	PAG
Influence of exercise etc., upon the heat of the body-Influence of the nervous system upon t	he
production of animal heat (heat-centres)-Mechanism of the production of animal heat-Equaliz	za-
tion of the animal temperature—Relations of heat to force	. 42

#### CHAPTER XV.

#### MOVEMENTS-VOICE AND SPEECH

Amorphous contractile substance and amœboid movements—Ciliary movements—Movements due to elasticity—Elastic tissue—Muscular movements—Physiological anatomy of the involuntary muscular tissue—Contraction of the involuntary muscular tissue—Physiological anatomy of the voluntary muscular tissue—Connective tissue—Connection of the muscles with the tendons—Chemical composition of the muscles—Physiological properties of the muscles—Muscular contractility, or excitability—Muscular contraction—Electric phenomena in muscles—Muscular effort—Passive organs of locomotion—Physiological anatomy of the bones—Physiological anatomy of cartilage—Voice and speech—Sketch of the physiological anatomy of the vocal organs—Mechanism of the production of the voice—Laryngeal mechanism of the vocal registers—Mechanism of speech—The phonograph . 460

#### CHAPTER XVI.

# PHYSIOLOGICAL DIVISIONS, STRUCTURE AND GENERAL PROPERTIES OF THE NERVOUS SYSTEM.

Divisions and structure of the nervous tissue—Medullated nerve-fibres—Simple, or non-medullated nerve-fibres—Gelatinous nerve-fibres (fibres of Remak)—Accessory anatomical elements of the nerves—Termination of the nerves in the muscular tissue—Termination of the nerves in glands—Modes of termination of the sensory nerves—Corpuscles of Vater, or of Pacini—Tactile corpuscles—End-bulbs—Structure of the nerve-centres—Nerve-cells—Connection of the cells with the fibres and with each other—Accessory anatomical elements of the nerve-centres—Composition of the nervous substance—Degeneration and regeneration of the nerves—Motor and sensory nerves—Mode of action of the motor nerves—Associated movements—Mode of action of the sensory nerves—Physiological differences between motor and sensory nerve-fibres—Nervous excitability—Different means employed for exciting the nerves—Rapidity of nervous conduction—Personal equation—Action of electricity upon the nerves—Law of contraction—Induced muscular contraction—Electrotonus, anelectrotonus and catelectrotonus—Negative variation

## CHAPTER XVII.

## SPINAL AND CRANIAL NERVES.

Spinal nerves—Cranial nerves—Anatomical classification—Physiological classification—Motor oculi communis (third nerve)-Physiological anatomy-Properties and uses-Influence upon the movements of the iris-Patheticus, or trochlearis (fourth nerve)-Physiological anatomy-Properties and uses-Motor oculi externus, or abducens (sixth nerve)-Physiological anatomy-Properties and uses -Nerve of mastication (the small, or motor root of the fifth)-Physiological anatomy-Properties and uses-Facial, or nerve of expression (seventh nerve)-Physiological Anatomy-Intermediary nerve of Wrisberg—Alternate paralysis—General properties—Uses of the chorda tympani—Influence of various branches of the facial upon the movements of the palate and uvula-Spinal accessory (eleventh nerve)-Physiological anatomy-Uses of the internal branch from the spinal accessory to the pneumogastric-Influence of the spinal accessory upon the heart-Uses of the external, or muscular branch of the spinal accessory-Sublingual, or hypoglossal (twelfth nerve)-Physiological anatomy-Properties and uses-Trifacial, or trigeminal (fifth nerve)-Physiological anatomy-Properties and uses-Pneumogastric (tenth nerve)-Physiological anatomy-Properties and uses-General properties of the roots-Properties and uses of the auricular nerves-Properties and uses of the pharyngeal nerves-Properties and uses of the superior laryngeal nerves-Properties and uses of the inferior, or recurrent laryngeal nerves-Properties and uses of the cardiac nerves-Depressor nerve of the circulation-Properties and uses of the pulmonary nerves-Properties and uses of the œsophageal nerves-Properties and uses of the abdominal nerves .

