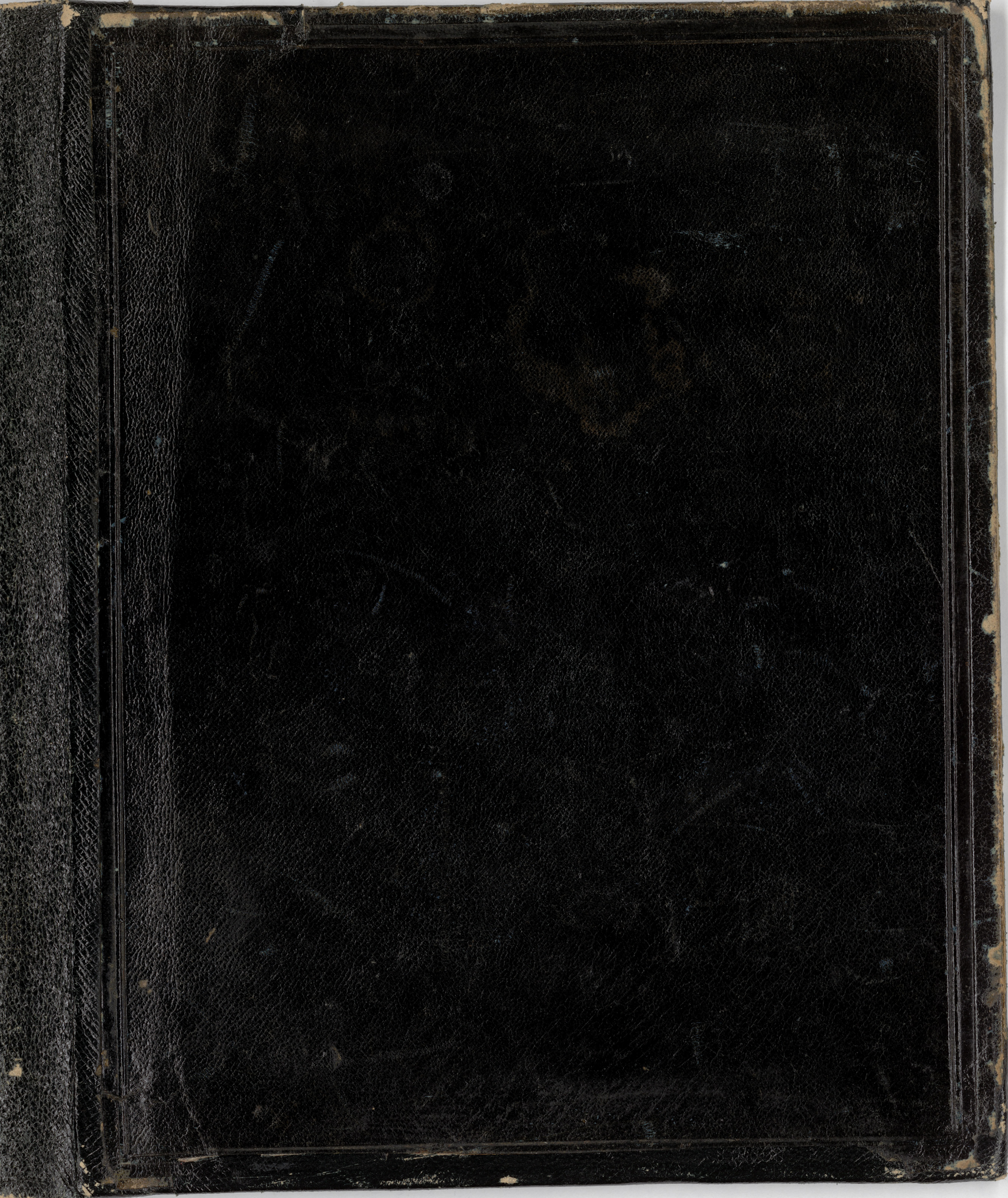


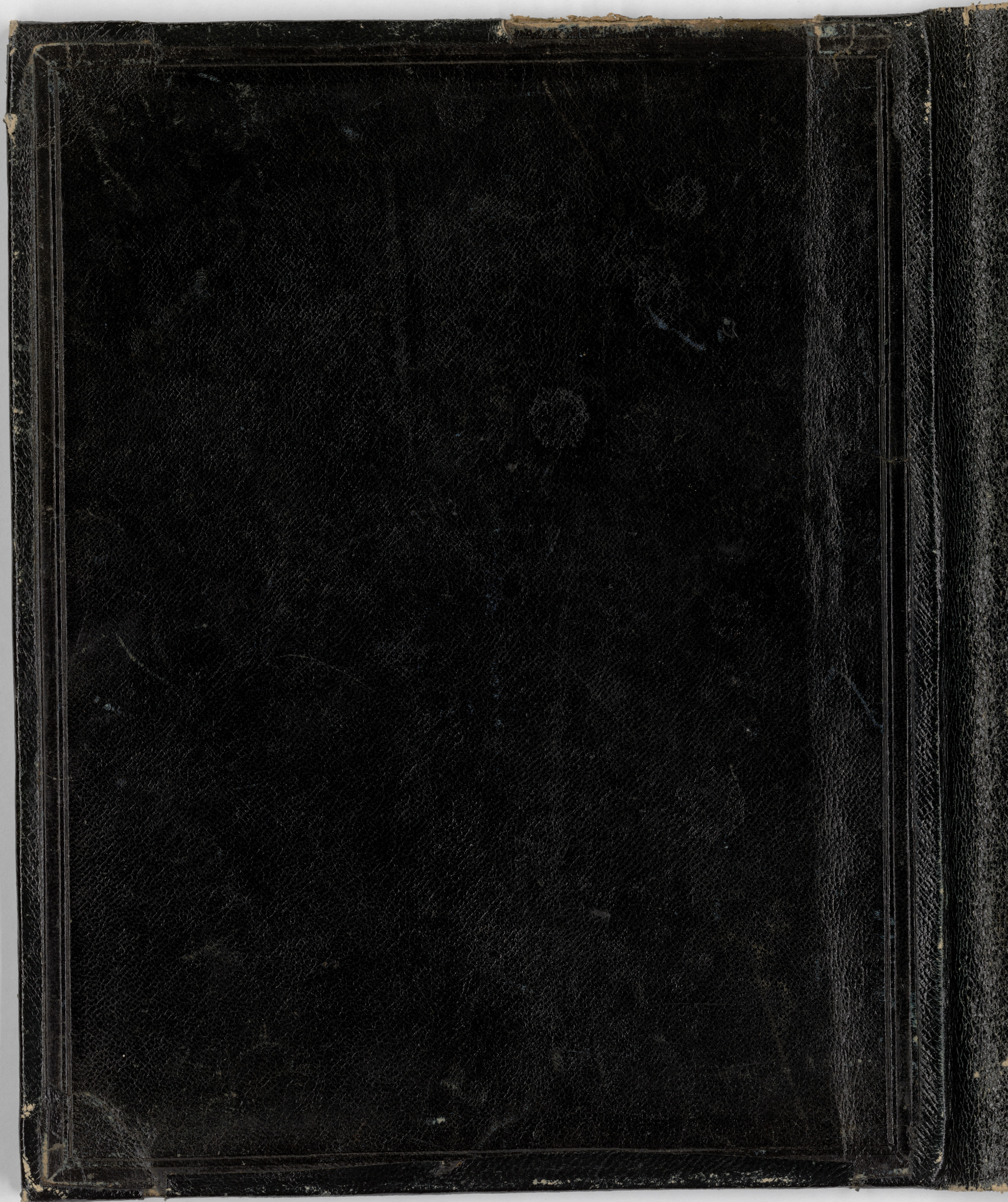


WG. 1
7666 z
Physiology
Lectures notes,
1883 - skin.
Plymouth.

FROM
THE LIBRARY
OF
SIR WILLIAM OSLER, BART.
OXFORD

7666 z





The glucose derived from the digestion passes directly through the organ into the blood & appears in the urine. He admits however that some glycogenic action takes place as in the case of patient fed on bean meal. Bern holds that in diabetes the gly. is too rapidly converted into sugar & the all oxidized & hence appears in the blood. Some think that a lessened consumption of the sugar in the muscles may lead to an accumulation & consequent excretion by kidneys.

