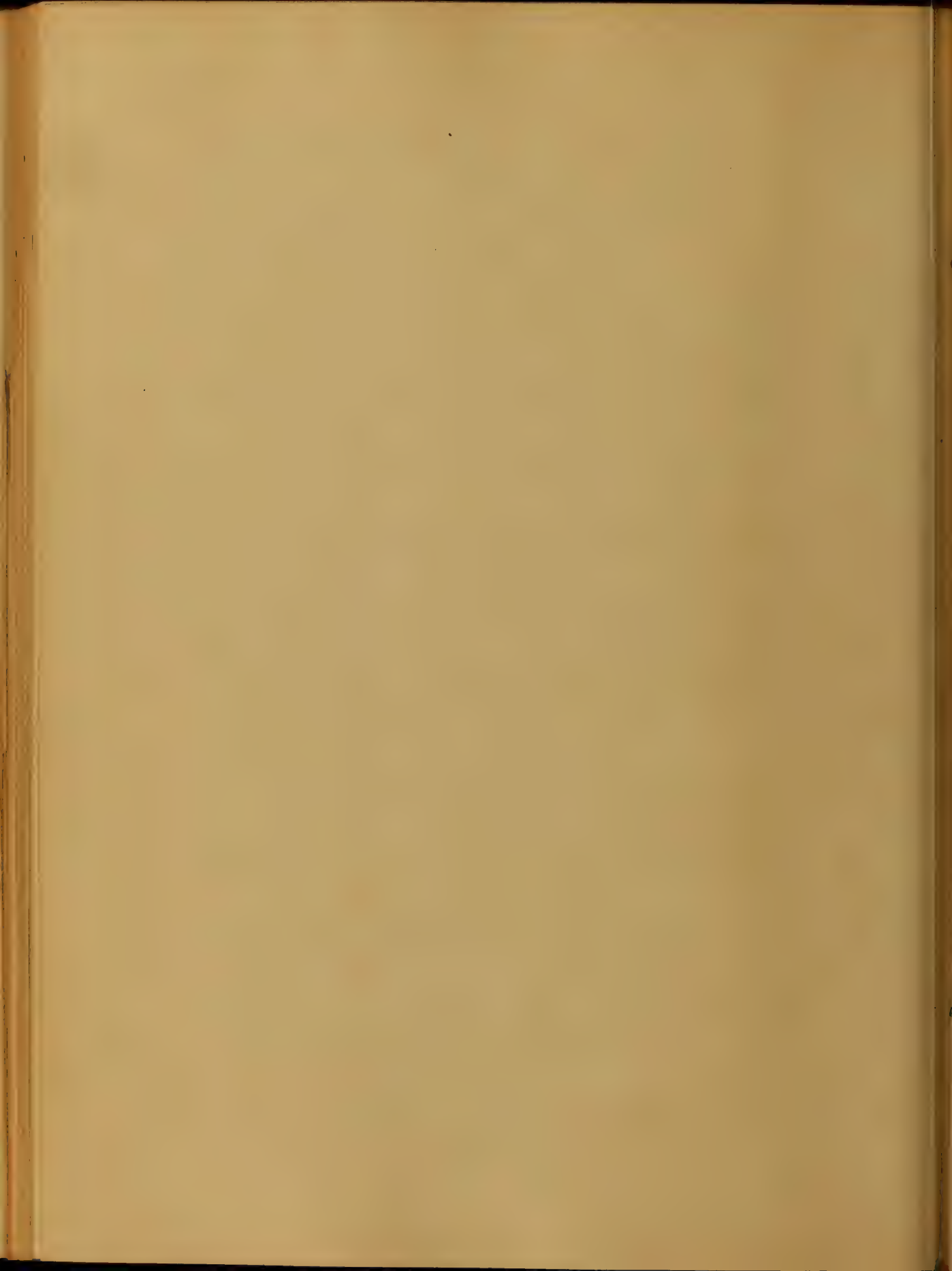
We are indebted to Dr. Hughes Bennett for our earliest knowledge of its remarkable powers in the treatment of tuberculous disorders. Chemistry has hitherto failed to explain its action, but clinical experience leaves not the slightest doubt as to its beneficial influence.

Of course, its virtues are most strikingly displayed in the earlier stages of the disorder, and in cases where there is not a strong inherited predisposition to tubercular disease, but

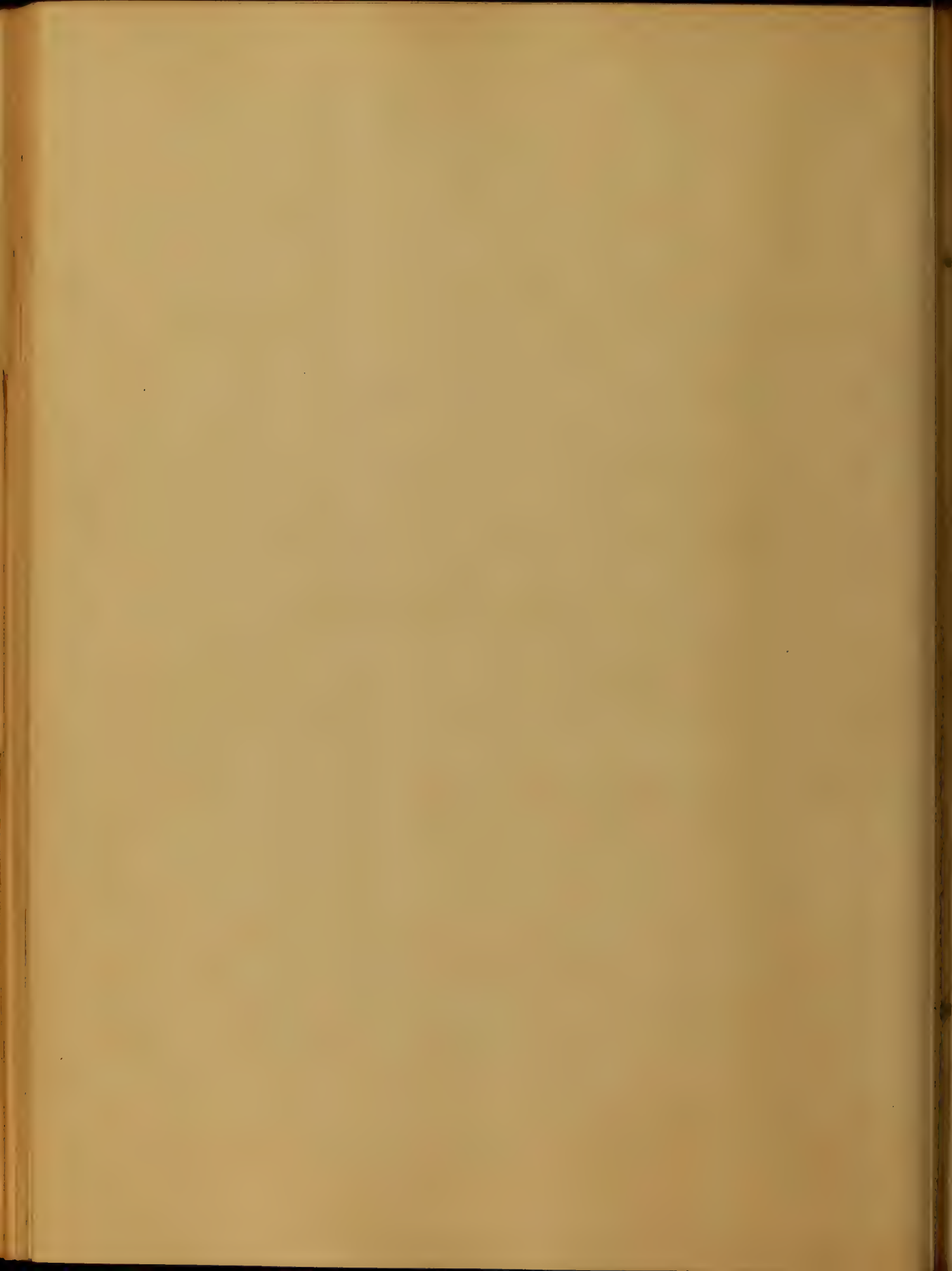


This simply means that where there is but little mischief to overcome the Oil has less difficulty in subduing it than where the trouble is deep seated and extensive, or more advanced, and, speaking generally, it may be stated that it proves serviceable at all ages of the patient and in all stages of the disease provided that the Stomach will retain and digest it, and it becomes subsequently purified.

There are other remedies which may be used



with advantage in certain conditions and under certain circumstances, such, for instance, as the Alkalies, and their salts, especially the Hypophosphites of Lime, Soda and Potassa; The Tr. Ferri Chloridi; Infus. Cuni Virginiani; The Phalybeates generally; Puchona; Quinia Strychnia and an extensive list of other remedies.



AN
Inaugural Dissertation

ON
Typhoid Fever
Submitted to the Examination

OF THE
Provost, Regents and Faculty
OF
PHYSIC,

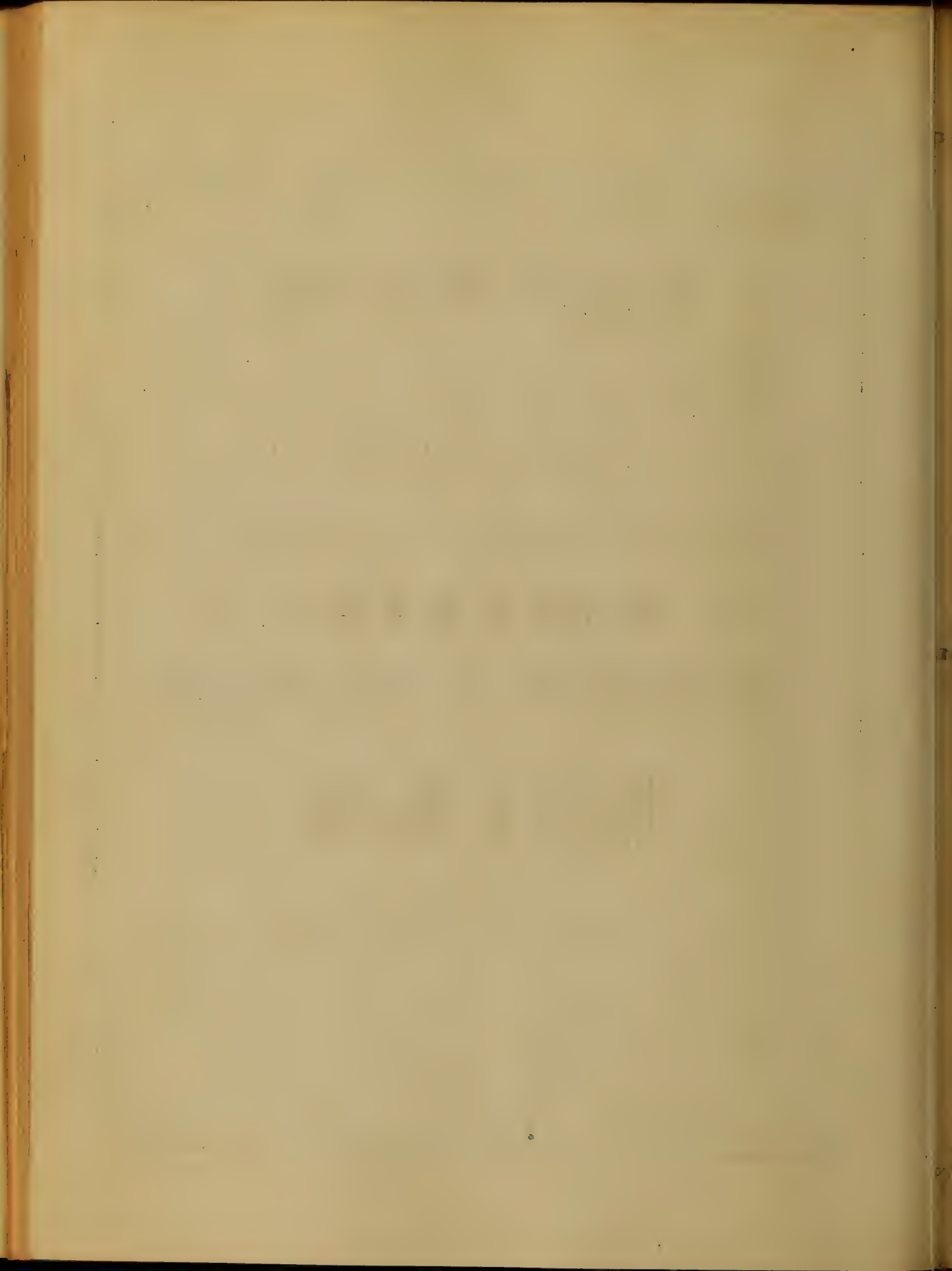
OF THE
UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF
DOCTOR OF MEDICINE,

By
James K. Chapman
of
South Carolina

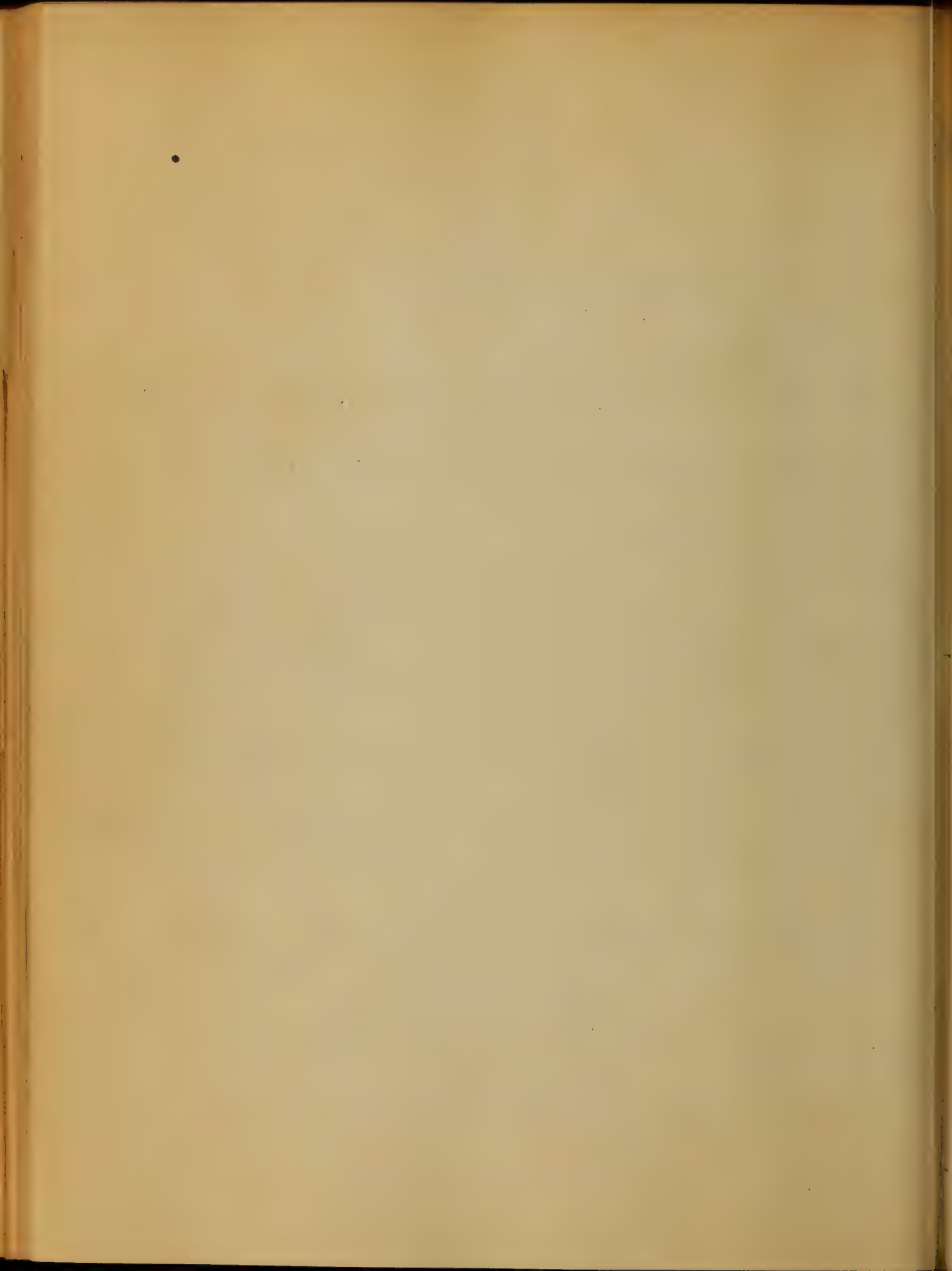
Session of

1868 & 1869.

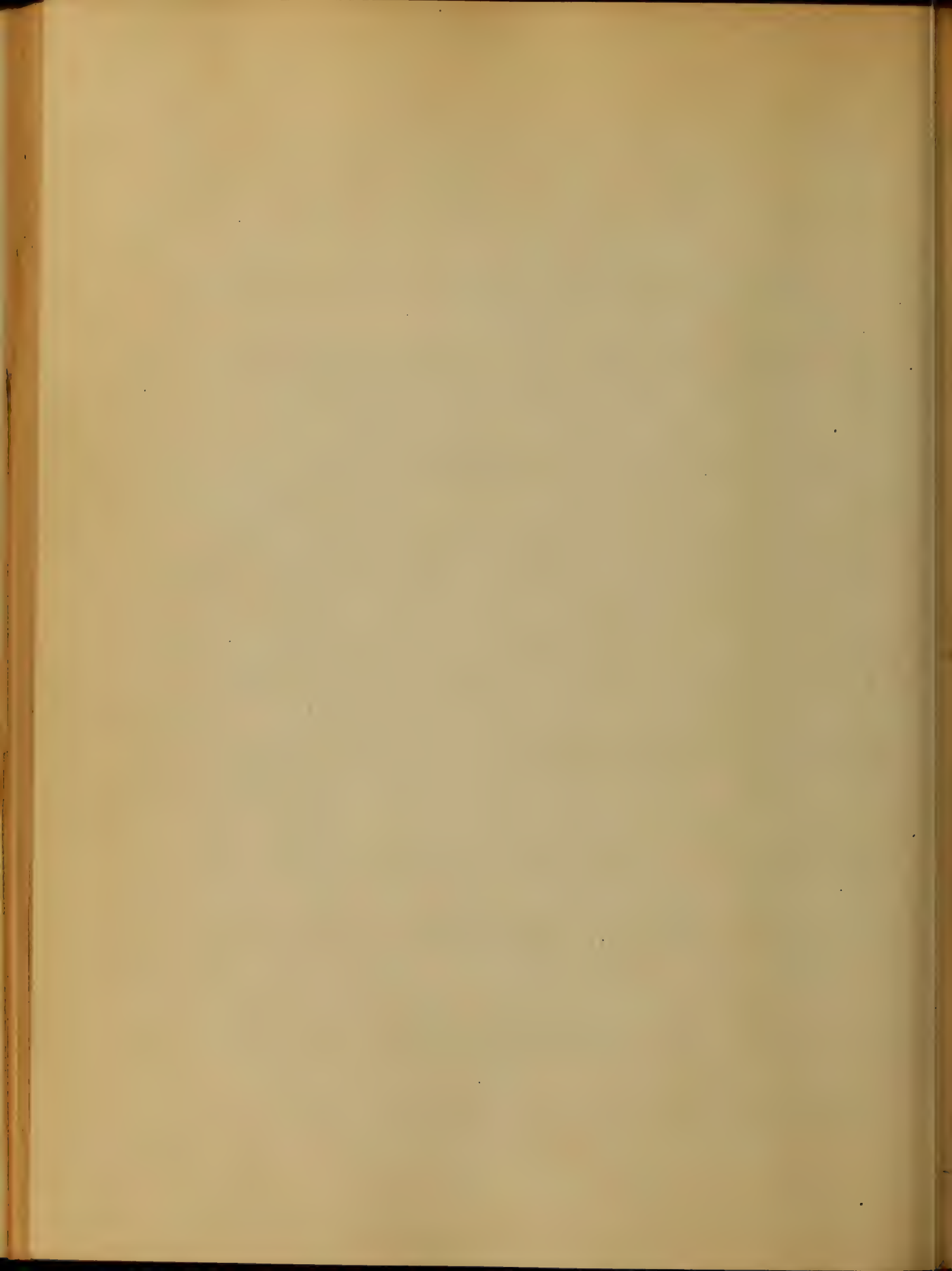


Typhoid Fever.

This is essentially an abdominal affection, dependent upon, or connected with an inflamed or ulcerated condition of the mucous follicles or glands of Peyer, and is perhaps one of the most interesting among the exanthematic diseases. As a disease, it knows no bounds; being confined neither to land nor sea, palace nor prison. Some localities seem to be peculiarly inviting, from the fact, that we see certain regions of country regularly visited by this dire calamity. Facts are gathered at the bedside of the king and subject,



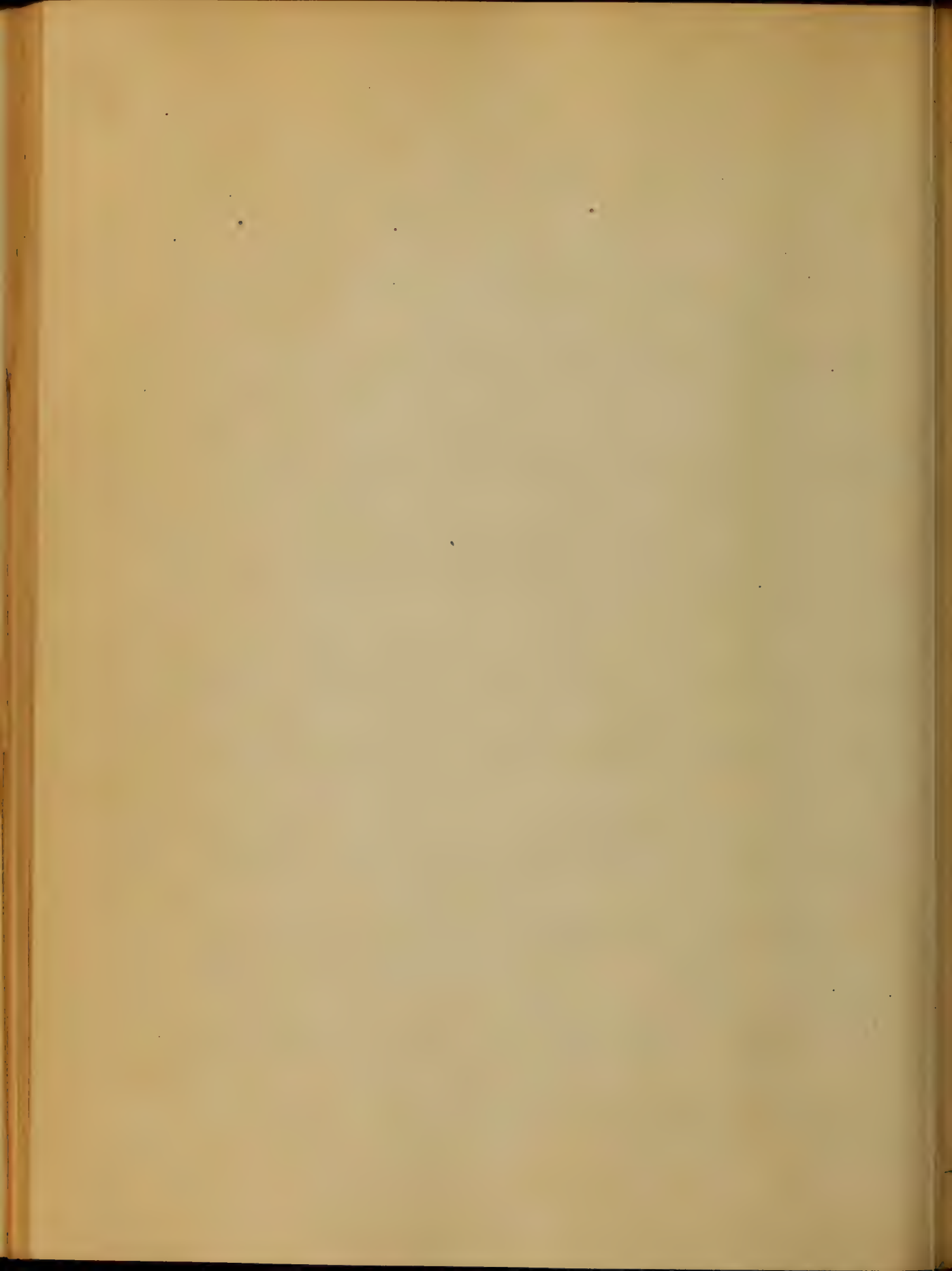
The rich and poor; the inhabitants of the stately mansion, and the lowly hulk; the hoary headed, and the sprightly youth, are all subject to this disease; and afford extensive opportunities for a thorough understanding of its symptoms and course; which is necessary before we can treat the malady successfully. A vast amount of learning has been expended upon the nomenclatures of this disease; we no doubt owe to Louis much of our knowledge as regards anatomical lesions. Some have considered his researches of great value, others think them objectionable. Yet, since it has become so common among all climes, and looked upon as a grave disease, one in which ^{we} may both hope and fear. Let us as students improve ourselves by imitating the examples set before



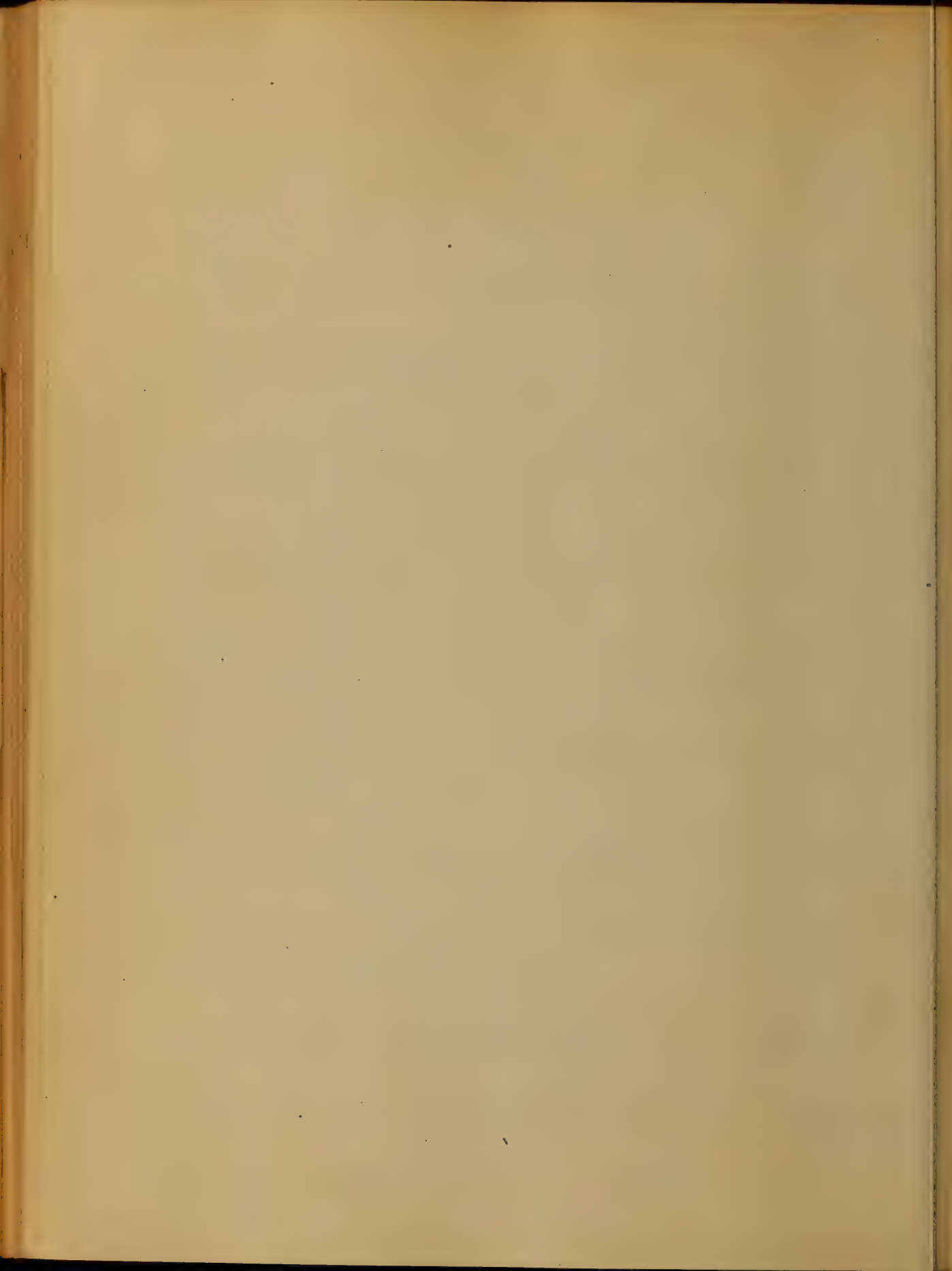
us by our worthy professors. The disease will probably continue to be called Typhoid fever; let it be that, or Enteric fever we must without preference, or choice of names endeavor to be able to recognize it in all its forms, which are clasped as follows:

- First, Simple or mild.
- Second, The Intermediate.
- Third, The Malignant.

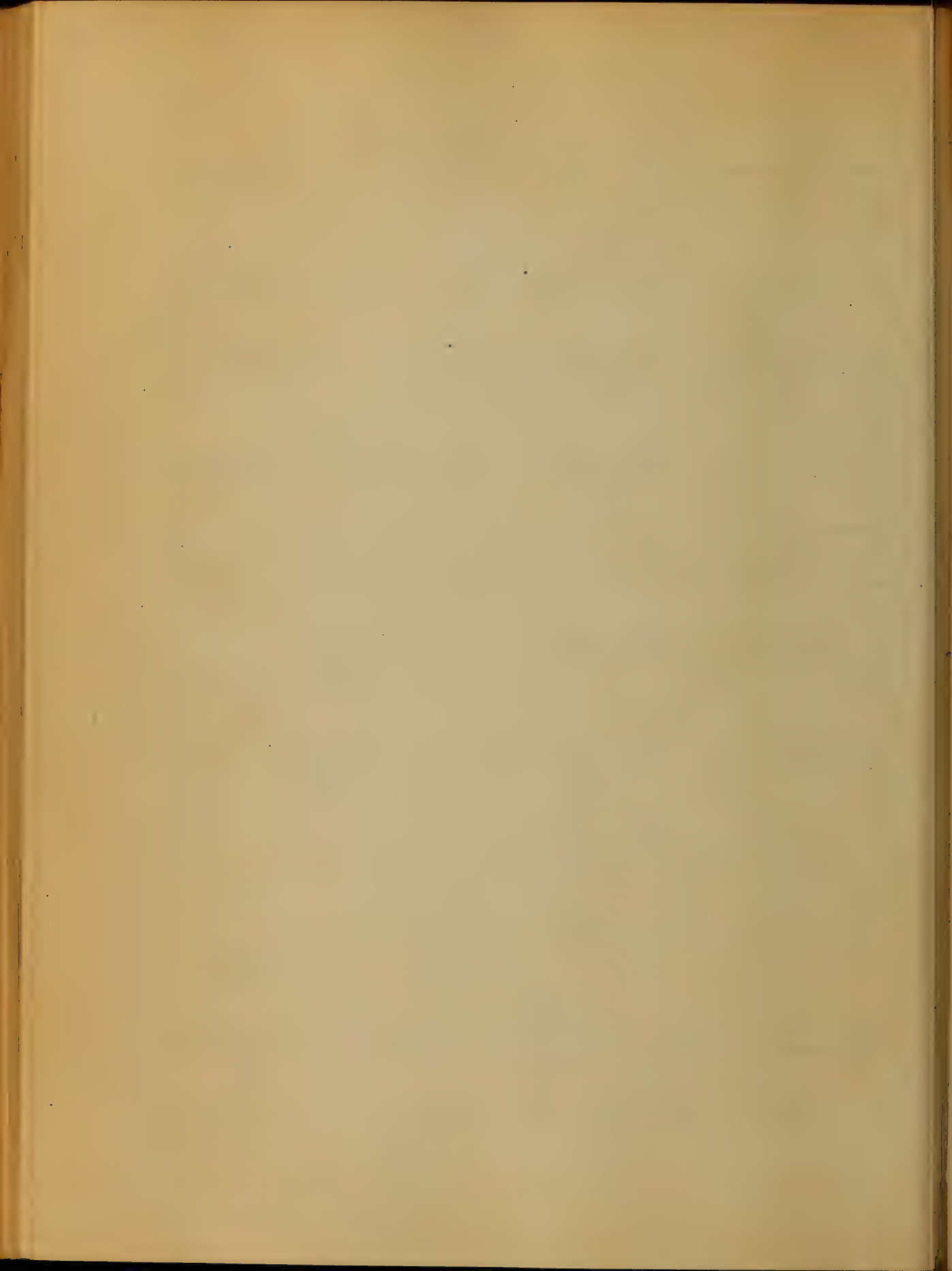
We find it difficult to draw a line of separation between the several forms just mentioned, so very gradual is the transition from one into the other, that the change is scarcely perceptible. The recognition of this affection may be attended with but little difficulty in a majority of cases, though, its accession is insidious.



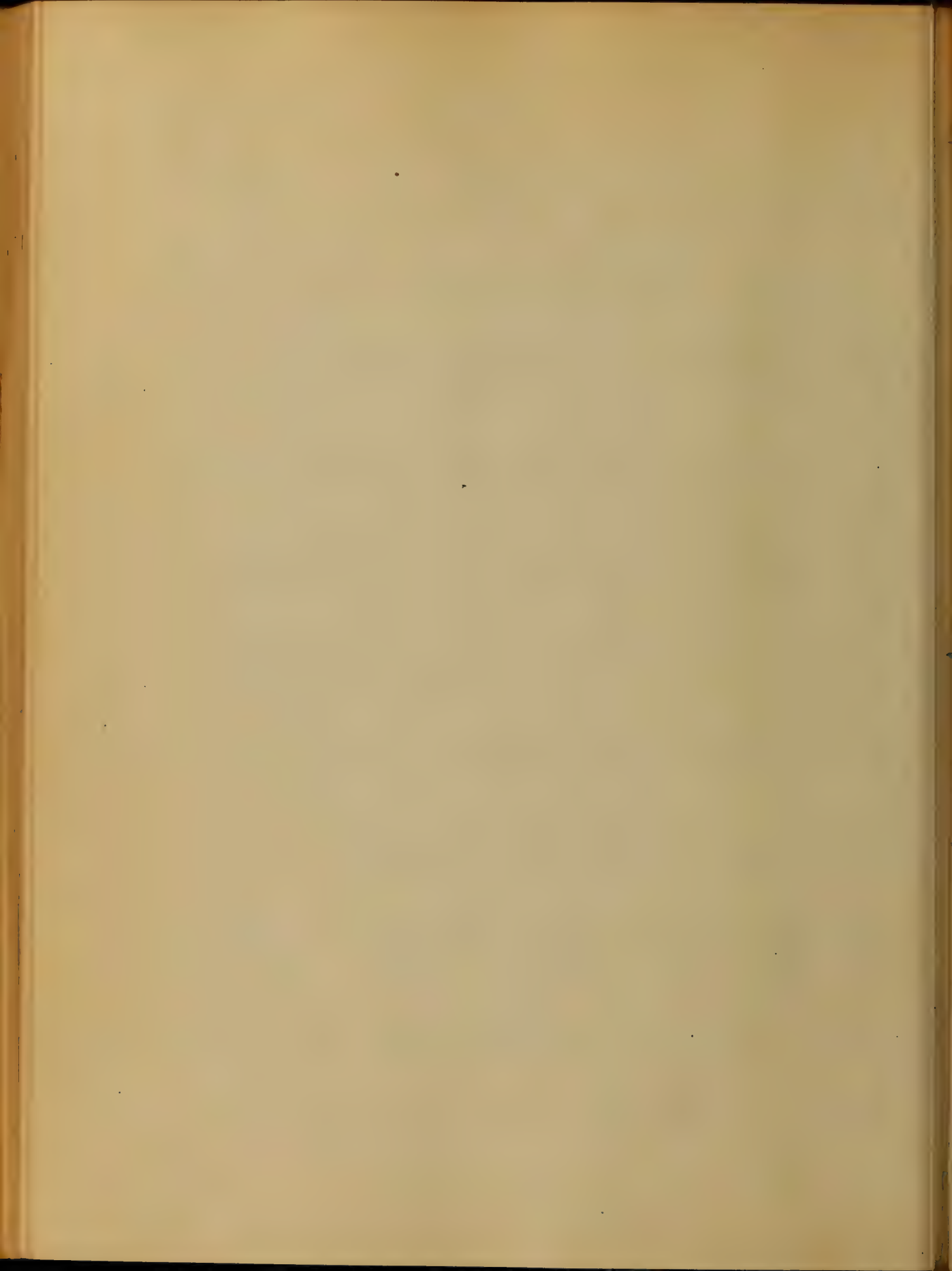
Symptoms - These are also very diverse, but, we shall confine ourselves to a statement of the general signs without dealing in specialities. The onset in some cases is sudden, without any premonition whatever; in others, there is a period of incubation, varying from ten to fourteen days. The disorder comes on slowly and insidiously with languor, in a day or two, the patient is often attacked with chills and headache, which last is a very common symptom. Sharp pain in the limbs, weakness with tendency to diarrhoea, - face languid, and pale - The appetite is generally greatly impaired - The pulse rises to 120 per minute, and even higher - breath offensive, tongue dry and brown, or red and glazed. The symptoms of special diagnostic



importance are looseness of the bowels and epistaxis, at the commencement of the second week, or a day or two earlier. The typhoid rash is one of the most characteristic symptoms of Typhoid fever. This consists of small rose colored lenticular spots, (taches roses) usually roundish, and about a line in diameter, though sometimes larger: These disappear on pressure, but return upon the removal thereof. They are never seen at the commencement of the disease, but usually make their appearance between the seventh and fifteenth days; not infrequently later, and sometimes not until near the close. They occur first, and most numerous on the abdomen, extending to the breast and occasionally to the extremities, and even to the



back and face, though rare at the points
last mentioned. I have seen them plainly
developed on the upper and inner portions
of the thighs on a patient whose my pre-
ceptor was attending. Their number is not
by any means the same, for we find some-
times only two or three, and then again we
find them almost countless. The period of
the eruption is from three to fifteen days.
Delirium - This is not a constant symptom
of the simple or mild form, though its oc-
currence on waking from sleep or during
the night is not at all uncommon - I
beg leave to mention before leaving the subject
this fact - that in several cases witnessed
by me during the summer the mind always
acted correctly when drawn to any particular

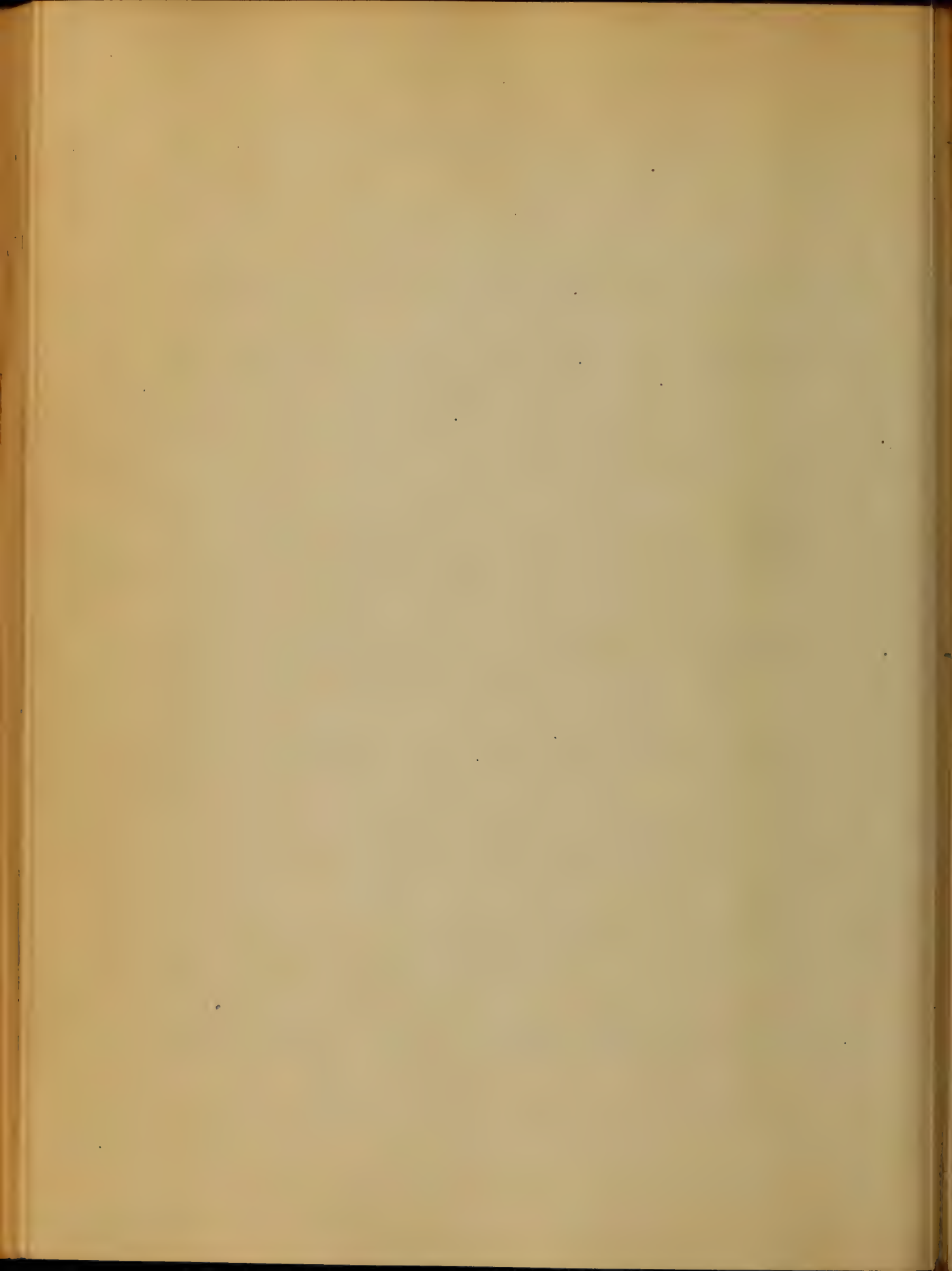


person or subject.

Tympanites— This is a swelling of the belly, which comes on towards the end of the first week, and continues until the beginning of Convalescence, or the termination of the disease in death.

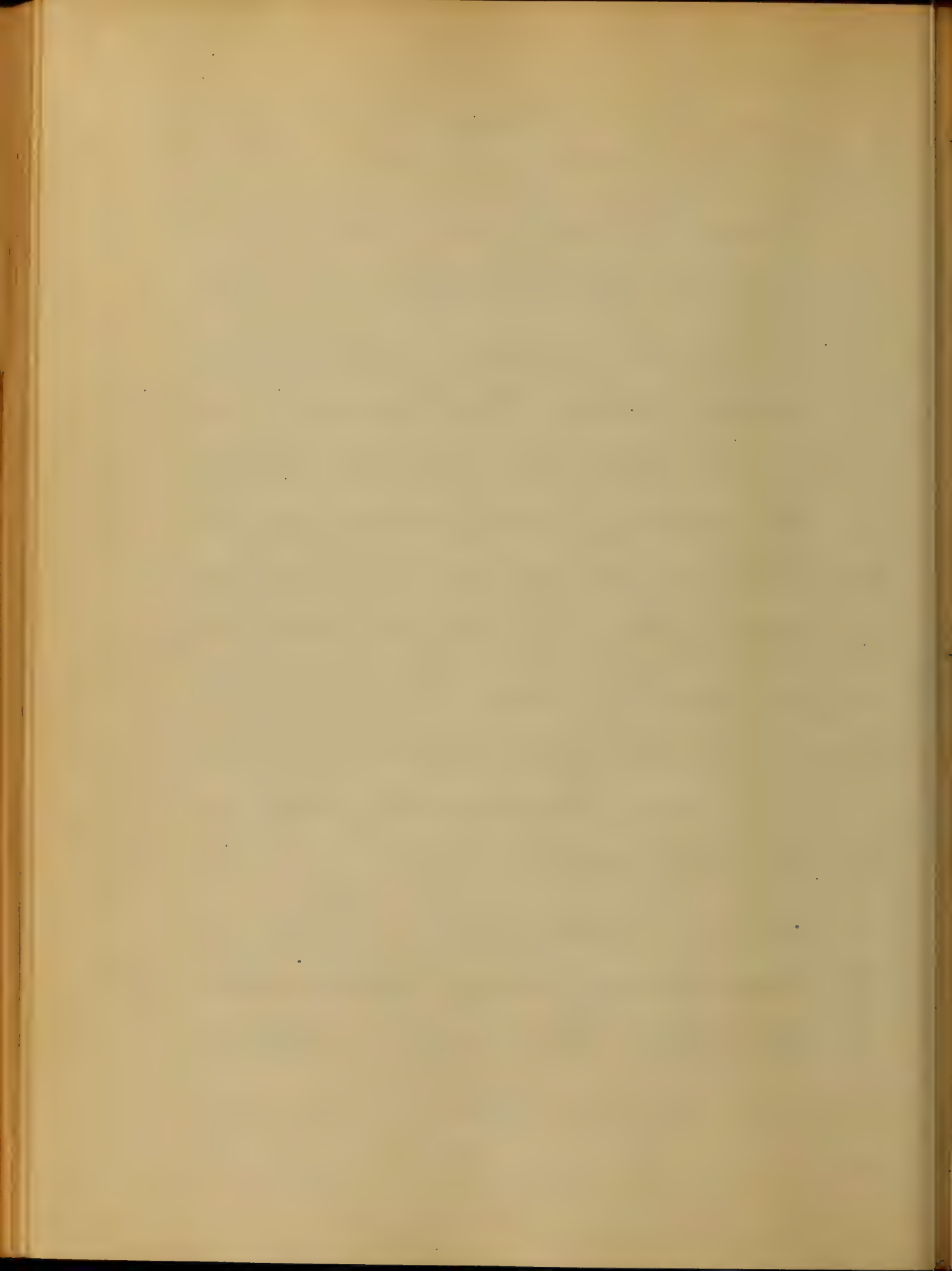
Tenderness or pressure in the right iliac region, with purging under the hand, generally exist.

Anatomical lesions— as regards this from my own observation, a description can not be given. The parts characteristically affected in Typhoid fever are the agminated glands or patches of Peyer, the mesenteric glands and the spleen. Observers have shown that the glands of Peyer become thickened, red and elevated from one to three times above the membrane around them. After this



a sort of induration or softening occurs. Later ulceration may effect many though not all of the altered glands, and this process may go on until it perforates all the coats of intestines. This however is exceptional. The other glands of the intestines (i.e. the solitary closed glands and the mesenteric glands) are commonly enlarged and often softened or ulcerated, occasionally suppurating. The spleen in almost all cases is more or less enlarged and softened; in some instances it is four or five times its normal size.