# CHAPTER XVIII.

#### THE SPINAL CORD.

General arrangement of the cerebro-spinal axis—Membranes of the encephalon and spinal cord—Cephalorachidian fluid—Physiological anatomy of the spinal cord—Columns of the cord—Direction of the nerve-fibres in the cord—General properties of the spinal cord—Motor paths in the cord—Sensory

paths in the cord—Relations of the posterior white columns of the cord to muscular co-ordination—
Nerve-centres in the spinal cord—Reflex action of the spinal cord—Exaggeration of reflex excitability
by decapitation, poisoning with strychnine etc.—Reflex phenomena observed in the human subject 586

#### CHAPTER XIX.

#### THE ENCEPHALIC GANGLIA.

Physiological divisions of the encephalon—Weights of the encephalon and of certain of its parts—The cerebral hemispheres—Cerebral Convolutions—Basal ganglia—Corpora striata, optic thalami and internal capsule—Tubercular quadrigemina—Pons Varolii—Directions of the fibres in the cerebrum—Cerebral localization—General uses of the cerebrum—Extirpation of the cerebrum—Facial angle—Pathological observations—Reaction-time—Centre for the expression of ideas in language—The cerebellum—Physiological anatomy—Extirpation of the cerebellum—Pathological observations—Connection of the cerebellum with the generative function—Medulla oblongata (Bulb)—Physiological anatomy—Uses of the medulla oblongata—Respiratory nerve-centre—Cardiac centres—Vital point (so called)—Rolling and turning movements following injury of certain parts of the encephalon 601

## CHAPTER XX.

#### SYMPATHETIC NERVOUS SYSTEM-SLEEP.

General arrangement of the sympathetic system—General properties of the sympathetic ganglia and nerves—Direct experiments on the sympathetic—Vaso-motor centres and nerves—Reflex vaso-motor phenomena—Vaso-inhibitory nerves—Trophic centres and nerves (so-called)—Sleep—Condition of the brain and nervous system during sleep—Anæsthesia and sleep produced by pressure upon the carotid arteries—Differences between natural sleep and stupor or coma—Regeneration of the brain-substance during sleep—Condition of the organism during sleep

## CHAPTER XXI.

# SPECIAL SENSES-TOUCH, OLFACTION AND GUSTATION.

General characters of the special senses—Muscular sense (so called)—Sense of touch—Variations in tactile sensibility in different parts (sense of locality of impressions)—Table of variations measured by the æsthesiometer—Appreciation of temperature—Tactile centre—Olfaction—Nasal fossæ—Schneiderian and olfactory membranes—Olfactory (first nerve)—Physiological anatomy—Olfactory bulbs—Olfactory cells and terminations of the olfactory nerve-fibres—Properties and uses of the olfactory nerves—Mechanism of olfaction—Relations of olfaction to the sense of taste—Reflex acts through the olfactory nerves—Olfactory centre—Gustation—Savors—Nerves of taste—Chorda tympani—Glosso-pharyngeal (ninth nerve)—Physiological anatomy—General properties of the glosso-pharyngeal—Relations of the glosso-pharyngeal nerves to gustation—Mechanism of gustation—Physiological anatomy of the organ of taste—Papillæ of the tongue—Taste-beakers—Connections of the nerves with the organs of taste—Taste-centre

