

Catalogue of anatomical preparations in the Hunterian Museum, University of Glasgow ... / [compiled by] G. Fordyce, David Pitcairn, W. Combe.

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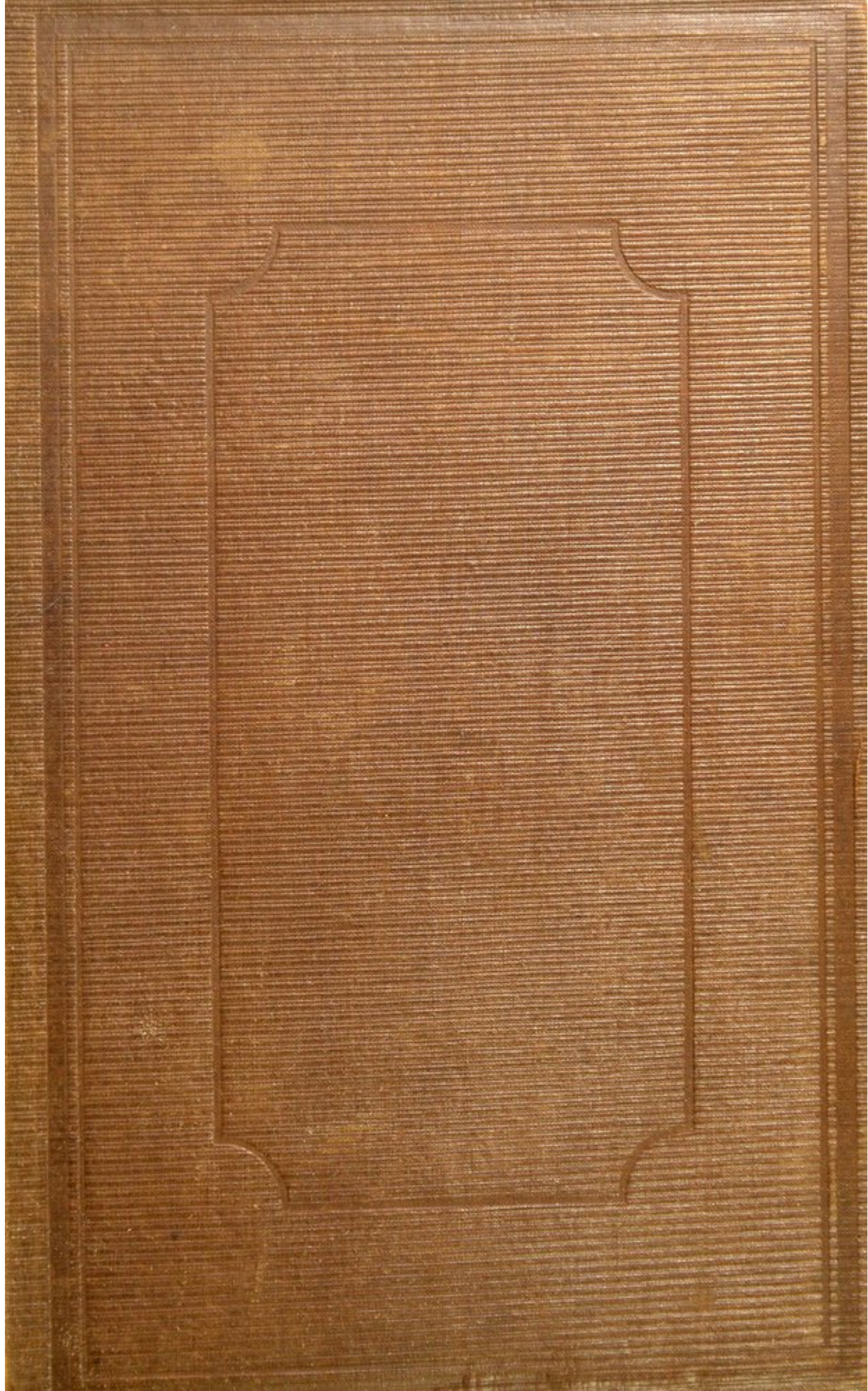
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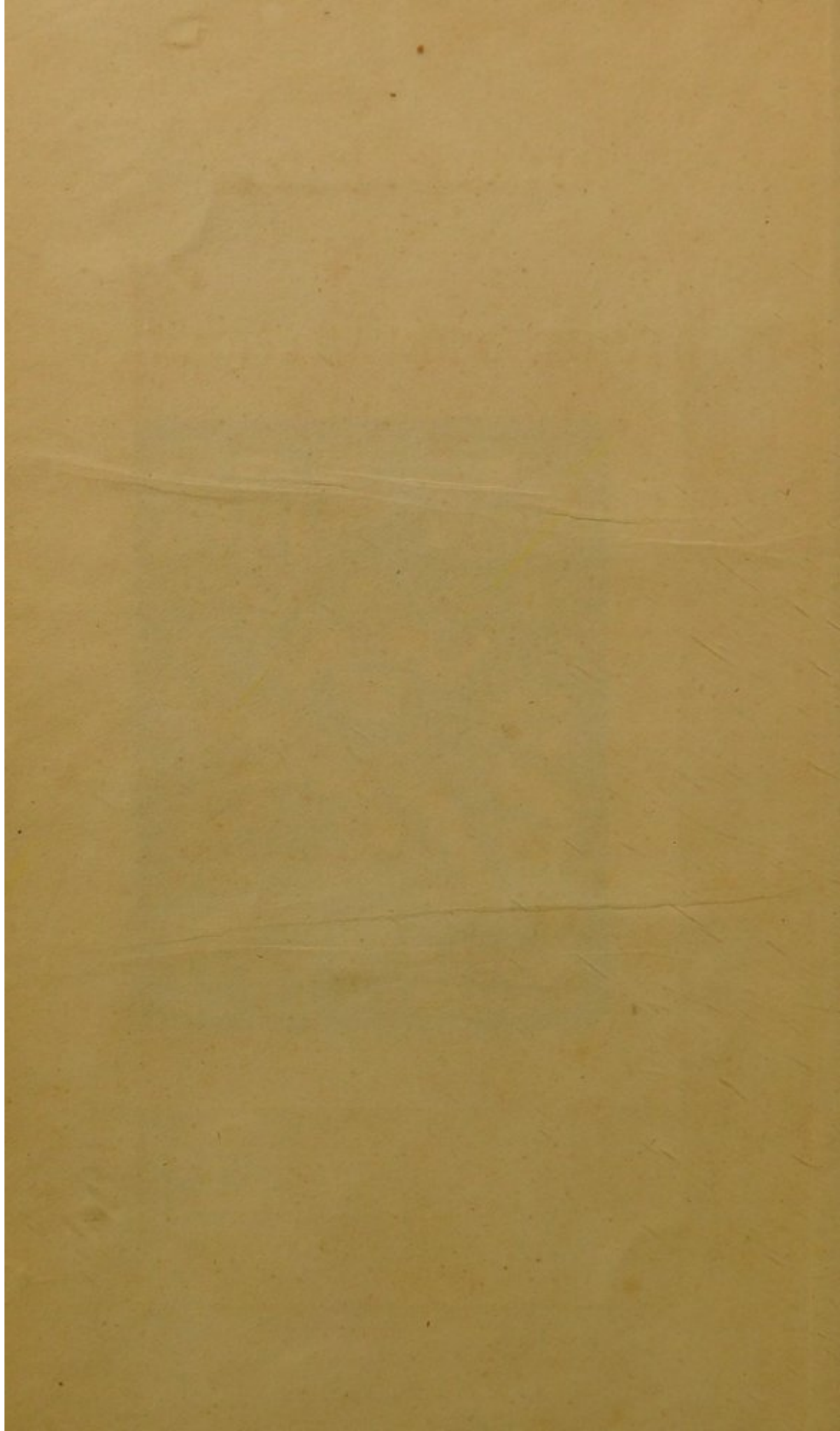


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1928





CATALOGUE
OF
ANATOMICAL PREPARATIONS
IN THE
HUNTERIAN MUSEUM,
UNIVERSITY OF GLASGOW.

“The following Catalogue is, to the best of our knowledge and belief, a true Catalogue of the Anatomical Preparations left by the late Dr. William Hunter.

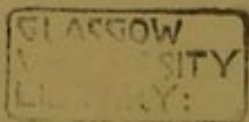
G. FORDYCE.
DAVID PITCAIRN.
W. COMBE.”

GLASGOW:
PRINTED BY GEORGE RICHARDSON, 35, MILLER STREET.

1840.

REFERENCES.

- S.....signifies in Spirits.
T..... ..in Oil of Turpentine.
D.....dried, and of course varnished.
P.....on a Pedestal under a Glass Cover.
M.....Microscopic Object.



ADVERTISEMENT.

THE Catalogue of the Anatomical Preparations in the Hunterian Museum, now published for the use of the Medical Students of the University and of scientific visitors, comprises all the Wet Preparations at present in the Collection, and many of the Dry Preparations; but the great majority of the latter not being exhibited, chiefly from want of room and of suitable cabinets, it has been deemed superfluous, in the mean time, to publish a description of them.

The Catalogue has been printed from one of the two Manuscript Catalogues transmitted to the University, by the Trustees of Dr. Hunter. These Catalogues abound with errors of every kind, rendering the descriptions often obscure and sometimes quite unintelligible. In rectifying these errors the collation of the manuscript catalogues was for the most part of little use, as the one seems to be a literal transcript of the other, preserving faithfully the most palpable mistakes. A careful comparison of the Preparations themselves, with the descriptions given of them, was found to be the only means by which the true meaning could be ascertained. Wherever it was possible the exact words of the original have been retained. Most frequently an alteration in the structure of the sentences was sufficient to restore the sense; but in many instances a change in the words themselves was quite indispensable. In such cases, if any doubt remained as to the true meaning, a reference has been given to the MSS., or a note of interrogation added; or if any interpolation had been required, the interpolated words are included within brackets.

There are many Preparations in the Collection of which no description is given in either of the manuscript catalogues. Of some of these a short description has been supplied. They are all marked as "not described," although there can be no doubt, that a more careful examination will serve to identify many of them with Preparations now supposed to be amissing.

As many of the Casts included in the Section R. R. correspond exactly to the Plates in Dr. Hunter's Anatomy of the Gravid Uterus, and very imperfectly or not at all to any of the descriptions in the manuscript catalogues, it has been deemed advisable to substitute for the latter the descriptions given in the published work, indicating at the same time the Plates to which the Casts appear to correspond. A similar reference has been given to the only Wet Preparation delineated in the same work. It has been judiciously suggested that references should likewise be given to the Plates published by Dr. Baillie, of which upwards of an hundred are taken from Preparations in the Hunterian Collection, but this suggestion came too late to be acted upon, on the present occasion.

It is only necessary to remark further, that several of the first Sections of the Catalogue were printed at an earlier period than the rest of it, and with the exception of the mere correction of the press under a different superintendence. The important labour of determining the correspondence between the several Preparations included in these Sections, and the descriptions put into the hands of the printer not having been performed with a sufficient degree of care, some Preparations have been wrong described, and others not described at all; while some descriptions have been printed, to which no Preparation corresponds. These errors, which must prove embarrassing to the student, were unfortunately not discovered till the press was too far advanced to admit of their being corrected. Of these therefore, and of any similar errors which, notwithstanding the care with which they have been guarded against, may be found in the succeeding Sections, the correction must be reserved for the next edition of the Catalogue.

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1911

CONTENTS.

	Page		Page
Blood. A. - - - -	3	Breasts, Women. D.D. - - -	149
Arteries. B. - - - -	4	Brain. E.E. - - - -	152
Veins. C. - - - -	7	Eye. F.F. - - - -	159
Absorbent System. D. - - -	8	Nose and Mouth. G.G. - - -	173
Nerves. E. - - - -	16	Ear. H.H. - - - -	182
Cellular Membrane. F. - - -	22	Skin. I.I. - - - -	188
Glands. G. - - - -	25	Aneurisms. K.K. - - - -	196
Muscles. H. - - - -	28	Diseased Bones. Wet. L.L.	199
Bones. I. - - - -	30	Monsters. M.M. - - - -	204
Periosteum. K. - - - -	32	Incubated Egg. N.N. - - -	211
Cartilage. L. - - - -	34	Generation. Rabbits. O.O. -	218
Ligament. M. - - - -	35	The Teeth. P.P. - - - -	221
Osteogeny. N. - - - -	38	Absorbents particularly. Q.Q. -	229
<i>Epiphyses.</i> - - - -	41	Gravid Uterus. R.R. - - -	238
<i>Cylindrical Bones—some flat.</i>	47	Casts, Do. chiefly in Plaster of Paris.	268
Œsophagus and Stomach. O.	50	Wet Preparations. Misplaced, &c.	270
<i>In Disease—chiefly.</i> - - -	54	Bones. - - - -	271
Small Intestines. P. - - -	59	Diseased Bones. Dry. - - -	272
<i>Uncommon Structures.</i> - - -	65	Inflammation. - - - -	272
<i>Diseased Structures.</i> - - -	66	Caries. - - - -	274
Great Intestines. R. - - -	70	Exfoliation. - - - -	275
Worms. Q. - - - -	76	Rickets. - - - -	276
Heart. S. - - - -	78	Mollities Ossium. - - -	277
Lungs. T. - - - -	82	Incurvation. - - - -	278
Liver. U. - - - -	90	Hydrocephalus. - - - -	279
Spleen. V. - - - -	94	Anchylosis. - - - -	279
Pancreas. W. - - - -	96	Fracture. - - - -	282
Kidney. X. - - - -	98	Exostosis. - - - -	284
Testicle. Y. - - - -	109	Spina Ventosa. - - - -	285
<i>Descent of the Testicle.</i> - -	114	Urinary Calculi. - - - -	286
Vesiculæ Seminales. Z. - - -	119	Salivary, and Pancreatic Stones.	288
Bladder. A.A. - - - -	119	Billiary Calculi. - - - -	288
Penis. B.B. - - - -	128	Bezoar Stones. - - - -	289
Female Organs. C.C. - - -	134	Intestinal Stones. - - - -	289

No. 10. *s.* Ditto, from the popliteal vein of an elephant, externally smooth, of a pyriform shape, about the size of one's thumb; and internally, as appears from the section, made up of concentric laminae; when found it was of considerable hardness and seemed of long standing.

No. 11. *s.* The posterior Tibial Artery from a Mortified Leg, impervious from the column of coagulated blood which blocks it up.

No. 13. *a.s.* An Artery from a Stump, apparently below the knee, dividing into two and showing in both branches coagula.

No. 13. *b.s.* A Coagulum of Blood at the end of the Femoral Artery after amputation. It is seen plugging up the artery, and the artery is somewhat contracted at this part. The ligatures made by the surgeon are still remaining, and the vein is preserved attending the artery.

No. 13. *c.s.* Ditto. The coagulum larger and the artery more contracted.

No. 15. *s.* The Carotid of an Ass, on which Lambert's operation for aneurism had been performed, obliterating at the place of puncture by means of the coagulating lymph plugging it up.

ARTERIES. B.

No. 6. *s.* The beginning of the Aorta and Pulmonary Artery hardened in spirits in their distended state, whilst the blood is supposed attempting to get back into the heart. The preparation shows the loose edges of the sigmoid valves, when in contact with one another, almost totally shutting up the passage.

No. 6. *a.s.* An Aorta at its beginning distended with Spirits, and showing the meeting of the three semilunar valves. It is known to be the aorta by the origin of the two coronary arteries.

No. 6. *b.s.* One of the Semilunar valves at the beginning of the Aorta. The artery is removed exactly opposite the valve that it

may be distinctly seen on each side, and it shows particularly a small body on the middle of its edge called globulus Arantianus.

No. 7. *s.* The beginning of the Pulmonary Artery slit open where four sigmoid valves are instead of three.

No. 10. *s.* A Section of the Aorta above the diaphragm turned inside out, and the thin inner coat transparent and without fibres peeled off and hanging down.

No. 11. *s.* Ditto, to show the three coats of an artery, viz., an external coat, where the fibres are in every possible direction, and which is thinner than the middle coat, the fibres of which are principally circular, which is about one-sixteenth of an inch thick, the inner coat as above described.

No. 12. *s.* Ditto, to show Ditto.

No. 12. *a. s.* A portion of the Aorta from an Ox, divided into its internal transparent coat, middle circular coat, and external irregular one.

No. 13. *s.* A section of the Aorta of an Elephant, a little below the curvature; it is about four inches in diameter, and the thickness of the coats taken together is about half an inch.

No. 13. *b. s.* An Artery from a Stump; the patient died before it was cicatrised—the ligatures are still hanging to it—it is still open and shows a considerable plug of coagulated lymph blocking up its lower extremity.

No. 15. *a. t.* A bit of the Aorta of a Child its peritoneal (or pleural) coat stripped off; it was injected red, slit open and dried; shows vasa vasorum.

No. 16. *s.* The Aorta of a Turtle, slit open to show the internal fasciculated muscular coat.

No. 18. *s.* The Aorta about the middle of the spine in a girl who had a very great incurvation of the spine from behind forwards; the aorta had adapted itself to that incurvation, and still shows the angle at which the spine was bent, which is very nearly a right angle.

No. 19. *s.* A portion of an Aorta of an uncommon size, from Mr. Page, a gentleman who had been subject to palpitations of his heart and frequent faintings.

No. 20. *s.* The three Coats of a section of the Aorta; the inner coat is in most places opaque, and as it were clouded—showing the beginning of ossification.

No. 21. *s.* An artery slit open, showing a number of ossifications of a purple colour.

No. 22. *d. t.* An artery opened and dried flat, to show general but distinct ossifications.

No. 25. *s.* Aorta below the diaphragm slit open to show incipient ossifications.

No. 26. *s.* Ditto. Ossifications more advanced.

No. 27. *s.* Ditto, still larger and thicker, and seemingly naked towards the cavity of the artery.

No. 28. *a. s.* A portion of the arch of the Aorta internally much ossified and aneurismal; the trunk of the right carotid and subclavian is nearly an inch distant at its origin, from that of the left, whose origin is covered with the ossification internally, and the trunk shrunk and obliterated. The ossification goes quite round the artery, and is an inch broad and apparently thick and strong.

No. 29. *s.* A section of an Ossified Aorta slit open, showing a thin membrane turned down between the bony matter and the cavity of the vessel.

No. 30. *b. s.* A portion of Diseased Artery, there appearing in some places to be small ossifications and a separation of the internal coat.

No. 30. *a. s.* Two portions of the same Artery; the uppermost one in the contracted state as in an animal bled to death: the other in the natural dilated state, as in ordinary death. In the former the cavity is almost entirely obliterated; in the latter it is nearly quarter of an inch in diameter.

No. 34 & 35. *s.* Portions of Aorta below the Diaphragm; showing the cæliac and superior mesenteric arteries coming from a common trunk.

No. 36. *s.* A portion of the origin of the Aorta, with the valves and the coats of the artery aneurismal.

No. 37. *s.* The beginning of the Aorta, with the coats of the artery a little thickened above the valves.

VEINS. C.

No. 1. *a. s.* The Placenta and Membranes of a Kitten. On the membrane in one place is seen an artery and vein meeting; the first white, the other black. This is either the origin of the vein, or it may be injection returning from the artery at one place, by the vein stopping till the venal injection meets it.

No. 9. *s.* A portion of the Cava Inferior inverted and stretched on a glass tube, showing three coats as in arteries. The internal coat very much resembles that of the artery; the middle coat has not its fibres principally circular as the artery, but in every direction; and the external coat, or that in contact with the glass tube, is coarser than the middle one—in other respects nearly the same.

No. 11. *s.* A Vein slit open to shew a pair of valves.

No. 12. *s.* Ditto, from a Horse also slit open and spread upon a card to show three valves.

No. 13. *s.* Ditto from ditto, inverted. At the upper end shows a pair of large valves filled with Paris plaster; at the middle three valves; and at the lower end three valves also filled with Paris plaster: the three sets are about two inches and a half distant from one another.

No. 17. *s.* A portion of the Basilic Median slit open: from a patient who died in the London Hospital from the inflammation

of that vein, after bleeding; a crust of extravasated lymph is seen lining the vein.

No. 18. *s.* A similar Preparation from the Iliac Vein of a gentleman who died from an aneurism of the crural artery.

No. 20. *s.* A portion of a Vein laid open with a thin layer of coagulable lymph upon the inside of it, produced by inflammation.

ABSORBENT SYSTEM. D.

No. 2. *s.* A portion of the small Intestine and Mesentery of an Antelope; in which the absorbents are still preserved in the state they were found in the dead body, i. e., full of their own chyle; the arteries and veins were both injected red.

No. 2. *a. s.* A portion of Human Intestine. An empty lacteal is seen running longitudinally on the gut, distinguished by its greater whiteness from the surrounding parts. It is but seldom, however, they are so strongly marked.

No. 2. *b. s.* A portion of Intestine with the deeper seated Lacteals filled with coagulated Chyle. The veins are injected black; the lacteals ramify like the veins, and are double their number.

No. 2. *c. s.* A large portion of Ditto, treated ditto, where they are even more crowded and exceedingly minute; seen also running on a portion of adjoining mesentery.

No. 4. *s.* A portion of the small Intestine and Mesentery of the Turtle. The arteries were first injected red, the veins next blue, and the absorbents last of all with mercury.

No. 6. *s.* Ditto from ditto. The arteries and veins were here both left empty; the absorbents alone were injected with mercury, not a drop of which has passed into either of the former vessels.

No. 9. *s.* A piece of Jejunum, the arteries and veins injected red, from a lady; it is slit open. The whole, with the adjoining piece of mesentery, is not above four inches square, yet in that space about ten absorbents remarkable for their valves, are filled with mercury, and seen passing into the glands not far from the edge of the intestine.

No. 14. *t.* A portion of the small Intestine and Mesentery of the Turtle. The arteries were injected red, the veins black, and the absorbents with mercury, and the intestine dried without distending its natural cavity. Gives a grand idea of the extent of the absorbent system in this animal.

No. 14. *a. t.* Ditto, exceedingly beautiful.

No. 15. *t.* Nine Absorbent Vessels, parallel to one another, and attached to a piece of black paper; they seem to run for a foot or two without branching.

No. 18. *t.* A Gall Bladder, with a small portion of the Liver, showing some absorbent vessels running along the surface of the gall bladder, and terminating in some absorbent glands, situated on the trunk of the vena portarum.

No. 20. *s.* A portion of the upper surface of the Liver; the absorbents in great numbers are injected with mercury, and each trunk resembles a tree with a vast number of branches; the preparation appears natural as the vessels are not dried.

No. 20. *s.* Ditto, showing ditto.

No. 21. *s.* A portion of the external surface of the Lungs; the absorbents form a most beautiful net-work; they are injected with quicksilver, and from the appearance in some parts, it would seem that no point could be taken in that surface where there was not an absorbent.

No. 21. *a. t.* Ditto, very minute and numerous.

No. 22. *s.* A portion of the small Intestine and Mesentery of the porpoise. The arteries are injected red, the absorbents with mercury. The arteries leave intermediate spaces on the mesen-

tery, and along these spaces the absorbents, apart from the larger blood vessels, pass to the loins.

No. 25. *s.* A section of the Gravid Uterus at the ninth month. In the course of the hypogastric artery from fundus to cervix, the absorbents in some places nearly as large as one's little finger, are seen injected with mercury and returning from the fundus towards the cervix, where they pass into glands, and thence mount on the side of the pelvis towards the loins.

No. 26. *s.* An absorbent injected with mercury on the upper surface of the Liver; it is equal in size to a small goose quill, and receives a number of considerable branches.

No. 26. *a. s.* Five absorbents rising out of the Testicle, running the whole length of the Cord, as large nearly as a goose quill.

No. 27. *t.* An absorbent injected with Quicksilver, of the size of a common writing quill, from the uterus of an unimpregnated ass.

No. 28. *t.* The Trunks of the absorbents of the small Intestines, coming out of the pancreas Asellii, in the kitten; they exceed the attendant superior mesenteric artery in size, and are much larger than crow quills.

No. 29. *s.* A portion of the Thoracic Duct in a Horse, large enough to admit the end of one's little finger, it was injected with spirit of wine; in consequence of which it now retains its rounded figure, and is opened in two different places.

No. 30. *s.* A portion of the small Intestine from the Turtle, the arteries injected red, the veins black, and the absorbents with Quicksilver. The quicksilver is seen on the internal surface of the intestine, in vessels just discernable to the naked eye; in the microscope they make a very large beautiful serpentine appearance, but nothing like orifice was evident.

No. 30. *c. s.* A portion of Intestine, injected red by the arteries and veins from the Rabbit; the tops of the villi are here also seen white and turgid with chyle, but the orifices were not distinct.

No. 32. *s.* A portion of Intestine of the Turbot slit open to show the villous coat; the arteries and veins both red, the absorbents injected with mercury; they appear very large on the internal surface of the intestine, and in the microscope there is in one or two places the appearance of a projecting pair of valves, preventing the mercury from escaping, but not decisively so.

No. 33. *s.* A portion of the Lungs of a Lioness which died in the Tower, and had hæmorrhage from the mouth and intestines; the absorbents were full of blood, which in the great trunks was coagulated, and prevented the mercury thrown in by the smaller branches from getting on. So that the orifices of the absorbents may be visible in the microscope, since they admitted particles of the blood which are so.

No. 34. *s.* A portion of the Thoracic Duct from the Horse, stretched on a glass cylinder, and inverted; by this means it was separated into two coats: an internal smooth floating one like that of arteries; and an external fibrous and consequently muscular one, the fibres seen in all directions, but principally circular.

No. 35. *s.* A large absorbent from the neighbourhood of the Spleen in the ass; it is filled with quicksilver and shows also an artery injected red, running on its external coat through its whole length, and encircling the absorbent with its branches; the absorbent is fixed to a piece of blue paper the better to show these particulars.

No. 37. *t.* Two portions of absorbent Vessels filled with quicksilver; their most depending extremities show two pair of valves preventing the quicksilver from escaping; they are attached to a piece of black paper.

No. 38. *t.* A considerable portion of the external surface of the Spleen in the Bullock; the absorbents running along that surface are injected with quicksilver; the mercury in many places endeavouring to go backwards shows very distinctly the valves. It likewise shows a varicose appearance in these vessels peculiar to them, in particular parts of the body, particularly in the spleen of most animals except the human species.

No. 38. *a. s.* Ditto. Vessels more numerous.

No. 39. *t.* A portion of the same vessel marked No. 27; both preparations show a knotted appearance, like a number of globules chained to one another, or like a string of beads; this appearance is stronger in the absorbents of some quadrupeds than in the human absorbents.

No. 41. *t.* An absorbent which had formerly been filled with mercury and dried, now cut open to show the valves in the manner of Ruysch.

No. 43. *t.* A portion of the Thoracic Duct filled with mercury from the adult Human subject; it appears tuberculated on the outside: these tubercles examined with a glass are evidently formed by valves where a vessel had been entering in.

No. 45. *a. s.* The Thoracic Duct in a Horse inverted and then filled with red injection; a single pair of valves only near its lower end appear; these are pointed out by a couple of bristles.

No. 46. *d.* The Body of a Monkey, the Aorta injected red, the Thoracic Duct with quicksilver. The valves in the duct are at every 16th of an inch through the whole length, and give it a very knotted appearance. Will the horizontal position of the Horse account for the almost total want of valves in the duct of that animal? And will the erect posture of the monkey make their frequency in him appear perfectly proper?

No. 47. *s.* An absorbent Gland from a Child's Neck; a portion of the external surface is turned down to show its vascularity; the arteries are injected red, and show the Gland extremely vascular.

No. 47. *a. s.* A portion of the same Intestine.

No. 48. *s.* The whole of the Mesentery from an adult Human Subject; the peritonæum of one side is removed to show the glands of the absorbents.

No. 48. *a. s.* The whole Mesentery of a Child at Birth, the arteries injected red, the veins black; intended to show the absor-

bent glands scattered along its surface to the number of 50 or 60, some of these smaller than the smallest pin's head, but very distinct; the largest are nearest the root of the mesentery, and form a portion of a circle like the pancreas Aselii in quadrupeds.

No. 49. *s.* A portion of the Jejunum and Mesentery of a Child; the arteries injected red to show the glands of the absorbents at some distance from the upper side of the intestine, clustered and large.

No. 49. *a. s.* Ditto showing Ditto.

No. 50. *s.* A portion of the Colon and Mesocolon from the same Child, to show the glands of the absorbents close to the intestine nearly, small and scattered.

No. 51. *s.* An absorbent of a large size, filled with Quicksilver, passing into a gland, and passing out; the substance of the gland is so little perceptible, that it looks as if the vessel subdivided and reunited only, without the least intervention of the fleshy substance.

No. 52. *t.* Eight or nine of the Glands of the absorbents in the Groin from the Adult Female Subject; they are injected with quicksilver to great minuteness. The absorbents of the surrounding cellular membrane are even injected and passing into the glands. In some of these last the mercury appears like a number of pin heads, showing the existence and size of the cells of the gland; in others the vast numbers of smaller absorbents of the size of the finest human hair, covering the external surface of the gland, prevent us from seeing the cells which lie under them, and give the idea of the glands being a congeries of vessels, only some of these glands communicate not only with the glands lying before them, but with those of each side by collateral absorbents. The inguinal artery, though not injected, is seen running through the middle of this cluster of glands.

No. 53. *t.* A number of absorbent Glands from the Groin, with the absorbents passing in and out, injected with quicksilver, and fixed on black paper showing the same circumstances as the former.

No. 54. *t.* Ditto from ditto, showing likewise the same circumstances. In these two last, some of the glands are just beginning to be filled, others are not completely filled, so that wanting the covering of smaller absorbents the cellular structure is evident in all of them; the want of regularity in the appearance has made some doubt of their being cells however.

No. 56. *t.* Two absorbent Glands injected with Quicksilver to show the manner in which the absorbents enter and pass out of the gland.

No. 56. *a. s.* One Ditto to show ditto.

No. 58. *t.* An absorbent Gland from near the Spleen in the Horse; it was of the size of a common plum—the absorbents entering the gland, and the absorbents which pass out, were all filled with quicksilver by one injection. After the gland had been dried above a year it was divided longitudinally, the mercury escaped, and it now shows cells capable of holding a common pea, and many of them communicating with one another—a bristle introduced points out this last circumstance; others do not seem to communicate with any different cell.

No. 59. *t.* The arch of the Aorta with the Carotids and Subclavians, the Trachea bifurcating to go into the two lobes of the Lungs, and the Jugular Veins slit open. The thoracic duct (which is one of the largest which has been seen,) is injected with quicksilver, and the trunks of the absorbents of the lungs and left side of the head are seen also injected with quicksilver, passing with it to the left subclavian. Other trunks from the lungs and heart, and right side of the head as well as right arm, are seen passing into the right subclavian and jugular; a very large trunk from the absorbents of the lungs passes behind œsophagus, (which has a quill through it) to join thoracic duct a little below the root of the lungs. A very elegant preparation.

No. 59. *b. s.* A portion of Intestine and Mesentery from the Kitten; showing in the course of the arteries and veins small lacteal vessels and small oval bodies, most probably absorbent glands.

No. 59. *c. s.* Ditto showing ditto.

No. 61. *s.* A section through a diseased mass of Lumbar Glands, from Mr. H., who had a scrophulous testicle extirpated, about three or four months before. He had a similar tumour on his head, and several such on the inside of the ribs.

No. 62. *s.* A Scirrhus mass of Lymphatic Glands on the inside of the pelvis from a woman who had died after labour, and who had the child extracted by the blunt hook; the narrowness of the pelvis preventing the delivery, was owing to this scirrhus mass.

No. 63. *s.* A Tumour which Dr. Hunter formerly extirpated from between the Scapulæ in a man; it looks glandular; the disease recurred, proved cancerous and killed.

No. 64. *s.* A portion of the skin from the Axilla, with two enlarged suppurated Scrophulous Glands full of cheesy matter, or like a mixture of thin lime and sand. This disease gives not great pain, but resembles scirrhus, and is attended with symptoms of irritation, (commonly called hectic fever.)

No. 65. *s.* The same disease in the Glands, surrounding the root of the Lungs; the trachea is seen bifurcating, and in the centre of many of these glands are seen ossifications, or a something between that and petrification, to the size frequently of a small hazel nut. These sometimes are coughed up in pulmonary consumption, and demonstrate it scrophula falling on the lungs, (compare this with 63 on lungs.)

No. 66. *s.* Some absorbents injected with mercury upon the Intestine of the Neel Ghaw. They are very large and much intersected with valves.

No. 67. *s.* Some absorbent Vessels filled with Chyle, which appears to have been hindered in its progress by an enlarged absorbent gland. The blood vessels have been injected of a green colour.

NERVES. E.

No. 3. *s.* The whole of the Adult human Brain. The Arteries are injected red, and the blood in the Veins is fixed by coagulation in a strong solution of Alum and Water; the Dura Mater covers the right hemisphere of the Brain, but is removed from the left, showing Pia Mater and the convolutions of the cortical substance of the Brain on its upper surface. On the under side are seen the lobes of the Brain, Pons Varolii, Medulla Oblongata, Cerebellum, Carotids and Basillary Arteries, the Origins of all the Nerves of the brain.

No. 4. *s.* Dura Mater injected red; shows also its glistening tendinous-like appearance; its outside is principally seen.

No. 4. *a. s.* Dura Mater in its natural situation respecting the brain, beautifully injected red; the arteries form the ridges on its outside, and give it roughness there; internally very smooth and glistening.

No. 4. *b. d. s.* The upper half of Dura Mater, showing the longitudinal sinus filled with red injection, and a number of veins terminating in this sinus.

No. 6. *s.* A Child's Cranium with the Dura Mater still adhering. It shows the inside of the Dura Mater, the superior longitudinal sinus open at one end, and the veins injected red entering that sinus. It shows also the Falx.

No. 7. *s.* A portion of the Pia Mater floating in spirits. Shows that this membrane also is white, has its surface next Dura Mater smooth, and that turned towards the brain, rough and shaggy, forming processes, which have been distinguished by the name of *Tomentum Cerebri*.

No. 8. *s.* A portion of Pia Mater injected. The injection was thrown in by the arteries, highly coloured with vermilion; it has returned by the beginnings of the veins, which are so small as

not to allow the particles of the vermilion to pass them, for which reason, the red injection of the artery is become white in the vein.

No. 8. *a. s.* Pia Mater, (a portion) the arteries had been injected red with vermilion, which has been dropt in the returning of the injection by the veins, which, of course, appear white as the tallow which formed the basis of the injection. The vermilion has lost its colour, and is dark red.

No. 8. *b. s.* Another portion of Ditto, shows ditto.

No. 9. *s.* A portion of Ditto, the arteries and veins both injected white; shows a beautiful Tomentum cerebri.

No. 10. *s.* A slice of the upper surface of the Brain, lower down than the cortical substance. The convolutions of the cortical substance are a little separated from one another in order to show the depth of the furrows which divide them, and in which the processes of the pia mater were lodged. These furrows in some places are more than an inch deep.

No. 11. *s.* A portion of the Brain injected and still covered with pia mater, the veins of a beautiful dark blue; the medullary substance of the brain does not seem vascular, and is perfectly white, except for the appearance here and there of passing vessels divided and forming red and blue points.

No. 12. *s.* Cortical Substance of the brain injected, the arteries red, the veins white: shows it exceedingly vascular.

No. 13. *s.* A considerable portion of Cerebellum; the seconti is so made, as to show the arbor vitæ—an appearance produced from the different colours of the medullary and cortical substances of the cerebellum, the last being of a dark white, the first a snow white.

No. 13. *a. s.* A similar preparation, the parts being a little more separated by maceration.

No. 14. *s.* A similar preparation injected red, the medullary substance of cerebellum seems very vascular.

No. 15. *s.* The upper half of the spinal marrow from an adult human subject. Before the dura mater is left adhering, behind it is slit open and turned to either side. It shows the spinal nerves arising by an anterior and posterior plane of fibres, the manner in which they perforate the dura mater, and the ganglions which they form after perforating it.

No. 16. *s.* The lower half of Ditto.; it shows the conic termination of spinal marrow, the origins of the lumbar and sacral nerves, which form thick cords, and run a considerable way enclosed in dura mater, before they perforate it. The length these cords run within the dura-matral covering of the spinal marrow, is in proportion to the distance of the conic termination of that marrow from the place where the nerves are to go out: this makes a kind of gradation or series, and produces the effect of a horse's tail; whence the whole of these origins taken together has been called *Cauda Equina*.

No. 16. *a. s.* The Spine of a Child; the anterior and posterior parts removed to look on the spinal marrow before and behind; the arteries are injected red, the veins blue; the dura-matral coat is removed before, and left in sight behind; the anterior spinal artery is seen running serpentine the whole length, and receiving branches from the intercostals and lumbar; the passing off of the nerves from the spinal marrow, and their passage through the dura mater and theca vertebralis very distinctly seen. The lateral parts of the spine are a little drawn outwards, and more separated from one another than in nature, more distinctly to show spinal marrow.

No. 16. *b. t.* Spinal Marrow from a Child, where the bones of the spine and the dura mater have been removed, showing a convoluted artery coming from one of the vertebrals and running down the middle of its posterior surface.

No. 16. *B.* A portion of the Spinal Marrow of a Skate; the nerves of the spinal marrow form two cords instead of two packets as in the human subject; they do not unite before they go out of theca vertebralis, nor form ganglions afterwards; of course, they make two distinct lines by their perforations of the theca vertebralis, here cartilaginous.

No. 17. *s.* The Spinal Marrow of a Child; the dura matral coat is removed both before and behind, but not at the sides. It shows both arteries and veins of the spinal marrow injected; the arteries are red, the veins blue.

No. 18. *s.* Ditto; the arteries only injected red, the dura-matral covering is slit up, on the fore part, through the lower half.

No. 19. *s.* A section of the Spinal Marrow suspended so that both ends of the section may be seen; one half of the section is also divided longitudinally and a part removed; from this view, the spinal marrow appears fibrous throughout, the fibres running longitudinally; in the centre, the cortical substance seems to make a cylinder, and resembles a thick wire passed lengthways from top to bottom through the middle of the marrow.

No. 20. *a. s.* A similar preparation divided lengthways. There is a tube to be seen in the middle which was occupied by cortical substance.

No. 21. *s.* A section of the Spinal Marrow of the Elephant, treated in the same way as No. 19. In this the cortical substance distinguished by its darker colour, is seen forming two distinct columns at a quarter of an inch distance from each other, and running through the centre of each of those columns, into which the spinal marrow is sub-divided by a hollow line on each side running on its middle surface.

No. 22. *s.* A section of a very large Nerve half an inch in thickness, and an inch and a half in breadth, from the Elephant.

No. 23. *s.* A section of the same Nerve become smaller and suspended, so that the two ends may be seen; the lesser fasciculi of which the nerve is composed, are seen at the ends; a longitudinal section of one half of the nerve also shows these fasciculi running parallel to one another, and connected by cellular membrane only.

No. 23. *a. t.* Two Nerves from the Arm, injected with coarse injection and dried; it shows that the arteries of nerves are very large, and run lengthways in the centre, or on the outside of the nerve commonly. Spread on blue paper.

No. 23. *b. s.* The olfactory Nerve from the Thornback, branching, like the feet of a caterpillar, on an organ consisting of a vast number of partitions, resembling in some degree the gills of a fish, and corresponding to the human turbinated bones of the nose.

No. 23. *c. s.* The olfactory Nerves passing through the cribriform lamella of the Ethmoid Bone, and seemingly ramifying on Schneiders membrane.

No. 23. *e. s.* The same preparation as 23. *c.* only injected.

No. 25. *s.* The conic termination of the Spinal Marrow, with the nerves arising from it, split into their constituent fibrilos as much as was possible, giving it perhaps a still greater resemblance to the horse's tail, and serving to give an idea of simple nerve.

No. 25. *a. s.* Ditto, showing ditto.

No. 26. *s.* The Median Nerve divided in the middle of the Fore Arm, and under the annular ligament of the wrist; the under extremity is the largest and broadest, though the nerve had received no additional fibres in that course.

No. 26. *a. s.* A portion of the Carotid Artery, just as it has passed within the skull, together with a portion of the motor externus and the origin of the Intercostal. It is fixed to blue paper.

No. 27. *s.* A portion of the Intercostal and Par Vagum. The extremities of the portion of the Intercostal are small, whilst the upper half is swelled out into a very vascular oval body, one-fourth of an inch in length, and five or six times the diameter of the nerve.

No. 28. *s.* The Semilunar Ganglion of the right side, lying between the cælic artery and the emulgent, upon the side of the Aorta. It is rather to be considered as a plexus of Ganglions than one. It is not unlike a large lymphatic gland perforated in six or seven places.

No. 30. *s.* The Optic Nerves appearing to decussate one another; also evidently fibrous.

No. 31. *s.* A similar preparation divided longitudinally, in order to show the internal structure; the substance of the one nerve appears blended with the other, as if they were but one; there is no appearance, however, of decussation.

No. 31. *a. s.* The whole of the Brain with a portion of Medulla Spinalis and basis of the Skull in the Cod. The principal aim of the preparation is to show that the optic nerves do not blend, as in the human subject, but actually decussate each other, that arising from the left side of the brain going to the right eye, and *vice versa*.

No. 31. *b. s.* The Brain of a Cod in situ; the optic nerves seen fairly decussating, the right going to the left eye.

No. 32. *s.* The lower Cervical and first Dorsal Nerves forming the axillary Plexus; the mode of communication here is equally inevident and inexplicable as that of the optic nerves; there is, however, a very general and intricate communication between the trunks of these five nerves.

No. 33. *s.* The superior Mesentric Artery in the Horse, injected green, and showing nerves forming a network on its external Coat; this net work is also termed plexus.

No. 33. *a. s.* A nerve attached to blue paper, and so prepared that the spiral appearances mentioned by Monro, or something like them may be seen. Dr. Hunter thinks this a microscopic deception.

No. 34. *s.* An Abscess between the Integuments and Adominal muscles above the Groin; one of the lumber nerves is seen passing through the abscess unaltered; a bristle likewise shows where the abscess burst.

No. 35. *s.* A nerve from the Stump, still appearing swelled above where the ligatnre had been made; and below the ligature showing an elongation from new matter added; this new matter shows granulation of nerve.

No. 36. *s.* Ditto, showing ditto. Both nerves are injected red, and are exceedingly vascular.

No. 37. *s.* A Snail suspended by its brain, from whence the nerves pass to the integuments only. The brain of this animal seems to partake more of the nature of ganglion, and is tougher than the brains of most animals.

No. 37. *b. s.* A Leech opened after it had been filled and hardened in spirits. There is no appearance of brain or nerves, but one large cavity intersected by septa, probably all stomach.

No 38. The Par Vagum and Intercostal in the Dog, seen running along with the carotids injected red; the larynx and trachea are also preserved. Black bristles point out where the nerves had formerly been divided and united again; the dog recovering in proportion as the union proceeded.

No. 40. *s.* The Heart, Carotids, Par Vagum, &c. of a Dog, subjected to the same experiments as the former; this dog had been injected, and considerable arteries run in the direction of the nerves towards the divided ends.

No. 41. *s.* The Sciatic nerve of the Dog which had been divided 14 days before he died; the nerve is swelled at the place of division, had not yet united, but was grandulating; a glass ball is attached to it to keep it steady.

No. 41. *a.* An Artery and three nerves from an amputated Arm. The nerves are much swelled at their extremities.

No. 42. The poplital Artery with Sciatic nerve, both eroded from an ulcer after amputation in a bad stump, in which there was constant pain. The nerve is more than three parts of its thickness eroded. The artery had bled a little, but above the place where it burst is seen plugged with an exceedingly firm coagulum of blood.

CELLULAR MEMBRANE. F.

No. 2. *s.* A section of the Scrotum; the Cellular Membrane had previously been inflated; it was dried in this state.

No. 3. *s.* One half of the Scrotum of a Child; the cellular membrane was distended from œdema; in this state it was hardened in spirits, and then divided. There is no appearance in any of the foregoing preparations of regular cells; the tissue seems rather to consist of very fine laminæ of a white cotton like colour, interwoven so as to form a kind of sponge; all the parts of which are seen to communicate with one another from the enlarged size of the parts thus distended. The cellular membrane appears very ductile, and of course must allow of parts moving easily on one another.

No. 4. *t.* A portion of the Cutis injected red; its inside as well as the cut edges shows the cellular and adipose membrane exceedingly vascular.

No. 6. *s.* A portion of human Cellular Membrane from a Tumor, showing the cells as distended with a morbid gelatinous fluid. There is a greater appearance of regularity here; the cells are more evident and an approach is made towards the honeycomb appearance.

No. 7. *s.* A portion of the external surface of the Liver, where it naturally comes in contact with the concave surface of the Diaphragm: the liver had formerly been in a state of inflammation, the juices thence extravasated were converted into cellular membrane, and united the surface of the liver with that of the diaphragm, which the preparation shows. The new cellular membrane, or adhesion, is seen half an inch long, and exceedingly vascular.

No. 8. *s.* Two portions of two distinct lobes of the Lungs, united by an adhesion in consequence of inflammation; also a large blood vessel is seen running across the adhesion, and injected red.

No. 9. *s.* Adhesions between a portion of the Lungs, and the Diaphragm, stretched on lead, injected red, and exceedingly vascular: the vessels seen, however, are remarkably large; and though they give off in their way branches to the cellular membrane, are chiefly anastomosing trunks between the vessels of the diaphragm and lungs.

No. 10. *s.* A similar preparation to No. 8: the adhesions are longer, the injected vessels fewer, and the circumstances observed in the two former more distinct.

No. 11. *s.* A similar preparation to No. 9: the whole is attached to a piece of thin lead, in consequence of which the adhering parts are kept at their greatest distance, and the parts to be observed better seen.

No. 12. *s.* The Stomach, Omentum, a portion of the transverse arch of the Colon with Mesocolon, the Spleen, and Pancreas of a Child injected red. The transverse arch of the colon, &c., are allowed to fall lower than their natural situation, in order to stretch the omentum, and then show the first depositions of the fat along the sides of the blood vessels of the omentum.

No. 12. *a. s.* A portion of Colon from the adult Human Subject: an appendicula epiploica, very large, hangs by a small peduncle; the arteries entering it are small: it shows that the oil is secreted by very small branches of arteries.

No. 13. *m.* A portion of the Omentum of a Child injected red, and stretched on glass to show the same thing as the former preparation; the fat appears to be first deposited in round little portions; but it is not evidently globular or contained in distinct cells.

No. 15. *s.* A large portion of Adipose Membrane from the Spermaceti Whale; the oil does not appear globular, but seems to be contained in large fluid portions, in irregular cells, like those of cellular membrane.

No. 15. *a. s.* Ditto.

No. 17. *t.* A preparation from the Child showing the Septum Scroti with its blood vessels.

GLANDS. G.

No. 4. *s.* A portion of the human Liver highly injected red, showing the substance of gland exceedingly vascular.

No. 5. *s.* One half of the Spleen of a Child, injected red to show the extremities of the arteries terminating in groups of very minute short branches, named penicilli, and believed to be the secretory branches of the artery.

No. 6. *s.* The Liver of a small Turtle with the heart; the vena portarum is injected red, and shows the extreme branches terminating in penicilli; not however like those described by anatomists, but rather in groups like small bushes.

No. 6. *a, s.* The Liver of a Turtle injected green to show the same thing as No. 6.

No. 7. *a, s.* A small bundle of vessels from the kidney, crowded with Cryptæ, and still more strengthening the opinion of Cryptæ being convoluted vessels.

No. 9. *t.* The Lachrymal Gland in the Turtle, the excretory Duct only injected with quicksilver; the same appearances are seen as when the artery of the kidney is injected, with this difference that the Cryptæ here resemble clusters of grapes, more than solitary gooseberries. This injection makes it probable that the Crypta is an appendage or beginning of the excretory duct, and not the termination of the artery.