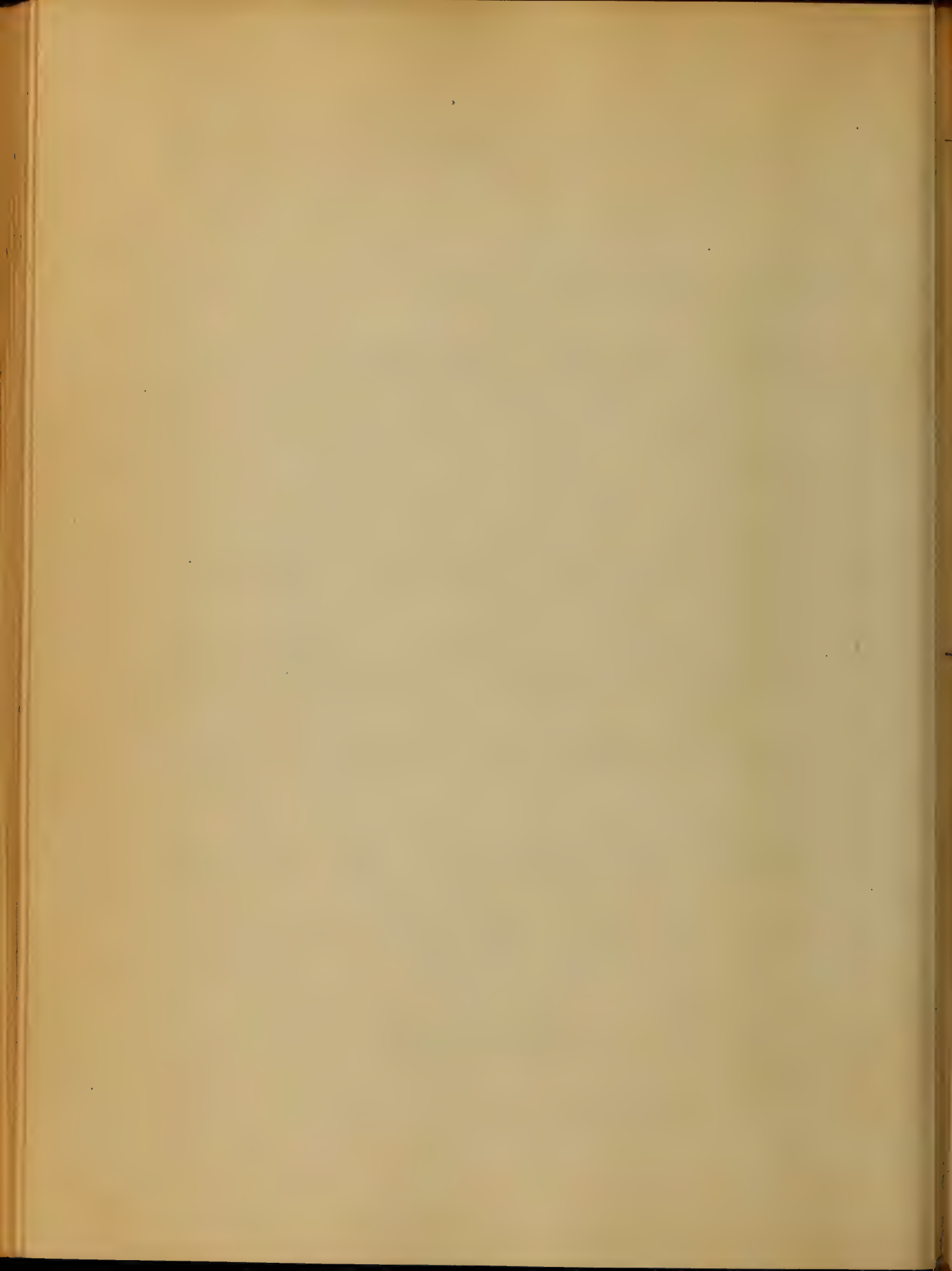
Causes — The precise cause is unknown. The circumstances favoring its production are diversified. It is certainly often generated in situations where human beings



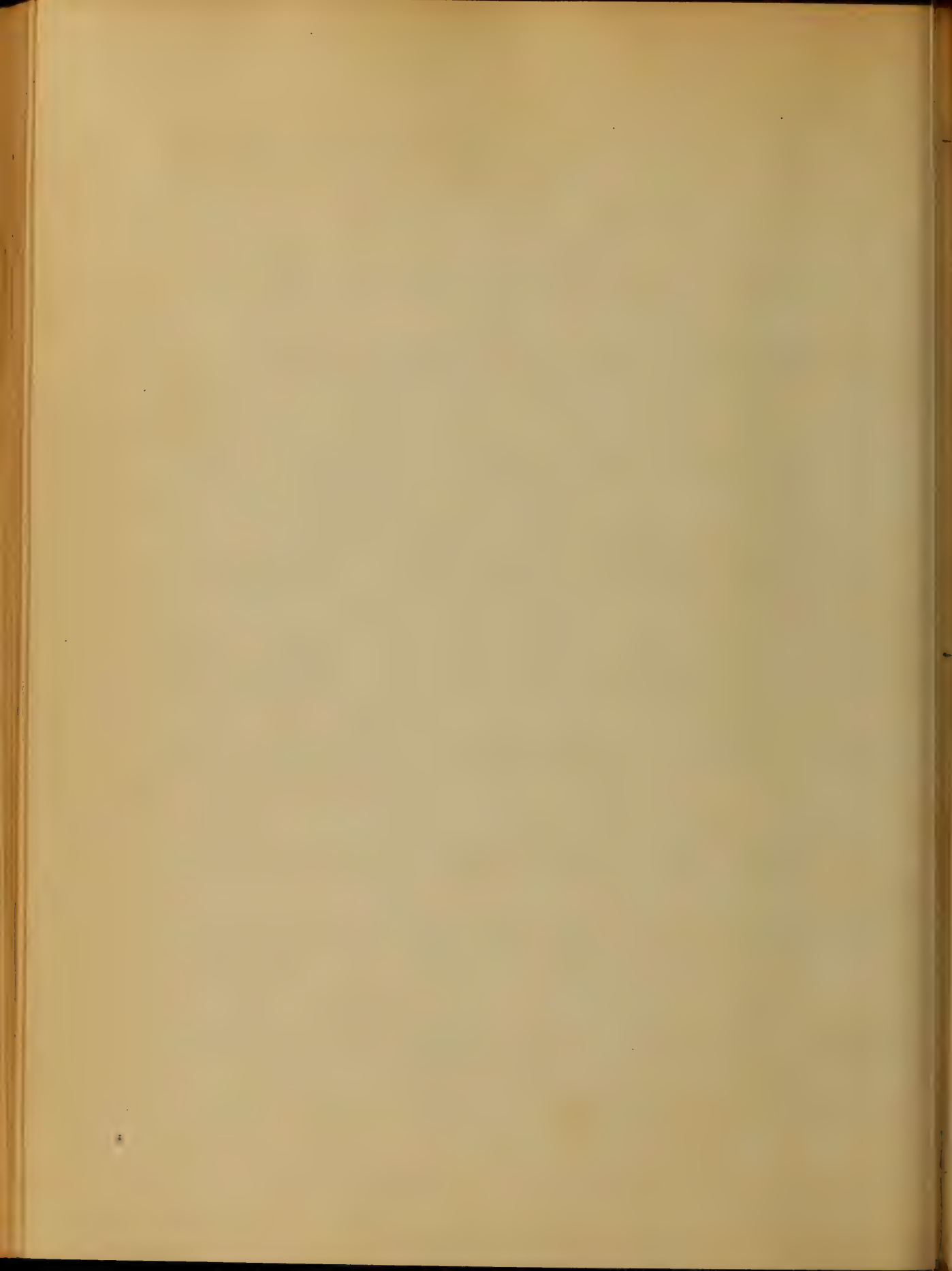
are crowded together with insufficient or unwholesome food and a confined vitiated air. In some sections it seems to be governed by the seasons, becoming most prevalent during the autumnal and winter months.

Contagion— on this point we have among professional men diversities of opinion— one contending it is contagious another denying it altogether. We are forced to the opinion, if contagious at all, only feebly so, and under peculiar circumstances.

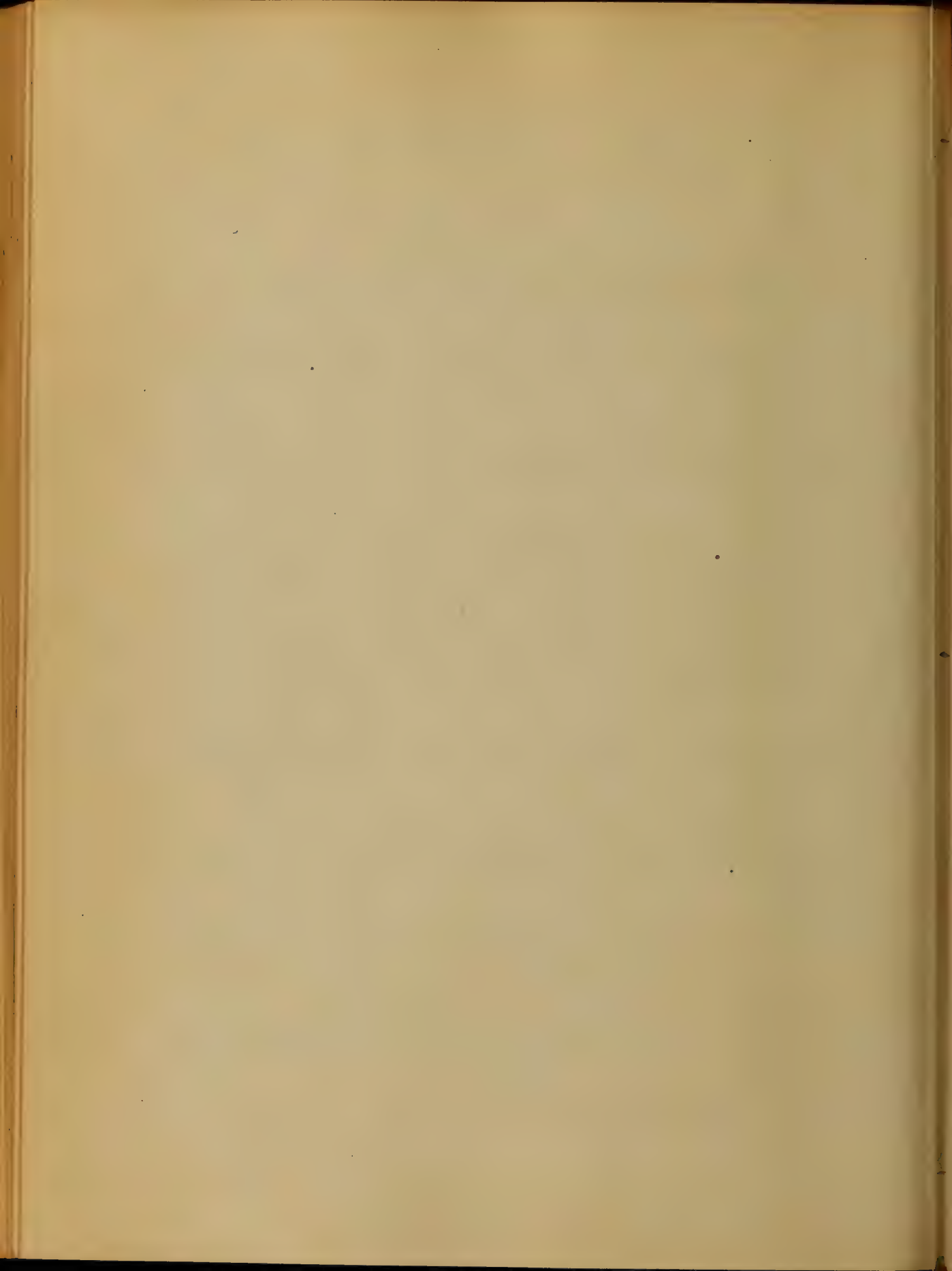
Duration— this is modified by circumstances, the average duration being from twenty to thirty days, though cases of unusual persistency continue for six or seven weeks, and some cases extend a longer period.



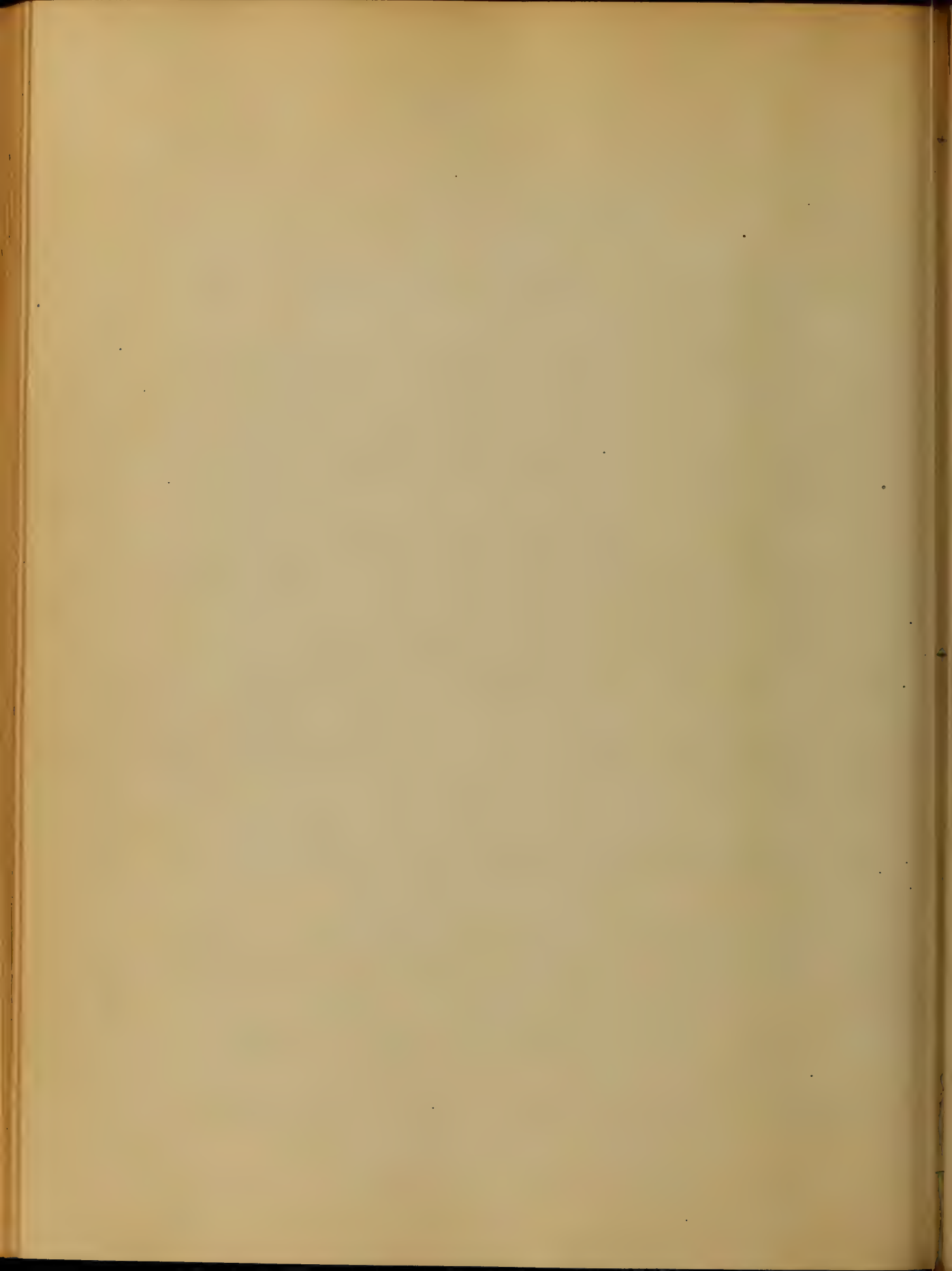
Complications—That Typhoid fever is occasionally complicated with other diseases will not admit of any doubt. The earliest complications are bilious remittent fever and acute pneumonia, pleuritis, is sometimes met with in connection with this disease. At a late stage of the disease hemorrhage from the bowels in fatal cases ensues. Peritonitis follows always when a perforation of the ileum takes place. This is a fearful accidental inflammation occurring sometimes when least expected. It is useless for me to mention the signs indicative of its occurrence, as it is rare that there can be any difficulty in ascertaining its existence, notwithstanding like the fever itself it is to a certain extent latent.



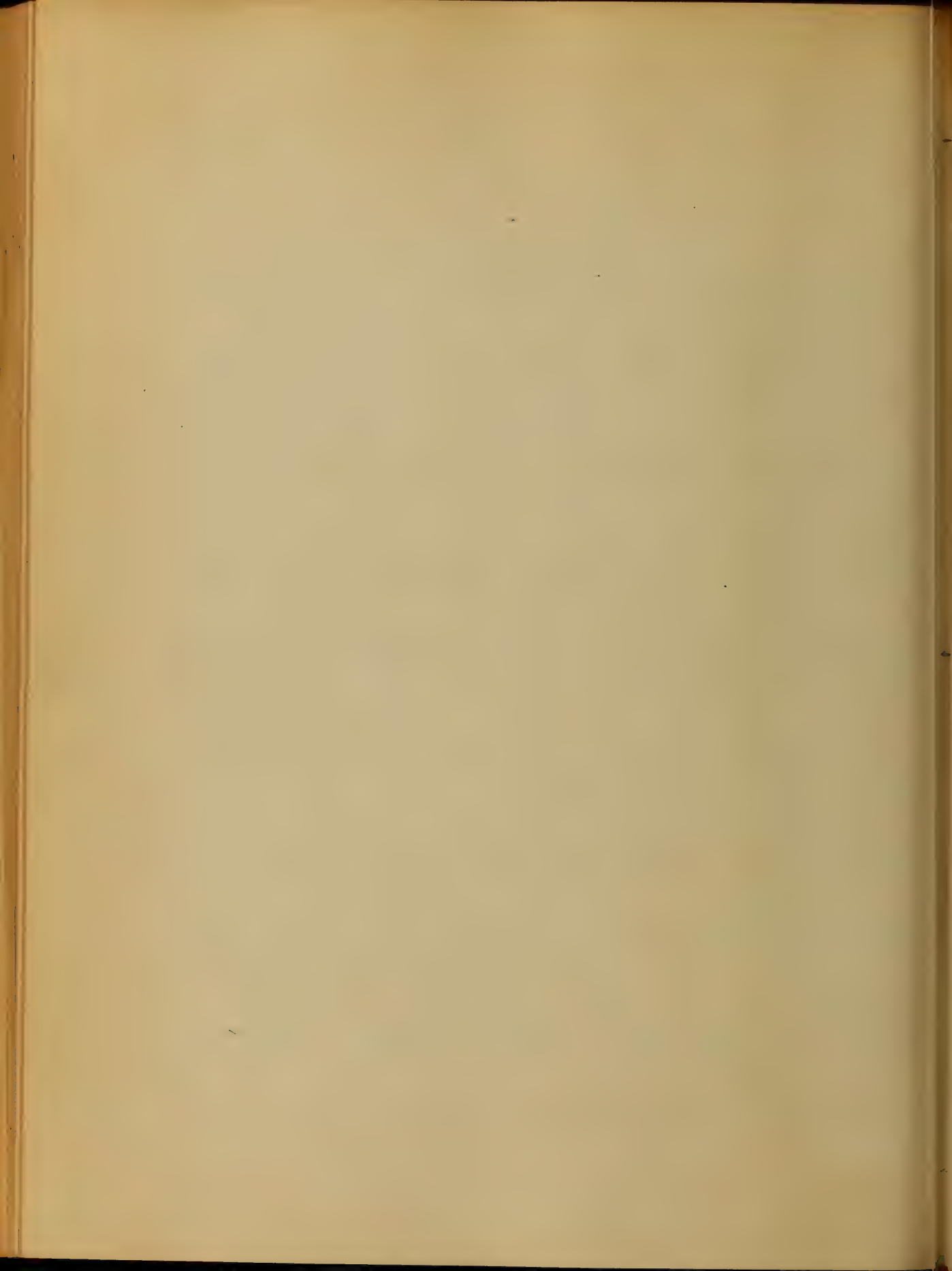
Diagnosis— mention has been made of some of the most characteristic symptoms. The continuance of fever with an evening exacerbation of febrile heat, tympanitic, bronchial rales, rose colored eruption, and a tendency to diarrhoea, all add to the positive conclusion as to the true character of the disease. There are other symptoms of the disease superadded in the intermediate stage, such as dry tongue with a brown stripe down its middle, slight collection of serous about the lips, gums and teeth, twitching of the tendons, deafness, delirium, &c. The young and inexperienced physician may find some difficulty in making a correct diagnosis though a strict attention to the symptoms will ensure success.



Prognosis — It is not an easy matter to arrive at any positive result of the variable influences, which operate in its production, march, or termination. A favorable prognosis in any case can rarely be pronounced with absolute certainty. No case however mild it may seem is free from danger. No case should be looked upon as absolutely desperate. There is no condition so low, no symptom so fatal that life should be considered hopeless. The most desperate state is probably that connected with intestinal perforation. The possibility of a perforation of the bowels by the ulceration of Peyer's glands gives an element of uncertainty to every case. Probably one death in twenty cases represents the mortality.



Treatment — It is a question of great importance to say how far it is needful for us to interfere in the management of Typhoid fever. Too much may be, and often is done. The success in the management of the disease is attributable to great care being taken of the patient, and the medicine given, should be well timed. To know how, and when, to interfere, constitutes the successful practice; to act with deliberation is the golden rule. It should be recollected the fever cannot be cut short by any plan of treatment, though we may do much to think to moderate the violence of the disease, and avert in many cases a fatal termination. By close watching on our part we may be able to do our patients much good.

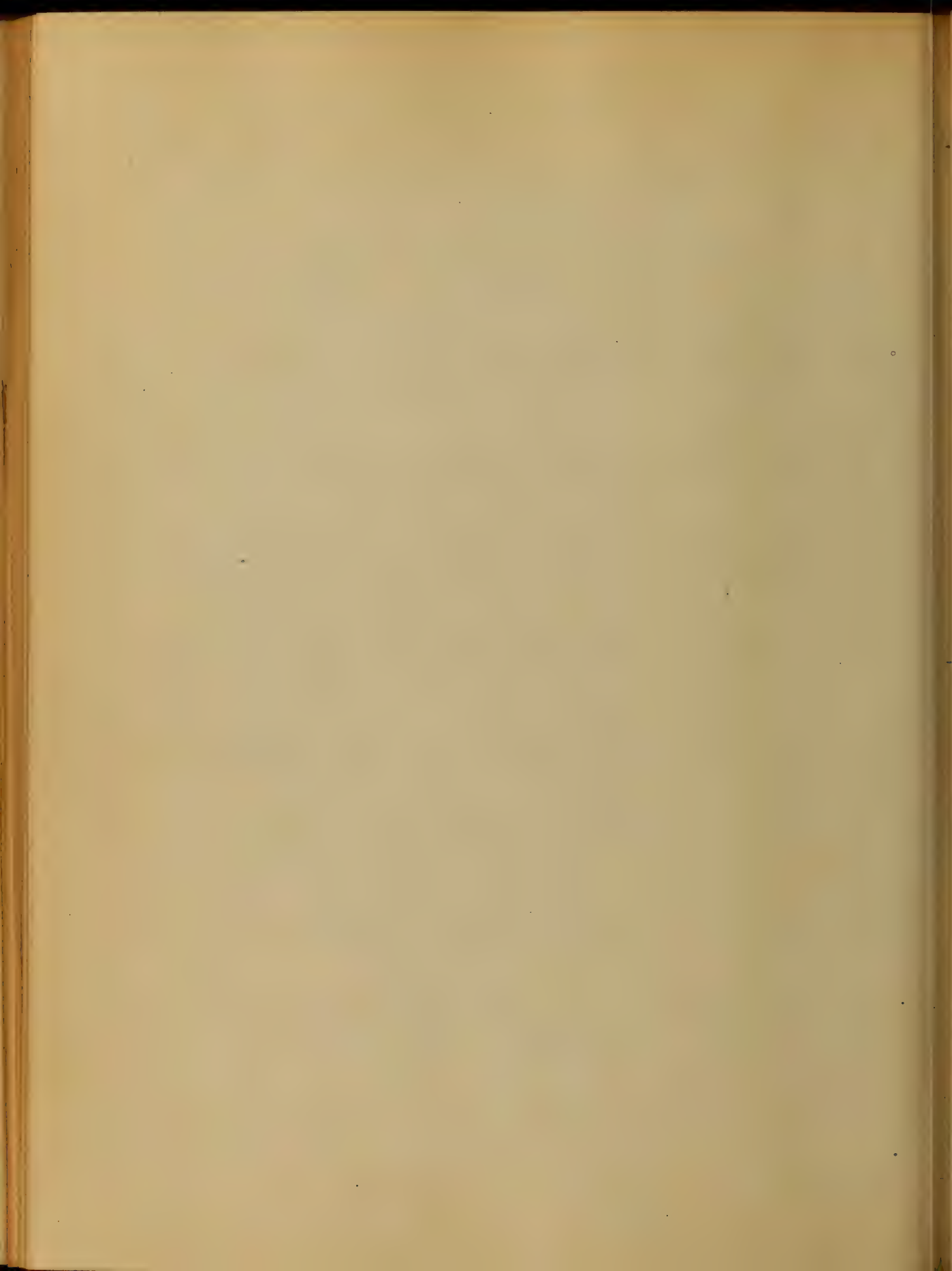


Condition of the system, State of the disease,
Age, sex, habit, and tendency to complication,
all demand constant attention, without which,
no hope can be entertained of a successful
treatment.

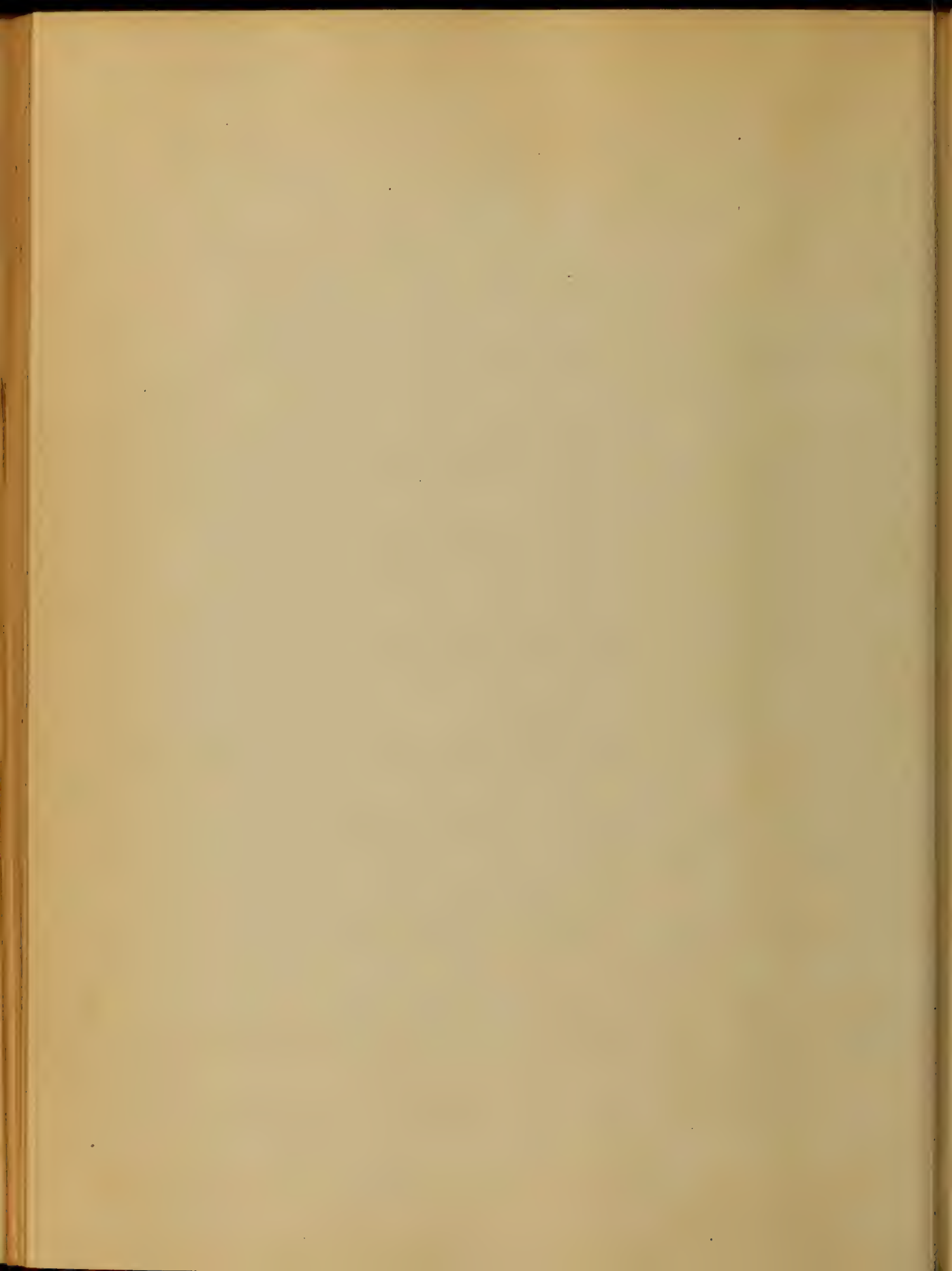
Therapeutic Agents—these means are
various; each plan of treatment has its
advocates; the plan of treatment consists
more in the period at which certain rem-
edies should be given, than in their choice.

In speaking of them severally Emetics
seem to come first in order, and by many
practitioners are considered of eminent ser-
vice in the beginning of the disease.

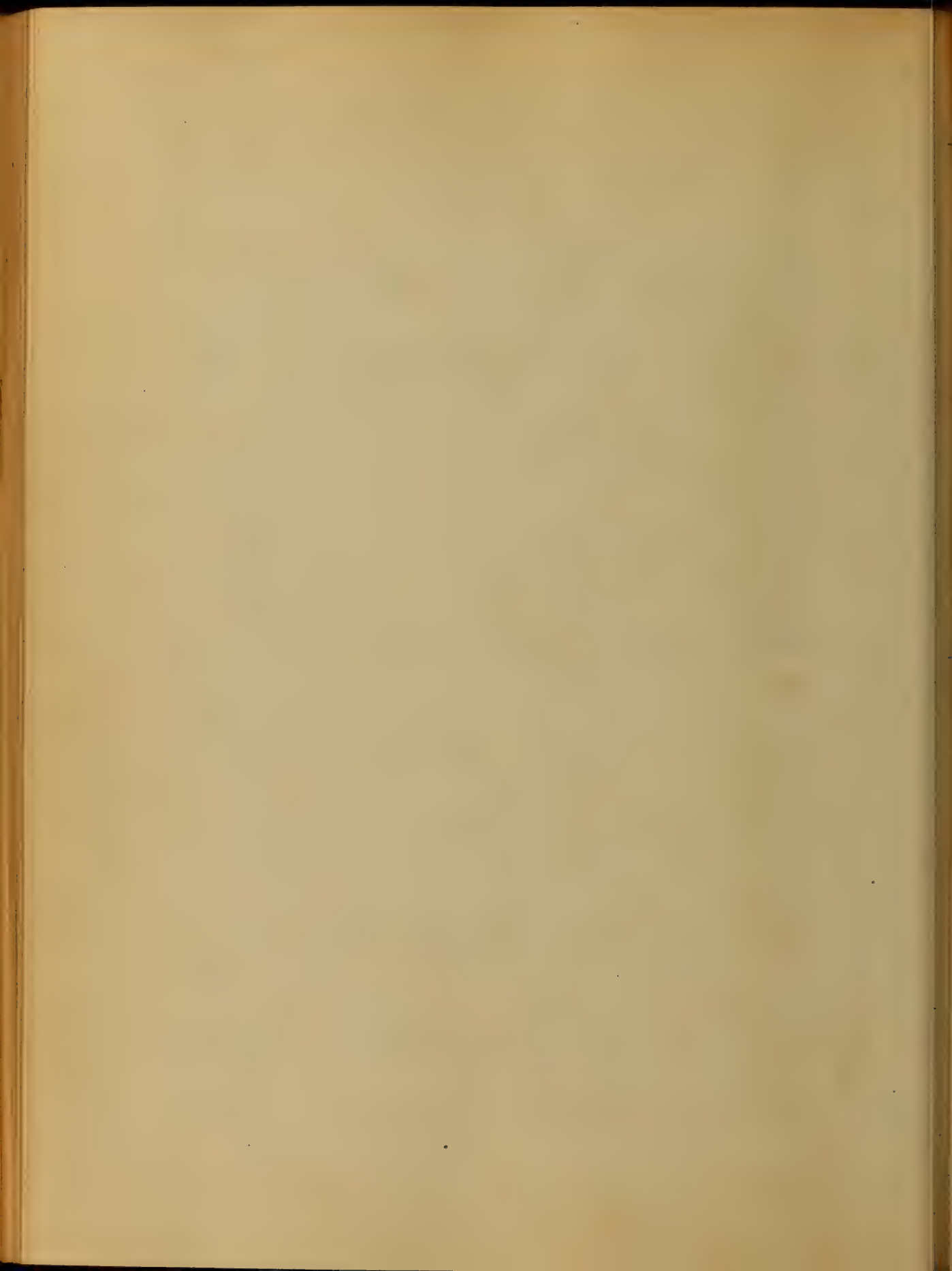
An Emetic cathartic to produce a complete
evacuation of the bowels may be given in
the absence of a tendency to diarrhoea.



After which, the body and bed linen should be made an object of special attention, as too much care cannot be paid to this, as cleanliness will aid us materially. Throughout the progress of the disease it is generally thought best that the bowels should^{be} moved once or twice in the course of twenty four hours; should this not occur, mild laxatives may be administered, such as Castor oil, a single dose of Seidlitz-powder, one or two drachms of Epsom-salts, or a half drachm Magnesia; either of them may be given, and repeated if necessary. The morning is the best time for administering these agents in order that their effects may be accomplished before night, as a restless night should be avoided if possible.



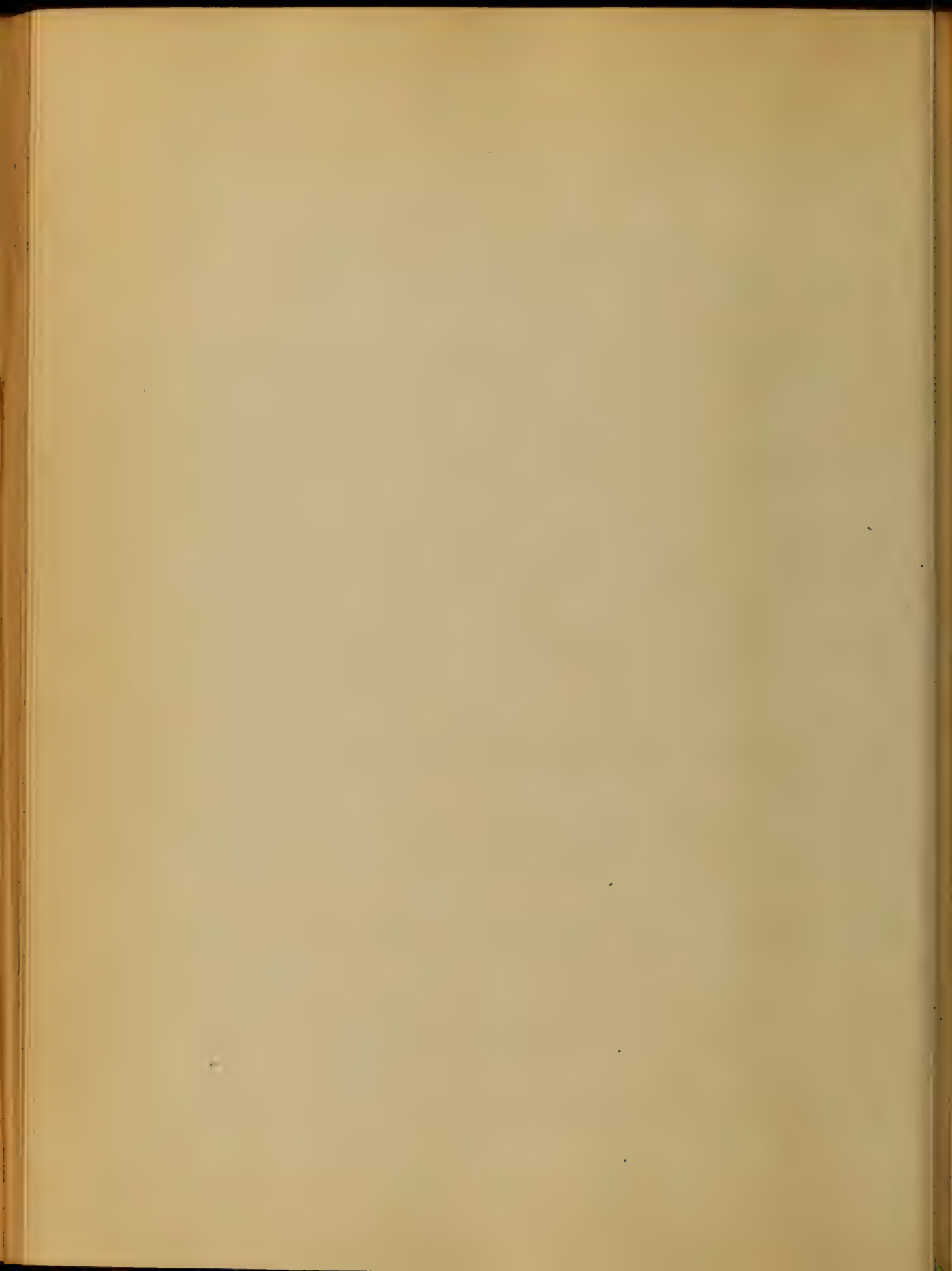
Blood letting—bleeding will not arrest
the disease, if carried too far, or improp-
erly employed, may so prostrate the sys-
tem as to cause it ultimately to sink
under the maledy. The main use of
bleeding, says Wood, is to prevent local
and disorganizing inflammation. The
local abstraction of blood may be of
great service, especially, for the rem-
oval or abatement of epistaxis or
abdominal pains. Diaphoretics—
These agents are used to bring about a relax-
ation of the surface, a reduction of febrile
heat &c. Of these, spiritus Mindereri,
sweet spts. Nitre, the neutral mixture or
effervescent draught is most generally cho-
sen, and administered every 4 or 5. Three



hours during the day, when the skin is hot and dry clovers powder at night to induce moisture and procure rest.

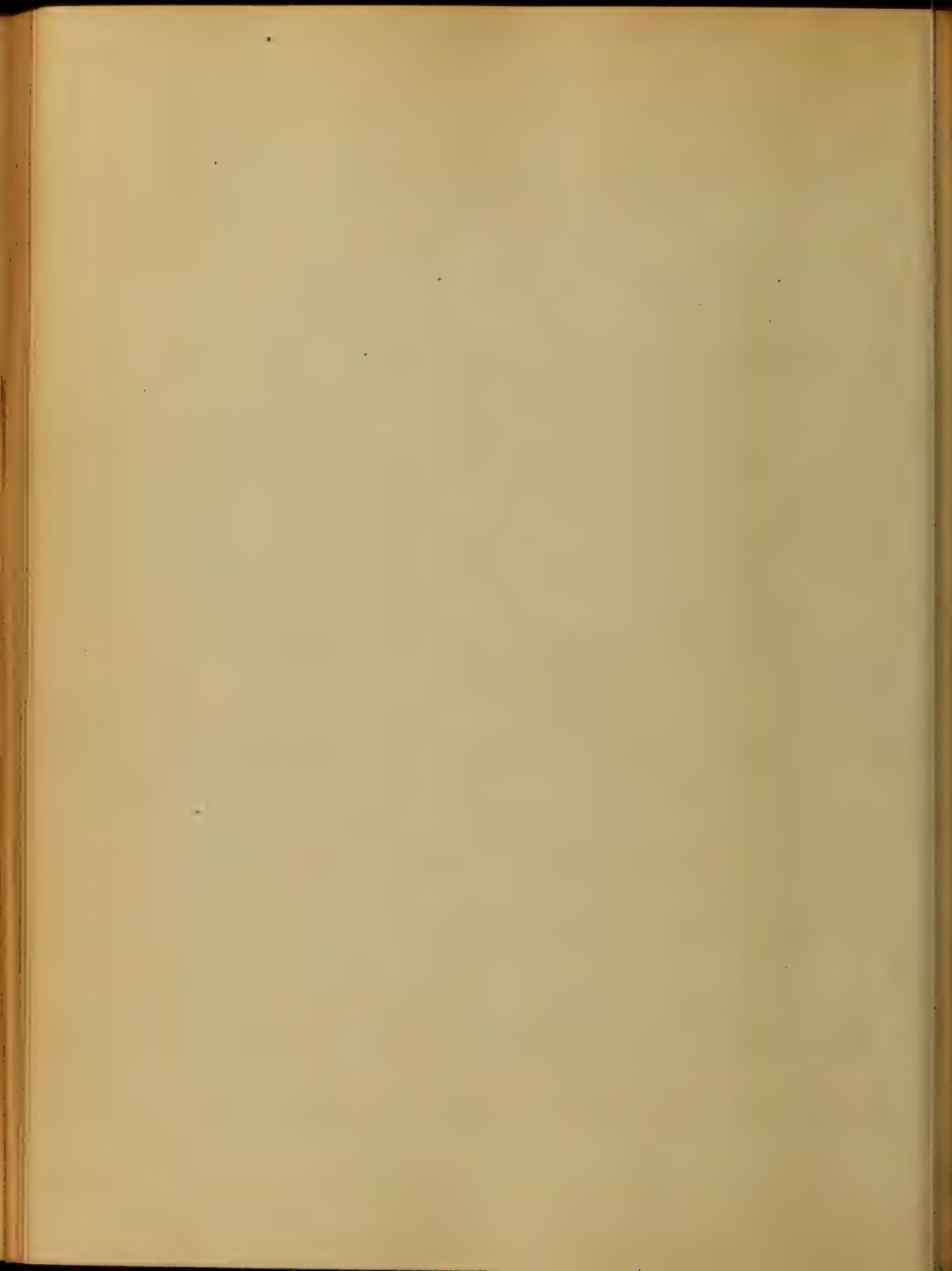
Veratrum Viride - this article has some advocates, and some opposers; it is employed to control the heart's action, the dose is from four to five drops, increasing the quantity by one or two drops until a dose of ten drops is reached, when its effects should be displayed. Astringents -

are of great importance especially when hemorrhage from the bowels occur. Opium and the Sugar of lead are considered the means for its arrest taken in conjunction to prevent the rectum from becoming converted into the Curb of lead. Precipitate is employed to arrest hemorrhage from the gums and nostrils.

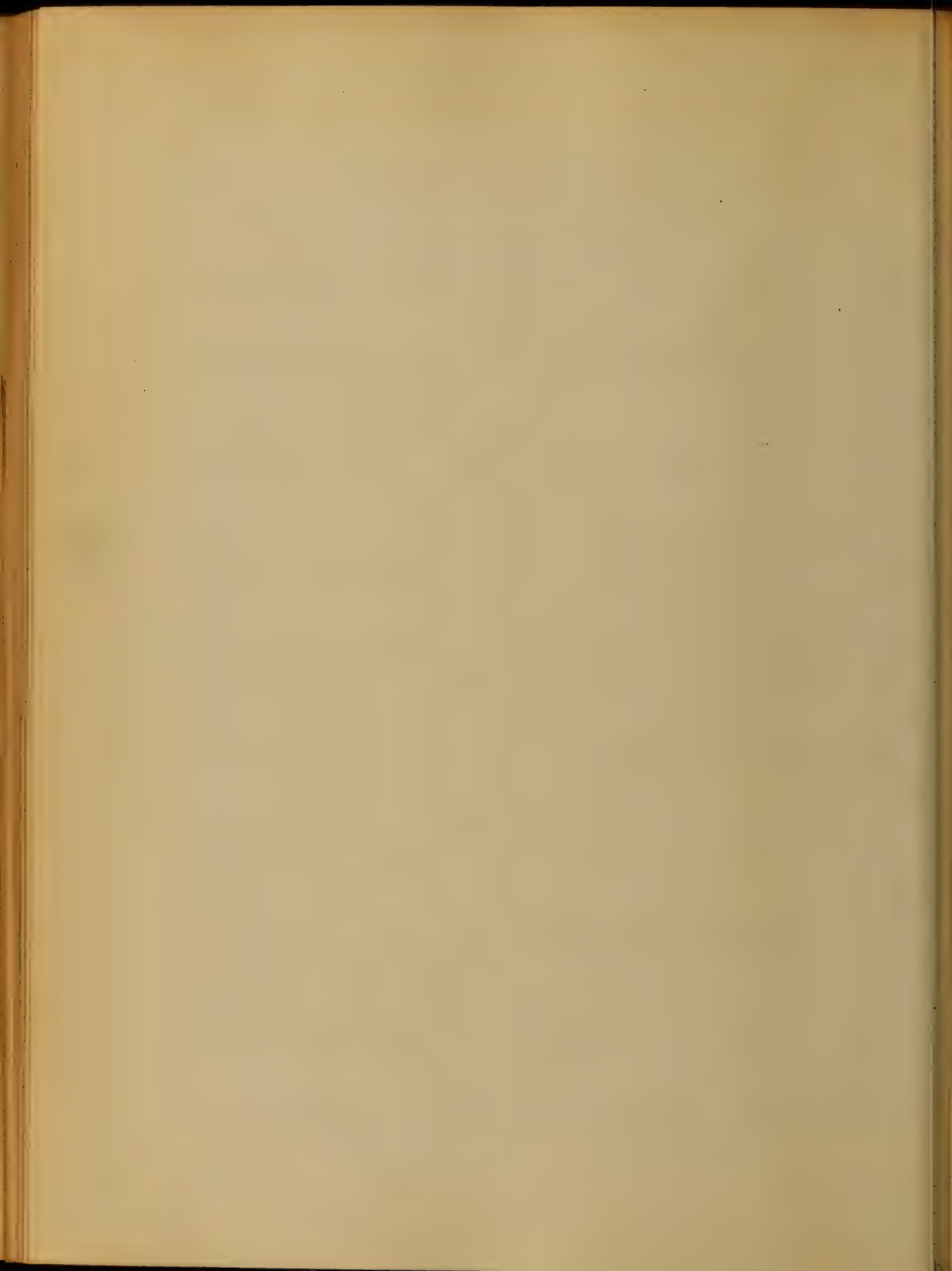


Fomentations - the ordinary application may be used, they should be applied as warm as can be borne by the patient; in many cases much good may result from their employment. Oil of turpentine - this a gem as a remedy - when best^{ly} employ. it is of great importance. According to the testimony of Wood, the occurrence of the dry state of the tongue is the signal for its use; given in dose from ten to fifteen drops every two hours.

Tonics and stimulents - in the employment of these agents great discrimination is often requisite. If the pulse be soft and compressible skin cool and moist strength considerably prostrated the indication for stimulents are pretty sure made out. When under the use of stimulents the pulse

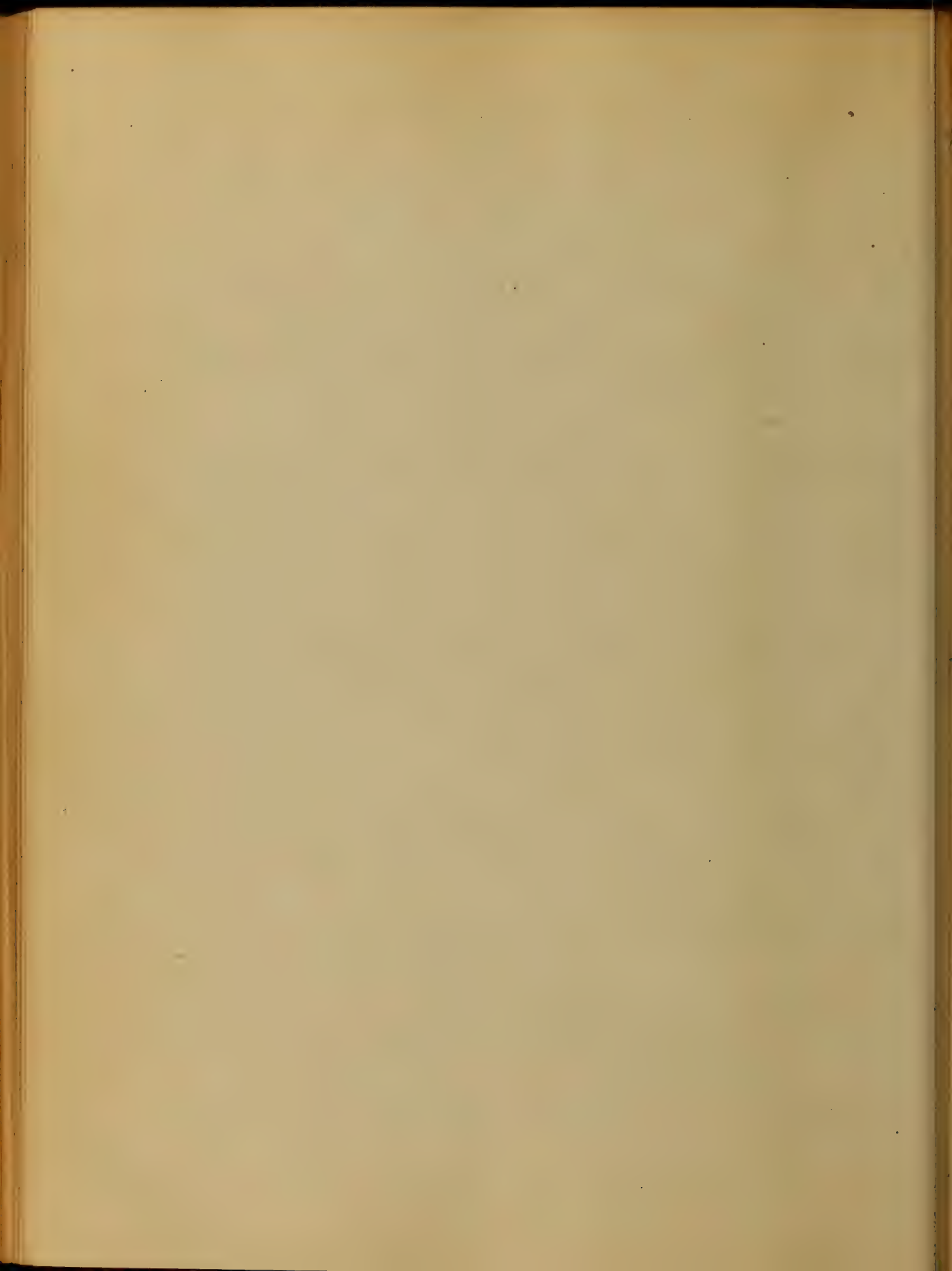


becomes slower and fuller, the skin warmer
and moist, the respiration more slow the
tongue moist and clean, delirium abates,
and sleep follows; the stimulants are doing
good. Quinin - I am satisfied has no
place as a curative of this fever. It is
useful as a tonic, after the critical period of
the passing of the height of the fever; not
more than eight or ten grains in one or two
grains doses, in twenty-four hours. A great
many cases of Typhoid fever require alcohol-
ic stimulants at any stage: about one fourth
of the cases need it before the middle of
the second week, when the fever begins to
decline; many require it first in Wine - they
hold a wine glassful about every three hours.
Later when weaker brandy or whiskey -



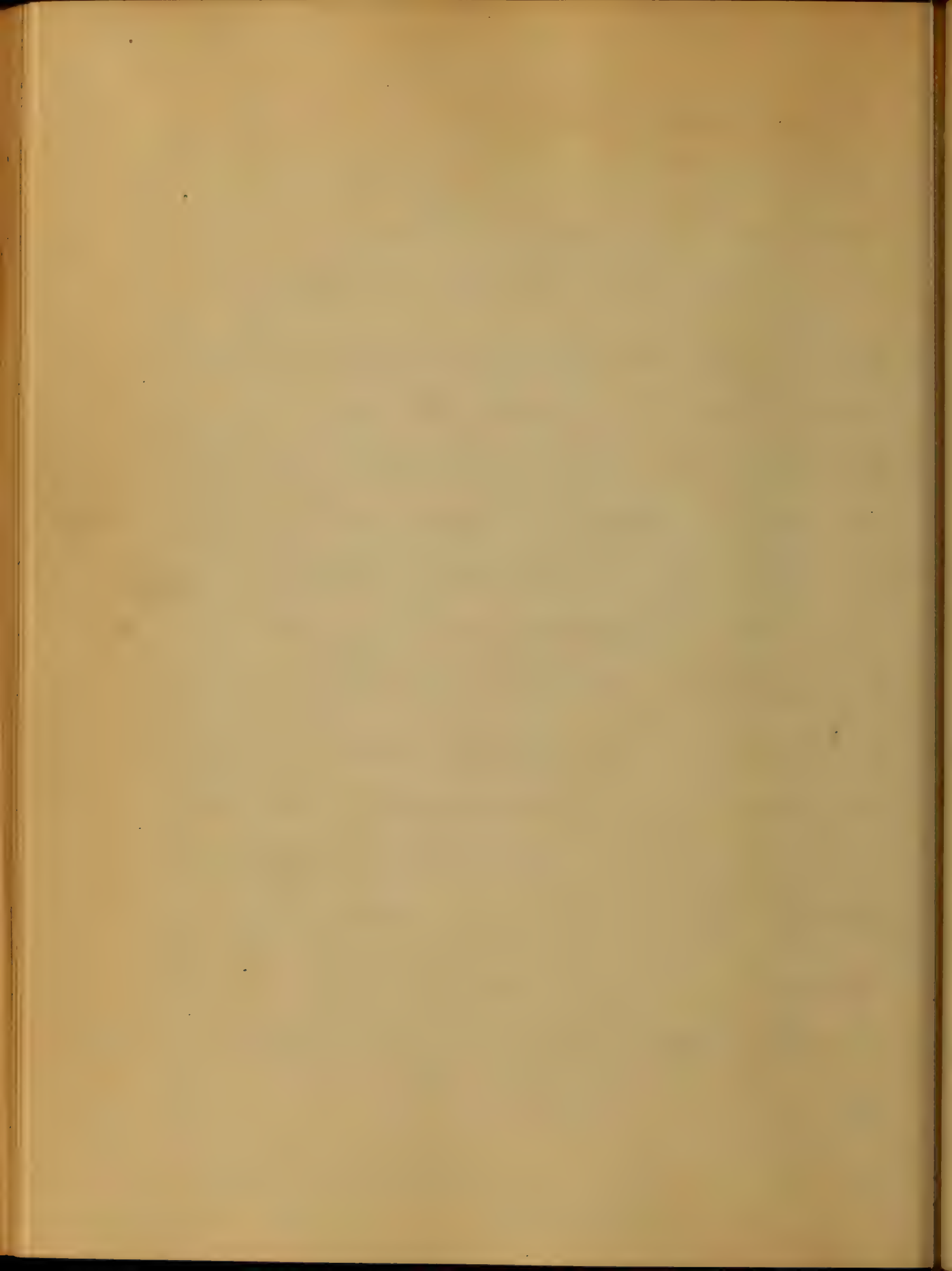
pinch; table-spoonful of brandy with the
same or twice the quantity of milk. Beef-
tea is indispensable in nearly all cases, from
the second week. We find it necessary to
nourish the patient from the commencement
of the disease. During the first week oatmeal-
porridge, toast-water, rice-water &c may be
given; afterwards milk may be added, one
or two table-spoonfuls every two or three or
three hours. This I offer as a treatise of
Typhoid fever.