## CHAPTER XXII.

#### VISION.

General considerations—Optic (second nerve)—General properties of the optic nerves—Physiological anatomy of the eyeball—Sclerotic coat—Cornea—Choroid coat—Ciliary muscle—Iris—Pupillary membrane—Retina—Crystalline lens—Aqueous humor—Chambers of the eye—Vitreous humor—Summary of the anatomy of the globe—The eye as an optical instrument—Certain laws of refraction, dispersion etc., bearing upon the physiology of vision—Refraction by lenses—Visual purple and visual yellow and accommodation of the eye for different degrees of illumination—Formation of images in the eye—Mechanism of refraction in the eye—Astigmatism—Movements of the iris—Direct action of light upon the iris—Action of the nervous system upon the iris—Mechanism of the movements of the iris—Accommodation of the eye for vision at different distances—Changes in the crystalline lens in accommodation—Changes in the iris in accommodation—Erect impressions produced by images inverted upon the retina—Field of indirect vision—The perimeter—Binocular vision—Corresponding points—The horopter—Duration of luminous impressions (after-images)—Irradiation—Movements of the eyeball—Muscles of the eyeball—Centres for vision—Parts for the protection of the eyeball—Conjunctival mucous membrane—Lachrymal apparatus—Composition of the tears

# CHAPTER XXIII.

## AUDITION.

## CHAPTER XXIV.

#### ORGANS AND ELEMENTS OF GENERATION.

## CHAPTER XXV.

## FECUNDATION AND DEVELOPMENT OF THE OVUM.

# CHAPTER XXVI.

#### FŒTAL LIFE-DEVELOPMENT AFTER BIRTH-DEATH.

Enlargement of the uterus in pregnancy—Duration of pregnancy—Size, weight and position of the feetus —The feetus at different stages of intraüterine life—Multiple pregnancy—Cause of the first contractions of the uterus, in normal parturition—Involution of the uterus—Meconium—Dextral pre-eminence—Development after birth—Ages—Death—Cadaveric rigidity (rigor mortis) . 842

# LIST OF ILLUSTRATIONS.

Plate I, Fig. 1. Human blood-corpuscles (Stratford) )	
" 2. Blood of Guinea-pig (Sternberg) }	spiece.
Plate II, Fig. 1. Deutoplasm-forming ovum from a Graafian fol-	
licle of a woman twenty-seven years old (Nagel)facing pag	
" 2. Fresh ovum from a Graafian follicle of a woman (Nagel)facing page	ge 777
thirty years old	
Plate III, Fig. 1. Human embryon at the ninth week (Erdl)facing page	
" 2. Human embryon at the twelfth week (Erdl)facing page	ge 805
FIGURE	PAGE
1. Human blood-corpuscles (Sternberg)	
2. Human red blood-corpuscles arranged in rows (Funke)	. 7
3. Blood-corpuscles of the frog (United States Army Medical Museum)	. 8
4. Artificial capillary filled with a sanguineous mixture, seen under a micrometer (Mala	
sez)	
5. Human blood-corpuscles, showing post-mortem alterations (Funke)	. 9
6. Human leucocytes, showing amœboid movements (Landois)	
7. Human red blood-corpuscles and two leucocytes (Sternberg)	
8. Blood-plaques and their derivatives (Landois)	
9. Crystallized hæmaglobine (Gautier)	
10. Coagulated fibrin (Robin)	
11. Heart in situ (Dalton).	
12. Course of the muscular fibres of the left auricle (Landois)	. 33
13. Heart, anterior view (Bonamy and Beau)	. 33
14. Left cavities of the heart (Bonamy and Beau)	. 34
15. Right cavities of the heart (Bonamy and Beau)	. 35
16. Muscular fibres of the ventricles (Bonamy and Beau)	. 36
17. Branched muscular fibres from the heart (Landois)	. 37
18. Valves of the heart (Bonamy and Beau)	. 37
19. Diagram showing shortening of the ventricles during systole	. 40
20. Side view of the heart (Landois)	. 40
21. Cardiograph (Chauveau and Marey).	. 41
22. Scheme of the course of the accelerans fibres (Stirling)	. 55
23. Small artery from the mesentery of the frog (United States Army Medical Museum).	. 63
24. Sphygmograph of Marey	. 67
25. Sphygmograph applied to the arm (Marey)	. 68
26. Trace of the pulse (Vierordt)	. 68
27. Portions of four traces taken in different conditions of the pulse (Marey)	. 68
28. Cardiometer of Magendie (Bernard)	. 72
29. Compensating instrument of Marey.	. 73
30. Chauveau's instrument for measuring the rapidity of the flow of blood in the arteries	. 76
31. Capillary blood-vessels (Landois)	
32. Small artery and capillaries (United States Army Medical Museum)	. 80
33. Web of the frog's foot (Wagner)	. 81
34. Circulation in the web of the frog's foot (Wagner).	