Inf. of Nerv. System Of floor of 4th vent. in Rat is punctured - area of vaso-motor ^{into of pneumos.}
in ur. in a few hours. Am. depend on feed of animal. Function is under the infl of the medulla. The pattern of this influence ^{is} down the cord. thro the lower cervical gang of sympathetics, thro splanchn. & coeliac axis & its along hep branches. The pneumo-gastros have no direct infl. but if the central end of the cut n. is stimulated glycos results. - This infl. is probably largely one of increased flow of blood in the liver by relax of the vessels, increased amount of ferment. Some think it may be an infl on the cells.

liv. muscles - fetal tissues. placenta, testis, brain, whole carbohydrates.
Glycogen $C_6H_{10}O_5$. L. has power of forming it. Gly. portion of liver. B. isolated
it & gave it the name. - Origin 1st. from carbo-hydrates. Amount is increased. & is
(2) nutritive element. Of animal fed on lean meat it is still formed. (3) Fat probably
not. Salomon's experiments. Rabbits fed on Oléagine. To show its existence. Rabbit fed
on starchy food. as carrots. quickly killed. and the liver rapidly excised & put into boiling
water. It contained no sugar but a white opalescent substance separated which had
the reactions of starch. This he called Gly. & he found it could readily be converted into
sugar by the action of any diastase fer.

At the top of the body the Gly is readily conv. into glucose & then is affected by culture
the blood via special permeant. B. has isolated it.
2 views 1st. Bernard & his school. The Gly. is during life constantly conv. into glucose
& passed into the blood of the hep. veins enters the circulation passes thro the lungs & may
be oxid there but more likely goes into the aorta & in the capillaries is fully or a part in the muscles
during the. They say that the arterial blood always has more S. than venous. & the blood of hepatic veins
than that of portal. 2d. Pavy & his school. contend that conv. of Gly into sugar takes place to
very slight extent during life. They hold that the liver cells accumulate the ^{fat} ^{as current it into} Glycogen & that it
probably is converted into fat. But it is an intermediate stage between sugar & fat.
They deny that there is an excess of S. in hepatic blood & say the quantity in ven. & art. blood is much
the same. Whenever an excess of S. as in ~~the~~ blood it passes off in urine = diabetes or glycos.
In diabetes Dr P. holds that the normal action of the liver does not take place

Uses. (1) Prob. for surf. beneath as organ of touch. & of gen. sensation. (2) Secreting & excreting office & aid in keeping proper temp. by it loss of and. power. Most distinguish between proper conditions. that are every present. & the modified. Skin & its appendages, Layers from without inwards. When cutis spoken of = Epid. & C. var. Epidermis forms a protection for C. var. Thickness $\frac{1}{4}$ to $\frac{1}{2}$ of an inch when pressure is applied. Corium not a place of any unequal. power. & not there the epid. is moulded & fills up the depressions. 2 layers. Ext. epid. cuticle, & int. epid. cells of flatter, fill up deep in corium, deepest layer, an column in form. Then layers on cuticle. In next 3rd cells are & more polygonal; Maximus from upper part. In cor. from. Irregular cells also seen. Pigment. more in deep cells. Epidermis in fine section from many lines, under skin, unequal polyg. flat cells $\frac{1}{2}$ to $\frac{1}{4}$ of an inch. In deeper parts like a small beam more more compressed. What is very coarse Corium tough. highly elastic. layer. What composed of, is clear that at upper part almost striated, lower part more dense & articulated. Hence distinguish two parts: Elastic film connective corpuscles. Surf. a thin transparent & elastic. membr. 7 arrows of corium, large & small. former on floor of joint, latter on white skin. specially in back of hand. Be well then certain small from ^{up} the elevation on the cut. papillae shape, are small, small, divided. Espe abundant when seen most perfect as hand, how arranged? In hand in line forming curvilinear ridges, & in there in double series. $\frac{1}{100}$ in hand $\frac{1}{500}$ in finger. Notches in ridges of cor. seen after of several thick. Structure of papillae like the cor. Cor. is var. & seen large & both other distinct. in papillae & distinct var. near papillae. Two vascular plexuses. No. every papillae provided with capillaries, & a side only there with which no nerves enter. Nerves included & non-medull. Modes of termination. Racemus is best