No. 10. *s.* The Tubuli Uriniferi injected red from the pelvis in the Horse's Kidney: they are exceedingly distinct at their termination, and two or three of them are seen uniting to form a larger one before they reach the pelvis; this sufficiently distinguishes them from arteries and veins. The injection, however, has not run far enough to fill the Cryptæ. They show the most simple kind of excretory duct.

No. 11. *s.* Follicles or Simple Glands, supposed to be cups having the arteries opened on their bottoms, and containing ropy fluids from the root of the tongue in the human subject.

No. 12. *s.* The Caput Coli, a portion of the Colon and termination of Ilium in the Fœtus, injected red, laid open to show follicles scattered up and down their internal surface. Those the anatomists have named *Glandulæ Solitariae*.

No. 13. *a. s.* A portion of an Intestine from a Rabbit, injected red; at one part appears like a cluster of follicles forming an oval of the size of a raisin; these follicles seem on the edge to be villous or fringed, and in the centre have each a little round tubercle.

No. 14. *s.* The same preparation with No. 12 from the Dog, also injected red; the follicles are larger and more distinct, the cavities likewise deeper. There are no follicles in the termination of Ilium as in the human preparation, but the Cæcum is exceedingly follicular.

No. 15. *s.* A similar preparation with No. 12: showing a very large cluster of aggregated follicles, in the bottom of which appear one, two, or three white round bodies from the dog.

No. 16. *s.* A portion of Ilium from a Horse: showing a very large cluster of *Glandulæ Agminatæ*; the follicles are not larger however than in the dog.

No. 17. *s.* A portion of the stomach of an Ostrich with scattered follicles, each a quarter of an inch deep, and large enough to admit the end of a common probe. The white bodies seen in the bottoms of those No. 15 are also seen here, but have here more the appearance of the coagulated secretion.

No. 18. *s.* One of the Tonsils of the Elephant, composed of a number of compound follicles, that is, of round bodies having five or six follicular orifices on their tops.

No. 19. *s.* A Ditto, more fully exposed, showing Ditto; in some places the orifices are so large and so crowded as to make the gland look like sponge.

- No. 20. *s.* A portion of the lower end of the Canal between the first and second stomach in the Pigeon; composed entirely of the most minute and at the same time distinct follicles any where to be met with; they appear to be oval bodies placed at one another's sides like perpendicular piles driven into the ground, having each a hole at top; they are united by cellular membrane, without the least intervention of any other substance.
- No. 21. Two Lacunæ from the Vagina of an Ass injected with quicksilver; their internal extremities appear to be formed of very small tubes, so that one-half looks like a small Insect with a number of feet. The orifices or mouths are large enough to admit the end of a small probe.
- No. 23. A section of the Kidney of a Cat, the cortical substance injected red; as it shows one smooth continued surface, it is also an instance of a globulated gland injected.
- No. 24. *s.* One half of the Kidney of the Fœtus, the arteries injected black, the veins red; as an instance of conglomerated gland.
- No. 25. *s.* The Kidney of a Porpoise injected green, showing exceedingly conglomerated gland.
- No. 26. *s.* The Maxillary Gland of a Child, showing conglomerated glands exceedingly vascular.
- No. 27. *t.* The same Gland; its ducts injected with quicksilver, showing excretory duct.
- No. 28. *t.* The Breast of the West Indian Goat; it was first injected with mercury, then dried, now cut open. There is but one Tubulus Lactiferus the size of one's finger, which opens into a kind of cavernous substance, probably follicular on the outside.
- No. 29. *s.* A portion of the Liver of a Cat, the minute glandular part injected from the vena cava.

MUSCLES. H.

No. 1. *s.* A Transverse section of the arm of a Child across the belly of the biceps flexor cubiti. The blood was washed out of the muscles by repeated injections of water from the artery, which returning by the veins entirely emptied the vessels of their natural fluids. The muscles now appear equally white with the bone or skin.

No. 2. *s.* A piece of Boiled Beef macerated in Water principally at one end; it shows that a muscle is composed of larger packets of fibres, these again of smaller and these last of barely visible fibres.

No. 3. *s.* A piece of Boiled Ham treated in the same way; many of the fibres are as fine as the threads of a spider's web, and probably are the constituent or smallest muscular fibres.

No. 4. *t.* The Diaphragm of a Child injected red, so as to seem composed entirely of vessels.

No. 5. *t.* Ditto from a Child of a larger size; injected red, but with coarse injection; is of course less minute but more distinct.

No. 6. *t.* A longitudinal section of a rectilineal muscle, very minutely injected; the arteries run chiefly in the direction of the muscular fibres.

No. 7. *t.* Gastrocnemius from a Child, highly injected red.

No. 8. *s.* A Tendo Achillis to show the white silvery appearance of tendon. The fibres are all longitudinal and parallel to one another.

No. 9. *s.* A Finger showing the Tendons of the perforatus and perforans, their ligamentary sheath is slit open through its whole length.

No. 10. *s.* The same Tendons in another finger, the ligamentary sheath removed, only where thinnest.

No. 11. *s.* A Tendo Achillis injected red; showing few vessels compared with the muscle.

No. 11. *a. t.* A portion of the Soleus, with Tendo Achillis, injected red in some parts considerably vascular; but the transparent portion, compared with the muscular, little vascular.

No. 12. *s.* A Bladder from a hanged Woman: removed as found contracted in the dead body, to show that muscular fibres can contract more than one-third of their greatest length.

No. 13. *s.* A portion of the Colon arrested by death, in its peristaltic motion. At two places it is seen contracted almost without cavity, and at two other places it is seen distended to much more than thrice the size of the contracted part.

No. 14. *s.* A portion of the Bladder from a Calculous Patient, thickened to half-an-inch in its muscular coat.

No. 16. *a. s.* A portion of the Belly of Gastrocnemius from an adult Male Subject. The other muscles of that leg, and of the other leg, were perfectly red. This was as white as it now appears, *i. e.*, as white as the muscular fibres of a skate; the great veins running through the muscle had their cavities plugged with coagulated laminated blood, as in the varicose veins. This disease was supposed palsy of the muscle; cause not known—perhaps frequent cramp, some blow, or accidental destination of the nerves leading to it, though no external marks appeared.

No. 16. *b.* Soleus and Tendo Achillis, from an adult; another instance of white muscle, (cause unknown). Falconer's Sale.

No. 17. *s.* Another portion ditto. The muscular fibres as white as those of the covering tendon, and at some little distance, not to be distinguished.

No. 17. *a. s.* Another portion ditto. The coagulated blood in the veins well seen.

No. 18. *s.* *Palmaris Brevis*, with its insertion into the spongy, in the inside of the metacarpal bone, supporting the little finger; it shows the fasciculated nature of muscular fibres, which are here red, the blood having been coagulated in alum and water.

No. 19. *s.* The Tendons of the *extensor primi et secundi internodii policis* regenerated, for half an inch, in a case where the thumb had been cut off.

No. 20. *s.* Small portions of Muscles, with very large ossifications in them—a circumstance universal in this body, (dissecting room.)

No. 21. *s.* A preparation, consisting of a portion of the Radius and of the Hand. The first bone of the thumb seems to have been cut off by an operation, and the tendons of the extensor muscles appear to have grown to a strong periosteum, covering the bones of the carpus on that side of the hand.

BONES. I.

No. 1. *d.* Parietal Bone of a Fœtus, long exposed to the weather; showing that it is made up principally of radiated fibres, whose inner ends meet in the centre of the bone and are close together, whilst the more external separate, and are at some distance from each other.

No. 3. *d.* A section of Middle of the Thigh Bone, prepared as the former; showing that cylindrical bones are nearly hollow within, having only a kind of network of small bony fibres, and that there is a strong thick compact outer covering.

No. 3. *a. c. d.* Ditto; very fine.

No. 10. *s.* The Sphænoid Bone injected red, and semi-transparent, from its having been steeped in an acid.

No. 11. *s.* The Ethmoid Bone; ditto.

No. 11. *a. d.* Os Parietale, injected red, made transparent in an acid, dried, and varnished. It shows distinctly the bony branches of vessels, and especially one considerable vessel running in the direction of the arteria duræ matris.

No. 13. *t.* The Os Occipitis; ditto.

No. 14. *t.* The lower portion of the Os Frontis; ditto.

No. 15. *d.* A section of the Parietal and Frontal Bones, injected red, made transparent in an acid, dried, and varnished.

No. 17. *t.* A transverse section of a Bone, highly injected red.

No. 18. *t.* The Frontal Bone of a Fœtus; ditto.

No. 19. *t.* The Parietal Bone; ditto.

No. 20. *s.* A longitudinal section of the Tibia, to show the marrow injected red.

No. 21. *s.* One-half of the Head of a Pig, which had been fed with madder; the os petrosum and inside of the jowl seem rather redder than any other parts.

No. 22. *s.* One-half of the Lower Jaw, ditto; showing that the teeth are tinged red, as well as the jaw itself.

No. 23. *s.* The Tibia of a Pig which had been fed with madder at three different periods; the ends of the bone are reddest, and pretty universally so; there are also two pretty thick layers in the middle of the outer compact substance, forming the middle of the bone.

No. 24. *s.* The Bones of a Bird fed with madder, and thence of a beautiful red colour, particularly one of the Sternums.

No. 25. *s.* The Thigh Bone of an Ostrich, slit up longitudinally, but so as to show two openings, near the head of the bone, which communicate with the air cells of the abdomen, and by which air gets in and out from the cavity of the bone, which is thin and hollow, and has no marrow, no cancelli in the middle, and large cells at each end.

No. 26. *t.* The upper part of the Cranium injected to considerable minuteness with the Pericranium, which is at one part reflected upwards: from an adult.

PERIOSTEUM. K.

No. 1. *s.* The half of the Tibia sawn lengthways from a young lad: the periosteum is turned off one side from top to bottom, and is seen as covering epiphyses as well as body of the bone. It is a white, shining pretty thick membrane.

No. 2. *s.* The Fibres of the Ligaments between the ends of the ribs and sternum, diffusing themselves over the sternum, and forming periosteum.

No. 3. *s.* The Periosteum investing the Radius and Ulna in a young subject, continued to form the interosseous ligament.

No. 3. *a. s.* A similar preparation as regard the interosseous Ligament between Tibia and Fibula.

No. 5. *s.* Tibia and Fibula of a young Subject: shows the vessels of periosteum injected red; shows periosteum, forming also the interosseous ligament, and a portion of it turned down about the middle of the tibia shows its thickness.

No. 7. *s.* The Middle or Body of the Thigh Bone in a child. Periosteum, removed through nearly its whole length on the fore-part, shows it of nearly equal thickness, adhering very firmly to the bone; and the arteries injected red, show it very vascular; periosteum appears to be made up of several laminae.

No. 8. *s.* The Tibia of a Child; the injected periosteum is turned down all the way, except where one stratum had remained about the middle. It shows the inside of periosteum exceedingly vascular, with a number of red points, opposite to which, in the bone, are seen the torn-ends of small vessels entering the bone.

No. 9. *t.* The Tibia, Fibula, and Interosseous Ligament, in a Child, highly injected red, and showing periosteum very vascular; the arteries appear to run a considerable way on the surface of periosteum, before they enter the bone.

No. 10. *s.* The Parietal Bone of a Child injected red, showing pericranium to be periosteum in every respect.

No. 11. *s.* One of the Frontal Bones, ditto; showing pericranium made up of strata.

No. 12. *s.* A portion of the Parietal Bone, ditto; pericranium is turned off on one side, and dura mater on the other; they both appear to adhere very firmly to the bone, and to be exceedingly vascular; the vessels of the bone run a great way under the pericranium before they enter the bone.

No. 13. *s.* The Sternum of the Silk Fowl; the periosteum is left on one side, and taken away on the other, to show that the periosteum only, and not the bone, is black.

No. 14. *s.* The Bones of the Leg in the same Fowl; showing that the tendons and ligaments are black, and that periosteum is therefore a continuation of, or the same substance with tendon and ligament.

No. 15. *s.* The Bones of the Wing ditto, showing ditto; showing also that the aponeuroses of the muscles are black; and showing the passage for the air of respiration into the principal bone of the wing.

No. 16. *s.* The lower end of Tibia and Fibula: periosteum so prepared as to show that it consists of short laminæ, like scales of fishes, &c.—not one continued fibre from one end of the bone to the other. (Dr. H.)

No. 17. *s.* A portion of the Thigh Bone, showing the deeper seated fibres of the periosteum, arranged longitudinally, like those on the surface of the bone.

CARTILAGE. L.

No. 1. *s.* The inner surface of the Patella; its cartilaginous covering by long maceration in water, has its fibres unravelled; some of these are dug out to show that the fibres of cartilage are perpendicular to the surface of the bone they cover.

No. 2. *s.* A portion of the lower end of the Humerus sawn through its cartilaginous covering, to show the same as No. 1.

No. 3. *s.* The lower end of the Femur, Patella, and Semilunar Cartilages, with the portion of fat supposed Synovial Gland. Every thing, except the cartilaginous coverings, is of a bright red, from the injection of the arteries with vermilion; it shows that cartilage does not carry red vessels.

No. 4. *s.* The Semilunar Cartilages from a similar injected joint; showing ditto.

No. 5. *s.* The first rank of the Bones of the Carpus from an injected arm: whilst the surrounding parts are of a bright red, their cartilages appear perfectly white.

No. 6. *s.* A Finger from an injected Hand. The joints of the fingers on the forepart are laid open to show the same thing as in the three former numbers.

No. 8. *s.* Two slices from the injected Patella of a very young Child; showing a nucleus of exceedingly vascular bone in the centre, and that the surrounding cartilage also carries red vessels.

No. 8. *a. s.* Three slices of ditto, similarly treated; the head of one of the thigh bones showing ditto.

No. 9. *s.* The first Ribs from an adult; the periosteum turned off from the long portion, appears to be continued into perichondrium, which also turned off for some way from the cartilaginous extremity.

No. 10. *s.* The Thigh Bone of a very young Child suspended by the perichondrium, which covered the external condyle.

No. 11. *t.* Two Carpal Bones injected red from a very young subject; the periosteum appears exceedingly vascular.

No. 12. *t.* A Patella with its inserted tendon from the Vasti, &c.; it shows the perichondrium on the inner surface of the patella, near the edges exceedingly vascular; arteries injected.

No. 13. *s.* The Joint of the Knee from an adult laid open, to show a large mass of fat below the Patella, supposed Synovial Gland; the arteries are injected red, but not minutely.

No. 13. *s.* The Tendon of the Vasti inserted into the Patella, and continued on to the head of the Tibia, injected red. On the inside of the tendon, before it comes to patella, is seen a Sacculus Mucosus, which communicates with the joint, and is one inch and a half in diameter.

No. 14. *t.* Ditto; the arteries injected minutely, to show that this fat is more vascular than in any other part of the body.

No. 15. *s.* The lower end of Tibia and Fibula, as forming the joint of the foot, injected red; the cartilage is of the most beautiful white, whilst the surrounding fat is exceedingly red and vascular.

No. 16. *s.* The Acetabulum from the Pelvis of the Sea Cow; synovial gland loose and floating in its cavity, and putting on a more glandular appearance than in any other animal.

No. 17. *s.* Ditto; like the preceding half divided, and turned back to see more distinctly into the cavity.

LIGAMENT. M.

No. 1. *s.* A Lumbar Vertebra, with two of the intervertebral substances, showing that substance half an inch thick. It is made up externally of the same kind of white silver coloured fibres,

as tendon, which decussate one another in many places; internally it approaches more to the nature of soft cartilage, and in the very centre is little finer than the pulp of some fruit.

No. 1. *a.* A section of a Lumbar Vertebra from the Sea Cow, showing that the intervertebral substance is exteriorly made up of concentric circles, and interiorly of a brown jelly.

No. 2. *s.* Ditto, showing ditto; showing also the cartilaginous crust under the intervertebral substance; the thickness of that crust is observable from one-half being removed: within the decussating fibres mentioned, No. 1, there are a vast many concentric elliptical fibres, and the gelatinous substance in the centre is seen swelled from long maceration in water.

No. 3. *s.* The Spine of a young Child, showing that the intervertebral substance is thinnest in the neck, and becomes gradually thicker to the upper end of the Sacrum; shows also the external decussating ligamentous fibres of these substances, the whole way.

No. 4. *s.* A perpendicular section of the superior ends of the Ossa Pubis, so as to look upon the symphysis; this joint consists of two cartilaginous surfaces, and transverse ligamentous fibres passing from one to the other; about the middle there is sometimes a discontinuation of these transverse fibres, and a kind of cartilaginous pulp only, as between the vertebræ, and sometimes a cavity with synovia.

No. 4. *a.* Ditto, in three pieces; from a Maid.

No. 5. *s.* A transverse section of ditto, to show ditto.

No. 6. *s.* Ditto, showing a cavity between the two cartilaginous surfaces in the middle.

No. 7. *s.* The other half of ditto.

No. 8. *s.* The Joint between the Temporal Bone and condyle of the Lower Jaw laid open; showing the thickness and extent of the capsular ligament, with the interarticular cartilage.

No. 9. *s.* The Joint of the Shoulder laid open, showing the thickness and extent of the capsular ligament; from a Lad.

No. 10. *s.* A perpendicular section through this joint from an adult; showing ditto, showing also the large Sacculus Mucosus under the Deltoid muscle.

No. 11. *s.* The Joint between the head of the Thigh Bone and the side of the Pelvis; showing the thickness of the capsular ligament, and the extent of the Ligamentum Teres, in a young person.

No. 11. *a.* Ditto in the adult.

No. 11. *s.* Do. do.

No. 11. *b. s.* The Joint of the Knee from an adult laid open in the bent state; shows crucial ligaments and semilunar cartilages, with the sacculus mucosus under the ligament of the patella; a most beautiful preparation.

No. 12. *s.* The Patella with the tendinous insertion of the Vasti, &c., forming periosteum on its outside, and continued down to form the ligament which connects the patella with the tibia; the ligament appears to be made up of the same fibre as tendon.

No. 13. *s.* Ditto, with the upper anterior part of the Tibia into which this ligament is inserted; showing ditto.

No. 13. *a. s.* Ditto; injected very fine.

No. 13. *b. s.* A fine preparation of the Tendon of the Vasti and Ligament of the Patella, the Patella itself, and part of the head of the Tibia injected red; the sacculus mucosus above the patella very conspicuous, also the tendinous fibres continued to form ligament.

No. 14. *s.* The Lumber Vertebrae from an adult, with their connecting Ligaments; a bit of stick is passed through the canal for the passage of the cauda equina, with a view to stretch the intervertebral ligaments, and render visible a yellow elastic ligament passing between the spinal processes of the vertebrae, and serving the purpose of assisting to maintain the spine constantly erected.

No. 15. *a. s.* Eight Vertebrae of the neck from the Ostrich; showing a strong pyramidal elastic ligament passing through a canal in the spinal processes, and serving to sustain the head in the stooping posture of the animal, also to bring it up again.

No. 16. *s.* The Condyle of the Lower Jaw, with the intermediate cartilage, from the Horse; there is no eminence before the cavity for the condyle in the temporal bone; nor does the condyle come out of its cavity.

No. 16. *s.* The Atlas, Dentata, and the next Vertebrae of the neck, from the Sea Cow; showing the strong ligament which confines processus dentatus in the anterior elliptic groove of the Atlas, and prevents it from pressing on the spinal marrow.

OSTEOGENY. N.

No. 1. *t.* The Patella of a Child about two years of age, yet cartilaginous; the artery injected red, which would have converted it into bone, is seen on the inner side coming from the outside, and no where as yet evidently changed into bone, unless perhaps a small portion of the extremity of one of its branches which begins to turn white—seen towards the lower edge on the right side looking on the inner surface.

No. 2. *t.* Ditto from ditto. In this the artery when the preparation was first put up, was beginning clearly to turn white: from remaining some years in turpentine this whiteness is now gone off; it is still connected with the upper part of the Tibia.

No. 3. *t.* Ditto; from the size of the lower end of the Femur with which it is yet connected, the Patella must belong to a child of four or five years of age; yet the same observations only take place here as in the last preparation.

No. 4. *t.* The Patella from a Child about four years of age, the arteries injected red: the extremities of two small branches are become white, or are beginning to ossify; most of the other extremities seen are black, owing to the blood driven before the injection having dried, and not to any change preparatory to ossification having taken place.

No. 5. *t.* Ditto from a smaller Child; more extremities of arteries are seen ossified, and nearly in the centre of the patella.

No. 6. *t.* Ditto from a Child about four years old; a most beautiful preparation. The artery on the outside of the patella divides into two equal parts, is nearly the size of a crow quill, and opposite to the middle of the patella seems to have a centre of ramification for the branches which are to form patella; not only the extremities of some of those branches, but one of the branches themselves is seen ossified.

No. 7. *t.* Ditto from same Subject as the last. The principal arteries have the same appearance, only, as this patella probably belonged to the right side, more branches are ossified; the ossification here evidently appears to be formed in the coats of the artery, as in some places it is alternately red from the injection, and white from ossification.

No. 8. *t.* A smaller Patella; more branches, however, are ossified, and appear nearly as in the last.

No. 9. A Patella with the lower end of the Femur, from a Child supposed about seven or eight years old: the ossified branches of the arteries look like coral; and there now appears in the very centre of the patella a portion of bone of the size of a common garden pea; there is also more osseous matter on the extremities of the arteries than on the branches, forming as it were little knots.

No. 9. *a.* } *t.* Two Patellæ considerably further advanced, the
 No. 9. *b.* } ossifications being nearly half an inch in diameter
 each way.

No. 10. *t.* A Patella with a knob of bone in the centre, about

the size of the last, but more irregular; there are here no surrounding branches of ossified arteries, as in the former.

No. 11. *t.* Ditto; with ditto a little larger, and the arterial branches above it ossified.

No. 11. *a. d.* Os Parietale, steeped in an acid, dried and varnished; showing distinctly ossified vessels composing its substance.

No. 12. *t.* Os Occipitis treated in the same way as No. 11. *a.*

No. 13. *t.* A Patella, the fellow of No. 11: the osseous matter in some parts is white, in others darker; the whiter is probably the last formed or newest, as round the arteries coming through the centre of the large mass, we observe circles of bone of the same white colour.

No. 14. *t.* Ditto, very little more advanced.

No. 15. *s.* Ditto; a most beautiful preparation: the branches of the arteries are ossified for some way all round the central knob.

No. 16. *s.* Ditto; ossification size of a sixpence, and about five times as thick.

No. 17. *t.* The fellow of the last.

No. 18. *t.* Ditto; as broad as a shilling, and in proportion increased in thickness.

No. 19. *t.* Ditto; larger.

No. 21. *t.* Ditto; of size of a large chesnut, and completely ossified, though not arrived at its full size.

No. 21. *t.* Patella in an adult of its perfect size; about the breadth of a crown piece, and an inch and half in thickness.

No. 22. *t.* An ossifying Patella divided into two, with its surrounding cartilage; showing that the cellular internal substance is always covered with a cortical thin capsule of bony matter.

No. 23. *t.* Ditto; showing ditto.

Epiphyses.

No. 24. *s.* The Tibia of a Child, in which the Epiphysis at each end is half pulled off, to give an idea of epiphysis.

No. 25. *s.* The Os Humeri of a Child, about the time of birth, injected red; the ossification in the epiphysis of the head is about the size of a large pin's head, and appears like a red spot: vessels of considerable size, carrying the red injection, are seen passing through the cartilage towards this spot.

No. 26. *t.* The Os Humeri of a Child, about two years old, broken so that both ends may be seen: the ossification on the head is more advanced than in the former; the arteries are seen ossified as they pass towards the new forming bone: at the lower end the ossification extends from the small head to the centre of the pulley.

No. 27. *t.* The lower end of the Os Humeri: the small head is considerably advanced in ossification; the arteries going towards it and the pulley (in which latter the process is little more than begun) are seen ossified, as in the patella; the internal condyle is likewise an epiphysis, about the size of a small pea.

No. 28. *s.* The same Ossification still further advanced, and injected red.

No. 29. *s.* The Ossification of the head of the Os Humeri now completed, and injected red.

No. 30. *t.* The upper ends of the Radius and Ulna; to show the arteries ossifying in the epiphyses.

No. 31. *t.* The lower ends of ditto; to show ditto.

No. 32. *a. t.* A longitudinal section of the Thigh Bone, injected red, from a child about a year old; ossification of the head as large as a pea; the lower and larger arteries ossified.

No. 33. *s.* Different slices of the Epiphysis of the lower end of the Thigh Bone; the ossification a little more advanced than

in the foregoing, and tinged green, supposed by steeping in dissolved copper.

No. 34, 35, } Show the same circumstances with regard to the
and 36. *t.* } Os Femoris, as No. 26 with regard to the Os Humeri.

No. 36. *a. t.* Shows the ossifying arteries in every respect similar to those of the patella.

No. 37. *s.* A longitudinal section of the lower end of the Femur from an adult ; the epiphysis is not yet united with the body of the bone.

No. 37. *a. t.* The upper end of a Femur, from a young person, injected; a section is made under the great trochanter nearly through the bone, by which its cellular structure may be discovered. A perpendicular section is made through the head of the bone, showing the distinction of the epiphysis, and the same cellular structure in the epiphysis as in the bone generally. The great trochanter may be seen to be a distinct ossification, there appearing to be a circumscribed knob of bone covered by a transparent lamina of cartilage.

No. 38. *s.* A longitudinal section of the Tibia and ends of the Fibula, with the Patella, from a Child at nine months, injected red. The only ossification in the epiphyses is in the head of the Tibia, about the size of a pea.

No. 40. *s.* The head of the Tibia, injected red, cut into three horizontal slices, showing that the ossification only occupies the centre of the cartilage.

No. 41. *t.* The heads of the Tibia and Fibula from the same Subject as No. 36, showing the same facts.

No. 42, 43. *s.* The Tibia and Fibula of each side, from the same Subject as No. 26 ; treated in the same way, showing same things.

No. 44. *s.* The longitudinal section of more than the lower half of the Tibia injected red, from a Boy ; showing the lower end still in form of an epiphysis.

No. 45. *s.* A longitudinal section of a Finger from a Youth, with its metacarpal bone; showing that the head of the metacarpal bone, and the bases of the bones of the fingers are epiphyses not yet united to the bone.

No. 46. *s.* A longitudinal section through the great Toe, its Metacarpal Bone and the Os Cuneiforme internum, from the same Subject; only the basis of the metacarpal bone, and those of the toe, are epiphyses.

No. 49. *t.* The Scaphoides, Lunare, and Cuneiforme of the Carpus; from a Subject about four years old. Scaphoides cartilaginous, except at one point in the centre formed by an ossifying artery, Lunare is more advanced, and Cuneiforme almost complete; but all formed by the arteries ossifying, some from one artery, others from two, &c.

No. 50. *s.* The Os Calcis of a Child, ossifying in the centre of cartilage, like the Patella; cut into longitudinal slices.

No. 51. *s.* Ditto, from a younger child; showing ditto, treated ditto.

No. 51. *a. s.* The Foot of a Child injected red, and stripped of the cuticle; the great Toe, its metacarpal bone, the Cuneiforme internum, Naviculare, Astragalus, and Os Calcis, are divided longitudinally; the two last are the principal objects, their ossification being considerably advanced.

No. 52. *s.* The Spine, Ribs, and Sternum, of a Fœtus just three months old: the spine and sternum are still cartilage; the ribs are completely ossified.

No. 53. *d.* Ditto, from a Fœtus between three and four months old, divided into two equal parts, and on blue paper: everything in the spine, except the spinal processes, seems completely ossified; the ossifications are at three different points in each vertebra, viz., in the body of the vertebra, and on each side of the foramen medullæ spinalis.

No. 53. *a. s.* Ditto, the processes being cut off from the dorsal and lumbar Vertebrae and Os Sacrum, but being left on the cervical Vertebrae. It shows very small points of bone in the middle of the bodies of the Vertebrae.

No. 54. *s.* The Spine of a Fœtus, a little older: the transverse and spinal processes are still cartilage; also the lower half of the Sacrum, and the whole of Os Coccygis.

No. 54. *a. s.* Ditto, about four months; every thing still as in the former; the bone is coloured black, from some solution of metal, probably.

No. 55. *s.* Longitudinal section of Ditto, injected red; showing the central ossifications of the Vertebræ.

No. 56. *s.* The Spine of a Child of about six months; ossifications coloured green; no more new parts are ossified than in No. 54.

No. 57. *s.* The longitudinal half of four Vertebræ of the Neck; the ossified body of one of the vertebræ is half turned out from its bed of cartilage, like a kernel from a nut-shell, in another it is entirely removed, and in a third it remains in situ.

No. 58. *s.* Os Sacrum cut down longitudinally, injected red, from a Fœtus of one month; five or six different ossifications, like so many distinct vertebræ, are seen.

No. 58. *a. s.* Spine of a Child at birth; ribs and spinal processes still cartilage.

No. 58. *b. s.* Ditto, at one year old, completely ossified.

No. 58. *c. s.* Ditto, at two years old.

No. 58. *d. s.* Ditto, with the Ossa Innominata, at four years old.

No. 58. *a. b. s.* The Spine of a Child about seven or eight months old.

No. 58. *a. c. s.* One half of another such Spine,—a perpendicular section.

No. 58. *a. d. s.* The other half of Ditto, the bodies of the Vertebræ almost completely formed, but not the spinal or oblique processes which are still cartilage.

No. 59. *s.* The Sternum and Ribs of a Fœtus, about three months old; no part of the sternum is yet ossified, though the ribs are complete.

No. 60. *s.* The Trunk of a Fœtus, a little more than three months old; every thing as in the preceding.

No. 60. *a. t.* Sternum with Ribs from a Fœtus, of about four months; shows five beginning ossifications like pin-heads; the ossifying arteries were at first distinct, now less discernible from the turpentine.

No. 61. *s.* The Sternum of a Child, of about eight months, split into an anterior and posterior half, to look upon seven separate ossifications beginning in the centre of the cartilage; that which afterwards becomes the first bone, is largest.

No. 61. *a. t.* Ditto, not sliced, showing three ossifications.

No. 61. *b. t.* Ditto from ditto, five months; shows progress ditto.

No. 61. *c. s.* Ditto divided into two thin slices; shows ditto.

No. 62. *s.* A Sternum, with the Cartilages of the Ribs; ossification a little more advanced: the cartilage before and behind is sliced off, to show the growing bone.

No. 63. *s.* Two Sternums, from very young subjects, sliced thin to show ossification: the smallest uppermost, has three ossifications; the undermost has four.

No. 64. *t.* Sternum, with Cartilages of the Ribs, and Intercostal Muscles, the perichondrium also left on; shows five globular ossifications in a line under each other; the whole very vascular, injected red.

No. 65. *s.* A Sternum, about the time of birth, with the Ribs, and Clavicles, injected red: eight separate ossifications may be seen; the uppermost are the largest, and most vascular.

No. 66. *s.* The two Ossa Innominata of a Child at birth, injected red; stripped of periosteum the acetabulum is almost wholly

cartilage, except at the lower end, where the ischium ossifying has got into that cavity; about half an inch of the pubis is ossified, and nearly the whole of the ilium; the rest is cartilage, and exceedingly beautiful.

No. 67. *s.* An Os Innominatum from a Child at birth, injected red, and sliced through the middle, to look on the osseous fibres and blood-vessels of the growing bone. Both resemble the rays of a luminous body passing from a centre to the circumference; evidently so in the os ilium.

No. 69. *s.* The Temporal Bone of a Foetus at nine months, to show that the os petrosum is yet cartilage, and that the bony circle of the Membrana Tympani is complete.

No. 70. *d.* Ditto dried, to prove ditto.

No. 71. *s.* Ditto from a Foetus, of between three and four months; the meatus auditorius internus, part of the cochlea, and under side of the vestibulum is ossified.

No. 72. *s.* Os Petrosum more advanced, nearly ossified, at four months.

No. 73. *s.* Os Temporis, bony circle and Membrani Tympani, with Malleus and Incus, at $3\frac{1}{2}$ months; the long leg of incus and centre of the head of the malleus is bone; every thing else of these last is cartilage.

No. 74. *t.* Ditto dried, showing ditto; Stapes also seen.

No. 77. *s.* The Hyoid bone and cartilages of a Child; hyoid bone injected red.

No. 77. *a. t.* The Cricoid Cartilage of the Queen's Elephant converting into Bone; the ramifications of the ossifying artery were, originally, inconceivably beautiful and demonstrative.

No. 77. *b. t.* A portion of the Thyroid Cartilage, Ditto; every branch of the arteries appears ossified, and gives a very grand idea of the manner of ossification.

No. 77. *c. p.* The other half Ditto, dried and varnished.

Cylindrical Bones,—some flat.

No. 78. *s.* Three Scapulæ on blue paper; the uppermost supposed at two months, the second at ten weeks, and the third certainly at twelve.

No. 78. *a.* The Scapula of a Slink Calf, pretty much advanced, or not far from birth: the basis of the scapula for about an inch is still cartilage; the basis of the bony part is most vascular, as if the principal formation of bone was in that part, and the arteries, which are injected red, are seen elongating from it into the cartilaginous base for $\frac{1}{8}$ of an inch at least: they are of large size and perpendicular to the base, or in the same line; some of them seem to communicate with others at their extremities, which are suddenly interrupted, and look as if they had been cut off as they went out to the perichondrium.

No. 78. *b.* Ditto, somewhat less advanced.

No. 79. *d.* The whole upper extremity of the right side of a Fœtus at three months, dried, and on blue paper; the ossification of all the cylindrical bones considerably advanced, or nearly perfect; only no epiphyses.

No. 80. *s.* The fellow of the foregoing.

No. 82. *s.* The upper extremity of a Fœtus, between three and four months old; the ossified parts coloured black.

No. 83. *s.* Ditto; the Scapula wanting.

No. 84. *s.* The left upper extremity, at four months; more perfect.

No. 85. *t.* The right Ditto.

No. 86. *s.* The right Ditto, at $5\frac{1}{2}$ months.

No. 87. *s.* The right Scapula, at 6 months.

No. 89. *s.* Hand, at $6\frac{1}{2}$ months.

No. 90. *d.* The fellow of the preceding, on blue paper.

No. 91. *s.* Humerus, Radius, and Ulna, at 9 months.

No. 92. *s.* Clavicle, Scapula and Os Humeri, injected red, at $7\frac{1}{2}$ months.

No. 93. *s.* Humerus, Radius, and Ulna, at 9 months.

No. 94. *s.* Ditto, ditto.

No. 95. *s.* The Thumb and Fingers, with their metacarpal bones, at 12 months.

No. 96. *s.* The Fore Arm and Hand, at 12 months.

No. 97. *d.* The lower extremity of a Fœtus, at three months, dried, and on blue paper.

No. 98. *s.* The fellow of the preceding.

No. 99. *s.* An Os Innominatum and Femur: a Femur, Tibia, and Fibula, with the Patella, about the same period as No. 98.

No. 101. *s.* The Thigh Bone divided longitudinally, the Tibia and Fibula, coloured black; at about 3 months.

No. 101. *a. s.* Two Thigh Bones, a Leg and Foot, from a Child, about three months old, highly injected green.

No. 102. *s.* The Os Innominatum, with the lower Extremity, at $3\frac{1}{2}$ months.

No. 103. *t.* Ditto, at four months.

No. 104. *s.* Ditto at ditto.

No. 104. *a. s.* Femur, Tibia, and Fibula, about $4\frac{1}{2}$ months.

No. 107. *a. s.* The Tibia of the same Calf, No. 78. highly injected red; the ends and posterior side seem principally vascular.

No. 107. *b. s.* The lower ends cut off transversely from the other Tibia (107. *a.*) with the Epiphysis of the upper end of the Bone both as red as vermilion; in the cut off extremity of the lower end, the vessels which were passing from the bone into the cartilaginous epiphysis, are seen large and floating as if cut off or torn through, in separating the epiphysis.

No. 107. *c. s.* The foot of ditto, showing the ossifications injected in the centre of cartilages in the Metarsal bone.

No. 107. *d. s.* Ditto.

No. 107. *e. s.* Ditto.

No. 107. *f. s.* Ditto.

No. 107. *g. s.* Ditto.

No. 107. *h. s.* Ditto.

No. 108. *s.* The Femur, Tibia, and Fibula, injected red, at nine months.

No. 110. *s.* Os Innominatum, and Femur, injected red, at twelve months.

No. 110. *a. s.* Ditto, not injected.

No. 111. *s.* The Tibia, Fibula, Patella, and Foot, seemingly of the same subject as 110.

Flat Bones.

No. 113. *s.* The Os frontis of a Fœtus, within the third month.

No. 113. *a. d.* Ditto, stuck on a bit of black card; shows as in 113.

No. 114. *s.* The Os Parietale of a Fœtus, within the third month.

No. 114. *a. d.* Ditto, at ditto.

No. 115. *s.* Ditto from the other side of ditto; there is a membrane between the Dura Mater and the Bone, and when both this membrane and the pericranium are pulled off, there is the appearance of very thin cartilage between the osseous fibres.

No. 121. *s.* The Os Parietale of a Fœtus, at five months.

No. 123. *d.* Os Parietale of a Fœtus, at seven months, injected red.

No. 124. *d.* Os Frontis ditto.

No. 125. Two Ossa Parietalia of a Fœtus injected red, at seven months.

No. 131. *s.* Five Ossa Hyoidea at different ages; showing the centres of ossification in each, which are injected black.

Skeletons.

No. 134. *t.* Fœtus, at two months.

No. 135. *t.* Ditto, at three months.

No. 136. *s.* Ditto, at three and a-half months.

No. 139. *d.* Ditto, at five months.

No. 145. *s.* The two Ossa Innominata, and Os Sacrum in a Child, between two and three years old; showing the progress of ossification, and especially that the spinous processes of the Os Sacrum are not yet formed.

ŒSOPHAGUS AND STOMACH. O.

No. 1. *s.* The Œsophagus inverted, to show its villous internal Coat; also filled with spirits to give some idea of its size.

No. 2. *s.* Ditto, slit open with a portion of the Stomach, highly injected red; showing more distinctly its villous coat.

No. 4. *s.* A portion of Œsophagus inverted, to show the same cuticular covering as in the former, separated and hanging in loose shreds.

No. 5. *s.* Portion of the Œsophagus and Stomach of the Ass; in which a very thick cuticle is seen lining the Œsophagus, and ending with an irregular border, about two inches within the Cardia.

No. 6. *a. s.* The lower end of Œsophagus in a quadruped, (a Leopard I believe,) with the upper orifice of the stomach; the cuticular lining of the œsophagus appears wrinkled, and terminating by a circular border just within the cardia.

No. 6. *s.* A portion of the Œsophagus and Stomach of the Turtle: the Œsophagus internally is beset with strong thick villi, an inch in length, and $\frac{1}{8}$ of an inch in diameter; their points are turned towards the stomach, and their thick bases towards the mouth; they are insensibly lost at a little distance from the stomach, at least they become much thinner and smaller. Their use is supposed to be that of preventing any animal swallowed down from getting up again; also it is evident, that the Turtle cannot vomit.

No. 7. *s.* A portion of ditto, with smaller and longer villi, also more crowded.

No. 8. *s.* Ditto, with a portion of the stomach.

No. 8. *a. s.* Ditto, inverted from a young Turtle, showing ditto.

No. 9. *s.* The whole Œsophagus and stomach inverted and injected red, from a very young Turtle; showing villi very vascular.

No. 10. *s.* The lower end of the Crop in the common Hen, with the Gizzard slit open, and injected red; to show a vast number of follicles, just at the mouth of the gizzard.

No. 11. *t.* The Stomach of a Child injected red, with a portion of Œsophagus and Duodenum; to show the shape of the stomach.

No. 12. *s.* A Stomach inverted, boiled, and dissected; to show longitudinal and circular muscular fibres.

No. 12. *a. d.* Peritoneum, or the external coat of all the abdominal viscera injected red, and exceedingly vascular; commonly, it does not carry red or injectable vessels.

No. 13. *s.* A section of the Gizzard of a Goose; to show the prodigious thickness of the muscular coat—in some places three inches thick.

No. 14. *s.* The Gizzard of a Hen, slit open to show the thickness of its muscular coat, about an inch and a-half.

No. 15. *s.* Ditto in a Sparrow, a quarter of an inch thick.

No. 16. *s.* The Stomach slit open; to show the internal coat thrown into rugæ, like the convolutions of a bird's intestines, in consequence of contraction in the muscular coat.

No. 17. *s.* Ditto, to show ditto.

No. 18. *s.* A portion of a Child's stomach, to show ditto; rugæ most beautiful.

No. 19. *s.* One-half of the Stomach inverted, to show ditto.

No. 20. *s.* A whole Ditto inverted; shows ditto.

No. 21. *s.* A piece of Stomach, so cut as to look upon the edges; where it is evident, that the rugæ are in the internal coat only.

No. 22. *s.* The internal coat of the Stomach in its relaxed state, or when the muscular coat is not contracted.

No. 23. *s.* The internal surface of the Stomach from an adult, the arteries injected red. When examined with the microscope, the arteries appear to form cells, so as to give the appearance of honeycomb to the whole surface, instead of the usual appearance of villi.

No. 24. *t.* A Child's Stomach, highly injected red; to show its shape.

No. 26. *t.* A Child's Stomach; the arteries injected red, the veins yellow.

No. 28. *s.* The Stomach of a Child at birth; inverted, and distended with spirits; both arteries and veins injected red from the umbilical cord. Nothing can be more uniformly red, nor is there the least ruptured vessel in the whole surface; the arteries form the honeycomb appearance everywhere except at or near the Pylorus, where they resemble the appearance in the small intestines, or are villous.

No. 28. *a. s.* Ditto, minutely injected and inverted, from a Child somewhat older.

No. 29. *s.* Ditto, something less advanced and smaller; equally well injected: the Œsophagus looks white from the cuticular covering lining its internal surface; the inner coat is in its rugous state.

No. 30. *s.* The Stomach of a Fœtus at six months, beautifully injected red and inverted; showing the same circumstances as the last.

No. 31. *s.* Ditto cut open: showing the internal coat highly injected red, and in its rugous state; also showing a coagulated fluid which takes the shape of the stomach, and appears to be coagulable lymph secreted by its arteries, probably serving as food for the Fœtus, and afterwards converted into Meconium.

No. 23. *s.* A portion of the Œsophagus and Stomach from a woman, who poisoned herself with arsenic: the stomach was very much inflamed, and the glands by this means visible, are very distinct towards the lower end of the preparation; on the right side, the cuticular lining of œsophagus is also seen terminating, as in some quadrupeds, just within the cardia.

No. 33. *s.* The Stomach of a Boy inverted; to show the same glands about the small end of the stomach, and near the Pylorus.

No. 33. *a. s.* A portion of the stomach of the Ostrich; showing follicles on the inside, and clusters of smaller glands on the opposite side, between the muscular and villous coat, the former of which is turned down.

No. 33. *b. s.* Ditto, showing ditto.

No. 34. *s.* The small end of the Stomach, with a considerable part of the Duodenum; distended previously with spirits, and after being thus hardened, opened at several parts to show the valve of the pylorus, and part of the cavity of the stomach and duodenum; the opening of the Ductus Communis Coledochus into the duodenum is also seen, and a bristle is passed through the duct.

No. 34. *a. s.* Ditto, to show valve of the Pylorus cut through.

No. 34. *b. s.* Ditto, to show ditto.

No. 35. *s.* Ditto, to show ditto.

No. 36. *s.* Small end of the Stomach, with the Duodenum, highly injected red; cut open to show follicles in great numbers about the Pylorus.

No. 38. *s.* The four Stomachs of a Goat, inverted to shew their internal surfaces: that of the first is villous; that of the second like the cells of a honeycomb; that of the third like the septa in an orange, only villous; and that of the fourth is not much distant from the internal surface of the human stomach.

No. 41. *a. s.* Some Teeth, and other Bones, with a ball of hair found in the stomach of a Leopard, that died in the Tower: the bones are half dissolved; the teeth were as soft as a camel-hair pencil, and would have answered most purposes nearly as well. The ball of hair shows the twisting of the fibres of the stomach in its peristaltic motion, like the vortex of a whirlpool.

No. 41. *c.* A ball of hair similar to the last mentioned, found in the stomach of a quadruped, of the size of a small apple.

No. 41. *d.* Ditto, of the size of a Swan's egg.

In Disease—chiefly.

No. 42. *s.* A portion of the Œsophagus of a person who died in a few days, in consequence of accidentally swallowing a half-

crown piece; it stuck just behind the left auricle of the heart; a bleeding from the stomach destroyed him. The half-crown is seen sticking in the œsophagus, and now black from a kind of rust. (Dr. Orme.)

No. 42. *a. s.* Some Fish found in the Stomach of a Scate, undergoing the same process as the bones in the Leopard's stomach. No. 41.

(Added 1779.)

No. 42. *a. a. s.* The Œsophagus, with a portion of the Stomach of a Man who died of Hydrophobia: the upper part of œsophagus, and the lower part forming cardia, are exceedingly inflamed; the stomach itself is much redder than natural: the inflamed appearance was preserved by steeping the parts in distilled vinegar.

No. 42. *b. s.* A portion of the Stomach from a Woman, who died of the peritoneal inflammation; the great end of the stomach was reduced almost to a jelly by the powers of the gastric juice: the digestive powers continuing so strong, show that this disease is an inflammation and not fever; the small end of the same stomach is natural and sound, the gastric juice falling to the great end by its gravity.

No. 42. *c. s.* A portion of the same Stomach; showing a distinct boundary between half dissolved and sound part; on blue paper.

No. 42. *d. s.* A portion of ditto half dissolved and pulpy.

No. 42. *f.* A portion of a diseased Stomach, properly speaking, cancerous; there is thickening, ulceration, and excresence in several parts. (Falconer's Sale.)

No. 42. *c. s.* A section of the Gizzard of the Ostrich, about two inches thick in some parts, and lined with a thick horny or cuticular covering.

No. 43. *s.* Part of the Œsophagus and Larynx of an adult, in whom while swallowing a cherry-stone, it stuck by the way: it gave occasion to the forming of a pouch, a little within the thorax, in the Œsophagus, which is now slit open from behind, to show the

bag; two quills show the natural passage lying before this pouch: every thing he swallowed stuck there after the cherry stone had once made a little lodgement.

No. 44. *s.* A portion of the Œsophagus from a Mr. Knight; the part close to the stomach was of a hard gristly substance, so contracted at one part as just to admit a small quill, and forming stricture of the œsophagus. (Mr. Russel opened the body for Mr. Walker, in presence of Mr. Ballard of Handley.)

No. 45. *s.* The Œsophagus and Larynx, part of the Trachea, Tongue, and Thyroid Gland of an adult: the œsophagus is slit open from behind, to show an ulcer extending from the upper edge of Cricoid cartilage to three inches below it, and being about $1\frac{1}{2}$ inch broad; in many places the whole thickness of the œsophagus is entirely destroyed, and the cartilages of the Trachea appear at the bottom of the ulcer; the Thyroid Gland is also enlarged. It killed the patient.

No. 46. *s.* A portion of the Œsophagus and Larynx from an adult; the œsophagus slit open behind, to show the same kind of disease as the former. The thyroid gland is also somewhat ulcerated.

No. 47. *s.* Ditto. The Trachea and Larynx are slit open, or rather they are both divided longitudinally, so as to look upon the forepart of the œsophagus, which is ulcerated in the same way as No. 45. The thyroid gland is very much enlarged.

No. 48. 49. *s.* Two longitudinal lateral sections through the middle of the Pharynx and Œsophagus, Larynx and Trachea, as far as the bifurcation of this last; to show an ulcer with stricture in the œsophagus, extending from behind the bifurcation of the Trachea two or three inches upwards. The patient could swallow nothing, but was nourished for some weeks by clysters.