# LIST OF ILLUSTRATIONS.

	· · · · · · · · · · · · · · · · · · ·	AGE
IGUE	Small artery and capillaries from the lung of the frog (United States Army Medical	
00.	Museum)	83
00	Portion of the lung of a live triton (Wagner)	84
90.	Venous radicles uniting to form a small vein (United States Army Medical Museum)	88
37.	Small blood-vessel of the mesentery of the frog, showing diapedesis of leucocytes	
38.	(Landois)	105
	Trachea and bronchial tubes (Sappey).	110
39.	Lungs, anterior view (Sappey).	112
40.	Bronchia and lungs, anterior view (Sappey)	113
41.	Mould of a terminal bronchus and a group of air-cells (Robin)	114
42.	Mould of a terminal bronchus and a group of alf-cens (nobin)	
43.	Section of the parenchyma of the human lung, injected through the pulmonary artery	115
	(Schultze)	116
44.	Thorax, anterior view (Sappey)	116
45.	Thorax, posterior view (Sappey)	110
46.	Diaphragm (Sappey)	110
47.	Action of the diaphragm in inspiration (Hermann)	100
48.	Elevation of the ribs in inspiration (Béclard)	170
49.	Arrowroot starch-granules (United States Army Medical Museum)	1/2
50.	Crystals of palmitine and palmitic acid (Funke)	170
51.	Crystals of stearine and stearic acid (Funke)	175
52.	Tooth of the cat (Waldeyer)	190
53.	Inferior maxilla (Sappey)	192
54.	Salivary glands (Tracy)	195
55.	Cavities of the mouth, pharynx etc. (Sappey)	203
56	. Muscles of the pharynx, etc. (Sappey)	204
57	Longitudinal fibres of the stomach (Sappey)	212
50	Fibres seen with the stomach everted (Sappey)	213
59	Pits in the mucous membrane of the stomach, and orifices of the glands (Sappey)	215
60	Goblet-cells from the stomach (Landois)	214
61	Glands of the greater pouch of the stomach (Heidenhain)	215
62	Pyloric glands (Ebstein)	215
63	Gastric fistula in the case of St. Martin (Beaumont)	216
61	Dog with a gastric fistula (Béclard)	217
CK	Metters taken from the pyloric portion of the stomach (Bernard)	224
66	Stomach liver, small intestine etc. (Sappey)	234
67	Gland of Brunner (Frey)	200
68	3 Intestinal tubules (Sappey)	236
60	Intestinal villus (Levdig)	238
70	Capillary net-work of an intestinal villus (Frey)	238
71	Enithelium of the small intestine of the rabbit (Funke)	238
he	Datab of Pavar (Sanney)	240
79	Patch of Pever, seen from its attached surface (Sappey)	240
74	Gall-bladder, ductus choledochus and pancreas (Le Bon)	243
7:	Capula fixed in the pancreatic duct (Bernard)	244
76	Representation fistula (Bernard)	. 245
171	7 Dog with a biliary fistula	. 251
70	Stamach panereas, large intestine etc. (Sappey)	. 258
7	Opening of the small intestine into the cæcum (Le Bon)	. 259
01	Migro organisms of the large intestine (Landois)	. 204
0	1 Ctorsoring from the human fæces	. 200
0	a Origin of lymphatics (Landois)	. 214
0	2 Lymphetic plevus, showing endothelium (Belaieff)	. 270
0	4. Superficial lymphatics of the skin of the palmar surface of the finger (Sappey)	. 277

LIST	OF	ILLUSTRATIONS.
TINI	OT	ILLUDITUALIUND.