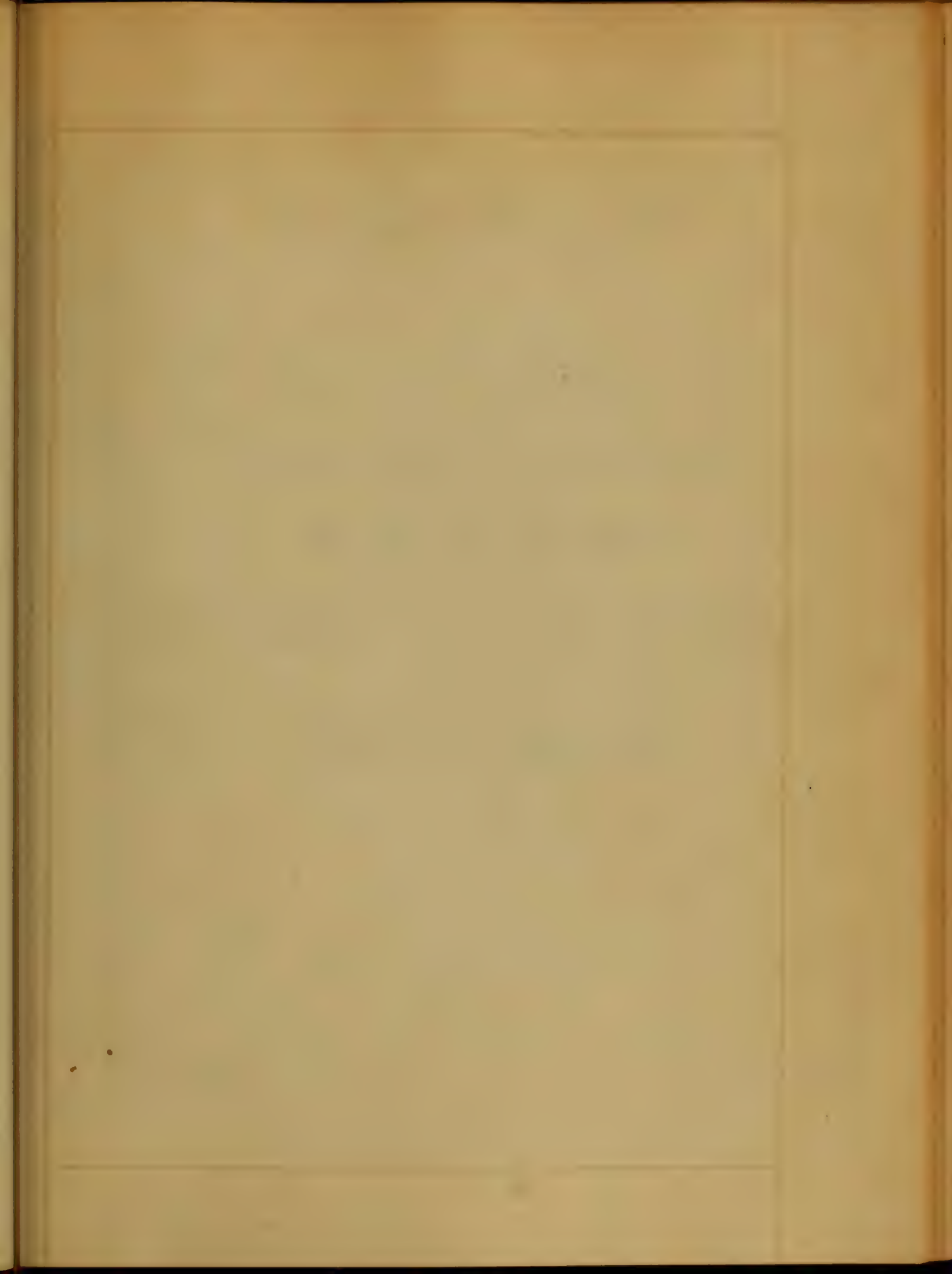
I can not close this essay and do jus-
tice to my feelings without endeavoring
though words are incompetent, to express in
a small degree, my heartfelt thanks to
the Faculty of "Maryland University —
School of Medicine" for their entering

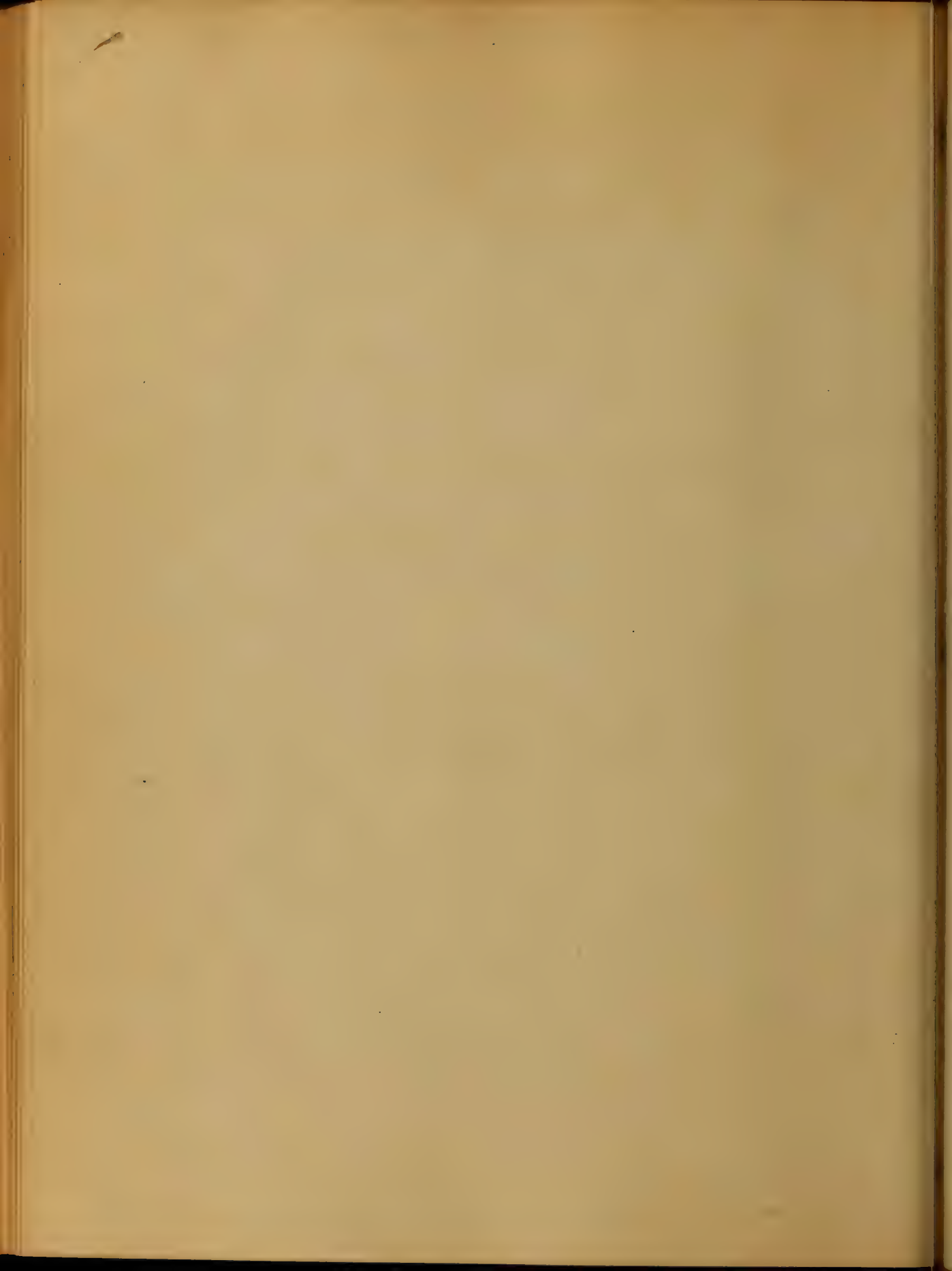


efforts, and never ceasing exertions, to
instill into my youthful breast that de-
gree of knowledge, which hereafter is to
enable me to meet, combat, and repel, the at-
tacks of that foul insidious disease -

Whatever fate may have in store for me:
should I be called to the cold and icy Arc-
tic, or the hot and scorching tropical -
regions; my mind will ever return to the
time when I had the honor to sit under,
and catch the droppings of wisdom as they
fell from the expanded minds of the re-
verend professors composing the Faculty of my
Alma Mater. This week's attempt must
be brought to a close, "Don't stare me with
a critic eye but pass my imperfections
by."







AN
Inaugural Dissertation

ON

Diagnosis of Tuberculosis
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

W. S. Wagner
of

Maryland.

Session of

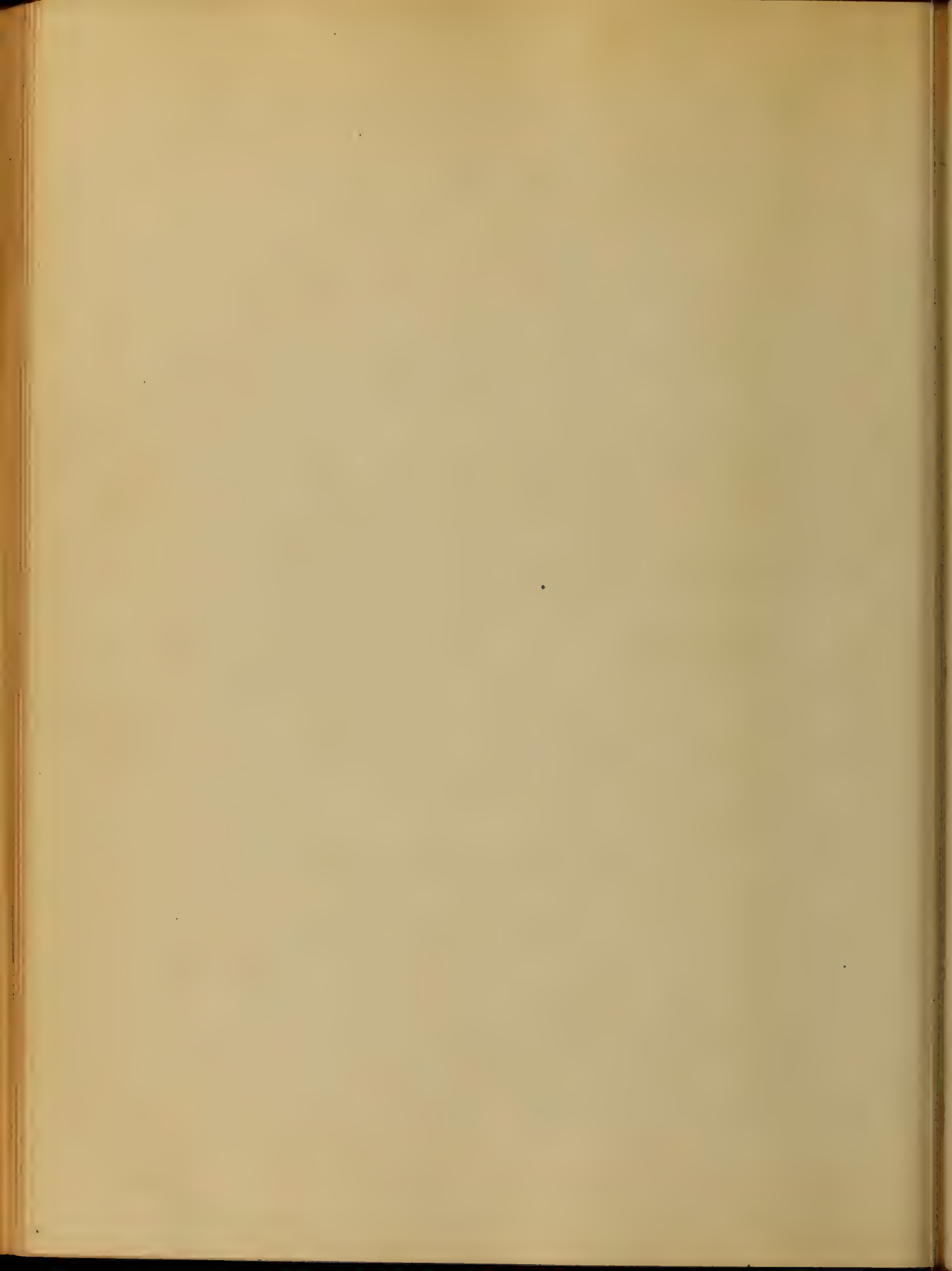
(1863-64)

1863

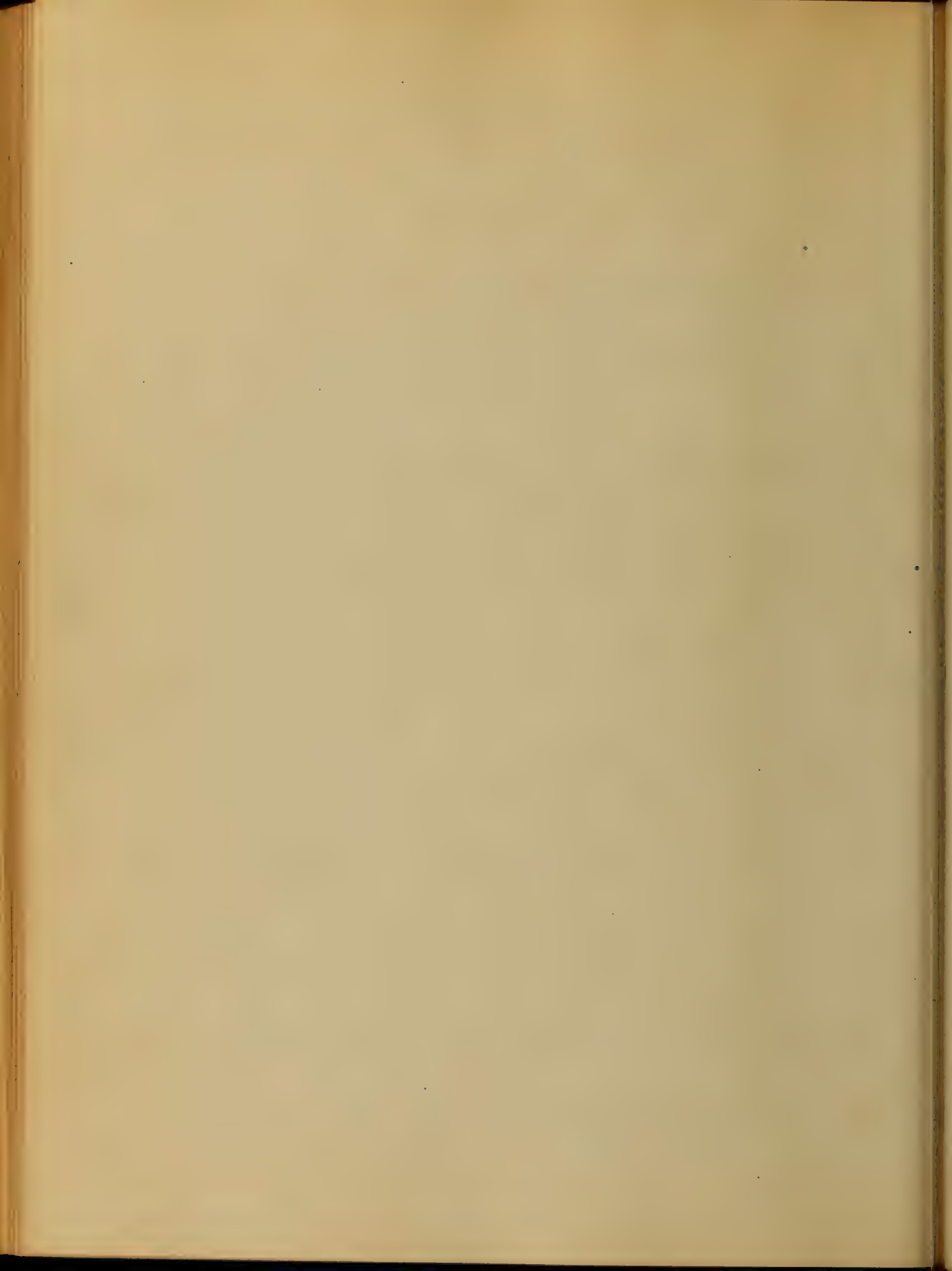


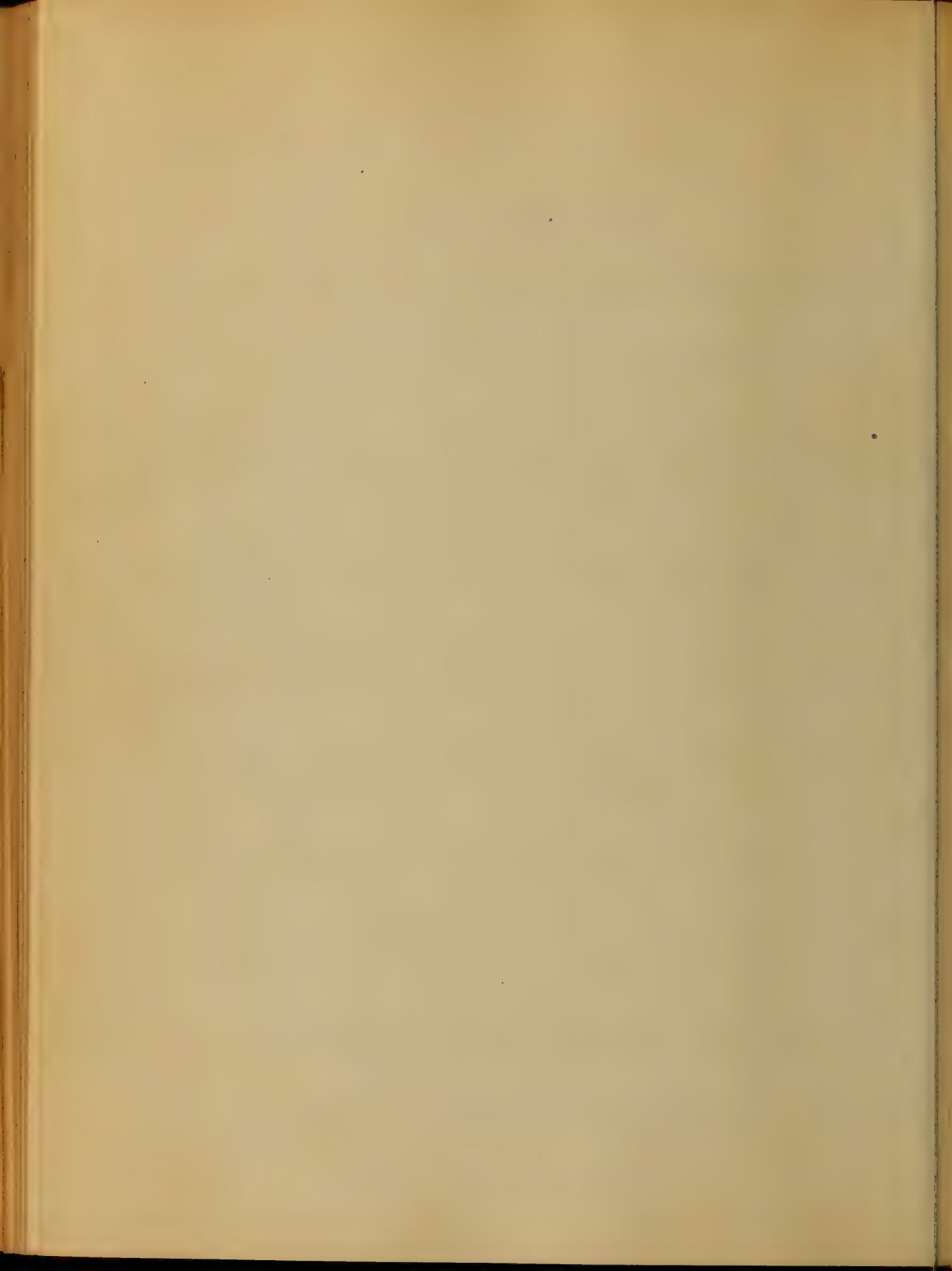
Diagnosis of Simple Fevers

In the young practitioners of medicine
there is nothing so more essential
than to be able to form a correct
diagnosis of the disease. It is necessary
is the knowledge that without
no one can be successful in
the practice or become eminent
in the profession. The diagnosis
of diseases is very difficult from
the mere fact that so many
diseases present the same sym-
ptoms and consequently have
nearly the same analogy. The
diagnosis of typhoid is particularly
difficult under all circumstances
and especially so when there is

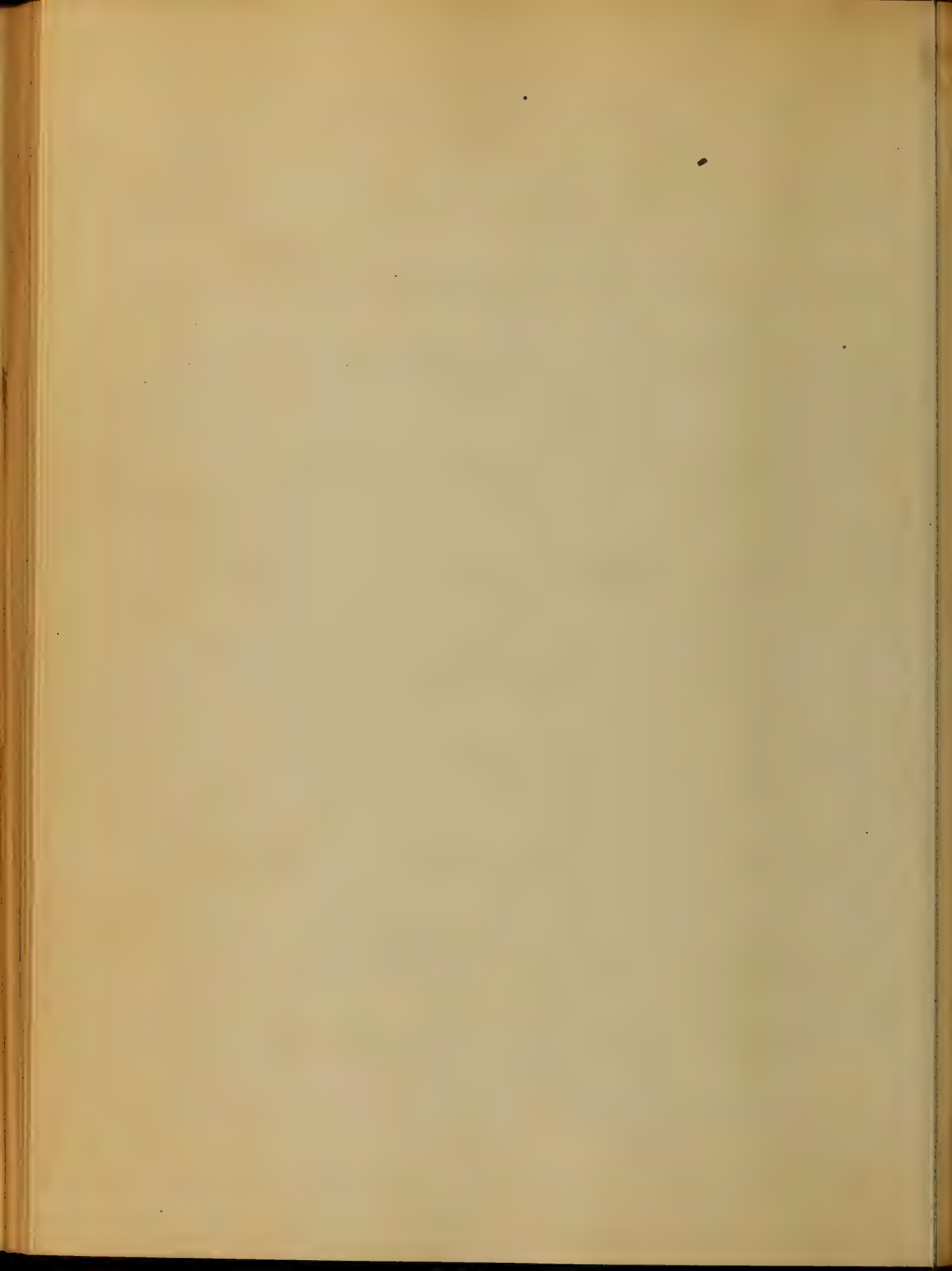


an earnest desire on the part of the
parent to become a doctor, and hence
they simulate pregnancy, and also when
there is a disposition on the part of the
unmarried parent to conceal the fact
of the existence of an embryo in utero.
To make distinctions, and distinguish
ly, in cases of the latter nature, requires
knowledge of the patient, and a
careful examination on the part of the
Physician to gain a reputation, and if
already obtained to increase it. Every
one with propriety remarks, that when
a correct diagnosis is made, and
if the obstacle to the successful
conduct of treatment is removed, the
result is the same, and the same
is the result in the case of a

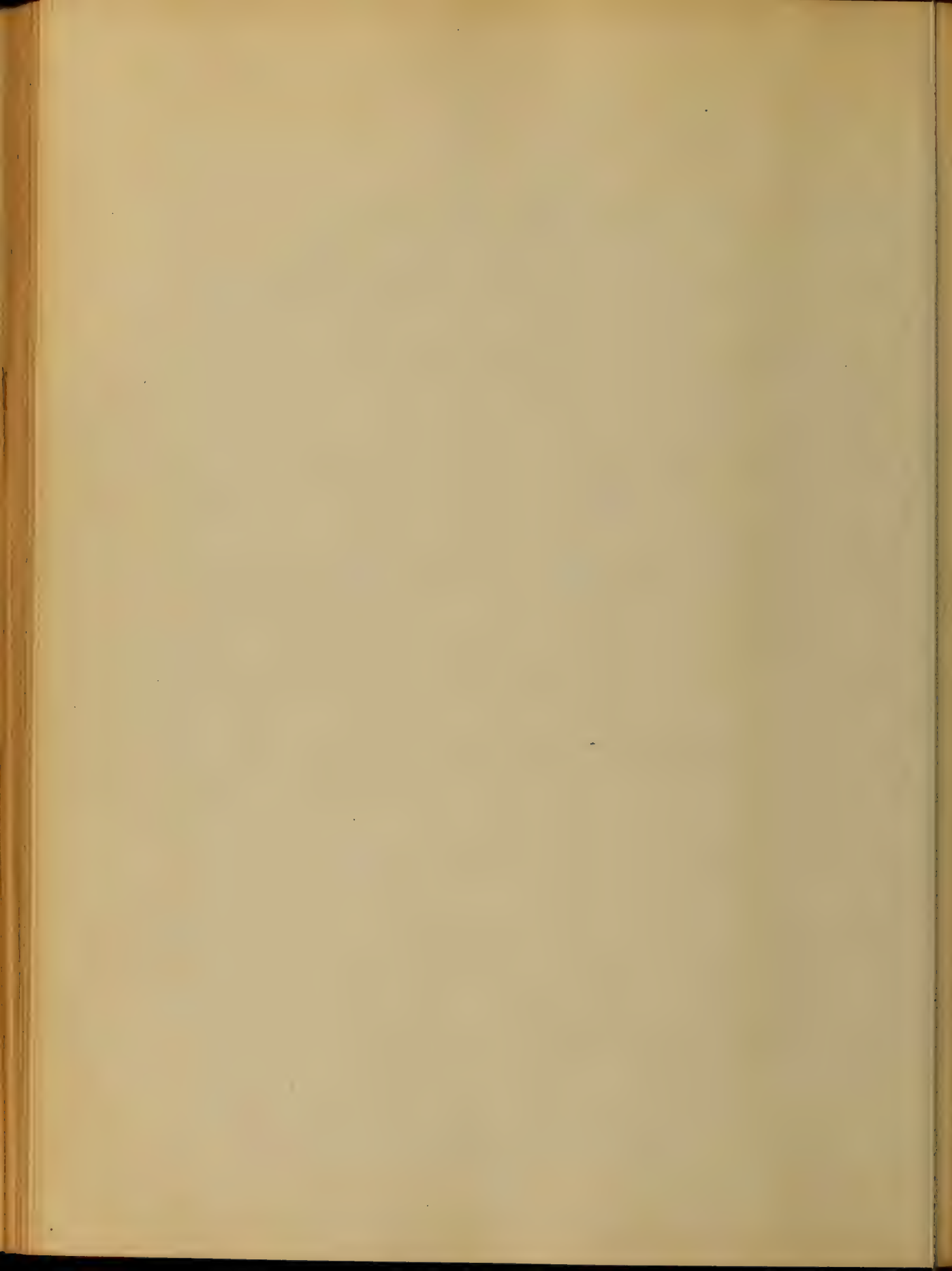




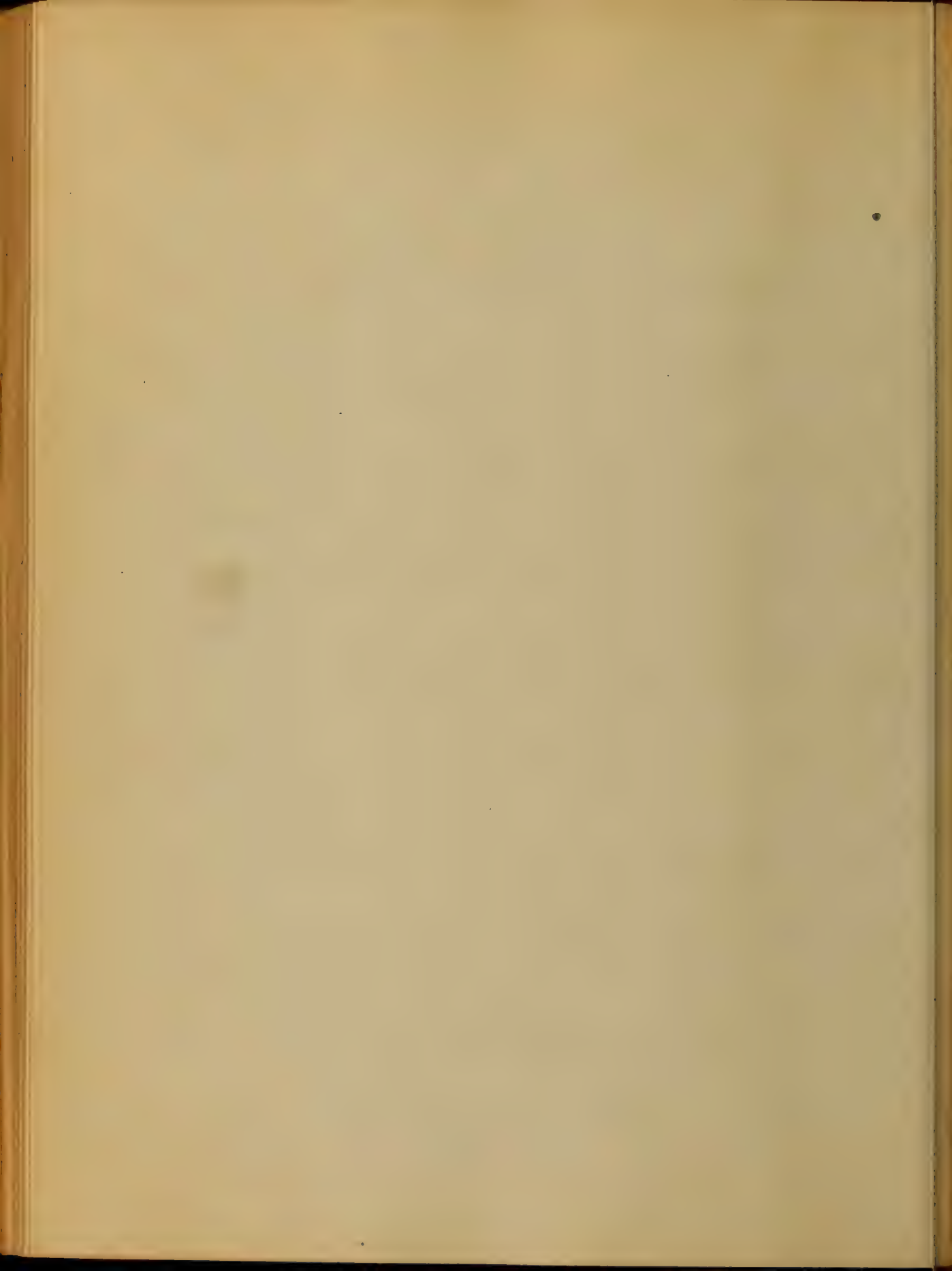
occasions of distention, all being
to have certain signs of pregnancy, with
others of well report the same. Concomitant
with numerous signs of pregnancy,
but as most of the symptoms
are of little or no value, it is
useless to dwell upon them. The signs
said down by Physicians have been
received. Among the rational signs of
pregnancy is called the cessation of
the menses this cessation of the menstrual
flow during the pregnant state is usually
accompanied with fulness in the
breasts, headache, and fullness of the
face. The stoppage of the menses is
admitted by all as a general law
in nature and also after a course



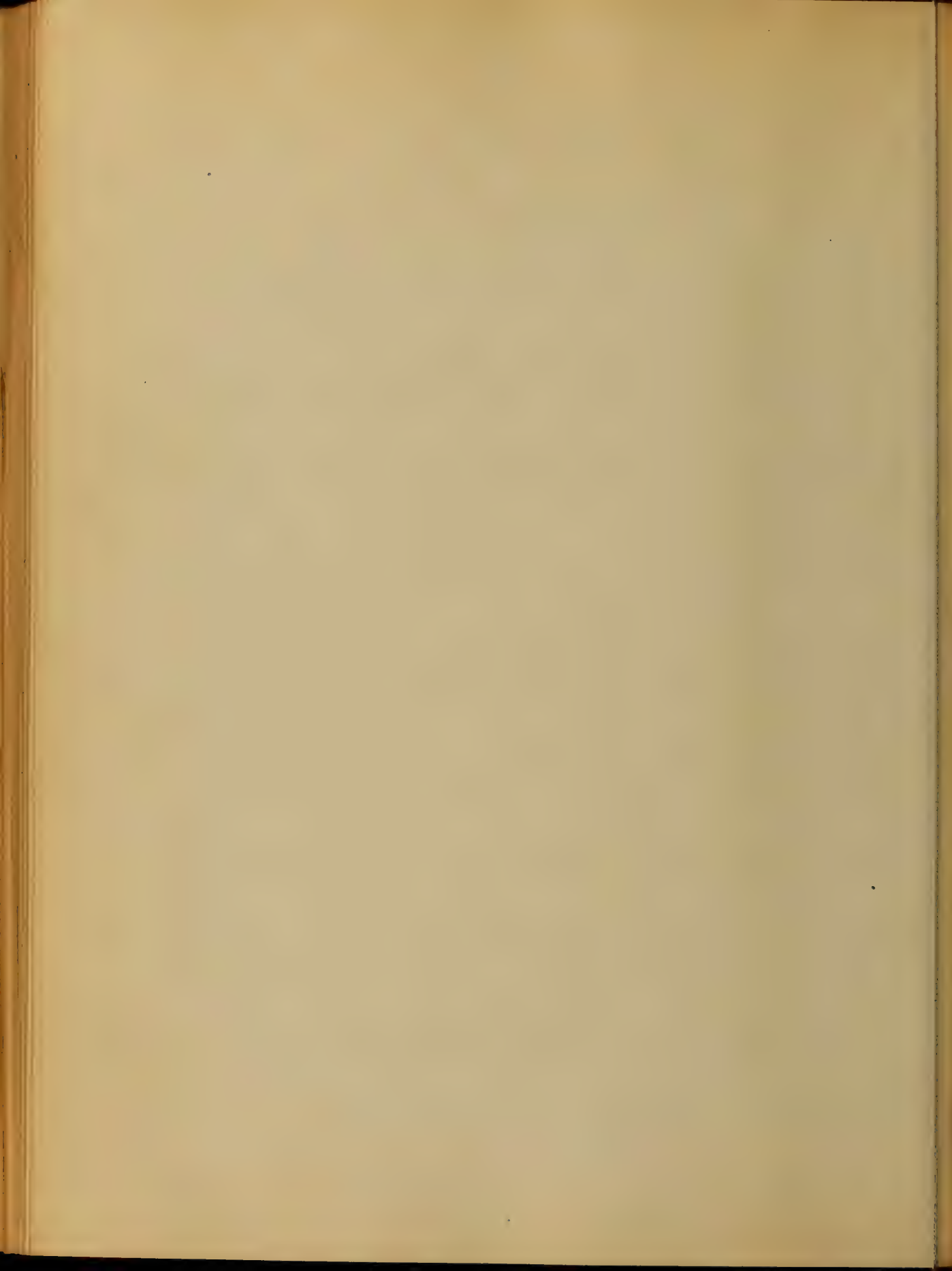
accepted and the only remedy
of the patient in the part of the practice
he can discover in medical writings
and the general health of the patient
to be good he may with a degree
of certainty regard it as a sign of
pregnancy. Of this in some cases
to the general law of the secretion of the
monthly discharge during gestation
low cases on record in which
the conception and continuation has
established which prove to be
precise that more appears than
in other cases on record when par-
tially the pregnancy is continued to
the end of the term as though it
was not in that condition for the



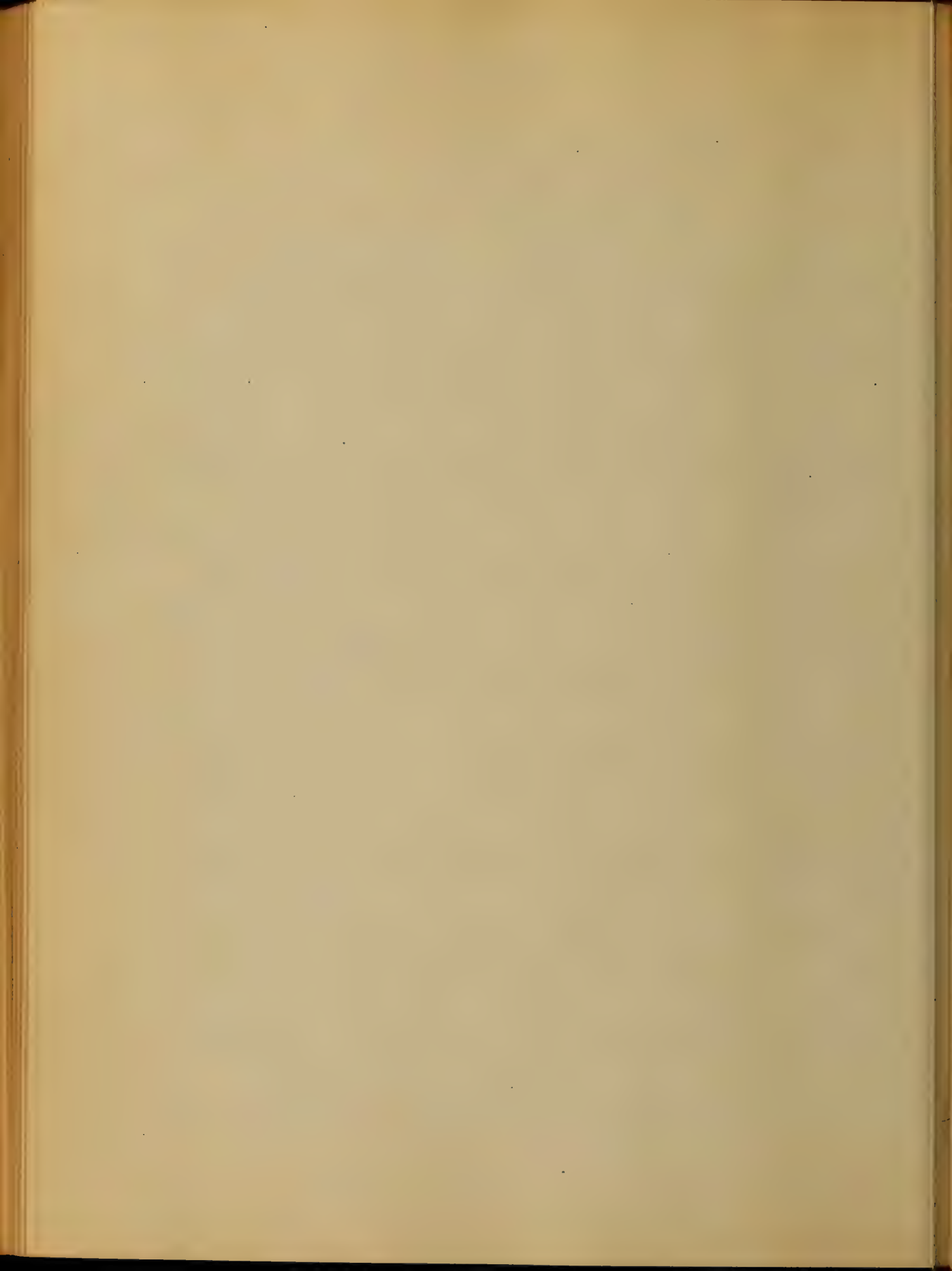
except as only for the present time. It
is not a bygone but present occur-
ence because frequent without
having originated, but inferring,
from what little has been said con-
cerning these cases, their occurrence must
be very rare. The termination of the artery
is another case but is the same in
many cases. They have the tendency
to produce the like effect. The
artery is thicker than is of the
vein, & is more profuse of blood
when the physician perceives some
peculiarities in the course of a vessel
and shape the course of the artery
is of the importance. The artery
is sometimes smaller at the termination



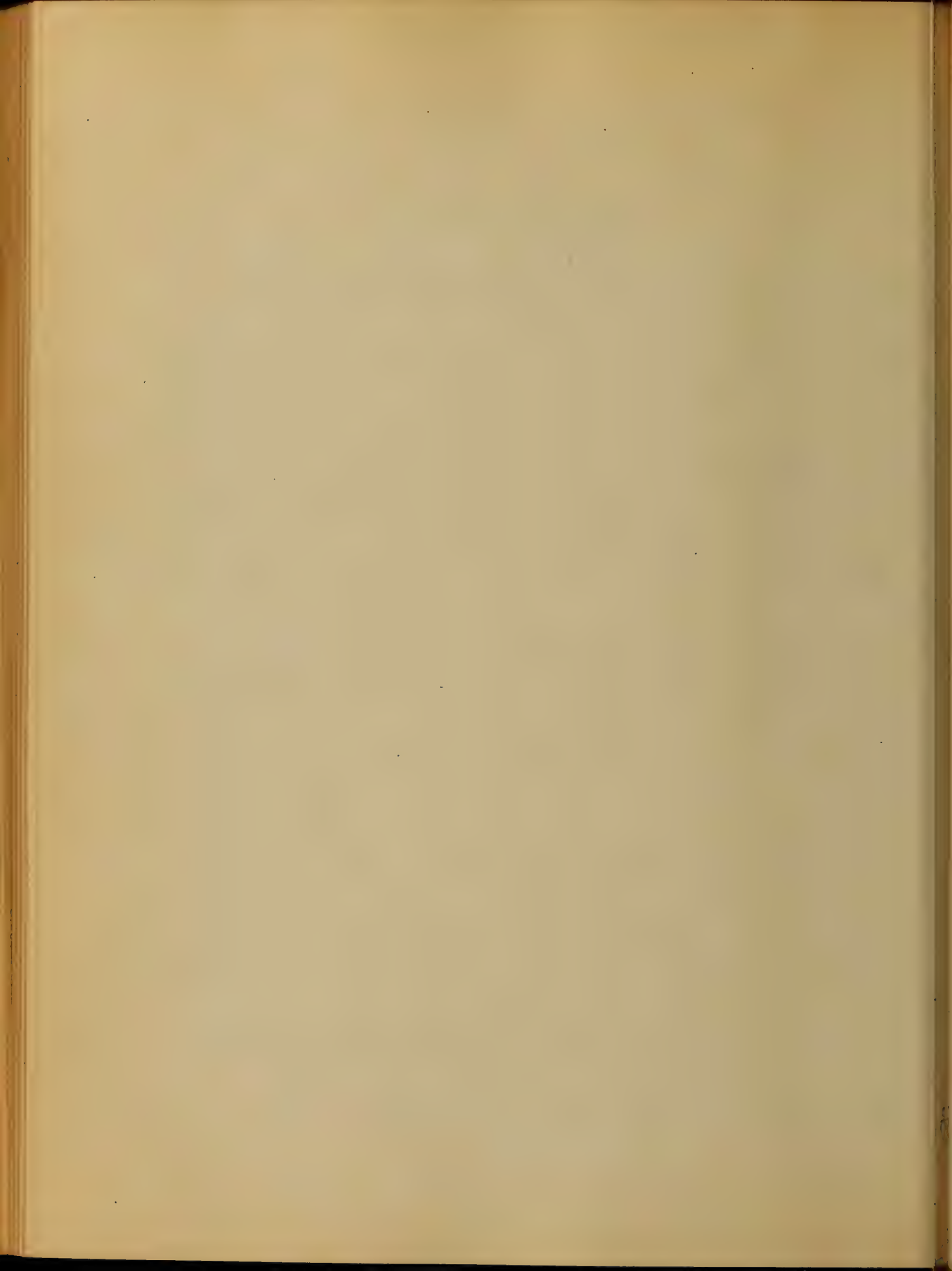
of a second month than it was at the first owing probably to the disappearance of the gas which had accumulated during the first month, but during the absence of the tympanites the abdomen is small during the first month. The second month is probably to the patient having either in the expectation. About the third month the abdomen is somewhat increased in size and continues generally to enlarge during the whole period of gestation. This increase in the size of the abdomen generally begins just when the tympanites first appear at first on the median line, the sides appearing somewhat flattened. The enlargement