No. 50. *s.* A portion of stomach from a Subject in the dissecting-room, in which is seen a pouch formed by five halfpence sticking together, black, and seeming, on their under surfaces, to have been rubbed bright by the action of the stomach: their effect on the patient not known.

No. 50. *a. s.* The Stomach of the Leopard No. 41. *a.* Black spots appear here and there along its internal surface; these were suspected to be parts digested by the same menstruum which was digesting the bones; 1st, because there was no cause to suspect any caustic taken down; 2d, there was no general inflammation in the stomach; 3d, there were no ulcers, the edges were not thick nor callous; 4th, the blackness was evidently from blood, recently effused from the dissolved vessels.

No. 50. *b. s.* A Stomach exactly in the same situation, from a Woman who had died the third day after Labour in a Fever, who had also taken an Emetic.

No. 50. *d. s.* The Stomach of a Dog inverted, supposed to be poisoned by arsenic: the inflammation is the most general ever seen; the whole looks black, the blood having been coagulated by distilled vinegar; there is, however, no erosion: the Dog died suddenly.

No. 50. *c. s.* A portion of the small end of the Stomach from a Woman in the dissecting room: there is stricture of the Pylorus which barely admits a quill; there are also a great many Prunestones which were found in the Stomach, and which could not pass the Pylorus.

No. 51. 52. *s.* Portions of the Œsophagus and Stomach of (Mr. Hume) a person, who died of the Gout in his Stomach: there was considerable inflammation, even in some places to extravasation as may be seen, the blood having been coagulated in the vessels and cellular membrane by means of distilled vinegar.

No. 53. *s.* The great end of the Stomach of an Adult, forming a thick large scirrhus mass: on the outside the surface is irregular and lobulated, but smooth; on the inside there is the same appearance, but the surface is broken and ulcerous: it is more than two inches thick in some parts. (From the Dissecting Room.)

No. 53. *a. s.* A portion of the Leopard's Stomach; in the inside is seen a Scirrhus, about the size of a walnut, with a hole in the top passing towards its basis about half an inch, and which seemed to discharge pus.

No. 53. *b. s.* Another portion of the same Stomach, with a smaller scirrhus ridge, and two different apertures as in the last.

No. 53. *c. s.* Ditto, in the human Stomach, only not clearly perforated at the top.

No. 54. *s.* A longitudinal section through Œsophagus, Stomach, and Pylorus, from an old Woman; everywhere thickened and scirrhus; the cavity of the stomach was not greater than that of a small intestine.

No. 54. *a. s.* Pylorus, with a portion of the small end of the Stomach become one large cancerous ulcer, ragged, thick, and bloody; from a Patient at Chelsea, who had perpetual vomitings and purging.

No. 55. *s.* Portion of the inverted Stomach of a Woman who died at Blackheath: the edges of the small curvature are thick scirrhus, and ulcerated; the Bristles shew how far downwards this thickening went, viz., about two inches from the curvature. The case will be described with No. 99, 100, in the diseases of the intestines. (Mr. Pinckstone's Patient.)

No. 56. *s.* Ulceration of the Pylorus; it extends but a little way into the stomach itself, and not at all into the duodenum; both are slit open to shew this.

No. 57. *s.* A longitudinal section of the lower end of Œsophagus and Stomach, much contracted, scirrhus, and ulcerated; from a poor Woman in Swallow street; she imagined nothing had staid on her stomach for six months before her death.

No. 58. *s.* The other half of No. 57.

No. 59. *s.* Ulceration of the Stomach near the Pylorus, from an old Woman who had jaundice. (Case unknown.)

SMALL INTESTINES. P.

No. 1. *d.* The Stomach, portion of Duodenum, Mesentery, lower portion of Ilium, and the whole of the great Intestine in situ, the arteries injected red, the veins yellow; to give an idea of the Alimentary Canal.

No. 2. *d.* The Stomach, and whole of the Intestines, injected red, and in situ; cut open at different parts to shew internal structure, and give a general idea of intestines.

No. 3. *t.* The whole of the small and great Intestines, with the Mesentery and Omentum, highly injected red, from a Fœtus at birth. The preparation was first steeped in spirit of wine, and is now in turpentine, where it becomes every day more transparent; it serves to show the same things as the two former.

No. 4. *s.* A portion of small Intestine filled with spirits, which are confined by ligatures: the peritoneal coat is in some places turned down, as is the muscular, to show longitudinal muscular fibres, running under the peritoneal coat, and circular muscular fibres under the longitudinal; the circular seem to be infinitely more numerous.

No. 5. *s.* Ditto: showing longitudinal fibres more distinctly; both these and the circular seem to be in packets separated by cellular membrane.

No. 6. *s.* Ditto, after boiling; the villous coat is removed in the middle, to show the circular fibres, (here very apparent) that lie immediately over it.

No. 6. *a. s.* A portion of Intestine distended by spirits, showing circular fibres not prepared by boiling, but exhibiting their natural appearance.

No. 7. *s.* Ditto, slit open: the preparation hangs by a cuticular kind of internal coat, which has in it the orifices of the in-

testinal glands; below this, the villous coat is turned down some way; and still lower down the muscular, with the peritoneal are turned down: it shews the different coats of Intestines.

No. 8. *s.* Ditto slit open; the villous coat is removed, to show lines of fat running in the direction of the principal blood vessels, between this coat and the muscular—a circumstance very seldom found in the small intestines.

No. 9. *s.* A portion of Jejunum from an Adult, open to shew the villous coat of the intestines, like that of the stomach in the contracted state of the muscular coat, throwing itself into wrinkles which run in the direction of the circular fibres, and are named *Valvutæ Conniventes*.

No. 10. *s.* Ditto, only inverted: showing ditto; showing also that these valves do not form circles, but are portions of spiral lines which arise and terminate insensibly.

No. 11. *s.* A portion of Jejunum inverted to show the *Valvulæ Conniventes*, all over whose surface a coagulated white fluid appears, taking the figure of the villi, and making the edges of the valves prominent.

No. 12. *s.* A portion of the small Intestine in the Turtle, slit open to show the villous coat thrown into beautiful longitudinal wrinkles.

No. 12. *a. s.* A portion of Ditto partially injected, with a network formed by the *rugæ*.

No. 13. *s.* A portion of Ditto from the Crocodile; the *valvulæ conniventes* are longitudinal, exceedingly small, and form waving lines so as to represent the drawing of a storm at sea.

No. 14. *s.* A portion of human Ilium inverted; the *valvulæ conniventes* wanting, and consequently the surface is here less, and the absorption from it or secretion must be less than in the Jejunum.

No. 15. *s.* Ditto, filled with spirits; showing ditto.

No. 16. *s.* A portion of Jejunum, cut open, highly injected red; under the microscope every *valvula connivens* appears covered with lesser ones, which in Dogs put on the appearance of hairs, and are called Villi.

No. 17. *s.* Ditto, showing ditto.

No. 18. *s.* Ditto inverted: one part of the Intestine beautifully injected red; the other uninjected and perfectly white, showing the same as No. 16.

No. 18. *a. s.* A portion of Jejunum, one fourth of it uninjected, and three fourths of it highly injected red; the injection was prevented by a ligature from running into the white portion, which thus makes an elegant contrast with the injected portion.

No. 23. *t.* A portion of Mesentery with Intestine, the artery injected red, the vein yellow; in turpentine: exceedingly beautiful, 1777; yellow fades apace, 1778.

No. 24. *d.* Ditto, in a bottle, varnished, and without any fluid; yellow perfect.

No. 24. *a.* Appendix Cœci, forming a rupture, and down in the sack. The surface of the peritoneum has here and there small tubercles on it; there were cancerous tumours in different parts of the body; these seem to have been incipient ones even on the peritoneum.

No. 24. *b. d.* A portion of small Intestine and Mesentery from the Sea Cow, showing two veins accompanying artery.

No. 25. *t.* A portion of Mesentery with Intestine, in turpentine; not inflated, but dried flat; yellow in part remaining.

No. 26. *t.* A considerable portion of the Mesentery and Intestine of a Child; injected red, and coiled round itself. N.B. this preparation has remained in its present state, unchanged, these thirty years.

No. 27. *t.* Longitudinal pieces of Ditto, inflated and dried.

No. 28, 29. *t.* Pieces of Intestine, from an Adult, injected red. These three last of the same age with No. 26.

No. 30. *d.* A portion of Intestine from a Child, injected red; remarkable for its beauty and distinctness; inflated, dried, filled with blue paper, and placed on bits of cotton, varnished.

No. 31. *t.* Portions of Intestine highly injected red, from a Child at birth; the whole Intestine seems vessels merely.

No. 32. *t.* Ditto, injected black, and filled with Paris plaster; remarkably distinct and beautiful.

No. 33. *d.* A small portion of the same, in a bottle, only varnished.

No. 34. *t.* Portion of same, coiled on itself: exceedingly beautiful.

No. 35. *t.* A portion of Jejunum, from the adult human subject; the arteries injected most beautifully with quicksilver: after filling them from the mesentery, a general ligature was made on the mesentery, and every set of arteries and veins tied separately, just at the end of the mesentery, otherwise the mercury escaped by one set as fast as it was injected by the other.

No. 36. *t.* A portion of Ilium, injected ditto; both arteries and veins filled.

No. 37. *s.* A portion of Intestine from a Child, slit open; shows the villi beautifully and minutely injected red, and here and there amongst these villi the *Glandulæ Agminatæ* of anatomists. (Pyer's, &c.)

No. 37. *a. s.* Ditto.

No. 37. *a. a.* A portion of Intestine where there had been peritoneal inflammation, slit open: it is highly injected red, and shows on the inside follicles apparently magnified, probably from longer and larger secretion; they are of the collected kind.

No. 38. *s.* A portion of Ditto; showing as No. 37.

No. 39. *s.* A large portion of Ditto; showing a line six inches long, one-eighth of an inch broad, of the Glands: there is a great variety in these.

No. 40. *s.* Ditto; showing two clusters of the same Glands.

No. 41. *s.* Ditto, inverted; showing a considerable cluster of these glands.

No. 42. *a. s.* A considerable portion of Intestine from the Sea Cow, inverted and filled with spirits; through its whole length it appear crowded with the Distinct Follicles, which are more numerous than perhaps in any other animal.

No. 42. *b. s.* A smaller portion of ditto, much crowded with do.

No. 42. *s.* The villous coat only of ditto; torn off to show a number of Glandulæ Solitariae.

No. 43. *s.* Intestine of a Child slit open to show a great number of these last.

No. 43. *h. s.* A portion of Jejunum from the Porpoise: there are very many and large valvulæ conniventes, but they are not interrupted, nor run one into another, but are continued longitudinally the whole length of the gut: the arteries form short small villi.

No. 44. *s.* A portion of Jejunum inverted and injected; to show the glandulæ solitariae all over its surface.

No. 45. *s.* Ditto injected and slit open; to show ditto: here however the appearance is doubtful, and seems rather the production of the villous coat than glands; here also are appearances of chyle in the absorbents.

No. 46. *s.* Ditto inverted from a Child and injected red, shows the same productions; spread on blue paper; appearances of chyle also seen here.

No. 47. *s.* Lower end of Jejunum uninjected, inverted, showing ditto.

No. 48. *s.* Ditto injected; showing ditto, showing also some Glandulæ Agminatæ.

No. 48. *a. s.* The beginning of Ilium, showing valvulæ conniventes almost entirely wanting, and glandulæ agminatæ.

No. 50. *s.* Duodenum slit open, injected red; shows valvulæ conniventes; shows size also.

No. 50. *a. s.* The Duodenum of the Horse, slit open to show the entrance of the Biliary and Pancreatic Ducts: one of the Pancreatic Ducts enters with the Biliary Duct, and both open by distinct mouths into a kind of sacculus or large follicle, which may serve for a sort of gall bladder in this animal, who has none in the usual place; the other pancreatic duct opens about two or three inches lower down than the first. Bougies are in all these ducts, and project into the sacculus or intestine.

No. 51. *s.* Ilium inverted, to show its size, thickness, and want of valves.


No. 51. *a. s.* Jejunum inverted, to show its size and fleshiness, and valves.


No. 52. *t.* The Mesentery of a Child at birth, injected red, with a portion of Colon.

No. 53. *s.* Ditto.

No. 53. *a. s.* A portion of the Small Intestine in a Dog, highly injected red, and inverted to shew the Villi, which are long and waving, small at the extremities like hairs—become a little thicker as they approach the villous coat, and then seem smaller again—so under the microscope.

No. 53. *b. s.* Ditto. In this as in the last, the arteries, had for hours previously been injected with warm water, and this was begun while the animal was warm; no valvulæ conniventes.

No. 53. *c. s.* Ditto from the Goat; the Villi resemble more the human, and have considerable breadth, leaving a loose edge towards the cavity of the intestine, rather than a loose waving point as in the dog, (thus ); no *valvulae conniventes*.

No. 53. *e. s.* Ditto, both from the Rabbit: one is distended with spirits and inverted, the other slit open, and highly injected red; the villi project much, but resemble the *papillae capitatae* of the Tongue rather than hairs, being rounded at the top, (thus, ) and apparently smaller as they come nearer the villous coat: no *valvulae conniventes*.

No. 53. *f. s.* A portion of Intestine from the Elephant, making an oblong; injected red: no *valvulae conniventes*, but the surface internally puckered, somewhat similar to a half-contracted Stomach; the villi very short and small, and more like hairs even than in the Dog.

No. 53. *g. s.* A portion of the lower end of Ilium, with the beginning of the Colon, both slit open: the villi in Ilium highly injected red, and not much differing from those of the Dog, rather shorter, but more crowded, and interspersed with vast numbers of follicles; the follicles in the *cæcum* are very large, and somewhat different in shape from other follicles, being oval and not circular, — at least the greatest number are ovals.

No. 53. *i. s.* A portion of the Intestine of the Goose, beautifully injected red; the upper end white, and uninjected: the villi are most of them like the human; some are long and resemble those of the Dog.

No. 53. *m. s.* Portions of Intestine from the Scate: the villi injected red form a honeycombed appearance, as in the gall bladder and stomach of the human subject, only the ridges are lower, and the cells of course more superficial.

Uncommon Structures.

No. 54. *d.* *Valvula Connivens* making a circle, and thence occasioning stricture in a portion of Jejunum.

No. 55. *s.* A Diverticulum or Cæcum in the Jejunum of a man hanged at Tyburn, four inches long, and nearly two in diameter.

No. 55. *a. s.* Small ditto, projecting like the first joint of a man's thumb.

No. 56. *d.* Ditto, but smaller, two inches long and $\frac{1}{4}$ in diameter also in Jejunum; this has a kind of valve at the beginning.

No. 57. *d.* Ditto, an inch long, and one half-inch in diameter; has also a kind of valve.

No. 58. *d.* Ditto, three inches long, and one in diameter.

No. 59. *d.* Ditto, an inch long, and one half-inch in diameter.

No. 60. *d.* Ditto, three inches long, one half-inch in diameter, injected red and yellow, at its end bifid.

No. 61. *d.* Ditto, one half-inch long, one inch in diameter.

No. 63. *d.* Ditto, from a child at birth, injected red.

No. 64. Large Ditto, injected; from dissecting-room.

No. 64. *a. d.* Ditto.

Diseased Structures.

No. 64. *s.* The Duodenum of a Woman from the dissecting room, slit open to show a Tumor of the size of a cherry, opposite to the orifice of the gall duct; it contained a fluid, but what symptoms it produced in the body when alive are not known.

No. 65. *s.* A similar Tumor, but not larger than an acorn, arising from the inner surface of the intestine, at the lower end of Ilium, which was not complained of. (Mr. Hume, Surgeon.)

No. 66. *s.* The Duodenum slit open, to show a Gall Stone an inch long, and half an inch in diameter in the very orifice of the duct, so that the person must have died in a fit of the colic.

No. 67. *s.* An Introsusceptio of the Jejunum from an Adult brought into the dissecting room; case not known.

No. 68. *s.* Ditto, of the lower end of the Ilium and Cœcum into the Colon, which brought on convulsions, livid countenance, inability of stool, and killed the child (Amyat's) in 24 hours.

No. 69. *s.* A Bubonocèle; case not known.

No. 70. *s.* Peritoneum as it covered the abdominal muscles on the inside of Paupart's ligament, and went out to form a hernial sack which is now seen empty and open.

No. 71. *s.* The portion of Omentum which was contained in this sack.

No. 72. *s.* A portion of Ilium with its Mesentery on the lower edge of the arch: the intestine is drawn out into a small bag, round the beginning of which is a black circle; this bag was formed from Hernia, and the black circle is the line of strangulation: the patient died. (Marybone Workhouse.)

No. 73. *s.* A portion of Omentum also marked with a black line, and strangulated along with the intestine in the above case.

No. 74. *s.* The Peritoneum, as it formed a sack of a Hernia in the groin, laid open: it is about five inches long, and two wide; Paupart's Ligament is seen at the upper edge on the forepart, and on the back part of the lower end is the testicle in its own tunica vaginalis; the Epidydimis was in a state of suppuration at the end next Vas Deferens.

No. 81. *s.* A Navel Rupture of the Omentum, from a very fat Woman in the dissecting room; the Navel is twenty times its natural size; the omentum was not strangulated; it seems to have been of long standing, and to have given little or no uneasiness.

No. 82. *s.* The Transverse Arch of the Colon adhering at one part to the lower end of the Ilium: the adhesion is about an inch long and half-an-inch in breadth; it is now untwisted, but was like twined cord in the dead body; it pressed on a portion

of Ilium above, so as gradually to form a stricture there, which frequently occasioned colicky pains, enlarged the intestine above to twice its natural size, and at last strangulated it so as to kill. (From a Woman in Great Windmill Street.—Mr. Naylor's patient.)

No. 83. *d.* The just-mentioned strangulated portion of Ilium, which at one part is also ossified.

No. 84, 85. *s.* Two pieces of inflamed Jejunum, from the Patient 82, 83: wherever the intestines touch one another, there the inflammation runs highest; and in the interstices, the intestine looks almost sound, so that bands of inflammation are formed according to the length of the gut, as if by adhesion the preventing the spreading of the inflammation was intended: the preparation, yet recent, was immersed ten minutes in distilled vinegar to arrest the blood in the vessels.

No. 86. *s.* A portion of Intestines still more inflamed, where great exudation had taken place, and the gut appears covered with coagulated lymph; from a boy in the dissecting-room; it was put some hours into rectified spirits of wine, and is now distended with it.

No. 86. *a. s.* Ditto, from a patient who died purging. (Westminster Hospital.)

No. 86. *b.* A portion of Intestine from a child unopened, and two turns are seen glued together from the peritoneal inflammation.

No. 86. *c. s.* A similar portion of the same Intestine; shows ditto.

No. 87. *a. s.* The termination of the Ilium in the Colon, forming the valve of the Colon: here particularly large and loose, and in the state in which it was found in a young lad who died of peritoneal inflammation; and in whom clysters thrown up by rectum were, in a few minutes after, vomited by the mouth; the linseed oil, appearing on the surface of the matter vomited, showed this.

No. 89. *s.* The Jejunum of a Child inverted, injected red; the follicular appearance on the valvulæ conniventes is probably from serophulous suppuration.

No. 90. *s.* Two pieces of ulcerated Intestine, injected red, from a child in the dissecting-room; inverted: the ulcers are above an inch in length and half-an-inch broad; the villous coat is entirely destroyed here, and the injection appears at the ulcerated mouths of the arteries.

No. 90. *a. s.* Ulceration in a portion of the same Intestine, injected red; the ulcerated part is whiter than the rest, the injection probably escaping as fast as it went in through the eroded ends of the vessels.

No. 90. *b. s.* Ditto.

No. 90. *c. s.* Ditto.

No. 90. *s. d.* Ditto.

No. 92, 93. *s.* Two Ditto, from ditto; slit open showing ditto.

No. 93. *a.* A large portion of ulcerated Ilium slit open, at entrance of Colon. (Mrs. Jenkinson.)

No. 93. *b.* Ditto.

No. 93. *c. s.* No. 93. *d. s.* Portions of the lower end of Ilium, ulceration beginning in the Glandulæ Agminatæ, perhaps as secretion is greater on these parts.

No. 94. *a.* 94. *b.* Ulcers of small Intestines. Dissecting-room.

No. 96. *s.* A piece of ulcerated Intestine, injected red; from a child in the dissecting-room; the ulceration in many places has gone through and through the intestine, and some fæces were found in the cavity of the abdomen.

No. 97, 98. *s.* Portions of Intestine, inverted from the same subject: from the appearance here it would seem they had been once ulcerated and recovered; the villous coat is gone in several parts, but the surface is whole and smooth, though thin and almost transparent.

No. 98. *a. s.* A portion of Jejunum, opened; an ulcer about the size of the nail of one's finger is seen on the inside, and at the distance of two inches from it on the Mesentery is seen a swelled Lymphatic Gland, the size of the first joint of one's thumb.

No. 99, 100. *s.* Portions of the small Intestines and Mesentery, injected red, from the patient *No. 55, in the preparations of the Stomach, &c.*: the thickening of the mesentery with ulceration, resembles Cancerous tumour more than any thing else; in the recent dead body all was livid or black.

No. 101. *s.* Portion of Intestine: man died of fever. On opening the abdomen, there was every appearance of child-bed fever, or abdominal inflammation: appearance preserved by spirits of wine. (Almacks Servant.)

GREAT INTESTINES. R.

No. 1. *s.* A portion of the Transverse Arch of the Colon, moderately distended with spirits, about three inches in diameter and seven inches long; it shows the sacculated appearance of the Colon, owing to the three muscular longitudinal Bands puckering the gut longways.

No. 2. *s.* Ditto, the peritoneal coat removed off one side, shows the muscular fibres on the sacculi, where the bands are running, principally circular.

No. 4. *s.* The Caput Coli, Appendix Cæci Vermiformis, with the lower end of Ilium: these were previously distended with spirits, and when hardened, a considerable portion was removed on one side, to look on the entering of the Ilium into the Colon, which is nearly at right angles; it has the appearance of contracting and diffusing rather than of insertion into the Colon; the vilous coat of the Ilium seems reflected back on the Colon after its entrance, which is by means of a slit in the direction of and as it were between the circular fibres of the Colon, on the side next Sacrum.

No. 4. *a. s.* Ditto, treated exactly in the same way, and showing same circumstances.

No. 5. *s.* The Caput Coli, Appendix Cæci Vermiformis, with the lower end of Ilium, inverted, and distended with spirits; the surface of the colon is puckered, but not villous.

No. 8. *s.* A portion of Colon inverted; the villous coat removed, to show the circular muscular fibres.

No. 9. *s.* Ditto, found in its state of peristaltic contraction, and having little or no cavity.

No. 10. *s.* Ditto, found ditto; one-half opened, to show the other almost without a cavity.

No. 11. *s.* Ditto, opened to show its internal coat thrown into rugæ like those of the stomach, in consequence of the contraction of the muscular coat.

No. 12. *s.* A portion of Colon, injected red; slit open: the arteries form an appearance on the internal surface like those of the Stomach, viz., a honeycomb-like surface.

No. 13. *s.* A portion of Colon, showing as No. 11: both show the internal surface gently rugous, as if the contraction of the muscular coat either had not taken place, or had been destroyed.

No. 14. *s.* Ditto, injected red and slit open: the inner surface very rugous, though not nearly so much as No. 11.

No. 16. *t.* Lower end of Ilium entering Colon, with Appendix Cæci, injected red and yellow.

No. 17. *s.* The Colon of a Quadruped (supposed the Lion,) injected red, and slit open; the surface not rugous nor honey-combed, but having long waving villi.

No. 18. *s.* Lower end of Ilium and Caput Cæci; slit open; injected red: shows the entrance of ilium; a very glandular surface both in ilium and colon: in the last the follicles are solitary, as in No. 14, *Glands*, where this appearance is seen in the dog.

No. 18. *a s.* Lower end of Ilium, Caput Cæci, and Appendix Cæci Vermiformis; slit open: the agminated glands of Ilium, and the scattered ditto in Cæcum, and particularly those in the appendix, were exceedingly distinct when the preparation was first put into spirits; still tolerably distinct in the appendix.

No. 19. *s.* The Rectum injected red, and slit open: the inner surface thrown into gentle rugæ, very irregular, like those of the colon; the arteries also form the honeycomb-like appearance, and there are a vast number of glandulæ solitariæ.

No. 19. *a. s.* Ditto: rather more successfully injected.

No. 20. *s.* The Internal Coat of the Rectum, spread out on blue paper, to show the follicles, which are exceedingly distinct, and appear to be aggregates of six or seven follicles, though with the common Glass they seemed single.

No. 21. *s.* The Internal Coat of the Rectum, (same as No. 20.)

No. 22. *s.* The lower end of Rectum, slit open and injected red: shows it very vascular; shows all the follicles injected.

No. 22. *a. s.* The Rectum from an Adult slit open, and hardened in alum and water; shows vast numbers of distinct follicles (not injected.)

No. 23. *s.* A portion of Colon, injected red: shows the glandulæ solitariæ.

No. 23. *a. s.* Ditto, showing ditto; from a child.

No. 23. *a. b. c. s.* Tubes of Coagulable Lymph, from the internal surface of the Intestines: one portion, 23 *c.*, being at right angles to the other, shows it to be from the ilium entering the Colon, (M. S.)

No. 24. *d.* Cæcum, with the lower end of Ilium inflated and dried: a portion of skin and hair adhering to the end of the cæcum, show that it had protruded in rupture, mortified, and healed up. (Case published—London Medical Essays.)

No. 25. *s.* Ulceration of the Colon; from the dissecting-room: the bristle passing across the opened intestine, shows rather where the intestine had been ulcerated and healed again.

No. 25. *a. s.* Former Ulceration Ditto; healed into stricture.

No. 25. *b. s.* Ulceration of Valve of the Colon; from the dissecting-room.

No. 25. *c. s.* Ulceration and thickening of parts in the Cœcum and Appendix Cœci, which, with lower end of Ilium, are slit open: it was bought at Falconer's sale, and resembles dysenteric intestines much.

No. 26, 27. *s.* Ulceration Ditto, with seeming Ossification at the same time. Case unknown.

No. 26. *a.* Ulceration of Colon.

No. 29, 30, 31. *s.* Ulcer, with Stricture of the Sigmoid Flexure of the Colon.

No. 32, 33, 34, 35, 36, 37, 38. *s.* Small pieces of Ulcerating Colon; the ulceration seems to begin always in a follicle, or amongst a cluster of follicles. (Dr. Stark.)

No. 35. *a. s.* A small portion of Intestine, cut open, showing a small excrescence.

No. 39. *s.* A considerable portion of Ulcerated Colon, injected red.

No. 39. *a. b. c. d. s.* Ulceration, with Sloughing in the Colon: (dissecting-room, 1778.)

No. 41. *s.* Diseased piece of Colon. (Dr. Stark.)

No. 43, 44, 45. *s.* Portions of Diseased Colon from a publican in Piccadilly: 44 and 45 came away in a dysentery he had, and recovered; 43 is the colon, two years afterwards, when he died: 44 and 45 seem to be portions of the internal coat ulcerated off, 43 does not, however, explain this exfoliation, but appears ragged and ulcerated, with stricture at one place.

No. 46, 47. *s.* Two portions of Colon from a Dysenteric Patient (Dr. Woolaston); the surface seems covered with a præternatural growth and enlargement of rugæ rather than ulceration. As the colour is different, however, in different places, it is probable that the whitest consists of granulations, and the yellow is the old surface not yet destroyed by ulceration.

No. 46. *a. s.* Portion of the Colon from a Dysenteric Patient, with large ulcers on the inner coat.

No. 46. *b. c. d.* Portions of the same Intestine, showing ditto.

No. 46. *e. s.* A portion of the same Intestine, with ulcers along the valvulæ conniventes, and bristles passed through some of them; from the same patient.

No. 46. *f.* Portion of large Intestines, very much ulcerated, from a Dysenteric Patient. (Dissecting room.)

No. 48. A portion of Colon from a Dysenteric Patient (Dr. Starke); the same appearance, but in a less degree than in No. 46. *s.*

No. 49, 50. Diseased portions of Colon from a Hypochondriac Patient (Mr. Dhal, Painter); those at the beginning of colon are in a sloughing state, seemingly lost; show the intestine just beginning to change.

No. 52. *s.* A Rectum on which as imperforate, Mr. Bromfield and Mr. Hewson performed the operation for imperforate rectum.

No. 52. *a. s.* A Rectum in situ, put up to show Procidencia Ani; of course the anus itself remains entire, it seems to be the external Coat only which becomes loose and œdematous, and prolapses. It is only incipient, as the tuberculated portions do not project above $\frac{1}{2}$ of an inch.

No. 53. *s.* Ulceration, with stricture of the Rectum. (Case Dr. Hunter's.)

No. 53. *a. s.* A Stricture of the Sigmoid Flexure of the Colon, attended with Schirrus.

No. 54. *s.* Ditto, from a Woman. Uterus is seen on the forepart.

No. 55. *s.* Uncommon surfaces, remains probably of some disease.

No. 55. *a. s.* Stricture of the Rectum about three inches above the anus. Lord T.—above a year's standing—dreadful case.—(Dr. H.)

No. 56. *s.* Ulceration of the Rectum in several parts; holes are formed through and through, and the uppermost one communicates with the Bladder, so that fæces passed by the penis. (Shoemaker's case. Dr. H.)

No. 57. *s.* Cancer of the Rectum about three inches above the verge of the Anus: the disease extends even to Sigmoid flexure of the Colon; came on with Tenesmus; continued two years, and killed the patient, not with very great pain, but teasing as it were: towards the end he became leucophlegmatic, and had water in chest and abdomen; used Cicuta, &c. in vain. (Case Mr. Cruickshank's patient, Faulkner.)

No. 58. *s.* Stricture, with Ulcer of the Rectum three inches above the verge of the Anus; the fæces used to be accumulated so above this Stricture that Rectum is here dilated to three times its size. (Case, Mr. Lee from Edinburgh, now in America. Mr. Jackson at Knightsbridge.)

No. 59. *s.* Portion of Rectum from a Man who had Stricture of the Œsophagus, and had long been fed by Glysters; the appearance is very like disease, yet the patient complained not of Rectum: could it be in consequence of the new stimulus of food there? it looks like enlargement of the Follicles, as if they could absorb.

No. 59. *a. s.* A portion of Colon inverted, showing internal Coat projecting much more than natural, and much inflamed. From the dissecting room.

No. 60. *s.* The Anus, from an adult body from the dissecting room; shows also Perinæum: round the verge of the Anus some

piles are opened, and appear to be Varicose Veins, on the little Valvulæ within the Anus elongated; two bristles also point out two fistulous orifices leading to an ulcerated Cavity on the fore part of the Rectum, and diverging thence towards each tuberosity of the Ischium.

No. 60. *a. s.* Shows appearance blind piles unopened.

No. 60. *b. s.* Ditto, showing particular processes like small Valvulæ Conniventes within the anus, which, distended, become Piles.

No. 61. *s.* A Stricture of Sigmoid Flexure of the Colon; one half of Uterus is preserved.

No. 61. *a s.* The Rectum of the Woman, who had the Foetus in her Ovarium, exceedingly ulcerated; two fistulous openings from vagina into rectum are seen; two orifices are also seen leading from rectum into the cavity of the pelvis, so that fæces either passed, or would soon have passed that way.

No. 62. *s.* A Rectum slit open, whose internal surface is exceedingly ragged from ulceration. Case not known.

No. 64. Herniary sac laid open to show colon protruded, (not described in Hunterian MSS.)

WORMS. Q.

No. 1. *s.* Ascarides from the human subject, floating about: the longest of them is not more than half-an-inch; the head is rather blunter than the tail, which is long and small; the diameter of the animal is not more than 1-64th of an inch.

No. 3, 4, 5. *s.* Specimens of the Teres,—No. 5, from a child who had no symptoms of worms.

No. 6. *s.* A Teres, opened at one part to show the internal parts a little.

No. 7. *s.* Ditto, opened its whole length; the internal parts, floating loose, seem, from analogy with other insects, to be uterus and vas deferens, with penis, so that the animal is a hermaphrodite.

No. 7. *a. s.* Ditto, Ditto.

No. 8. *s.* A Tape Worm, with small joints, coiled up to the quantity of a yard or so.

No. 9. *s.* Ditto, with small joints also; same quantity: these two brown or yellowish.

No. 10. *s.* Ditto, joints a little broader, colour white.

No. 11. *s.* Ditto, joints also broader, colour yellow.

No. 12. *s.* Ditto, some joints very narrow, other very broad; yellowish.

No. 13. *a. s.* A quantity of a narrow Tape worm; many of the joints small, others broad, colour yellowish.

No. 14. *s.* Ditto, broad, yellowish; small quantity.

No. 15. *s.* Ditto, very broad joints, and considerable length.

No. 16. *s.* Ditto, very fine specimen, large quantity of joints, in general broad, colour yellowish.

No. 17. *s.* Ditto, white.

No. 18. *s.* Ditto, white; in these two last very broad joints.

No. 19. *s.* One from Sardinian Ambassador, (Sir John Elliot.) In some parts the joints intermit, and are connected by a filament on each side only; the bristles show this passed between.

No. 20. *s.* Worm from America, mentioned in the Medical Observations of London. (doubtful.)

No. 21. *s.* A portion of a Tapeworm with the arborescent vessels of its joints filled with a light brown fluid.

No. 22. *s.* A Tape Worm from the Salmon; entire, head well seen: was quite alive when found on dividing a very fine fish taken in the Forth 36 hours before. (Presented by Professor John Couper.)

Intestinal Worms, (not numbered.)

HEART. S.

No. 1. *s.* A male child at birth (but still born) injected from the umbilical cord ; the anterior parietes of the Thorax and Abdomen are removed to show the viscera of both cavities in their situation, from before.

No. 2. *s.* A female Ditto ; the posterior parietes of Thorax and Abdomen are removed to give a back view of the contents of both cavities.

No. 3. *s.* A male child at seven months, treated as No. 1. to show ditto ; shows also the Testes on each side of the bladder, not yet descended into the scrotum.

No. 3. *b.* A view of the Heart, and other Viscera of a Slink Calf.

No. 3. *c.* A view of the Viscera in a child injected, with the bag of a Spina Bifida laid open.

No. 6. *s.* The contents of the Thorax with the Liver, from a child at birth : a portion of the lungs on the right side is removed to show the better the Thymus Gland and right auricle of the heart ; the lungs are injected with tallow, the arteries red ; spine not removed.

No. 7. *s.* Ditto, with the Larynx and Thyroid Gland ; the lungs injected red, no liver, and the spine is moved to show descending Aorta.

No. 10. *s.* The contents of the Thorax and Abdomen from a Fœtus, at three months : intended principally to show that the auricles are larger in proportion to the ventricles than in the adult, and that the right and left auricles touch one another before, and quite surround the upper anterior parts of both ventricles ; the lungs also are at a greater distance before, and leave the heart quite exposed on the right particularly ; the Thymus is now smaller in proportion to the heart than afterwards.

No. 10. *a. s.* The Viscera of the Thorax and abdomen exposed in a Fœtus of three months: the auricles of the heart are much larger, in proportion to the ventricles, than in the adult; the left auricle touches by its edge the apex of the heart; the right appears bifid, consisting of an upper and under half; the liver larger than all the other viscera put together; the spine behind very beautiful.

No. 12. *s.* The heart of an adult (Hoquet) hardened in spirits and injected red: the ventricles afterwards cut away to show their fasciculated structure; the carneæ columnæ and chordæ tendinæ, with the valves of the ventricles, preventing the blood's return into the auricles; the valves of the aorta, and pulmonary artery are also seen preventing the blood's return into the ventricles; the left coronary artery is seen coming off a great way above the valves.

No. 13. *s.* The heart of a Boy about twelve years old treated in the same way, that is, filled with size, hardened in spirits, and then cut open; the size removed to show the internal structure of auricles and ventricles, with the exit of the great vessels.

No. 13. *a. s.* A most beautiful ditto; adult; shows ditto.

No. 24. *s.* The heart of the Turtle, treated in the style of No. 13, showing two auricles, and a kind of single ventricle; two aortæ behind the pulmonary artery arise from this ventricle, which, however, is not single at the lower part: quills are introduced into the pulmonary veins.

No. 24. *c.* (Not described.)

No. 25. *s.* The right auricle of the heart in the adult treated as No. 13; the Cava inferior, from its exit from that auricle to about four inches down, slit open to show the valvula nobilis sive Eustachii, also the fasciculated structure of the inner surface of the auricle.

No. 26. *s.* Ditto, showing valve in the middle, $\frac{1}{4}$ of an inch broad.

No. 27. *s.* Ditto from a Child, showing Valve putting on the appearance of Brussels Lace, as delineated by Eustachius.

No. 28. *s.* The heart of a Child, filled with Size coloured with vermillion; the right auricle is removed to show the Foramen Ovale covered with a thin membrane, loose only at the upper edge, and so placed that the blood of the right auricle only can pass it, that of the left shutting it close.

No. 29. *s.* Ditto, auricles removed, the Septum only remaining, and Foramen Ovale seen from either side; ventricles also open show the Septum thin at one place.

No. 29. *a.* The heart of a Fœtus about seven months. Foramen Ovale covered with Brussels Lace like Membrane; also not hitherto described Foramen Ovale between the right and left ventricles, just in the upper edge of the Septum, where it appears thin and transparent in 29.

No. 30. *s.* Ditto, uninjected, both auricles and ventricles slit open to show Ditto.

No. 31. *s.* Ditto, ditto, both auricles removed; the valve of the Foramen Ovale appears as transparent as a spider's web nearly.

No. 32. *s.* The Septum Auriculorum from an adult, showing Foramen Ovale open, and a goose quill in the passage.

No. 33. *s.* Ditto, ditto, ditto, the opening not so wide.

No. 35. The aorta as it comes out of the heart (with a portion of the carneæ columnæ and valvulæ mitrales) cut open to show its valves.

No. 36. *s.* A large Carnea Columna passing between the two sides of the right ventricle in a Bullock: the foramina Thebesii on that column injected with mercury, and communicating with the coronary veins.

No 47. *a. s.* A heart injected green, suspended by its nerves.

No. 54. *s.* The heart of a young nobleman who had black fits, and died about twelve years of age: the pulmonary artery is exceedingly small, as is the right ventricle of the heart; the Ductus

Arteriosus and Foramen Ovale are both open; the branches of the artery which go into the lungs are barely large enough to keep up a circulation there.

No. 55. *s.* A portion of the right Ventricle of the Heart from an old man who married his maid, and died suddenly the first night after; the ventricle appears ruptured large enough to admit ones thumb.

No. 56. *s.* A portion of the left Ventricle of the heart, with the Aorta slit open to show one of the Semilunar valves ruptured.

No. 57. *s.* The Aorta Ascendens slit open to show its inner surface formed into aneurismal sacs of the size of a small walnut; one of these had burst, and the patient died of internal hæmorrhage into the cavity of the chest as well as the pericardium.

No. 58. *s.* A Polypus in the right Ventricle of the heart, of a very large size.

No. 59. *s.* The Apex of the Heart adhering to the Pericardium, and this last to the Pleura lining the chest, by a broad adhesion however, and which admitted of the heart's motion: a portion of lungs adjoined shows the patient to have been phthisical; their outer surface is much covered with coagulated lymph.

No. 62. *s.* A similar Crust not injected, adhering to pericardium internally, from another subject.

No. 63. *s.* A portion of this Crust forming a kind of membrane, which on its outer side looks villous, like the inner surface of the Intestine in the Cod; in some places it resembles the inner surface of the Gall bladder.

No. 65. *s.* Ossification in the edge of Valvula mitralis, pointed out by a black bristle.

No. 66. *s.* A very large Ossification in the substance of the heart, round the mouth of the left ventricle; from a fat woman in whom the arteries of the uterus and brain were also ossified.

No. 67. *s.* A Heart turned out of its pericardium; there was universal adhesion from inflammation, as appears by the ragged surfaces of both heart and pericardium, which naturally are smooth.

No. 68. *s.* The Carpenter's Heart, who in dovetailing a bit of wood, run the chisel through the Septum ventriculorum, and died suddenly.

No. 69. *s.* The right ventricle of the Heart from an adult, (who died in Westminster Hospital,) covered externally with a very thick crust of coagulated lymph.

No. 70. *s.* The same crust investing Pericardium internally.

No. 71. 72. *s.* Portions Ditto, peeled off from the forenamed surfaces.

No. 71. *a.* Ditto.

No. 74. *s.* A portion of Auricle from a Child's Heart, covered with coagulating lymph.

No. 75. *s.* Portions of the same Heart, with the inflammatory Crust injected; in 74, as it covered the Auricle, and in 75, as it covered the ventricle, both turned up.

No. 76. Similar crust turned up from ventricle of heart, (not described.)

No. 77. *s.* An Oyster, showing its heart consisting of a single Auricle and Ventricle.

No. 78. *s.* A Thymus Gland rather of a large size.

LUNGS. T.

No. 6. *s.* The Lungs of a Fœtus injected red, to show that they consist of a right and left lobe, and that these again are subdivided, the right into three lesser lobes and the left into two; that they are generally convex on the outside, adapting themselves to the cavity of the chest; that there is a space left behind for the spine which lies between them; that they are hollowed on their internal side to make room for the heart and its great vessels; and that there is a niche in the lower anterior edge of the left lobe for the apex of the heart.

- No. 7. *s.* Ditto, with a portion of the heart.
- No. 8. *s.* The left lobe of the Lungs in a child about 3 or 4 years old, injected red.
- No. 9. *s.* Ditto, from a child at birth, highly injected red; the pleura turned down to show the investing membrane of the lungs.
- No. 10. *s.* The Lungs of the Pigeon where there is no pleura; or where if it exists it is perforated by a infinite number of holes, so that such lungs cannot be distended without inflating the cavity of the chest and abdomen also: the bristles show that the principal branches of the Trachea are open towards the abdomen.
- No. 11. *d.* Pleura as it covers the chest, injected red, and exceedingly vascular: the vessels of this membrane do not in general admit either red blood or coloured injection; it is spread on blue paper and varnished.
- No. 12. *s.* The Os Hyoides, Larynx, and Trachea for some way through the lungs—a beautiful preparation: the branches of the bronchial artery are seen on the lower part; before the Trachea is principally cartilaginous, behind membranous.
- No. 13. *s.* The same preparation, with the Cæsophagus and Pharynx, hardened in spirits in its natural situation.
- No. 15. *s.* The Larynx from an adult, with the Os Hyoides: in a fore view are seen the Epiglottis above, next the os hyoides, then the thyroid cartilage, and lowest the narrow part of the cricoid; behind the principal objects are the arytænoid cartilages standing on the basis of the cricoid.
- No. 15. *s.* Ditto, from Ditto.
- No. 16. *s.* Ditto, from a Child, the Epiglottis and Arytænoid Cartilages are wanting.
- No. 17. *s.* The Cricoid Cartilage, with the Arytænoid only, making principally the lower posterior part of Larynx: all these preparations of larynx were macerated in water till the muscles and blood were perfectly dissolved and washed away.

No. 18. *s.* The Larynx opened on the forepart: shows the inner surface of the Trachea porous; it is supposed that these pores are the orifices of the follicles which secrete the bronchial mucus.

No. 18. *a.* Larynx cut open showing the Sacculi laryngis.

No. 20. *s.* The Larynx of the Porpoise.

No. 21. *s.* Ditto, in the Turtle.

No. 22. *s.* The anterior cartilaginous part of the Trachea removed so that two cartilaginous rings remain, one at top, the other at bottom merely to show that it was a tube; the intermediate cartilages are cut out a little way from the membranous part, so as to look upon the ends of divided cartilages, and to give an idea of a number of species: the porous inner membrane is also seen.

No. 23. *s.* A ring of the Trachea cartilaginous before and on the sides, membranous or rather muscular behind; the cartilaginous part makes nearly the half of an ellipse, the posterior part passes in a straight line from the ends of the cartilage, like a string of a bent bow; and thus through the whole Trachea.

No. 24. *s.* The same kind of preparation as 22, only at the bifurcation of the Trachea, to show the arrangement of the cartilages at that place.

No. 26. *s.* A section of the Trachea of a Horse: the cartilaginous rings go quite round, and lap over, but lie loosely connected by a loose cellular membrane; the inner surface has a pretty thick mucous membrane, (turned down,) and a muscular whose fibres are principally longitudinal.

No. 27. *s.* Two rings from the Trachea of an Ass; the cartilages go more round than in the human, and the posterior membranous part is not $\frac{1}{8}$ of an inch broad.

No. 28. *s.* A portion of the Horse's Trachea as it gets more into the substance of the Lungs: the cartilages degenerate into membranes or ligamentous substance; the muscular fibres on the inside appear also longitudinal.

No. 29. *s.* The Trachea of the Turtle, at its bifurcation: the cartilages go quite round and form one complete ellipse. In all these Tracheæ, the cartilages are moveable on one another, and united by a ligamentous or rather an elastic condensed cellular membrane.

No. 30. *s.* The Lungs of a Fœtus, with the Heart, about 4 months old; the substance of the Lungs here appears made up of a vast number of lesser lobules, circumscribed by transparent lines so as to give the appearance of a cauliflower top.

No. 31. *s.* The Trachea with its branches in the calf after the surrounding parenchyma had been destroyed by maceration in water: what is now visible is not materially different from the ramification of an artery or vein.

No. 32. *s.* Ditto, after injection of its branches with red wax: at the extremities of the smallest branches appear small grains; these are a congeries of cells, as will appear presently.

No. 33. *s.* Ditto, Ditto, less macerated, the pleura merely destroyed with the connecting cellular membrane, to show the lesser lobules or clusters of cells into which the extreme branches of the Trachea are divided.

No. 33. *a. s.* A portion of the Lungs of a Slink Calf resolved into its constituent lesser lobules by maceration in water, the vessels injected red, very beautiful.

No. 33. *b. s.* Ditto, injected red, not so minutely divided by maceration.

No. 34. *s.* Ditto, the air cells as well as the bronchial artery injected red, in the style of 31.

No. 34. *b.* The Trachea of a child at birth; the trunks of the bronchial artery, injected red, and of a considerable size, dried and on blue paper.

No. 34. *c. s.* A portion of the Trachea near the surface of the Lungs in the Slink Calf after maceration; the branches of the bronchial artery curling along those of the Trachea are extremely beautiful.

No. 34. *d. s.* Ditto, whole, showing Ditto; the nerves are seen also running along with the arteries.

No. 34. *e.* Ditto, of the Slink Calf, minutely injected and put into Oil of turpentine; two small branches of the artery may be seen running along the edges of each cartilaginous ring so as to be parallel to each other, having between them an irregularly waving branch running upon the rings; these all anastomose with each other, forming a most elegant irregular network of vessels.

No. 34. *f.* Portion of a Trachea from a Slink Calf dried, showing very minute vessels running parallel to each other, and anastomosing together.

No. 35. *t.* The Lungs of a Frog injected red, and after injection, and drying, cut open; each lung is a bladder which on the inside is formed into cells like a honeycomb; it gives the most simple idea of lung; the substance of the lungs is as thin as a spider's web almost.

No. 36. *s.* One half of the Lung of the Turtle after the pulmonary artery had been injected red, and to great minuteness; in this preparation the Trachea and its branches are divided longitudinally, and the whole seems to be a cellular network or sponge; on the posterior side some absorbents are filled with mercury, but do not appear unless held between you and the light, from the thickness and opacity of the pleura.

No. 37. *t.* Both halves Ditto; dried from a young Turtle; this preparation was put up by Dr. Hunter 35 years ago, with the following; they have not evaporated.

No. 38. *t.* A small portion of Ditto; also a piece of child's Intestine beautifully injected red, coiled on itself in the distended state.