xiii

	FIGUR		PAGE
		Deep lymphatics of the skin of the finger (Sappey)	
		Same finger, lateral view (Sappey)	
		Superficial lymphatics of the arm (Sappey)	
		Superficial lymphatics of the leg (Sappey)	
		Lacteals (Asellius)	
	90.	Thoracic duct (Mascagni)	281
	91.	Valves of the lymphatics (Sappey)	282
		Lymphatics and lymphatic glands (Sappey)	
		Different varieties of lymphatic glands (Sappey)	
		Epithelium of the small intestine of the rabbit (Funke)	
		Epithelium filled with fat, from the duodenum of the rabbit (Funke)	
		Villi filled with fat, from the small intestine of an executed criminal (Funke)	
		Egg prepared so as to illustrate endosmotic action	
		Chyle from the lacteals and thoracic duct (Funke)	
		Sebaceous glands (Sappey)	
	100	Ceruminous glands (Sappey)	200
		Meibomian glands (Sappey).	
	101.	Mammary gland of the human female (Liégeois)	990
	102.	Human milk-globules (Funke).	994
	104.	Colostrum (Funke)	000
	100.	Anatomy of the nails (Sappey)	340
		Section of the nail, etc. (Sappey)	
		Hair and hair-follicle (Sappey)	
		Root of the hair (Sappey).	
		Human hair (United States Army Medical Museum)	
		Transverse section of a human hair (United States Army Medical Museum)	
	111.	Surface of the palm of the hand (Sappey)	354
	112.	Sudoriparous glands (Sappey)	355
	113.	Vertical section of the kidney (Sappey)	359
	114.	Longitudinal section of the pyramidal substance of the kidney (Sappey)	360
	115.	Longitudinal section of the cortical substance of the same kidney (Sappey)	360
	116.	Structure of the kidney (Landois)	363
	117.	Blood-vessels of the kidney (Sappey)	365
	118.	Diagram showing the mechanism of micturition (Küss)	372
	119.	Crystals of urea (Funke)	376
	120.	Crystals of uric acid (Funke)	380
	121.	Sodium urate (Funke)	380
	122.	Crystals of hippuric acid (Funke)	382
	123.	Crystals of creatine (Funke)	382
	124.	Crystals of creatinine (Funke)	382
		Crystals of calcium oxalate (Funke)	
	126.	Crystals of leucine (Funke)	383
	127.	Crystals of tyrosine (Funke)	384
		Crystals of taurine (Funke)	
		Crystals of sodium chloride (Funke)	
		Lobules of the liver, interlobular vessels and intralobular veins (Sappey)	
		Transverse section of a single hepatic lobule (Sappey)	
-		Liver-cells from a human, fatty liver (Funke).	
		Portion of a transverse section of an hepatic lobule of the rabbit (Kölliker)	
		Racemose glands attached to the biliary ducts (Sappey)	
		Gall-bladder, hepatic, cystic and common ducts (Sappey).	
		Cholesterine extracted from the bile	
		Instrument for nuncturing the floor of the fourth ventricle (Rernard)	404

T	TOT	OF	ILLUSTRATION	P
	TOT	OT.	TELUGITIMATION	10.