in tail-like capsules, in red bulbs & between
the cells of the Rete mucosa. Pacini bodies, Tacite cap
most common lower layers of lam. phalanges. of an oval
form, near, same length as papillae, trans. its upper thin
into each a med. & sub. cornu. used to vomit it
now and not known. Red bulbs, situated at upper
part of papillae, capsule & soft-motile & into this a
n. fil. may be traced. Some have traced non medullate
fil. thro the cornu. between the layers of the
sub. cut. corn. directly contin. with cornu. composed
of cornu. & elastic. fil. coarse mesh work, fat & connect-
tissue. also have taken organs here & called P. adpo
Lymphatic also described. in two pls are
Sebaceous glands, corn. with hair follicles, where? hairy part
of body. absent. P. scales. on Lab. mucosa. perhaps
occure rarely; when corn. with large hair foll 4-6
d. ranged round, open at point. Largest at the dorsal
horn. & on hair follicles. Fine structure. Seb. itself
fluid is cream - when fresh dark fatty granules. oil drops
a simple fatty content. ol. margar. body and casein, cells
of hair & a parasite Entozoon follicul. in fetal life
brown caseosa. oily matter & debris of cells. Another
the acneous gland head. mint-like sudoriferous
Sudoriferous glands. Small in body $\frac{1}{6}$ of a line in diameter
in cut cut continuous, at its point with C. vers. short-
rod glands. Cut is the gland. long st. part the duct
the opens by a widened conical oblique orifice. Largest
in perineum anal & nipple axilla largest. When unrolled
 $\frac{1}{4}$ inch. $\frac{1}{200}$ in breadth. Cut. consists of a basement
membr. & a l. of cells somewhat flattened in form
between the cuts. Muscle cells intrude also. Capillaries
duct passes up & the cornu. straight when n. in between



papillae & tentacles a special course no. of special
 depending on thickness of food. Krance 2-3000 in palm
 of hands i. 12.58 posthead. cheeks 5-48. Inten no 2 1/2 in
 of each unsawled 1/16 inch whole 2 1/3 mil. Inten at
 2800 in ~~mouth~~ the body, 7 mill. whole. & 28 mm
Sweat. a water fluid. besides this & lat. & included. sensible
 & irreversible. latter constant. Mechanism of secretion same
 as in other glands cells the active agents. Sweat clear colorless
 acid, pearl order. acidity due to volatile acid. acetic bodies
 & formic with soap in it standing. In ceps. sweating only that not
 counted is acid. Sp gr. 1003-1004 contains 97.5 & 2.5. foetid
 matter. fatty matters chiefly from seb glands. also urea & uric acid
 ch of Na. K & Dr. a pearl and endoric or hydrocarbon & acid contains
 fragments. The urea is in soap then 1/4 of total solid. & much
 more in kidney affections. In disease. abt & when matter is
 formed. Quantity varies. about lbs 2. & about half that amount by
 lungs. Very circumstantial. all the quicken the circulation, as seen
 of the clothing. Many motions. - the depressing of argument
 Muscles. temp of air & its hygrometric condition. It is
 cut circle & more sweat is separated. Dry air increases it
 damp air reduces it. Cold diminishes. In high temp & moisture
 sweat is stopped, but & heat goes on. Cold. med. warm drinks
 & uric acid. Local sweating sometimes occurs. Loss in weight
 very considerable in an hour. 3 lbs in passing blood temp some
 thing 2-4 lbs by men in 90 min in a hour. Local flikin
 and kidney are supplementary. In cold weather etc. Certain amount
 of CO₂ gone off also about 1/30 of that from lungs, or 1/100 every
 min 1/20 - 1/150. In man not so much as in lower animals
 Urea present. (1) get rid of superfluous water & keep down temp
 (2) remove as med. for removal of effluvia matter. Taking the
 amount at 30 of vol in 1/3 of 1/3 being 1/6 of foetid matter
 from same source. Import. of skin. brown & pink. un-
 covered. They die. In layers around of only a few sq inch left new
 but in smaller. Ber. suff. death for want of CO₂ in exhalation. but must
 not be done in temp of body. For temp. maintained. death does