No. 39. *t.* Ditto, from a large Turtle: the cells are in proportion larger so as to equal, if not surpass those of a honeycomb; nothing can be more vascular.

No. 39. *a.* Not described.

No. 40. *t.* A smaller piece, Ditto.

No. 41. *s.* A piece Ditto, uninjected, slit open to look on the network of cells.

No. 42. *s.* A portion of human Lungs, the air cells filled with mercury, to show their size on the surface of the Lungs; they are smaller far than the finest pin's head.

No. 45. *t.* A portion of Porpoise Lung, in the style of 42; the cells much larger, perhaps four times larger than in it.

No. 46. *t.* Ditto.

No. 47. *t.* Portion of the Lungs of a Lion: the pulmonary artery had been injected; in the style also of 42; air-cells six or eight times larger.

No. 48. *t.* Ditto, ditto, ditto.

No. 49. *t.* Portion of the Tiger's Lungs, treated in the same way; the cells much larger than the Lion's.

No. 52. *t.* A portion of the Antelope's Lungs, in the style of 42: the air cells like those in the human lungs.

No. 53. *t.* Portion of the Lungs of a Sheep, Ditto; air cells smaller even than in the human.

No. 54. *t.* Ditto, Calf; air cells very small.

No. 55. 56. *t.* Portion of Cat's Lungs; air cells filled with mercury and very large.

No. 56. *a. t.* Portion of the Lungs of the Leopard, the Trachea injected with mercury; the air cells are less than in the Tiger or Lion: it was steeped previously in spirit of wine.

No. 63. 64. 65. *s.* Portions of the Lungs of a Child still-born, the arteries injected red, the veins black, and the Trachea yellow; the last colour takes the lead.

No. 93. *a. s.* A Lobe of the Lungs of a child at birth, injected red to great minuteness.

No. 65. *a. s.* Portion of the Lungs of a Fœtus, the arteries injected red, veins black.

No. 66. Awanting. }
 No. 67. s. } A longitudinal section of the Trachea from

the Epiglottis to the bifurcation within the Lungs: it is divided into an anterior and posterior half, the Thyroid gland is also divided in the same manner, the Œsophagus is with 66 which is the posterior half, and the Aorta is with 67 the anterior. The Trachea below the Larynx appears internally diseased, the surface being granulated and projecting into the cavity of the Trachea; this appearance is continued down two or three inches: the cartilages of the Larynx are ossified, and its sides at the Sacculi Laryngis almost touch one another. The Thyroid gland is enlarged to four or five times its size, and below the Thyroid gland, over the arch of the aorta and behind the first bone of the Sternum is a mass of Schirrous Lymphatic glands, surrounding almost the Trachea, and projecting so much as to have occasioned a sense of almost constant suffocation; the disease was of one year standing, and killed the patient, (Holbum, Mr. Neilson's patient.)

No. 66. a. s. The Gills of a Cod injected red to great minuteness: the blood vessels must in a manner be in contact with the water; they run first longitudinally and then send off innumerable small branches to each side at right angles to the former.

No. 66. b. s. Ditto, a smaller portion.

No. 68. s. A Polypus coughed up from the Lungs, and imitating the branches of the Trachea.

No. 69. s. Two Ditto, still more perfect imitations.

No. 70. s. The Trachea of a child who died of the Croup or Cynanche Stridulosa; the posterior half is turned down to show the coagulable lymph plugging up the Trachea entirely.

No. 72. s. Two pieces of coagulable lymph putting on the appearance of tubes coughed up from the lungs.

No. 73. s. Mr. H——'s Trachea slit open to show the inner surface inflamed: he died of an attack of the gout on the Stomach and Lungs: the blood was arrested in the inflamed vessels by ten minutes immersion in distilled vinegar.

No. 75. *s.* The Coagulating Lymph, forming a crust on the pleura, and making it appear $\frac{1}{8}$ of an inch thick; from a patient who died of the Empyema.

No. 75. *a. s.* A portion of the Lungs from a patient who had general inflammation of the Thorax: the lungs are encrusted both on the side next the heart, and on that next the ribs with thick coagulable lymph.

No. 76. *s.* A portion of Lungs from a consumptive patient: the branches of the Trachea in many places removed by ulceration, the matter had found its way into the cavity of the chest, and then formed Empyema; the lungs are connected to the ribs by a thickened membrane, originally lymph, now carrying red vessels.

No. 77. A portion of Lungs on the outside of the Pericardium near the Diaphragm; the patient died of Empyema, and the matter was beginning to ulcerate the external surface of the Lungs in the places marked by bristles. (Mr. Neilson's patient, and Dr. Watson's, Lincoln's Inn fields.)

No. 78. *a. s.* A portion of Lungs on the surface of which the small beginnings of Tubercles are seen; they are certainly cheesy like the Scrophulous absorbent glands.

No. 78. *b. s.* Ditto; a large branch of the Trachea cut open, which communicated with a collection of Pus near the lower part of the Lungs; the condensed Tubercles are seen in other parts.

No. 79. *s.* Ditto; Tubercles still distinct but in vast numbers, the Lungs injected red, and some Lymphatics on the outside.

No. 80. *s.* Ditto; a large portion of Tubercles universal, and making the lungs as solid as a piece of liver; the air cells are seen empty in many places.

No. 81. *s.* Still more diseased, and cavities from ulceration beginning to be formed.

No. 81. *a. s.* A farther continuation of 81.

No. 82. *s.* A Sternum and intercostal muscles with the cartilages of the ribs ulcerated from vicinity, or continuation of the process of disease in the Lungs.

No. 83. *s.* Tubercles in the Lungs of the size of walnuts, truly scrophulous, but it is the pulpy scrophulous tumour, not the cheesy one; this patient lost both limbs from similar tumours on them, and at the time he died, had his left arm in the same situation, though the absorbent glands were not affected. (Mr. Watson's patient, Westminster Hospital.)

No. 84. *s.* A portion of the Trachea and Œsophagus from a consumptive child, injected for blood vessels in Spring, 1778; the Lungs were exceedingly ulcerated, and a cavity thus formed in the lungs has made its way also into Œsophagus behind them, destroying its anterior part for more than two inches.

No. 85. *s.* A portion of the left lobe of the Lungs from an adult, with a Scrophulous Tumour as big as a child's head at birth, which compressed them, so that no air passed into them; the tumour was painful and killed the patient. (Dr. J. Jebbs, Westminster.)

No. 86. A portion of Lungs consolidated into a mass like the Liver, where of course the air cells were nearly obliterated: from a woman in the dissecting room.

LIVER. U.

No. 1. *s.* The Liver and Gall bladder of a child at birth, highly injected red: to show its shape, that it is convex before and concave behind, and divided into two lobes, a large one the right, and a lesser one the left; and that the Gall bladder lies in a bed on the concave side of the great lobe near its lower edge.

No. 1. *a. s.* The Liver and Gall bladder of a child at birth; peritoneal coat removed; very red.

No. 3. *s.* A portion of the Liver from an adult; the peritoneal coat and its own coat are turned down at one place, and floating in the spirits.

No. 4. *s.* Ditto, showing ditto, more distinctly.

No. 4. *a.* Ditto, Liver injected, not distinct.

No. 5. *s.* The Liver of a Fœtus about six months; the arteries injected black show these coats exceedingly vascular.

No. 6. *s.* A portion of the Liver of a child injected red; it looks like a lump of vermilion from its vascularity; one set of vessels only were injected, viz: the vena portarum system, but from the branches of the cava perhaps, the Pori Biliarii, and even the arteries are injected.

No. 7. *s.* Ditto, ditto, redder if possible than the former.

No. 8. *s.* A portion of Liver from a child some years after birth, in which the Ductus Venosus being impervious, probably only the branches of the Vena Portarum are injected; they form a kind of network in the Liver, inclosing round uninjected portions.

No. 8. *a.* Portions of a Cat's Liver injected red, from Vena Portarum; the minute glandular part appears as a net work in scattered spots, at pretty regular distances.

No. 23. *s.* A Gall Bladder inverted and distended in spirit; to show the inner surface fasciculated like that of the stomach, and putting on a honeycomb appearance.

No. 24. *s.* Ditto, cut open, one half turned down to show ditto.

No. 25. *s.* One half Ditto, where the rugæ are very remarkable, and make it probable that this surface secretes like that of the intestines.

No. 26. *s.* The same preparation as 23, showing Ditto.

No. 27. *s.* Ditto, from a child, injected red and exceedingly vascular.

No. 28. *s.* Ditto, from a very young Fœtus, still more vascular, injected red; both inverted and cut open.

No. 29. *s.* The Gall Bladder, Ductus Cysticus, Ductus Hepaticus, and Ductus Communis Choledochus, with the beginning of the Duodenum all slit open; to show the internal surface of the first, which is honeycombed and fasciculated; a bit of black stick is introduced into the opening of the Gall Duct into the intestine.

No. 32. *s.* A portion of the Duodenum and Gall Duct in the Elephant, to show its size and entrance into the intestine; this animal has no Gall bladder.

No. 33. *s.* A portion of the Liver of a child at birth, with the Gall Duct and beginning of the Duodenum, injected red; to show that there was no Gall bladder, but that the human animal here resembled the quadruped.

Nos. 36. 37. 38. *s.* Pieces of Liver from a highly jaundiced subject; there is a granulated appearance every where resembling the Tubercles of the Lungs; according to some anatomists these are scirrhous enlarged Follicles.

No. 36. *a.* Hydatids (not described: uterine?)

No. 38. *a. t.* A portion of Mr. K——'s Liver, who died dropsical; it cut like cartilage, was white and tuberculated; the absorbents on its surface very large, one of these almost the size of a goose quill, is seen full of mercury. He drank hard, and had been very strong, was also a few months before in full vigour as a man.

Nos. 39. 42. *s.* Hydatids from the human Liver, the size of gooseberries or currants.

No. 43. *s.* Ditto, the size of a peach.

No. 45. *a.* A Cyst laid open, containing Hydatids and a brown membrane, probably coagulated lymph.

No. 45. *s.* A portion of Liver cut open to show a Cyst containing a membrane probably the coagulable lymph of the blood, as in inflammation of the Pleura, &c.

No. 46. *s.* Ditto, ditto, shows two such cysts about the size of peaches.

No. 47. *s.* Ditto, ditto, shows a cyst with the same kind of lining as 45, of the size of a child's head.

Nos. 47. *a.* 47. *b.* 47. *c.* Cysts from the Liver of a patient who died in the London Hospital: they were full of scrophulous matter, the last contained purer pus, and there is a deposition of earthy matter on the sides of the first and second; ulceration was also taking place in the last one.

Nos. 47. *d.* 47. *e.* 47. *f.* Portions of Diaphragm from the same patient, encrusted with coagulable lymph to a great degree; 47. *f.* has also a portion of the Liver, covered with the same crust.

No. 47. *g. s.* A portion of a gentlewoman's Gall Bladder, who died in Portman square; the gall stones ulcerated their way through the Bladder, and the bile was poured out into the abdomen.

No. 47. *h.* A Gall Bladder ulcerated at the posterior part, by which the Bile was effused into the neighbouring part of the abdomen: Ductus Cysticus is entirely obliterated and Choledochus of a smaller size than usual; there is also a small ulceration in the stomach near pylorus: dissecting room.

No. 48. *s.* A quantity of the newly formed membrane above mentioned, from a Cyst in the Liver; that part of the Gall Bladder which adheres to the Liver is seen on the posterior part of this membrane, to show that the Cyst was near that part.

No. 49. *s.* A Gall Stone about the size of a common Hen's egg, filling up almost the whole cavity of the Gall Bladder, one-half of which is removed to show this; the Ductus Cysticus is kept open by a quill.

No. 49. *a.* A Gall Stone the size of a hazel nut, seen in the Ductus Communis Choledochus, about half an inch from its opening into Duodenum; Ductus Hepaticus and Cysticus are, as well as Choledochus, very much distended.

No. 50. One thousand and seventy-four Gall Stones of different sizes, forming thirteen rows of about ten inches long each, spread on white paper; the smallest form three circular planes at the bottom; they are gummed to the paper, and were taken from a patient who died of a flooding, and had no jaundice.

No. 50. *a.* A very considerable number of black Gall Stones from one Gall Bladder.

No. 51. *s.* The Gall Bladder thickened, and contracted close upon a stone of the size of a cherry, and of a brown colour; one side is removed to show this.

No. 51. *a. s.* A Gall Bladder exceedingly contracted with the Ductus Cysticus, Hepaticus, and Choledochus, somewhat enlarged: a portion of Duodenum is preserved.

No. 52. *a.* A Gall Bladder laid open, showing a white Gall Stone in the beginning of Ductus Cysticus, and the muscular fibres uncommonly strong and fasciculated

No. 58. *s.* A Gall Stone in the Ductus Communis Choledochus, which is slit open to show that.

Nos. 59. 60. 61. 62. 63. 64. 65. *s.* Gall Bladders more or less filled with Gall stones, some of them enlarged in size, others contracted, with the Ductus Cysticus, Ductus Hepaticus and Ductus Communis Choledochus, considerably distended beyond their common diameter.

SPLEEN. V.

No. 1. *s.* The Spleen and pancreas of a Child, the Artery injected red, the Vein yellow: it shows the shape of the spleen, which resembles the segment of an orange, viz: has one convex side, and two nearly flat or concave, and three sharp edges; the blood vessels enter on the middle edge, which in the body is turned upwards and forwards; of the other two edges one is upwards, and the other

down, speaking of the body supine: the vessels running to the spleen, lie in a groove in the upper edge of the pancreas.

No. 2. *s.* The Spleen of a Foetus minutely injected red, to show that it is exceedingly vascular. In No. 5, of the Glands the spleen was said to have pencils on its external surface; with a deeper magnifier the arterial branches seem more like the cryptæ of the kidney.

No. 3. The Spleen of a little Child, injected red, and macerated in water, shows its floating vessels very minute in the style of Ruysch.

No. 3. *a.* Ditto.

No. 4. *s.* The Spleen of an Adult, (rather small,) the arteries injected red and the Capsula removed: it is macerated in water, and shows the floating extremities of the arteries; these seem very like cryptæ.

No. 4. *a.* A Spleen from a Child, with its vessels minutely injected and unravelled.

No. 6. *s.* The Spleen of a Calf, the capsula removed off one side; it has been macerated in water, and shows vast numbers of floating vessels.

No. 7. *s.* Ditto, ditto, injected by the artery red, and treated as No. 6; shows ditto.

No. 8. *s.* Ditto, ditto, ditto, exceedingly beautiful, the branches of the artery are corroded: shews round bodies of the size of pin heads, which from their resemblance to the cryptæ of the kidney, as well as from the appearance of some of them, are probably convoluted arteries; the reticular substance commonly supposed vein, appears white, and from the cut extremities is evidently not hollow.

No. 10. *t.* The Spleen of the Antelope inflated from the veins, and after drying cut open to show that the trunk of the vein opens into cells, like the Trachea in the Lungs.

No. 12. *s.* The Spleen of a Turtle, the veins injected yellow, the arteries red; the latter much smaller and fewer than the former.

No. 13. *s.* Halves of Ditto, injected red, both by arteries and veins; the injection has got amongst the reticular substance, and makes it appear one uniform mass of injection.

No. 13. *a.* A Section of the Turtle's Spleen.

No. 15. *s.* A large scirrhus human Spleen, six or seven times the natural size.

No. 15. *a. s.* A Spleen small, its coats Cartilaginous and Scirrhus, from an old man.

No. 16. *s.* A portion of Spleen from a consumptive child, in which there is the same appearance of Tubercles as in the Lungs.

No. 17. *s.* Ditto from an adult, injected red, in which the Tubercles are still larger; they seem to be scrophulous suppurations of the cellular part.

No. 18. *s.* A Spleen very much enlarged, and of a solid texture, with its vein tortuous and injected yellow.

PANCREAS. W.

No. 1. *s.* The Pancreas from the adult human subject, with that portion of the Duodenum where its Duct enters; it is about nine inches long, and $1\frac{1}{4}$ broad, is conglomerated or clustered externally: near the Duodenum it becomes small as if a thread had been tied round it there, and then enlarges again.

No. 2. *s.* Ditto without Duodenum; the cellular membrane connecting its lobules, is a little destroyed by maceration to show conglomeration more perfectly.

No. 3. *a. s.* Ditto, injected red, the duct dissected through its length.

No. 3. *a. s.* A Pancreas injected red, and the duct dissected through its whole length.

No. 5. *t.* The lower portion of Pancreas injected with mercury; on the back part near the lower extremity, the extreme branches appear to end in follicles.

No. 7. *t.* Ditto, in the Cat, whose pancreatic duct about the middle, notwithstanding the smallness of the pancreas is nearly as large as the human.

No. 8. *s.* The Pancreatic Duct of the Elephant, slit open on each side; the lower extremity of each half is sewed together; it makes a tube as large as the cava inferior of a man: the fluid it contained in the dead animal was not unlike bile and gelatinous.

No. 9. *s.* The Pancreas, portion of the Stomach and Duodenum, and Gall Bladder of a Cod injected red; the ducts of the pancreas in this universally loose, unconnected by Parenchyma, and the arteries run on their outsides; they make Culs de Sacs at their extremities, which favours the doctrine of Follicles; they communicate with one another in different places so as to give the idea of conglomerated gland, and they open by five different orifices into Duodenum; they contained a white glairy fluid like that lining the whole surface of the intestine: the Gall Duct which opens along with these, has a double bristle in it, the others having single ones.

No. 10. *s.* Stony concretions in the route of the duct of the Pancreas, resembling those found in salivary glands; the Gall Duct is seen opening with the pancreatic duct into the duodenum; many parts of the concretion resemble a corroded injection of the duct; a number of worms are seen on the outside of the ducts, a circumstance very common in fish.

KIDNEY. X.

No. 1. *s.* The right human Kidney; the ureter and pelvis distended with injection, and one side of the kidney after this removed: it shows the shape of the kidney, shows the thickness of its flesh, and that it is hollow within.

No. 2. *s.* Ditto, injected red; the ureter and pelvis were injected with spirits till it became hard, and then one side was removed, to show the same thing as the former.

No. 3. *s.* Ditto, from a young subject, treated Ditto; one half removed to look at the breadth of its cavity, and the nipples projecting into it.

No. 4. *s.* The Kidney of a Tiger, (one half;) the veins injected red, and ramifying most elegantly on the outer surface of the kidney: the arteries are injected white.

No. 5. *s.* The Kidney from a Lion, (whole,) showing ditto.

No. 6. *t.* Ditto, (whole) from the Cat; the veins injected with mercury; it was steeped in spirit of wine for some days, and is now dry; shows the same as the Tiger's.

No. 7. *s.* Ditto, from ditto, injected red, shows ditto.

No. 8. *t.* The Kidney of some animal of the same class with the Cat, &c., injected red by the veins, and then dried; it is much shrunk, but must have been a very fine injection: shows ditto.

No. 9. *s.* One half of a Kidney injected by different branches of the artery, with black, red and white, to show that these do not anastomose as in other parts of the body: pelvis injected yellow.

No. 10. *s.* The other half ditto.

No. 11. *s.* One half of the Lion's Kidney injected red; has but one nipple as it were, the tubular portion being uniform and undivided: shows the most simple kidney.

No. 12. *s.* Section through the middle lengthways of the Wolf's Kidney; the cortical substance injected red; the tubular not: shows ditto.

No. 13. *s.* One half Kidney, ditto, ditto, ditto, animal forgot.

No. 14. *s.* Ditto, ditto, ditto, injected black, ditto.

No. 15. Ditto, Lamb's Kidney foetal state; shows simple kidney very well.

No. 16. *s.* Ditto, of the Bear, injected red; to show that it is lobulated or conglomerated, every single lobule having a nipple of its own, and an infundibulum or branch of the pelvis distinct from the rest.

No. 17. *s.* Four of these lobules separated a little with their distinct nipples.

No. 18. *s.* The Kidney of the Porpoise, the ureter injected green; it consists of a prodigious number of very small lobules; the connecting cellular membrane is destroyed, so that it looks like a bunch of grapes: to show the same things as the Bear's.

No. 20. *s.* The Foetal human Kidney, lobulated like the Bear's, though it afterwards becomes simple like the Lion's; the arteries, injected red, the veins black.

No. 20. *s.* Ditto, injected red, shows ditto.

No. 21. *s.* Ditto, ditto, one half; to show the nipples belonging to each lobule.

No. 21. *a. s.* Ditto, showing very curved projecting nipples.

No. 22. *s.* The human Kidney boiled and divided into two, to show that its flesh is of two different kinds; a dark brown in the middle, and a whitish on each side; the brown is the tubular, and the white the cortical part.

No. 23. *s.* The other half ditto.

No. 24. *s.* One half of a Kidney injected with coarse red injection; from its being coarse, the injection has only reached the

cortical part, which is therefore red, and the tubular uninjected part here appears white.

No. 26. *s.* A portion of injected Kidney, to show the vascularity of the cortical part.

No. 27. *s.* Ditto, arteries only injected.

No. 28. *t.* Ditto, spread on black paper, dried.

No. 29. *s.* A thin slice from the external surface Ditto, the arteries red, the veins white; the termination of the artery is seen to be a convolution on itself, and not a bag as imagined by Malpighi, &c.

No. 30. *s.* Ditto, ditto, arteries and veins both red, shows ditto; these two last spread on blue paper.

No. 31. *s.* One half adult human Kidney injected red; shows ditto, but chiefly the nipples or Mamillæ of the kidney, mouth-ing or pouting into its cavity; the nipples are the pyramidal tops of the tubular portion, and are perforated by a number of holes, the terminations of the excretory ducts of the kidney.

No. 32. *s.* Ditto, ditto, to show the Mamillæ.

No. 33. *s.* A portion of human Kidney uninjected, to show the radiation of mamillæ as well as their points.

No. 34. *s.* One half of Foetal Kidney injected red; two mamillæ are seen projecting into the cavity of the pelvis.

No. 36. *s.* One half of Foetal Kidney injected red, to show the mamillæ.

No. 37. *s.* A Mamilla from an adult, with its cortical substance injected red; ditto.

No. 38. *a.* One half of the human Kidney injected red; it is from a young subject; and the mamillæ are more numerous, having not yet united with the neighbouring ones, and project much.

No. 38. *b.* Ditto, from a younger subject, and injected more minutely.

No. 39. *s.* One half of a very large human Kidney; the cortical substance finely injected red; the tubular substance and mamillæ very white; about eight mamillæ appear in this section.

No. 40. *s.* Ditto, from a young subject, shows ditto.

No. 41. *s.* Ditto, a single mamilla, with its cortical surrounding substance not injected; rest injected red.

No. 42. *s.* Ditto, section of cortical substance injected.

No. 44. *s.* Two mamillæ uniting from opposite sides.

No. 44. *a. s.* A section of the Wolf's Kidney, No. 12, where the tubular portion though united and simple in the middle of the kidney, yet on each side is separated into seven mamillæ.

No. 45. *s.* One half of the adult human Kidney, beautifully injected red; the injection, which was size coloured with vermilion, passed into the veins, passed also through the tubuli uriniferi into the pelvis, having performed the round of the secretion; the tubuli are easily distinguished from the arteries, which towards the point of the nipple become smaller, whereas the former by uniting with each other become larger; in this injection the cryptæ appear most evidently convoluted artery.

No. 46. *s.* Ditto, of the other side; the veins only were injected and with the same success; nothing can be redder than this preparation, except at the points of the mamillæ, where the injection found so easy an outlet as to leave the tubuli at their orifices in many places.

No. 47. *s.* Ditto; one half of this Kidney only had been injected red, and to great minuteness; the tubuli are very full on one nipple, and crossed by a bristle.

No. 48. *s.* The other part of ditto, shows ditto.

No. 50. *s.* One half of a human Kidney injected by the arteries red; the tubuli also filled from them: was steeped in spirits of wine first.

No. 50. *s.* Other half Ditto, (Mr. F.)

No. 51. *s.* One half of an adult human Kidney; some red injection had been thrown into the pelvis by the ureter, and is seen passing along the tubuli uriniferi; on each side mamillæ to the number of eight or nine.

No. 52. *s.* A small mamilla, injected in same manner; exceedingly beautiful.

Nos. 53. 54. 55. *s.* Ditto, ditto, ditto.

No. 56. *s.* A slice from a mamilla; the tubuli uriniferi injected, both from the artery which was red, and the vein which was white.

No. 57. *t.* Some Tubuli injected on the point of a mamilla, with waxy yellow injection thrown in by the ureter; the same tubuli above the point of the nipple, are injected white from the veins; the arteries are red.

No. 57. *a. d.* A thin slice directly through the middle of the Kidney; the arteries are injected with spirit varnish coloured with vermilion, the veins with white size, and the pelvis and beginning of the ureter with yellow wax: it gives a good idea of kidney generally: the pelvis is almost entire; in some places the cryptæ are seen hanging like berries on a bush from the arteries; the tubuli uriniferi are seen the whole length of the mamillæ, injected white from the veins; the varnish injection had not, unless at some particular parts, filled the cryptæ, which were filled by the white size and the tubuli from them: it seems however to be the cryptæ on the surface of the kidney, which were filled in this way, as they do not appear through the substance.

No. 58. *s.* One of the mamillæ with its cortical substance from a Horse's Kidney; the tubuli uriniferi are injected red from the pelvis to the very surface of the kidney, exceedingly beautiful and distinct; they can even be seen uniting with one another by the naked eye.

No. 59. *s.* The Kidney of the Horse opened on the side of the pelvis, after this had been injected with red size to show ditto.

No. 60. *s.* One half of the Ass's Kidney, beautifully injected from the pelvis to the very surface of the kidney, where also some veins are filled.

No. 60. *a. s.* One half of an Ass's Kidney; the arteries injected red, the tubuli uriniferi blue from the pelvis, almost their whole length, in some places to the very outer surface of the kidney, and appear in one or two instances to be emerging from the crypta itself.

No. 60. *b. s.* A section, (one half,) of the Leopard's Kidney, arteries, veins and ureter injected red; some of the tubuli are seen injected from the ureter.

No. 61. *s.* A portion of a small Elephant's Kidney; the tubuli injected by the pelvis for a considerable way along the mamillæ, do not appear so large as either the horse's or ass's.

No. 62. *s.* The half of a Cat's Kidney injected red from the artery; the tubular portion which also had its arteries injected, is almost as red as the cortical.

No. 63. *s.* Ditto, from the Monkey; some tubuli on the lower end are very well filled with red injection.

No. 64. *t.* A slice of the Kidney, No. 46, steeped in spirit of wine, and now in Turpentine; every part is as red as scarlet, tubular as well as cortical.

No. 65. *s.* The Kidney and Renal Capsula of a Child at birth; both injected red; the renal capsula is more than half the bulk of the kidney, sits like a helmet on the upper end of it, and appears to be exceedingly vascular.

No. 66. *s.* Ditto, ditto, still more minutely injected.

No. 66. *a.* Ditto, not so minutely injected.

No. 67. *s.* Ditto, from a Fœtus at six months; the renal capsula now larger in proportion to the kidney than at nine months.

No. 68. *s.* Ditto, from a child at birth, injected red; one half from top to bottom; the internal substance of renal capsula exceedingly red.

No. 69. *s.* Other half of ditto, shows ditto.

No. 70. *s.* The renal capsula from a child at birth, divided almost into two halves transversely; it seems like the kidney to consist of two substances, an outer brown and an inner gray: there is no cavity seen.

No. 70. *a.* 70. *b.* Renal Capsulæ from a Monster without brain, exceedingly small compared with their kidneys; on one side there appears to be fat only in the place of renal capsula.

No. 70. *c.* Ditto from ditto; small but not wanting.

No. 71. *s.* A portion of adult renal capsula injected red; the vessels seem to ramify through it like the veins on the outside of the Tiger's kidney.

No. 72. *s.* One half of the renal capsula of the Queen's Elephant, not unlike the human kidney as to the internal appearance, but larger and longer, and externally trifid; it evidently consists of two substances; the outer is brown, and extends inwards about half an inch all round; the inner is gray in some places; the brown shoots across to the other side and blends with it.

Nos. 73. 74. *s.* Two transverse sections Ditto, shows ditto; shows also a mixture of gray streaks even amid the brown colour on the border.

No. 73. *a.* A similar section to No. 73.

No. 73. *b.* Ditto.

No. 75. *s.* An adult human Kidney; one side nearly removed to show two pelves and two ureters injected green.

No. 75. *a. s.* Ditto, with two pelves and ureters injected red.

No. 79. *s.* The lower part of the trunk of a Child at birth opened to show what is termed the Horse shoe kidney—being a kind of conglomeration of four kidneys in form of a crescent, the two horns of which are turned up, and the middle rests on the lumbar vertebræ, just over the edge of the pelvis.

No. 80. *a. s.* The pelvis of a Kidney with little more surrounding flesh than merely covers it; as a specimen of wasting kidney.

No. 81. *a.* A large scirrhus Kidney (one half); this must have been six or seven times the size of the natural kidney.

No. 82. *s.* A Kidney cut open lengthways; it shows incipient small hydatids on the outside, and a very large one on the inside; the shape however of the kidney and bulk are not much altered.

No. 83. *s.* A Kidney considerably shrunk, tuberculated externally and a hydatid as large as a peach on its outside: the pelvis also looks enlarged.

No. 84. *a. s.* The right Kidney, having its artery, vein and excretory duct injected. The pelvis of the ureter is of an uncommonly large size, and one half of the kidney nearly is converted into a Hydatid.

No. 84. *b.* A Kidney beginning to form itself universally into Hydatids; one is of considerable size, the others very small.

No. 84. *s.* A very large Kidney; more than a fourth part of one end is converted into a bag, which could contain six ounces of fluid.

No. 85. *s.* 86. *s.* The one is the half of the right Kidney, the other of the left; they were enlarged to three or four times their usual size, and their whole substance seems to be converted into hydatids of various sizes, from a currant to a peach: an attempt was made towards injecting them, but they were too tender to bear it; (from Mr. G. Hawkin's, St. George's Hospital.)

No. 87. *s.* The Kidneys of Mr. Hume, Navy Surgeon, who died of the Gout in his Stomach, had sometimes suppression of urine, and was supposed to have the stone in his bladder, which was imagined to be cured for two years before he died, by eating honey. The kidneys are transformed into a larger mass of Hydatids than was ever seen before, some of them as large as one's fist, many of them as large as an orange, others like plums, &c.; a little portion of Cortical Substance remains unchanged and in-

jected red, but there is even here something like disposition to become Hydatid: he made water freely enough: the Aorta and Cava for some way above and below the Emulgents, lie on the upper part of the preparation, the kidneys being in their place as nearly as possible with respect to the body supine. There was a stone of a hemispherical shape, and half an inch in diameter in the pelvis of one kidney.

No. 87. *a.* A Kidney almost entirely converted into Hydatids, and a large stone filling up the pelvis.

No. 88. *s.* One half of the right and of the left Kidney, from a man who died in the Westminster Hospital; these kidneys are as much diseased as any of the former, but the hydatids are smaller, and more nearly of a size; on the outside they looked like a bunch of grapes nearly.

No. 90. *s.* Two Kidneys, their Ureters the whole length, and a portion of the bladder; the kidneys are tuberculated, one enlarged the other shrunk, the ureter and pelvis of both are much enlarged, particularly that of the shrunk kidney; the enlarged kidney is opened on the convex side, to look in on the enlarging infundibula, which are encroaching on the flesh of the kidney, and twice or three times their natural size.

No. 91. *s.* A Kidney, to show the progress of the last disease; the whole kidney seems degenerated into pelvis; the branches of which are filled with scrophulous pus—a substance thick and cheesy, or like lime just ready to be used in building: this matter is here removed.

No. 92. *s.* A similar preparation in which part of the above mentioned matter is left; the disease is nearly in the same stage as the former.

No. 92. *a.* A similar specimen of diseased Kidney.

No. 92. *b.* A Section of a Kidney where there has been supuration in several places.

No. 93. *s.* Ditto; in both these the Ureters themselves were plugged up with the same matter.

No. 93. *a. s.* A Kidney somewhat shrunk, internally divided into two large cells, which were full of scrophulous matter, and resembled the cheesy matter of the suppurated scrophulous absorbent glands; 92 and 93 are of the same kind.

No. 93. *b. s.* 93. *c. s.* 93. *d. s.* Same process going on in the kidney of both sides; they are not shrunk however; the disease is going from the inside outward, (93. *d.*) and the cells are lined with a crust of coagulable lymph as the liver cysts.

No. 94. *s.* A portion of Kidney, where the Tubuli Uriniferi contain calcareous earth, presumed to be the beginning of stone in the kidney.

No. 96. *s.* Two halves of a Kidney, where calcareous earth is seen in many places blocking up the extremities of the tubuli uriniferi.

No. 97. *a.* A portion of a kidney with a stone in one of the infundibula.

No. 97. *b.* A Kidney laid open and hanging by the pelvis, to show vast numbers of little yellow stones, small as pin heads, formed about the points of the mamillæ; many of these had got down into the bladder; they were probably passing off by urine, but might lay the basis of large stone in the bladder.

No. 98. *s.* One half of a Kidney formed into bags, and containing two stones, one of the size of the end of one's finger, the other somewhat larger, both black, formed among the tubuli.

No. 99. *s.* Ditto, a very large black stone in the pelvis, almost filling it entirely.

No. 100. *s.* Ditto, injected red; the enlarged pelvis, with all its branches, plugged up with a stone, in some parts black, in others white, imitating a corroded injection of the pelvis with wax.

No. 101. *s.* Ditto, from the other side, in the same woman, (old, in the dissecting room); exactly the same appearance, but the stone rather larger and whiter.

No. 101. *a.* A very large Kidney, quite filled with large stones and pus; the cavities containing both laid open.

No. 102. *s.* Ditto, one end of the Kidney only, filled with a stone of a brown and black colour.

No. 103. *s.* Ditto, one end or half of the pelvis, much enlarged; plugged with a white stone, ramifying, as the infundibula.

No. 104. *s.* Ditto, a large Stone in the body of the pelvis, black and white.

No. 105. *s.* A Kidney, the pelvis much enlarged; the kidney itself inclining to form hydatids; the pelvis is opened at two places to show a large stone in its cavity, black and white.

No. 106. *s.* Ditto, the arteries injected red, the veins with a portion of the cava yellow; some lymphatics coming out of the kidney are also injected; the pelvis is very much enlarged, and projects so as to seem to leave the kidney; it is full of small rugged stones, of the size of small pins, and may contain perhaps 500 such stones. These stones are now removed to show the lymphatics more distinctly.

No. 107. *s.* A portion of Kidney, with the pelvis and ureter laid open, except at one place, where it contains a stone of the size of an almond; the opening of the ureter into the bladder is also preserved.

No. 107. *a.* 107. *b.* The Kidneys of Mr. Lumesden, who died of suppression of urine; one kidney was quite destroyed with a ragged stone, nearly the size of a walnut; the other was very pulpy, and had a stone in the ureter plugging it up: there was water in the bladder after death, and the air let loose forced the urine through the urethra.

No. 108. *s.* The Kidneys of a Frog highly injected red (Falconer's sale); seem to be of the conglomerate kind.

No. 111. *s.* A Kidney from an old Woman, (dissecting room) either wasted, or which was never larger than Renal Capsula itself, which stands over it; one half is attached to blue paper to look on the outside surface, which is granulated from vast

numbers of little brown vesicles; the emulgent artery is seen rising from the aorta not one fifth of the diameter of the opposite one; ureter internally is seen becoming vasicular or forming hydatids.

No. 111. *a. s.* A Kidney wasted to a fifth of its natural size, and forming chiefly a bag of serophulous matter.

No. 112. *s.* One half of a Kidney, from the dissecting room; the pelvis is enlarged from the process of ulceration beginning on the points of the nipples, and going on towards the outer surface of kidney.

No. 113. *s.* Half the Kidney of the other side, where the ulcerative process has gone on still farther, and reached the outer surface nearly.

No. 114. *s.* A Kidney opened, which has become little more than a membranous bag, and was internally full of pus.

No. 115. *s.* A small portion of Kidney, apparently with small ulcerations in different parts of it.

No. 120. *s.* The lower portion of the trunk of a Child, with abdomen laid open; all the intestines are removed in order that you may look down upon the kidneys, which join each other so as to form a single one, filling up the lower part of the belly, somewhat of a crescent shape, and approaching to what has been called the horse shoe kidney.

No. 121,)
 122, } not described in Hunterian MSS.
 123, }

TESTICLE. Y.

No. 1. *s.* The human Testicle with the Spermatic Cord; the tunica vaginalis was distended with spirits, and then a portion cut out on one side to show the enclosed Testicle; a piece of wax pushed upwards shows how far the coat extends upward, which is about one inch and a half above the testicle.

No. 2. *s.* Ditto; the tunica vaginalis entirely removed shows Epididymis and Vas deferens a little dissected.

No. 3. *t.* Ditto; the artery injected red, the vein yellow, and the vas deferens with mercury.

No. 5. *a. t.* A Testicle, with the artery and veins injected: tunica vaginalis spread open; dried.

No. 7. *t.* A portion of the Spermatic Artery of a Bull, almost as large in diameter as a goose quill, and convoluted in such a way, that were this piece, which is not more than three inches in length, unravelled, it would measure ten or twelve feet.

No. 11. *s.* The human Testicle, with a portion of the cord prepared as No. 1, to show testicle inclosed, and epididymis more particularly.

No. 12. *s.* Both Ditto, tunica vaginalis removed, and the cord a little dissected. The testicles are hung nearly in *situ naturali*, that is obliquely up and down, the larger end forwards and upwards, the smaller in the opposite directions, the one side outwards, and the other inwards; Epididymis begins on the lower smaller end, mounts on the outside keeping the upper edge, and becomes larger as it goes on, till at last it terminates in the anterior and upper end; it appears through its whole extent separated from the body of the testicle by a small groove.

No. 13. *s.* Epididymis separated from the body of the Testicle, and injected with quicksilver; likewise a little unravelled to distinguish it from the testicle more particularly; it only adheres to the latter at the end where the tubes go into its body.

No. 14. *t.* The Vas deferens, Epididymis, and a portion of Rete Testis, injected with quicksilver; the body of the testicle is removed to give an idea of epididymis more particularly.

No. 15. *t.* The Testicle of a Goat; the veins injected with quicksilver, as is the vas deferens; it shows that the principal veins ramify on the outside of albuginea, and then dip into the body of the testis, and that on the cord they form a crowded network or plexus: formerly immersed in spirit of wine.

No. 16. *s.* The body of the human Testicle injected red; the albuginea turned up at one place to give an idea of albuginea.

No. 17. *s.* A middle section of Albuginea: the body of the testicle being removed to show what has been supposed membranous septa between the different portions of tubuli, but which are certainly veins passing from one side of the albuginea to the other.

No. 18. *s.* The body of the Testicle injected red, and cut nearly into two, to show that it is very vascular.

No. 18. *a. s.* The Adult human Testicle; the arteries injected red, the veins black; tunica albuginea slit open and folded back, some of the tubuli also unravelled: the veins internally, as well as externally, are larger than the arteries, but neither one nor other can be traced into a tube; the veins, like those on the sclerotica of the eye, creep on the thick coat of the gland, before they enter its substance.

No. 19. *s.* Ditto, one half removed, shows ditto; shows also some of these veins believed bands, filled with red injection from the artery. The tubular convoluted substance is also seen injected.

No. 20. *s.* The veins Ditto; injected green.

No. 21. *s.* A very fine portion of Tubular Substance, injected red; the vermilion has, from adulteration, become black in the injection.

No. 22. *s.* The Body of the Testicle, the albuginea turned up all round. The tubuli exceedingly convoluted, are seen in separate parcels.

No. 23. *s.* Ditto, ditto; the tubuli a little unravelled by maceration in water.

No. 24. *s.* Ditto, injected red and unravelled.

No. 25. *s.* Ditto, a little more unravelled.

No. 26. *s.* Ditto, very much unravelled; some tubuli are drawn out to four inches in length, and are seen singly, though still convoluted, not much larger in size than a human hair.

No. 27. *s.* Ditto, ditto, ditto.

No. 28. *t.* The most perfect Injection of the Tubuli, Epididymis, and Vas deferens, with quicksilver, which has ever been seen; the Epididymis appears to be formed by fifteen tubes coming out of the testicle, and gradually uniting with each other. Though the testicle is heavy from the quantity of mercury, and though the tubuli are pretty generally injected, others appear empty; in size the distended tubuli now appear like small silver veins: it had been in spirit of wine; albuginea and vas deferens dissected.

No. 29. *b. s.* An exceedingly beautiful and complete injection of Tubuli, Testis, Epididymis, and Vas deferens (injected 1778); there is a small quantity of acid in the spirit to make the mercury appear more bright, the spirit otherwise renders the tubes blackish: some of the tubes are drawn out one inch and a half: epididymis and vas deferens are loose and disposed in a waving line over the testis; a few of the tubes are unfilled, but these taken together, are not above one-tenth of the whole: and what was very remarkable, one side of albuginea had been removed before the mercury had entered the testis, so that the injector saw the whole tubes filled in about a quarter of an hour.

No. 30. *s.* The Testicle with the Cord; the Epididymis is injected, and the rete testis, which is brought into view by removing one side of the testicle.

No. 31. *t.* The Tubuli, Rete, Epididymis, and Vas deferens, injected with mercury. The testicle was a small one, and the tubuli appear few but unravelled and hanging down four or five inches, to show that the preparations 26 and 27, were really those of unravelled tubuli; spread on blue paper; changed in 1778, and length of tubes now less, as portions broke off in removing.

No. 32. *t.* The same preparation as No. 28; dried: exceedingly beautiful.

No. 32. *t.* Ditto, the Tubuli only beginning to be filled; this preparation shows the rete testis and vascula recta well; the vascula recta are short thick vessels, in which the tubuli terminate

first; these again form long parallel tubes running in the length of the testicle, and communicating with each other; at length the upper anterior end of the testicle gives off the vasa efferentia to the number of eight, ten, or sometimes fifteen or sixteen; these again form Epididymis; a few only of these last are injected: spread on blue paper.

No. 33. *a. t.* Ditto, shows ditto.

No. 34. *t.* Ditto, shows ditto.

No. 35. *t.* Ditto, spread on red paper; the Epididymis very much unravelled: a very fine preparation.

No. 36. *t.* Ditto, on blue paper; shows the Vasa efferentia to the number of seven, unravelled and spread out, forming Epididymis, and communicating with each other.

No. 38. *t.* Ditto; the Vasa efferentia to the number of fourteen or sixteen, partly separated.

No. 39. *s.* Epididymis so unravelled, after injection with mercury, as to appear in several places a single tube.

No. 40. *t.* Epididymis very much unravelled, appearing a single tube convoluted; one of the vascula aberrantia of Haller is seen terminating near the beginning of Vas deferens: a fine preparation on blue paper.

Nos. 41. *s.* 42. *s.* The Testicles of the Paca: the Vas deferens and part of Epididymis filled with mercury; the beginning of Epididymis is seen lying on one case in the folding of the cremaster muscle; in the other the cremaster, which embraced the end of the Epididymis, is spread open.

No. 43. *s.* One half of the Testicle of the Elephant, not much more than twice the size of the Goat's Testicle, No. 15. The Tubuli are of a brown colour and very finely convoluted: about the same size as the human,

No. 45. *s.* The Testicle of the Porpoise, twice as large as that of the Elephant; the Albuginea removed on one side to show the Tubuli about the same size as the human: the Epididymis is a little unravelled and convoluted.

No. 46. *t.* The Epididymis and Rete Testis injected with mercury, and dried; it shows a Vasculum aberrans ending in a blind pouch: it comes from near vas deferens.

No. 47. *t.* Ditto, on blue paper, where the Vasculum aberrans runs out for an inch or two, and then returns again: comes off near vas deferens.

No. 47. *a. t.* The Epididymis on blue paper, where the vasculum aberrans runs out for an inch or two, and then returns again.

No. 49. *t.* Ditto, ditto: shows ditto from the same place.

No. 50. *t.* Ditto, from the same place; ran clinging (though now separated,) to the Vas deferens, and ended in a blind pouch: the Epididymis very fine.

No. 51. *s.* Rete Testis, Vasa efferentia, and Epididymis filled with mercury, spread on blue paper; a vasculum aberrans is seen coming out of the Rete Testis like a vas deferens, and ending in a blind pouch.

No. 52. *s.* A Vasculum aberrans from the same place as No. 50.

Descent of the Testicle. (53—60 a.)

No. 53. *s.* A Fœtus between four and five months, the head removed, the anterior parietes of the thorax and abdomen also removed. The Testes are seen on the sides of the pelvis about the size of very small peas.

No. 53. *a. s.* The lower half of the Trunk of a Fœtus, considerably farther advanced, but the testicles are still within the cavity of the abdomen.

No. 54. *s.* Ditto at seven months; all above the kidneys removed; the lower extremities from the middle of the thigh downwards, also removed. The Testicles are seen in contact with the lower end of the kidneys; a pyramidal body is also seen in contact with the lower end of the testicle; its basis touches the testicle, and its apex points towards the groin.

No. 55. *s.* Ditto at seven months, but a smaller child. The testicles are seen on the sides of the pelvis, having the bladder, which is here opened, lying between them: the pyramidal body (the gubernaculum of Mr. Hunter,) is seen much larger than the testis—itsself pointing towards the groin; a bristle passes under vas deferens going into the pelvis; rectum distended, seen behind bladder; the arteries are injected red.

No. 56. *s.* Ditto: here the intestines are all removed except the rectum, which is seen passing into the pelvis behind the bladder; the kidneys and renal capsules are also seen; the testicles are below the kidneys on each side of the rectum, (distended;) the gubernacula are twice the size of the testicles, and point towards the groin.

No. 56. *a. s.* The Pelvis and upper part of the Thighs, with posterior paries of the abdomen in a child about seven months: one testicle is down in the scrotum, the other just under the kidney; would probably have continued there through life, (injected red.)

No. 58. *s.* From a Fœtus at eight months; the anterior parietes of Abdomen and Pelvis seen from behind, the posterior with the contents of abdomen, except the bladder and rectum, being removed; bristles are introduced through the opening of the tunica vaginalis from the abdomen, and appear on the other side of the ring of the oblique: the tunica vaginalis is from this laid open to show the cord within it, and the testicle with gubernaculum now got to the bottom of the scrotum; on the left side, tunica vaginalis is dissected from the ring to the bottom of the scrotum, but not opened; the penis is seen between vaginalis of each side.

No. 59. *s.* The Bladder, Umbilical Arteries, and Urachus like ligament lying between them, the tunica vaginalis with the testicles, taken out of the body of a Fœtus at eight months, but in situ nearly; the bladder is cut open before, the tunica vaginalis at the bottom, to look upon the testicles now down; the upper part of vaginalis seen yet open by means of bristles passing through.

No. 59. *a. s.* The Testicles with their gubernacula in a Fœtal Dog, just in the passage of descent as in man.

No. 59. *b. s.* Same preparation as 59. *a.* but in a Lamb, and injected from the Umbilical vein.

No. 59. *c. s.* Ditto, from the Calf.

No. 60. *s.* A similar preparation to No. 58, from a Child at birth: it hangs by the Umbilical cord; the bladder is distended with spirits; on each side of the bladder is seen a little cavity leading to the Groin, and a small cicatrix showing where the Testicles now down had passed; there is now no passage that way; the Tunica Vaginalis beyond the ring is opened all the way to show the cord and testicles at the bottom; on one end of the testicle is yet seen Gubernaculum.

No. 60. *a. s.* The same kind of preparation as No. 60. The Testicles have just come down, and the openings under the rings of the abdominal muscles are of the natural size, and will easily admit a goose quill. Tunica Vaginalis is also slit open to show testicle at the bottom, an inch or two of umbilical cord hangs over behind, and bristles point out the continuation of the ligamentous human urachus through the cord.