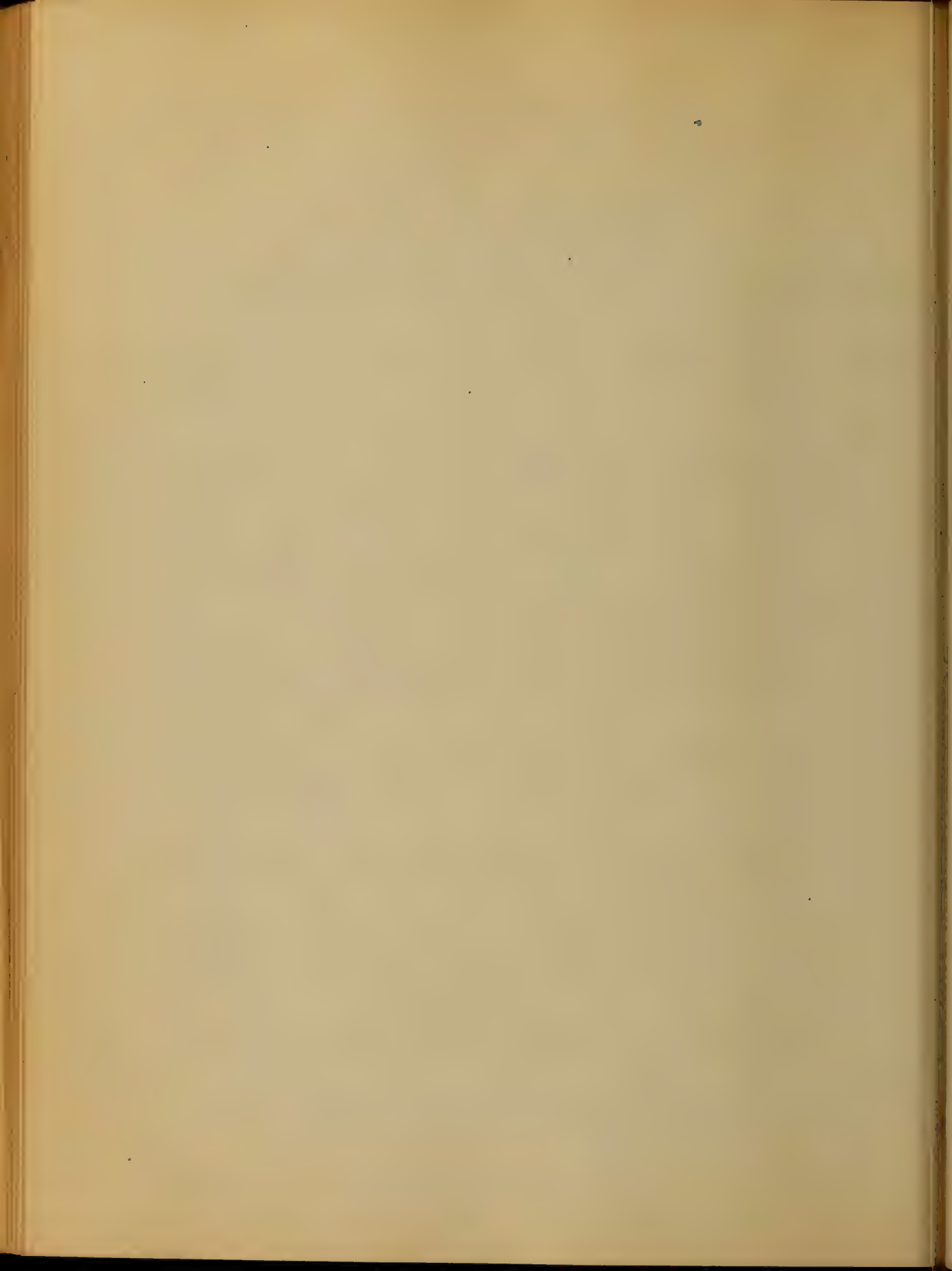
of course is more rapidly developed in
the program. It may also occur
frequently in large and small
fifth months. Some others are at the
first term of gestation being in all
probability to the difference in the
7. The depression at the end of the
appears during the early months of
pregnancy. It has been reported to
downward. The depression is
an average duration which extends
over a portion of the term. In
several months the umbilical vein
its normal shape. The gestation
since the umbilical vein becomes
somewhat enlarged and during the
latter months of gestation the pressure



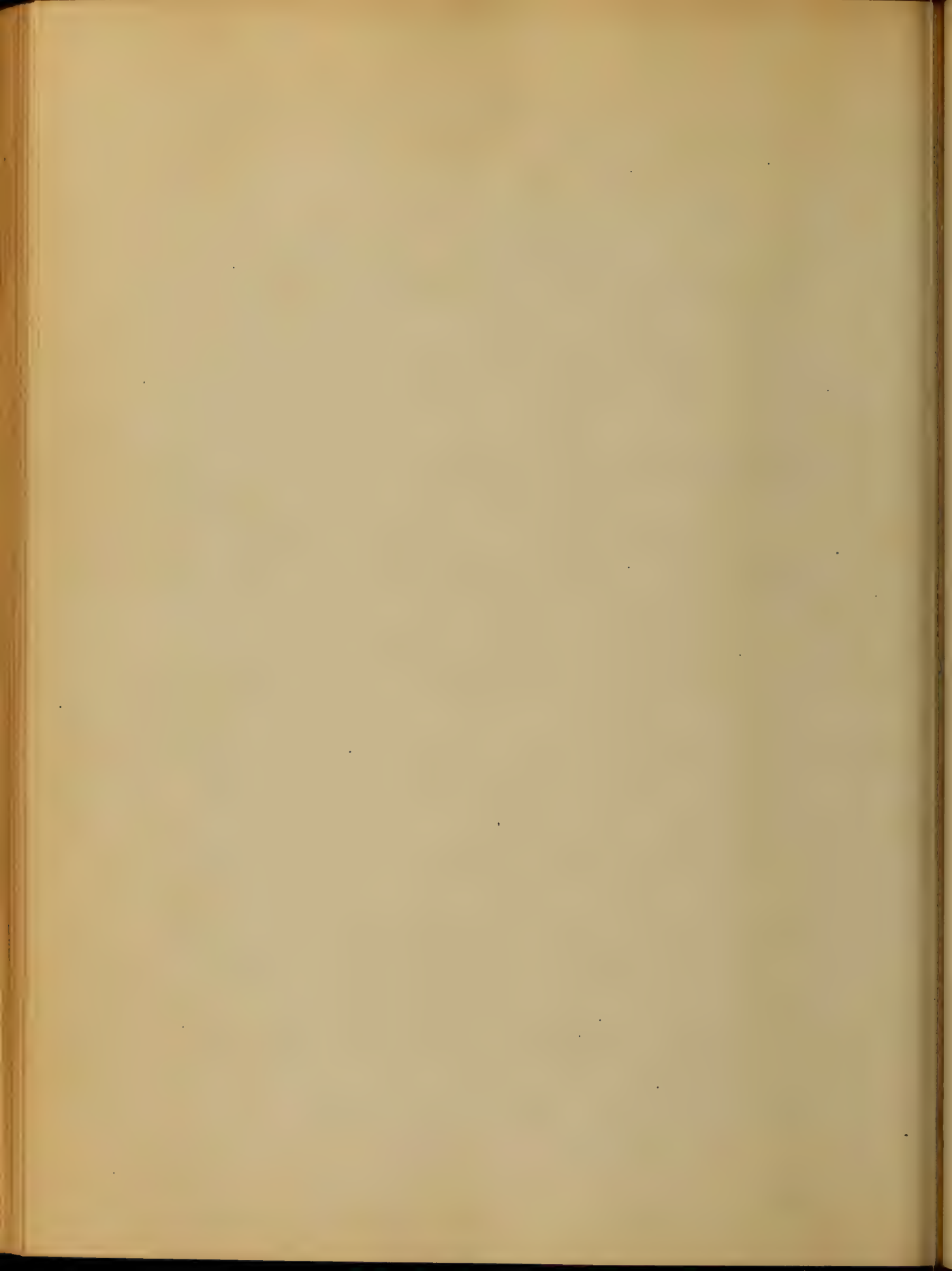
of brown streaks extending from the
Symptomatic public to the level of
should not be interpreted as a sign of
progression. Can authors of such works
claim the appearance of the disease
as affording some signs of progression.
Smith and Hunter considered the
changes in the retina as a result of
retinal degeneration. Some thin
sections are in fact to be observed
only in the retina in the absence of
any other changes which they expect
as seen. Conception from the
presence here they were wanting
The absence does not prove that
the eye is not at all. In a
group of people who had been

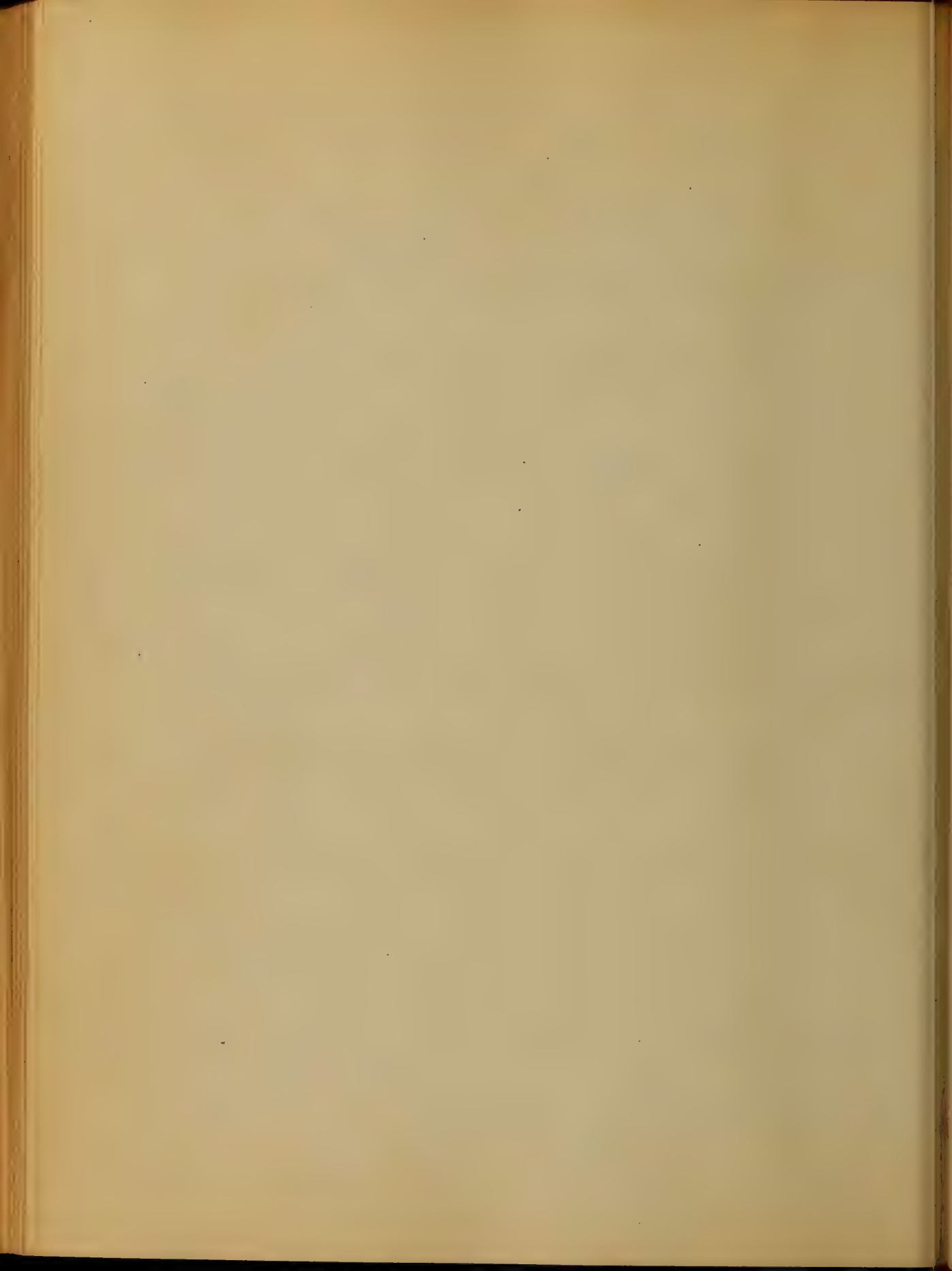


been a mother, when breast fed
but the appearance would be
with a degree only altered with
a certainty also the occurrence
prevalence the subject is
but when the party has been
children, these signs are less to be
relied upon. It is alleged that
Kjyrtan disease in the
is characteristic of the frequent
State. Many diseases caused
by sympathy between the
and through a passage among
the national cup of quietness,
especially to the view of some
is obtained a valuable symptom
in diagnosing and curing.



This sickness is accompanied by vomiting which generally ceases once but the violent vomits continue for several weeks after which time the vomiting generally ceases. Its recurrence however may take place at a later period. It will be seen however and perhaps it will not be out of place that the vomiting among the Indians and in some females is extremely violent and continued, almost threatening their lives and being the cause of the prostration. I myself know several females who suffer from the violence of constitution and who lay in

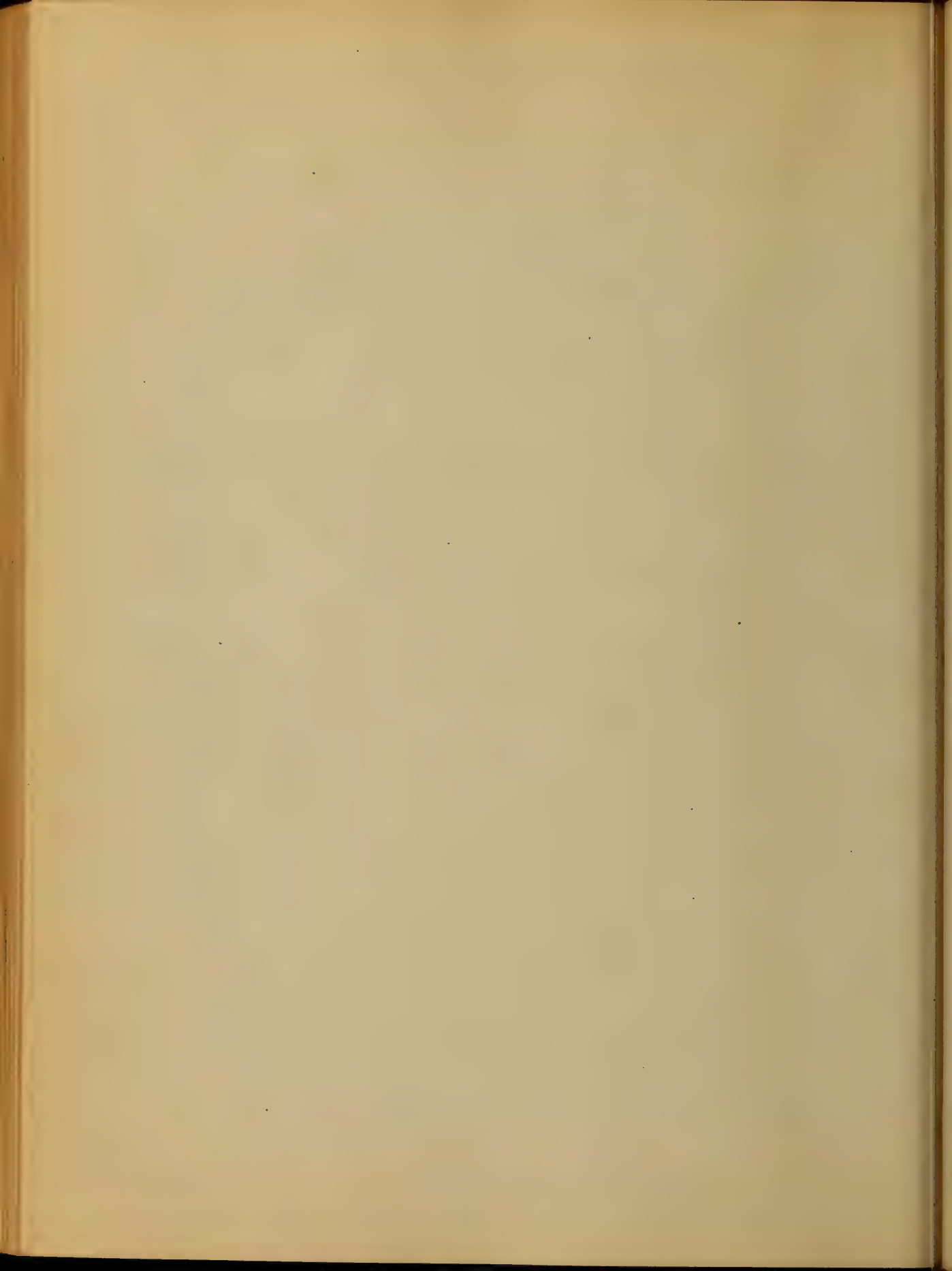




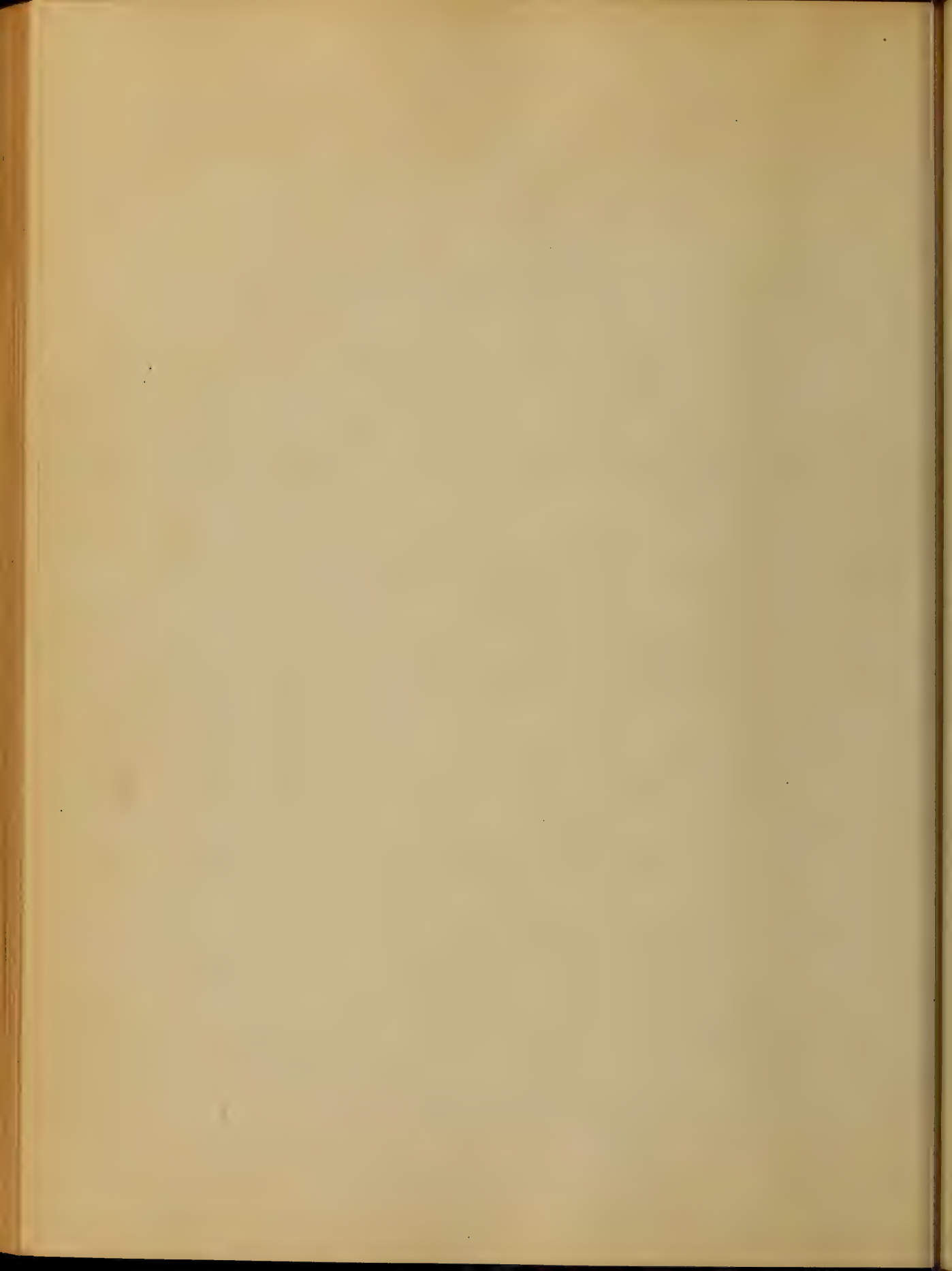
can not be removed without the
part-a respect, and unless it be
at some future time, and under
some other arrangement, it can
be as well to leave it as it is
at present. The physician
is engaged to the place, and
will be in said employment during
the year of service, and it is
the duty of the board to
see that the same is
done by a respectable
person, and that the
same is instituted by said
physician at
the earliest possible
time, and that the
same be in a
state of health, and
that the same be
in a state of health, and
that the same be



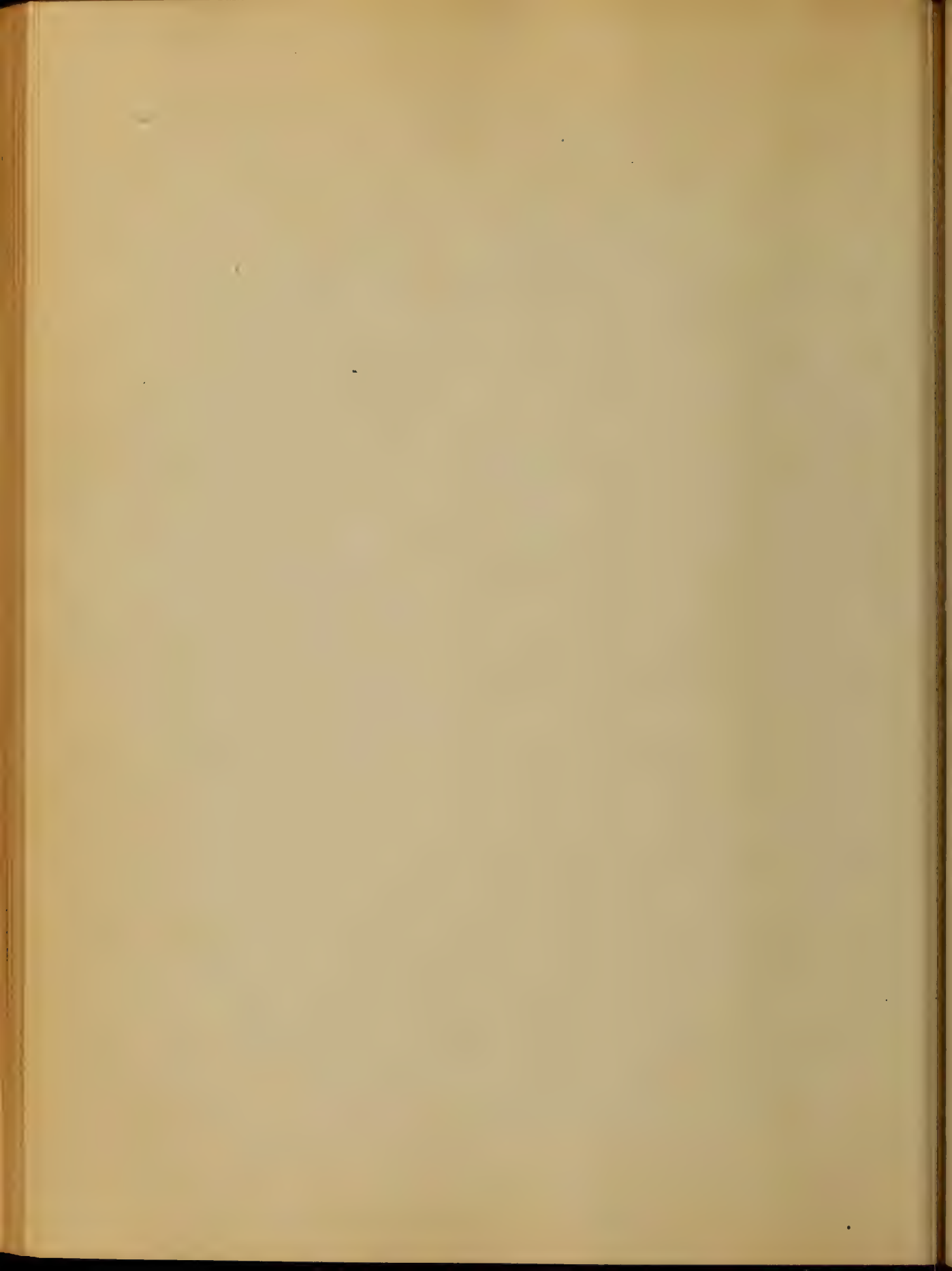
and he was thought to be
in a very precarious condition,
judging from his general appearance
and the violence of the attack
of vomiting. The symptoms were
a great degree of depression, and
his health would be better if
a couple of months. He was
about 20 years of age, and
was in first time in his life
vomiting. This occurred very
suddenly, and he was
in bed for some days, and
his knees passed. He remained
in bed for some days, and
and becoming much better
his friends, and they

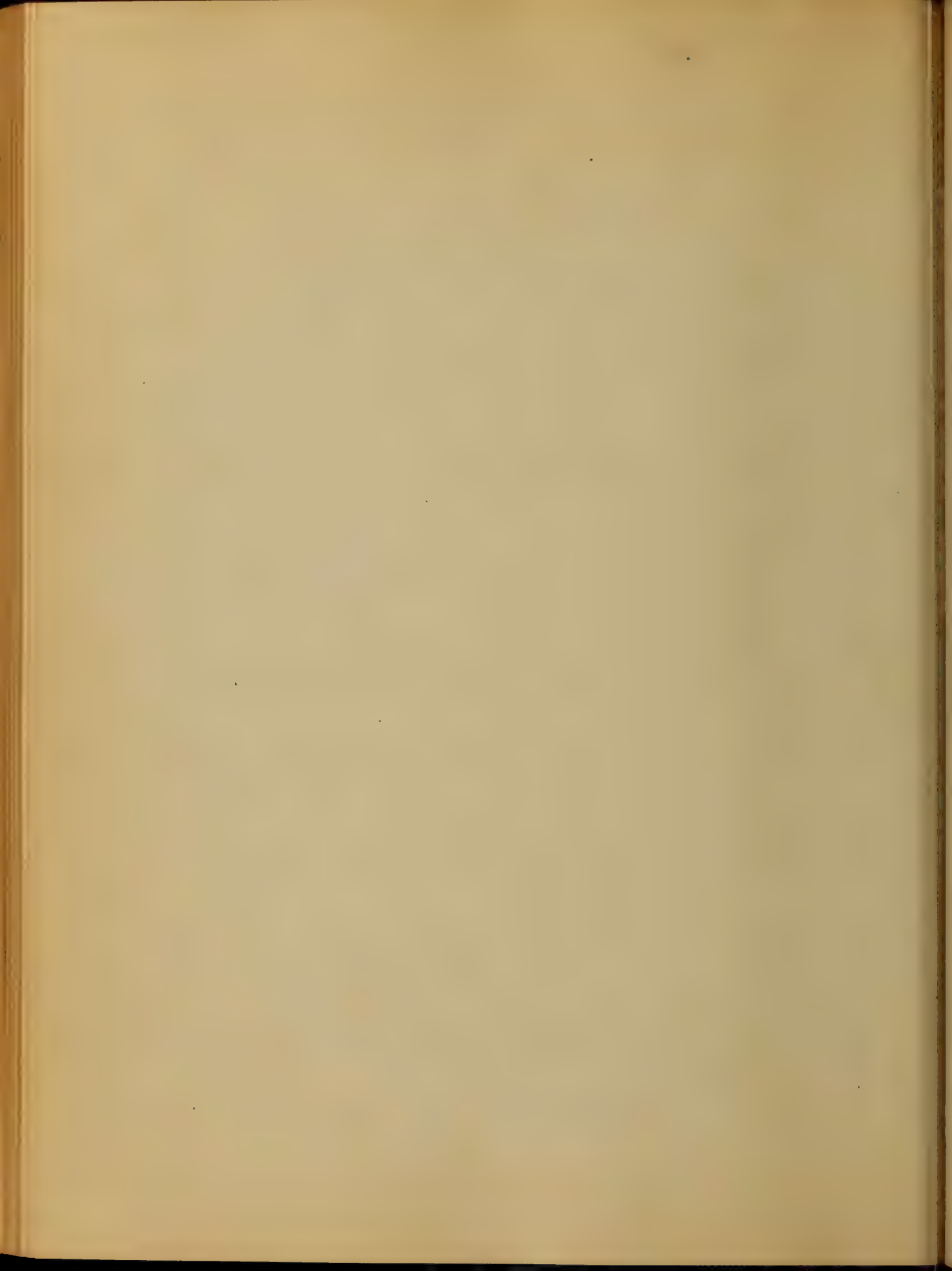


to supply to a steady & long
employment, and place to merit
under his treatment. He treated
him for some length of time
with little success and was
at length compelled to acknow-
ledge that all he had done and
all the advice he could give in
regulation, only had the effect
of increasing his sufferings, and
would check the attacks. The
second conception brought the
result to husband, and each suc-
ceeding for the sickness
the treatment for the first
of four children was
from a visit to the ...

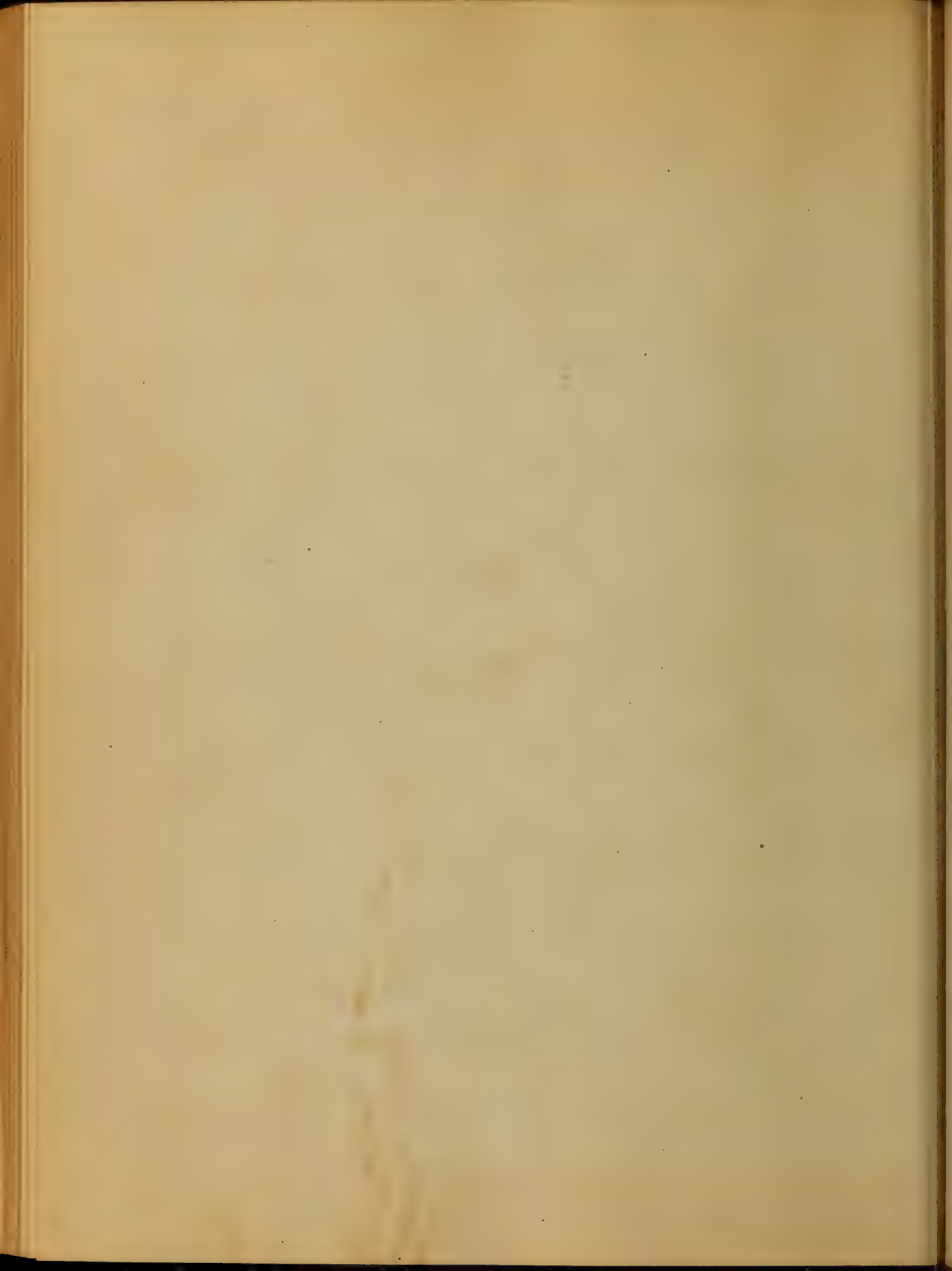


generally combined with the
must and for his or three months
after which he was found to be
robust for he was a man of fine
appearance and remarkable
etc. I have remark his wife during
the time of gestation she experi-
enced any degree of sickness
about the stomach. I am not inclined
to the view that the pregnancy was healthy
to be correct I relate the simple facts
as presented and leave the reader to
draw his own conclusion. As for
the gestation being
usual things in this general
appearance and have pro-
vailable for the purpose of

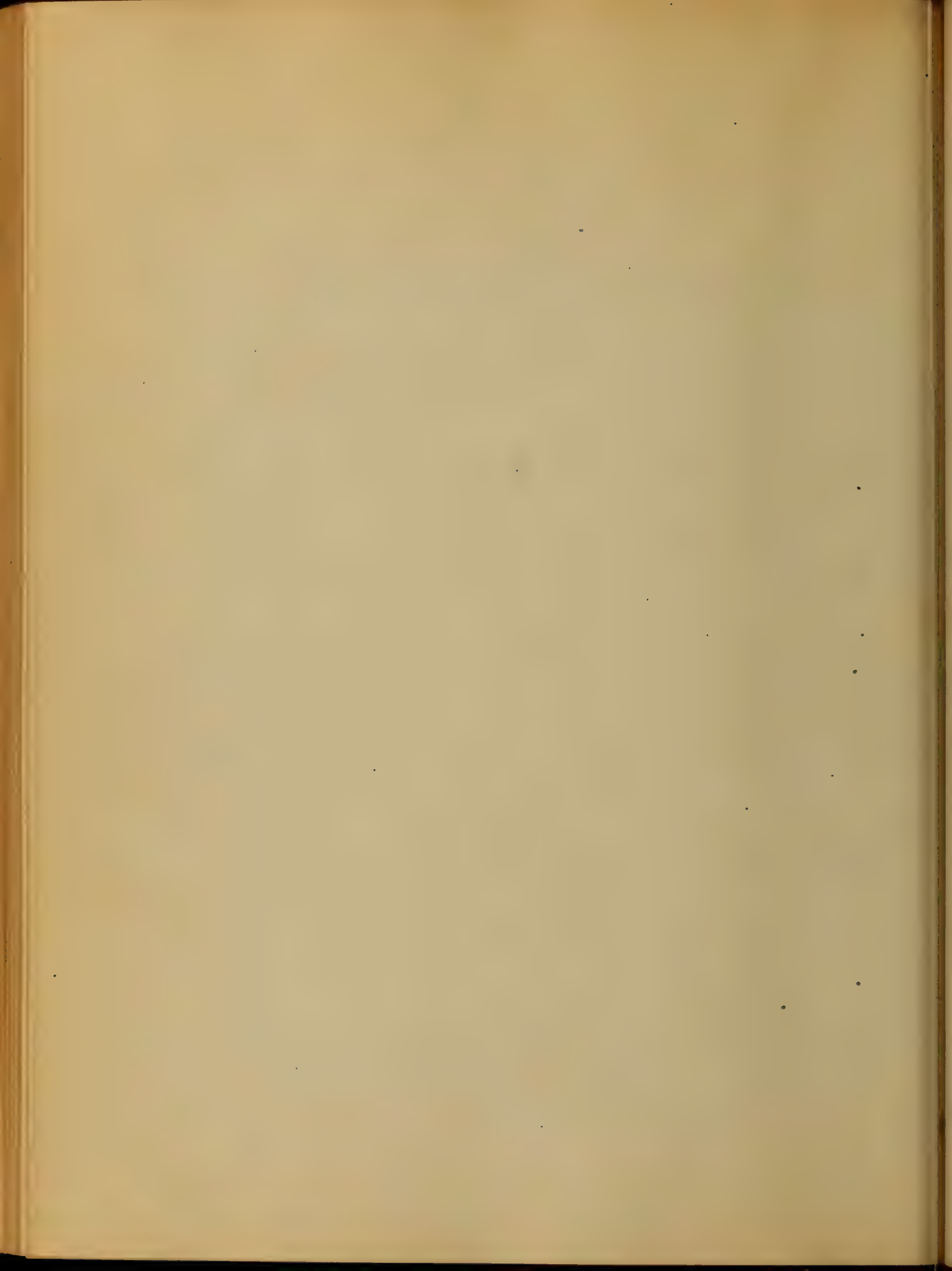




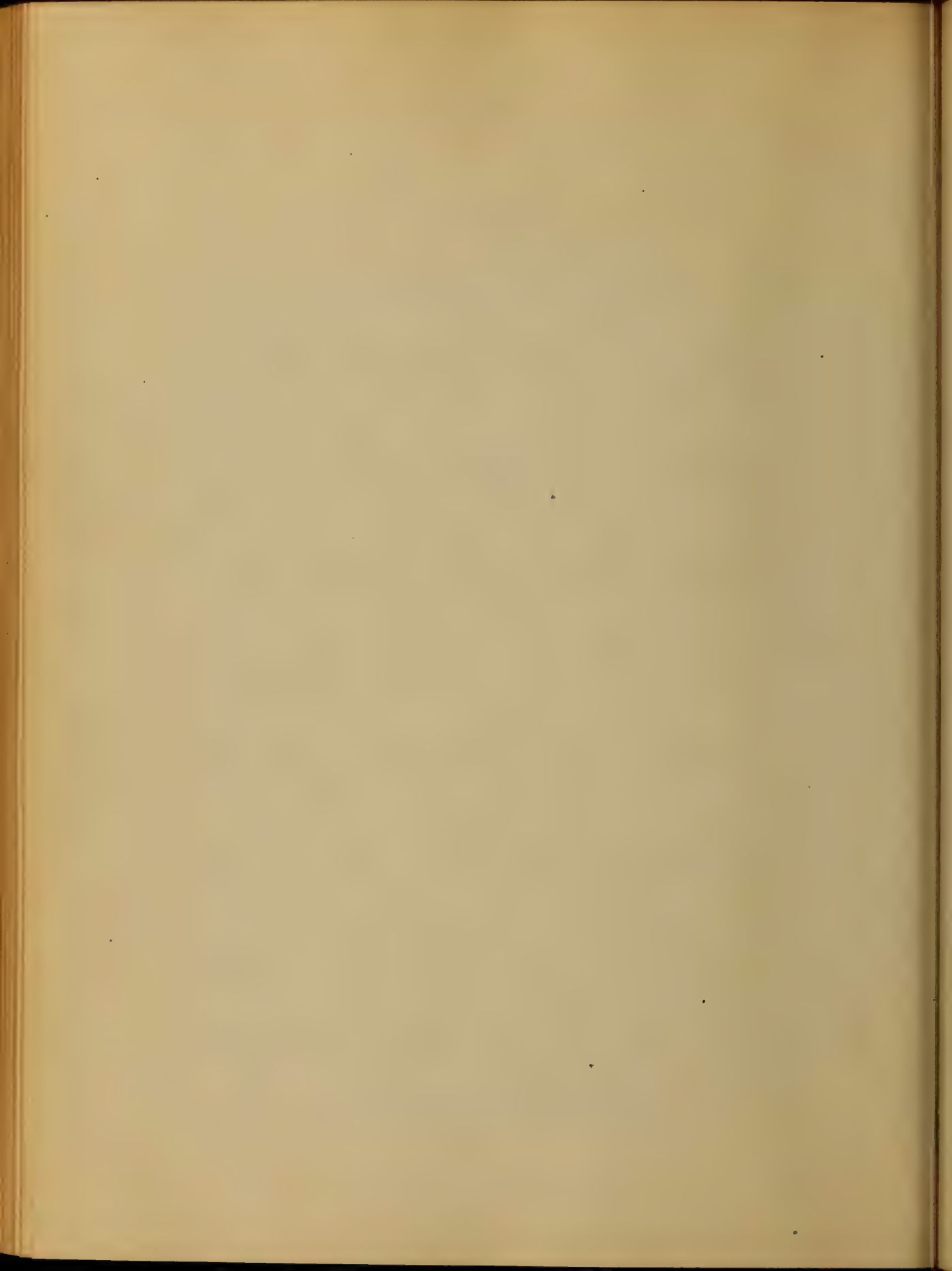
afternoon. At this time the
may come to appearance and the
vomiting may return. The
so much enlarged about the part
of the mouth in with there is some
difficulty of breathing but the most
better part of that month the breathing
becomes easier. The vomiting greatly
ceases. At this time the heat
is gone from the body and the
hins. The morrhoids may still be
apparent and the female has
frequent retentions of urine.
During the female before we
are the following. The urine is
very full foetal movements
the first month of gestation.



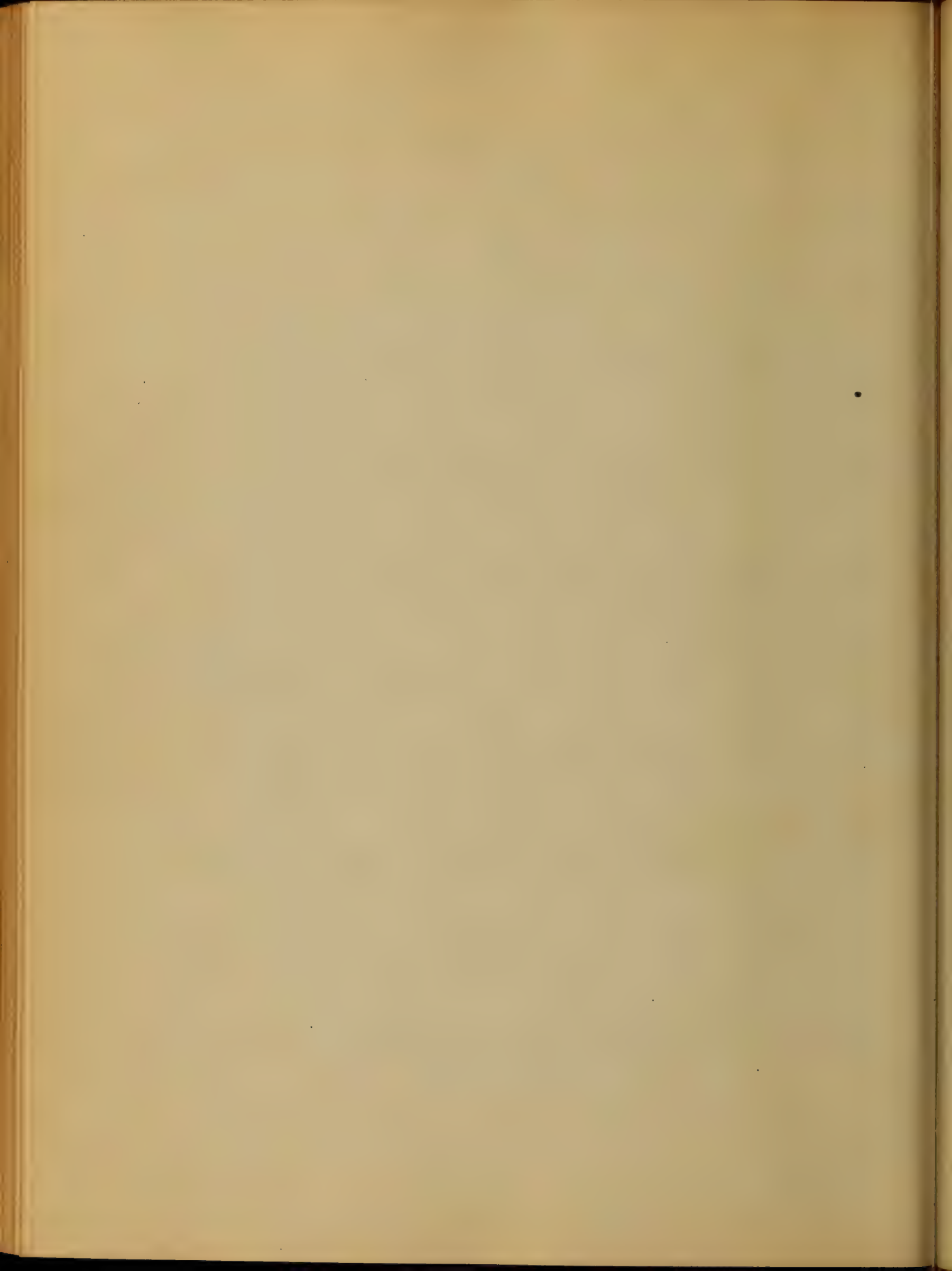
and the other is time, which
may be put the movement
which starts at a later point than
is not a sign to measure the delay
of preparation. By means of
the least preparation may be
positively and negatively maintained by
the least to maintain them that
the action is not a sign of action
in shape and content for the
but as we can say with a certainty
that it contains a future. What
the stage of completion to be
may be prepared to understand
in the column. But the
in preparing preparation, it is
the least to the least - and



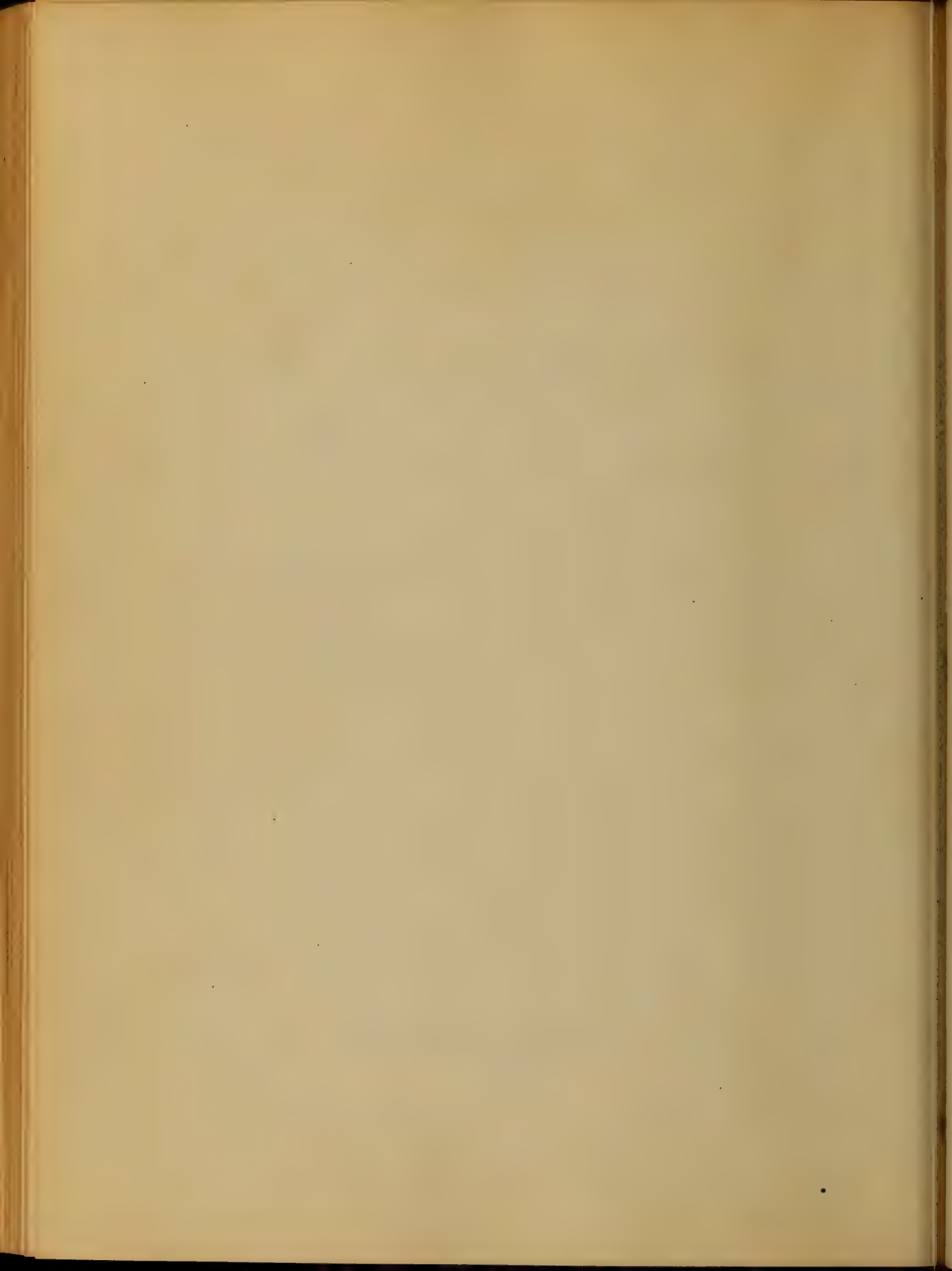
For a better understanding of the anatomy
of diagnosing gestation. but as a skin
in the abdomen or other cavity
produces the same effect. this does
not furnish a sure sign of conception.
When the pulsation of the foetus
beats are diminished by small
it is that all doubt will
refer to the position of the
foetus is at an end. At the
period the motions of the foetus
are much more perceptible. The
fundus uteri can be found more
easily below the umbilicus at
the end of the fifth and at the
same distance at the end of the
sixth month. The cavity of the



birth is somewhat delayed in the
multiparae though a lower grade
in the primiparae. During the
second and eighth months the
abdomen is greatly enlarged.
The fetus is capable of movement
in accordance with the usual position
and to the right. Its position is for
finger process above the umbilicus
& 4th the beginning of the month.
The fundus uteri may be detected
under the margin of the false ribs
and to the right. The uterine wall
is soft and with the exception of
the intense rigidity which remains
above. During the latter part of
the month under the fundus uteri