18
hot nerves. Hair & nails. modif. of phloem & than of phloem
follicle & cut. deposits. 1-3 lines long. deep into subcutaneous
and in long the d. & l. in. At upper & d. open. None larger for the wall
of phloem. 2. curved two among hair & muscular. 3. structure
cuticle with base of corn. at both fresh a papilla & projection
cuticle. made up of corn. & nuclei. vessels present. Hair not
two investments. (1) ext. not sheath abt. d. up. base & corn.
to the sole muscle. this cuticle with scurf of hair but does not
reach the bottom of follicle. Made up of epithelial cells. (2) not not
sheath. flatter cells - sh. of scale which adhere fur to each & much
open the & scurf of the hair. None shaft is exposed. outer for cortex
inner is medulla, sh. & only found in some hairs. Cuticle on
outside corn. of thin nucleus under the cuticle of hair. cell on
flatt. & on the under. in d. for below upper. in the root this sheath
is coffee & has a thick sheath. Under is fine part of hair sh.
are built. corn. of fine cells shing & flatter with tinged fibres
& mixed with fragment. Pig. varies from the to high yellow & sh. in
in the root the fine hair sh. sh. as abt. the papilla & d. in.
Medulla only in short sh. hair of head & neck. 1/3 - 1/5 of hair sh.
made up of rounded oblong cells. the cut. growth pig. in air
from Pap. hair in form of corn. part. & melan. Small muscul
fine from phloem fine hind end of hair. In old age begin at top
sh. bleacher. lines. as protection. & in. keep up moderate
for the corn. in the penum. & ap. Nails not body of body
not. end - part. 1/4 of length. body smooth sh. mostly of long line
beneath behind. Removable - the matrix, sh. in the corn. must
be part. up. corn. into rings - a long layer Corn
~~the part. up. corn. into rings - a long layer~~ Corn
~~the part. up. corn. into rings - a long layer~~ Corn
the part. up. corn. into rings - a long layer Corn
corn & fill up in the sole muscle & cut. under the corn. layer in
shing. None layer - the true nail adhe. to sole muscle. It is
thicker for before back. The knot 1/3, in. in all sh. take
shadow of flatter scales & sh. in clasp. & corn. in a fine
Growth takes place by cut. part. of cells of cells below & up. & the

Hautschel rd ||||-|||||/|||

Suclair od |||| a||||||

Sully od |||| ||| a ||||

Norman od ||||| ||||| ||||

Aborn rd ||||| ||||| ||||

Donald rd ||||| ||||| ||||

Hagg rd ||||| ||||| ||||

Pomeroy od |||| a ||||| a ||||
and of Pomeroy

Halt and |||| a ||||| a a ||||
Charles

Giles ||||| ||||| |||| a a

Ross rd ||||| ||||| ||||

Wright rd |||| a |||| a a |||| a

McDonald rd |||| a ||||| a ||||

Williamson rd ||||| |||| a |||||

McKinnon rd ||||| |||| a |||||
any

Richardson rd ||||| ||||| ||||

Ferguson rd ||||| ||||| ||||

Donk rd ||||| ||||| ||||

Kelly rd ||||| ||||| ||||

Evans rd ||||| ||||| ||||

Brunette rd ||||| |||| a |||||

Ellis rd ||||| |||| a |||||

Woodruff rd ||||| |||| a |||||

Ritchie rd ||||| ||||| ||||

Easton rd ||||| |||| a |||||

Cameron rd ||||| |||| a |||||

Laflaur rd ||||| |||| a |||||

Cameron rd ||||| |||| a |||||

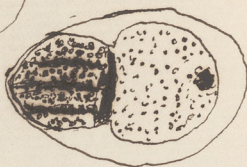
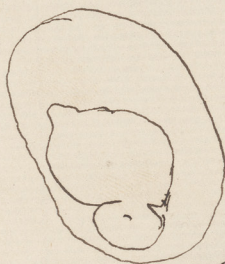
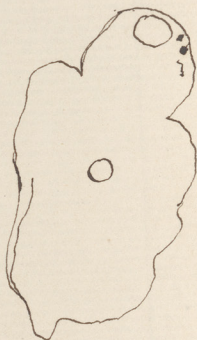
4/10

with 1 inch

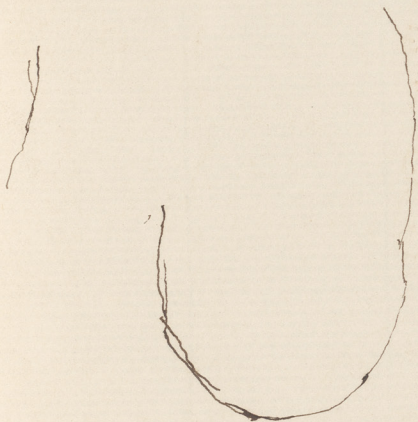


4/7/30

with 1. inch









This is my lecture portfolio with the list of students in the last class to which I lectured at McGill. The rule was to call the roll once a week, but as the list shows this was not always carried out.