xiv

FIGUI	RE .	PAGE
138.	Operation of puncturing the floor of the fourth ventricle (Bernard)	412
139.	Malpighian corpuscle of the spleen of the cat (Cadiat)	415
	Section of a human, suprarenal capsule (Cadiat)	
141.	Thyroid and thymus glands (Sappey)	424
	Amœba diffluens (Longet)	
	Ciliated epithelium (Landois)	
	Small elastic fibres (Kölliker)	
	Larger elastic fibres (Robin)	
	Large elastic fibres—fenestrated membrane—(Kölliker)	
	Muscular fibres from the urinary bladder (Sappey)	
148	Muscular fibres from the aorta (Sappey)	465
140.	Muscular fibres from the uterus (Sappey).	465
	Striated muscular fibres (United States Army Medical Museum)	
	Striated muscular fibres (Sappey)	
	Fibres of tendon from the human subject (Rollett).	
	Net-work of connective tissue (Rollett).	
	Frog's leg prepared so as to show the effects of curare (Bernard)	
	Diagram of the myograph of Helmholtz (Landois)	
	Curve of a single, muscular contraction (Landois)	
	Muscular current in the frog (Bernard)	
158.	Longitudinal section of bone (Sappey)	482
159.	Longitudinal section of bone (United States Army Medical Museum)	482
160.	Transverse section of bone (Sappey)	483
	Transverse section of bone (United States Army Medical Museum)	
162.	Bone-corpuscles (Rollett)	484
	Section of cartilage (United States Army Medical Museum)	
164.	Section of diarthrodial cartilage (Sappey)	486
165.	Section of the cartilage of the ear (Rollett)	487
166.	Longitudinal section of the human larynx (Sappey)	488
167.	Posterior view of the muscles of the larynx (Sappey)	489
168.	Lateral view of the muscles of the larynx (Sappey)	490
169.	Glottis seen with the laryngoscope (Le Bon)	492
170.	Appearance of the vocal chords in the production of the chest-voice (Grützner)	497
171.	Appearances of the vocal chords in the production of the falsetto-voice (Mills)	498
172.	Nerve fibres from the human subject (Kölliker)	508
173.	Nodes of Ranvier and lines of Fromann (Ranvier)	509
174.	Fibres of Remak (Kölliker)	509
175.	Mode of termination of the motor nerves (Rouget)	511
176.	Intrafibrillar terminations of a motor nerve in striated muscle (Landois)	512
177.	Termination of nerves in non-striated muscle (Cadiat)	512
178.	Termination of the nerves in the salivary glands (Pflüger)	513
179.	Corpuscle of Vater (Sappey)	514
180	Panillæ of the skin (Sappey)	515
181	End-bulbs, or corpuscles of Krause (Ludden)	516
182.	Unipolar cell from the Gasserian ganglion (Schwalbe)	517
183	Unipolar nerve-cell with a spiral fibre (Landois).	518
184	Binolar nerve-cell (Landois)	518
185	Multipolar nerve-cell (Landois)	518
186	Grav matter of the spinal cord, treated with silver nitrate (Grandry)	519
197	Flortrie forcens (Liégeois).	535
188	From's leg prepared so as to show induced contraction (Liégeois)	535
180	Method of testing the excitability in electrotonus (Landois)	537
100.	Corried portion of the spinal cord (Hirschfeld).	540