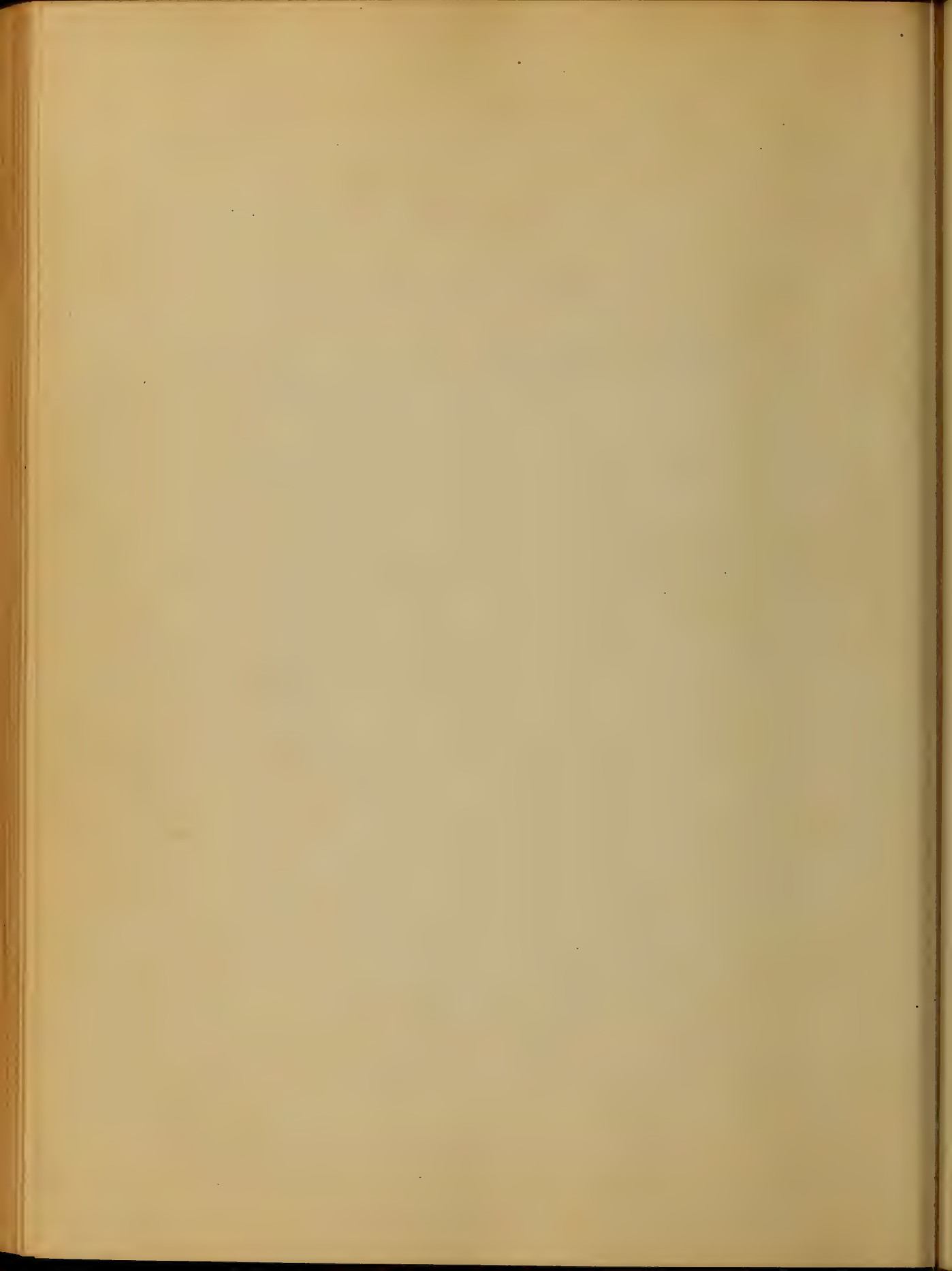


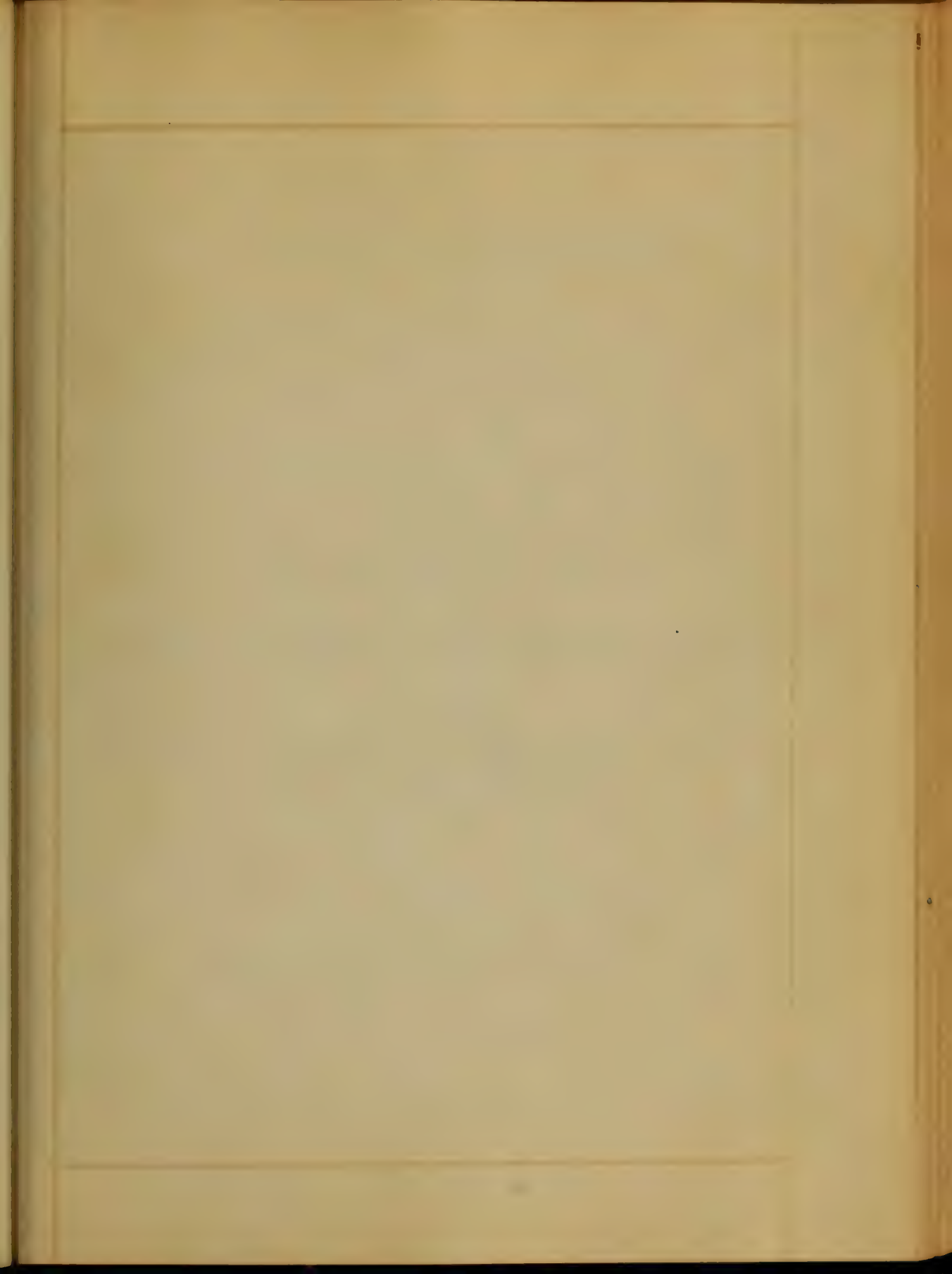
work. The head is engaged in
the operation. The answer is
the repetition of the same
before the facts with repetition.
I speak in the beginning of my
thesis of the many difficulties
to be encountered in forming a
correct diagram of population
and the procedure and can be
stated, particularly by the young
practitioner in forming an
opinion worth respect. The
I in conclusion will remark
though obstacles present them-
selves which appear almost
unovermountable though for
an able eye to be raised upon

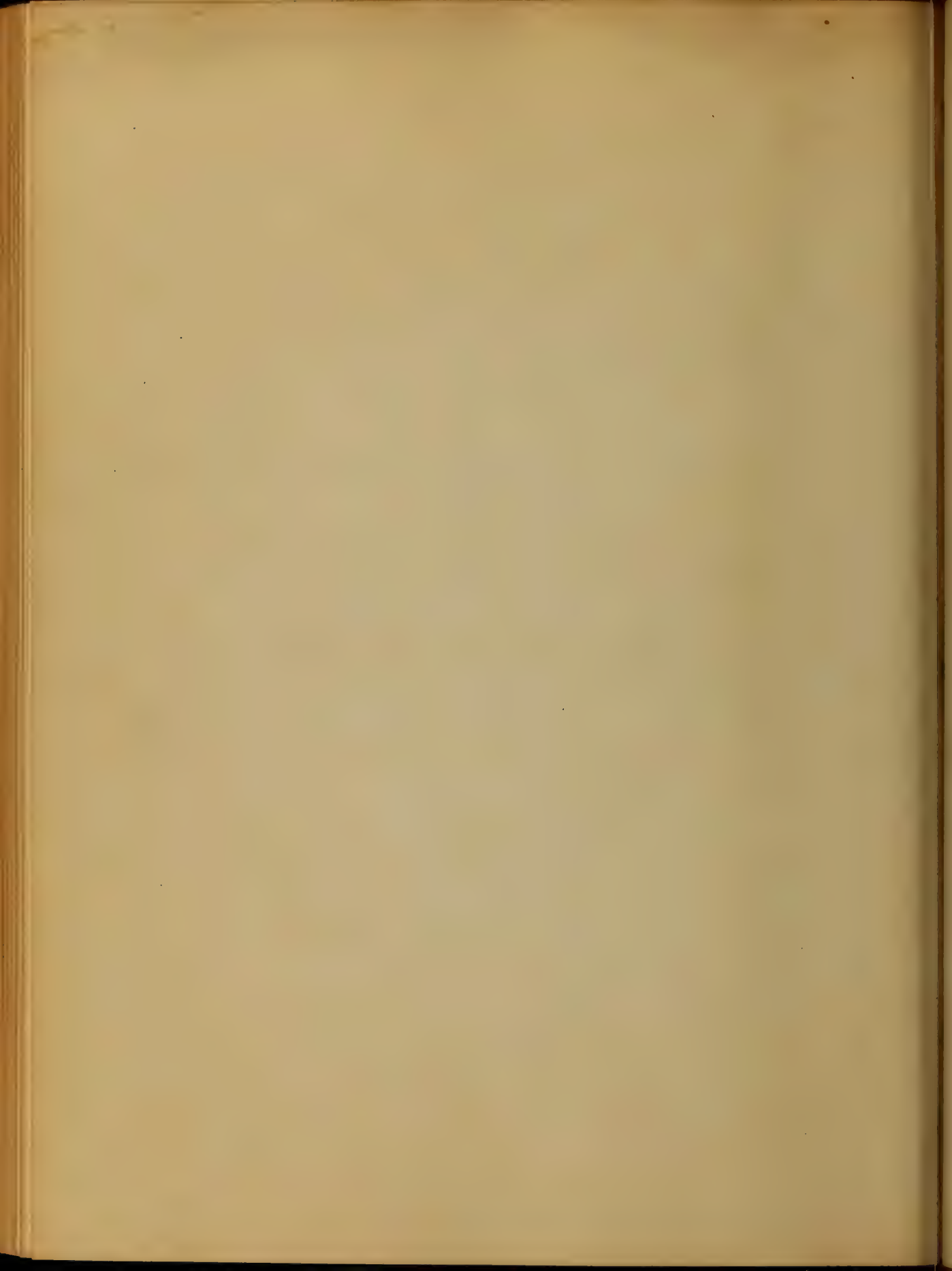


get it into your net, and
you find the different dis-
tinguished Authors I have read
upon the subject that under
all circumstances with the most
utmost diligence and perseverance
the practitioner can make the
diagnosis and that he without
the fear of being in error.

J. E. S. Wagner
of Maryland







AN
Inaugural Dissertation

ON
Intermittent Fever.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

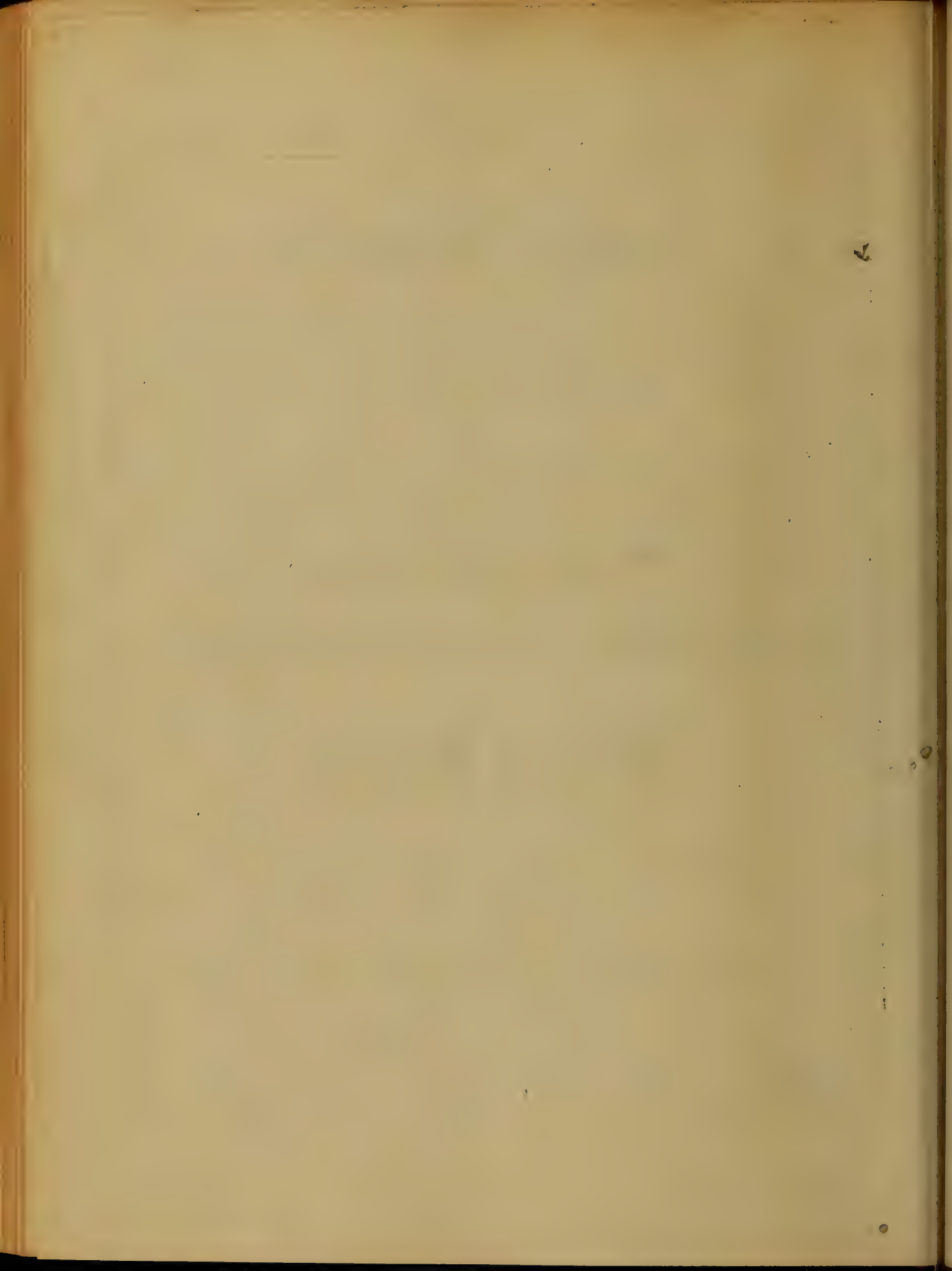
DOCTOR OF MEDICINE,

By
Abram Inger. Wheatzer.

Harford County, Maryland.

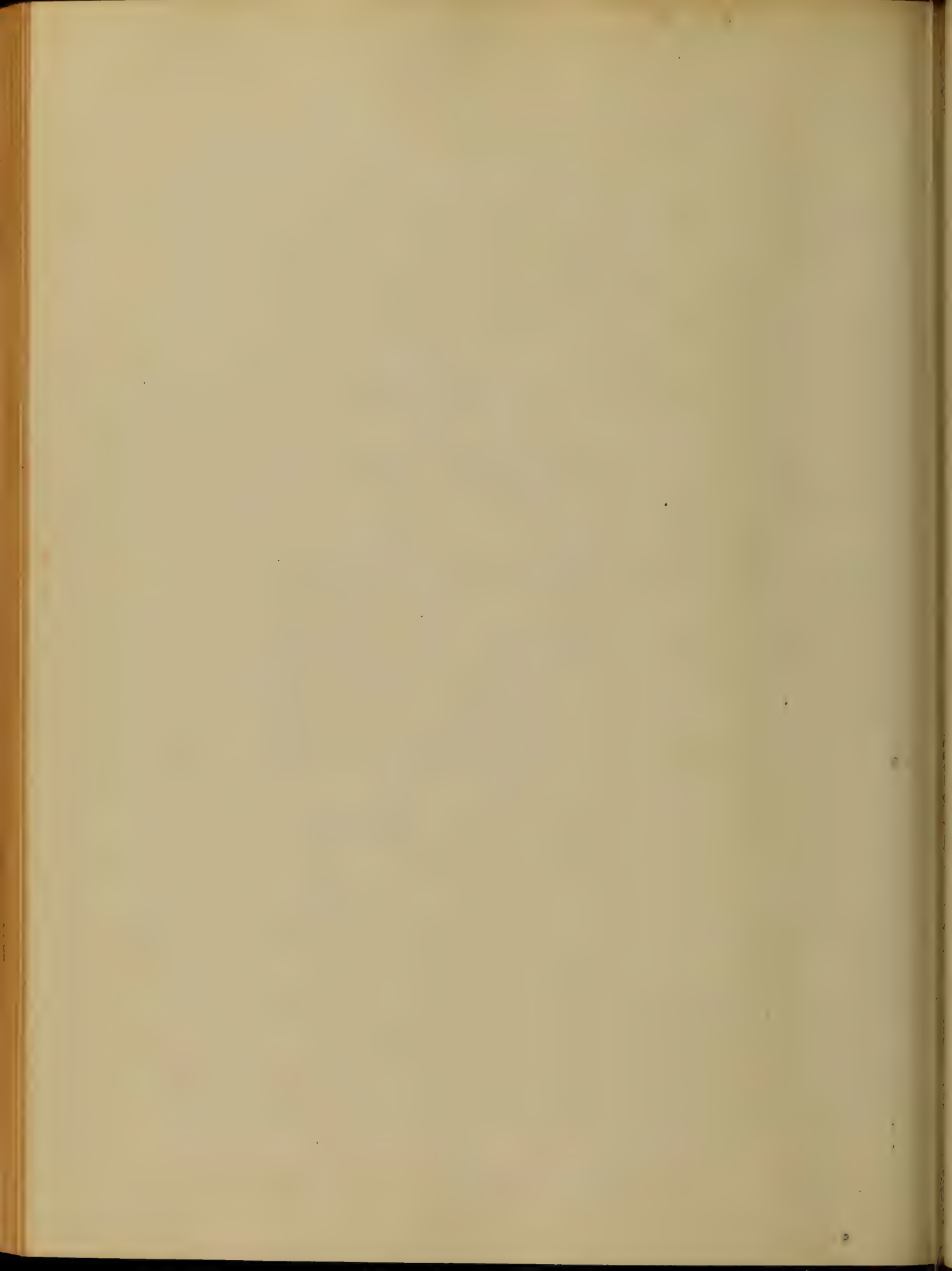
Session of

1868-69.

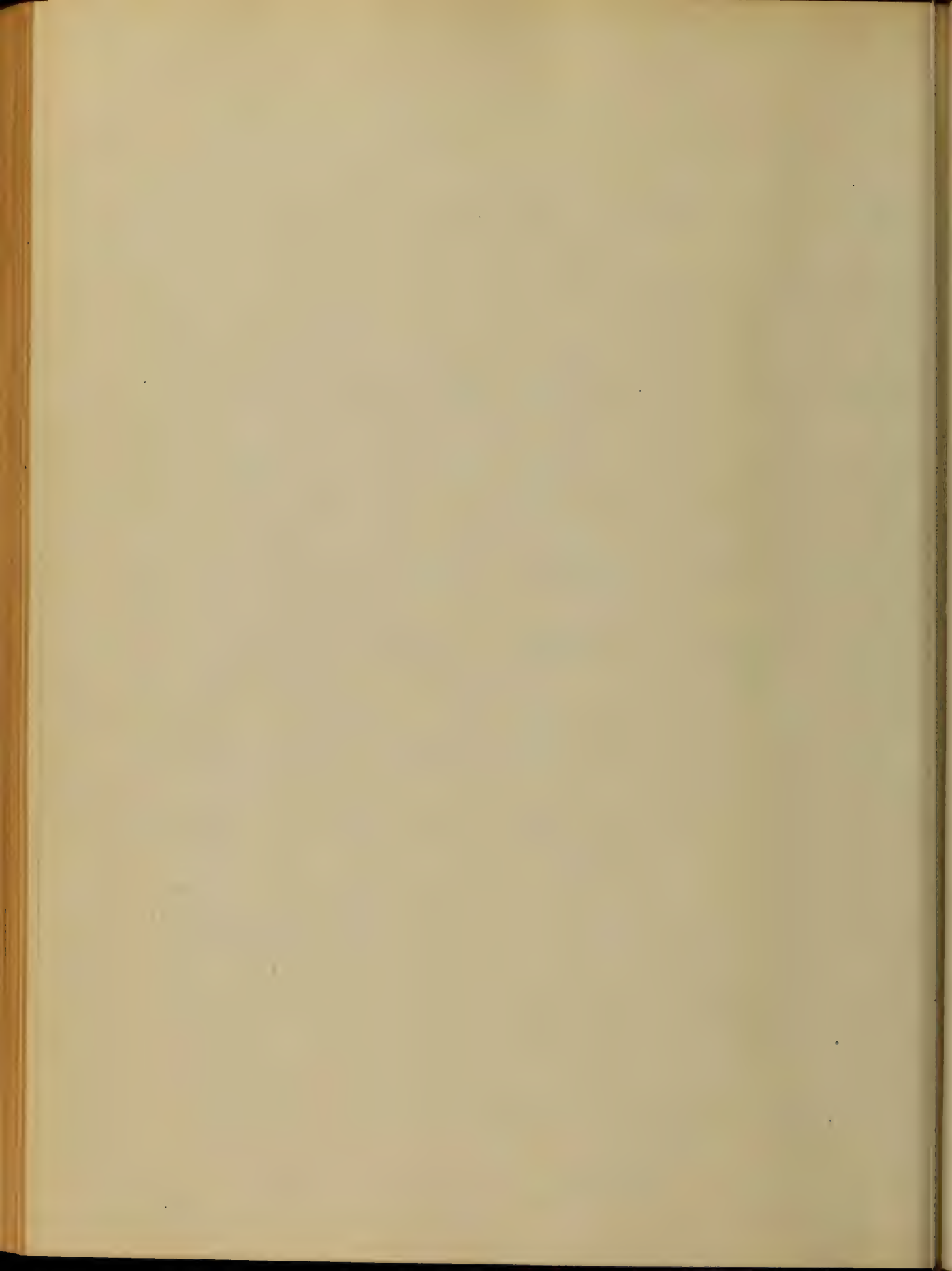


Preface.

While the author of this work was a student of
medicine he received an appointment as
a medical officer of one of our army regiments.
It was not until after he had entered
upon his duty for the first time, that he
was made aware of the great responsibility
devolving upon him. It was then that he
was made aware that the lives of
hundreds and lives of some of our
ships were in his hands, and upon his
conduct in the future, and the thought
that it might be the result of



though within a moment of their minds, and
lose the vital spark, and send a punter,
the brittle cord of life, and they should give
a water of life, thrilled him with horror,
and caused him to shudder, and the very
blood in his veins to run cold, and
the death like picture which presented
itself to him. How often has it come
to the young practitioner of medicine, through
embarrassment when he first enters upon
the duties of his profession, to read false
definitions of diseases, and thereby lost



them in the very opposite manner to

they should be treated, to restore them to

a healthy condition; and consequently

this mode of treatment only has a

tendency, to aggravate and promote the

ferment proceeding in the system

wherever it is in the solid or fluids, or

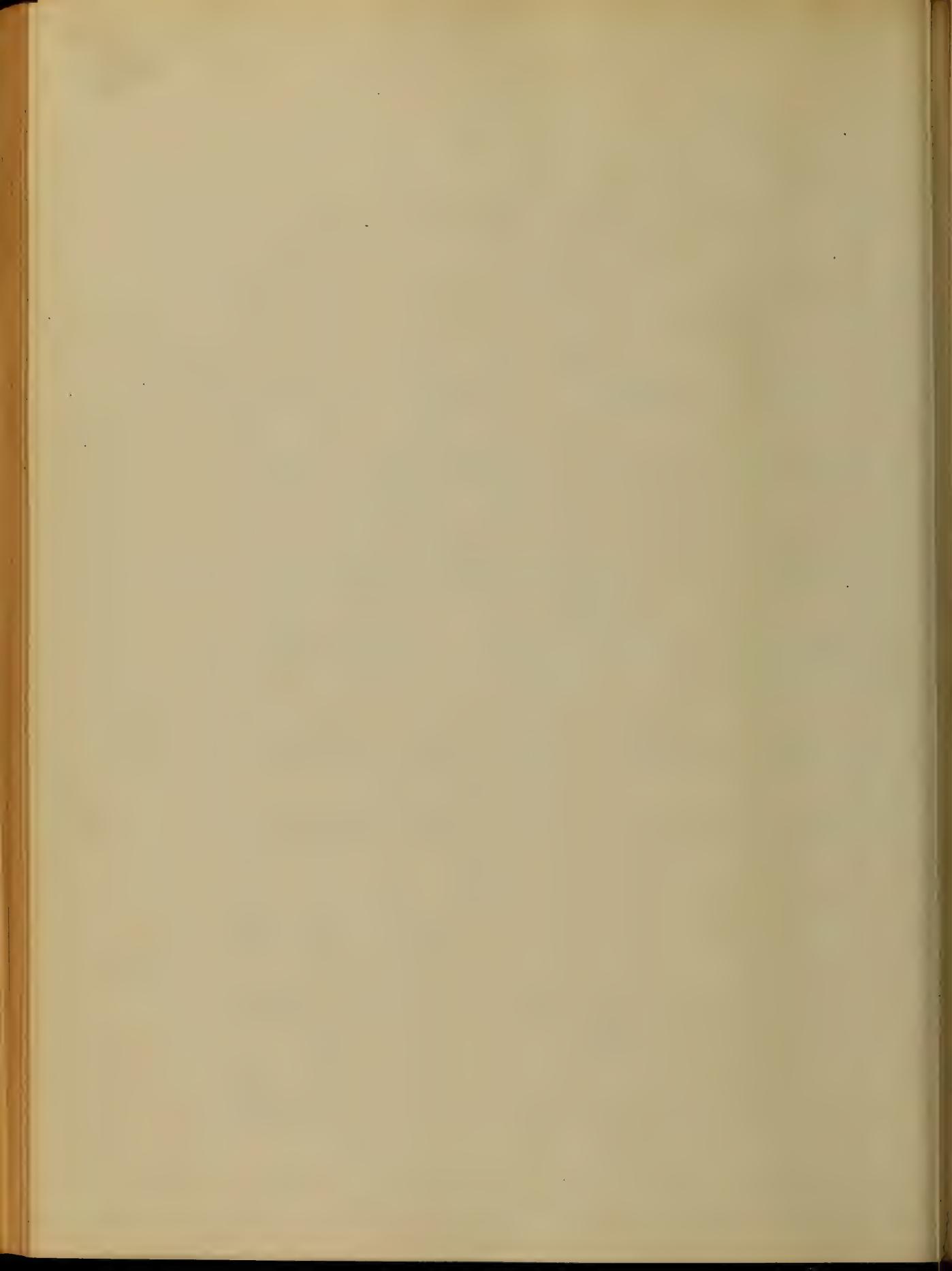
what ever part of the system to which they

may be confined. It is a pity that

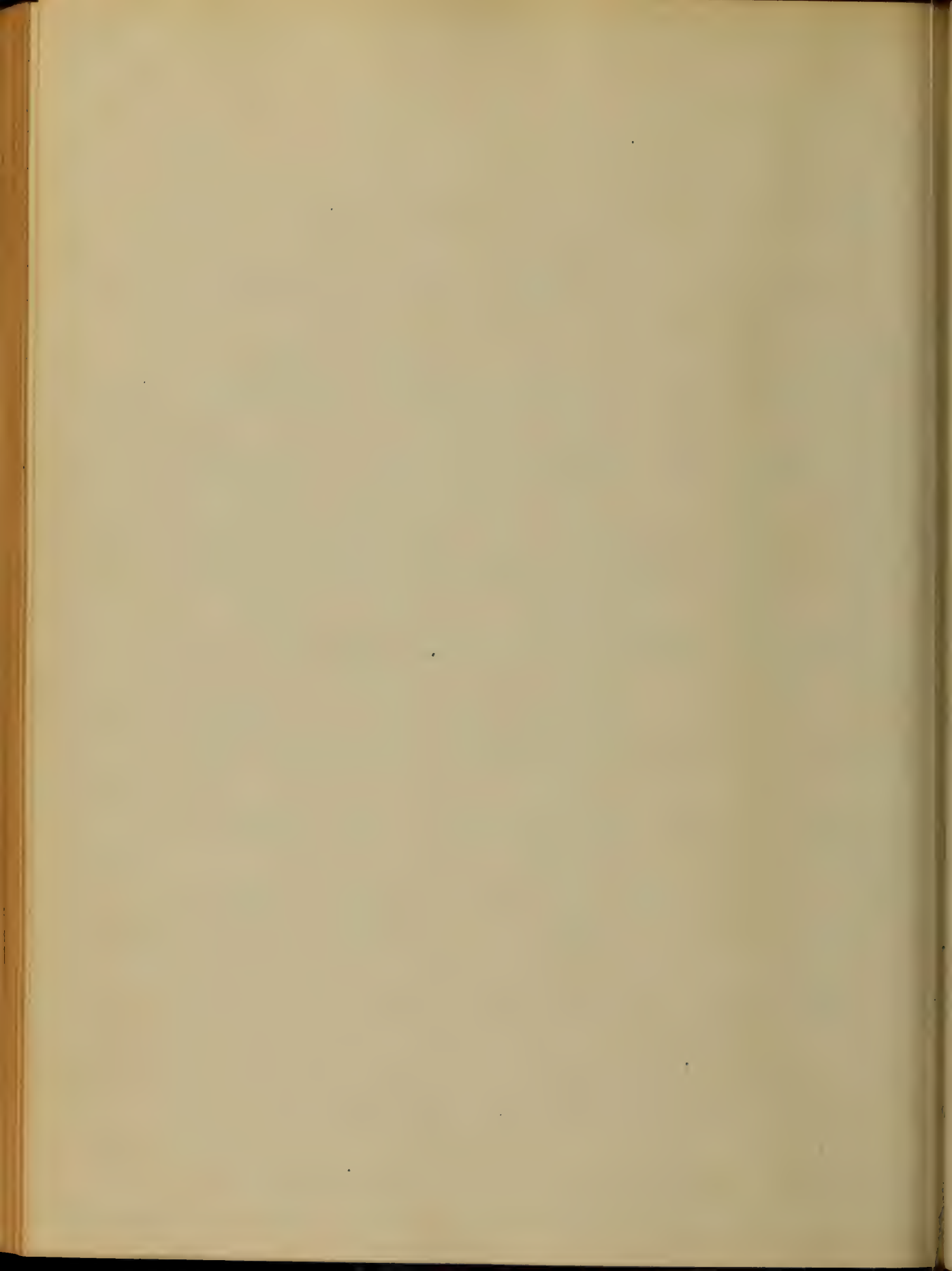
no one but the author has tried it, and that

it has been so long and so generally

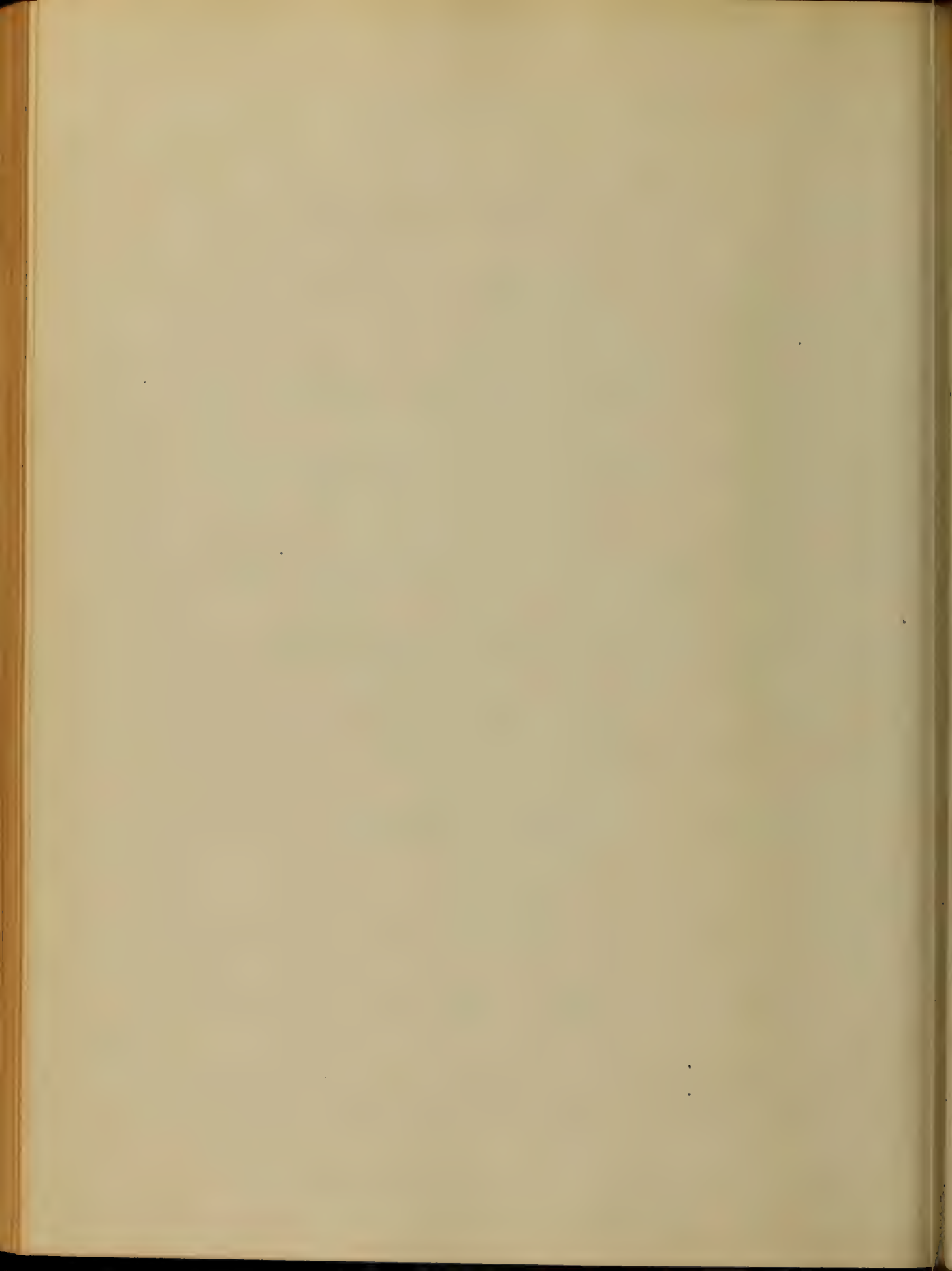
used, and that the importance of



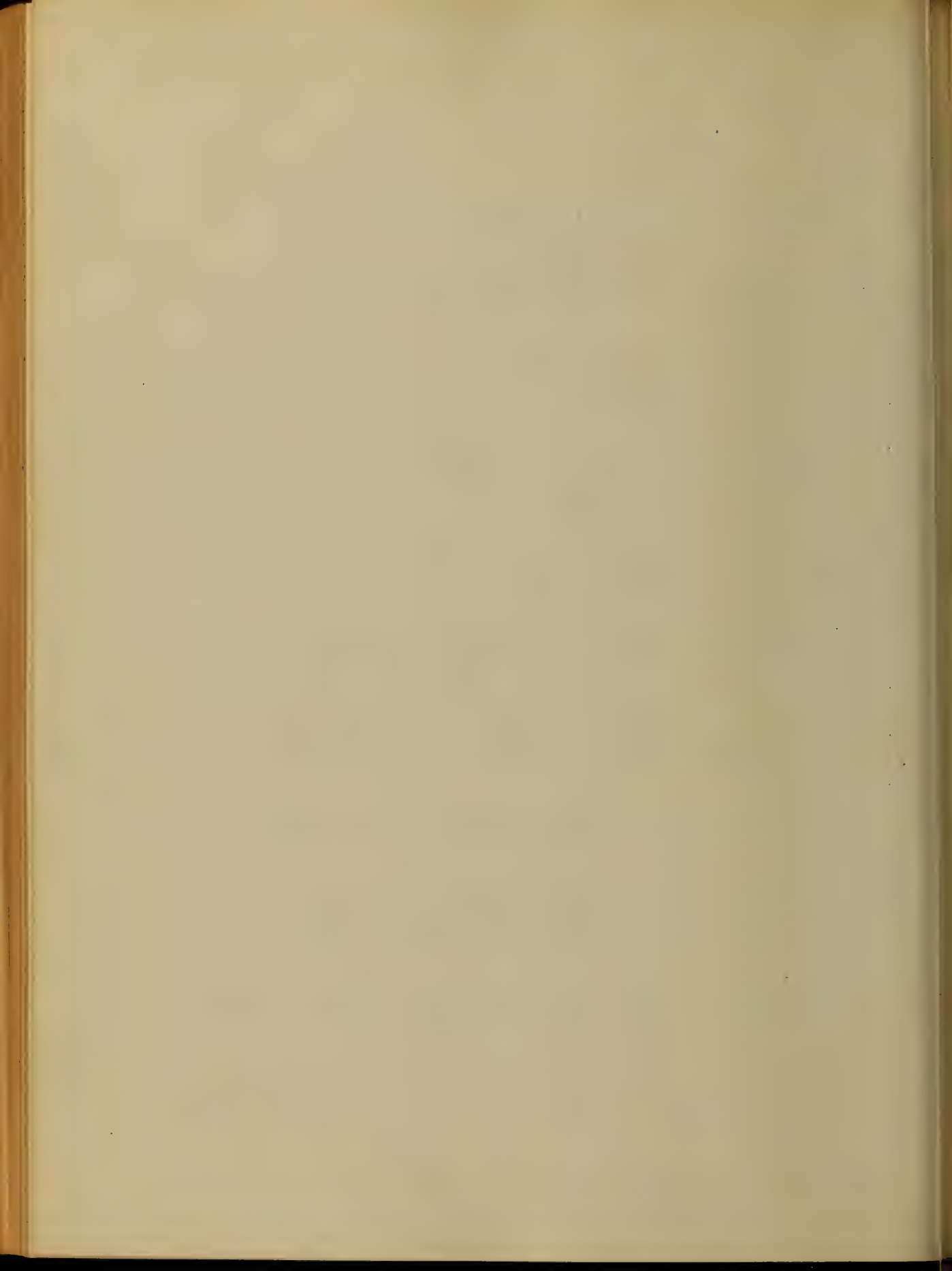
of forming a correct definition of the disease
which he is called to attend; and snatch
his patient as it were from the jaws of
death, who has laid so many victims in
the silent tomb. It is only after the
student of medicine, has completed his
medical training at a university of four
years, in the theory and practice of
medicine; that he becomes sufficiently
skillful in his profession to be master
of disease, that mighty desecrator of
flesh, staining upon mankind at all



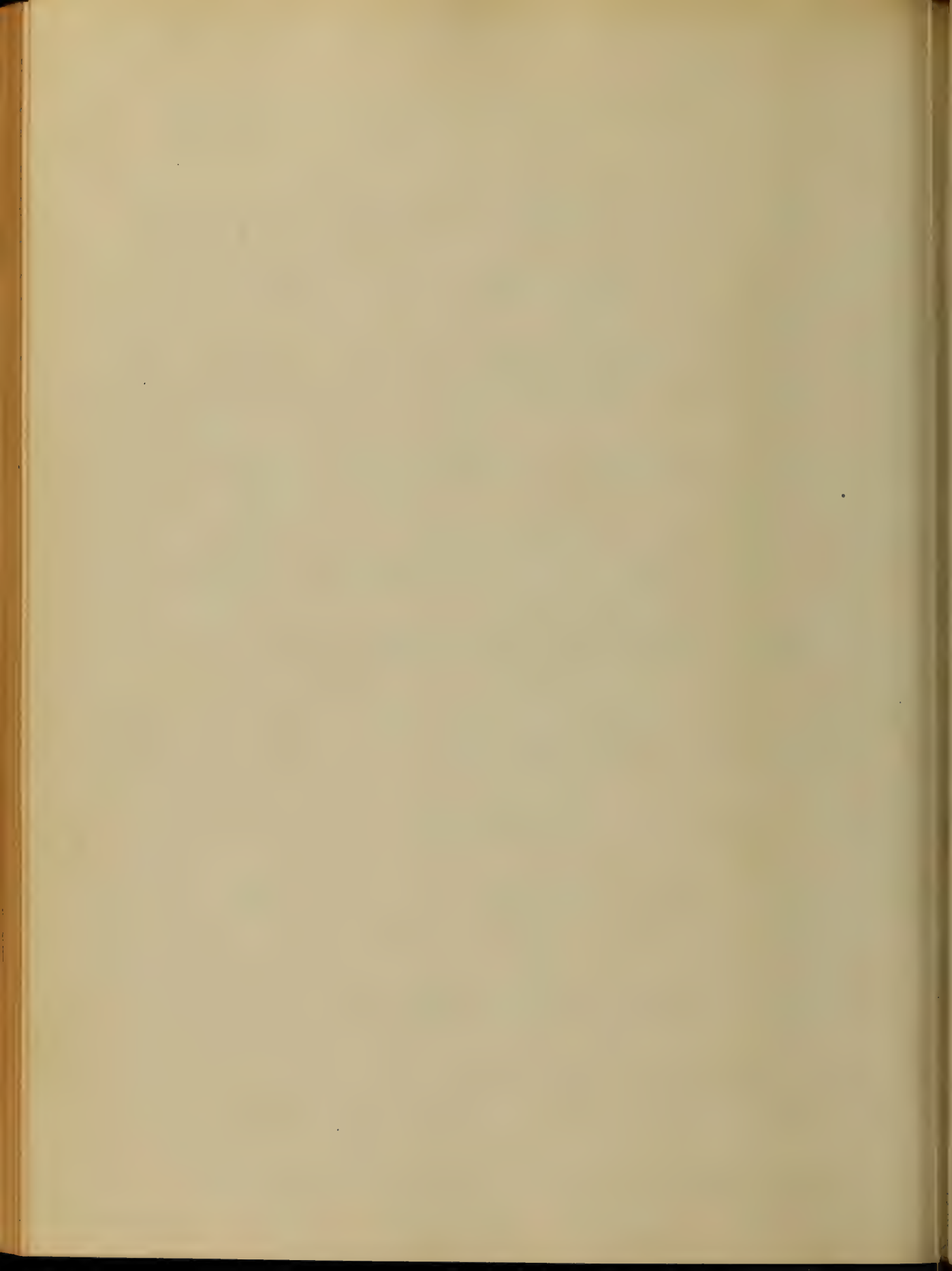
periods of life, not repeating themselves
in various ways by which it can be
held upon that road and further
going in to which but that the
birth of life and made it subject to
any disease or enemy that chose to
attack its organic structure. I have
said Master of disease, may not master, but
warrior against it; I have his knowledge
for his sword, and his drugs for his
shield to go forth in to the world to
the suffering humanity.



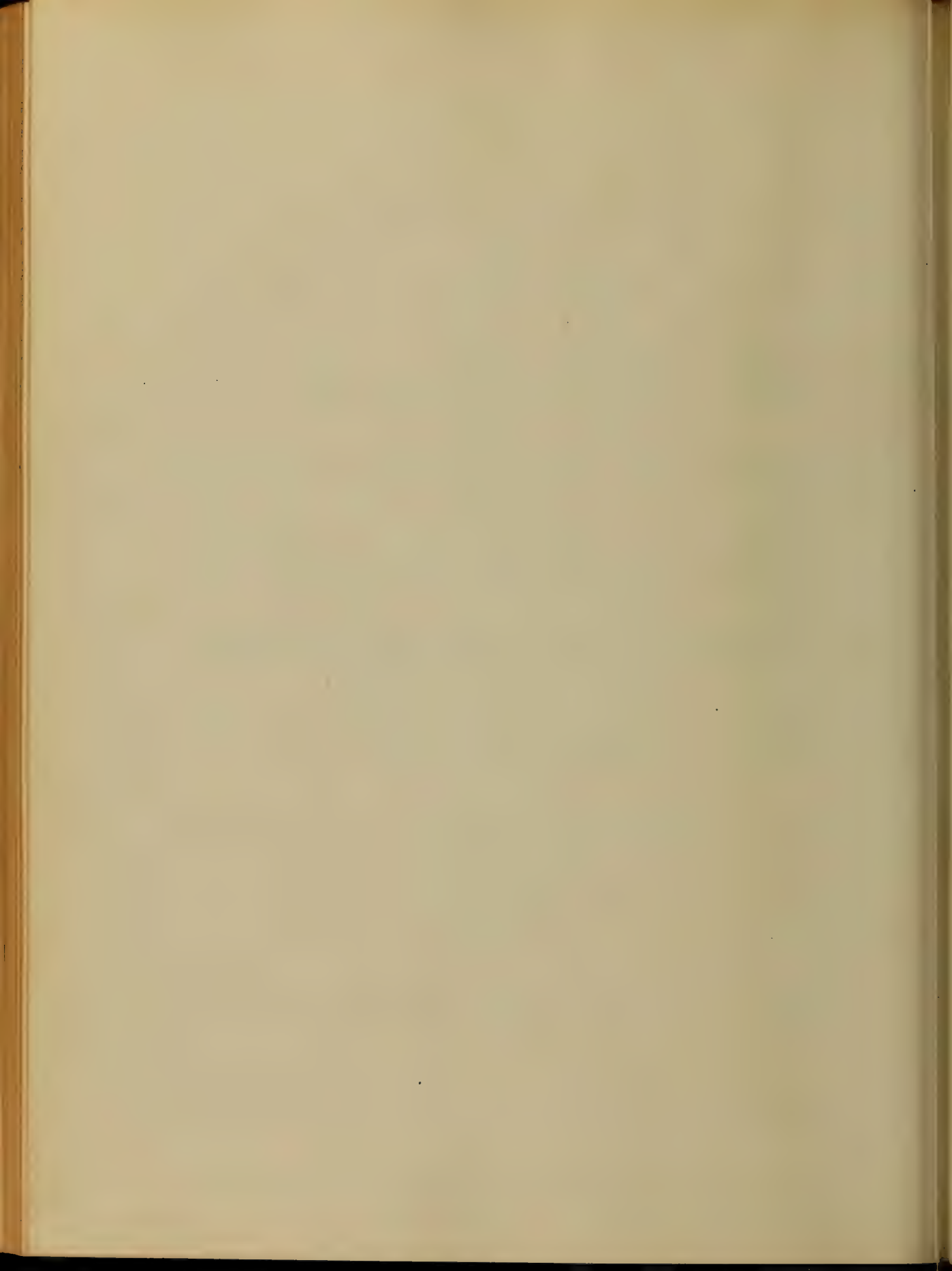
thousand, and more disease which it
is heir to. And after he arrays and
equips himself with what ~~is~~ ^{is} ~~is~~ ^{is}
in his possession and ~~is~~ ^{is} ~~is~~ ^{is}
before the world he ~~is~~ ^{is} ~~is~~ ^{is}
medical ~~is~~ ^{is} ~~is~~ ^{is} at this
important period of ~~is~~ ^{is} ~~is~~ ^{is}
~~is~~ ^{is} ~~is~~ ^{is}
an incorrect ~~is~~ ^{is} ~~is~~ ^{is}
would cause him to see ~~is~~ ^{is} ~~is~~ ^{is}
it should become known ~~is~~ ^{is} ~~is~~ ^{is}
and ~~is~~ ^{is} ~~is~~ ^{is}



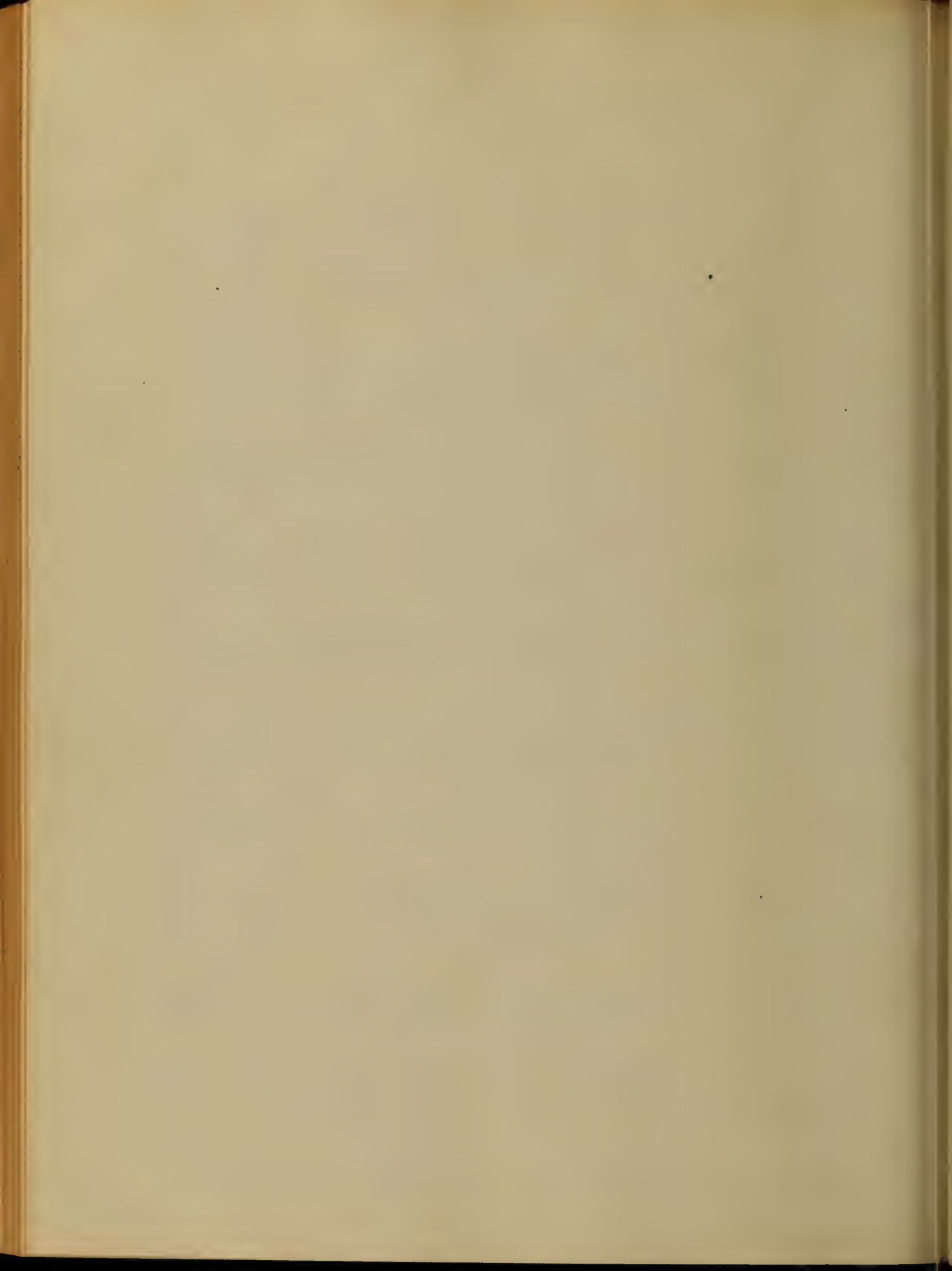
Total ruin as a practitioner of medicine,
and even if it did not, at ~~some time,~~
to regain his reputation. The ~~more~~
more shows the great practical impor-
tance of being slow in judgment and sure
in every step towards forming a correct
Diagnosis, upon which rests not only his
own reputation, but the life and the death
of his patient depends upon his decision.
Therefore the student must at all times
to be looked up to the age and days gone
The progress of medical science is being