No. 61. *s.* A Bubonocoele Sac or peritoneal pouch in the cord of the Testicle laid open; below this another cavity enclosing the testicle is also seen open, viz: that of the Vaginalis, unconnected with the other cavity.

No. 62. *s.* Ditto, showing ditto.

No. 62. *a. s.* A most elegant Hernia Congenita from an Adult; Poupart's Ligament, and the lower edge of Obliquus internus are preserved in situ; the pouch was distended in spirits, and when hardened the anterior paries cut away to show the size of the cavity, which would hold a goose egg, and the Testicle naked at the lower posterior part.

No. 63. *a.* A small Hydrocele laid open.

No. 63. *b. s.* Ditto laid open, the Testicle seen on the opposite side; there is also a hernial sac separated from the Tunica Vaginalis: the whole injected green.

No. 63. *c. s.* A very large Ditto; Testicle lying in the very lowermost part, but Tunica Vaginalis so thick that it never could have contracted from inflammation or suppuration, so as to enclose and adhere to the testicle: and had an operation been performed, it would perhaps been with propriety cut out.

No. 64. *a. s.* A Hydrocele, perhaps after the radical cure had been attempted, as there are adhesions seen, and the testicles lie at the bottom and not behind the sack; the cremaster was exceedingly strong, the broadest and reddest ever seen perhaps, and was lost before it reached the lower end of Tunica Vaginalis.

No. 65. *s.* Two Testicles from the same subject; the Epididymis in both, instead of leading on to vas deferens, terminates abruptly in a blind point, in the one about half way, and in the other just where it should join vas deferens.

No. 66. *s.* The Testicle, the Tunica Vaginalis dissected off, the cord also dissected; from the vas deferens hangs a tumour of the cord, with a worm in it like the Vena Medinensis or Guinea worm.

No. 67. *s.* Ditto; Tunica Vaginalis opened to show universal adhesion, probably from inflammation of the testicle.

No. 67. *a. s.* Ditto; at the place where the tunica vaginalis is reflected from the testicle, there are to be seen many adhesions.

No. 67. *b. s.* A Testicle laid open, showing universal adhesion of the tunica vaginalis to the testicle: dissecting room.

No. 68. *s.* A Scirrhus Testicle cut open; no appearance of tubes, but one smooth uniform flesh, and twice or three times its natural size; the nerve is three times its natural size, and hangs between vas deferens and the blood vessels marked by bristles.

No. 70. *s.* Sections of a Scirrhus (or, according to Mr. Hunter, of a Scrophulous) Testicle, Mr. Hoquet's: it is ten times the natural size, soft and pulpy; gave but little pain; was extirpated: patient seemed to recover, but died some months after of other scrophulous sores.

No. 70. *b. s.* A diseased Testicle, apparently of the scrophulous kind; the disease but little advanced: it is dissected, and one side turned up; epididymis seems principally affected. (Falconer's.)

No. 70. *c. s.* Ditto; a little unravelled; epididymis four or five times its natural size, and apparently pulpy. (Ditto).

No. 70. *d. s.* Ditto, with the very same disease; epididymis exceedingly large. (Ditto.)

No. 71. *s.* A Testicle of a monstrous size cut open; internally cartilaginous: it bears the marks of frequent puncture, having been supposed hydrocele; these punctures have not united: between the cartilaginous portions are bits of scrophulous pus.

No. 71. *a. s.* A large Cancerous Testicle, three or four times larger than a kidney; internally hard, bloody: shows only one half.

No. 72. *s.* 73. *s.* Ossifications of the body of the Testicle about the size of the end of one's finger; 72 has two such; 73, one, but larger and irregular: the vas deferens in both is injected with mercury.

No. 74. *s.* A young Sparrow, two months old only; the testicles are seen of the size of small pin heads, just before the kidneys at their upper end; the anterior parietes of the thorax and abdomen, with most of the viscera are removed; the feathers remain, and the bird hangs with the head down by the legs.

No. 75. *s.* An old Ditto, but in winter; the testicles are very little larger than those of the young one.

No. 76. *s.* An old Ditto, in April; the testicles are now about the size of a sparrow's egg, that is, two or three hundred times larger than they were in winter.

No. 78. *s.* A Testicle enlarged, with a scrophulous abscess in it.

No. 79. *s.* A Testicle, with the Epididymis injected with mercury, and the veins with white injection.

No. 80,)
81, } not described in Hunterian MSS.
82,)

VESICULÆ SEMINALES. Z.

No. 4. *s.* The Vesiculæ Seminales; one side is removed to look on a cellular or honeycomb-like surface; the surface of each cell examined with a glass, appears to be also composed of smaller cells, as does the inner surface of vas deferens.

No. 5. *s.* Ditto, with a portion of the Bladder, Prostate Gland, and beginning of the Urethra: it shows the same things as before, but shows also the termination of the vasa deferentia and vesiculæ seminales, before the neck of the bladder, in the Caput Gallinaginis; besides these two openings is seen a third, which is that of a large lacuna or duct of a gland: the Prostate Gland is rather enlarged and diseased.

No. 6. *s.* The same preparation as No. 4. The Vesiculæ themselves are smaller, as well as their cells.

No. 8. *s.* A Mouse opened, (the abdominal viscera except the kidneys removed,) to show the Testicles large in proportion to the bulk of the animal, as also the Vesiculæ Seminales forming two horns like the uterus of a Dog, &c.

No. 10. *s.* The Vesiculæ Seminales and Prostate Gland cut open; in the vas deferens of the left side appears a stricture totally obliterating the canal: notwithstanding of which the vesicula of that side was full of a brown fluid as usual. The cells of the prostate gland are enlarged from disease.

BLADDER. A. A.

No. 1. *a. s.* The Pelvis of a Child at birth; to show bladder high up in the abdomen, uterus turned up, and ovaria also higher than the edge of pelvis.

No. 3. *s.* One half of the adult human Bladder, previously distended and hardened with spirits to make it retain its shape: a bristle is introduced into the lacuna of the Caput Gallinaginis, near which the orifices of the vesiculæ seminales are seen; in the lower part of the bladder, the orifice of one ureter is seen, about an inch and a half behind the last mentioned orifices; on the edge all round the upper half, may be seen the peritoneal coat externally, the internal coat within, and the muscular coat between the two.

No. 4. *s.* The human Bladder in its contracted state, about one-fifth of the bulk of No. 1, but retaining exactly the same shape; it hangs by the membranous part of the urethra; the lower ends of the ureters are also seen on each side entering the bladder.

No. 7. *s.* The Bladder in the state it was found after death, very much contracted; as a proof of its muscular power, being now almost a solid ball: bristles are in the ureters.

No. 7. *a. s.* The Bladder in its contracted state, opened on one side, in order to show the internal membrane thrown into rugæ, like the inner membrane of the stomach in the same circumstances.

No. 7. *b. s.* One half of a Bladder prepared as the last; the rugæ are less pendulous, more like convolutions or flouncing.

No. 7. *c. s.* The other half of No. 7. *b.* the fundus in this state is half an inch thick at least; it is thinnest just behind the neck of the Bladder.

No. 7. *a. a.* The Bladder, Umbilical Arteries and Urachus from a Lamb; the urachus is filled with quicksilver, grows rather narrower after it leaves the fundus of the Bladder: (in a bottle with blue paper.)

No. 8. *s.* The Bladder of a man who had a Stone; the muscular coat in some parts is half an inch thick in consequence of greater exercise: it was first distended and hardened with spirits, now a portion cut out to look on the edges and internal cavity; the inner coat is uneven, and looks fasciculated from the projection of the muscular fibres behind.

No. 9. *s.* One half of the Human Bladder injected red ; it retains its natural figure, having been filled and hardened in spirits before it was divided ; the inner coat is thrown into very elegant convolutions like the flouncing of a Lady's petticoat ; it is also exceedingly vascular.

No. 10. *s.* The posterior part of a female Bladder injected red ; the uterus is seen also on the back part : it hangs by the neck of the bladder, is more vascular even than the last, and the orifices of the ureters are seen near the neck looking upwards, the surface is rugous, but not so much as in the former.

No. 11. *s.* A portion of a Bladder ; two ureters are seen opening on the right side, two bristles are introduced ; two other bristles show the openings of the Vesiculæ Seminales and Vasa deferentia.

No. 11. *a. s.* Posterior half of a male Bladder, with double ureters on each side ; nothing of the glandular appearance of the female Bladder.

No. 12. *s.* A portion of female Bladder to show the openings of the ureters and urethra ; spread on a card ; near the neck of the bladder there is a follicular appearance.

No. 12. *a. s.* The posterior half nearly of a female Bladder ; the internal membrane seems every where follicular, and near the neck of the bladder is a cellular porous appearance, probably follicles which run in the direction of the orifices of the ureters.

No. 13. *s.* Ditto, with a portion of vagina behind, to show ditto ; also a rising in the bottom of the urethra, similar to Caput Gallinaginis, with the orifices of lacunæ.

No. 13. *a. s.* The posterior portion of the Bladder from a Woman ; just within the urethra, and all before the orifices of the ureters is an undescribed follicular, or rather honeycombed surface, like that of internal surface of Gall Bladder ; it is very beautiful, and probably a secretory surface for mucus.

No. 14. *s.* The male Urethra slit open ; injected red to show that it is exceedingly vascular ; in some places it even looks villous.

No. 15. *s.* A portion of the Bladder with the orifices of the ureters, Vesiculæ Seminales with their orifices, and urethra slit open the whole way to show the inner surface of the urethra; the prostate Gland is also seen behind, and Cowper's glands.

No. 16. *s.* Ditto, with bristles in the lacunæ, showing ditto.

No. 17. *t.* The Prostate Gland injected from eight or ten ducts, which open round Caput Gallinaginis, with quicksilver; the Vesiculæ Seminales here very large, also injected with ditto; the gland appears to be a congeries of follicles, and makes a beautiful appearance.

No. 18. *t.* Ditto, less minute.

No. 19. *s.* The Prostate Gland of the Elephant, (a section;) it appears to be a congeries of large cells, having a common ramifying Trunk, not unlike the structure of Lungs.

No. 20. *s.* The same preparation as No. 15, to show principally Cowper's Glands lying on the under side of the membranous part of the urethra, between the Bulb and Prostate Gland.

No. 22. *t.* The same preparation as No. 17, with the addition of Cowper's Gland injected with quicksilver; it appears to have the same kind of structure as the Prostate, and two excretory ducts resembling lacunæ above an inch long.

No. 23. *t.* Cowper's Glands injected with quicksilver, but less minutely than in the preceding.

No. 24. *s.* The Rectum, and Bladder of the Turtle cut open; to show the rugous inner surface of bladder like that of the Stomach; and to show that the urethra opens into the rectum a considerable way above the anus.

No. 26. *s.* A portion of the Bladder Prostate Gland and Urethra, on which the operation of the Stone was performed by the cutting Gorget; the parts cut are Bulb of the urethra, to the left Cowper's Gland, the prostate side ways, and about half an inch of the bladder itself; the thickness of the prostate sufficiently defends the Vesiculæ Seminales below; bristles show their ori-

fices, and that the knife has passed within the 1-16th of an inch of them to the left: section made on the dead body, with a view to show exactly the parts cut.

No. 26. *a.* Ditto, with the new Gorget.

No. 26. *b. s.* The whole of the parts concerned in Lithotomy, cut by Gorget composed from the blunt one and the blade of Dr. Hunter's knife; the objection to other cutting instruments was, that they did not cut enough, or that the forceps could not be conveniently conveyed along them. A very large flint was conveyed into the Bladder at its fundus, and extracted as in Lithotomy, without laceration or wounding any important part; the Caput Gallinaginis, Rectum and Vesiculæ Seminales untouched: the external as well as the internal parts are preserved.

No. 27. *s.* The same parts with the Rectum opened, in a Boy who died in St. George's Hospital; he was formerly cut for the Stone, and the cicatrix is seen externally: in the operation the point of the staff had got out of the orifice of the bladder, and the gorget had been pushed through above the natural passage; the rectum had also been injured; the natural passage is pointed out by a bristle, which at its anterior end points also to a little fistulous orifice, by which the urine got into the rectum, produced purging, &c.: the boy had the stone again, was to have been cut, but died.

No. 27. *c. s.* The parts concerned in Lithotomy; they seem to be from a Boy, and it appears he had been cut for the stone, from the large external cicatrix; there is also a fistulous orifice between bladder and rectum.

No. 28. *s.* A portion of Bladder, with Prostate Gland, and beginning of the Urethra; on the side of the Caput Gallinaginis appear small round stones naked towards the urethra, and surrounded by a ragged ulcerated surface; these probably would give the stroke to the sound on searching, and would be mistaken for stone in the bladder.

No. 29. *s.* Ditto, showing ditto; the stones seem to be formed in the cells of the Prostate Gland, and are also seen on the back part like small peas.

No. 30. *s.* A Bladder inverted, to show its inner coat produced at several parts into laminae, or processes of a quarter of an inch above the surface; these might be laid hold of along with the stone in lithotomy, and occasion dreadful symptoms.

No. 31. *s.* The Lumbar Vertebrae and Pelvis of a Child at birth; the lower part of the left ureter is dilated into a bag, very nearly as large as the bladder itself; the same disposition seems to be taking place in the lower end of the other ureter; both kidneys are shrunk almost to the size of kidney beans; the left was even beginning to take on the hydatid appearance on its outside; the arteries are injected red.

No. 31. *a. s.* The large Tumour between Rectum and Bladder. Case published London Medical Essays.

No. 32. *s.* A portion of a Bladder ulcerated near the insertion of the right ureter; the ulcers in some parts went through to the other side of the bladder, as the bristles show.—(Case forgot.)

No. 33. *s.* A portion of (Hocquet's) Bladder; amongst other symptoms he had great pain in making water, with scalding; sometimes the urine appeared like pus; at other times bloody: the muscular fibres are collected in bundles, much enlarged, but deprived almost entirely of their covering, the inner coat of the bladder being destroyed; the Vesicula Seminalis of the left side was full of a brown fluid, though the testicle had been removed some months before.

No. 34. *s.* A Bladder very much fasciculated, and the inner coat formed into pouches, protruding between the fasciculi; the Prostate Gland much enlarged; the penis is also slit open its whole length; a number of vessels are injected from the lacunae, near the Caput Gallinaginis, with mercury; they look like lymphatics, but may be traced to the iliac veins.

No. 34. *a. s.* A very thick fasciculated Bladder, (turned inside out) from stricture in the urethra.—(Dissecting-room.)

No. 34. *b. s.* Ditto, with pouches formed by the pushing out

of the internal membrane between the fasciculi; these pouches might contain 3ij; each of their orifices easily admits a large pea; the stagnating of the urine in these pouches may possibly contribute to the foetor of the urine in patients with strictures.

No. 35. *s.* A very large thickened Bladder opened; the posterior part of the prostrate, swelling into the bladder, forms an eminence behind Caput Gallinaginis, which often prevents the introduction of the Catheter; the inner coat is formed into pouches, in which are seen white stones to the number of fifteen or twenty, some of these are as large as a small gooseberry.

No. 36. *s.* Ditto, but without any stones, inverted.

No. 36. *a. s.* A portion of Ditto, the pouches very numerous.

No. 36. *b. s.* Ditto, showing ditto.

No. 36. *c.* A prodigiously enlarged Bladder and Prostate Gland; the cause seems to have been scrophula enlarging the prostate, and thus producing suppression of urine; there is a fistulous orifice between Caput Gallinaginis and Rectum.

No. 37. *s.* A Bladder injected red and inverted, from a man who had the Stone: the coats are much thickened, the surface of the inner coat very rough, and the ureters much enlarged; there is a fistulous orifice between Caput Gallinaginis and Rectum, shown by a bougie.

No. 37. *a.* The Kidneys, Ureters, posterior part of the Bladder and kind of Glans Penis, from a Boy; the Parietes of the Abdomen about the pubis, and the pubis itself were wanting; the anterior part of the bladder was also wanting, and the posterior part presented itself in place of the external integuments; it was inflamed, and a little concave; the orifices of the two ureters appeared, and the urine flowed perpetually either in small gushes, or drop by drop; on the upper side of glans penis appeared the orifices of the vasa deferentia with the large lacuna between: the Vesiculæ Seminales are seen behind, and most of these circumstances are pointed out by bristles.

No. 38. *s.* A very large Scirrhus Prostate Gland, which occasioned suppression of water; the Catheter made a false passage through its substance, shown by a quill; a portion of the Bladder and Urethra adheres to it.

No. 39. *s.* Ditto, with the Bladder cut open, from an old Gentleman at Hammersmith, who died after suffering much from difficulty and suppression of water, with much irritation. It was very difficult to pass the Catheter, and no urine was discharged till the point of the instrument was passed up almost above the Os Pubis; and the enlargement of the Prostate, (consequently the nature of the case) was certainly known by the examination per anum. There was a Stone in the Bladder bigger than an almond, the bladder was fasciculated, and a process of the enlarged prostate, at the beginning of the Urethra, made a valvular operculum, the principal cause of suppression.

No. 39. *a. s.* A Prostate Gland very much enlarged, and the Bladder behind fasciculated. The passage to the bladder is so obstructed, that it must have been difficult to have introduced the Catheter.

No. 39. *a. a. s.* A portion of Bladder with a diseased Prostate Gland, very thick; there is some appearance of the patient having been cut for the Stone; and there must have been abscess on the under side of the Prostate, as there is a large cavity with a rough surface, which has been opened. (Falconer's sale.)

No. 40. *s.* A portion of the Bladder, the Prostate, and Urethra slit open all the way; the internal surface of the bladder and urethra was in a state of sloughing: from a dead body in the dissecting room; case unknown: bladder had sloughed, and on the surface is deposited a crust of animal earth.

No. 41. *s.* The Bladder and Rectum of Colonel————; he was cut for the Stone by Mr. Hawkins, and died a few days after the operation. He determined at last to submit to the operation because he was miserable; for besides the ordinary complaints, his urine had made a passage into the Rectum, which from time to time had all the effects of a sharp clyster. He could hardly venture abroad, and at home was from that urgency

always without breeches. On passing the finger within the sphincter ani, the bag of large stones was distinctly felt; they were covered by a thin membrane only; and on the most prominent part the point of the finger felt the fistulous hole where the urine passed, and where the stones were bare. The quill is in that orifice. On the fore part is seen the cavity of the bladder, with quills in the dilated ureters; below which is the urethra laid open, where it passes through the prostate, with a bristle in a seminal duct; and below that again the cavity of the bag which contained the stones, which in reality were in the dilated membranous part of the urethra.

No. 42. *s.* A portion of very much diseased Bladder and Urethra; a fistulous orifice is pointed out by a quill, going through to the prostate gland.

No. 43. *s.* The Bladder of the Kidney, No. 97. *a.* The same gravel seen there, also seen here lying between the rugæ of the internal membrane: the anterior part is removed.

No. 44. *s.* An extremely ulcerated Bladder from a subject in the dissecting room; its size is small, having never been much distended probably for years past; there is a fistulous orifice just before the Caput Gallinaginis leading to perineum; at the upper part of the Bladder, the ulceration had gone through to the peritoneal coat, and formed an abscess, which was guided by the ligamentous Urachus to the navel, where it opened externally; so that matter was discharged, and probably Urine also, both at the navel and perineum.

No. 45. *s.* The Bladder laid open, with a portion of the Penis; the Bladder is considerably thickened and fasciculated; the Prostate Gland has its ducts enlarged from the pressure of the urine backward, which was not allowed to pass off by the Urethra; and at the bulb of the Urethra there is a considerable ulceration, made probably by the pressure of the urine confined by Stricture.

No. 45. *a. s.* A large Communication by Ulcer, between the rectum and neck of the Bladder. The ureters had been much distended.

No. 46. *s.* The posterior portion of a female Bladder, showing in two places the appearance of sloughing. In one place there is a little hole from ulceration, pointed out by a bristle, where the urine must have passed out into the cavity of the abdomen.

No. 47. *s.* An enlarged prostrate, and thickened Bladder.

No. 48. *s.* Not described.

No. 49. *s.* Ruptured Bladder, (from a patient of Mr. Hey of Leeds.)

PENIS. B. B.

No. 1. *s.* The Penis of a Man from the dissecting room, of a prodigious size; the Corpora Cavernosa and Spongiosum are injected green to show its shape; $6\frac{1}{2}$ inches long.

No. 1. *a. s.* Ditto, of the same size nearly as the former.

No. 2. *s.* Ditto, about half the size of the former, though equally distended with green injection; both of these have the integuments; 6 inches long.

No. 3. *s.* Ditto, without the integuments, larger even than No. 1. The Corpora Cavernosa injected green are brought to view, as is the Corpus Spongiosum Urethræ and Glands injected red.

No. 4. *d.* Ditto, injected ditto; the veins on the surface of the Glans are filled with quicksilver, every other part is red; these two last show general composition of Penis.

No. 9. *s.* The Corpora Cavernosa slit open on each side, and the reticular substance dug out, to show that the sheaths are of a shining inelastic tendinous kind of substance, and that the septum between them is fissured every little way by a number of perpendicular slits, in consequence of which whatever is poured into one Corpus Caverosum may get into the other.

No. 10. *s.* A section of Penis transversly, to show the thickness of the integuments, the reticular substance of the two Cor-

pora Cavernosa, that of the Spongiosum Urethræ, the passage of the urethra with a double bristle in it, the artery running through the middle of cavernosum with a bristle in it, and the vein in dorso penis with a bristle in it; the septum inter corpora cavernosa is seen, and the thickness of the sheaths.

No. 11. *s.* Ditto; the Penis having been injected black, the sheaths and septum being white, are most distinctly seen.

No. 18. *s.* The Corpora Cavernosa having been injected red, the cavernous substance is mostly dug out, to show ligamentous fræna passing from the sides of the cavernosa, to prevent their being irregularly distended, or beyond their capacity.

No. 19. *t.* The Corpora Cavernosa dried by the quicksilver injection, after having been injected red by the arteries; the arteries are seen all the way running through the centre of each corpus cavernosum.

No. 20. *t.* One of the Corpora Cavernosa opened, after having been injected with quicksilver and dried; a section also through the spongiosum urethræ, and gland: dried in the same way, to show that the latter is a continuation of the former.

No. 21. *t.* A very large Penis, in which the arteries had been injected red, dried in the manner of the last, and cut open on one side, to show the corpus cavernosum, and that the spongiosum, urethræ and glans are continued into one another.

No. 23. *t.* The other half of No. 20, showing ditto.

No. 24. *t.* The Corpus Spongiosum and Glans, also the Corpora Cavernosa for three or four inches, filled with mercury; the glans appears exceedingly vascular from the veins; very large veins arise from the Spongiosum Urethræ, turn round the sides of the cavernosa, and get on the dorsum penis: an elegant preparation.

No. 24. *a. t.* A similar preparation from the Dog; the Glans, and a round swelling an inch below, which locks the dog in the coitus, is seen turgid with mercury; it appears a spongy substance, and has two very large veins passing from it, one on each side of the cavernosa.

No. 24. *b. t.* Not described.

No. 25. *t.* A Glans Penis turgid with mercury from the veins on the surface; it appears that though the interior parts are cellular, yet the external are really vessels similar to veins.

No. 25. *a. s.* Not described.

No. 28. *s.* A section through the upper end of the Penis, after the Cavernosa and Spongiosum had been filled with spirits, and hardened; to show that the glans and spongiosum are different from the cavernosa.

No. 29. *s.* A section through the upper end of the Penis, after the Cavernosa and Spongiosum had been filled with spirits, and hardened to show that the glans and spongiosum are different from the cavernosa; showing also Urethra of its natural size.

No. 30. *s.* A Penis, where Corpora Cavernosa are distended with green injection; the Spongiosum and Glans not injected: the spongiosum is dissected off all the way from the cavernosa, and is slit open to show Urethra and the bulb of the urethra.

No. 31. *s.* The upper part of the Penis for above four inches; the Cavernosa injected red; the urethra is slit open to look on its internal surface: the arteries injected red.

No. 32. *s.* Urethra and Glans; the former opened all the way to show its breadth, about quarter of an inch.

No. 35. *s.* The Corpora Cavernosa injected; the urethra slit open all the way to show bristles in the orifices of the lacunæ or excretory ducts of the mucous glands.

No. 36. *s.* Urethra opening on the point of the Glans, and a lacuna of considerable size seen just within the orifice.

No. 37. *s.* The lower end of Urethra, with a portion of Bladder; some lacunæ are filled with mercury, and readily communicate with the veins on the inner surface of the bladder.

No. 38. *s.* Urethra slit open near its termination, showing the same lacunæ as in No. 36, filled with quicksilver.

No. 39. *s.* The Corpora Cavernosa injected black, and a section afterwards made on one side, except near the glans; the vein in dorso penis is injected green, the artery red, and the nerves are seen dissected, lying chiefly on the outside of the artery, and branching largely towards the glans.

No. 39. *a. s.* The Corpora Cavernosa injected black: on the right side, the injection is dug out next the crura, showing a complete tendinous septum; on the left side, it is dug out next the glans, showing the injection passing through the slits of communication.

No. 41. *a. s.* 41. *b. s.* Sections of the Horse's Penis through Corpora Cavernosa and Spongiosum urethræ; pretty similar to the human white tendinous cords go from the bottom of the ligamentary sheath, in a radiated form to the other sides, to prevent above a certain distention perhaps.

No. 41. *c. s.* Ditto, with the Glans.

No. 42. *s.* The upper end of the Penis injected red; the glans denudated; the prepuce drawn back, shows the frænum or bridle between the prepuce and glans, making a kind of groove in the corona glandis on the under side.

No. 43. *s.* Ditto, shows ditto.

No. 44. *s.* The Glans Penis injected red from the arteries; they project from the surface of the glans, forming villi, and are most numerous on the corona glandis, where the odoriferous glands are believed to be: when the glans is injected from the spongiosum the surface seems smooth, nor do the vessels project.

No. 44. *a. s.* Ditto; the Villi project very much round Corona Glandis, and are gathered into distinct bundles, so as to put on the appearance of glands.

No. 45. *s.* The upper half of the Penis of a Jew; as the prepuce is removed, it explains circumcision: there are also two large chancres on the glans. (Solomon Porter.)

No. 46. *s.* Ditto, showing the orifice of the Urethra, opening not in the apex of the glans, but in the place of the frenum, on the under side.

No. 47. *s.* Ditto, showing ditto. What influence this might have on the emission of the Semen, preventing its direct passage into the womb, is not perhaps easily determined.

No. 48. *a. s.* A Penis and Scrotum prepared to show cellular membrane, which exists in great quantity on the body of the penis, and also forms the only septum scroti.

No. 52. *s.* The Penis, Anus, and Perinæum in a lad of 19, who died in Westminster Hospital: some lymphatics are injected in dorso penis, which come from a common trunk, and go to the groins; but the most particular circumstance about the preparation is, that there is no scrotum, only a raphe in the skin where scrotum should be: the testicles had never been down.

No. 56. *s.* A Penis from the adult human subject; the Corpora Caverosa distended with injection; the urethra slit open all the way: for about two inches from the beginning, the urethra appears large and sound, but thence downwards is contracted sensibly; in some places to one-half of its breadth.

No. 57. *s.* Urethra and Bladder both open; but the first is opened on the under side, the second before: the bladder is very much thickened and fasciculated; there is a very thin stricture extending not above 1-16th of an inch in breadth, just where membranous part of the urethra terminates in the bulb; the breadth of the urethra before and behind this stricture is pointed out by cross bits of quill: the prostate and vesiculæ seminales seem both dissected.

No. 58. *s.* Penis, with a portion of the Bladder: Urethra slit open its whole length, shows two strictures, one within two inches of the orifice of the urethra; the other about two inches above the membranous part: their breadth nearly that of the former.

No. 58. *a. s.* The Bladder, Penis, and Perinæum from a body in the dissecting room: there was stricture in the bulb of the

urethra, bougies had been employed and made a false road, pointed out by the most anterior bristle; there was a large fistulous orifice in perinæo, leading into a large ulcerated ragged cavity, which extended towards each tuberosity of the ischium; from this sinuses led through the substance of each corpus cavernosum almost to the glans, and one of these is pointed out by a bougie; the bladder itself is thickened and fasciculated, and there are several orifices leading from the bulb of the urethra into the just now described cavity in perinæo.

No. 58. *b. s.* The same parts nearly, from a Sergeant in Burgoyne's light horse (an out-pensioner, Chelsea Hospital); there is stricture one inch and a half in length, about two inches within the urethra. He had kept this concealed for many years: meanwhile the urine pressing behind had ulcerated and dilated urethra, so large as to receive the first joint of one's thumb; there was also an abscess unsuspected in perinæo. The suppression of urine had not been total till twenty-four hours before I was called; no catheter or bougie could pass, but a common probe passed, and the urine followed. It was twenty-four hours before I was sent for again; I found the urine had got into the cellular membrane, all over penis, scrotum, groins, and inside thighs, and was by its distention spreading mortification wherever it went; I made punctures every where in these parts, sent for Mr. Hunter, who opened the urethra beyond the stricture, (as he believed,) in doing which, a great quantity of foetid pus was discharged; the man by this time was become comatose and died next morning. A bristle bent upon itself shows the passage where the urine burst through; the prostrate gland was rather large and scirrhus; bladder also much thickened.

No. 58. *c.* The same parts. There is the appearance of a false passage through the whole course of the corpus spongiosum urethræ, either from a bougie or spontaneous disease.

No. 60. *s.* This preparation shows the Prostate Gland, much enlarged; the bladder thickened and fasciculated: there is a fistulous orifice near the bulb, and another in the bladder near the left ureter's entrance; quills point them both out. Whether these were from bougies, or stone, or stricture, does not appear.

No. 61. *s.* Bladder, Penis, and Testicles of an adult ; there is a fistulous orifice from the membranous part of the urethra through scrotum, opening between the testicles; a little above that appears a stricture extending upwards half an inch at least.

No. 62. *s.* An exactly similar preparation, only there are two fistulous orifices in the membranous part of the urethra, and the stricture is at the beginning of the bulb. The bladder is much thickened; some vessels are injected with mercury; from the lacunæ near caput gallinaginis they look like absorbents, and run up the ureters, but they may be traced to the veins.

No. 63. *s.* A similar preparation ; one fistulous orifice in the membranous part of the urethra.

No. 64. *s.* Prostate Gland, with the lower portion of the Urethra : this last is entirely obliterated about an inch and a half above the caput gallinaginis ; the prostate is much thickened.

No. 65. *s.* The lower portion of the Bladder opened from before, the lower portion of Penis also : the Bulb of the Urethra is opened ; it contained a stone very nearly as large as a hen's egg ; there was a fistulous orifice from it in perinæo : from an old man in the dissecting room.

No. 66. *s.* An Urethra slit open, showing a prodigious number of lacunæ, with bristles inserted into them.

FEMALE ORGANS. C. C.

No. 5. *s.* The external parts of generation in the female ; Hymen perfect, the opening longitudinal, but a mere slit, not a quarter of an inch long ; the parts were kept extended by melted wax, then hardened in spirits, after which the wax was removed : the anus and perinæum are also seen.

No. 6. *s.* Ditto ; Hymen very perfect, a longitudinal opening as in the former.

No. 7. *s.* Ditto, the opening will admit a goose quill.

No. 8. *s.* Ditto, from a Child about four years old, with two bristles in the opening.

No. 10. *s.* Ditto, from a Child at four years old; the Labia, Vestibulum and Vagina extended as much as possible; to show the true shape of Hymen, which is that of a crescent with the horns turned towards the sides of meatus urinæ.

No. 11. *s.* Ditto, from a Child at six or eight years, Labia separated, and Hymen seen less stretched, but resembling No. 4; as does in some degree No. 10.

No. 12. *s.* Ditto, from a Child at two years old.

No. 13. *a. s.* Ditto, with a little thread or frenum passing over bristle, from the upper edge of Hymen to meatus.

No. 14. *s.* Ditto, from a full grown subject; the Hymen less perfect, and will easily allow a finger to pass; however, enough appears to make it probable she was never deflowered. The rete mucosum in this subject is very dark; it appears to pass on the inside of the labia, over the nymphæ, and is lost on their inner edge, and on the inner edge of the preputium clitoridis, but does not cover the glans, meatus urinæ, or hymen.

No. 14. *a. s.* A similar preparation, where although the opening is large, yet the hymen appears perfect.

No. 15. *s.* Ditto, very like the former; the hymen on its inner edge much wrinkled, and the passage pretty wide so as to give some appearance of carunculæ myrtiformes.

No. 16. *s.* Ditto from a Negro Girl, who had probably been deflowered, as the opening will admit one's thumb, yet there is a regular border of hymen all round: the rete mucosum terminates as in the former, though it is less evident on the clitoris, which is here small and indistinct: the rete mucosum passes also a little way within the anus.

No. 17. *s.* The Labia, Vagina, and Uterus of a young woman: vagina and uterus are opened before; the inner surface of vagina is rugous; it seems about three inches in length, and about one

in diameter: some little remains of hymen at bottom, and the mouth of the womb projects into the vagina at top, like the point of one's finger: the labia lie on the bottom of the bottle, covered with hair.

No. 17. *a.* The Uterus, Vagina, Bladder, and Rectum, filled with Paris plaster; it shows the contents of the female unimpregnated pelvis at one view.

No. 18. *s.* A side view of the Bladder, Urethra, Vagina, Uterus, and Rectum from a young woman; they were previously distended in spirits, and a portion cut out on the side to show their cavities fully. The labium, nymphæ, and one half of remains of hymen, with one side of the anus and perinæum are seen.

No. 19. *s.* The same preparation from a full grown subject, only the external parts and hymen are entire: vagina seems here about four inches long, but not so capacious as rectum; the urethra will admit a goose quill easily, and is about one inch long; the bladder on the upper side, and rectum on the under, are firmly attached to vagina through its whole length; the uterus is not opened: it is the uterus of a pubes or girl just arrived at puberty, whose breasts will afterwards be described. The Fallopian tubes, ovaries, and round ligaments are seen, so that this preparation exhibits the whole contents of the female pelvis.

No. 20. *a. s.* The body of the Uterus stripped of its ligaments, ovaria, and tubes, vagina also cut away: so suspended that *os Tincæ* is uppermost, and points obliquely forwards; the orifice of the uterus is a small round hole, capable of admitting a very small probe.

No. 20. *b. s.* A Virgin's Uterus, about sixteen years old: the *Os Tincæ* is the principal object; it is a transverse fissure, and not a round hole, about a quarter of an inch long, and sufficiently resembles the Tench's mouth.

No. 20. *c. s.* A Virgin Uterus from a girl about eighteen years old; showing the *os tincæ* transverse: the Fallopian tubes, and ovaria are preserved. The preparation is inverted, being suspended by the vagina.

No. 21. *s.* A similar preparation, also injected red; behind it is opened its whole length, appears wrinkled lengthways, and very vascular.

No. 22. *s.* Ditto uninjected, exceedingly white; vagina very rugous, especially on the side next urethra: there is a piece of tinfoil rolled in the urethra, and bristles in Cooper's Glands by the edge of Hymen.

No. 23. *s.* An Uterus from an adult female; the arteries are injected red with wax, and dissected, showing the trunks of the hypogastrics on the sides of the uterus, and those of the spermatics making one tube with the former on the fundus and broad ligament: the uterus is opened, bristles are in the orifices of the Fallopian tubes at the fundus uteri.

No. 24. *s.* One half of Uterus and Vagina, the arteries injected with red wax, and the veins with yellow; the Fallopian tube seems principally vascular, and the veins are more numerous and larger, but have the same course with the arteries: the section through uterus is longitudinal, so that a side view of its cavity appears; the sides are almost entirely in contact, there is just a line showing where cavity is.

No. 25. *s.* The other half Ditto.

No. 26. *s.* The contents of a Child's Pelvis beautifully injected red, to show the situation of uterus between rectum and bladder; the Fallopian tubes and ovaria are also well seen.

No. 26. *a. s.* A female Fœtus of five months, injected red, and suspended by the legs, to show fundus uteri above the pelvis, Fallopian tubes, ovaria, and round ligaments; the ovaria are large compared with the uterus, and lie over the middle of pelvis.

No. 27. *s.* An Uterus cut open to show the thickness of its sides, about one-fourth of an inch; to show also its cavity, which is divided into cervix and fundus: the fundus is smooth and nearly triangular; the cervix is nearly as long as the fundus, rugous like the branches of a tree: bristles are in the Fallopian tubes.

No. 28. *s.* A section transversely through Uterus, between cervix and fundus, and through the broad ligaments; the prepara-

tion hangs side ways by the right Fallopian tube, near its fimbria. The cavity of the uterus in this view is not half an inch long, and is merely a line in breadth, but not a straight line, making a portion of a circle; the Fallopian tube makes the upper edge of the broad ligament, the ovarium is behind in that ligament, and the round ligament is before: the fimbriæ of the external orifice of the Fallopian tube are continued down half an inch to the body of ovarium, and form as it were a fringed chain of connection.

No. 29. *s.* The Labia, Vagina, Uterus, and Rectum slit open: the cervix uteri is the principal object; the rugæ in it resemble the long leaves of rushes from a middle stem; the cervix is much longer than the fundus; both taken together are not above two inches in length, the breadth is about one inch at the very uppermost part of fundus: there are bristles in the interior orifices of the Fallopian tubes.

No. 29. *a. s.* Cervix Uteri laid open, the rugæ pennatæ exceedingly beautiful.

No. 30. *s.* A similar preparation, only it is opened behind, and the Bladder is opened on the fore part; the rugæ in the cervix uteri are still more beautiful than in the former, and run up from os Tincæ nearly one-fourth of an inch; on the anterior part are seen the crura clitoridis, and body.

No. 30. *a.* The Cervix Uteri laid open, with Ovaria and Fallopian tubes, Vagina laid open, and external parts: on the other side a portion of Bladder is preserved.

No. 31. *s.* Ditto, injected red; the body of this Uterus is not in the same direction as vagina, but inclined to the right, and the cervix and fundus are nearly equal in length.

No. 32. *s.* The same preparation as No. 29, injected red, from a young Child; the uterus seems to be all cervix, as the rugæ extend to the upper side; the vagina is finely corrugated, like the surface of water from a gentle breeze.

No. 33. The anterior half of Vagina and Uterus, with a small portion of Bladder; the uterus is small as from a young creature, and inclined to the left; the ovaria are oblong and shaped something like the human spleen.

No. 35. *s.* The anterior half of Uterus: the cavity of the Uterus is nearly triangular, the convex sides of the lines are turned towards the cavity, &c.: this gives the uterus within something of the shape of the quadruped's, that is of two horns, each horn running towards the Fallopian tube.

No. 35. *a.* An Uterus laid open, showing the same horned-like appearance in the fundus uteri.

No. 36. *s.* A preparation much resembling No. 35. *a.* The inner surface of Uterus has a loose membrane on it like decidua, and is porous instead of being nearly smooth.

No. 36. *a. s.* An Uterus laid open, whose inner surface is covered with a membrane denser than in the former case, and which in some places is removed; the Ovaria are laid open, showing large vesicles, as if there was a tendency to dropsy.

No. 38. *s.* Labia, Vagina and Uterus opened behind, Bladder opened before; the direction of cervix uteri obliquely to the right, and making an obtuse angle with vagina; there is a quill in meatus urinæ.

No. 39. *s.* A similar preparation, shows ditto; there seems to be a sloughing disposition in the inner surface of the bladder.—Case not known.

No. 40. *s.* Uterus and Vagina divided into an anterior and posterior half, the anterior turned up: the cavity of uterus is nearly a rectilinear triangle, and strongly marked as distinct from cervix.

No. 41. *a.* Similar; not described in MSS.

No. 41. *s.* Ovarium and Fallopian tube in the broad ligament of the uterus; there is a bristle in the tube; the fringed border of its exterior orifice is seen resembling the flower of a pink in some degree; ovarium is about the size of a large almond, and tuberculated externally.

No. 42. *s.* Ditto: the fimbriæ run for more than an inch between Fallopian tube and ovarium; make two rows as it were.

No. 43. *s.* Fallopian tube slit open its whole length, to show that it is broader near the external, and narrow, very narrow, to-

wards the uterus; its inner surface is also thrown into longitudinal rugæ, like those internal surfaces which are occasionally to be distended.

No. 44. *s.* A very uncommon specimen of disease, not only from size, but from situation. The Uterus appears perfectly healthy at the cervix, and the Fallopian tubes and ovaria are in their natural state: there arises from the fundus uteri an uncommonly large scirrhus substance, consisting of two irregularly rounded masses joined together by a narrow neck, and feeling almost like the substance of gravid uterus; the smaller of these rounded masses is next the uterus; the larger is at a greater distance, and must have occupied a great part of the abdomen: there is a section through the whole mass, exhibiting the true scirrhus appearance: the largest mass is about twenty-one inches round, and the whole weighing five pounds six ounces.

No. 45. *s.* The posterior half of Uterus: the cavity is triangular, the cervix very rugous, the os tincæ is a round hole, and just admits a bristle (much narrower than usual); the ovarium of the left side is dropsical, and larger than a Child's head at birth.

No. 45. *b. s.* The right half of Uterus: Ovarium of that side dropsical, and twice the size of No. 45.

No. 45. *c. s.* One side of the Fundus Uteri, with the broad ligament, ovaria, and tubes; bristles in these tubes their whole length: on the body of the uterus are two scirrhus tubercles, the largest about the size of the first joint of one's finger; one ovarium is dropsical, nearly the size of a hen's egg.

No. 45. *d. s.* Broad Ligament, Ovarium, and Fallopian tube; ovarium dropsical, size of a small walnut.

No. 45. *e.* The same parts, same disease; ovarium larger than a common orange.

No. 46. *s.* The right half of Uterus; the tumor of ovarium also solid in many parts.

No. 46. *a. s.* A portion of an encysted Dropsy of Ovarium; size of an orange, full of a glairy fluid which coagulates in spirits, but was originally transparent.

No. 46. *b. s.* A very large portion of the same diseased Ovarium; the jelly scooped out; the different cysts, many of them communicating with one another, exposed: on one side is seen a portion of the diaphragm, with a very large ossification in it; also a portion of the lungs, showing that the ovarium had reached so high.

No. 47. *s.* The posterior half of Uterus: from its internal surface a number of small polypi hang by slender roots; and in the ovarium of the left side is a very large bag, which contained a fluid forming dropsy of the ovarium.

No. 48. *s.* A Tumor which adhered to the outside of the Fundus Uteri by a slender membranous peduncle, and contained a fluid.

No. 49. *s.* A dropsical Tumor in the left Ovarium; divided internally into cells.

No. 50. *s.* A large portion of dropsical Ovaria; in most places become solid, spongy and cellular.

No. 50. *a. s.* Uterus adult, slit open: left Ovarium was dropsical to a very great size; a portion still remains, and consists of a jellifying fluid, in large cells.

No. 50. *b. s.* One of these Cells about the size of a small orange; and the jellied fluid hanging from a hole in the side.

No. 50. *c. s.* Broad Ligament, with Fallopian tube, and a dropsical ovarium; size of an orange: injected red.

No. 50. *e. s.* Uterus; the left ovarium dropsical, and of the size of a small pear: dissecting room.

No. 51. *s.* A Dropsy of the Ovarium, of the size of a small hen's egg.

No. 52. *s.* An Ovarium cut open to show cells of the size of common peas, containing jelly, and forming the basis of future dropsy.

No. 52. *a. s.* An Uterus laid open; having very large ovaria, apparently hollow in some places, so as to be beginning to become dropsical.

No. 53. *a. s.* Posterior half of Uterus, with the right Ovarium enlarged to the size of a Child's head at birth, internally full of suet and hair: one half.

No. 53. *s.* Other half Ditto: no Fœtus, nor bone.

No. 54. *s.* An Ovarium of the same kind full of suet and hair. about the size of a hen's egg.

No. 54. *b.* A Ball of this suet and hair in spirits.

No. 55. *a.* Fibrous tumor attached to broad ligament; injected red: not described in MSS.

No. 55. A Tuft of hair from an ovarium, very considerable.

No. 56. Ditto.

No. 57. *s.* Uterus, Vagina, and Bladder from a Woman in the dissecting room: the body of the uterus pretty sound, but the ovaria of both sides much enlarged and ulcerated; several abscesses were also found, and the disease had extended to the bladder, which has two holes communicating with these abscesses: these holes are pointed out by quills.

No. 57. *a. s.* The Uterus, Vagina, and Bladder of a Woman from the dissecting room, all laid open: cervix uteri and upper part of vagina all cancerous and ragged; a large opening also between vagina and bladder, sufficient to pass a walnut.

No. 57. *b. s.* An Uterus opened; also from the dissecting room; rather larger than natural: ovaria forming two scirrhus tumors about the size of walnuts; one half of each is removed, to show internal scrophulous looking texture.

No. 57. *c. s.* Ditto, from a Woman in Charles Street, whose cystic duct is described as ulcerated from a Gall Stone, as large as a walnut and falling into the abdomen (vide No. 58. U). Cavity of the uterus considerably enlarged, and a pendulous polypus from the fundus seen also: both ovaria scirrhus; one is ossified quite, and both as large as oranges; os tinæ makes here a round hole, not an oval: she was reputed indeed as a maid; about 50.

No. 58. *s.* Uterus, Vagina, and Vulva; vagina is obliterated about an inch within the vestibulum, probably from long continued venereal inflammation.

No. 59. One half of the Uterus, in a section from side to side ; fundus uteri rather large ; there is an obliteration of the cervix just where fundus begins ; similar to stricture in the urethra.

No. 59. *a. a.* A section of another Uterus, with a similar stricture, but not so complete.

No. 59. *a. s.* The Bladder, and Uterus also of a Maid at forty-five : os tinæ here also round ; but it is principally intended to show Uterus growing close to the Bladder : the os tinæ pressed on the neck of the bladder, and occasioned inability to make water ; even the catheter could not be introduced till she was bled ; was at this rate bled about three hundred times in five years : was now dropsical.

No. 59. *b. s.* An Uterus about the size of the impregnated at two months, diseased apparently : rectum is laid open behind, and is evidently cancerous.

No. 60. *s.* Vagina inverted, dissected off from the posterior side of the Bladder, also carried downwards and forwards ; the bladder opened at one part to show that it was full of stones, and a quill passing from this opening, goes out at meatus urinæ, which from the retroversion of the bladder now looks upwards.

No. 60. *a.* An Uterus also inverted ; Vagina slit open.

No. 61. *s.* Uterus and Vagina from the dissecting room ; vagina had been so inverted and exposed to the air, that it had acquired the look of skin, and was hard, and callous ; the cavity of uterus internally black ; both ovaria were becoming dropsical.

No. 61. *a. s.* A bearing down or inversion of the Vagina ; a bougie in meatus urinæ, and another in os tinæ ; a section of the rectum behind also stretched out by a bent bougie ; the bladder moderately distended, also seen lying above, instead of before uterus.

No. 61. *b. s.* A similar preparation, only the Os Pubis is preserved in situ ; vagina slit open behind shows that fundus uteri has descended very low, so that os tinæ projects out of the body ; inside of vagina, putting the appearance and hardness of an outside surface.

No. 61. *c. s.* A similar preparation from a smaller subject, os pubis wanting; the exposed surface of vagina, from the urine perhaps falling on it, or from friction or both, is ulcerated in several parts: dissecting room.

No. 62. *s.* Vagina inverted: it sloughed away entirely from os tinæ: the woman notwithstanding recovered.

No. 62. *a. s.* The Uterus and Vagina of Mrs. Crook, who died of dropsy of the right ovarium, and had besides an exceedingly large umbilical rupture: vagina is opened to show the bed of a large pessary, which was encrusted with a coat of coagulable lymph and calcareous earth, so as to feel like stone; one edge of the pessary had made its way through vagina: there had been considerable bearing down, and discharge per vaginam.