	LIST OF ILLUSTRATIONS.	XV	
FIGU	TOP		
	Dorsal portion of the spinal cord (Hirschfeld)	PAGE	
192	Inferior portion of the spinal cord, and cauda equina (Hirschfeld)	. 540	
193	Roots of the cranial nerves (Hirschfeld)	. 540	
194	Distribution of the motor oculi communis (Hirschfeld)	541	
195	Distribution of the patheticus (Hirschfeld).	542	
196	Distribution of the motor oculi externus (Hirschfeld).	546	
197	Distribution of the small root of the fifth nerve (Hirschfeld)	547	
198	Incisors of the rabbit, before and after section of the nerve of mastication (Bernard).	548	
199	Superficial branches of the facial and the fifth (Hirschfeld)	549	
200.	Chorda tympani nerve (Hirschfeld)	166	
201-	-206. Expressions of the face, produced by contractions of the muscles under electrical	004	
	excitation (Le Bon, after Duchenne).	EEG	
207.	Spinal accessory nerve (Hirschfeld).	557	
400.	Sublingual nerve (Sappey)	569	
209.	Principal branches of the large root of the fifth nerve (Robin)	Kes	
210.	Ophthalmic division of the fifth (Hirschfeld)	KCK	
411.	Superior maximary division of the fifth (Hirschfeld)	KAR	
212.	interior maxillary division of the fifth (Hirschfeld)	567	
213.	Cutaneous distribution of sensory nerves to the face head and neek (Ráclard)	500	
214.	Anastomoses of the pneumogastric (Hirschfeld)	574	
210.	Distribution of the pneumogastric (Hirschfeld)	KAK	
210.	Transverse section of the spinal cord (Gerlach)	K00	
211.	Columns and conducting paths in the spinal cord	502	
410.	rrog poisoned with strychnine (Liegeois)	599	
219.	Structures displayed upon the right side in a median longitudinal section of the brain		
220	semi-diagrammatic	602	
220.	Vertical section of the third cerebral convolution in man (Meynert)	604	
222	Diagram of the external surface of the left cerebral hemisphere	605	
223	Diagram of the internal surface of the right cerebral hemisphere.	605	
224.	Horizontal section of the hemispheres at the level of the cerebral ganglia (Dalton)  Diagram of the human brain in a transverse vertical section (Dalton)	607	
225.	Direction of some of the fibres in the cerebrum (Le Bon)	608	
226.	Motor cortical zone on the outer surface of the cerebrum (Exner).	612	
227.	Paracentral lobule (Exner).	613	
228.	Lateral view of the human brain with certain motor cortical areas.	014	
229.	Inner surface of the right cerebral hemisphere (Schäfer and Horsley)	010	
230.	Cerebellum and medulla oblongata (Hirschfeld).	000	
201.	Afterior view of the medulla oblongata (Sappey)	000	
494.	Floor of the fourth ventrical (Hirschfeld)	000	
200.	Vervical and thoracic portion of the sympathetic (Corner)	DESCRIPTION OF THE PARTY OF THE	
404.	Lumbar and sacral portions of the sympathetic (Sapper)	COH	
	Strategy Early and Helves (Hirschield)	GEO	
400.	refilmal maments of the offactory nerves (Kölliker).	cco	
201.	Glosso-pharyngeal nerve (Sappey)	888	
200.	rapinæ of the tongue (Sappey)	000	
200,	240. Varieties of papillæ of the tongue (Sappey)	een	
Z#1.	raste-beakers (Engelmann)	ena	
	optic tracts, commissure and nerves (Hirschfeld)	679	
244.	Diagram of the decussation at the optic commissure	672	
245.	Choroid coat of the eye (Sappey)  Ciliary muscle (Sappey)	676	
246.	Ciliary muscle (Sappey) Rods of the retina (Schultze).	678	
247.		682	

# xvi LIST OF ILLUSTRATIONS. 248. Connection of the rods and cones of the retina with the nervous elements (Sappey)... 683 256. Section of the lens, etc., showing the mechanism of accommodation (Fick) . . . . . . . 710 271. Section of the first turn of the spiral canal—section of the cochlea (Rüdinger)...... 758 291. Ovum of the rabbit, showing penetration of spermatozoids and retraction of the vitel-

 297. Placenta and deciduæ (Liégeois).
 811

 298-300. Development of the chick (Brücke).
 814, 815

 301. Development of the notochord (Robin).
 816

	LIST OF ILLUSTRATIONS.	xvii
FIGUR	E	PAGE
302.	Human embryon one month old (Dalton)	816
303.	Development of the nervous system of the chick (Longet, after Wagner)	810
304.	Development of the spinal cord and brain of the human subject (Longet, after Tiede	
20=	mann)	820
305.	Fœtal pig, showing umbilical hernia (Dalton)	822
306.	Development of the bronchial tubes and lungs (Longet, after Rathke and Müller)	825
307-	309. Development of the face (Coste)	827
310.	Temporary and permanent teeth (Sappey)	829
311.	Fœtal pig, showing the Wolffian bodies (Dalton)	221
312.	Diagrammatic representation of the genito-urinary apparatus (Henle)	833
313.	Area vasculosa (Bischoff)	835
314.	Aortic arches, in the mammalia (Von Baer)	837
315.	Diagram of the fœtal circulation.	840
316.	Cholesterine extracted from meconium.	847