Last half century has seen an intimate
new and closer relations with almost
all other departments of physical science,
but with none however in so intimate
and indissoluble a manner as with that
of forming a correct Diagnosis. And therefore
to keep pace with advancing science the
study required in forming a correct Diagnosis
by the young practitioner; as it relates
particularly to Medical Knowledge and
practice, has become an absolute and
indispensable study; forming the

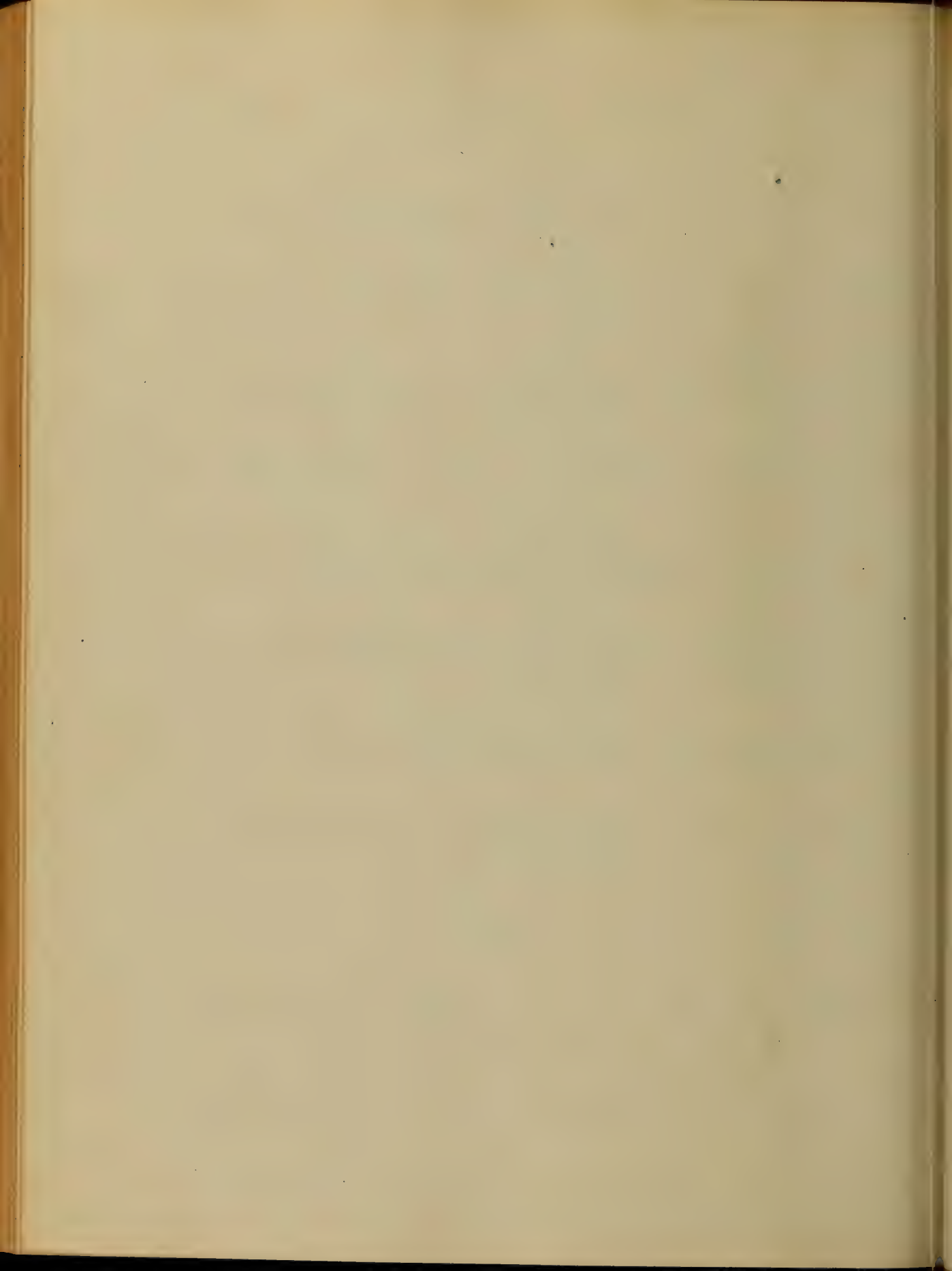


richer to practice Teach, or in any
cultivate Medical Science, and
successful in his profession, and meet
all its required demands at the proper
time. watching every symptom to see that
it bears testimony to the fact that he
in no instance violated his own Principles
of the disease, and that he has not established
a system of treatment based upon prin-
ciples of erroneous and unfounded charac-
ter. A use of treatment not consistent with the
phrenological, chemical, and physiological

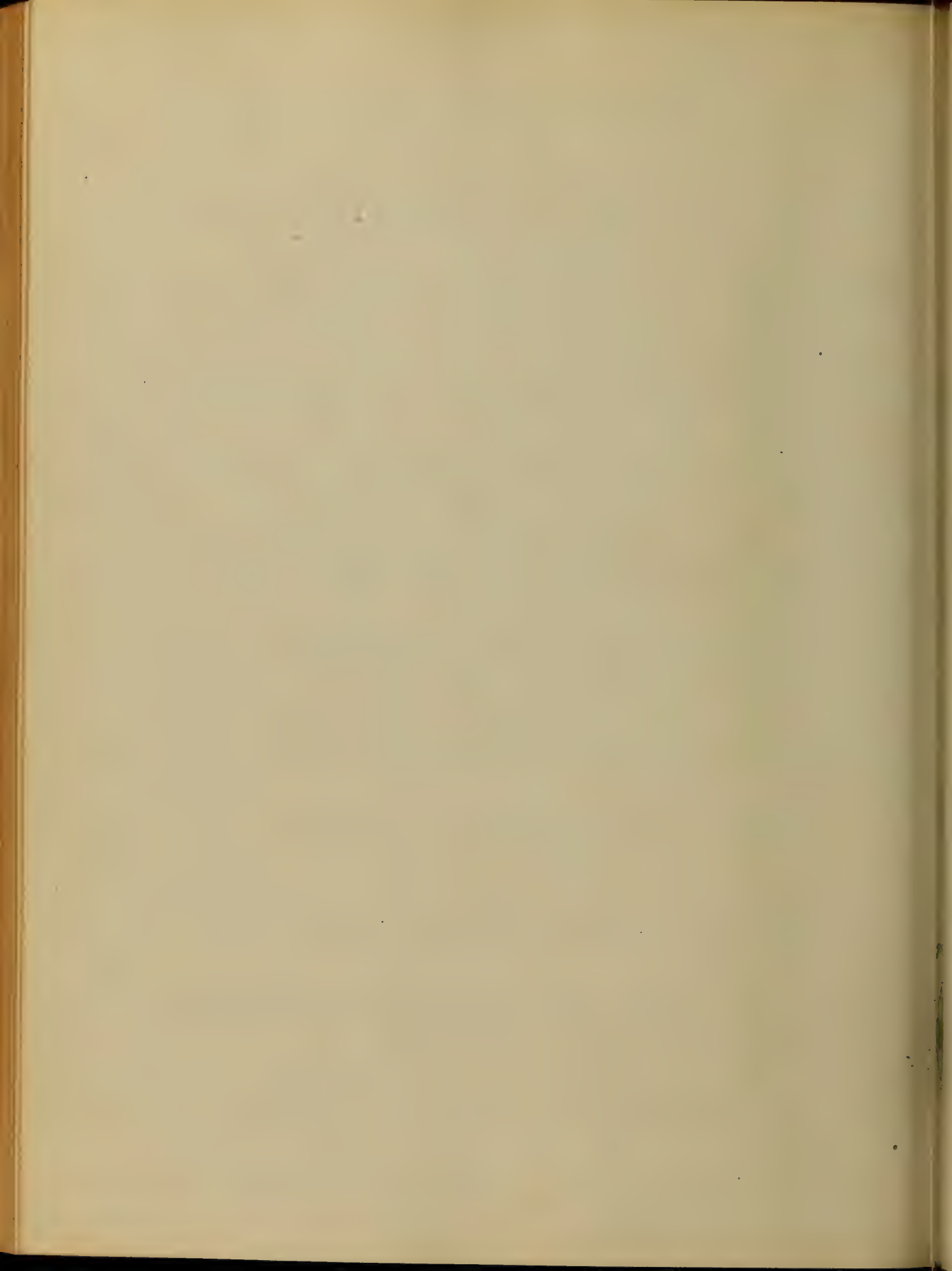


well as to the physician all having processes
and phenomena to deal with, and
consequently each has need of becoming
familiar with them at least in general
they relate to their respective lines of
practice: to those to which they refer
in the symptoms and treatment correct
Diagnosis. This subject therefore
embraces more aspects than one.

It presents us not only with the
and practical ideas of forming our diagnosis
of treatment for many various symptoms

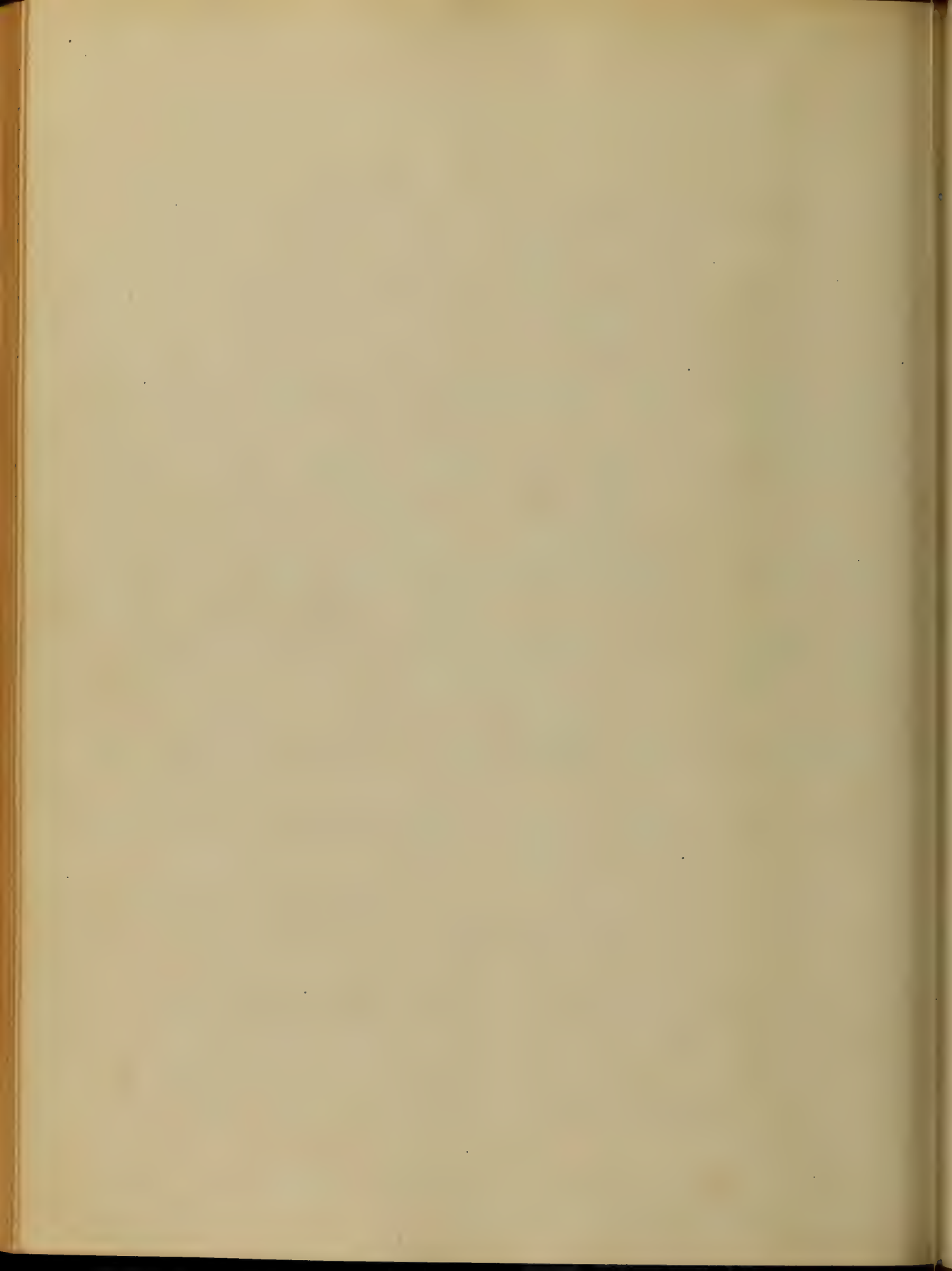


and diseases, not it affords a practical
view of medicine in growth, and in
repair; in cause and cure, disease, and
remedy, and of nervous phenomena, in
particular, thus throwing light on the
whole range of healing art, by studying
signs and symptoms. Care and practical
attention should attend our every step
as students, in this interesting depart-
ment of medicine, and the study of medicine
has ever stood the test of time and
general approval.

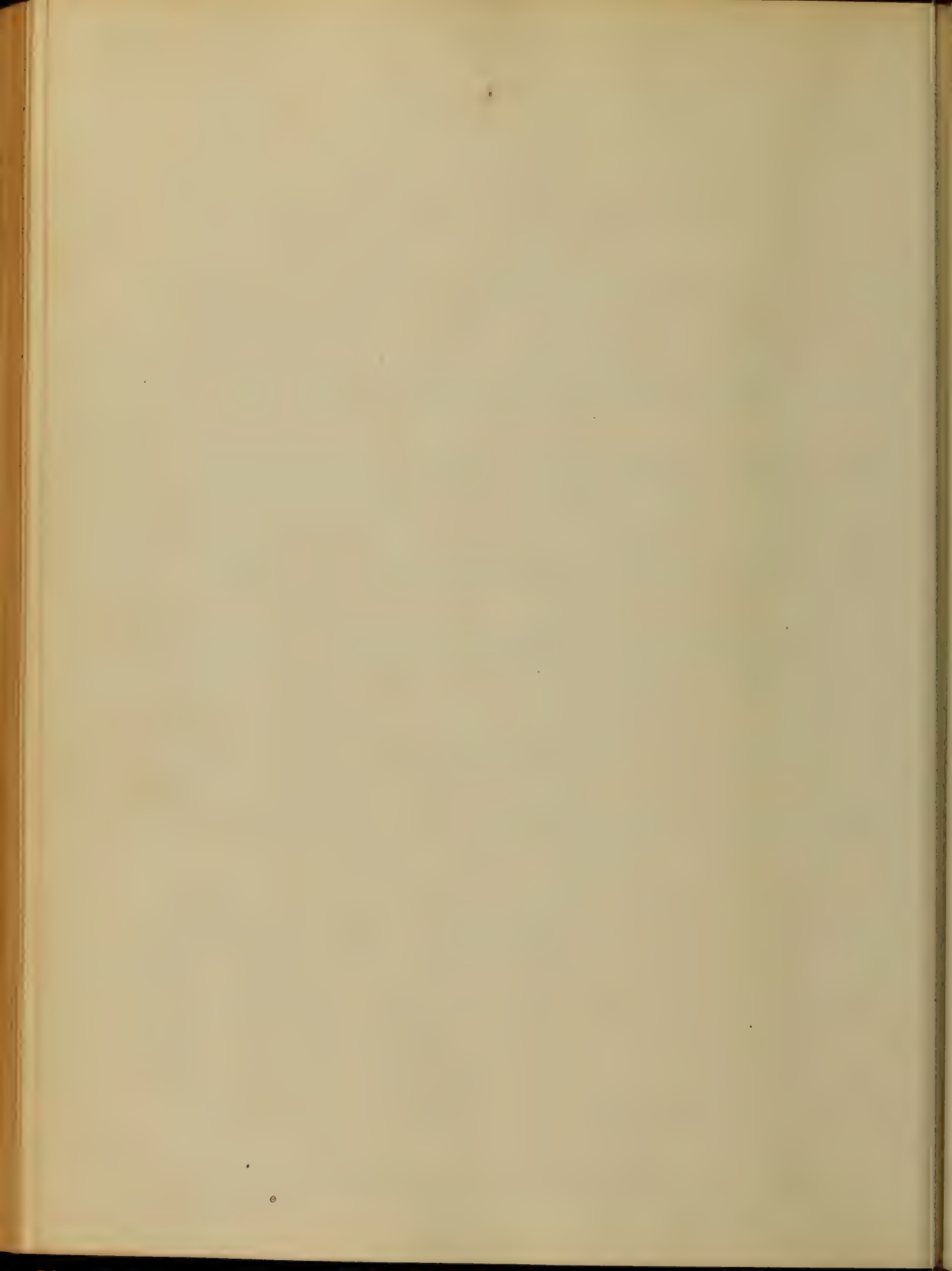


intelligent that is not strictly in
harmony with the laws of nature
and with the moral laws of God.

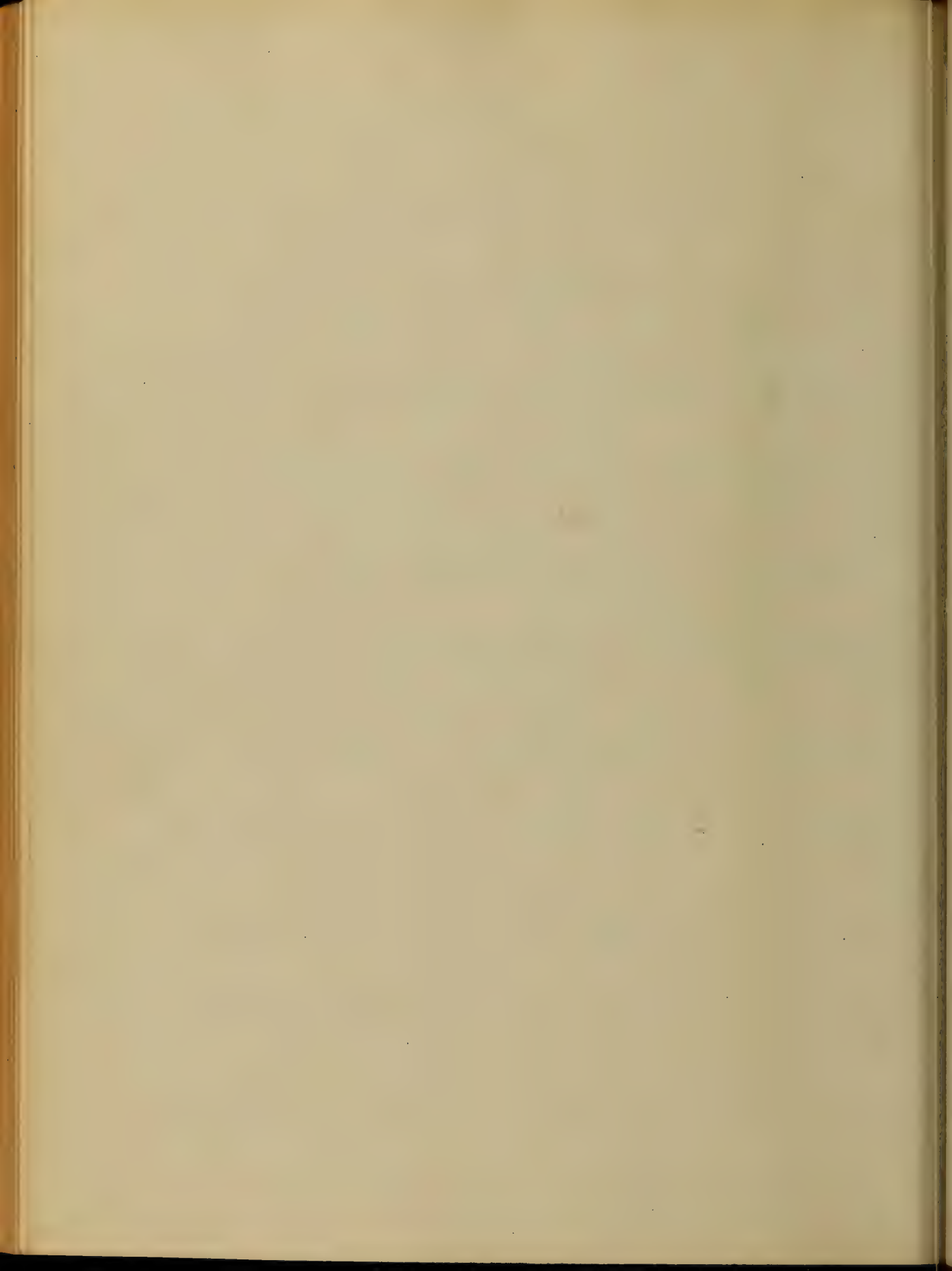
What I require is an im-
partial reception for our American
medical world, of what has already
been achieved by them. *Physiology*
is usually treated of as a science and
presented as a part of the foundation
of a thorough medical education that
course embraces the whole of *physiology*.
All classes of organized *Physiology*



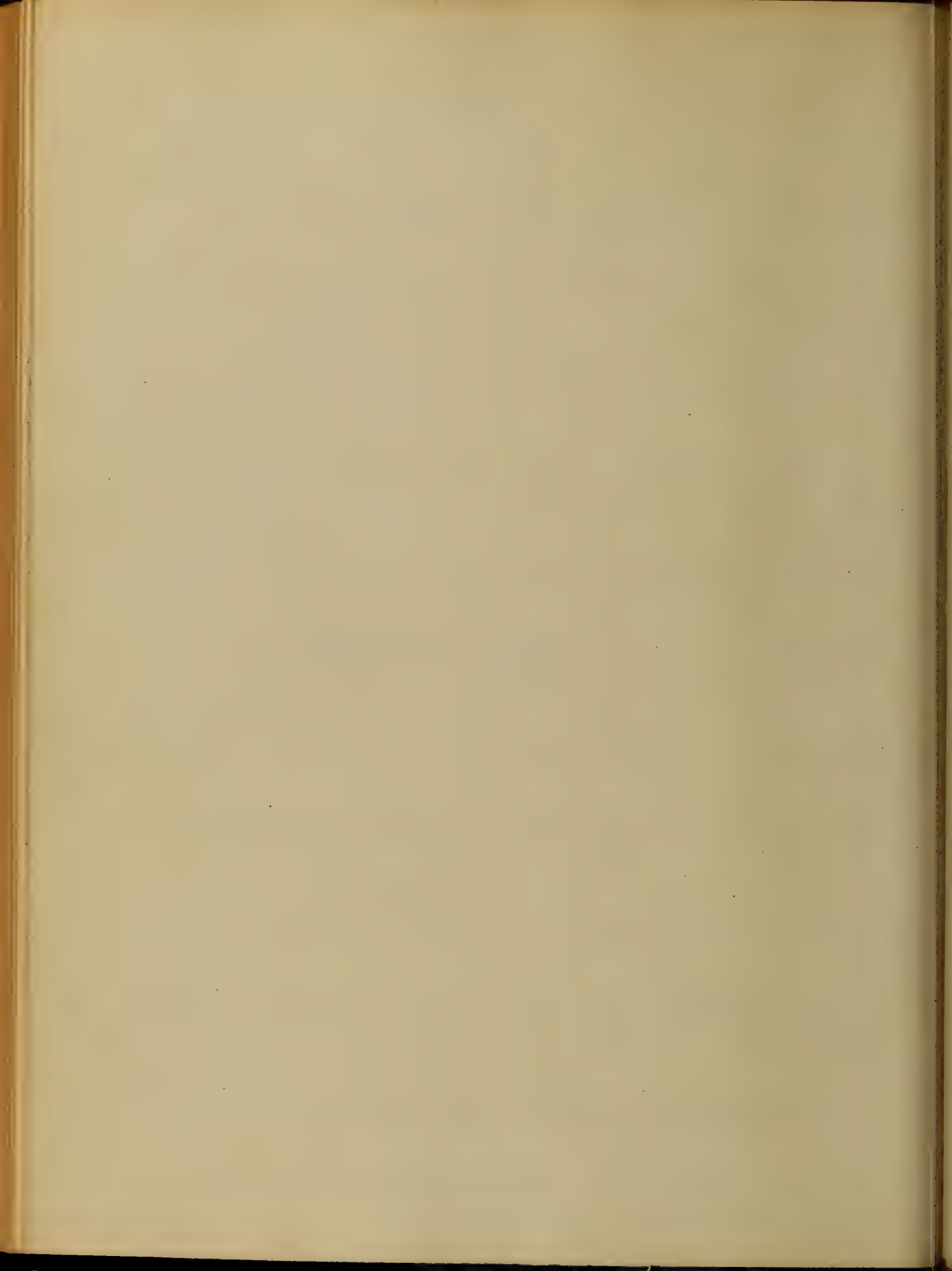
organisms have their appropriate shapes according to the mode of development, nutrition, and growth. But when through disease they become the seat of disease and refuse to perform their special functions which nature has commanded them to perform, and they like the dead material of non-living bodies become foreign matter which is required to be assimilated to healthy tissue or to be expelled from the body. At this important point

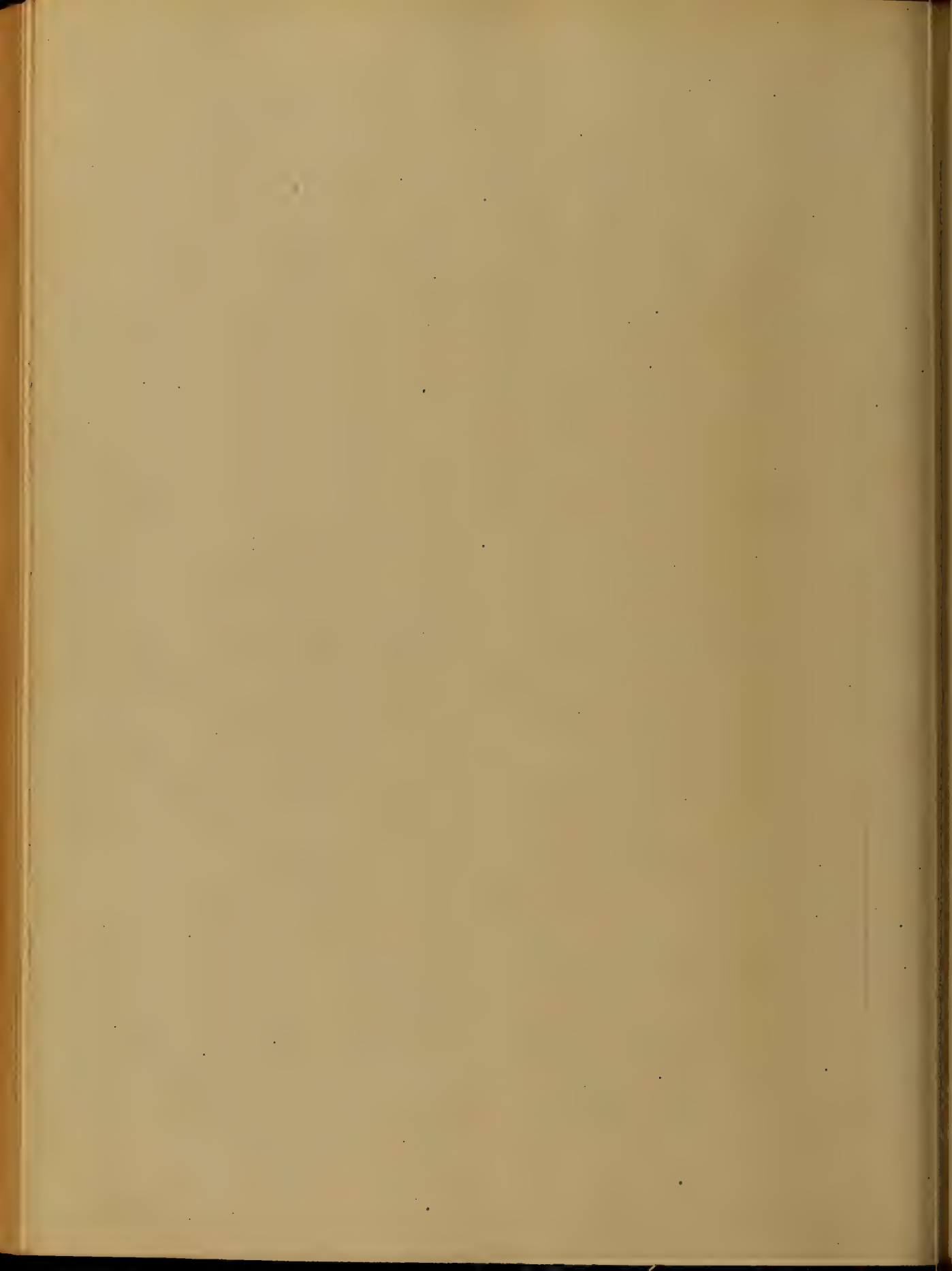


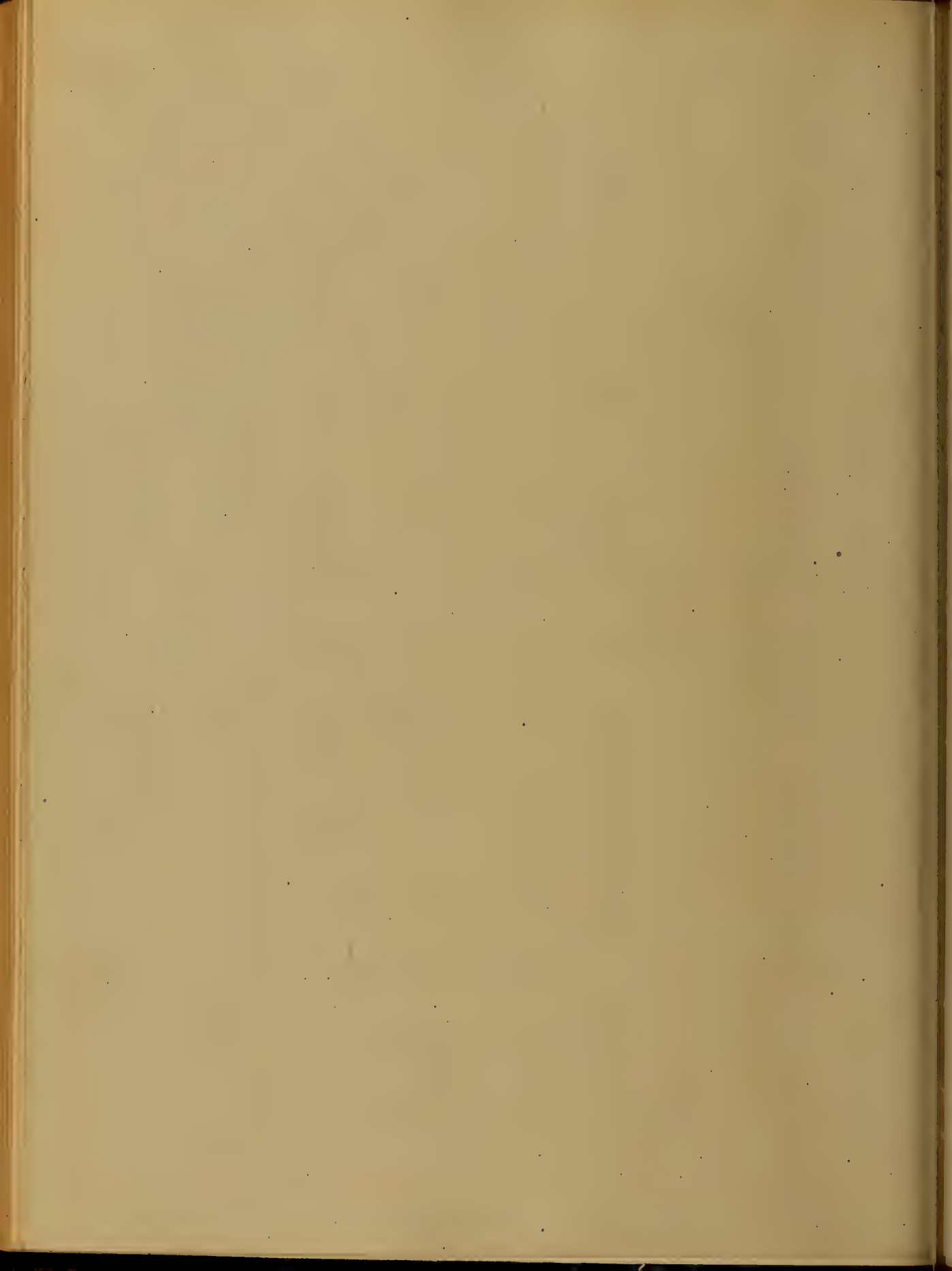
The young practitioner is required to
form a correct Diagnosis from its
varying symptoms and the different stages
of the disease which they may be labour-
ing under, by ascertaining the nature
the rapidity of its progress and by
bringing them to a correct settled point
by a decision of his judgment, to pre-
scribe the appropriate medicine required
in special, and in general treatment,
to allay or arrest the morbid process
of the disease and reduce it to the



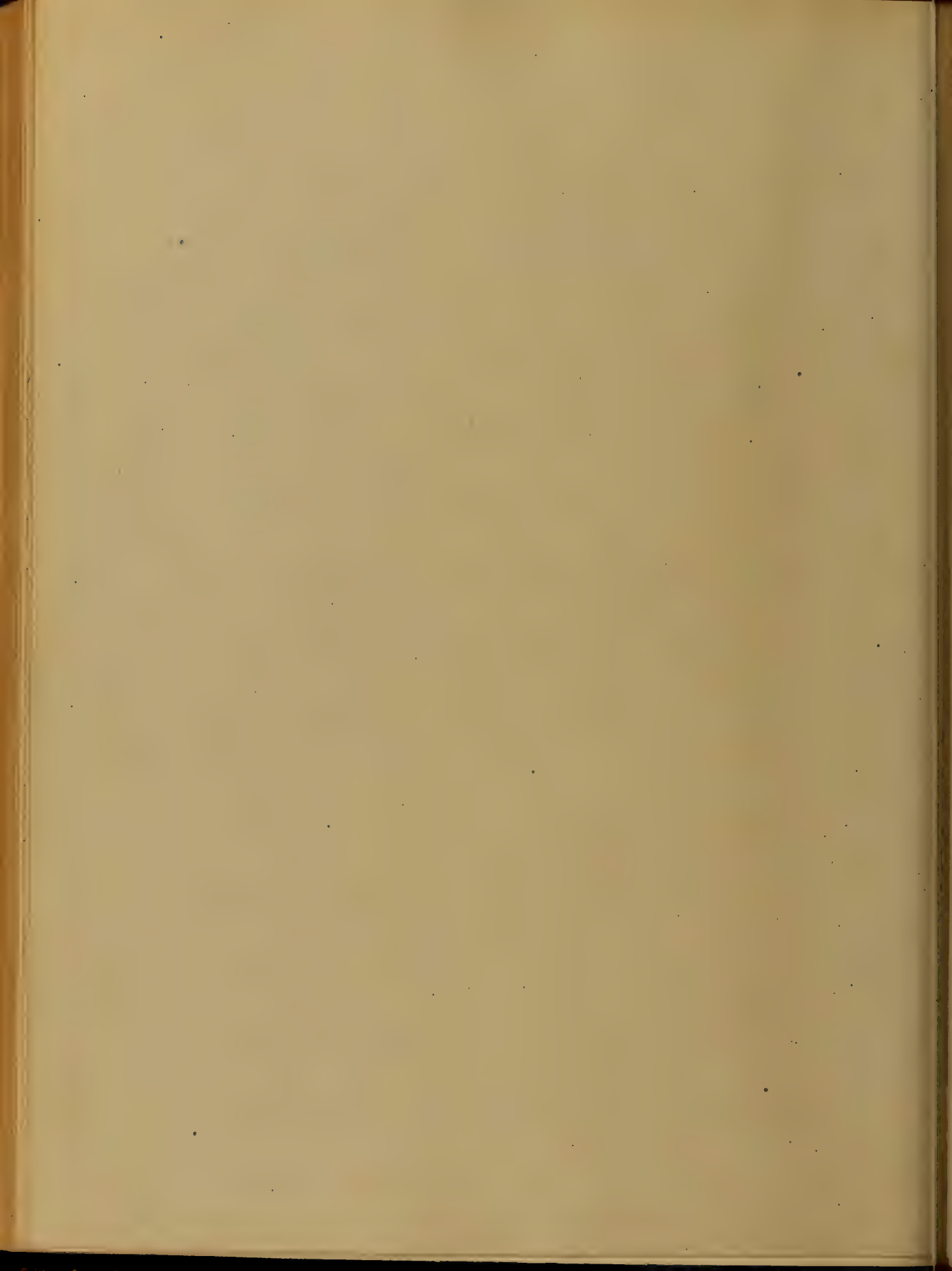
healthy condition of its normal state
and thereby assert that power which
is not in accordance with the laws of
nature in the living body. The action of
various forms of disease, and method
of the administration and application
of drugs require to be studied and to
be understood to be enabled to apply them
at the proper time, and to the appro-
priate disease in order to get a true
knowledge of the Philosophy of life, the living
disease, and the catastrophe of death.



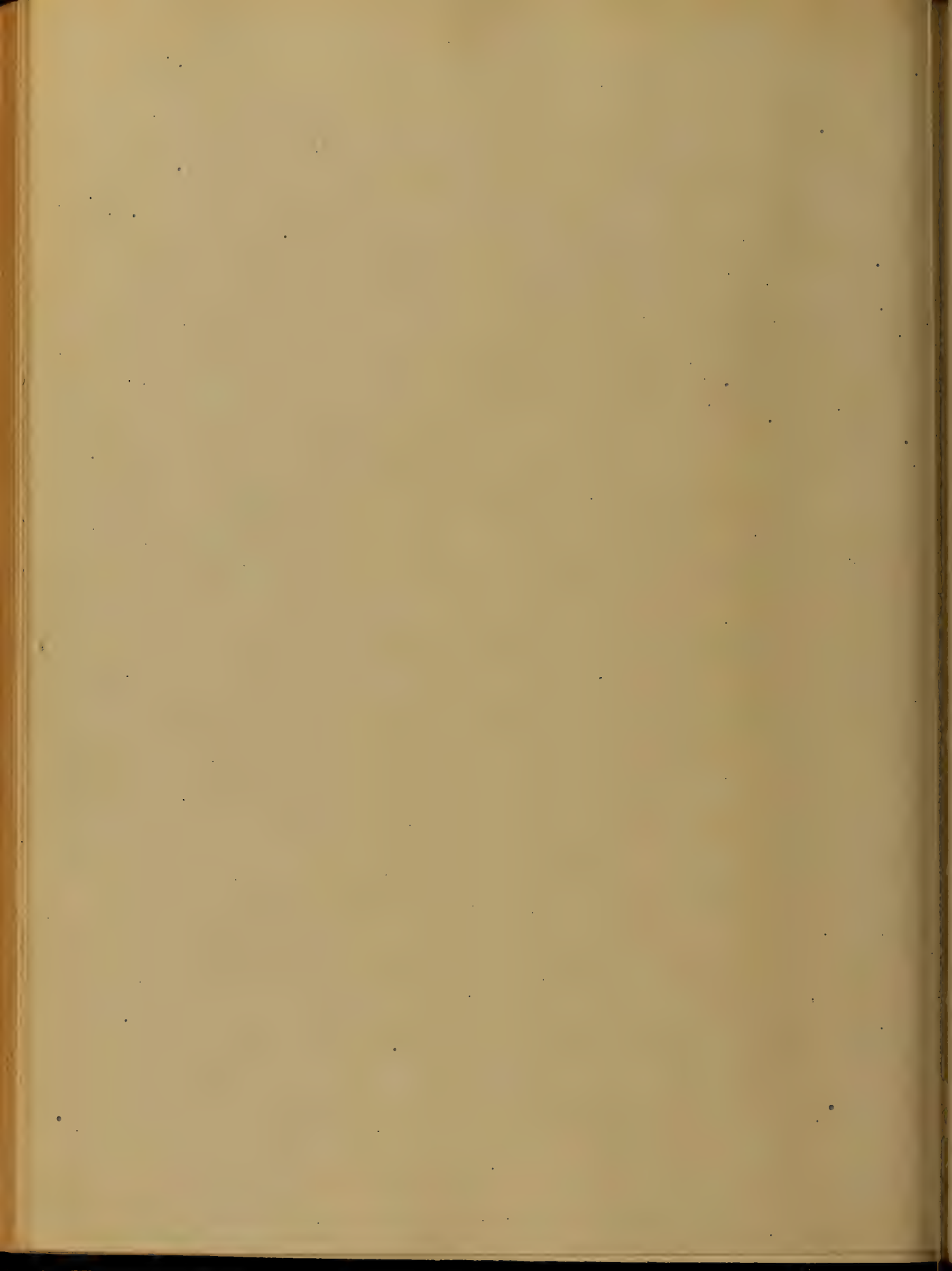




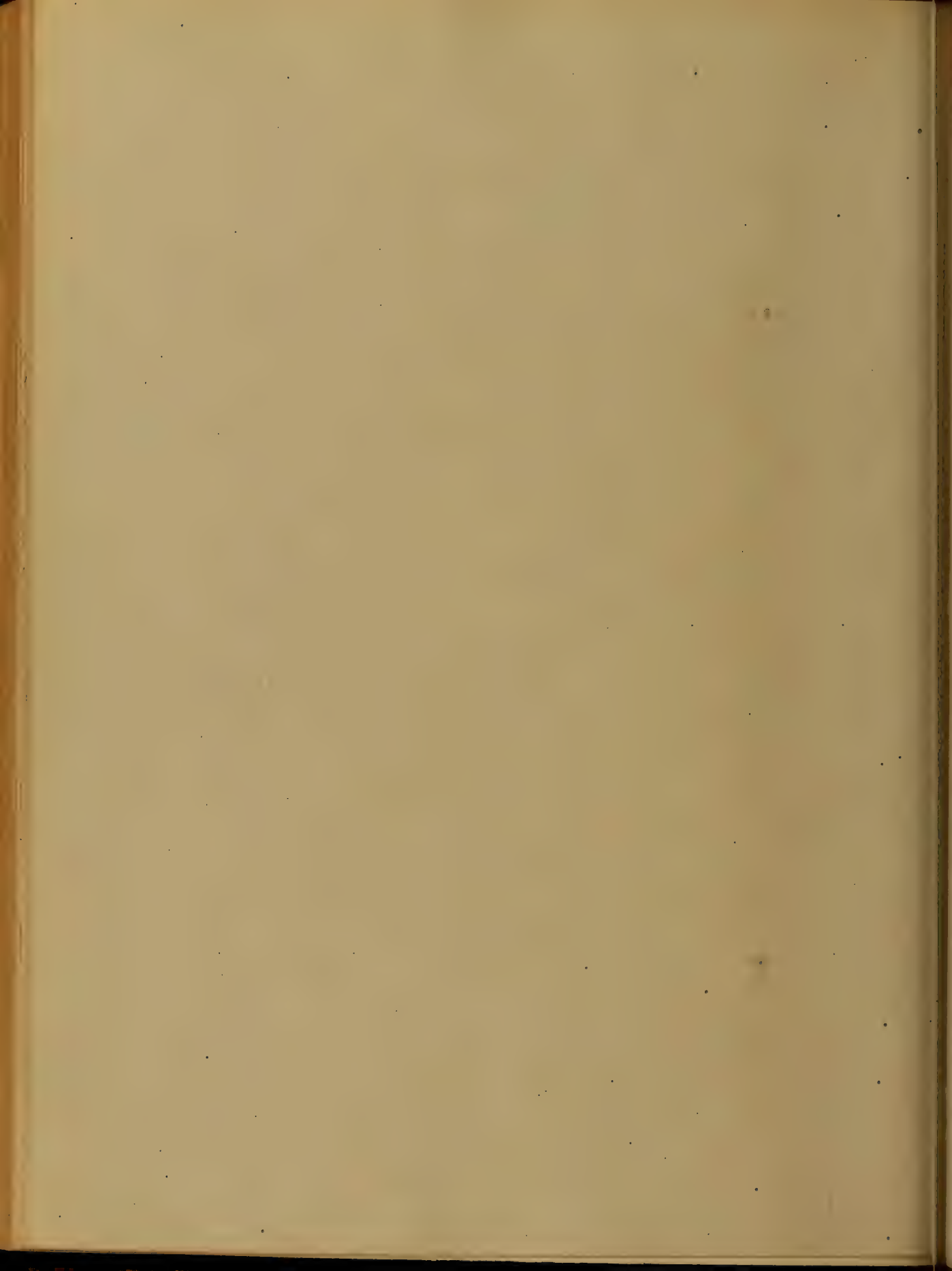
next in order will appear the
questions of Midwifery, Surgery, &c. &c.
the special part of the course
time: some are necessary to be spent
in which drugs in some form or other
must be administered, which
is the principal object of the course.
The first is to be spent in the
study of the natural history
of the human body, and the
profession; we must do it with
fullest sense of their importance in
the relation of the student to the
future medical career, and reputation
eventually, as the result of the
study of the course will be



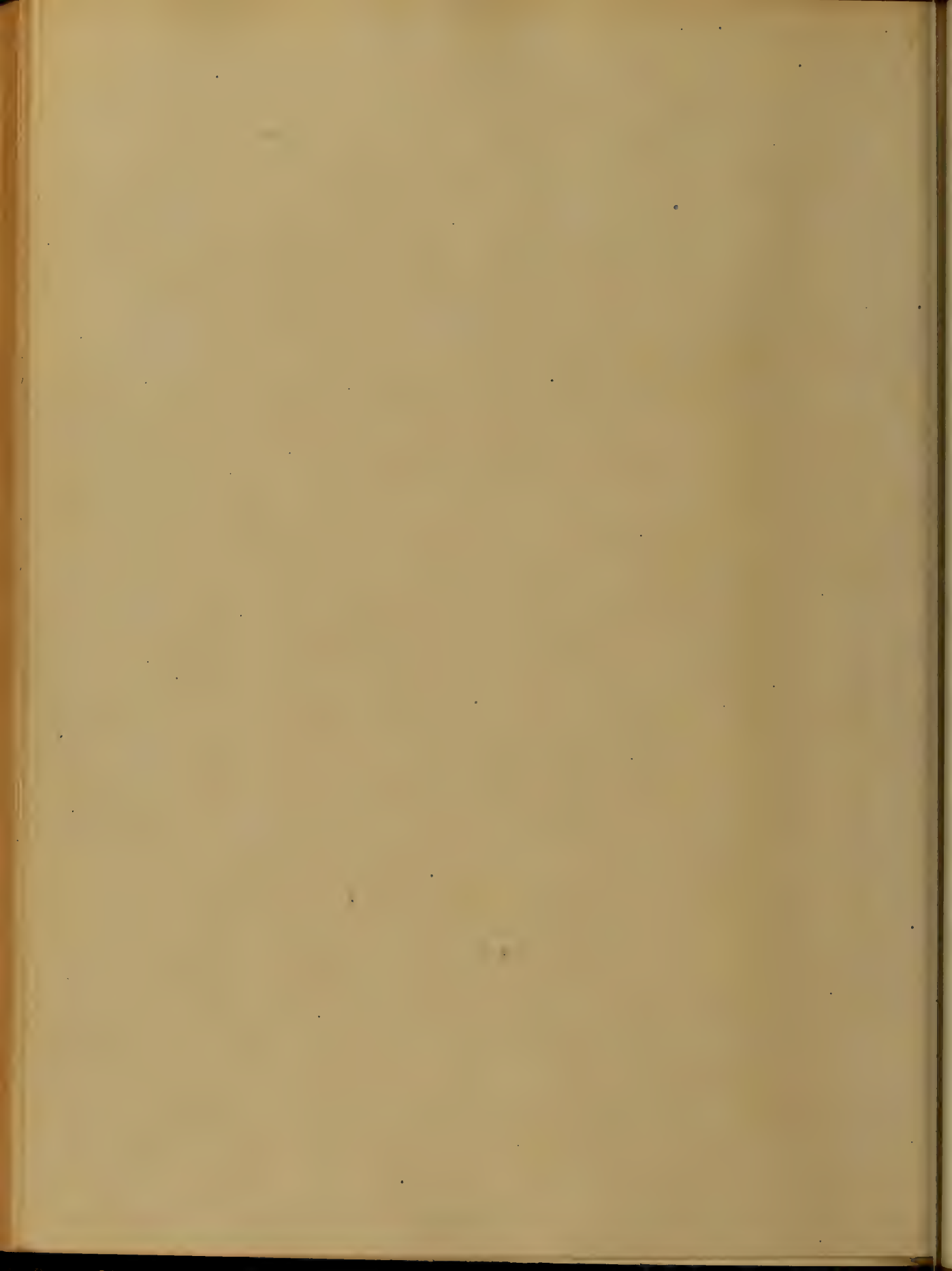
...
...
... persons ...
...
to constantly keep in mind the
great principle ...
that is to the interest of the patient ...
... power; his hereditary affections ...
whatever deformities, may ...
either physically, or mentally.
In experience has taught that certain
medicines ...
to ... of patients ...
particular disease ...



... while in the ...
... given for example ...
... the least ...
... the ...
... effect was the ...
... climate. It is ...
... and the ...
... medical career ...
... Physique, of the ...