No. 64. *s.* An Uterus, one half removed; there are two scirrhus tubercles in the substance of the fundus, one about the size of a large pea, the other of a large nut; ovaria externally convoluted like the brain of some small quadruped.

No. 65. *s.* Uterus and Vagina: uterus opened; a scirrhus tubercle in the substance of the fundus, about the size of a large nut.

No. 65. *a. s.* Uterus, with Vagina opened behind; upper side of vagina and cervix both beautifully rugous, substance of the uterus thickened, and of the tuberculated texture; a considerable tubercle on the posterior part of fundus, size of a small walnut.

No. 65. *b.* Tumors similar in structure in substance of uterus, and attached to broad ligament.

No. 66. *s.* Uterus, Vagina removed; a still larger scirrhus tubercle on the substance of the fundus: uterus half divided through the fundus to show this.

No. 67. Uterus cut open, one half turned down; internally and externally full of scirrhus tubercles, and enlarged to three or four times its natural size.

Nos. 67. *a.* 67. *b.* 67. *c. s.* Three sections transversely of the same Uterus, scirrhus and enlarged to the size of a gravid uterus at six months; there was a foetid discharge and hectic fever: it was in a milliner about forty-five, who was also a maid.

No. 69. *s.* Uterus and Vagina slit open: a large ossified tumour about the size of a Child's head at birth, appears to have grown in the substance of the fundus; internally, (for it is almost divided into two) it seems to have been cellular, and to have contained a fluid.

No. 70. *s.* Uterus and Vagina slit open; in the middle of the fundus, on the back parts appears a small polypus hanging by a very narrow neck.

No. 70. *b. s.* Uterus and Vagina slit open; a tubercle attached by a small peduncle, is seen in the fundus of the uterus like a small garden bean: several very small ones are also seen in the cervix.

No. 70. *d. s.* Uterus and Bladder, the anterior part of bladder removed: on the anterior side of the uterus appears a pretty large tubercle; these are turned up, and show cavity of the uterus behind, with a bristle in the Fallopian tube.

No. 72. *s.* Uterus slit open: a polypus with a pretty broad neck appears in the substance of the fundus, with a black bristle tied round it; the polypus is not larger than the end of one's finger.

No. 73. *s.* Uterus slit open; one half turned up, the other down, two polypi appear in its fundus, one as large as a filbert, the other about one-fourth of that size.

No. 74. *s.* Uterus, and Vagina slit open; shows a polypus as large as a Child's head at birth, hanging by a peduncle not above one-eighth of an inch diameter, and which therefore might easily have been extirpated.

No. 74. *a. s.* Uterus and Vagina slit open nearly their whole length: shows a polypus larger than a Child's head at birth, filling up vagina; it hangs from the fundus uteri by a peduncle, as thick as one's finger, and about an inch and a half in length. Dr. Hunter attempted to tie it several times, without success, chiefly from its great size: at an earlier period there would have been no difficulty in tying it.

No. 75. *s.* Uterus and Vagina slit open: a Polypus of the size of a very large walnut appears in the fundus; is almost perfectly spherical, and internally spongy.

No. 76. *s.* A section through fundus Uteri and Vagina: a polypus growing out of the substance of fundus uteri, not by a small neck, but as if uterus at once became a polypus; it fills up half vagina, and is half the size of a Child's head at birth: no operation could here succeed.

No. 77. *s.* The other, and largest portion of Ditto.

No. 78. *s.* Uterus dilated by a pyramidal polypus to the size of a gravid uterus at five months; vagina and uterus opened: the polypus adheres by its base to the fundus uteri, but it is not connected with the uterus any where else, and its apex is just pushing through Os Tincæ.

No. 79. *s.* A Polypus, got by extirpation from the living subject; cut into two: it is now white, and free from blood, internally spongy, and inclined to the nature of ligamentous fibre; size of one's fist.

No. 80. *s.* Ditto, smaller; procured ditto; treated ditto.

No. 81. *s.* Ditto, size of a common pear.

No. 82. *a.* (Not described: to section N. N.)

No. 82. *s.* Ditto, a little smaller.

No. 83. *s.* Ditto, very white, more loose in texture, but larger than the last, round.

No. 83. *a. s.* Ditto, ditto, extracted from the living body by ligature, size of a large orange.

No. 84. *s.* Ditto, very loose in texture, and oblong.

No. 85. *s.* Ditto, very small, but very white, round, size of walnut.

No. 86. *s.* Ditto, size of one's fist, grayish, tattered.

No. 87. *s.* Ditto, same size, one section turned down; inclining to black gray.

No. 88. *s.* Ditto; a white one, ragged and loose in texture, smaller than the last.

N. B. All these white or gray, and with small peduncles.

No. 89. *s.* Ditto, half white, half bloody, size of ordinary pear.

No. 89. *a. s.* A bloody Polypus of the Uterus, extracted by ligature by Dr. Hunter; about the size of a pear, with a peduncle an inch long and thick as a goose quill.

No. 90. *s.* A very large one, equal to a very large fist, very loose, very bloody.

No. 91. *s.* Ditto, a little less, ditto.

Nos. 92. *s.* 93. *s.* Polypi procured also by extirpation from the living subject; very bloody, and nearly the size of one's fist.

No. 95. *s.* An Uterus, size of the pregnant at three months, with a very bloody polypus adhering to its fundus: size of one's fist.

No. 96. *s.* A very bloody Placenta with a portion of membranes, which had been fraudulently introduced into the uterus, and afterwards extracted by a practitioner, as a real polypus.

No. 97. *s.* Uterus slit open from before; it is of the size of the impregnated uterus at two months: the woman, however, was not pregnant, but had the Furor Uterinus.

No. 97. *a. s.* An Uterus and Vagina slit open; there was no ovarium on one side, and the Fallopian tube terminated about half-an-inch from the fundus in a cul de sac.

No. 98. *s.* Vagina and Uterus slit open from behind: os tincæ, cervix uteri, and upper part of vagina destroyed by an ulcer; commonly termed cancer of the uterus.

No. 100. *s.* Ditto, Bladder also open before: ulceration smaller about os tincæ, about the size of a shilling; same appearance in the bladder in the side next uterus.

No. 101. *s.* Ditto; the whole cervix, and almost the whole vagina destroyed internally by ulceration.

No. 101. *b.* A Cervix Uteri cancerous, much thickened, and enlarged.

No. 101. *a. s.* An Uterus, cervix uteri, and greater part of vagina destroyed by cancerous ulcer, also opening into the bladder before.

No. 102. *s.* Ditto, ditto; also a hole large enough to admit a walnut between vagina and bladder, from ulceration.

No. 102. *a. s.* Ditto, ditto.

No. 103. *s.* Ditto, ditto; only the hole not so large; little else of the body of the uterus than the mere fundus remains; also the greater part of the vagina is destroyed.

No. 104. *s.* Vagina ulcerated to very tatters; a considerable portion of bladder removed to show this; fundus uteri entire.

No. 104. *a. s.* A section through a cancerous Uterus: vagina and bladder, os tinæ, and the greatest part of cervix ulcerated to tatters; scirrhus masses are seen formed on the outside of uterus and vagina, which increase it to bulk of a child's head at birth; bladder internally beautifully rugous.

No. 104. *b. s.* Other half Ditto.

No. 104. *c. s.* Section through a similar Uterus and Vagina; shows the same disease as the last, but not so far advanced.

No. 104. *d. s.* Other half Ditto; to the left ovarium is seen attached a mass of diseased absorbent glands.

No. 104. *e. s.* An Uterus of the same kind; vagina opened before shows os tinæ in shreds, and that the ulceration has gone through to rectum itself.

No. 105. *s.* Uterus slit open; rather large, like No. 97, but on the posterior part has a large portion of thickened omentum adhering to it, showing that it had once been inflamed. (Case not known.)

No. 106. *s.* Os Tinæ and upper part of Vagina, destroyed by ulceration; a kind of fungus is seen in the bottom of the bladder, which is open before.

No. 106. *a. s.* A cancerous Uterus, where the Cervix Uteri is destroyed by ulceration, a communication being made behind and before with the rectum and bladder. From a woman in the dissecting-room, 1782.

No. 106. *s.* An Uterus, with the broad ligament of one side; there is to be seen a scirrhus tubercle arising from the fundus uteri, and another at the side of the uterus, near the origin of the broad ligament.

No. 16. *a. s.* External and internal parts of generation; the clitoris and its prepuce so large as to resemble the corresponding organs in the other sex. (Not described.)

No. 16. *b. s.* External parts of generation. (Not described, marked on glass R. R. 60. c.)

Nos. 109. <i>s.</i>	} Not described in Hunterian MSS.
110. <i>s.</i>	
111. <i>s.</i>	
112. <i>s.</i>	
113. <i>s.</i>	
114. <i>s.</i>	
115. <i>s.</i>	
116. <i>s.</i>	
117. <i>s.</i>	
118. <i>s.</i>	
119. <i>s.</i>	

BREASTS, WOMEN. D. D.

No. 1. *s.* A perpendicular section through the nipple and body of the Mamma, from a girl at puberty, so as to look on the cut edges; the integuments are in situ: the gland is somewhat circular, and about three inches in diameter, and one in thickness at the centre; the substance of the gland is injected red, and is easily distinguished by its red white, from the yellow white of the intermixed lumps of fat.

No. 2. *s.* A horizontal section of the Mamma of the opposite side, from the same Girl; shows very well the intermixture of fat with the glandular substance, also that the very centre is all substance of gland without the least fat.

No. 3. *s.* A perpendicular section, being the central portion of the adult Mamma, about an inch broad, and including the nipple; there appears to be more of gland, and less of fat than in the young one: the point of the nipple is cut off to look on the divided Tubuli Lactiferi.

No. 4. *s.* The central portion of the Mamma from a pregnant woman: the areola is of a dark brown, except where cuticle and rete mucosum have been removed; there it is a perfect white, and shows that the blackness depended on rete mucosum.

No. 5. *s.* A portion of the Mamma, in which the tubuli lactiferi are filled with red corroding injection; their diameters near the nipple are larger than those of crow quills.

No. 6. *t.* Ditto, filled with mercury; many of the tubes are as large as writing pens.

No. 7. *t.* One of the Mammæ in the pregnant Rabbit, about three inches long, and two broad: near the nipple the tubuli enlarge into reservoirs nearly as large as gun bullets, then grow narrower as they come to the nipple; the gland is not completely filled, as it required the injecting tube to be introduced into distinct tubuli, in order to fill more than a portion; the follicles are not only found with small peduncles on the extreme branches, but form cells without any peduncle on the bodies of the great trunks before they ramify.

No. 8. *t.* The Mamma of a Negro girl, injected from the nipple with mercury, by two tubes only; a very large portion of the gland towards its outer edge is filled, more than could probably belong to one tubulus, so that the extreme branches of the tubuli communicate with one another, contrary to what we found in the Rabbit; there is no communication, however, near the nipple; and the thickest tubes are little larger than crow quills: she was not pregnant.

No. 9. *t.* A most beautiful injection of about one-fourth of the Mamma, from a woman (B. H.), who died just after delivery. The tubuli are filled with mercury, but not seen distinctly, on account

of the vast number of follicles, and that the preparation which was removed out of spirits of wine into turpentine, is not yet perfectly dried.

No. 9. *b. t.* A beautiful injection of the Female Breast; tubuli partly filled with mercury, and partly with red injection; this last has run to considerable minuteness; shows the conglomerated structure of the gland, but not the follicular.

No. 10. *t.* The Mamma of a newly-delivered Woman (B. H). The tubuli still larger perhaps than in the last, and filled all round with mercury: none of this has got into the follicles, but an absorbent vessel was filled from the cavity of one of the tubuli near the nipple; this runs into a gland of the size of a small pea, half-way between the nipple and axilla.

No. 10. *a. t.* Two of the Mammæ from a Bitch of the bull-dog size, some weeks after suckling: tubuli are not quite so large as in women, nor has the mercury run sufficiently minutely to fill the follicles; they are beautifully radiated, however, and several absorbent vessels have been filled from the cavity of the tubes near the nipple; those run between the skin and mamma upwards, in the direction of left subclavian.

No. 11. *s.* The central portion of a Mamma, with twelve black bristles introduced into the orifices of as many tubuli on the nipple.

No. 12. *s.* The Nipple merely, with 25 bristles introduced into as many tubes on its point.

No. 13. *s.* Ditto, ditto, with nearly as many.

No. 14. *s.* 15. *a. s.* Two portions of cancerous breasts: (Miss E.), cut off 1780; Hydatids: other bought.

Nos. 16. <i>s.</i>	} Not described in Hunterian MSS.
17. <i>s.</i>	
18. <i>s.</i>	
19. <i>s.</i>	
20. <i>s.</i>	
21. <i>s.</i>	
22. <i>s.</i>	

BRAIN. E. E.

No. 3. *s.* The superior part of the Brain of a Child injected red, to show that it is divided into two lateral hemispheres, and convoluted.

No. 5. *s.* The Pia Mater injected red; the injection has returned by the veins colourless: the processes on its under surface which pass between the convolutions of the Brain, are seen exceedingly vascular.

No. 6. *s.* Ditto, arteries only injected red, and the processes exceedingly distinct; these have been named *Tomentum Cerebri*.

No. 7. *s.* Ditto, the veins are white, from the colourless returning injection; exceedingly beautiful and minute.

No. 9. *t.* Ditto from a Child, exceedingly minutely injected, and spread on a card.

No. 9. *a.* The Medulla Oblongata from an adult, turned upside down, to show the loose floating *Tunica Arachnoides*. It is suspended by two threads fixed to the two vertebral arteries, which were cut through close to the inside of the *dura mater*.

No. 12. *s.* The superior longitudinal Sinus laid open to show the bridles or *fræna*, which pass from side to side, to prevent its unusual distention.

No. 12. *a. s.* A portion of *Dura Mater*; arteries injected red, to considerable minuteness.

No. 12. *b. s.* A portion of *Dura Mater*; longitudinal sinus laid open, shows round bodies in clusters, the supposed glands of *Pachionus*; and two bristles in veins, show that these veins open into the sinus against the current of the blood.

No. 12. *c. s.* Ditto, the arteries and veins full of their own blood, coagulated by vinegar.

No. 13. *a. s.* The basis of the Skull from a Child, injected red; the lateral parts removed to show the exit of the nine pairs of cerebral nerves; the olfactory in particular, are very distinct, very

vascular, and ramify over the ethmoid cribriform lamella; they are all pointed out by black bristles.

No. 13. *c. s.* The whole Brain of the Turtle, with a considerable portion of the cranium and upper jaw; the olfactory nerves are exceedingly large, and are traced into the cavity of the skull itself.

No. 14. *a. s.* One lobe of the adult human Brain, in which the lateral ventricle is seen rather larger than usual; but as the cranium was of the usual size, and the substance of the brain very firm, it is rather an instance of large ventricle, than of hydrocephalus.

No. 14. *b. s.* The other lobe Ditto, in which also the plexus choroides is left in the ventricle; in both ventricles a very fine lining or pia mater is seen, in which, however, the blood vessels, still full of their own blood, appear very large and radiated, especially about the posterior part of the ventricle.

No. 15. *s.* The basis of the Skull from a Child, injected red; it is intended as a counterpart to No. 13; shows the beds of the middle and anterior lobus cerebri, and that of the cerebellum; shows also the origins of the nerves within the skull; shows also infundibulum exceedingly vascular, and seemingly rather a solid cylinder than a tube.

No. 16. *s.* A section of Cerebellum; it hangs by one of the peduncles, or crura cerebelli: it shows the convolutions of the cerebellum smaller, and more parallel than those of the Brain; the internal whiter substance forming arbor vitæ, is seen branching between the convolutions of a darker ash-coloured cortical substance; the convolutions of the last substance go deeper in proportion, in some places, than in the Brain.

No. 16. *a. 16. b. s.* Sections of the Cerebellum of a man who had been long mad, and died so: the appearance in the centre of the medullary part of cerebellum, which resembles the section of a renal capsule, was thought at first peculiar; but by comparing it with others, it appears common though unnoticed; the brown lines are irregularly oval, and at first sight put one in mind of a drawing in miniature of some fortification.

No. 17. *s.* The Cerebellum from a Child injected, half-dried, and put afterwards into spirits: it gives a very fine idea of the great vascularity of cerebellum.

No. 18. *s.* The Pia Mater of Cerebellum, with its processes which run in between the convolutions pretty entirely removed, and injected red; the injection has passed colourless from the arteries into the veins: it shows same thing as the last.

No. 19. *s.* A section of Cerebellum from a very young Child; the vessels of the pia mater being black, show how deep its processes go.

No. 20. *s.* The Crura of Cerebrum and Cerebellum, and a portion of Medulla Oblongata: third, and fourth ventricles are laid open; a bristle passes through the iter a tertio ad quartum ventriculum; another passes under commissura posterior, into the third ventricle; a third bristle passes across the upper part of fourth ventricle, in the place of valvula major.

No. 20. *a.* Tuberculum Annulare; Corpora Albicantia of Willis, Pyramidalia, and Olivaria; third and fourth Ventricles: some nerves (origins of the seventh pair) are seen naked in the bottom of the fourth ventricle, with bristles under them.

No. 21. *s.* A portion of Medulla Oblongata: it shows tuberculum annulare on one side, with corpora olivaria and pyramidalia; on the other side is seen the fourth ventricle open: the tuberculum annulare, or pons Varolii stands above the corpora olivaria and pyramidalia; the last named bodies are in the middle, the olivaria on each side of them; the fourth ventricle is of the lozenge shape, and at the lower angle has been suspected to communicate with a cavity running the whole length of the spinal marrow, and occupying its centre.

No. 22. *s.* Ditto: the basiliary artery lies over the tuberculum annulare; on the same side low down are seen two round bodies over a bristle, viz: the Corpora Albicantia of Willis: on the other side we see the fourth ventricle open, and a bristle passing the white cord, supposed a nerve beginning; it does not look like a blood vessel: there is a strong appearance of nerves passing between one part of the brain and another, as well as from the brain to other parts.

No. 22. *a. s.* Ditto, showing more distinctly the crura of the cerebrum and cerebellum; the corpora olivaria and pyramidalia are likewise very distinct; on the other side are seen the corpora quadrigemina, and the vermiform process over the fourth ventricle.

No. 23. *s.* Corpora Olivaria, and Pyramidalia.

No. 23. *a. s.* A portion of Medulla Oblongata from a Child five months old; it shows principally corpora olivaria on the outside of corpora pyramidalia, exceedingly distinct and beautiful.

No. 24. *s.* The same preparation as No. 21; perhaps distincter: more dissected.

No. 24. *c. s.* A portion of Intestine, and large portion of Mesentery from the Ostrich; arteries injected red, veins yellow: the nerves may be traced, and are pointed out by black bristles from the root of the mesentery to the intestine itself.

No. 25. *s.* The Dura Mater from a patient, who died in Chelsea Hospital, having long had St. Vitus's Dance: a very strong thick membrane formed between dura mater and brain, is seen turned down; this covered only one hemisphere of the brain, and must have owed its existence to great inflammation: described by Mr. Adair Hawkins.

No. 25. *a. s.* Dura Mater from a Child of six years old; had the symptoms of worms and hydrocephalus: there is an adventitious membrane evidently from extravasated coagulated blood, and which explains No. 25; there had been once inflammation of the dura mater, and of the lining membrane of the ventricles constituting the first stage of hydrocephalus; the consequence was water in the ventricles to a considerable amount. (Dr. Saunder's Case.) (Vid. MSS.)

No. 26. *a. s.* Five Tubercles strung upon a thread; they are hard and of the scrophulous kind; found in the substance of the brain of a child injected for blood vessels: the largest is as big as a walnut, the smallest like a very large pea.

No. 27. *s.* A soft pulpy Tumour which had formed a bed for itself on the upper surface of the brain, large enough to admit a child's fist; made its way through the top of the skull, and rose above the surface of the frontal and parietal bones, for more than two inches in height, and four or five in breadth.

No. 27. *b. s.* A portion of the Skull, Dura Mater, and posterior lobe of the Cerebrum from an old gentlewoman, aged about seventy. A tumour rose gradually on the occiput. She consulted me about two years before. It appeared to me to be a swelling of the bone itself; at least it felt as hard as bone, and was smooth, rising gradually from its extreme boundary, as in swellings of bone. It gave her no uneasiness, and I advised doing nothing. Her friends desired me to examine it after death. She had continued well till within a short time of her death, when she became gradually sleepy, and more and more insensible till she died, after two or three days of total insensibility. It was a case similar to that of Hocquets, and of the old man in Monmouth street, and the case by Mr. Wathen.

No. 28. *s.* Inflammation, and Suppuration with Ulcer in the posterior part of the posterior lobus cerebri; the dura mater near the lateral sinus was corroded, and the sinus nearly dissected round; (Mrs. Bell's case); died suddenly: there were other tumours externally on the [skull?]: suspected venereal disease, (case wrote out).

No. 29. *s.* A portion of diseased Brain, to show inflammation of the cortical substance. (Case unknown, dissecting room).

No. 30. *s.* Suppuration of the Tuberculum Annulare, producing palsy of the upper extremities with some hydrocephalic symptoms, and killing in about two months. (Dr. Cooper's case, wrote out and drawn).

No. 31. *s.* Plexus Choroides, of either side, with some hard tubercles in them. (Case unknown).

No. 32. *s.* Ditto, with large ossified tubercles, from a woman who died mad.

No. 32. *a. s.* The basiliary and carotid arteries within the skull, spread on blue paper, to show universal ossification; from a gentleman (Mr. Clive), who died apoplectic.

No. 22. *b. s.* A portion of Corpus Striatum and Thalamus Nervi Optici of one side, from the same subject as the last;

plexus choroides also adheres in situ: a coagulum of blood as large as the end of one's finger is seen in the centre of corpus striatum; there was a coagulum as large as an orange in another part.

No. 33. *s.* A perpendicular section of a Woman's Head, injected red; the section is through the brain, by the side of the fal-ciform process: shows one side of the left hemisphere of the brain, lateral ventricle, nervi optici, arbor vitæ, one side of medulla oblongata, and a portion of medulla spinalis; the inner cavity of the nose, cavity of the mouth and one half of the tongue, some part of trachea, pharynx, and œsophagus.

No. 34. *s.* The other half Ditto; here besides what is seen in the former we see septum narium, genio-glossus, larynx, pharynx, and œsophagus, still better.

No. 35. *s.* A cross section of the head of a young Woman, injected as the last; all behind the ears is cut off: it shows the cavities of the nose and mouth, the orifice of the windpipe, palatum molle, and uvula from behind; shows also the brain in this kind of section, how deep its convolutions go, &c.

No. 37. *s.* The Brain of the Turtle injected red: it appears to consist of five lobes of different magnitudes, which internally are either hollow, or contain a medullary substance, like a nucleus or kernel within its shell; what corresponds to fourth ventricle in man is exceedingly large.

No. 37. *a. s.* Ditto; not so minutely injected, and the lobes not divided.

No. 39. *a. s.* Upper part of Spinal Marrow; basiliary artery injected red, with the vertebrales, and sending off the arteriæ spinales.

No. 42. *s.* One half of adult Spinal Marrow; dura matral coat removed on one side, to look on the size of the medullary portion, with the origins of the nerves.

No. 43. *s.* The other half ditto; showing ditto.

No. 44. *s.* A Foetal Medulla Spinalis injected red; dura matral coat removed, except on the sides; shows ditto.

No. 45. *s.* A section through an incurvated portion of Spine, about the uppermost vertebræ of the neck, from a child 12 years old; died paralytic, arms, &c.: spinal marrow pressed on by the angle of incurvation; in other places the vertebræ carious, and spinal marrow bare.

No. 46. *s.* Portion of adult Spinal Marrow, with a tumor, size of a large filbert, adhering; the cause of palsy in the lower extremities. (Dr. Knox.)

No. 47. *s.* Spina Bifida in a Child at Birth unopened; tumour, size of an orange.

No. 48. *s.* Ditto; very young; external integuments removed: the spinal process of last lumbar and first sacral vertebræ wanting, forming an oval of an inch long, and half an inch broad.

No. 49. *s.* Ditto, older, dissected; dura matral coat likewise wanting, and the nerves pushed out, forming right angles nearly with medulla spinalis, and adhering to the sides of the sac.

No. 49. *a. s.* A Spina Bifida from a Child; the nerves not pushed out as usual, but in their natural situation.

No. 49. *b. s.* Ditto.

No. 50. *s.* Ditto, a little older.

No. 51. *s.* Ditto half, injected.

No. 52. *s.* Ditto, injected.

No. 53. *s.* Other half Ditto, do.

No. 54. *s.* Ditto, uninjected.

No. 55. *s.* A very elegant dissection of Ditto; the nerves of canda equina seen forming right angles with the vertebral canal passing through the middle of the sac one and a half inch in length.

No. 56. *s.* Ditto, ditto, very large, as one's fist nearly; the outward part of the sac beginning to ulcerate: the bag would have burst and killed the patient soon.

No. 57. *s.* Portion of the Spine from Lowe's Child, where caustics had been applied ineffectually for incurvation; the ulceration of the body of the vertebra had gone in as far as the spinal marrow itself.

No. 59. *s.* }
 60. *s.* } Not described in Hunterian MSS.
 61. *s.* }
 62. *s.* }

No. 2. Preparation so marked, not described; does not seem to belong to this section.

THE EYE. F. F.

No. 2. *s.* The left Eyebrow and Eyelids, to show the quantity of Hair, &c.

No. 3. *s.* The right Eyelids injected red: bristles in the puncta lachrymalia; the inside of the lids exceedingly vascular.

No. 4. *t.* The same preparation as No. 2. injected red, and dried; the larger vessels better seen.

No. 5. *s.* The left Eyelids of a Child injected red: the tunica conjunctiva or membrane which lines them, and is continued over the cornea, is shown as one entire bag, by inverting the eyelids, and removing the eyeball; the part lining the eyelids is villous, and exceedingly vascular; that covering the eyeball is transparent.

No. 6. *s.* A similar preparation, the edges of the eyelids turned up so as to make a complete pouch.

No. 6. *a. s.* The Eye of a Cod; the section was made through the ball transversely after it had been hardened in spirits: one half is turned up, the other with crystalline and half of the vitreous is still in situ; in the turned up half the humours are removed, and show the retina terminating by a distinct border before it comes near crystalline; the eyelid, which is orbicular and single, unperforated and transparent in the middle like another cornea, is turned down; the retina is beautifully radiated, and behind choroid

is a thick fleshy substance, pointed to by a bristle, probably altering the shape of the humours, drawing crystalline back, &c., according to circumstances.

No. 8. *s.* The Tarsus or cartilage of the eyelid, dissected with its ligament; a bristle in one of the puncta.

No. 9. *s.* A couple of Eyelids injected red; the principal object is the orifices of the glands of the tarsus, on the inner edge of each eyelid; they range in one line regularly and at equal distances, nearly; in the under eyelids the secretion of the glands is seen coagulated by the spirit, and hanging from the orifices like minute globules of glass.

No. 10. *s.* The left Eyeball, with the Eyelids; the lachrymal gland is seen dissected above the outer angle of the eye; four bristles are introduced into the ducts of this gland, in the under side of the upper eyelid, near the angle.

No. 10. *a. s.* Section of the Eye of the Whale, (not described.)

No. 12. *s.* Both Eyelids, the gland removed, but bristles in the ducts; the secretion of the tarsal glands in drops on the orifices beautifully seen here.

No. 13. *t.* The Lachrymal Gland of a Sheep, having one large duct only; injected with quicksilver.

No. 13. *a. t.* The Eyelids, with the Lachrymal Gland of the Goose beautifully injected with quicksilver; the duct will easily admit a crow quill, and the cells of the gland are most distinctly follicular; the gland is as large as the human, and remarkable in proportion to the size of the animal: the secretion here is ropy.

No. 13. *a. a. t.* The Lachrymal Gland of the Goose, injected with mercury, in situ under the eyelid; it is much inferior to No. 13. *a.*; and some of the follicles are seen collapsed, after having been nearly dried full.

No. 13. *b. t.* The Eyelids, with the Lachrymal Gland of the Turtle injected with quicksilver: a conglomerated follicular gland; it has but one duct, which will nearly admit a goose quill, and is larger in proportion than in any other animal perhaps.

No. 14. *s.* The same preparation, wet, and injected red from the arteries; the substance of the gland and the membrana nictitans exceedingly red; the latter is also villous; the secretion of this gland is very ropy, and not like tears; the empty cells may be seen by a good glass, in some cut surfaces of the gland.

No. 15. *s.* The left Eyebrow and lids; tunica conjunctiva beautifully injected red; the puncta lachrymalia very well seen towards the inner angle, with bristles in them.

No. 16. *s.* The left Eyelids beautifully injected from a young subject; tunica conjunctiva complete over cornea, &c.; bristles are in the puncta lachrymalia; the eyelids detached at the outer angle, and half inverted, to show better the puncta, or orifices of the lachrymal sac.

No. 17. *t.* The same preparation, dried and spread on a glass globe, of the size of the eye-ball; shows ditto.

No. 18. *s.* Ditto, uninjected.

No. 18. *a. s.* A section through Optic Nerve and Ball of the Eye, the choroid coat injected with coarse injection, the artery of the crystalline also hanging down; humours removed and retina: intended to show the shape of the eye-ball already described.

No. 19. *s.* Tunica Sclerotica, divided all round on the middle of the ball, and one half turned up, the other down: to show the vessels of the choroid coat injected red; they are principally vorticose: the humours had escaped by a rent in one side.

No. 20. *t.* The Ball of the Eye dried after injection, to show its vascularity depending on the vessels of the choroid and iris; opened behind, humours and retina gone.

No. 21. *a. s.* The Globe of the Eye, with the Optic Nerve; suspended by the lenticular ganglion and its fibrils, which appear to the number of six or seven, perforating the sclerotica on their way to the iris itself.

No. 23. *s.* The Globe of the Eye: one half of cornea and sclerotica are turned up to show the uninjected choroid from without; the nigrum pigmentum shines through it.

No. 23. *b. s.* }
 No. 23. *c. s.* } Ditto, (not described).

No. 23. *a. s.* One half of Sclerotica turned up, in an otherwise entire eyeball, to show choroid in its uninjected state, continued into iris; the former appears of a dark brown from the nigrum pigmentum underneath, the latter of a blue and white intermixed; the vessels of the choroid are evidently continued into the tris.

No. 24. *s.* The anterior half of Sclerotica, with Cornea from an injected Eye: extravasation frequently takes place where choroid ends, and iris begins; the red circle seen on this inverted coat, shows that boundary.

No. 24. *a. s.* A section through the Eye, showing behind the choroid coat beautifully injected, and before a circle round the cornea, as in the last number.

No. 25. *s.* Sclerotica divided nearly all round, and inverted; on its inside is seen choroid coat beautifully injected red, forming an elegant network which every here and there forms penicilli, probably for the secretion of the vitreous humour.

No. 26. *s.* A section through Optic Nerve and Globe of the Eye, to show choroid coat very minutely injected: the distinctness of the preceding injection is lost.

No. 27. *a. s.* The posterior half of the Globe of the Eye, humours and retina removed, to look on the minutely injected choroid inside; most of the great vessels appear portions of parallel circles, the smaller ones make an intricate network.

No. 27. *b. t.* Choroid dried in situ, and hollow: shows as before.

No. 27. *c. s.* One half of Choroid in situ, the arteries injected red, the veins white; the trunks of the latter are large, and as soon as they come on choroid, divide into a great number of spiral branches.

No. 27. *d. s.* The Eye of the Sea Cow, one half turned up, the other down, humours removed; the posterior half of choroid is white like the retina itself, the anterior black, and the nigrum pigmentum is behind choroid.

No. 27. *e. s.* Ditto, shows ditto, shows also the optic nerve fibrous like the olfactory of the Turtle.

No. 28. *s.* The Eyeball, sclerotica partly removed, to look on choroid from without; the veins are the principal object, injected white, and forming the vasa vorticosa of Steno; the arteries are injected red, but less successfully: a very fine preparation.

No. 28. *c. s.* A section of the Coats of the Eye, injected yellow; in distilled water with gr. x. of spirit of sea salt; marked Jan. 15, 1778: the yellow colour of the injection is unaltered, but the sclerotica is dissolving very fast.

No. 29. *s.* The Eyeball, sclerotica entirely removed, as well as cornea; the choroid and iris are seen injected white and red, and the termination of the one and beginning of the other distinctly seen.

No. 30. *s.* Ditto, the anterior half of sclerotica and cornea removed; choroid injected red, and very vascular.

No. 30. *a. e.* Vessels of choroid and iris minutely injected red: (not described).

No. 31. *s.* The Eyeball; the vessels of choroid continued on to the iris.

No. 33. *s.* Ditto; the preparation suspended by one of these vessels (by sclerotica); injected red.

No. 34. *s.* Sclerotica, with the adhering Choroid, injected red, divided into two parts, and inverted: in the lower one choroid is seen exceedingly red; in the upper the vessels are continued from the ciliary processes to the iris. [?]

No. 35. *t.* The whole of Choroid Coat and Iris injected, and dried on a glass globe, showing distinctly as in the former.

No. 35. *a. t.* Ditto, ditto.

No. 37. *s.* The Globe of the Eye, with the Optic Nerve, from a child: cornea only is removed to look on the iris, very elegantly injected red; the arteries at first view seem portions of the radii of a circle cut off at some distance from the centre, equally all round; the middle space thus left is the pupil, and the arteries seem to anastomose at this border. On a closer inspection these arteries do not form straight but serpentine lines: and some of the arteries at least appear to return on themselves, after having touched the edge of iris.

No. 39. *s.* Iris, after removing Cornea, cut off, except at one point from the globe of the Eye, and hanging down; injected red: the arteries very distinct and serpentine.

No. 40. *s.* The Globe of the Eye, minutely injected red; divided into two, except at one point; both halves inverted, one hanging down from the other. Choroid shows the vessels very distinctly, though not minutely; the injection has not reached the ciliary processes: the preparation is intended to show these last in their uninjected state; they appear like so many plaits or folds in the anterior edge of choroid; these plaits projecting, touch the edge of the crystalline humour, and are by some supposed ligaments of attachment.

No. 41. *s.* The same kind of preparation, only the halves are not inverted; the choroid, and ciliary processes minutely injected red: the ciliary processes make the line of distinction between choroid and iris, and here seem right angled triangles; an appearance more distinctly seen in the ciliary processes of the Seal's eye.

No. 42. *s.* Choroid and Iris inverted, to show the ciliary processes injected red, in a fore view, so as to look on one edge of the triangle.

No. 43. *s.* The anterior half of the Globe of the Eye, in the Ox; the ciliary processes very large; the arteries injected red, project from the surface and form villi.

No. 44. *t.* Ditto, exceedingly red; the preparation seems to have first been steeped in spirit of wine, and then put into the turpentine to dry; suspended by a glass bubble.

No. 46. *s.* The Choroid, Iris, and Sclerotica of the Bullock's Eye inverted, and hanging by the optic nerve; the arteries injected red: some of the ciliary processes are bent back on purpose to show the anterior side of the triangle, as it were, which is here 1-16th of an inch at least; the vessels of the choroid are exceedingly beautiful, and vorticose.

No. 47. *s.* The same preparation as No. 43. from the Turtle: the ciliary processes very small; project but little beyond the surface of choroid; the course of the arteries towards them radiated, and beautifully distinct.

No. 48. *s.* An Ox's Eye injected red, the anterior half of Sclerotica with Cornea removed; the choroid remarkable for its large distinct vorticose vessels, the vessels on the iris small and indistinct, and the pupil approaches more to an oblong, with the angles rubbed off, than a circle: the preparation is suspended by two glass bubbles; gives an idea of the whole vascular coat.

No. 49. *s.* The Eye of a Fœtus about seven months, injected red; cornea is removed: a very elegant vascular membrane is here seen in contact with the crystalline humour as if the anterior half of its capsula (but commonly detached), and shutting up the pupil; its arteries meet seemingly in a point in the centre, others cross from one side to the other; the membrane is named Pupillaris, and is lost at birth.

No. 49. *a. t.* Iris, with Membrana Pupilli, from the human Fœtus, injected red, previously dried and spread on green paper: the greater number of vessels do not reach the centre, but are reflected back towards the inner edge of the iris; others form a communication in the very centre of the pupil; two large trunks are seen on each side; one from choroid, going into iris and membrana pupilli.

No. 49. *b. s.* Anterior part of the Globe of the Eye, from a Fœtus; membrana pupilli injected red; shows as the last.

No. 49. *c. s.* The Eye of a Fœtal Calf, but near its time, at least of a large size; one half of the coats are removed, the hu-

mours in situ, except the aqueous: membrana pupillaris exceedingly beautiful, and formed by vessels, partly from the iris, partly from the capsule of the crystalline, anastomosing more freely in the centre of the membrane than in the human subject.

No. 49. *d. s.* Ditto, still more minutely injected, and part of the vitreous humour removed, to show the capsula of the crystalline injected behind, from an artery passing through the centre of the vitreous humour; its branches are radiated, but convoluted, and the membrana pupilli is beautiful beyond description; the optic nerve seems smaller in proportion to the size of the eye than in the human subject.

No. 49. *e. s.* Ditto; Membrana Pupilli torn away from one side, and the crystalline humour (with part of the vitreous,) hanging by these vessels of the other side; its capsula gives the membrane which appears as so many parallel lines.

No. 49. *g. s.* Ditto. capsula of the crystalline also injected and seen on one side; the artery which comes from the centre of the optic nerve and passes through the vitreous humour to the crystalline, distinctly seen unbroken: a little more extravasated.

No. 51. *s.* The Membrana Pupillaris very distinct, and also a little torn in the centre.

No. 52. *s.* Ditto very minutely injected, but also torn in the middle.

No. 53. *s.* The whole of the Eyeball, cornea only removed; membrana pupillaris is seen complete, adhering to the crystalline humour, its arteries injected red, but not minutely.

No. 54. *s.* The same preparation as No. 51. Membrana Pupillaris a little torn in the middle, the arteries injected red, very distinct, and evidently in some places returning, after they reach the centre of the pupil, also running waved like those of iris.

No. 55. *s.* The same preparation as No. 53, the Membrana Pupillaris adhering to the crystalline capsula: the arteries may be seen passing from iris into the membrana pupillaris.

No. 56. *s.* The whole of the Eyeball injected red, the anterior half turned down, membrana pupillaris seen from the inside.

No. 57. *s.* A very elegant Membrana Pupillaris, torn, however, a little in the middle; the arteries seen distinctly passing from iris to membrana pupillaris, and returning near the centre.

No. 60. *a. s.* The Rabbit's Eye, (muscles and fat dissected off), one half turned up, the other down: it is from a white rabbit; either in those of this colour there is no nigrum pigmentum, or the web corresponding to it is colourless: it is injected red, and the ciliary processes are large, and choroid coat very fine; humours removed.

No. 61. *s.* One half Ditto; the retina, choroid, and humours removed to look on nigrum pigmentum from within; it covers not only choroid, but ciliary processes, and iris.

No. 62. *s.* A section through Optic Nerve and Eyeball, retina and a portion of vitreous humour remaining; sclerotica, choroid, nigrum pigmentum, and retina are seen in a side view.

No. 64. *s.* An Eyeball; the divided sclerotic turned up and down; the vessels of the choroid injected white: there is an appearance of the nigrum pigmentum being here on the outside of choroid, instead of the inside; the nigrum pigmentum seems also darker in this eye than in others.

No. 64. *a. s.* The Eye of a Negro split into two halves, with the Optic Nerve, but not totally divided: nigrum pigmentum is seen not only before, but behind the choroid.

No. 64. *b. s.* Ditto, divided in the contrary direction and separated: showing ditto.

No. 65. *s.* The anterior half of the Eyeball injected red; nigrum pigmentum seen covering the ciliary processes; it is removed from the iris, except at one place, to show the difference.

No. 66. *s.* A section through Optic Nerve and Eyeball, to show Retina seemingly a continuation of optic nerve, and lining the eyeball next pigmentum nigrum, between it and the humours; towards the ciliary processes it becomes very indistinct.

No. 67. *s.* A transverse section of the Eyeball, the humours removed: the optic nerve seen in the bottom, making as it were a little cup, and rounds its edge retina arising; the retina appears of a gray colour.

No. 68. *s.* Eyeball, the sclerotic, choroid, and nigrum pigmentum removed: retina is seen enclosing the humours of the eye; the anterior part of the other coats, from ciliary processes forwards, is left in situ.

No. 69. *a. s.* Shows principally Ciliary processes of Iris, and vessels of the retina in a calf, No. 6. *a.*, chiefly the cornea; human Eye grooved internally.

No. 70. *s.* The Ox's Eye injected red, opened, and inverted; attached by the ciliary processes to the crystalline and vitreous humours, from which the preparation is suspended by means of a glass bubble: very considerable arteries are seen running on the inside of retina, and anastomosing with one another.

No. 71. *s.* The Eye of a Cod divided, almost, into two halves: the retina has more of the fibrous appearance than in other animals; makes a regular border just where ciliary processes begin in other animals; consequently is not continued near the crystalline or iris.

No. 72. *s.* The Retina of the Turtle's Eye injected red: seemingly more a continuation of optic nerve than in man.

No. 72. *a. s.* The Turtle's Eye with the Eyelids, treated as the last; sclerotica is remarkably thick and cartilaginous, nigrum pigmentum exceedingly dark, and the optic nerve projects very much into the cavity of the eye, forming a bulb rather than a cup before it gives off retina.

No. 72. *b. s.* Ditto reversed, the eyelid downward; the ciliary processes are very small, and rise but little above the inner surface of choroid: the same projection of optic nerve is observable as in the last.

No. 72. *c. s.* The Eye of the Cameleon treated as No. 72. *a.*, crystalline and retina in their places; the optic nerve instead of

projecting into the cavity of the eye, and forming a bulb, as in the Turtle, makes a small cup, which looks like a dark spot in the bottom of the eye; retina likewise terminates, as in the cod, by a regular border, before it comes near the crystalline.

No. 72. *d. s.* The Eye of the Pike, ditto; the retina appears rugous, like the internal surface of human stomach, only the rugæ are radiated; and it is probably this, which is delineated by Eustachius.

No. 72. *e. s.* The Eye of a black Rabbit; the nigrum pigmentum between retina and choroid, and on all the outside of iris, is exceedingly black, particularly towards the anterior parts of the eye-ball: the optic nerve not only expands into retina, but becoming bifid, is extended to the right and left in the form of nerve, having the retina going off from its edges within the eye-ball; this division is also pointed out by an artery injected red.

No. 72. *f. s.* Another Rabbit's Eye, the same as No. 60. *a.*; showing the continuation of retina from optic nerve, and the other circumstances of No. 60. *a.*

No. 72. *b. b. s.* The Turtle's Eye, divided but not totally, into an anterior and posterior half: sclerotica appears of great thickness, and is almost cartilaginous; the extremity of the optic nerve seems to project forward in the bottom of the eye, instead of forming a cup.

No. 73. *s.* The posterior part of the human Eyeball inverted; choroid minutely injected red, hanging down: the texture of retina is here more evident, viz: an internal vascular web, transparent as a spider's, and an external pulpy opaque membrane, probably the medulla of the nerve; this external membrane broke in many places shows more distinctly the two.

No. 74. *s.* A section of an injected Eye, iris turned down; retina is seen hanging from the optic nerve, and shows as in 73.

No. 75. *s.* A section through Optic Nerve and Eyeball, to show the nerve injected; retina is also seen, and the crystalline in its place.

No. 76. *s.* Ditto, injected red; the nerve exceedingly vascular.

No. 77. *s.* Ditto, sclerotica removed only in part, and the injected optic nerve cut open.

No. 78. *s.* The Elephant's Eye cut open, the anterior half turned up, the other down; optic nerve is seen in the bottom of the ball making a cup, and divided by a border from retina all round.

No. 79. *s.* The same preparation in the Neel Ghaw; the optic nerve projects in the bottom of the ball, as if distinct from retina; there is also an appearance of retina being continued to the anterior edge of ciliary process.

No. 80. *s.* A section through Optic Nerve and Eyeball: shows the crystalline humour in situ, just before the ciliary processes, and behind iris; a considerable portion of it, however, also projects backwards behind ciliary processes, so that the anterior edges of the last would, if produced to meet those of the other side, divide crystalline into an anterior and posterior half.

No. 80. *a. s.* The Eye of the Turkey treated as No. 60. *a.*; the ciliary processes long and waving: optic nerve projects much into the cavity of the eye, and retina is a very thick web, and is divided at one part by a number of processes in one line of unequal lengths, projecting into the cavity of the eye, and entering the body of the vitreous humour, so as to resemble the tooth of a large saw; these processes are apparently muscular, and serve, perhaps, to draw the humours of the eye nearer the bottom of the cavity, altering, occasionally, the usual focus of the crystalline, probably, when an object is very near to the eye.

No. 80. *b. s.* Ditto, ditto: this musculus serratus more distinctly seen, a white bristle passing through its black substance; it is situated in the bottom of the cavity, near to one side of the entrance of optic nerve.

No. 80. *c. s.* The Eye of the Camelion, ditto; a similar process of the same shape, and proportional size as in the turkey, is seen; this process is black, and resembles the point of a spear in

miniature, being longer in proportion to the breadth of its basis than in the turkey.

No. 81. *s.* Anterior half of the Eyeball : crystalline seen from behind and before, making a kind of flat sphere ; that is, a circle in the fore and back view, but an ellipse in a side view.

No. 82. *s.* The whole Eyeball, cornea and iris only removed : the crystalline seen in a fore view, in situ, larger than any common garden pea.

No. 83. *s.* The anterior half of the Eyeball ; crystalline seen from behind.

No. 84. *s.* Ditto ; seen also before.

No. 86. *s.* The Vitreous Humour, with the crystalline in its situation ; part of the nigrum pigmentum of the ciliary processes, as well as of iris, still adheres to the crystalline : on a card, supported by two pins.

No. 86. *a. s.* Ditto, suspended by a thread.

No. 87. *s.* Ditto, hanging by a thread ; the red injection of the arteries extravasated round ciliary processes.

No. 90. *s.* Ditto, in the Elephant : the crystalline not nearly so large as in the Neel Ghaw, or Ox.

No. 91. *s.* The human Crystalline pinned on a card, by means of a portion of the still adhering vitreous humour ; the nigrum pigmentum of the ciliary processes and of the choroid, for some way round also in situ, makes a fine contrast between itself and the crystalline, now become opaque and white from spirits.

No. 92. *s.* The Vitreous and Crystalline Humours in a Slink Calf, dried and in turpentine : but as they had been dried without maceration, they were dried black ; perhaps, too, nigrum pigmentum is left on one side.

No. 93. *s.* The Capsula of the Crystalline seen from behind, injected red: the artery comes upon it in the very centre, and thence it sends branches like the radii of a circle, proceeding all round, and enveloping the capsula; they are not seen on the fore part: hung on a card.

No. 93. *a. s.* Capsula of the Crystalline from a human Foetus, injected red, and containing the humour; on blue paper.

No. 93. *b. s.* Ditto, from the Calf, injected black; on white paper.

No. 93. *c. s.* Ditto, from the Calf; the vessels which were going to membrana pupillaris left loose, and floating all round its edge.

No. 93. *d. s.* Ditto, well injected behind: the capsula of the crystalline does not look vascular before, which seems as if its vascularity behind was given on account of membrana pupillaris; also, these vessels cannot be injected in the adult, where this membrane does not exist.

No. 95. *s.* Ditto, suspended by a portion of vitreous humour.

No. 97. *s.* Ditto, suspended by a glass bubble, with a portion of membrana pupillaris before: here, it seems almost evident, that membrana pupillaris, and the posterior part of the crystalline capsula are one and the same membrane, as a portion of membrana pupillaris is here left on.