For the first few years I wrote out and read my lectures. I am sorry no copy has been kept. I destroyed them all on leaving Montreal. Then I got into the habit of lecturing from slips, two of which are here preserved, one in the album the other in glycogen.

W. Osler

PETER BENT BRIGHAM HOSPITAL

721 HUNTINGTON AVENUE

BOSTON 17, MASS.

JOSEPH B. HOWLAND, M. D.
SUPERINTENDENT

HENRY A. CHRISTIAN, M. D.
PHYSICIAN-IN-CHIEF

HARVEY CUSHING M. D.
SURGEON-IN-CHIEF

S. BURT WOLBACH, M. D.
PATHOLOGIST

Fig 8

A sheet of Ocular Physiology, lecture

Francis p. 224

Aha! That's where it was!

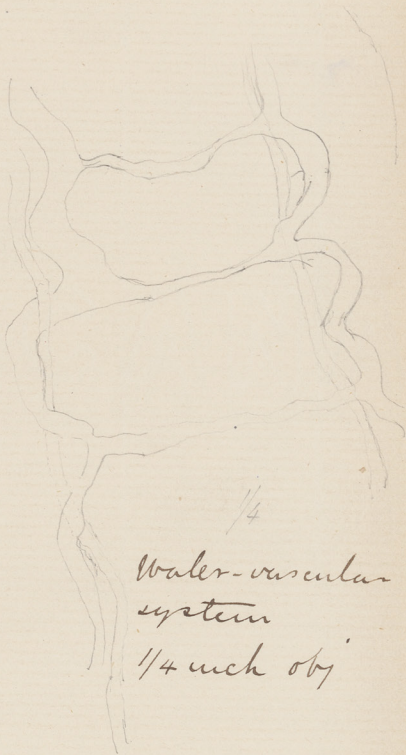
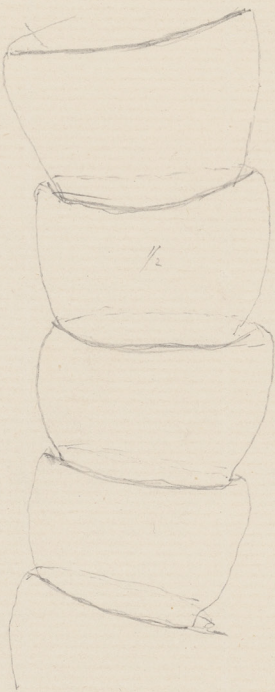
This is the missing "slip" for the SKIN lecture,
belonging in the portfolio, # 7666 z, I ~~found~~
lost for 10 years. I find it today in an "Ocular" ^{physiology}
file among the Cushing papers, # 8303; H.C.
evidently thought of using it as an illustr. for
the "Life".

W. W. Francis

26. iii. 36.

11/9/70

Four segments of *Pharus* -- from front
1/2 inch obj.



Water-vascular
system
1/4 inch obj.

Algar pd // // // // // // //

Dickson pd // // // // // // //

Lusk. pd // // // // // // //

Curie pd // // // // // // //

Hall W pd // // // // // // //

Bowen pd // // // // // // //

Christie pd // // // // // // //

Grant pd // // // // // // //

Ayler pd // // // // // // //

~~Stewart~~ // // // // // //

~~Mudge~~ // // // // //

~~Arde~~ // // // //

MacDonald ^{as} // // // // // //

Boone pd // // // // // //

Fillmore pd // // // // // //

Boggs pd // // // // // //

Wilkinson pd // // // // // //

Travers // // // // // //

Potter pd // // // // // //

Flett // // // // // //

57
54
50
104

W. O's Lecture Portfolio
with list of students
in last class to which
he lectured at McGill

& note about
his lectures written
at Oxford during
the war.

From Pike

I. 84 Tania

II. 43 " "

From Pickeral

8 Tania. length 10-12 inches

width of posterior segments about $\frac{1}{4}$ inch