For a routine practitioner, new
gains for himself the good
reputation of the community, or the
income due to his profession.



Febris Intermittens

Intermittent fever, a term applied to fevers in which the paroxysm intermits and returns, usually at nearly equal

intervals; which includes three principal

species, viz: *Quotidian*, the paroxysm

of which returns every day;

Tertian, in which the disease returns

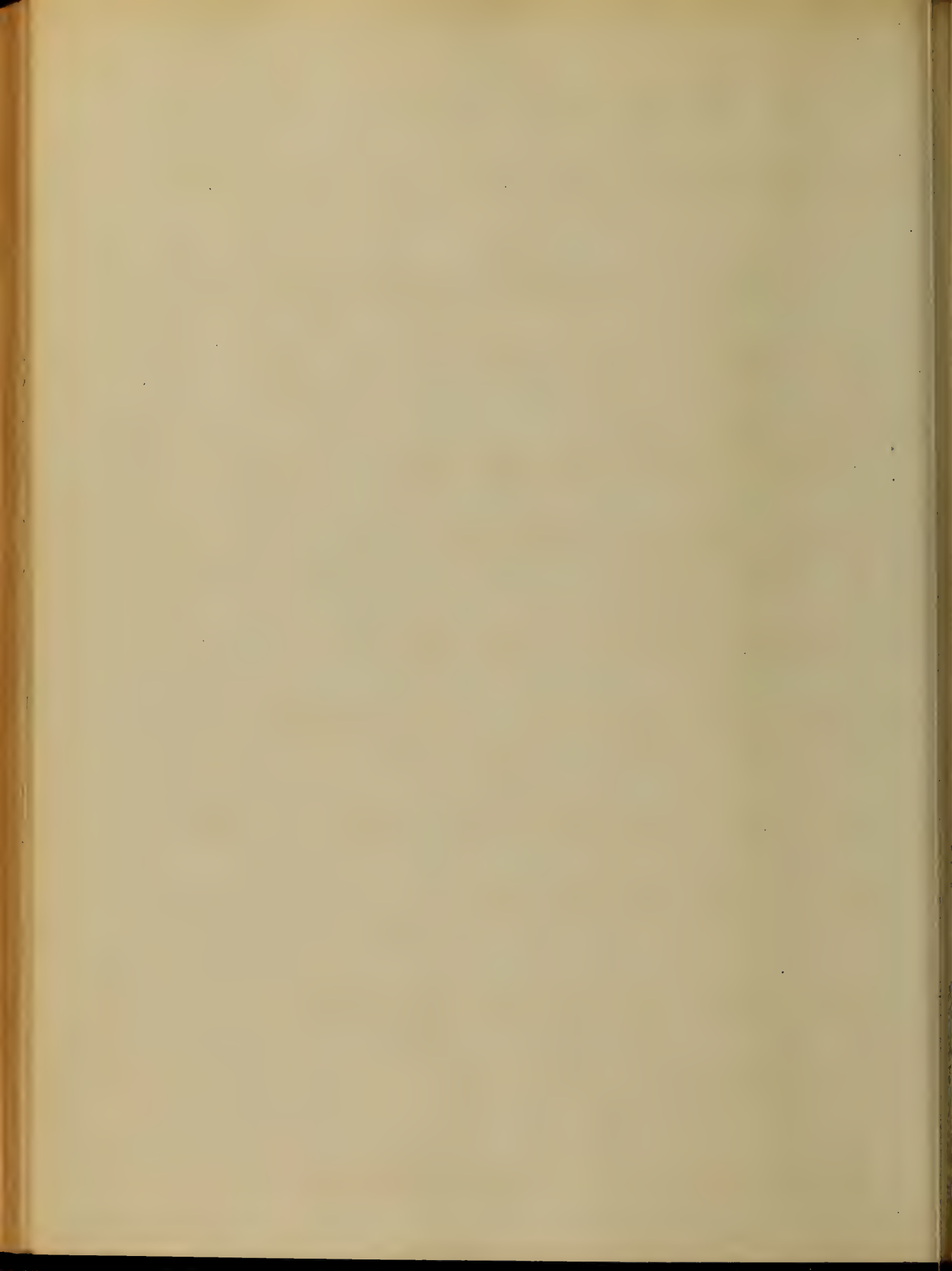
every third day, that is on alternate days;

Quartan, in which it returns every fourth

day, thus leaving two days between

the paroxysm.

This disease is characterized by febrile



paroxysms, recurring at stated times.

and by the absence of fever between

the paroxysms.

¹⁴¹ The intervening period, from the end
of one paroxysm to the commencement

of the next, is called the intermission;

the whole period occupied by one paroxysm,

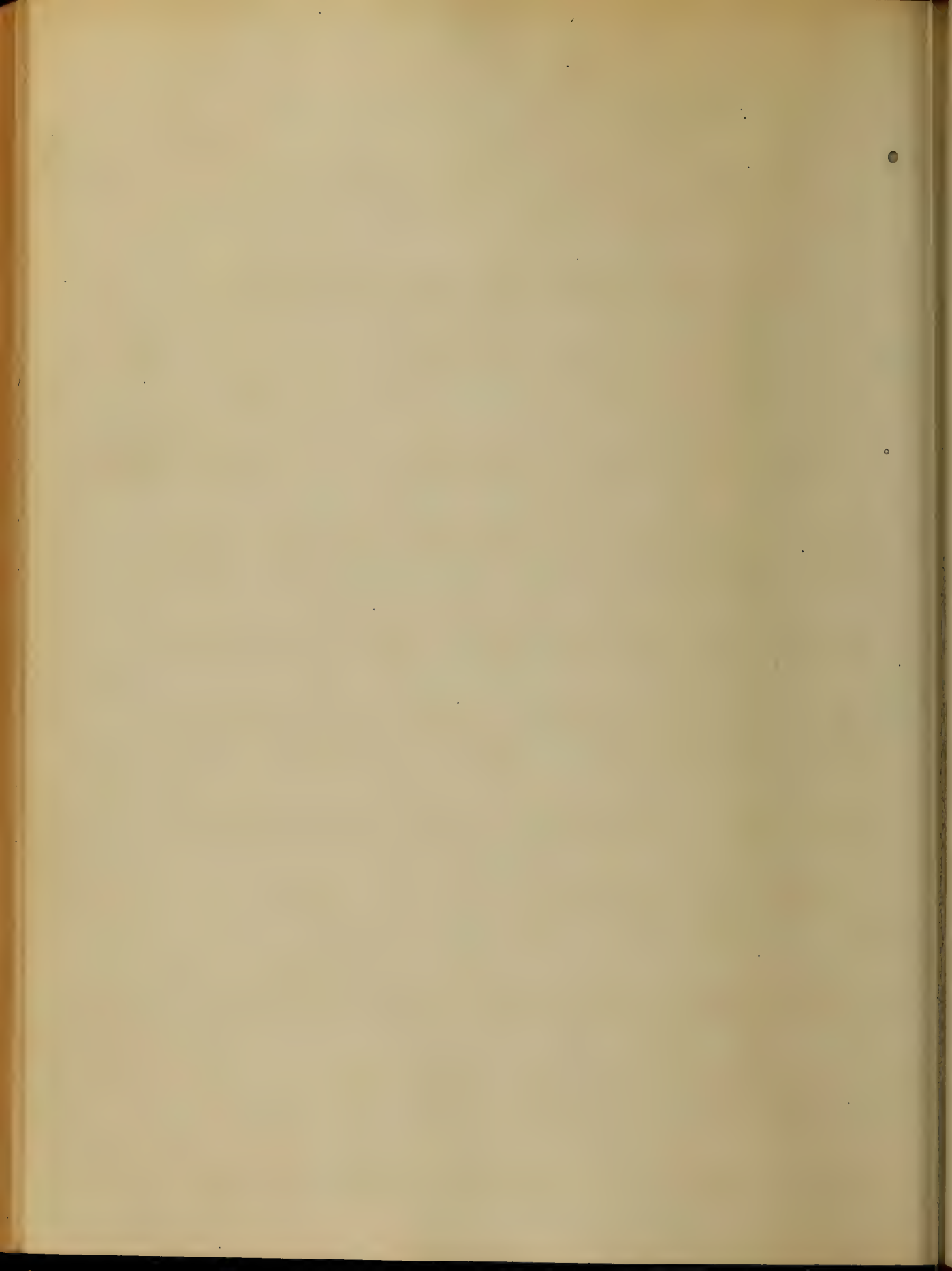
and the succeeding intermission, is called

the interval.

The regular types above mentioned are

liable to numerous diversities.

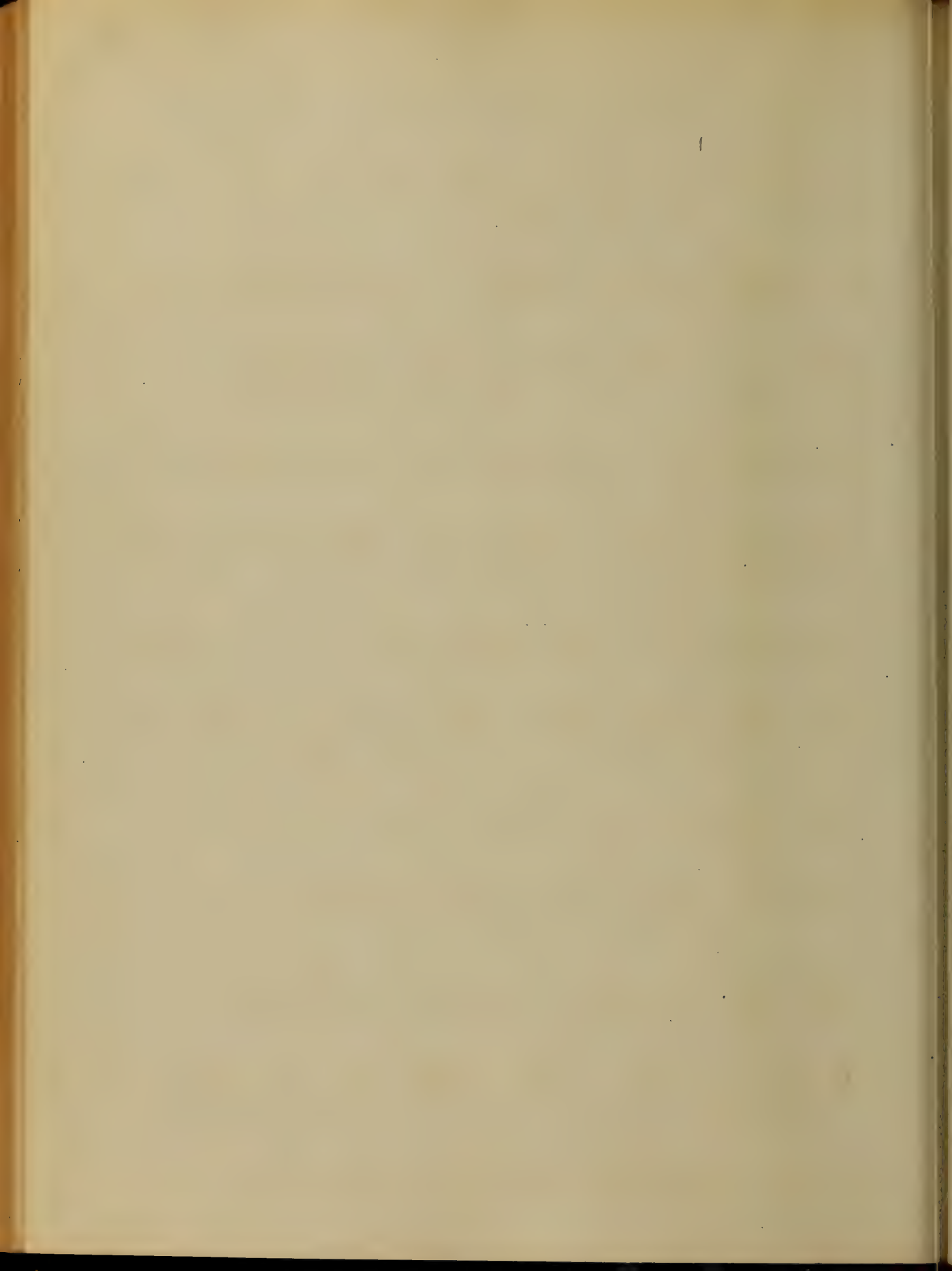
¹⁴² The quotidian is sometimes double, being



two paroxysms every day.

There is a double tertian, with a daily paroxysm, occurring at different periods, or with different characters, on successive days; the paroxysms of alternate days are by corresponding with each other.

Thus, on the first and third day, the paroxysm may take place in the morning, and correspond with each other in grade and character; while on the second and fourth day they shall occur in the afternoon, and in like



manner, correspond with each other,

but differ from those of the other two

days. It thus appears that two

tertians are going on together, but

with paroxysms at different periods

of the twenty four hours.

Sometimes there are two paroxysms in

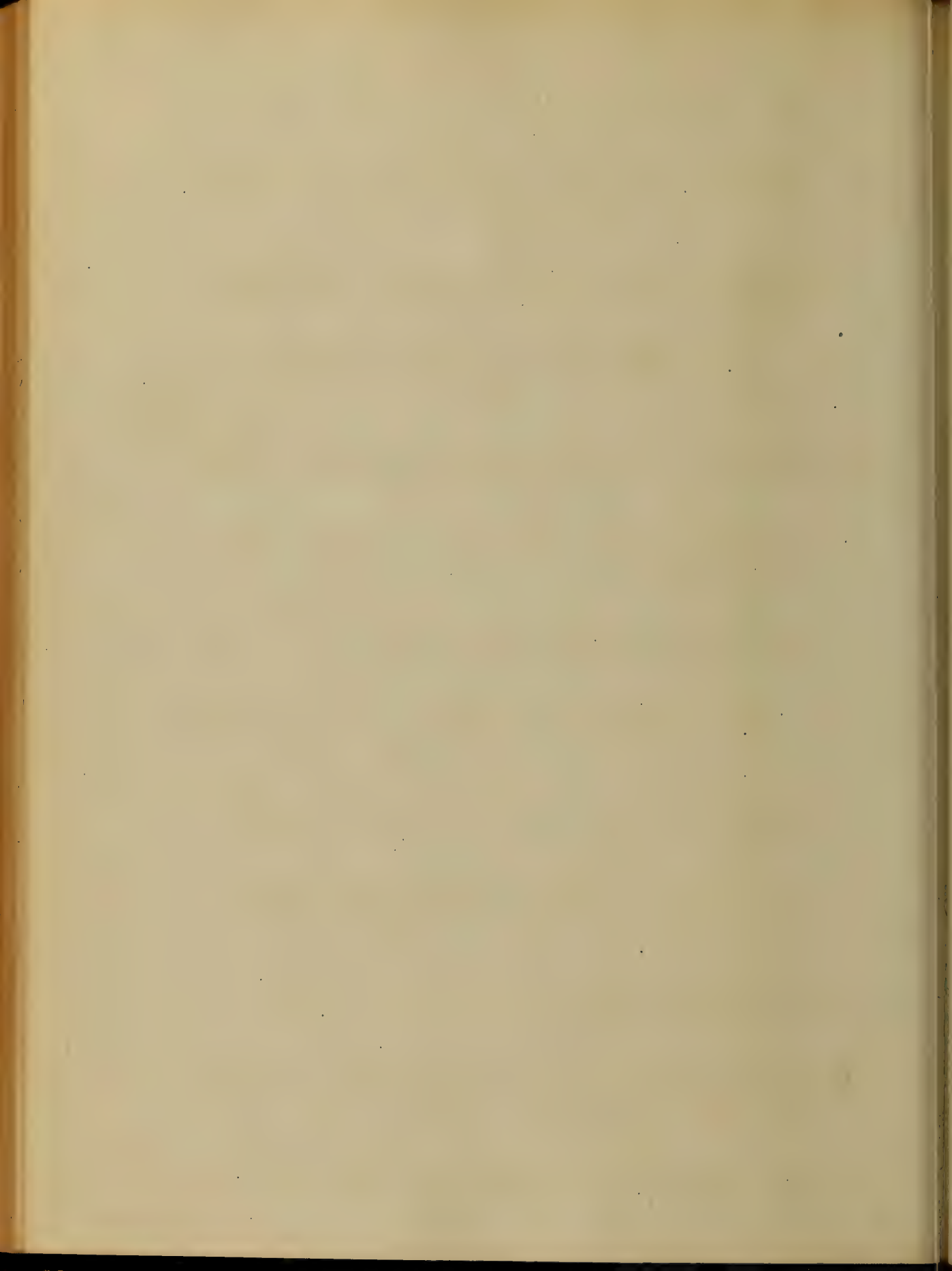
one day, and none in the next.

This variety is named duplicated or

doubled tertian.

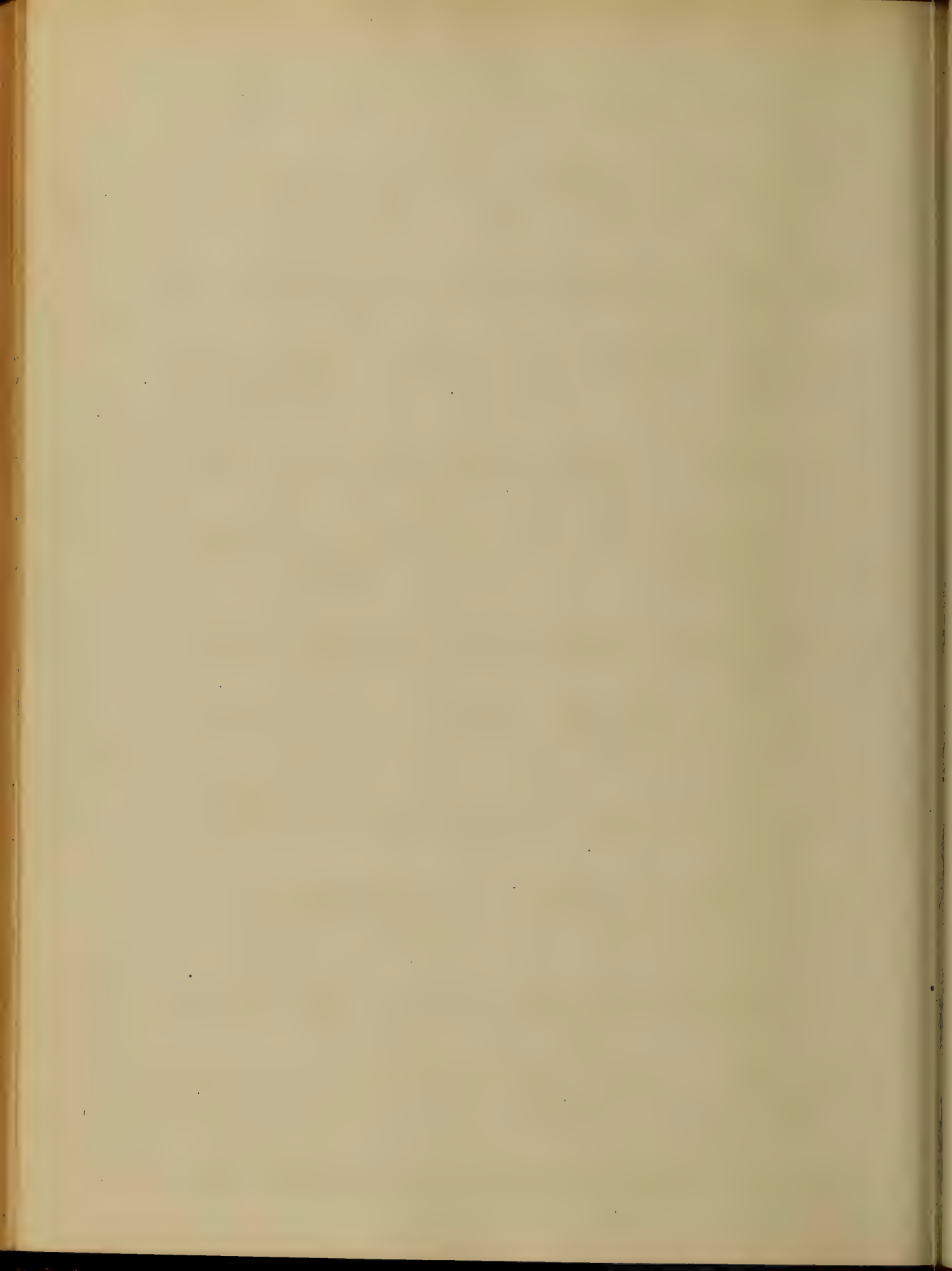
Other varieties are mentioned by writers

as the tripled and the quadruple tertian.



the doubled and tripled quarters, &c.
but these distinctions are mere refinements,
of no practical value, and exceedingly rare
in nature; if indeed they have any other
foundation than in the imagination
of observers. Of all the varieties above
enumerated the last, and justitia
are the varieties which occur most
frequently. It is said that cases
have been noticed, in which the parts
yours are altogether imperious.

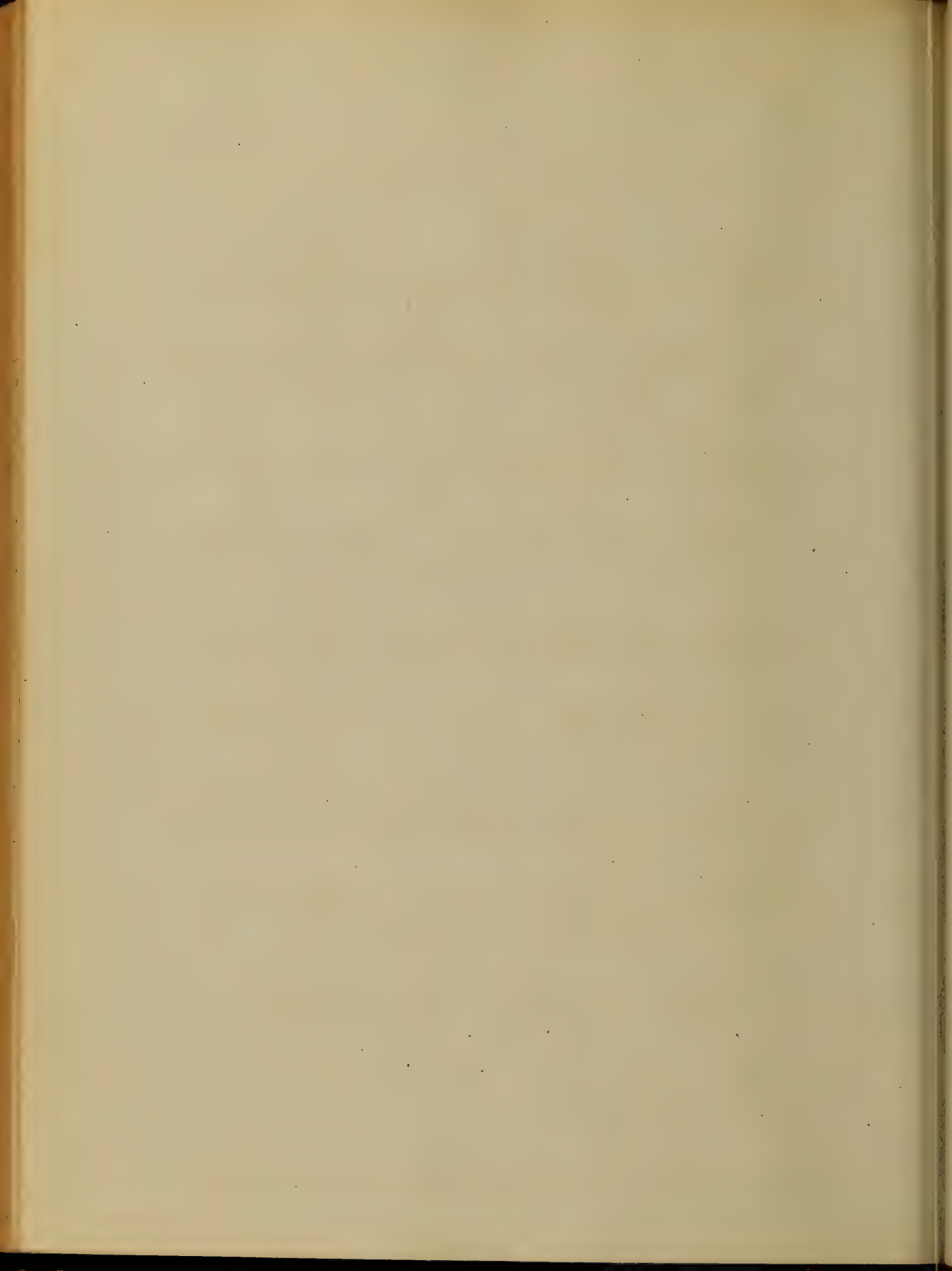
These are distinguished by the title of



erratic intermitters.

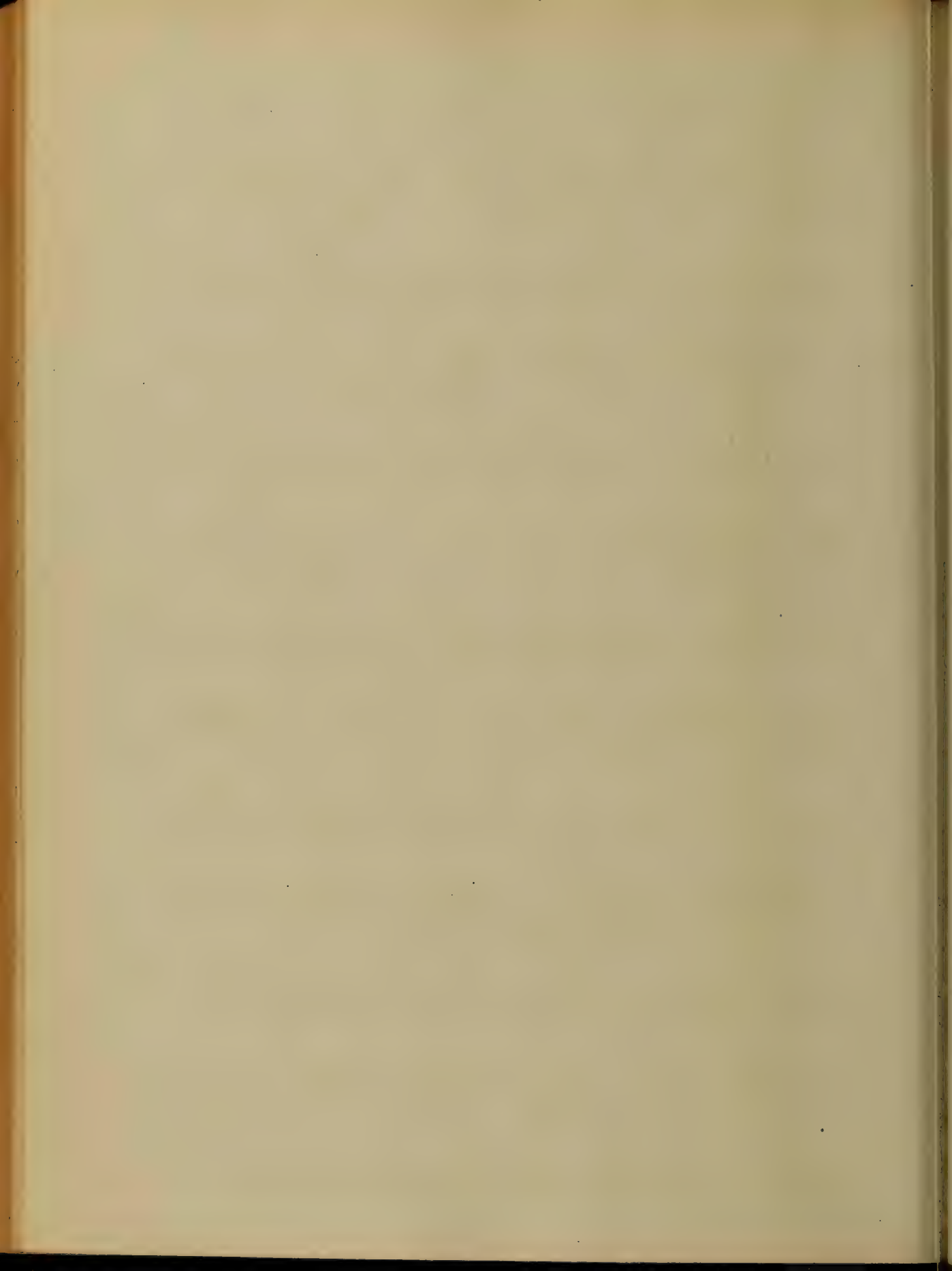
Symptoms. - Each paroxysm of an intermittent, when quite regular and fully formed, consists of three stages; viz., the cold, the heat, and the sweating, which usually succeed each other in the order mentioned.

Very often, the paroxysm is preceded by the ordinary preliminary symptoms of fever, such as feelings of languor or weariness, general uneasiness, quivering, &c; and occasionally these feelings,



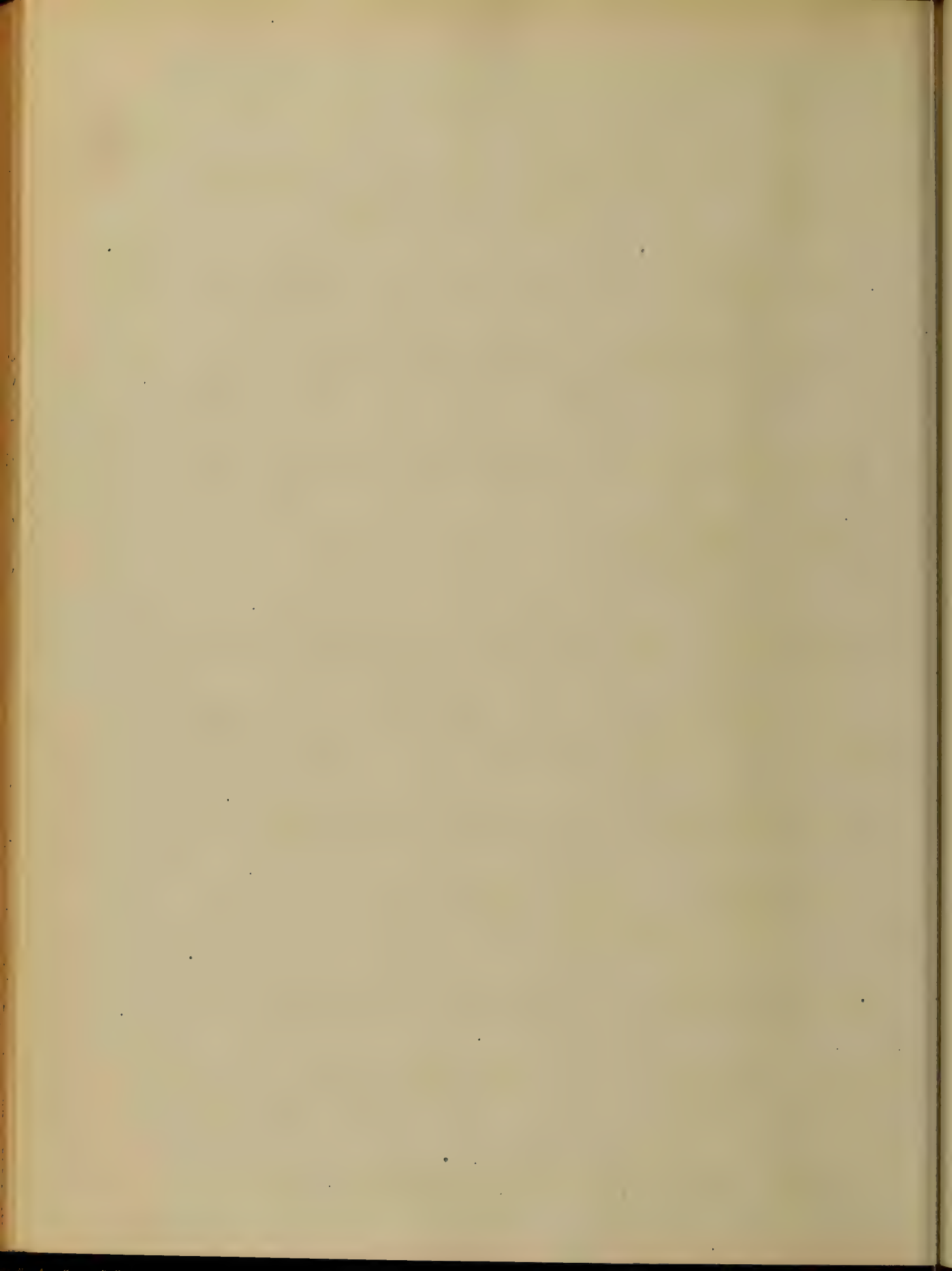
with perhaps some pain in the head
and back, impaired appetite, and
a scarcely observable degree of febrile
excitement, constitutes the whole apparent
disease for several successive paroxysms.

A person is seized with the above symptoms,
or something like them, which after a
few hours pass off, almost without notice,
and are perhaps quite forgotten, until,
upon their recurrence the next day, or
the day after, or upon a third occasion
at the same interval, and each time



with increased severity, the patient is reminded of the preceding attacks, and finds himself, or is informed by his physician that he is labouring under intermittent fever.

Attention to those imperfectly formed preliminary paroxysms is important; as the disease may be arrested by the adoption of proper measures at this early stage, and much subsequent inconvenience and discomfort spared the patient. Sometimes, however,

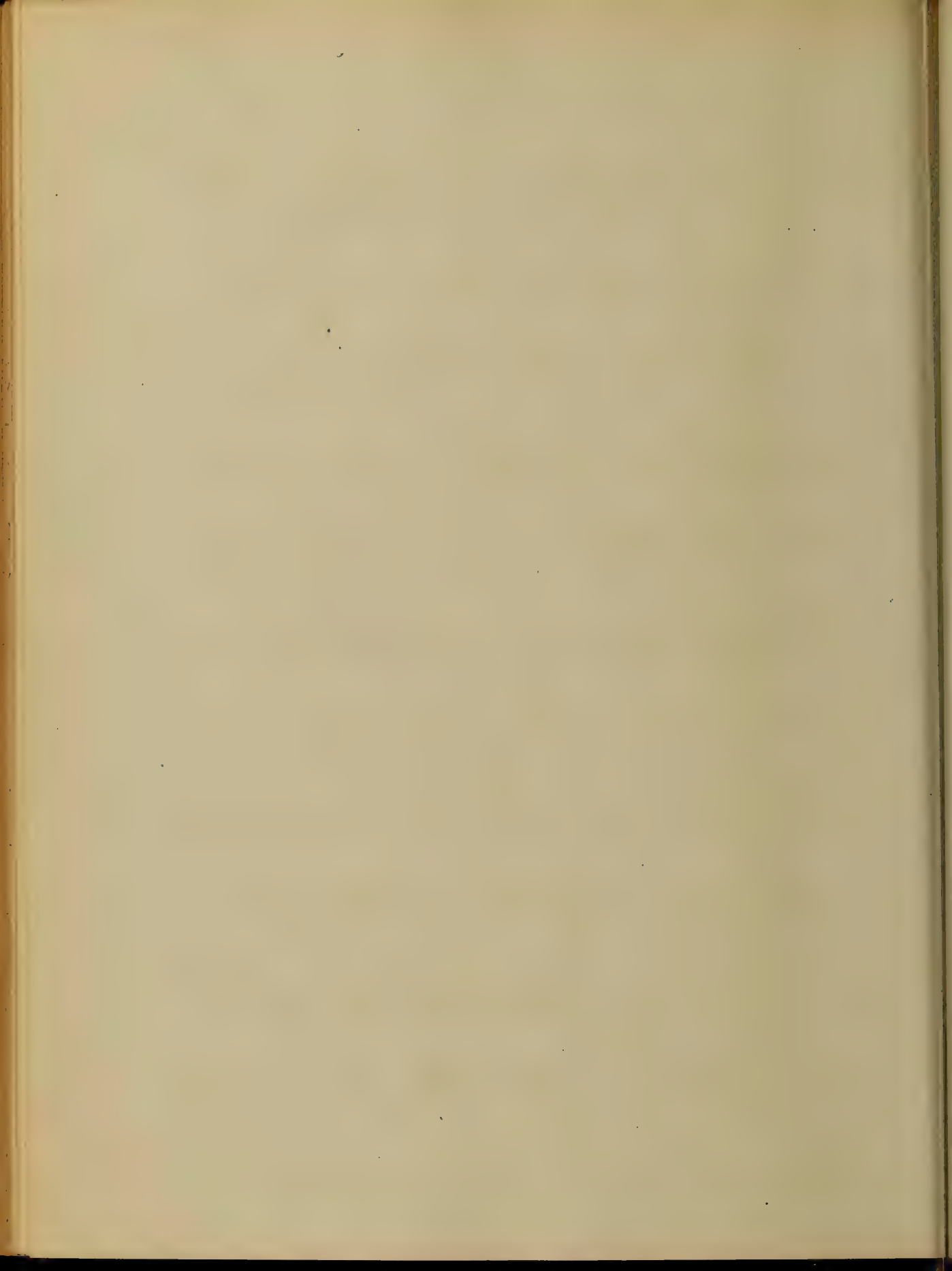


the first regular paroxysm seizes the patient in the midst of apparently good health, and without warning.

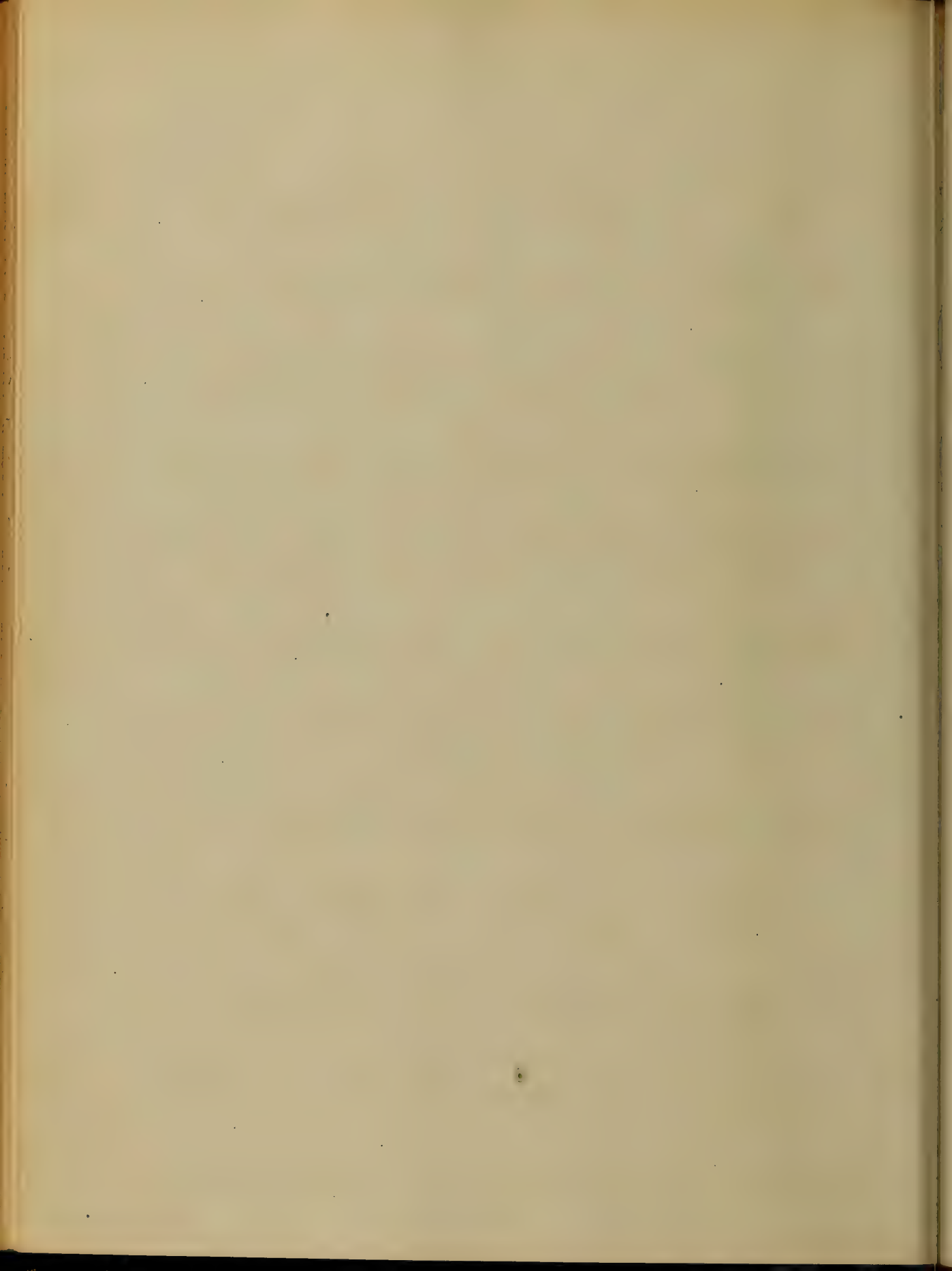
Cold Stage. - After some yawning, &c., the patient experiences sensations of chilliness, especially in the limbs.

These increase, and gradually spread over the body, becoming often severe and distressing.

Not uncommonly, the chilliness seems to run in longitudinal lines, as if little streamlets of ice cold water were trickling down the trunk. Along with this,



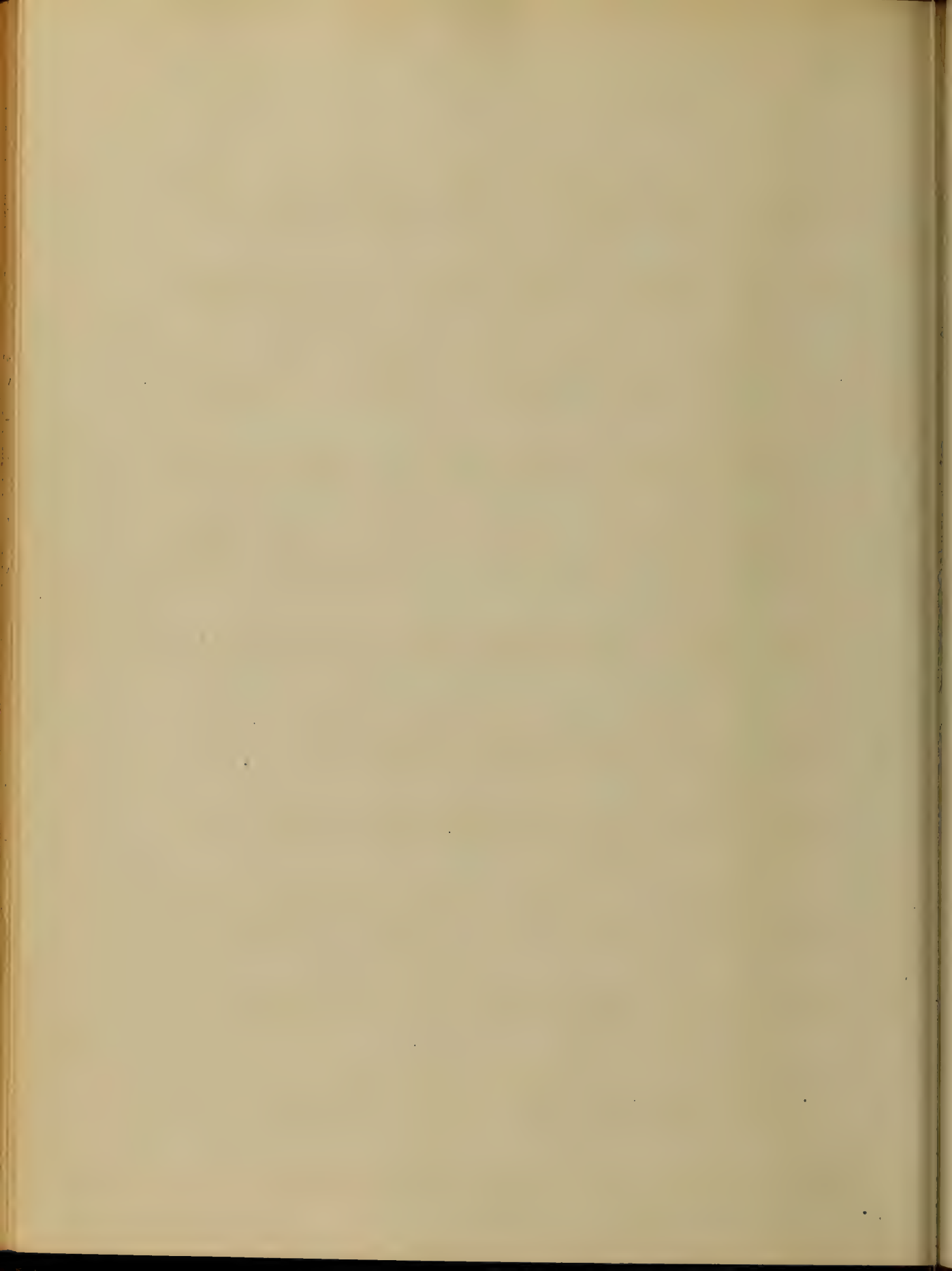
the patient experiences shivering or
trembling; rapid and successive
shudders run through the frame;
the teeth often chatter, sometimes loudly,
and the bedstead is occasionally shaken
with the violence of the involuntary
movements. These tremors, in
connection with the sensation of cold,
are technically denominated rigors.
The body often feels cold to an observer,
especially the hands, feet, nose, ear, and
cheek; but this is by no means unifying



the case. Sometimes the surface is hotter than in health, even when the patient experiences a feeling of cold.

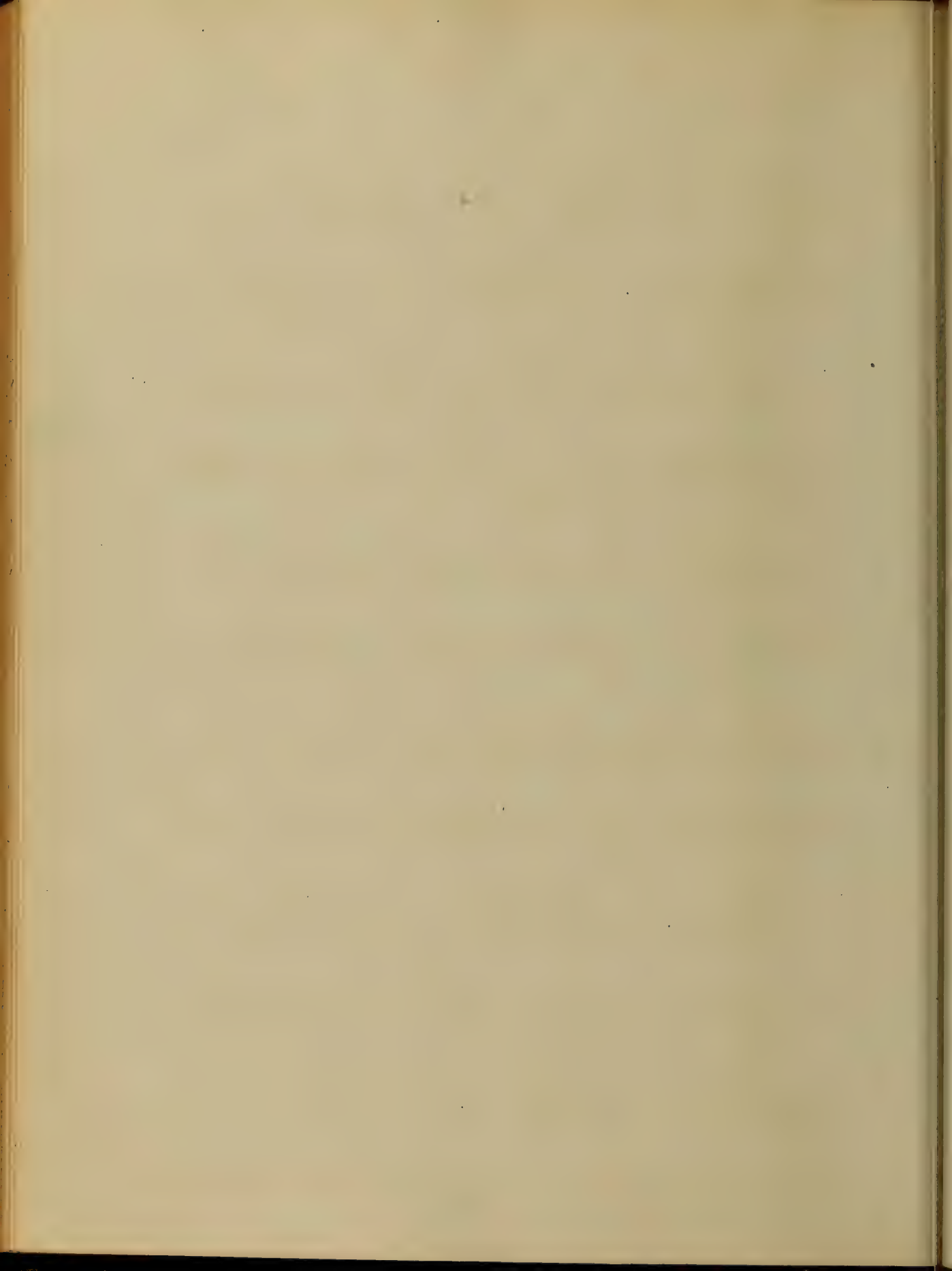
In connection with the sensation of coldness, the surface is pale and contracted, and not unfrequently presents the rough appearance called gooseflesh, which is owing to the projection of the subcutaneous and capillary follicles, while the proper tissue of the skin shrinks. From the same cause, the hair sometimes bristles, as in fright.

The hands are shrunken, the feet are



contracted, the countenance pale, and
the lips and ends of the fingers often
purplish, or sometimes livid.