No. 99. *s.* The Capsula of the Crystalline, from a Calf, dried on a piece of talk, and suspended on a glass bubble; it is injected red, and very distinct.

No. 100. *s.* The Capsula of the Crystalline as it covers crystalline, injected red; from the calf.

No. 101. *s.* Ditto, from the Lamb, with iris, and a portion of membrana pupillaris.

No. 102. *s.* Ditto, from the Calf. In none of these are vessels to be seen on the anterior part of the crystalline, if membrana pupillaris is removed.

No. 102. *a.* The Eye of a Foetal Lamb, injected red: two

large vessels are seen, one running over the eyeball, the other under; when they come to the edge of the cornea they unite and form a circle, from whence probably the iris and membrana pupillaris are furnished.

No. 103. *s.* A diseased Eye; the retina looks here as if collapsed all round, forming a solid mass, continued from optic nerve, and there is no appearance of humours: (case unknown).

No. 104. *s.* The Eyelids of a Man who was blind of an eye; the muscles are adhering to the eyelids themselves, or to a kind of shrunk tunica sclerotica; the optic nerve apparently sound.

Nos. 105. *s.* }
 106. *s.* }
 107. *s.* }
 108. *s.* } Not described in Hunterian MSS.
 109. *s.* }
 110. *s.* }
 111. *s.* }

NOSE AND MOUTH. G.G.

No. 1. *s.* The Alæ Nasi and Septum, so far as they are cartilage; that is, stript of the external integuments and internal Schneiderian membrane.

No. 2. *s.* That part of the Head, from a freshly injected subject, which shows exactly the right side of the cavity of the nose, and upper part of the mouth, in one view, and the antrum of Highmore opened with a portion of the orbit of the eye, in another; a portion of os turbinatum superius is removed, to show the opening of the antrum with a bristle in it; os turbinatum inferius is in situ, covered by a very vascular porous membrane; the sphenoidal sinus of one side is also seen open.

No. 3. *s.* A Section of the Head, injected red, showing septum narium complete, with a portion of os ethmoides above, and roof of the mouth below; the septum narium is not all in one plane, but in the middle convex to the left side, and concave to the right, and is exceedingly porous and vascular.

No. 3. *a. t.* Septum Narium complete, with a portion of Uvula; all injected, very highly, red.

No. 4. *s.* The counterpart of No. 2, that is, the left side of the Nose and Mouth; it shows a bristle in ductus ad nasum, antrum opened, and the two turbinata in situ: the orifice of the Eustachian tube is also seen both in this and its fellow, about a quarter of an inch behind the posterior end of os turbinatum inferius; the sphenoid cell is also seen open behind os turbinatum superius, and above the anterior upper end of the same bone is seen one of the frontal sinuses open.

No. 5. *s.* The same preparation as No. 2, from a younger subject, most beautifully injected red: there is a bristle in ductus ad nasum, its lower end comes out beneath turbinatum inferius; another bristle, in one of the cells of the ethmoid, comes out above os turbinatum superius, under a kind of os turbinatum supremum or Testum Morgagnii; a third bristle is in the mouth of the Eustachian tube.

No. 6. *s.* The opposite side of the same Face, showing an exceedingly beautiful injected septum narium; Schneider's membrane appears honeycombed, like the inner surface of a child's stomach, particularly towards the anterior part; there is a bristle in the Eustachian tube, and one in the ductus ad nasum; and the antrum is opened externally.

No. 7. *s.* A perpendicular section through Crista Galli, Septum Narium, Turbinata, and ossa Maxillaria superiora, so as to look on the anterior half of the nose from behind: the ossa turbinata are seen hanging down; also the thickness of the cartilaginous septum and the bony, as well as of the membrane covering them: the nose is entire on the opposite side.

No. 8. *s.* The posterior part of the same Nose, and roof of the Mouth: the same things are seen as in the last; the cavities of the antra are also seen with bristles in their orifices; a considerable portion of the orbit of the eye is also seen; on the back part, come in view, the foramina optica, lacera, rotunda, and the posterior nostrils.

No. 9. *s.* That kind of section of the Nose and roof of the Mouth, where merely the projecting anterior part of the nose is removed, and so much of the posterior, as just to show the larger portion at once: the sphenoidal and maxillary sinuses are seen opened; also the ossa turbinata, and septum narium.

No. 10. *s.* The same preparation nearly as No. 7, only in a larger subject.

No. 11. *t.* The Parotid Gland, injected with red injection, by the duct, to great minuteness; it appears very much conglomerated.

No. 12. *t.* The same Gland, filled with quicksilver, by the duct, to considerable minuteness: on examining the extreme branches of the excretory duct, they seem to be follicular.

No. 12. *a. t.* A Parotid Gland, beautifully injected with quicksilver; the external ear still adheres, and the gland, with its duct, are in situ.

No. 12. *b. t.* A Parotid Gland, also injected with mercury, but not in situ, and less minutely filled than the last.

No. 12. *c. s.* Ditto, the arteries injected red.

No. 12. *d. t.* Ditto, duct injected with mercury; the external ear also attached.

No. 13. *t.* The same as No. 12.

No. 14. *t.* Ditto.

No. 14. *a. t.* A Maxillary Gland, injected with mercury, and the duct preserved through its whole length; the minute follicular structure is also seen.

No. 14. *b. s.* Ditto, where the proper Duct is also joined by another from the sublingual, near its termination.

No. 14. *c. t.* Ditto, shows ditto.

No. 14. *d.* Ditto, only a small portion of the Duct preserved.

No. 14, *e. t.* The two Maxillary, and Sublingual Glands nearly

in situ; the ducts of the former injected with quicksilver; no duct comes into them from the latter.

No. 14. *f. t.* A Maxillary Gland, and Duct injected its whole length, similar to the last.

No. 15. *s.* The Maxillary and Sublingual Glands, with bristles in their ducts, adhering to one-half of the tongue: the tongue is slit from the root to the apex; it is the left half, with the left maxillary and left sublingual, which are seen; the duct of the maxillary is about three inches long, and opens near the tip of the tongue, on its under surface; the ducts seen of the sublingual are eight in number; these open on the under surface of the tongue, near its outer edge.

No. 16. *s.* A section transversely through the Tongue, near its apex, through the lower jaw, with the lower lip; the tip of the tongue is turned up, and a couple of bristles are seen in the orifices of both maxillary ducts: injected red.

No. 17. *s.* The anterior half of the Tongue, hanging by its apex: on the one side are seen bristles in the ducts of the maxillary gland; also, two in the largest ducts of the sublingual: injected red.

No. 18. *s.* The same kind of preparation as No. 16. reversed; this hangs by the lower lip, that by the posterior part of the section of the tongue: bristles are seen in the ducts of the sublingual glands, and in the ducts of the maxillary, the apex of the tongue being turned up to show their orifices; a couple of bristles are also seen in the orifices of two of the labial glands.

No. 20. *s.* The Mouth of a little Child: the cheeks are removed; the mouth wide opened to show the cavity; the gums and tongue injected red.

No. 21. *s.* The roof of the Mouth, Teeth, and Alveolar Processes, from an adult, injected red: the gums are exceedingly beautiful, the teeth well shaped, and the hard palate is distinguished from the soft; in that the first is of a pale colour, the last very red;

on each side of the uvula are seen the tonsils, making a cluster of follicles.

No. 22. *s.* The same preparation, with the addition of the upper Lip, of the Cheeks and Nose; shows ditto.

No. 23. *s.* The human adult Tongue, with the Epiglottis and the Os Hyoides; shows the upper surface of the tongue follicular behind, and villous for about three parts before: some of the villi are long, and project beyond the rest; others less prominent have round heads, in some like pin heads, in others like heads of tacks.

No. 24. *s.* Ditto, remarkable for a large hole on the middle of the posterior quarter; this hole terminates abruptly in a cul de sac, and is named foramen cæcum.

No. 25. *s.* Ditto, injected red, and very vascular.

No. 26. *s.* Ditto, from a Child; exceedingly red.

No. 27. *s.* One half of the human Tongue, viz., the anterior, injected red; to show particularly the processes, or villi.

No. 28. *s.* The posterior half of the Tongue, with Epiglottis; to show particularly the follicular surface, with the tonsils.

No. 28. *a. s.* Posterior half of a Tongue, with Epiglottis: the follicles in the root of the tongue are the principal object.

No. 29. *s.* The Tongue of a Child: one carotid only has been injected red; the injection stopped in the middle line of the tongue, and had not passed to the other side, so that one half of the tongue looks black, the other white: the upper part of the larynx is also seen.

No. 30. *s.* The Tongue of a Child injected red; a membrane, resembling cuticle, with rete mucosum, is turned down.

No. 30. *a. s.* A Child's Tongue: the cuticular covering turned down in several places.

No. 32. A whole Tongue injected red, showing ditto: here there is an appearance as if the whole villi had sloughed off.

No. 33. Greater part of a Tongue, beautifully injected red: the morbid villi, except at one place, removed; those remaining black and mortified, as it were, while these underneath are exceedingly red and vascular.

No. 34. The whole Tongue, with Larynx slit open: the morbid villi left on at the edges; in this tongue they were so loose, that the least touch brushed them off.

No. 35. A very large anterior portion of a Tongue: it is the superfluous part of a woman's tongue, cut off by Mr Lambert; did well with the other part.

No. 35. *a. s.* The under Jaw, with the bifid Tongue of the Viper: showing double tongue.

No. 36. The upper part of Pharynx, the opening of the Wind-pipe, Tonsils, and root of the Tongue; to show the follicles, making a kind of spread out tonsil and v. v.: injected red.

No. 37. *s.* A section through basis of the Skull, Nose, roof of the Mouth, and Tongue; the pharynx adheres to the basis of the skull all round: the intention of the preparation is to give a view of the isthmus of the fauces, uvula, tonsils, and upper part of the pharynx: injected red.

No. 38. *s.* The under half of the Mouth, with the beginning of the Larynx: the tonsils are seen by the sides of the tongue, near the root, and appear an aggregate of follicles.

No. 39. *s.* The Isthmus Faucium, Tonsils, and a little portion of the Tongue, with Uvula, injected red: shows the tonsils particularly.

No. 40. *s.* Palatum molle, Uvula, Tonsils, and posterior side of Pharynx uninjected: shows tonsils very large.

No. 41. *s.* An Ulcerated Tonsil, with the Tongue covered with

black fur, from a Child who died of a putrid sore throat. Dr. Hunter says it was perfectly rotten; fingers went through and through.

No. 41. *a. s.* Pharynx, and Œsophagus slit open; to show the coagulable lymph, forming an inflammatory crust which lines these parts, and covered also the tongue: in a child who died of thrush.

No. 41. *b. s.* Ditto, five years old. (Dr. Gartshore).? [Tongue, with section of Larynx, Trachea and Bronchi; tongue furred, right bronchus obstructed by enlargement of bronchial glands].

No. 41. *b. b.* Pharynx slit open behind, Uvula in situ, and Tongue; putrid sore throat. Case, Mrs. M——. The exudation or inflammatory membrane reached the œsophagus itself: the cuticle is here black.

No. 42. *s.* A portion of the basis of the Skull and Nose; the last shows the under edges of turbinata inferiora: the view of the preparation is to show a follicular surface at the attachment of pharynx to the basis of the skull, in the middle space between the mouths of the Eustachian tubes, and directly behind the upper end of vomer. Dr. Hunter calls this the third Tonsil; injected red.

No. 43. *s.* A similar Section, showing this most beautifully injected, and resembling follicles.

No. 44. *s.* Ditto, less injected, but having more of the foliage appearance.

No. 45. *s.* The Tongue before, Pharynx opened behind, Isthmus Faucium, and Palatum molle in situ; Larynx standing before Pharynx: to give a view of epiglottis and orifice of the windpipe, and of their situation with respect to the fore-mentioned parts.

No. 46. *s.* Ditto, injected red.

No. 46. *a. s.* Ditto, in Slink Calf, with Thymus.

No. 48. *s.* Larynx hanging so as to look through its aperture, the narrowest part of which, just below the lower bands, is termed Glottis.

No. 49. *s.* The Larynx opened behind, the Tongue in situ; injected red: shows orifices of the sacculi laryngis.

No. 50. *s.* Larynx opened behind: the cavity of one of the sacculi exposed, the bottom is turned upwards; the other unopened: the muscles of the larynx, retaining still their natural redness, are dissected, and have bristles under them.

No. 50. *a.* The Os Hyoides, Larynx, and portion of Trachea, with Pharynx, from a Man who cut his own throat, and was recovering, but died from some other accident. (Bengal.)

No. 51. *s.* Trachea, from its bifurcation to the upper end of Larynx, slit up: it shows the cartilaginous rings of about one-eighth of an inch in breadth which compose trachea, and are connected by intermediate elastic ligaments: the inner surface of trachea is seen follicular; the width at different parts is the object principally in view; it is narrowest at the Glottis and widest just below that.

No. 52. *s.* Larynx, with Thyroid Gland dissected, from a woman: it lies on the fore part of the larynx, just below thyroid cartilage, in form of a crescent; a process runs up from the middle towards pomum Adami; from one extremity to the other following its curve will be about four inches; it is about one inch broad, and looks follicular.

No. 52. *a.* The largest Bronchocele, perhaps, ever seen, from a patient who died at St. G: on one side it resembles an enlarged kidney of the hydatid kind, but, cut into the tumour seems, in many places, of the pulpy scrophulous kind. The lymphatic glands, in the neighbourhood, seem to have put on the same disease. Œsophagus is seen slit open on the back part of the tumour: the trachea and larynx are nearly surrounded by the tumour.

No. 52. *b. s.* A Bronchocele, or Enlargement of Thyroid Gland, still larger than the former. Case is published by Mr Prosser, and

engraved. Tumor surrounds completely both larynx and pharynx, which are marked by bougies passed down them.

No. 52. *e. s.* A Bronchocele.

No. 53. *s.* The same preparation from a Child, injected red: it is, perhaps, one of the most vascular parts in the body, in proportion to its bulk.

No. 53. *a. s.* Ditto, from an Adult.

No. 54. *s.* Ditto; a dilatation of the substance of thyroid gland on the right side, into a large pouch, capable of containing two ounces of fluid: it was an abscess, which burst into the trachea, and killed the patient.

No. 55. *s.* A section through the Forehead, cavity of the Nose, and roof of the Mouth: it shows polypous excrescences every where in the cavity of the nose, destroying the bones even of the orbit, and the eye itself, and forming a tumour externally on the cheek.

No. 55. *a. s.* The right side of the Face, cavity of the nose seen on one side, and antrum of Highmore laid open on the other: two polypi are seen hanging in the cavity of the nose, under os turbinatum superius, and covering the passage into the antrum; the membrane of the antrum is thickened into a similar substance, as if the polypous disposition had spread over its whole extent.

No. 56. *s.* The head of a Fœtus, at three months, the lower jaw removed; it shows, that the soft, as well as the hard palate, is originally fissured, and that the two halves grow together afterwards: accounts for frequency of hair lip.

No. 56. *a.* The same preparation from a young Lamb, showing the same thing.

No. 58. *s.* The under half of a Child's Face, so as posteriorly to look on pharynx opened; the palatum molle, and uvula are fissured throughout: injected red.

No. 59. *s.* Ditto, from a younger Child.

No. 60. *s.* Ditto, seen from before: the mouth opened very wide, and the cheeks cut off.

No. 61. *s.* Ditto, the portions of palatum molle so separated that the tongue has got almost behind the palate.

No. 62. *s.* The head of a monstrous Child, who had no brain: palatum molle and durum, both fissured; with hair lip single.

No. 63. *s.* A Child's head opened behind, the brain removed, mouth opened wide, cheeks slit towards each ear; shows complete fissure of the palate, with double hair lip.

No. 63. *s.* }
 64. *s.* } Not described in Hunterian MSS.
 65. *s.* }
 66. *s.* }

THE EAR. H. H.

WET PREPARATIONS.

No. 1. *s.* The left Os Temporis, with the external Ear, and Eustachian Tube; the squamous portion, and upper part of os petrosum is removed, so as to give a view of tympanum, vestibulum, and cochlea; the meatus auditorius externus is laid open from before, and is seen through its whole length; membrana tympani, with the ossicula, is also in situ; and the Eustachian tube is uncovered through its whole course: this preparation serves to give a general idea of the whole organ of hearing.

No. 2. *s.* The Cartilage of the Ear, after the integuments and lobe are removed; giving the permanent shape, with flexibility to the external ear.

No. 3. *s.* The external Ear entire, uninjected: it shows the outer border or Helix, an eminence more internal, and over against the former or Antihelix; two eminences on the lower part over against the entrance into the ear, of which the anterior is Tra-

gus, and the posterior Antitragus: the cavities are also seen, viz: that between helix and antihelix or Fossa Navicularis; that between the crura of the antihelix or Fossa Innominata; and that under the antihelix or Concha, which also is divided by a transverse middle ridge, or septum conchæ.

No. 3. *a.* } A right and left external Ear, uncommonly large
 No. 3. *b. s.* } from a Man; there is almost no helix, and tragus
 and antitragus are covered with long hairs: cuticle is removed,
 and the surface of the skin looks exceedingly porous every where,
 particularly in the concha.

No. 3. *c.* The external Ear of a Negro.

No. 4. *s.* Ditto, injected, and cuticle removed.

No. 5. *s.* Ditto, ditto, exceedingly fine.

No. 6. *a. s.* The left external Ear of the Negro, darker in colour than in the former, but otherwise showing the same things.

No. 7. *s.* A section through the whole organ of Hearing, from without inwards and forwards: it particularly shows the extent and dimensions of meatus externus, which on the whole is incurvated something in the way of the Italic *s.*; the internal end goes more downwards, as well forwards.

No. 8. *s.* The other half Ditto; on the inner surface of the meatus are seen pores in great numbers, generally believed to be the excretory ducts of the glandulæ ceruminosæ.

No. 9. *s.* } Similar injected preparations.
 No. 10. *s.* }

No. 11. *s.* Ditto, the two halves in one bottle; they are not in situ, but one hangs down from the other.

No. 11. *a. s.* Ditto.

No. 12. *s.* A transverse, or horizontal section of the adult human Ear, the one half hanging down, the other up; but best understood by laying the bottle upon its side: the cells of the

mastoid, the tympanum, vestibulum, and cochlea are pointed out by bristles.

No. 13. *s.* The whole organ of Hearing from a Fœtus; meatus externus cut open, to show a mucilaginous white web covering membrana tympani.

No. 14. *t.* Ditto, external ear and meatus only removed: it is chiefly intended to show membrana tympani exceedingly vascular, concave externally, and convex internally; the ossicula auditus are seen behind it.

No. 16. *t.* Membrana Tympani divided into two layers, both beautifully injected red; these hang by a glass bubble.

No. 16. *a. t.* Ditto, perforated naturally: a bristle in it.

No. 17. *s.* The whole organ of Hearing in a child at birth; vestibulum, cochlea, and semicircular canals are opened; membrana tympani is broke down: it shows chiefly the ossicula auditus in situ, and the musculus externus mallei.

No. 21. *s.* The whole organ of Hearing, from an adult, suspended nearly in situ, meatus externus, tympanum, vestibulum, cochlea, and cells of the mastoid laid open: it shows principally the portio mollis of the auditory nerve, exposed by laying open meatus externus, dividing into three branches, two of which go towards vestibulum, and one enters the basis of cochlea; cochlea is here seen extremely perfect, and was uncovered by a lucky stroke of a hammer and chisel; the corda tympani also pointed out by a black bristle running on the inside of membrana tympani, and between incus and malleus.

No. 22. A similar preparation nearly, injected red; the external ear, however, and meatus were removed: the portio mollis, accompanied with its arteries, is still more beautiful and distinct: chorda tympani is also seen adhering to the under, and membranous side of Eustachian tube; a bristle is passed through it.

No. 23. *s.* The head of a Pheasant; the organ of Hearing exposed on both sides: the meatus externus is about half an inch

in length, and runs obliquely backwards and inwards : at the bottom of this passage, in all Birds, are two rows of glands resembling the human sublingual glands, with a number of orifices; these are certainly the glandulæ ceruminosæ: the membrana tympani is convex externally, and turned obliquely backwards and outwards; its under edge is more inwards, and its upper edge of course more outwards: there is but one ossiculum which is rather a kind of Stapes; by one end it shuts up the fœnestra ovalis, and at the other it joins a cartilage in the same line with itself, but which, at the membrana tympani, is bent nearly at right angles to the Stapes, and attached to the posterior side of the circle or ellipse in which the membrana tympani, is fixed: there are three canals corresponding to the semicircular canals in men, and a fourth corresponding to the cochlea; that this last is meant to be cochlea, is evident from its having a different entrance, which however is also *ovalis*, and not *rotunda* as in men.

No. 25. *s.* Membrana Tympani, with Malleus, Vestibulum, and Cochlea, from the Guinea Pig: the cochlea is transparent, and the gyrations may be distinctly seen through its parietes; it resembles a species of small oriental pyramidal shell.

No. 25. *a. s.* Not described.

No. 26. *s.* The internal Vestibulum, and Semicircular canals from the Turtle, injected red; the auditory nerve hangs by the vestibulum, and may be seen ramifying through its centre.

No. 27. *s.* The organ of Hearing in the Kingston Fish: two bristles are introduced into meatus externi; a third making a very obtuse angle with the left bristle, leads into vestibulum internum, which is full of black sand, and from which three most elegant cartilaginous internal canals pass off; each of these canals is bulbous at the part where it leaves the vestibulum, and within the bulb a branch of the auditory nerve may be distinctly seen ramifying.

No. 28. Ditto, without the Meatus Externi; vestibulum is opened, showing distinctly the black sand: it is from a larger fish, and a black bristle may be seen passing under two considerable nerves, on their way to ramify within two bulbs of two canals.

No. 29. *s.* Ditto, in a smaller ditto.

No. 30. *s.* The Auditory nerve in Ditto, before it enters vestibulum, ramifying like a diverging cone of rays.

No. 32. *s.* The organ of hearing in the Thornback: the entrance of the nerves into the bulbs of the canals is remarkably distinct; vestibulum is filled with a tremulous jelly, which coagulates like the crystalline of the eye in spirits; the canals are accidentally demonstrated to be tubes, from some particles of the coagulable jelly having got into them in inflating vestibulum.

No. 33. *s.* A most elegant preparation of the Cod's Ear: the anterior and posterior canals unite at one end, and enter vestibulum perpendicularly by a common portion; the nerves ramifying on the bulbs, are well seen; and there is a large serrated bone incurvated like a boat, filling up the bottom of vestibulum; its concave side is towards the fish's brain, its convex in the opposite direction, and it rests upon one edge, one end pointing forwards, the other backwards nearly.

No. 34. *s.* Internal Vestibulum, and Canals from Ditto, in situ.

No. 35. *s.* The Cameleon's Ear: there is no external meatus, but a large Eustachian tube; a long stapes as in birds, connected to the skin at one end, and fenestra ovalis at the other; there is a very considerable vestibulum, three canals as in the turtle, but no perceivable cochlea; almost the whole cavity of the skull in the middle between the two vestibula.

No. 36. *s.* The upper half of a Lizard; membrana tympani in the same plane almost with the skin of the head, i. e. no meatus externus.

No. 37. *s.* Ditto, shows ditto, also the cavity of the vestibulum exposed, and stapes with a long handle between membrana tympani and vestibulum, as in the turtle, and in birds.

No. 38. Another species of Lizard, having a small meatus auditorius externus. All of them have a large opening from the throat on each side into tympanum, as seen in the two last.

No. 39. Not described.

THE EAR. H. H.

DRY PREPARATIONS.

No. 8. The Temporal Bone separated into its squamous and petrous portions, from a child at birth: the bony circle appears to belong to the squamous portion, and is seen in situ.

No. 9. *d.* Different views of Membrana Tympani in situ; the ossicula also in situ, to show the connection it has with them: there is one upper outside view where this membrane appears concave in the centre, and two under inside views where it appears convex in the middle; it seems perfectly circular, but in the upper and under ones oval, one end of the oval up, the other down.

No. 14. The Temporal bone of a child at birth; shows tympanum and its different circumstances: of the three bristles, that go from without to the inside of tympanum, the uppermost points to the canal of the internal muscle of the malleus, the second to the foramen ovale, and the third to the foramen rotundum; the bristle which goes across the tympanum, marks the course of chorda tympani, and leads down Eustachian tube.

No. 17. The Mastoid cells in the Elephant; cellular, and communicating with each other.

No. 22.? A variety of Ossicula Auditus from the human subject: the sizes a little different, but not much on the whole; three of the mallei are very perfect.

No. 31. The Ossicula Auditus from the Dog, Sheep, Monkey and Calf; they are three in number as in men; the malleus is a little different in its shape; the others come very near the human; those of the monkey most like the human.

No. 45. Bones of the Skull of the Hedgehog.

No. 45. *a.* Tympanum of the Ox.

No. 45. *b.* Ear of the Horse.

No. 49. Four different views of different Cochlae opened; on blue paper.

THE SKIN. I. I.

WET.

No. 1. *s.* A Child's Head injected red, cuticle not removed, glass eyes; remarkably beautiful; it looks as if it were alive; about three or four years of age: the skin of the face most natural.

No. 1. *a.* The left Fore-arm, and Hand of a Girl about twelve years of age: the cuticle seems removed, in many places, so as to show the pores of the cutis.

No. 2. *s.* Portion of the Skin of a Negro; the cellular and adipose membrane removed on the inside from the upper half, but remaining with the under; two bristles stretch it out: it seems to be the basis of the skin, as if the latter were little more than a condensation of the former.

No. 3. *s.* Ditto, showing ditto.

No. 5. *s.* A human Face, the arteries injected to most astonishing minuteness: the cuticle is removed; the arteries project and form villi on the lips and nose; the inside of the mouth and nose are also inconceivably vascular.

No. 6. *s.* Ditto, from a Child about eight or ten years of age: red as crimson from injection. (Dr. Nichols.)

No. 7. *s.* The left Hand of a young Woman minutely injected red, stripped of its cuticle: the whole exceedingly red and beautiful, from the magnifying power of the round bottle and spirits; the arteries appear more numerous, and project more; the parts are also redder on the points of the fingers and under the nails; the fore parts of the fingers are also more vascular than the back parts, upon the whole. (Mr. H.)

No. 7. *a.* Ditto, left.

No. 8. *s.* The Foot of the same Subject equally red with the Hand, and, in some places, particularly about the little toe and outside of the foot, even more vascular; this, however, may be

accidental: the superior redness of the tops of the toes, however, is certainly natural.

No. 8. *a*, Ditto, shows ditto.

No. 8. *s*. A Horse's Foot minutely injected red, and deprived of its hoof by long maceration in water: round the upper edge the blood vessels project and form waving villi, longer even than on the surface of the Dog's intestine; some of these are amazingly red and beautiful, others remain white; but the foot is redder, upon the whole, than its companion, the human one: between the upper and under villous edge, the body of the foot is divided into parallel longitudinal ridges and grooves, disposed like portions of the radii of a circle: the animal was full grown.

No. 8. *a. a. s*. A section of the Horse's Heel showing, on the side, parallel grooves receiving ridges of the foot, and at the lowest part, pores receiving the villi.

No. 8. *b*. A Foot of a Slink Calf, beautifully injected red, with long villi all under the heel, particularly in the sole of the foot: the pores of the hairs disposed four and four, and a reticulated appearance between.

No. 8. *c*. Ditto, of the same Calf, ditto, ditto.

No. 8. *d*. Ditto, of a younger Calf, heel in left part on; shows ditto.

No. 9. *s*. A portion of Cuticle from the Sole of the Foot very nearly one-eighth of an inch thick: on the inside are crowds of parallel ridges running across the foot; in the middle grooves between every two ridges, is seen a smaller ridge, so as to give the appearance of two smaller furrows in every large one: these are all intersected by perpendicular lesser ridges, so that the whole surface is honeycombed, and is just the counterpart of the appearance in the Cutis: these parallel ridges are never continued far, but unite in some single one to the one side or to the other, forming an acute angle at their union.

No. 9. *a. s*. The Hoof of the Foot, (?), full of very large pores,

grooves, and ridges, and an exact counterpart of the former : the grooves, into which the corresponding ridges in the foot went, are one-eighth of an inch deep, in many places.

No. 9. *a. a. s.* A portion of Cutis from the Heel injected red, in which corresponding villous ridges and grooves are seen to those in the Cuticle.

No. 9. *b.* A portion of Cutis in the Sole of the Foot, where cuticle is divided into two layers.

No. 10. A portion of the Whale's skin : the black cuticle turned down resembles a good deal, as to its deeper furrows, the Horse's heel ; the villi on the opposite surface are also very strong.

No. 11. *b.* The Nipple, and Areola from a Man's Breast : shows the tuberculated sebaceous glands all round the nipple ; the hairs longer at this place.

No. 12. A portion of Cutis, with its subjacent Membrana Adiposa, from the human axilla : at one part the membrana adiposa is dissected off, to show the odoriferous or sebaceous glands lying immediately under the skin, as large nearly as hemp seed.

No. 12. *a.* Ditto, from the Negro.

No. 13. *s.* A portion of Skin from a white Person ; cuticle turned down largely, and rete mucosum only in part : the brownness of the skin seems to depend on rete mucosum, for under it the skin is of the purest white.

No. 14. *a. s.* A portion of Cutis from a Child's Arm injected red, cuticle and rete mucosum turned down ; rete mucosum is removed in the centre only, where cuticle appears transparent : spread on blue paper.

No. 16. *a. s.* A portion of Negro's Skin, cuticle turned down : in one place rete mucosum is left in situ, and its upper side appears to be the same as the cuticle.

No. 16. *b. s.* Ditto ; rete mucosum turned down, and the black

mucous web with it ; still, however, a layer of this web remains with the cuticle.

No. 16. *c.* } Ditto, shows ditto very evidently.
16. *d.* }

No. 16. *e. s.* Ditto : cuticle turned down at one part by itself, very thin and transparent ; rete mucosum at another, two or three times as thick, and very dark.

No. 16. *f. s.* Ditto ; rete mucosum more brown than in the other, as from different Negroes.

No. 16. *g. h. i.* Three pieces of Cuticle, and Rete Mucosum from the Calf's Tongue : the appearance of perforations may be produced either in the one or the other, but it is by tearing in both, for where the villi are short and the processes easily separate, there are no perforations in either visible to the microscope.

No. 17. *s.* Cuticle, with Rete Mucosum from a Black : rete mucosum removed in the central part ; the cuticle looks white.

No. 19. *s.* The upper Lip Ditto : rete mucosum lost, a little way within the mouth.

No. 20. *s.* One side of the Nose, and upper Lip Ditto : rete mucosum goes one fourth of an inch within the nostril.

No. 20. *a. s.* The left external Ear of a Negro, showing rete mucosum continued down meatus externus.

No. 21. *s.* Penis of a Negro ; rete mucosum covers all the glans.

No. 21. *a. s.* The Penis of a Negro, corpora cavernosa and spongiosa injected with wax : prepuce is drawn back, to show rete mucosum covering the glans, and even descending down the urethra ; is of a black colour.

No. 22. *s.* Two portions of Skin from a Sailor's Arms : on the one side is represented, in gunpowder and some red powder, the crucifixion ; on the other his mistress's name, with some love emblems ; from both the cuticle is turned down, to show that this

kind of painting could not be effaced, but with the destruction of the cutis.

No. 23. *s.* A portion of Cutis, with *G. W.* and 1745, done in the same way as the former.

No. 24. *s.* A portion Ditto; with *I. S.* ditto: rete mucosum left on to show that the characters are under it.

No. 25. *s.* A portion of Cutis with a large cicatrix from a Negro: the newly formed skin appears different from the original, the regenerated cuticle itself seems thinner, and no new rete mucosum is formed.

No. 25. *a. s.* A portion of Skin from the top of the shoulder in a Negro; there is a white mark like the cicatrix of an ulcer, as if the rete mucosum had not been afterwards regenerated, or were no longer of the black colour. *Query:* as the surface is not corrugated like that of a cicatrix, may not this be a mark similar to claret spots with which children are born?

No. 26. *s.* Ditto, from the white subject; shows ditto: also injected, and very vascular.

No. 26. *a.* The Cutis of a Stump injected after amputation, and healing of the wound; the new cutis seems very vascular, in some parts.

No. 27. *s.* A portion of Cuticle from the sole of the foot in the Negro; rete mucosum exists on the outside, but is wanting in the sole of the foot, or it appears white there.

No. 28. *s.* The Cuticle of a Child's hand removed entirely by maceration, and forming what the anatomists call *Chirotheca*: it was pulled off as a glove from the hand, and is very white; the nails adhere to it, as if they were continued from cuticle.

No. 29. *s.* A *Podotheca*, in the same style.

No. 30. *s.* A great Toe injected, the cuticle turned up; the ridges and furrows are vorticose, and tend towards a centre upon the middle of the first joint.

No. 31. *s.* A portion of Cuticle, from the under side of the Great Toe, showing as in the last.

No. 31. *a. s.* A large portion of Cuticle from an Exostosis of the Thigh, in which the limb became as thick as the trunk of the body: the intention was to discover pores open at both ends, but they were not visible in this way; the hairs, in consequence of the distention, are removed at a considerably greater distance than they were originally.

No. 31. *b. s.* A portion of Ditto from the upper side of the Foot, with the Nails of two Toes: this shows very well the short processes which go into the smaller pores, different from those which go with the hairs, or the finer filaments of Dr. Hunter.

No. 31. *c.* Ditto, from the Great Toe; shows ditto; shows also hairs pulled out with their roots, and original cuticle falling off in scales.

No. 32. *s.* A portion of Skin injected; cuticle half peeled off to show small filaments (probably exhalents), passing between cutis and cuticle: stretched on lead.

No. 33. *s.* Ditto, showing ditto.

No. 33. *a. s.* Ditto, ditto.

No. 34. *s.* The Cuticle of the Thigh transforming into scales on the Leg in the Turkey.

No. 35. *s.* The Cuticle of the Great Toe strongly adhering to the Nail, as if the one substance was only a continuation of the other: the root of the nail runs under cuticle loose for nearly a quarter of an inch, but, nearer the top, becomes strongly attached.

No. 35. *a.* The Cuticle of the Great Toe, on which a tumour had grown, by the side of the nail, about the size of a shelled almond; the cuticle had also covered it, though apparently of an inferior kind.

No. 35. *b.* The Great Toe, belonging to the former Cuticle, with the Tumour, which appears also covered with a kind of cutis.

No. 35. *c.* Shows as 35.

No. 35. *d.* The hoof of a Slink Calf, whose feet had been injected; many of the villi are still in the pores of the hoof, and give it the appearance of injection.

No. 36. *s.* A portion of Scalp injected red; the hair still on, in a side view; it is evident that the bulbs, or roots of the hair, lie deeper than the cutis, in the adipose membrane.

No. 37. *s.* Ditto uninjected, showing ditto most distinctly in posterior view; membrana adiposa in part removed.

No. 37. *a. s.* A portion of the Scalp of the Negro, showing the curling hair, which if drawn out would be several inches long, and resembling more the hair of Sheep, &c.

No. 38. *s.* A portion of Scalp from an adult; on the outside is seen a long cicatrix, and on the inside a lock of hair, which had been driven in at the time of receiving the wound, and continued there probably for years without irritating.

No. 39. *s.* A Cyst from a Sheep's Leg; internally full of balls of hair, which had grown from its surface, shed, and accumulated gradually.

No. 40. *s.* A portion of Cutis injected, covered with small pox.

No. 41. *s.* Ditto, heads removed to show the bottom extremely vascular and red; the slough having just thrown off.

No. 43. *s.* A portion of Skin from the belly of a Woman, who had borne children; it is full of marks like cicatrices, as if in the distention some new skin had been inserted or formed in different parts, which is whiter and thinner than the originally formed skin.

No. 44. *s.* 45. *s.* Corns upon the Toes, going deeper than the cuticle, and like nails acting on cutis itself; under them however in the cellular membrane is a sacculus mucosus, as if motion was intended in the corn.

No. 45. *a.* An excrescence adhering to the Skin; the size of a walnut. Case not known. (Falconer's sale.)

No. 46. *s.* The Guinea Worm; more than two feet long, and one-sixteenth of an inch in diameter, rather smaller at one end than the other, but ending in a fine point either way.

No. 47. *s.* A portion of the Elephant's Cutis, tanned, above an inch thick; the cuticle turned down: it here appears that the cuticle forms vaginae, which pass down a great way into the pores of the skin.

No. 48. *s.* 49. *s.* Ditto, showing ditto; the cuticle is also internally formed into fine honeycomb cells, corresponding to small papillae in the cutis: there do not appear to be any ridges or grooves similar to those on the human cuticle.

No. 50. *s.* A portion of small pox Skin, injected red; cuticle and rete mucosum turned down, and sticking to one another; a new membrane is also turned down, in which the greater part of the pustule seems to reside.

No. 52. *a. s.* A portion of injected Cutis from the sole of the foot: by long maceration the villi are turned down, as if a distinct membrane, but the surface is rough and not porous, from whence they came; the membrane is of course not natural: cuticle, and rete mucosum were previously removed.

No. 52. *b. s.* Ditto, ditto, ditto.

No. 52. *c. s.* A portion of Skin, injected from the arm; the cuticle and rete mucosum removed, as in the former: a new vascular membrane turned down loosely, and floating; less perfect however than the small pox membrane.

No. 52. *d. s.* A portion of Tongue from the Slink Calf; cuticle, rete mucosum, and the new membrane removed; a vascular membrane, corresponding to cutis, still remains.

No. 52. *e. s.* Ditto.

No. 53. *s.* A portion of Negro's Skin, to show that this membrane is not rete mucosum; it is turned down, white, but less perfect than in the small pox skin.

No. 54. *s.* Ditto, in injected Negro's Skin; this also less satisfactory.

No. 54. *a. s.* Ditto, not turned down.

No. 56. Ditto, torn in three layers, without any previous maceration.

No. 57. *s.* }
 No. 58. *s.* } Not described in Hunterian MSS.

ANEURISMS. K. K.

No. 1. *s.* The Adult human Heart; an Aneurism about the size of a large cherry, is seen opened, in the trunk of aorta, just as it rises out of the left ventricle. (Case, Mr. Adair's patient.)

No. 2. *s.* The Trunk of the Aorta from an adult: aorta ascendens seen aneurismal about the middle of its arch; the sack equal to a child's head at birth; the under side full of lamellated, firmly coagulated blood; the upper contained fluid blood, and is now empty.

No. 2. *a. s.* An Aneurism in the arch of the Aorta, about the size of an orange: the two carotids are separated two inches from each other, by the distention of the bag behind; an opening has been made, showing coagulated blood; and the trachea is left remaining, to mark more precisely its situation.

No. 3. *s.* The anterior half of the same sack (No. 2.?), adhering to the sternum, and cartilages of four true ribs.

No. 3. *a. s.* A plug of coagulated Aneurismal blood, rounded like a child's head at birth: it was that which burst from the man in St. George's Hospital; it was in the same part as No. 3.; struck against the top of the bed: patient died instantly. (Case, Dr. Hunter's Lecture.)

No. 4. *s.* The same kind of aneurism, and same section as

No. 2.: a small aneurismal sack unopened is seen below the great one; size of a gooseberry.

No. 5. *s.* The anterior half Ditto, with a portion of ribs and sternum; it appears larger than No. 3, and to have continued longer, for the ribs are in some places totally obliterated.

No. 7. *s.* A portion of arch of aorta, with a very large Aneurism in the right sub-clavian; one half of the sack full of concentric lamellæ of firm blood; the other empty, as having contained either fluid, or half coagulated blood.

No. 8. *s.* A section of the largest superior portion of Aorta, from its origin out of the heart, to its passage through diaphragm: just as it passes the root of the lungs, it dilates into an aneurismal sack, capable of containing one's fist; the orifice leading from aorta into this cavity is about one half inch long, and one inch broad, making an oval; it had formed a bed for itself in the posterior side of both lobes of the lungs, and was at first sight mistaken for a vomica by the pupils; the greater part of it was as it were buried in the lungs. (Case unknown.)

No. 9. *s.* The opposite section, or half Ditto; with a portion of lungs still adhering.

No. 10. *s.* An Aneurism in the trunk of aorta, about the root of the mesentery; size of one's fist. (Case, Mr. Bayford's, published.)

No. 10. *a. s.* An Aneurism between carotid and subclavian of the same subject as No. 10. (Mr. Bayford's.)

No. 10. *b. s.* A firm Coagulum from this aneurism.

No. 11. *s.* A portion of descending Aorta slit open, to show the inner surface becoming aneurismal, irregular, and fasciculated.

No. 14. *s.* The whole Aorta descendens aneurismal, and divided into two longitudinal portions: its diameter, every way, about three inches, especially about the middle; it becomes less, however, in going downwards: from the dissecting room.

No. 16. *s.* A Coagulum of Blood from this Aneurism, formed

into very distinct broad laminæ, easily separated from one another, loose floating.

No. 17. *s.* } Portions of Aneurisms: apparently from the same
 No. 17. *a. s.* } one, and look as if from the inguinal artery.
 (Case forgot.)

No. 18. 19. *s.* Coagula from some of the above Aneurisms, showing different degrees of firmness in the laminæ, different degrees of cohesion to one another, as more or less recent.

No. 20. *s.* A very large Aneurism in the Thigh, in the middle of the Femoral Artery: the orifice is about the size of a half-crown; the artery above and below this is slit open, to show that every where else it was sound.

No. 21. *s.* A section through the Coagulum, belonging to this Aneurism: much larger than a Child's head at birth; formed of concentric laminæ, as in the other ones.

No. 22. *s.* } Ditto, ditto.
 No. 24. *s.* }

No. 24. *s.* An Aneurism in the opposite Leg of the same Man, to whom No. 21. belonged, in the posterior tibial artery: the coagulum is pushing in between tibia and fibula, very large, the sack being nearly circular, and four inches in diameter.

No. 24. *a. s.* The Tibia upper end, and lower end of Femur, also a portion of Fibula: an aneurism in the popliteal artery, about the size of an orange, is cut open upon a bougie passed through the artery, which is exposed in its passage at one place, viz., the orifice from the artery into the sack. (Case amputated, Bartholomew's Hospital, Mr Pott's, died.)

No. 25. *s.* 26. *s.* 27. *s.* 28. *s.* 29. *s.* Sections through Aneurismal Coagula very dense, so as to give the idea of firm flesh. (Rock Gibraltar, officer.)

No. 30. *s.* A portion of Coagulum, separated into laminæ.

No. 31. *s.* A portion of the left Ventricle of the Heart,

dilated at the apex into a bag, large enough to hold a common pear. (Case, dissecting room.)

No. 32. *s.* An Aneurism opened, apparently in the Femoral Artery: about four inches below the larger aneurism, there is a smaller one, of the size of a hazel nut: two bougies are put into the artery, above and below the aneurism.

No. 33. *s.* The greater part of the Aorta, where there had been an aneurism near the cæliac artery: there is an opening behind, with a small quantity of coagulum; the bag seems to have been cut away. (Case, I believe, Dr. Cooper's.)

No. 34. *s.* Four lumbar Vertebræ, where the bodies have been absorbed from the pressure of an Aneurism, and even the canal of the spinal marrow laid bare; the intervertebral substance is entire, being less liable to be affected by pressure. This, I believe, belongs to the aneurism of last number.

No. 35. *s.* A large portion of Coagulum, where the blood has not been sufficiently extracted by previous maceration.

DISEASED BONES. L. L.

WET.

No. 1. *s.* A section longitudinally through the whole length of os humeri of a man, who died at Wapping, with remarkable softness of bones: the cavity of the bone is much enlarged, and was full of oil mixed with blood; no appearance of cancelli, but cross bridges or septa here and there; the two extremities are less altered than the other parts; the cortical part thin as paper, as soft as bees' wax almost.

No. 2. *s.* Ditto, through whole length Thigh bone of Ditto, showing ditto.

No. 3. *s.* Ditto, through whole length Tibia; the extremities still more perfect than the middle parts.

No. 4. *s.* A complete Humerus from an adult: case unknown; but it is bent three or four different ways, and has much the appearance of soft bone.

No. 5. *s.* A portion of Os Ilium, from the same subject as No. 1.; substance of the bone still full of pulp, and the cortex very thin.

No. 6. *t.* A fracture of the Tibia, a little below the middle; longitudinal section; the broken ends ride much: injected red to great minuteness, but callus is equally vascular, with the other parts, perhaps more so.

No. 7. *t.* The middle portion of a fractured Thigh injected red, and sliced off laterally, to show injected callus.

No. 8. *t.* A longitudinal section through the Humerus of a Child about the first year, fractured through the middle: injected red and very vascular.

No. 9. *t.* A longitudinal section of Callus injected very red: (this has more the appearance of a luxuriant stump).

No. 10. *t.* Ditto, very red; looks like section of a very compound fracture. (Case unknown.)

No. 11. *t.* Ditto. These three last seem portions of one bone.

No. 12. *s.* The lower part of Tibia fractured; the end of the bone beginning to exfoliate, and the new bone forming on its outside as if from the periosteum.

No. 13. *s.* A Fracture in the middle of the Thigh bone, from a sailor (Greenwich Hospital): it never united, but a new joint, capsular ligament, and synovial membrane were formed, and he walked as if he had three joints in the thigh bone; the ends of the fracture are covered with thin cartilage.

No. 14. *s.* (*awanting.*) The lower part of the same Bone, with all the articular cartilage dissolved away or eroded, in consequence of matter pressing in the joint.

No. 15. *s.* The Astragalus of the same Foot; the cartilage of the joint not quite destroyed.

No. 15. *a.* (?) Diseased Joint: foot from Battersea; looks like a fracture. (Case, Mr. Hewson's.)

No. 16. *s.* The lower end of Tibia and Fibula; the cartilage of the joint beginning to be eroded.

No. 17. *s.* A Patella which has the appearance on the inside of having been fractured at one part, but not detached.

No. 18. *s.* Ditto, seemingly united again.

No. 19. *s.* Ditto; inside cartilage eroded, and two fractured portions ready to drop off.

No. 20. *s.* A fractured Patella, with a membranous adhesion between the tendon above the fracture, and the lower extremity of the os femoris; a black thread shows the connecting membrane.

No. 21. *s.* The Patella of the other Knee, from the same subject (an old Greenwich Hospital pensioner); it had united after fracture.

No. 23. *s.* Appearance in White Swelling; the cartilages on the ends of femur, tibia, and inner surface of patella, all gone.

No. 23. *a. s.* Ditto; the upper part of the cartilage of the femur eroded.

No. 23. *b.* The cartilage from the upper surface of Tibia eroded.

No. 23. *c. s.* The Cartilage from the Patella eroded.

No. 24. *s.* The lower end of the same Femur, to which the preceding Patella belonged: the surface of the bone is eroded by the pressure of the fractured upper portion of patella.

No. 25. *s.* A longitudinal section through the Joint of the Knee, to show incipient ankylosis, from white swelling probably.

No. 25. *a. s.* The Cartilage which covered one condyle of the Femur, with the appearance of cicatrix in the middle; two loose smooth thick cartilaginous and bony bodies are hung to it by the same thread: these lay loose in the cavity of the joint, but had originally lain against this middle portion of cartilage.

No. 26. *s.* A Finger from a gouty hand; a joint opened and bent upon itself, to show the cartilages eroded a little.

No. 27. *s.* Ditto, very much eroded; the joint full of chalk-like substance.

No. 27. *a. s.* Ditto, the joint invested every where with a thin layer of chalk.

No. 28. *s.* Thumb from the same hand, showing ditto.

No. 29. *s.* Another Thumb, showing ditto.

No. 29. *a. s.* Ditto, showing ditto.

No. 29. *b. s.* Ditto, the chalk accumulated about the joint in considerable quantity.