Though the tongue is pale and moist,
there is often thirst; all disposition for
food is lost; and occasionally nausea,
and vomiting of food, mucus, or bilious
matter, are experienced. The breathing is
irregular, and often hurried; and the patient
has a feeling of oppression or weight on the
epigastrium or chest, which causes him
to sigh deeply. There is sometimes a short

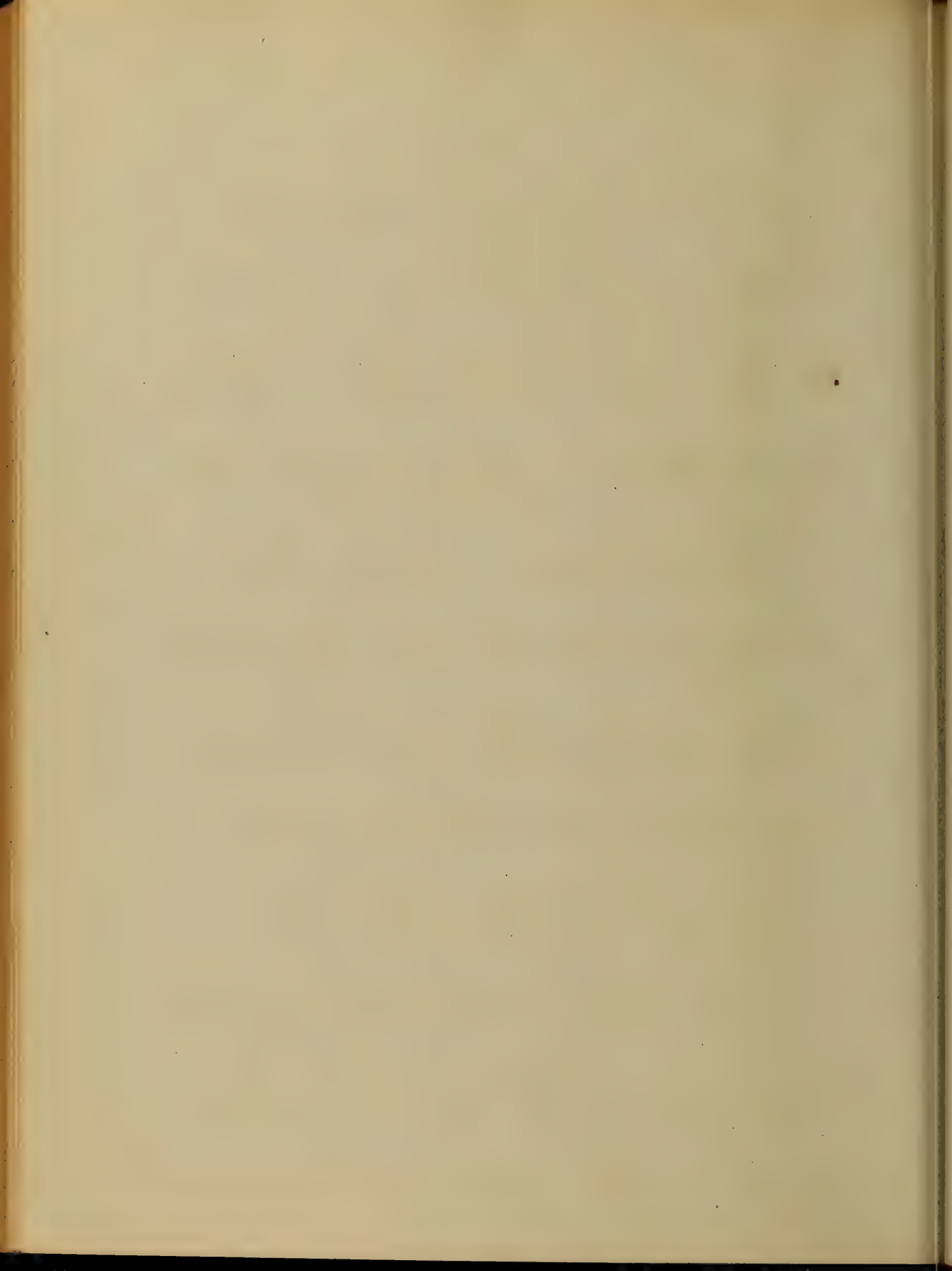


dry cough. The pulse is small, in some instances accelerated, even very much so, in others slow, often irregular and feeble.

The secretions are generally scanty; but the urine is usually pale, limpid and copious.

The nervous system is much disordered.

Independently of the tremors already alluded to, there is often severe pain, of a neuralgic character, in the back, limbs and extremities and sometimes in the head. The temper is not unfrequently irritable, and the mind confused, dazed and

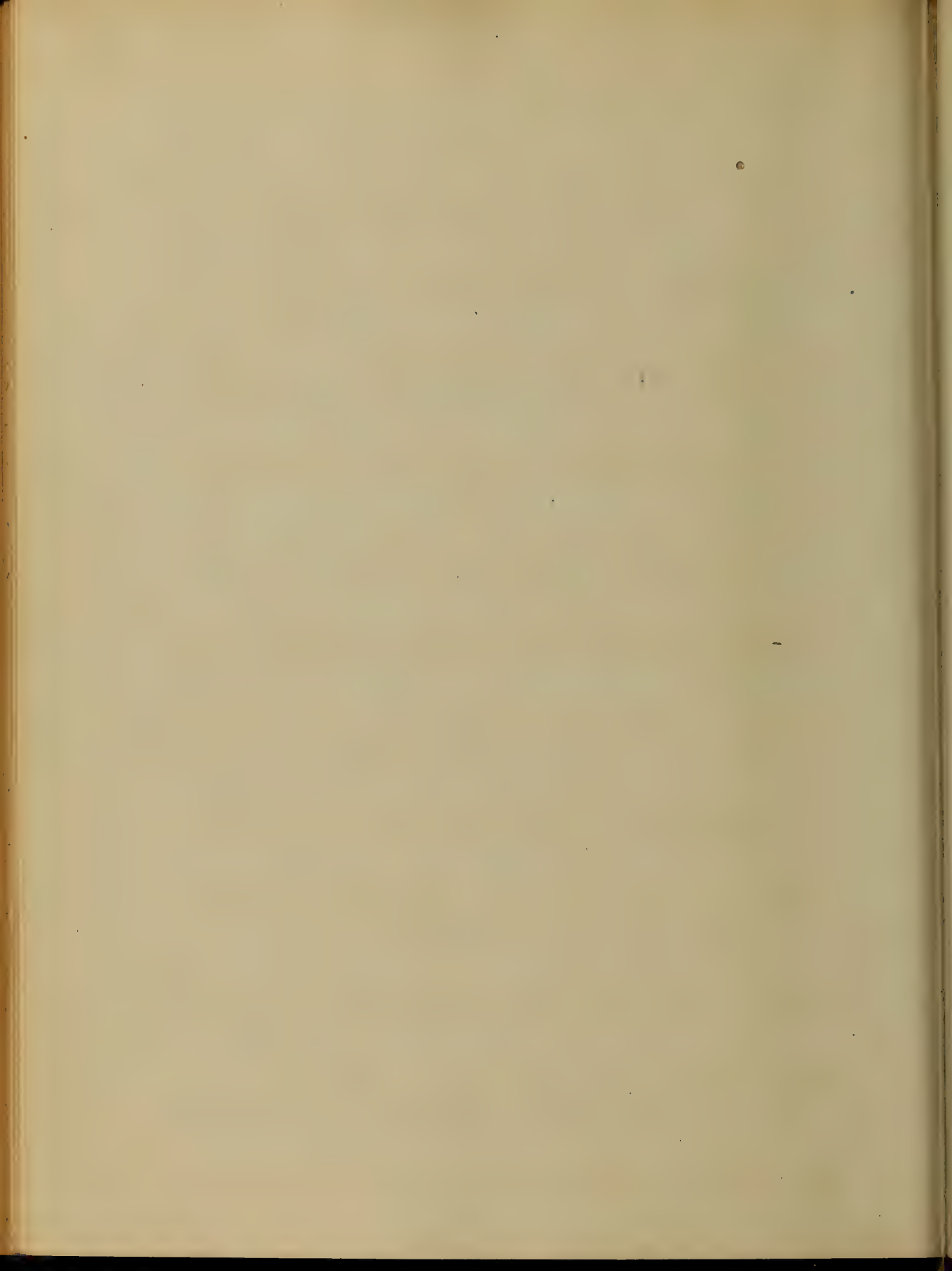


sometimes wandering. - Occasionally
there is drowsiness, which, in some rare
instances, deepens into stupor, coma, and
even symptoms of apoplexy.

The duration of the cold stage varies
greatly. At times it does not exceed
a few minutes, at times extends to
three or four hours or more. On the
average, it may be stated at about an
hour. Hot Stage. - The passage from

the chill to the hot stage is not abrupt.

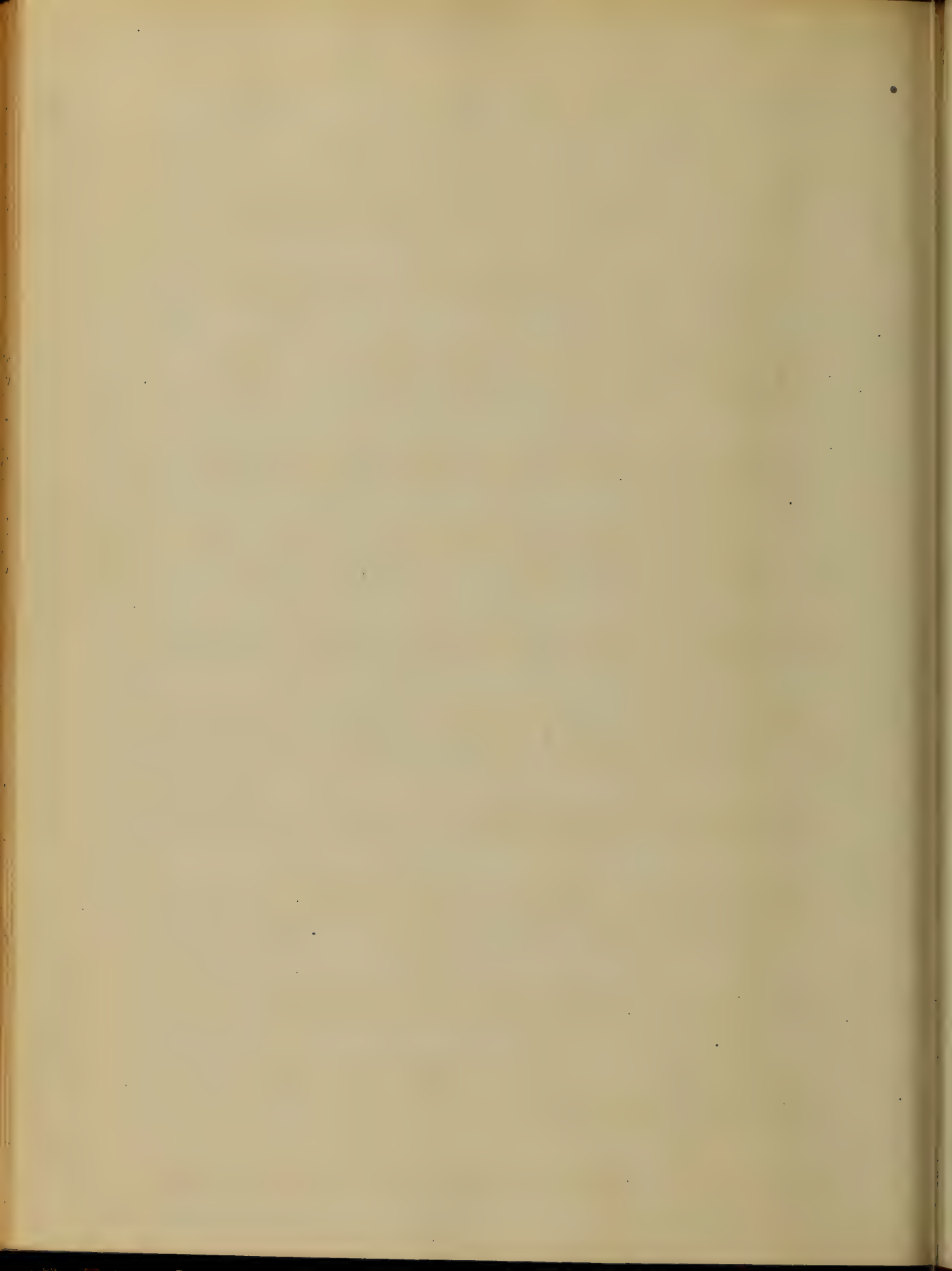
Rigors for a time alternate with flushed



of heat. The first sensation of warmth
are rather agreeable than otherwise.

A glow is felt about the face and
temples, and the patient is conscious
of increased heat of breath.

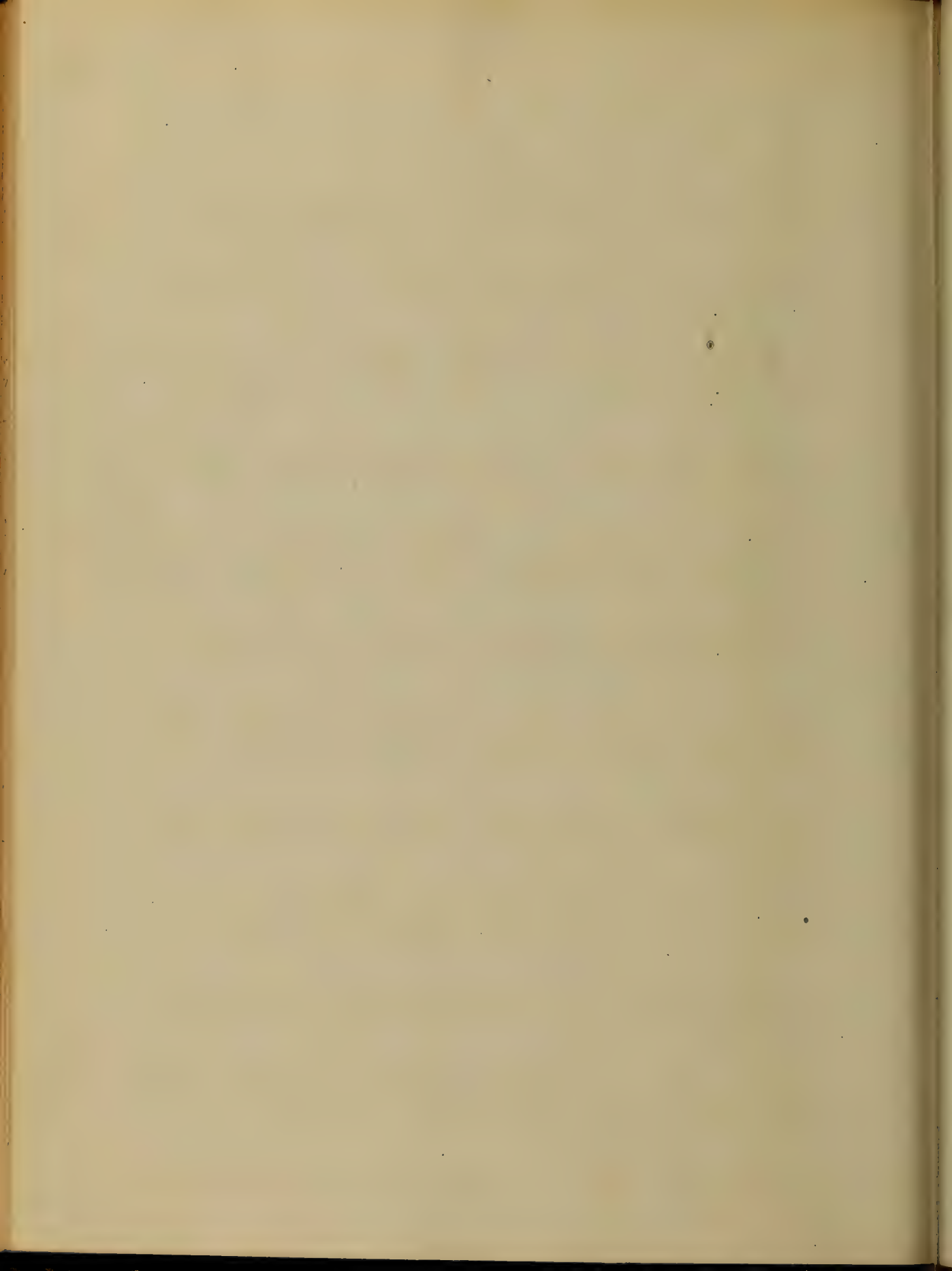
Gradually the whole surface becomes hot,
but even now if a limb be moved into
a cold part of the bed, sudden chills are
felt, vibrating disagreeably through the
frame. At length all traces of the cold
stage disappear, and the patient is
affected with a universal burning heat.



The cheeks are flushed, the eyes sunken, the surface is everywhere reddened, and the skin distended with blood. The evidence of increased heat is not confined to the sensation of the patient. The temperature of the body is positively increased.

It has been found by the thermometer, to range from 105° to 112° in warm climates.

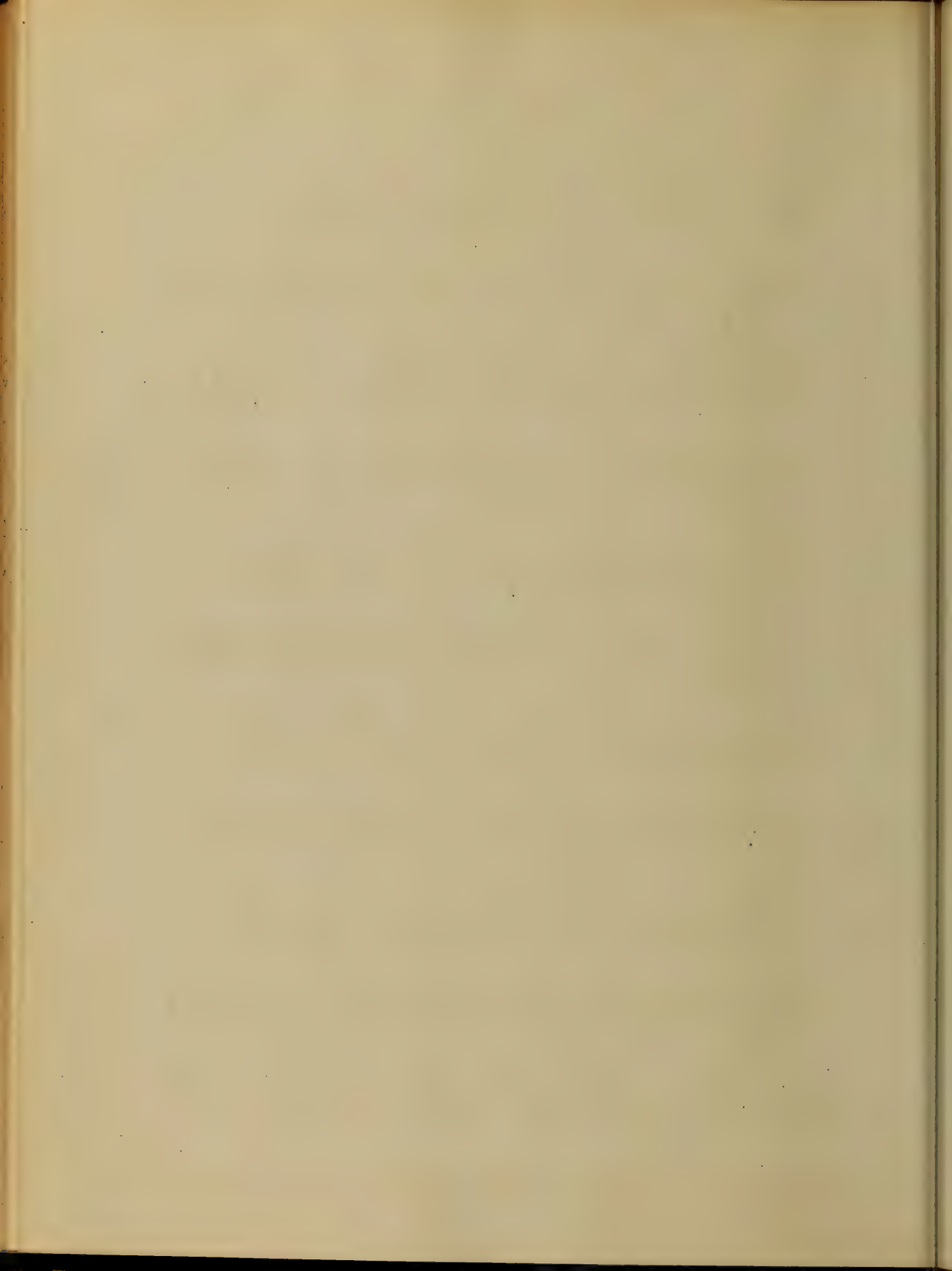
The mouth is not entirely dry, the tongue usually gummy; and the patient generally complains of great thirst, though this is not invariable. There is utter disinclination for



food, and occasionally nausea and vomiting. The respiration is more regular than in the chills, but is still accelerated.

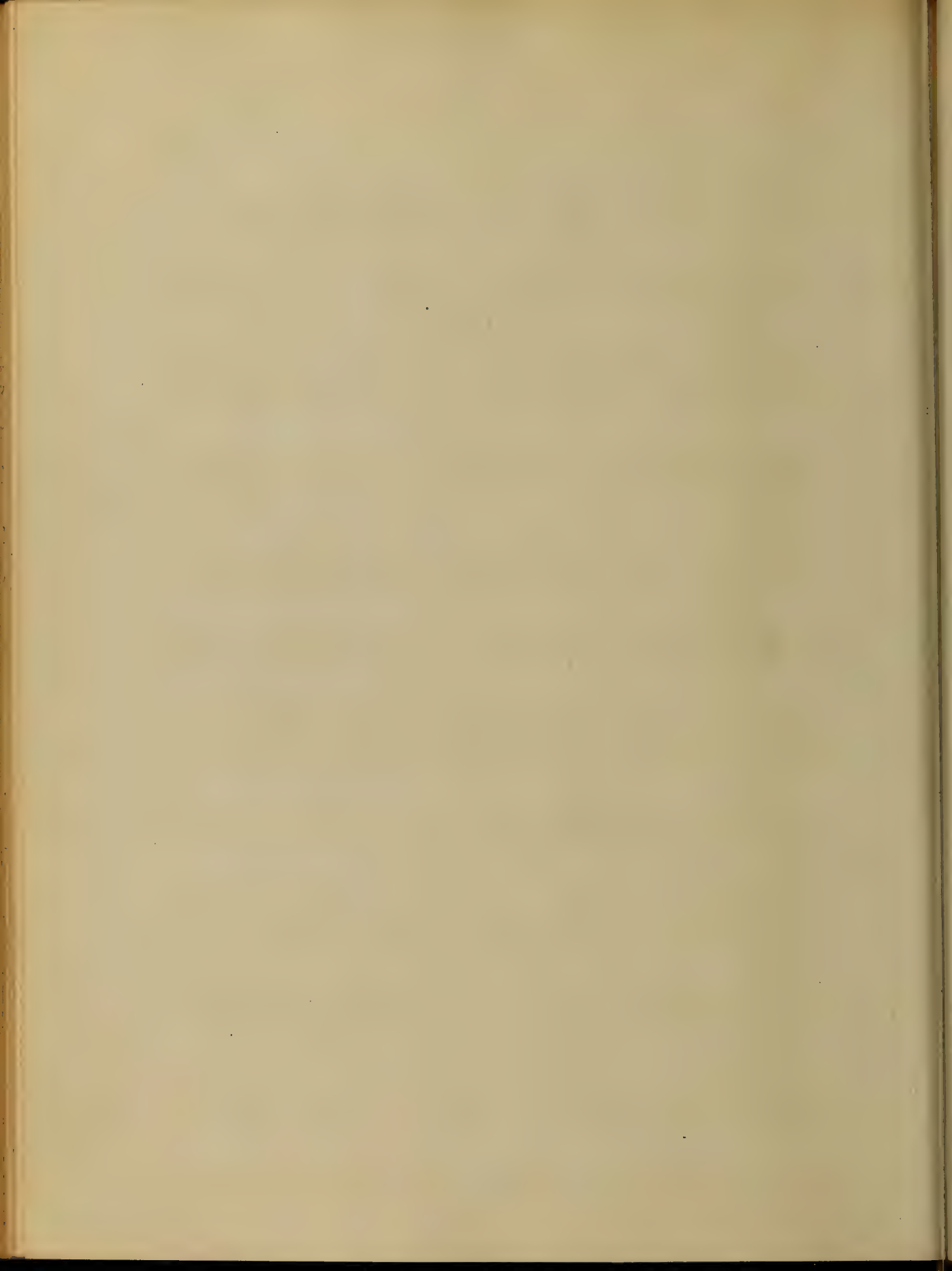
The pulse is more frequent than in health, and is usually full and strong.

In some cases however, when the state of the system is adynamic, it is at once frequent, and feeble. All the secretions are diminished; the skin being dry as well as hot, and the urine scanty and often high coloured. The head is almost always painful sometimes very much so.



and the suffering from this cause, as well
as the general violence of the febrile reaction,
is often greater than is usual in remittent or
continued fever. The pain frequently
throbbing, with a feeling of distension in
the temples, and seems to be deep in the
head, unlike that of the chill, which is
generally superficial.

There is frequently also pain in the back and
limbs. Convulsions are not uncommon
in children, at the commencement of the
hot stage. The duration of the hot stage varies

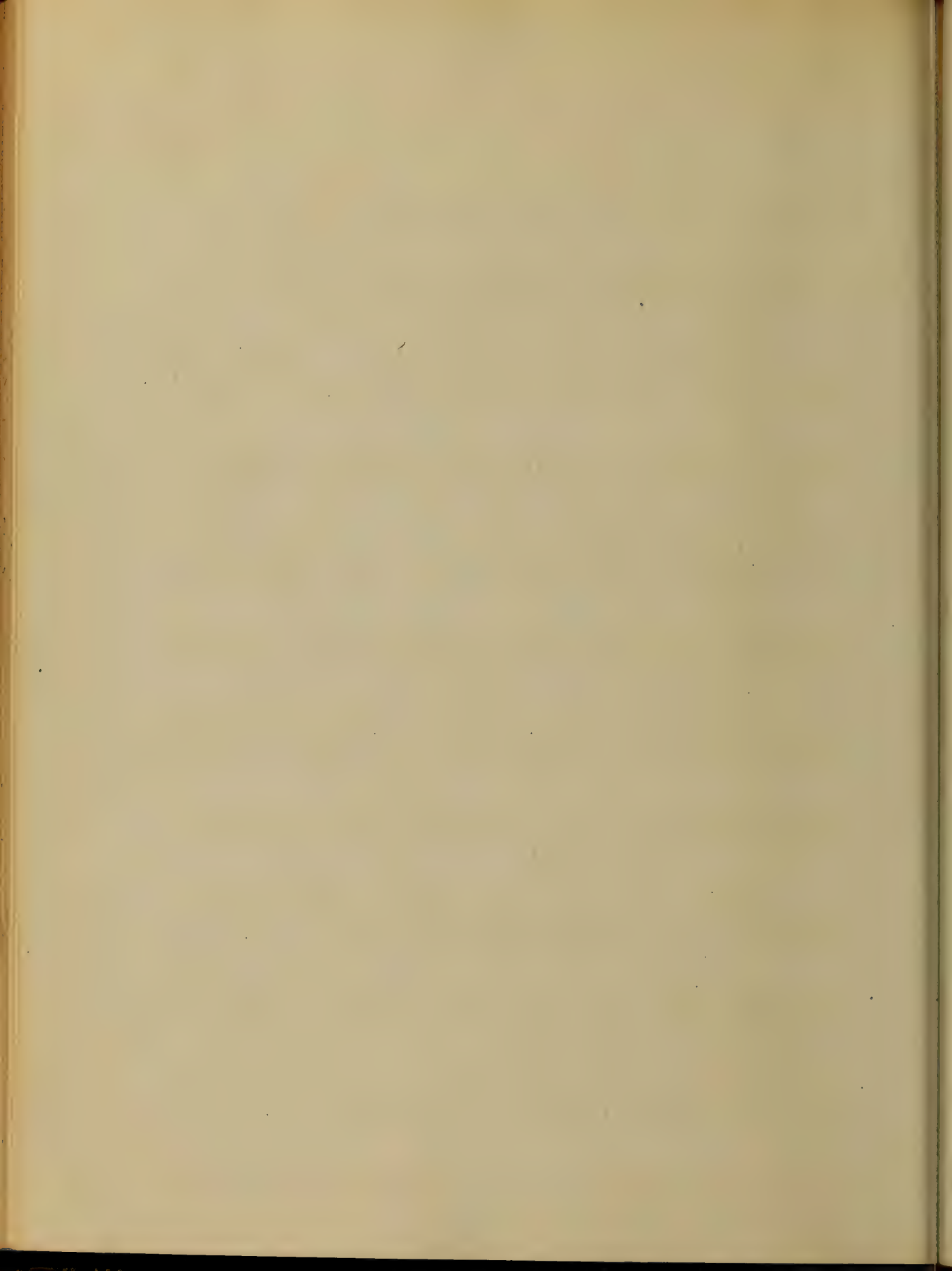


from two to eighteen hours or more.

Sweating Stage.— Transpiration generally appears first upon the face and breast, and gradually spreads over the surface; at times slight but generally copious, and occasionally very profuse.

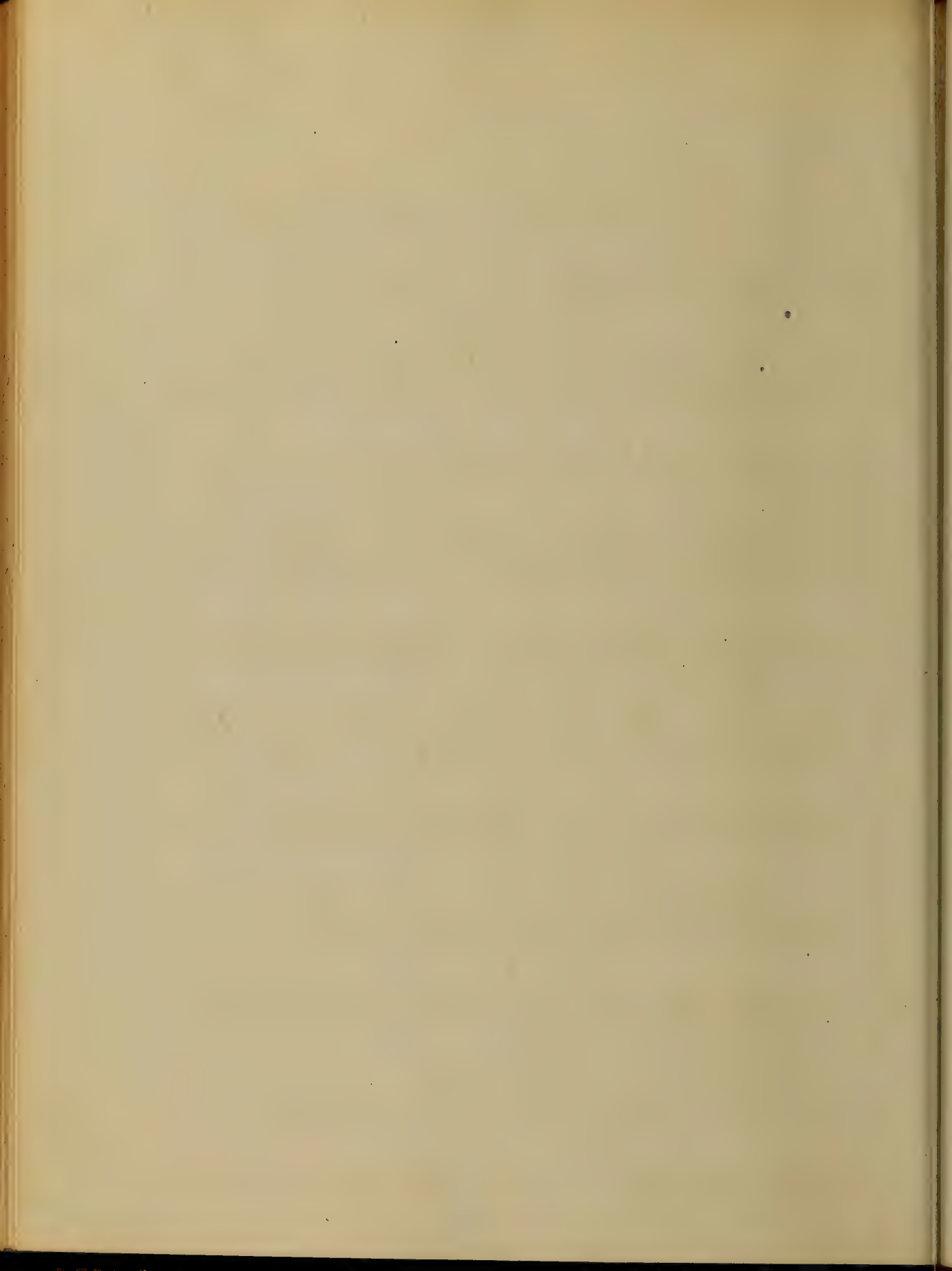
Upon its first appearance, the patient begins to feel some relief, and the febrile symptoms gradually abate with it.

The skin becomes cool, the excitement of the circulation subsides, the mouth is moistened, the headache disappears, and the patient



frequently falls into a calm sleep from
which he awakes free from fever.

The kidneys now resume their functions, and
the urine which is discharged, very often
deposits a luteitious sediment upon
cooling. It has been stated that the cold
stage produces the hot, and the sweating;
but this is scarcely probable, at least with
regard to the two first stages, which bear
no proportion to each other, a protracted
and severe chill being frequently followed
by less fever than a very slight one, and the



fever sometimes occurring without any
preceding chill whatever.

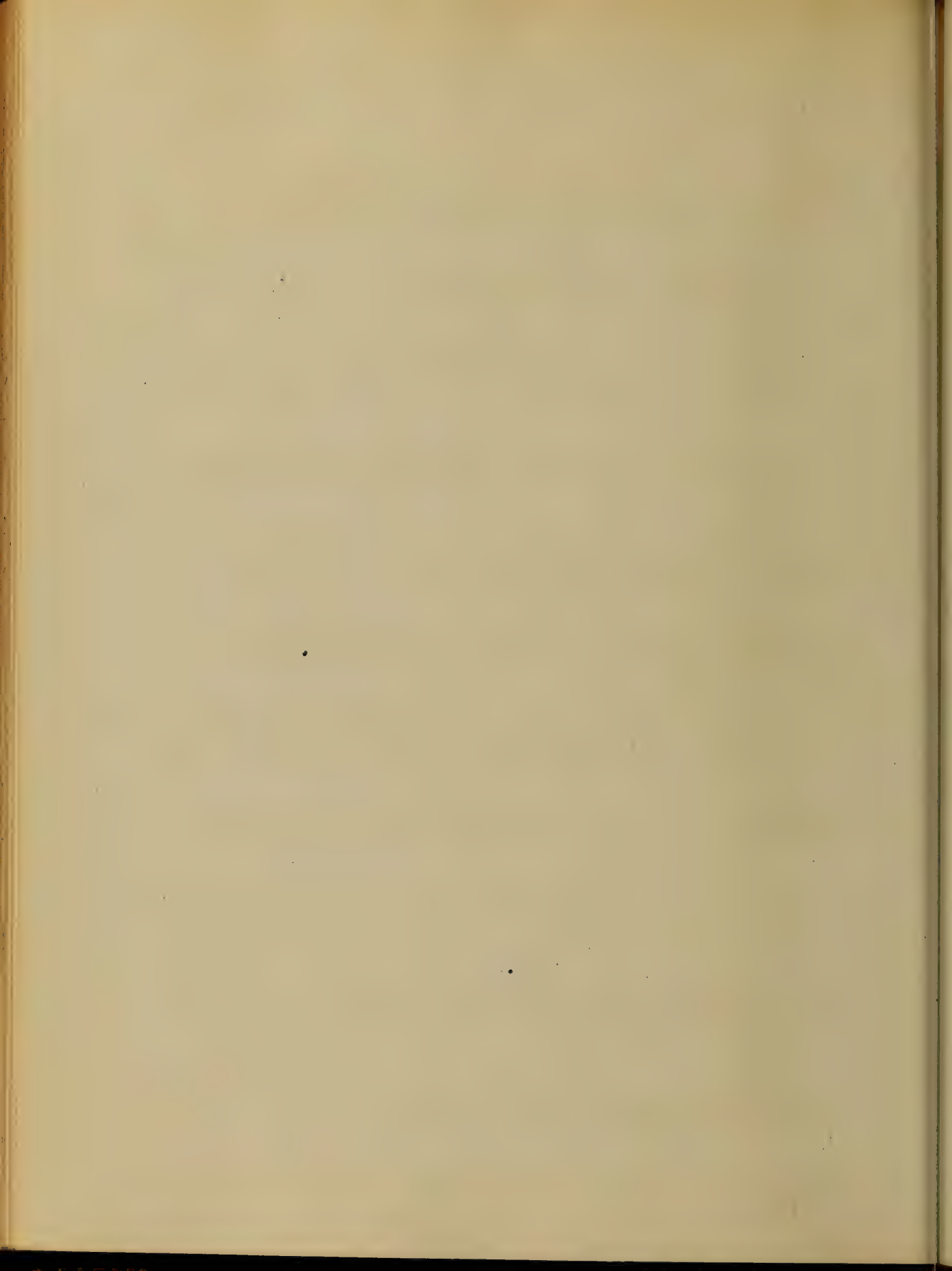
The probability is, that while the depression
of the cold stage is naturally followed by
some degree of febrile reaction, as a neces-
sary consequence, the morbid cause,

whatever it may be, is capable of producing
the hot stage by a direct influence.

^{as} The whole duration of the paroxysm is pretty

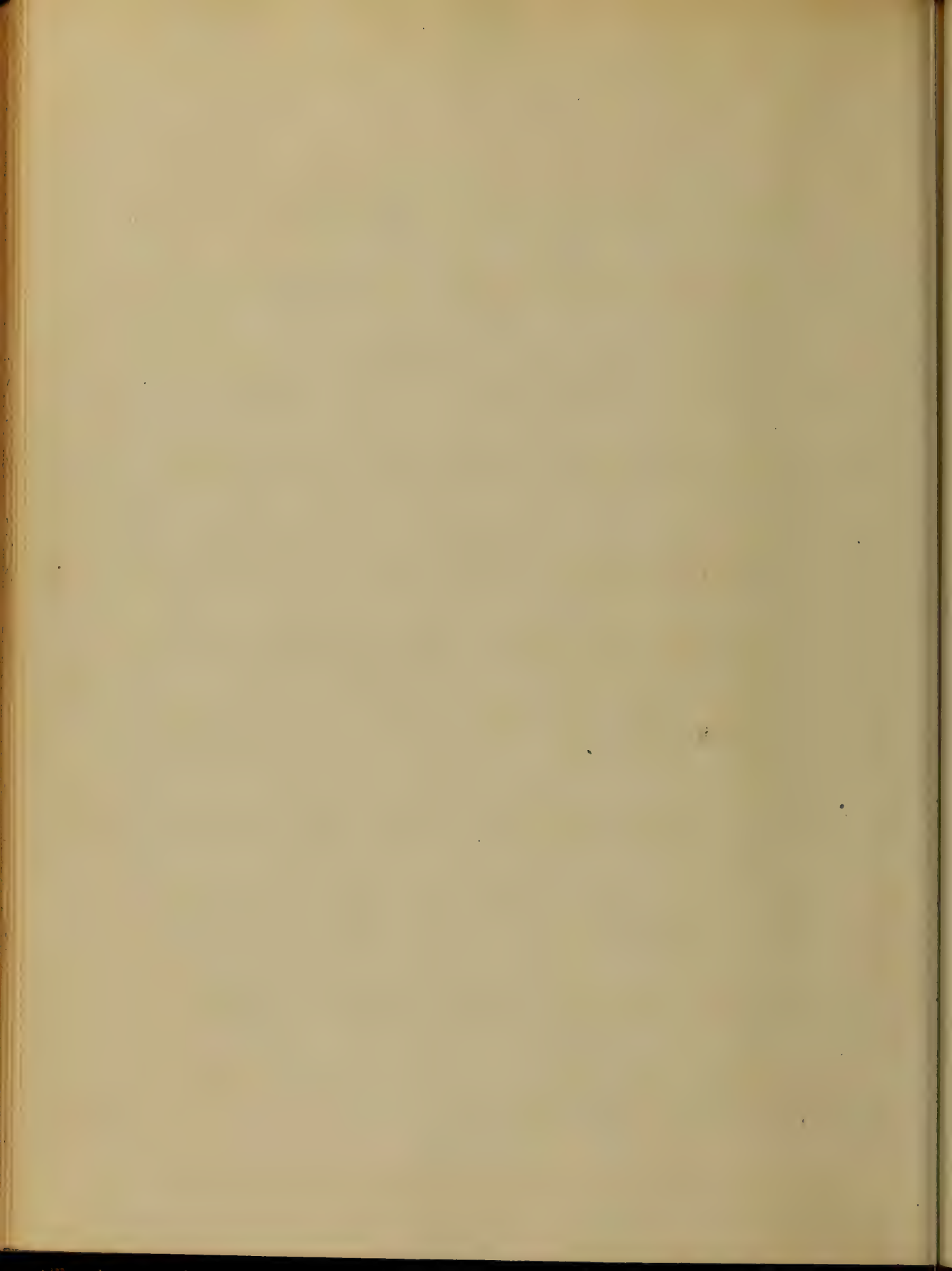
constant. - The causation involves a special
morbid agent, commonly known as

malaria. The production of the period



cause, was attributed to vegetable decomposition in marshy localities, and called marsh miasm. Observation shows that it is generated more especially in marshy situations, but its production is not confined to such situations.

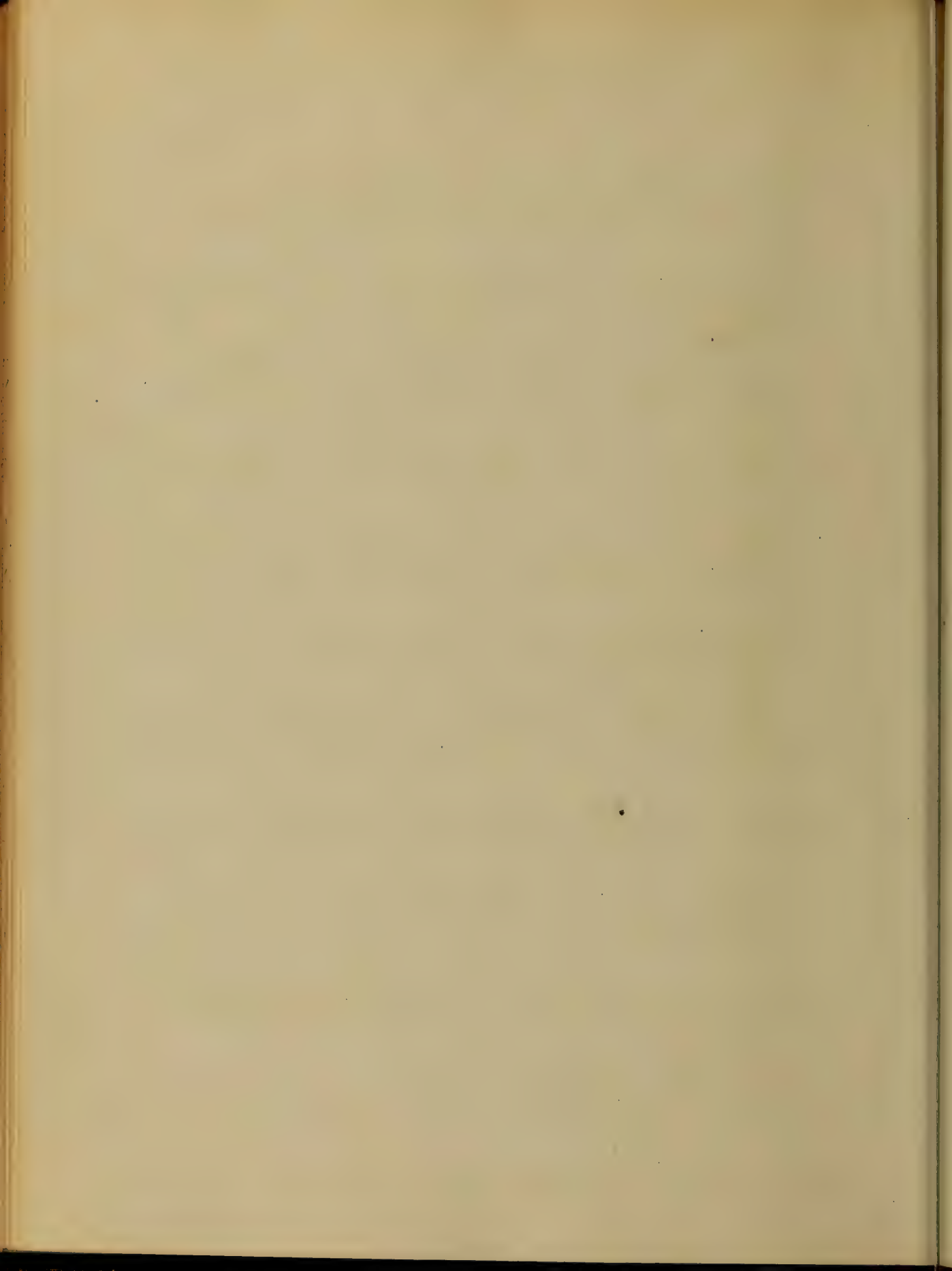
Diagnosis.—In well marked cases the diagnosis offers no difficulty. The type is to be determined only by the duration of the intermits, and a comparison of the paroxysms.



X)
Prognosis.- Ordinary intermittent fever,
as regards immediate danger, is not
a grave affection. ⁷⁴ Whenever the
disease involves danger it is to be con-
sidered as not belonging to ordinary
intermittent fever.

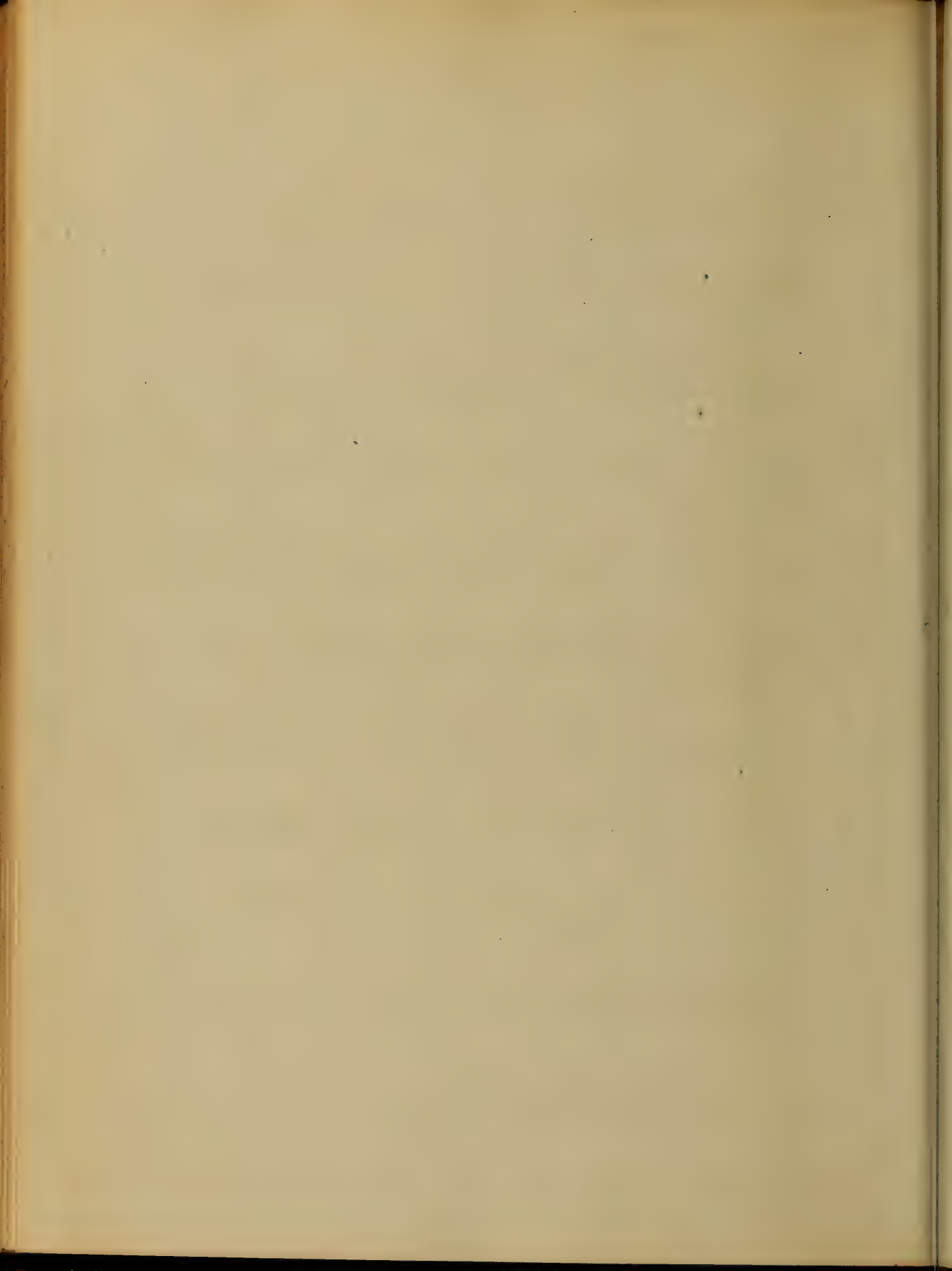
By
Treatment.- For the cure of intermittent
fever, medicine possesses specifics, and
remedies are entitled to this application.

This statement applies especially to the
salts of Quinia of which the sulphate is
the one almost universally used.



The sulphate of Quinia will promptly interrupt the recurrence of the paroxysms of intermittent fever, in the vast majority of cases. It is always desirable to arrest the disease as speedily as possible.

As regards doses, the most effective plan is to give the remedy so as to produce evidence of cinchonism, as speedily as possible. It should be given in small and repeated doses. The most effective form of administering it is in solution, its solvency being secured



by the addition of a few drops of
the Aromatic Sulphuric Acid. It may
be given, however in powder, or pills.

Respectfully Submitted by
Abram Tregg. Shertzer
Harford County
Maryland.