No. 31. *s.* Glenoid cavity of Scapula, carious.

No. 32. *s.* Ulcer and thickening in Schneider's membrane, from the Lues Venerea. (Patient in Westminster Hospital.)

No. 33. *s.* The other side of the Nose, ditto; the septum narium about the middle and lower part gone before and behind, excepting one pillar about the middle: the disease was getting better, and the membranes had united, those of the one side with those of the other, at the anterior and posterior edges: the mouths of the Eustachian tubes in both were much thickened.

No. 34. *s.* The Vertebrae of the Back, with the heads of the Ribs, from a scrophulous child; the bodies of almost all the vertebrae are bare and eroded before; the intervertebral substances and cartilages themselves in many parts destroyed; almost the whole of the bodies of the two middlemost vertebrae gone, the spinal marrow appearing bare behind; the cartilages of the heads of almost all the ribs eroded. From a Child in Saint George's Hospital.

No. 35. *s.* A Thumb dislocated from its first bone, which had never been reduced, but allowed to remain; the cartilaginous ends are quite covered over with a membranous substance, which however is loose as it covers the central parts.

No. 36. *s.* A longitudinal middle section of the Tibia, on which a large node, probably venereal, was formed; the leg had been injected, and the bone afterwards steeped in an acid: the node resembles much the callus of bone, and is also evidently vascular.

No. 39. *s.* A Fracture apparently, of Fibula.

No. 40. *s.* A very fine specimen of internal Exfoliation, where the bone has shot into irregular granulations, and where large holes are to be seen in some places; a kind of effort in nature to get rid of the dead bone.

No. 41. *s.* A similar preparation, where the new granulations of bone are not so irregular and projecting as in the last No.

No. 42. *s.* A Section of Bone, probably the Thigh, where, in some places, the periosteum may be seen evidently much thickened.

No. 43. *s.* The Ankle Joint covered with a stratum of chalk, in many places; the cartilage may be seen shining through.

No. 44. *s.* Ditto, in some of the Joints of the Tarsus, the chalky stratum not being so thick.

No. 44. *a.* Ditto, ditto?

No. 45. *s.* A section of the lower part of Tibia and Fibula, where there seems to be a fracture of the inner ankle, and considerable thickness round the joint.

No. 46. *s.* The other Section at the same joint.

No. 47. *s.* A section of the Tibia and Fibula at the ankle joint, where the cartilage seems to have been entirely removed from Tibia and Fibula.

No. 48. *s.* The upper portion of Tibia, where the bone is scooped out by ulceration, and the cavity contained a number of small hydatids, some of which still remain in it, and others have fallen to the bottom of the phial.

No. 49. *s.* The lower end of Femur, where the cartilage of the condyles is, in many places, abraded.

No. 50. *s.* A section of the Fore-arm, which has been fractured in several places.

No. 51. *s.* The Elbow Joint, where the cartilage has been removed from the os brachii, and from the head of the radius, and where the cartilage has not only been removed from the sigmoid cavities of ulna, but the shape considerably altered by a long continued ulceration.

No. 52. *s.* A portion of the Thigh Bone, from an old soldier, where the leg had been amputated above the knee; there is a considerable thickening from ossification at the end of the stump, and a small piece of bone is exfoliating.

No. 53. *s.* A section of a Tibia, where there is an oblique fracture about two inches above the ankle joint.

No. 58. *s.* } Not described in Hunterian MSS.
59. *s.* }

MONSTERS. M. M.

DEFICIENCY—REDUNDANCY—DEFORMITY.

No. 1. *s.* The Head of a monstrous Child; every thing above the eyes, that is, all the cranium wanting, and consequently no brain.

No. 2. *s.* Ditto dissected, to show ditto.

No. 3. *s.* Ditto, with large goggling Eyes: a kind of want, or cicatrix-like appearance, in the integuments behind.

No. 3. *a. s.* Ditto, injected: the basis of the skull very vascular.

No. 4. *s.* An entire Child of this kind; instead of cicatrix behind, there is a bag, like a production of pia mater, which contained a fluid: in this monster there is, besides, a kind of double hair lip.

No. 5. *s.* The superior half of a similar Monster; here likewise there is the additional circumstances of a bag covered by the integuments on the back, which looks as if the child was double.

No. 6. *s.* A brainless Child, with one of the thin transparent bags behind; it has also no nose, scarcely any eyes, and all its viscera, both of thorax and abdomen, in a bag hanging out of the body as it were.

No. 7. *s.* A Head in the style of No. 1, but larger; there is also a double hair lip, large staring eyes, and something like remains of brain on the top of the head, but uncovered by the common integuments.

No. 8. *s.* A whole brainless Child, nearly; a portion of the legs and thighs removed, to admit of its going more readily into the bottle; there is a thin bag behind the brain: the canal of the spinal marrow is open, and shows nerves, but no spinal marrow.

No. 9. *s.* A very large, entire, brainless Child, at the ninth month: though vigorous just before labour, such children generally expire as soon as born.

No. 10. *s.* The Head of a similar though larger Child; on the top of the head, uncovered by the common integuments, is an irregular fungous looking substance, presumed to be a degeneration of brain: this substance is generally very vascular.

No. 11. *s.* A whole Child of the same class; very little seen of degenerated brain, and that contained in a bag behind; the spinal processes of the vertebræ of the back wanting, making a very large flat surface in place of a canal for spinal marrow.

No. 12. *s.* The superior half of a Child similar to No. 10; minutely injected red: the fungus on the head exceedingly vascular, as if it were pia mater callapsed, now that the brain was gone; the thorax opened; heart and lungs very perfect.

No. 13. *s.* Ditto; the fungus on the top of the head not larger than the first joint of one's thumb.

No. 14. *s.* A very large Child in this class, injected minutely

red: the small fungus on the left [in the cleft?] of the head divided; it is extremely vascular in the centre, and a substance not unlike pineal gland, likewise very vascular, appears to have been surrounded by this fungus: the vertebral canal is open; spinal marrow is seen one-third its natural size; the nerves are going from it, small and degenerated: the anterior parietes of thorax and abdomen removed; the viscera of both cavities plump, large, and sound, exceedingly vascular: the size of the child upon the whole rather large.

No. 15. *s.* A Monster, in its upper part resembling No. 11; no vestige of brain or spinal marrow, but all a flat surface, covered with a thin membrane; the left hand has but four fingers, and the left thigh and leg are wanting; the right leg and foot are bifid.

No. 16. *s.* A female Child somewhat allied to this class; there was a cranium and brain, but very small proportioned to the size of the child: the four eyelids seem to be jumbled together, as if they belonged to one eye in the middle of the forehead; the eye itself is wanting, and in the place of nose is a smooth flat surface: contents of thorax and abdomen, large and vascular.

No. 17. *s.* The contents of the cranium from the preceding Monster; cerebellum, with medulla oblongata, is very perfect, but small, and cerebrum which forms an oblong mass, is not above one-fifth of its natural size.

No. 18. *s.* A Child about the sixth month; the anterior parietes of the abdomen for some way round the navel are wanting, and in their place peritoneum is stretched out into a bag, in which a considerable portion of the abdominal viscera, equal in size to a small egg, are contained.

No. 20. *s.* A Child, about the ninth month, injected red; the bag as in No. 18, opened, and was very large.

No. 21. *s.* Its Twin fellow, with the same deficiency in the parietes, and same bag; also with the additional circumstance of a large spina bifida behind. (Dr. H.'s case).

No. 22. *s.* A very large Child at birth; a deficiency in the diaphragm, has allowed the stomach and a portion of intestines to get into the cavity of the chest, on the left side.

No. 23. *s.* A Child at birth: the liver, with a portion of intestines, have got into the right side of the chest.

No. 24. *s.* Os Pubis, Bladder, and Rectum, with Penis, from a Child; the Anus wanting; rectum communicates with the bladder, and the fœces passed by the penis with the urine. (Mr. Wathen's case).

No. 25. *s.* A section through the Pelvis of a Female Child: anus was wanting. Mr. Hewson, and Mr. Broomfield did the operation here.

No. 25. *a. s.* The Rectum and Bladder of a Child, on which Dr. Hunter attempted the operation for the imperforated rectum; the passage made is marked by a bougie: had the instrument gone on a little farther, it would have succeeded.

No. 26. *s.* A Foot injected red from a Child at birth; the metatarsal bones seem to be wanting; the toes are small, and in the sole of the foot huddled together.

No. 27. *s.* The Leg and Foot of the other side, where there appears to be a deficiency of the same kind; one toe also wanting.

No. 28. *s.* A Kitten with a single head, brain wanting, mouth and nose imperforated. Body double, contents of chest single, of pelvis double; body only becomes double below diaphragm.

No. 29. *s.* A young Calf; no brain, no mouth, no nose, one eye on the top of the head.

No. 30. *s.* A monstrous Pig: one eye wanting, the other large in the middle of forehead; nose imperforated: from the size of the head, brain probably deficient.

No. 31. *s.* Ditto; no eyes, a kind of proboscis like an Elephant's growing out of the forehead.

No. 31. *a. s.* The head and shoulders of a Monstrous child, having no nose, no eyes: it has apparently something like two eyelids, but placed in the middle where the nose should begin; over them hangs a proboscis broad at its base or pendulous end, and becoming narrower at its attachment; it appears perforated in the middle for a little way, and seems an attempt towards forming a nose.

No. 32. *s.* A young Kitten; the left fore leg wanting.

No. 33. *s.* Two Children about the seventh month apparently, growing together by the chest and abdomen.

No. 33. *a. s.* Ditto, apparently at full time.

No. 34. *s.* A Child at birth, injected red: the bladder was dilated to an enormous size and full of water, as if there had been an ascites; it had encroached exceedingly on the cavity of the chest.

No. 35. *s.* The Fore-arm, and Hand from a Child at birth; there are six fingers, instead of five, the sixth one growing out of the little one.

No. 36. *s.* Ditto, ditto, ditto.

No. 37. *s.* A Pig, with two heads, at the full time: the carotids are injected; the left, as going to the supernumerary head, as well as to the left side of the right one, is largest: the under jaw is wanting, in the left head.

No. 38. (Awanting.) A Kitten, where the brain is wanting, and the eyes fixed on the top of the head: the body is double however; there are two spinal marrows, one set of thoracic viscera, and, though not complete, two sets of abdominal; the stomach is single, but the ilium becomes bifid, and sends a gut to two different cæcums: the two supernumerary fore legs, instead of being placed on the chest, are placed low down on the sacrum, or union of the two pelves behind.

No. 39. *s.* A very large Pig, with a double body, much in the style of the last monster; contents of the thorax and abdomen exposed: it is injected red.

No. 41. *s.* Two Pigs strangely jumbled; the posterior parts of the heads are together and of the chest, but the anterior parts of the abdomen: one of the heads has but one eye.

No. 42. *s.* The same appearance, in every respect, as in the last, except that the bodies are larger and the head single: the bodies are laid open, showing two hearts, two livers, &c.

No. 43. *s.* A monstrous Calf, with two bodies, but much shrunk.

No. 44. *s.* A monstrous Chicken, with double body, double wings, and double legs.

No. 45. *s.* A prodigiously deformed Child, with its head and chest buried, as it were, in a large irregular mass of flesh.

No. 46. *s.* The Leg of a Child at birth, injected red, and stripped of its cuticle; to show the club foot.

No. 47. *s.* The skeleton of a similar Leg; the inner malleolus is before, and the outer one behind astragalus, [sole of foot] also turned outwards; there is also a bending between the metatarsal [tarsal?] bones themselves.

No. 48. *s.* An extra-uterine Foetus. (Case in Philosoph. Transact.)

No. 49. *s.* Ditto; great part of it wanting.

No. 50. *s.* A number of Bones from Ditto, upon a card.

No. 53. *s.* Case of adhesion of the Liver to the Navel, in a Child, soon after birth.

No. 54. *s.* An umbilical Rupture in a Child at birth.

No. 55. A Child, whose head is bent upwards and sunk between the shoulders; there is a deficiency of brain, the eyes being at the top of the head, and there is a thin bag hanging down from the head behind: the spleen, and almost the whole intestines, are out of the cavity of the abdomen.

No. 56. A Child without head, and without arms: the skin, too, appeared to be covered with a very long down, and resembles somewhat a Pig's skin: there appears to be no heart, lungs, diaphragm, or liver, but the whole cavity seems filled with intestines only: the left foot has only four toes.

No. 57. A Monster very much resembling the former; there seems no head nor arms; there is one general cavity of thorax and abdomen undistinguished by diaphragm, in which there is no heart, lungs, &c. Its system of vessels is injected; and consists of one vessel which, as soon as it has perforated the navel, divides itself into four branches, two of which go to the upper part, and two to the lower extremities, and another vessel running along the spine: these had carried on the circulation by their own powers of contraction, during the whole period of utero-gestation, for the child seems to have been born at its full time.

No. 57. *a.* Drawing of Vascular System in monster just described.

No. 58. A Monster with a large head, and a large portion of intestines, which had broken through a thin bag placed on the right side so as to become external; its left foot is bifid, and there is no appearance of toes; its other lower extremity rises out from the trunk behind, having no distinction of thigh and leg, and without any thing but an oblong knob for foot and toes, so that it very much resembles the thigh of a common fowl. (*Preparation thus marked does not answer to the description.*)

No. 59. A Monster very much deformed, very similar to that described in last number: its head is large; part of the viscera before is external; both lower extremities arise from behind, having a protuberance between them; the right lower extremity more perfect than the left.

No. 60. A Female Child exceedingly deformed: the face is without distinction of eyes and nose, and there is a large tumour arising from the left side of the head; the viscera are external on the left side, from behind the left shoulder to the pelvis; the two upper extremities are very much changed from their natural appearance, the left being very short, and its hand is distinguished by four fingers only, not very perfect; the hand of the right arm

has its fingers very imperfect, and the wrist is surrounded by three processes, not very unlike the spurs of a young fowl; its lower extremities are tolerably perfect.

No. 61. The upper portion of a Monster, where there is a deficiency of brain, the eyes being placed on the top of the head, and the remains of a thin bag behind; there is no neck, and the capacity of the chest is very small.

No. 62. A Head finely injected, with deficiency of brain, and irregularly tuberculated on its top.

No. 63. A Head, irregularly tuberculated at the top; with large projecting eyes, not surrounded by eyelids; with a nose projecting like a knob, not perforated with nostrils; and a double hair lip.

No. 64. A kind of double Kitten, where the one is complete, and the hinder parts of the other are joined to the belly of the former, still at the same time showing a junction of what are to be considered as the fore legs.

No. 65. A kind of double Kitten, where the head is single, and two bodies joined together at the spine: there are four hinder legs, and only three fore legs, one of which is small, crooked, and placed nearly in the middle of the back.

No. 65. *a.* A similar preparation.

No. 66. A Puppy where there are no eyes, no nose, an irregular fissure for the mouth, and the ears placed at the angles of this fissure.

Nos. 67. *s.*
 68. *s.*
 69. *s.*
 70. *s.* } Not described in Hunterian MSS.

INCUBATED EGG. N. N.

No. 1. *s.* The yolk of an Egg inclosed in its proper membrane: on the side next the great end of the shell, is a twisted gelatinous cord, and on the opposite side there is another; these are not

exactly opposite to one another, but one of them is inserted obliquely into the membrane, like the optic nerve into the eyeball; the twisted cords have been called Chalazæ: they perhaps answer the purpose of the oblique muscles regarding the eyeball, i. e. sling it, and prevent its rotation beyond a certain degree.

No. 2. *s.* The Membrane by itself, with the chalazæ extremely thin and transparent; the yolk has escaped through a fissure in its side.

No. 3. *s.* The contents of a boiled Egg, in which there were two yolks, distinct from each other.

No. 4. *s.* An Egg Shell peeled down at the great end, half an inch at least of its length, till a diaphragm-like membrane stretches across: this serves to give an idea of the air bag, and shows that the air is not in contact with the white or yolk.

No. 5. *s.* A portion of the membrane of the Yolk stretched on blue paper: under it is seen a white spot, whose diameter is that of a small pea; this spot is never perceived in the yolk, unless the hen has received the male, and is named Cicatricula.

No. 6. *s.* Ditto: cicatricula is opaque, circular, and spotted, but is transparent in the centre, where it contains the foetus invisible to the finest microscope.

No. 7. *s.* Ditto, two hours after incubation: embryo invisible still.

No. 8. *s.* Ditto, six hours after incubation: embryo, a small white hair one eighth of an inch long.

No. 9. *s.* Ditto, at twelve hours: cicatricula now broader, composed of several circles, and the embryo nearly as in the last.

No. 10. *s.* Ditto, at eighteen hours, and seen more distinctly: the rudiments of the spine, the heart, the brain, and spinal marrow visible under the microscope.

No. 11. *s.* Ditto, at twenty-four hours: the same appearances, but a little more distinct, as somewhat more advanced.

No. 12. *s.* Ditto, at twenty-four hours: but appearances hardly so much advanced as in the former; perhaps less vigour in the vital principle, or an original determination of less size, may be the cause of this.

No. 13. *s.* Ditto: cicatrix the size of twenty-four hours; but a membranous bag, over which a very distinct embryo lies larger in diameter but shorter in length than usual, gives some room for suspecting something preternatural here, perhaps blighting or shrinking in the embryo: the egg probably longer sat on than was known, but the appearance unusual.

No. 14. *s.* 15. *s.* 16. *s.* Ditto, at thirty-six hours: the former appearances now evident to the naked eye.

No. 17. *s.* Ditto, at forty-eight hours: still larger, and the spinal marrow evidently composed of two cylinders, at some little distance from one another.

No. 18. *s.* Ditto, at forty-eight hours: now as large as the head almost, and the vascular system very evident; towards the lower end of spinal marrow is a small opaque point, which enlarges afterwards, and becomes Vesicula Umbilicalis, or the investing membrane, which is double, and between its duplicature forms Allantois.*

No. 19. *s.* Ditto, most elegant: the principal blood vessels run off the middle of the embryo to the one side and to the other, and resemble trees with very bushy heads; the vascular circular border is well seen; it looks like a large circular blood-vessel in which all the others terminated, in short as if it were placenta to which all the arteries went, and from which the veins returned.

No. 20. *s.* Ditto, in a posterior view.

No. 21. *s.* The Embryo at fifty-seven hours: the body now become thick, clumsy, and more curved than formerly.

* To prevent misconception, it is necessary to remark here, that in describing the incubated egg, the term Vesicula Umbilicalis is applied to what is now commonly named the Allantois, while, in describing the human ovum, the same term is applied to a different organ, now regarded as the analogue of the yolk-bag of the egg.

No. 22. *s.* Ditto, with a portion of cicatricula, on which are seen very large vessels.

No. 23. *s.* Ditto, at seventy hours: the head turned aside, to show more distinctly the heart, which looks like a large twisted vessel.

No. 24. *s.* Ditto, at seventy-two hours: heart very distinct, as also vesicula umbilicalis.

No. 25. *s.* Ditto, at seventy-four hours: a little larger.

No. 26. *s.* Ditto, at seventy-nine hours: Vesicula Umbilicalis now become very conspicuous, as also the Amnios.

No. 27. *s.* Ditto, ditto.

No. 28. *s.* Ditto, at eighty hours: cicatricula now broader than a shilling, and very vascular.

No. 29. *s.* Ditto, at ninety-six hours: extremely beautiful; the former circumstances all enlarged.

No. 30. *s.* Ditto, also at ninety-six hours, or the fourth day complete: body of the foetus much incurvated; vesicula umbilicalis size of a small pea; head very large; the eye, in proportion, larger than any part; the wings and legs like little buds.

No. 31. *s.* Ditto, at ninety-eight hours, very complete: the circular external vessel very apparent.

No. 32. *s.* Ditto, shows vesicula umbilicalis well.

No. 33. *s.* The Foetus at a hundred and one hours; head larger than the rest of the body put together; wings and legs now remarkable.

No. 34. *s.* Foetus, at a hundred and twenty hours, or fifth day complete: it hangs by vesicula umbilicalis.

No. 35. *s.* Ditto, with all its membranes complete: vesicula umbilicalis size of a small nut.

No. 36. *s.* Ditto; Amnios still turgid with its own fluid: foetus very beautiful.

No. 37. *s.* A most beautiful preparation of Fœtus, with its Membranes, on the sixth day; amnios very distinct; vesicula umbilicalis broader than a shilling; arteries and veins most elegant; the vascular membrane more than half covers in the yolk.

No. 38. *s.* Fœtus, of the fifth day, itself complete, and with a little bit of the membrane of the yolk; head very large; inside of said membrane rugous, like *valvulæ conniventes*.

No. 39. *s.* Fœtus of the sixth day; amnios very complete, turgid with its own liquor, and carrying transparent vessels crowded and ramifying, but no red blood in them: it hangs by vesicula umbilicalis.

No. 41. *s.* Fœtus, of seventh day; membranes removed, and even parietes of thorax and abdomen.

No. 42. *s.* Whole contents of the Egg hanging by one of the chalazæ, now thick and strong, and which had contracted a strong adhesion to the small end of the shell; eighth day: vesicula umbilicalis has enveloped the fœtus, the yolk in part, and seems to enclose also the white.

No. 43. *s.* Fœtus, of eighth day, a good deal freed from its membranes, and the size of the first joint of one's little finger: the bill formed; the body larger in proportion to the head than before.

No. 45. *s.* Fœtus, of ninth day, out of its membranes: vesicula umbilicalis seems to get larger arteries than the membrane of the yolk; feathers begin to appear on the fœtus's back; eyes make the great bulk of the head.

No. 46. *s.* Fœtus in Amnios, tenth day; mouth open, and turned towards the under side of the left wing: yolk, and white turned out of vesicula umbilicalis.

No. 48. *s.* Fœtus very compact in its Amnios, tenth day, hangs by both membranes: meatus auditorius externus very wide; feathers making a ridge down the middle of the back, and two spots on the rump.

No. 49. *s.* Ditto, spread out on paper; arteries going to the umbilical membrane, clearly, the largest.

No. 50. *s.* Whole contents of the Egg, eleventh day: the umbilical membrane had quite enclosed chick, yolk, and white, but the sides at the part of contact were only touching, not adhering; they are pulled out to show the manner, in which they meet.

No. 51. *s.* Fœtus by itself; thorax and abdomen exposed: eleventh day.

No. 52. *s.* Whole contents of the Egg, now enclosed in the umbilical membrane; the blood vessels on the outside larger than crow quills: twelfth day.

No. 54. *s.* Contents of Egg, thirteenth day; fœtus and yolk with the membranes, turned out of membrana umbilicalis, which here appears a complete bag, except one little fissure at the top; septum between the air in the great end and this bag, is left in situ.

No. 55. *s.* Ditto, ditto, with its shell; umbilical vessels prodigiously large.

No. 56. *s.* Contents of the Egg turned out of membrana umbilicalis, which is left lining the inside of the shell, and seen beautifully injected with its own blood coagulated by distilled vinegar: a very fine preparation.

No. 57. *s.* Contents of the Egg entire, fourteenth day: that membrana umbilicalis is a double membrane, and is Allantois appears from the urine; which is thick like chalk and water, and seen in considerable quantity over the chick's rump.

No. 58. *s.* Ditto, fifteenth day; a bristle introduced between the two laminæ of membrana umbilicalis, which covers the contents of the egg like a double night cap.

No. 59. *s.* Ditto, ditto; turned out ditto.

No. 60. *s.* Fœtus, sixteenth day, completely covered with feathers; the yolk in its membrane hangs by ductus intestinalis; the umbilical membrane by urachus: there is, besides, a small vesicle full of fluid, in the line of one of the large blood vessels of the last named membrane, which is perhaps more properly styled Vesicula Umbilicalis.

No. 61. *s.* Fœtus, at sixteenth day, hanging by the heels: thorax and abdomen opened; from the mouth there drops, what was a fluid, and which coagulated in spirits like the albumen.

No. 62. *s.* Fœtus, seventeenth day: the yolk suspended with its membrane, is seen on one side, vesicula umbilicalis on the other; and from these two the fœtus hangs, by ductus intestinalis on the side of the yolk, by urachus on the side of vesicula umbilicalis: what remains of the white, now not much larger than half the barrel of a crow quill, is seen seemingly in a membrane, attached at one place firmly to the membrane of the yolk; the fluid, which was thin and transparent and dropped from its mouth, is now, when put into the spirits, seen coagulated and white.

No. 63. *s.* Fœtus, on the eighteenth day, almost perfect: albumen all gone, and yolk beginning to be drawn into the abdomen; the vessels of membrana umbilicalis also shrinking.

No. 64. *s.* Ditto, nineteenth day: yolk more than half taken into the abdomen; vessels on the inside shell much shrunk; and a black bristle points to a similar vesicula to that formerly mentioned, (umbilicalis proprie dicta), size of a small nut.

No. 66. *s.* Fœtus, now hatched, opened to show urachus entering the under side of rectum, and admitting a crow quill.

Nos. 67. <i>s.</i>	} Not described in Hunterian MSS.
68. <i>s.</i>	
69. <i>s.</i>	
70. <i>s.</i>	
71. <i>s.</i>	
72. <i>s.</i>	
73. <i>s.</i>	
74. <i>s.</i>	
75.	

The difficult points are—Whence comes the carina: if from the male, how gets it under the membrane of the yolk; or does it always exist there, though invisible? How does the membrana umbilicalis get on the outside of the membrane of the yolk, so as to enclose foetus, yolk, and white, completely? Is it between a double membrane itself? How is the white carried into the stomach and intestines of the chick, at a particular point of adhesion between yolk and it? What is the intention of such large vessels, and of such a size of allantois? The yolk is originally surrounded by the white; how gets it to one end of the shell, and the white to the other?

GENERATION. RABBITS. O. O.

No. 1. *s.* The Uterus of a Rabbit, hot, that had not received the male: the vagina is about six inches long, and half an inch in breadth: there are three openings into it, one from the bladder, about two inches from the vulva, and two at the opposite end from each horn of the uterus: the horns are much curved, about four inches in length and one-eighth in diameter; in the end next vagina, they become smaller and smaller as they approach the ovaria and Fallopian tubes, which run serpentine, and are nothing else than a continuation of the horns; the ovarium is of the size of a kidney bean, and within one-fourth of an inch of the orifice of the tube, which is rugous and fimbriated, resembling a full blown pink in its shape nearly. When the animal is hot, the vagina is, internally, almost black, from the derivation of blood to it, and the ovaria are externally covered with a number of pellucid little grains, like drops of glass, which contain the ova in their centre, and afterwards become corpora lutea: injected red.

No. 2. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium of a Rabbit, hot, but which had not received the male: some of the formerly mentioned grains in the ovarium appear here very bloody, so that they form now dark spots; there are several of

the others, but from the size of the dark ones, it seems probable they were to give out the first ova, and they are accordingly more vascular and forward than the other ones; they project but little above the surface of the ovarium: not injected.

No. 3. *s.* The Uterus of a Rabbit two hours after the coitus: the round bodies in the ovarium more pouting, more vascular than in the last; the internal surface of the uterus redder, *i. e.*, the derivation of blood to it greater, but little else different from No. 1.: injected.

No. 4. *s.* A portion of Uterus, Fallopian Tube, and Ovarium of the Rabbit, the first day of the coitus; the appearance of the round bodies in the ovarium as in the last, only [not] injected.

No. 5. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium, the second day of the coitus; no apparent change on the uterus from the former, but in the ovarium the corpuscles are more projecting above the surface of ovarium, and form a nipple-like appearance.

No. 6. *s.* Ditto, on the third day: no apparent difference from the former; the corpuscles in the ovarium flatter than could have been supposed.

No. 8. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium in the Rabbit, on the fourth day: appearances very little different from those of the third day; corpora lutea a little more prominent; in some the appearance of a superadded, round, very small body, on the most prominent point, in others this looks more like a small cavity or depression.

No. 10. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium slit open, on the fifth day: at different parts, the uterus could be perceived enlarged and rounded, where internally the ova were contained; the corpora lutea appear to sink deep into the substance of ovarium, as well as to project much above its surface, and are considerably [larger] than in No. 8.

No. 12. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium, on the sixth day; appearances of the fifth day a little more increased.

No. 13. *s.* Ovarium of the sixth day; as in the former ones, the day is denoted by the number of bristles inserted here; as in the last, the corpora lutea project much beyond the surface of ovarium, which now is externally rough and tuberculated.

No. 15. *s.* A portion of the Uterus of the Rabbit, on the sixth day, with Ovarium, and Fallopian Tube; the cells in which the last mentioned ova (in Tube No. 14. *now wanting*) were contained, are seen opened in two instances.

No. 17. *s.* Ditto: two cells opened; ova removed to show the surface of uterus, to which they adhered loosely: on the posterior side, is seen a bit of decidua, nearly as in the human subject, attached to the blue paper, to which the above-named preparation is fixed before. No appearance of foetus as yet.

No. 18. *s.* Ditto, internal surface of the Uterus more exposed, and ovarium more distinctly seen; corpora lutea, upon the whole, enlarging and projecting more.

No. 20. *s.* Portion of the Uterus of the Rabbit, opened; attached to blue paper; on the eighth day: it showed the foetus, which was made visible, by dropping distilled vinegar on it, but is now not visible from the opposite white ground.

No. 22. *s.* One of the cells of the Uterus, in which is enclosed ovum of the ninth day, opened; the foetus amazingly increased—to four or five times (perhaps ten times) its first visible size; the cavity of the ovum very large, and full of ropy transparent fluid.

No. 23. *s.* Ditto, with Fallopian Tube, and a section of Ovarium; the corpora lutea, in a side or vertical section, evidently hollow in the centre.

No. 25. *s.* A portion of the Uterus, Fallopian Tube, and Ovarium of the Rabbit, on the eleventh day; the foetus seen lying in its cell, and still enclosed in its amnios, proportionably larger than in No. 24 (*wanting*), but even now the navel-string is hardly visible; the corpora lutea, very large, and project much above the surface of the ovarium, which is now very rough.

No. 28. *s.* A Fœtus (or greater part of it), on the fourteenth day: heart exceedingly large; head bifid near the mouth with a hole in each point anteriorly for the nostrils, as the upper jaw is asunder, for some time in the fœtus. (?)

No. 30. *s.* A portion of fourteenth day Uterus with Ovarium, injected: the corpora lutea are as red as vermilion; seen in a vertical section of ovarium, and apparently hollow in the centre.

No. 31. *s.* A portion of Uterus, Ovarium, and Fallopian Tube of the Rabbit, on the sixth day after the coitus; in the extremity of the horn next the Fallopian Tube is a polypous excrescence, which, though it did not prevent conception in the ovarium of that side, prevented four ova from getting farther into the horn than merely the entrance, and would probably have induced abortion.

No. 32. *s.* An Ovarium from the Rabbit, converted almost wholly into a dropsical cyst, as frequently happens in the human subject.

No. 33. *s.* An Ovarium of the eleventh day; the increased size of the corpora lutea very remarkable, so that it resembles a mulberry nearly in external roughness.

Nos. 34. <i>s.</i>	} Similar preparations from Rabbit, Dog, or other Quadrupeds, not described in Hunterian MSS.
35. <i>s.</i>	
36. <i>s.</i>	
37. <i>s.</i>	
38. <i>s.</i>	
39. <i>s.</i>	
40. <i>s.</i>	
41. <i>s.</i>	

THE TEETH. P. P.

No. 1. *s.* The stomach of a Lobster, showing that the Teeth are not necessarily situated in the mouth; the teeth in this animal resemble two grinders and a canine, and are internally hollow.

No. 2. *p.* A very beautiful view of the whole Teeth with their roots, in an upper and under jaw of the same human head, showing the situation of the human teeth.

No. 3. The Alveolar processes of the under Jaw, showing that their sides are thinnest externally till you come to the two last grinders, where this is reversed; in the upper jaw, both sides equal or nearly so.

No. 3. *a.* Ditto, on the upper Jaw.

No. 4. The eight Teeth of one side, from the upper Jaw of the same subject; showing the size of the teeth with respect to one another, and also serving to show the parts of a tooth, viz., the body, neck, and root: stuck on green paper.

No. 5. Twelve Teeth, from Pigs fed on madder, become red throughout; showing that the arteries convey the colouring matter of the madder to the teeth as to other bones, but the madder is taken out of other bones, but always remains in teeth, as if they had no absorbents: on blue paper.

No. 7. Eight Teeth worn down on the grinding-stone smooth, to the middle of the body almost; showing the difference between bone and enamel, also the thickness of the enamel respecting the bone: blue paper.

No. 8. Six Teeth treated in the same way, and afterwards the bony substance burned with a red-hot iron till it became black, while the enamel remains white.

No. 9. A half of the lower Jaw, the teeth in situ treated in the same way; showing enamel in a transverse section.

No. 10. The whole of the upper Jaw, treated ditto; showing ditto.

No. 11. The same as No. 9, only the bony substance is coloured black, by a solution of silver in nitrous acid much diluted, while enamel remains white. ? [Left half upper jaw.]

No. 12. The same as No. 10, but treated as No. 11. All on green or blue paper.

No. 13. One half of the lower Jaw: shows a perpendicular section of the Teeth in situ, from the outside; the bone burned black, and the enamel white, which gradually becomes thinner, as it comes nearer the neck of the tooth: green paper.

No. 14. Six Incisors, from the second set; the enamel waved like wreaths of snow, in the horizontal direction: blue paper.

No. 15. Eight Teeth on green paper, in two rows: the first five, from the roots being naturally more dark than is usual, show the boundaries between the bone and the enamel at the neck of the tooth more distinctly; the last three show each a drop of enamel on the roots of the teeth, at some distance from the body.

No. 16. A transverse section of a Horse's Tooth, which had been shed, treated as the human teeth, No. 8; to show the enamel not on the outside, as in men, but irregularly convoluted and intermixed with bony substance: blue paper.

No. 17. Ditto, treated with the solution of silver; shows, ditto: blue paper.

No. 17. *a.* A section of the Elephant's Tooth: enamel more regularly intermixed than in No. 17.

No. 18. Nine Teeth, pushed through and fixed in holes in stiff blue paper; showing a transverse section of their cavities, some of which are nearly round, others oval, and some square.

No. 19. A transverse section of the Teeth, in situ in the lower Jaw; the size of the cavity nearly in proportion to the bulk of the tooth, and, of course, largest in the molares.

No. 20. An upper Jaw, the Teeth in situ, and ground down so as to give a perpendicular view of the cavities from the outside: the cavity, upon the whole, is larger near the basis of the tooth, or about the middle of the body, and gradually becomes smaller as

it goes to the extremity of the fang; it takes the shape, not only of the body, but of the roots of the tooth, and is therefore single, double, triple, or quadruple.

No. 21. The lower Jaw of a child about two years old, containing the ten first teeth complete, injected red; the periosteum removed at the level of the gums, which are highly vascular, and left in situ; showing principally the gums. B. P.

No. 22. Ditto, in the upper Jaw. B.P.

No. 24. *s.* 25. *s.* Two sections of a Tooth, with the alveolar processes and gums; shows principally that the gum is villous, particularly round the neck of the tooth, like the surface of the lips.

No. 26. *s.* One half of the lower Jaw from a young person, periosteum, gums, and teeth in situ; shows more fully the fringed villous border of the gums, and their superior vascularity.

No. 27. *t.* The whole lower Jaw of a young person, with the Teeth in situ; highly injected red, steeped in an acid, divided perpendicularly through the teeth, and dried; shows many of the teeth exceedingly vascular, particularly those which had not yet got above the gums.

No. 28. *a. s.* One half of lower Jaw treated in the same way as No. 27, but not dried: divided internally.

No. 33. *t.* A nearly full grown Incisor of the second set, in the upper jaw, hanging by a slip of elegantly injected periosteum.

No. 34. *t.* Ditto; still more beautiful.

No. 35. *t.* Two Incisors of the second set, attached by gum Arabic to green paper: the uppermost is split into two different parts; the largest part shows the vessels of the cavity, the smaller shows periosteum: and the under tooth shows a periosteum of an unaccountable kind, covering the enamel at one part, and highly vascular.

No. 36. *t.* Three Monkey's Teeth, stuck on green paper with gum Arabic; periosteum beautifully injected in them all, and internal cavity in the lowermost.

No. 37. The four Incisors of the upper jaw in one row, and the four of the under in another: those in the upper are larger than those in the under, particularly the two middle ones; they have but one root, and a sharp cutting edge.

No. 38. The four Cuspidati in one row; the two first belong to the upper jaw, the two towards the right hand to the under: their basis is pointed like a wedge; they have but one root, are largest in the upper jaw.

No. 39. Eight Bicuspidates in two rows; those in the first row belong to the upper jaw, those in the second to the under: their bases have each two points, and they have here but one root; they are also largest in the upper jaw.

No. 40. Six Molares, in two rows, those in the uppermost row from the upper jaw, and v. v.; the first either have three fangs or the appearance of three run together, the second have only two fangs; of those in the upper jaw two fangs are turned outwards, and the third inwards, and they are somewhat conical; in the under jaw, the fangs have two broad sides and two narrow sides, the narrow ones are always turned outwards.

No. 41. Fifteen Molares of the Upper Jaw, stuck by their bases on blue paper; to show the variety in the fangs, and that each is perforated.

No. 42. A complete set of Teeth, belonging to the same head, made to perforate blue paper, so that their roots may be seen at one view distinctly: besides the molares of this set, there are the molares of another set more perfect in their roots.

No. 43. Six Bicuspidates, with double roots.

No. 44. Nine Dentes Sapientiæ, with their roots run together and bent, as this tooth has seldom room to grow.

No. 45. Four Dentes Sapientiæ, with each four fangs.

No. 45. a. Twelve Teeth in four rows, every root having a sort of node or exostosis, by which its extremity is the largest part, and which would make the extraction of such teeth more difficult and dangerous.

No. 47. *a.* Four lower Jaws, showing that the incisor cells are first formed, and so on gradually backwards less and less of the septum is formed; the uppermost one is from a very young subject, the septa only beginning to be formed at the place of the incisors.

No. 48. *s.* The upper and under Jaw, teeth in situ exposed, the gums left in situ; from a child at birth, showing how far from the edges of the gums the edges of the teeth then are.

No. 49. *s.* A Child's under Jaw at birth, with all its teeth exposed; to show the ossifying points on the basis, sometimes three as in the incisors, or five as in the molares: the two last molares are still pulp except in one point.

No. 51. *s.* Child's under Jaw, at seven months: teeth in situ injected minutely; the capsule as well as the pulp of the teeth highly vascular, the one to form enamel, the other to form bone.

No. 52. *s.* Ditto, a little more advanced, or at birth; both arteries and veins minutely injected, and seen branching together on the pulps.

No. 53. *t.* Shows the same thing as No. 51, in one half of upper Jaw of a child at birth.

No. 54. *s.* The under Jaw of a Calf (Slink) injected, and so prepared as to show the different pulps; two rows adhering to the under sides of the alveolar processes, and one middle row descending between the two others from the gums: the two first form bone, the third enamel.

No. 55. *s.* 56. *s.* The pulps from the Elephant, one the pulp of bone, the other pulp of enamel; the long processes pass between one another, as the prepared tooth shows.

No. 57. *s.* Half the lower Jaw of a Slink Calf, highly injected, and so prepared that the under sides of the vascular bony pulps are seen.

No. 58. *s.* Other half Ditto, so prepared that a side view of the same pulp is seen, or rather of the surrounding vascular capsule.

No. 59. *s.* This Capsule opened, to show the growing teeth underneath, in ditto.

No. 60. *s.* Growing Tooth, hanging by its very vascular pulp, removed from the jaw, in ditto.

No. 61. Five rows of growing Teeth, in different stages; the edges of the fangs always smooth, and it appears that the body is first formed, and the fang gradually after.

No. 62. Three rows Ditto; some injected, and internally very vascular.

No. 63. *a. t.* Both Jaws in a Child at birth, highly injected red; all the teeth exposed, to show that little else than the body of the most anterior, and the basis of the most posterior teeth are yet formed; the vascular capsule is left on, in several of them: in oil of turpentine.

No. 64. *s.* A Child's upper and under Jaw, injected red; about two years old: it has eight teeth in each jaw, and a ninth just cutting the gum in the upper jaw; several of the second set are also seen in separate cells underneath.

No. 65. *p.* The upper and under Jaw of a Child between two and three years old; it has got twenty teeth complete, which are perfectly exposed, nor yet beginning to shed; twenty other teeth, which are to succeed these, are also discovered lower down in the jaw, enclosed in their capsules, which are very vascular, and injected red.

No. 66. *p.* Three rows of Teeth stuck on blue paper; their roots are either entirely gone, or incomplete and ragged, a proof that they were shedding: they may be supposed to be of the first twenty, as shown in No. 65, now disappearing.

No. 66. *a. p.* A shed Tooth from a Horse, with the same jagged roots; little remains of the tooth but its base.

No. 68. *p.* An half of an upper and under Jaw, from a Child about four years old; both sets of teeth exposed: some of the

first set are gone, and some of the second come down, so that they are seen in all the different situations: the principal arterial trunks also seen.

No. 69. *p.* A similar preparation to No. 65, from a somewhat older child, perhaps five years old; the number of teeth the same, but the incisors in the under jaw stand high, as if the alveolar process had left them, and they were ready to drop out.

No. 69. *a. p.* A similar preparation to No. 69, with this difference, that the middle incisors of both jaws are wanting; it may very possibly be the same, the incisors which are wanting having dropt out, as No. 69 cannot be found. [No. 69 now (1841) in Museum, and that marked No. 69. *a.* wants the four incisors below, and the two of the right side above.]

No. 70. An under Jaw from a Child, about seven years old: the incisors and cuspidati have dropt out, and the second set are seen rising; the two molares of each side are standing, but their bases as well as their roots appear to be wasting.

No. 71. *p.* One half of upper and under Jaw from a Child, about eight or nine years old: the first of the former [temporary] incisors of upper and under jaw are gone, and the second [permanent] ones got into their place; second of the former, especially in the under jaw, is ready to drop out, the root being almost entirely gone: the child had twenty-four teeth; and the first of the permanent grinders are complete, and above the gums; the first of the temporary grinders is ready to drop out.

No. 72. *p.* A most beautiful preparation of upper and under Jaw, from a Child about ten years old: forty teeth are discovered; the four first incisors both in upper and under jaw are gone, and the new set either out or getting out; the temporary grinders just dropping out; the cuspidati of the first set still firm; the new cuspidati deep in the jaw; the first permanent grinders out, and complete.

No. 73. A Section of the lower Jaw, in which two molares are seen in situ, and a dens sapientiæ growing, its root not yet completed.

No. 74. A Horse's shed [deciduous] Tooth, upon the top of the almost complete young tooth: the latter appears to be formed in the same cavity with the old one; and by its pressure to have increased the absorption of the other.

No. 75. An upper Jaw from an old head; bicuspides and molares in situ, incisors and former cuspidati gone: two third set cuspidati are seen very large; their points just to be felt in the roof of the mouth.

No. 76. Three rows of Teeth covered with Tartar; in one the bulk of the tartar surpasses that of the tooth itself.

No. 77. Several rows of carious Teeth, in different stages; from that state in which a small hole only appears in the side of the body of the tooth, till nothing remains but a very small stump.

No. 80. The head of the Viper, with two bifid teeth containing canals for the passage of the poison.

No. 81. *t.* A lower Jaw highly vascular, from a child about nine or ten months old; showing three incisors above the gums, and a fourth just breaking through: the tongue and larynx highly vascular, are attached.

No. 82. An upper and lower Jaw of an Adult, with alveolar processes removed give a view of the fangs upon the left side. (V. MSS.)

ABSORBENTS PARTICULARLY. Q. Q.

WET OR IN BOTTLES.

No. 1. *s.* The Great Toe of the right foot, with the metatarsal and tarsal bones in the same line; the external integuments are removed; the tendons of tibialis anticus, and extensor pollicis longus are exposed: on the outside of the first bone of the great

toe, appear some Absorbents filled with mercury; these run up with the aforesaid tendons over the ankle joint, to get upon the foreside of the tibia, and inside of the thigh, as will be seen in No. 1. of the dry preparations.

No. 2. *s.* The Femoral Artery, or that part of it which reaches from the groin to the ham: on its outside clings an absorbent, the trunk of the deep seated ones of the leg; it is filled with mercury, in some places is almost as large as a goose quill, is sometimes double, sometimes triple, but higher up becomes single; it appears now very tortuous, as if much longer than the artery, but the artery is now shortened from its elasticity.

No. 3. *t.* A very fine injection with mercury, of the Absorbents of the human Testicle; they are remarkably large, and were filled from the rete testis, by filling the vas deferens with mercury; there are only two absorbents filled, but as they go higher up the cord, (which is seen almost its whole length), they become double, and are four: vas deferens also filled, and all spread on blue paper.

No. 4. *t.* The Absorbents filled with mercury, rising out of the body of the Testicle; vas deferens also filled: on red paper.

No. 5. *t.* Ditto, two seen; ditto.

No. 6. *s.* Epididymis filled with mercury; a very large absorbent also filled with mercury, running on the cord.

No. 7. *s.* The Absorbents of the Testicle of the Bear, filled with mercury, and running the whole length of the cord, to the number of eight or ten: on the body of the testicle they are innumerable; several of those on the cord are twice or three times the size of a crow quill.

No. 8. *t.* Ditto, dried and in turpentine, but smaller and less beautiful than the last: vas deferens also injected.

No. 9. A half of a Testicle, suspended by several absorbent vessels in the spermatic cord.

No. 10. *t.* A portion of human Intestine, with the mesentery: eight or ten absorbents are filled with mercury, and are seen

running through glands, increasing in size after they emerge from the glands; the glands themselves are evidently cellular; in two places the same lacteals may be traced through two different glands: spread on red paper and thin wood, to prevent the coming over of the turpentine, which constantly happens when the preparation is suspended by threads.

No. 11. *t.* Three large Absorbents also filled with quicksilver, injected on the intestine, and sub-dividing on the mesentery into eight or nine; these are perhaps branches belonging to other absorbents, but communicating with the former; they pass into glands about four inches from the upper or first edge of the intestine.

No. 12. A portion of an uncommonly large human Intestine, with mesentery; the lacteals injected with quicksilver, and passing into glands on the mesentery: one of these lacteals runs longitudinally on the gut, and is there much larger than a crow quill.

No. 13. *s.* A small and thin portion of the human Lungs, with some superficial absorbents injected upon it.

No. 14. *t.* The Absorbents of the Intestines filled with mercury, and rather small in size: four or five different absorbents, in one place, meet in one gland; in another, the same absorbent gives one branch to one gland, and another to a distant one.

No. 15. *s.* An Absorbent arising from the Intestine, in a drop-sical body; runs towards a gland four inches distant from the first edge of the gut, but before it enters, ramifies into eight or ten smaller branches.

No. 16. *s.* Absorbents rising out of the human Intestine, filled with mercury, and exceedingly small: the mesentery was cancerous; and the obstruction made, perhaps, the smallest vessels visible.

No. 17. *t.* Lacteals filled with quicksilver, putting on a very nodose or knotted appearance, from the intersecting valves; arteries injected red: human intestine.

No. 18. *t.* A beautiful quicksilver injection of the Absorbents on the Horse's Intestine, where they ramify innumerable, and to great minuteness.

No. 19. *s.* A portion of the Ass's Intestine slit open, and hanging lengthways; the cellular substance between the fasciculi of muscular fibres puts on the appearance of a circular vessel: mercury injected into these intestines, easily fills the absorbents; the same appearance may be seen in the human intestine: the circular vessels are here filled with quicksilver, and the absorbents also rising out of them: the arteries injected red.

No. 19. *b.* A portion of Ass's Intestine, laid open, moderately injected red, and some absorbents seen running on its outer surface injected with quicksilver, very different in their appearance from the circular vessels.

No. 20. *s.* The same preparation with No. 18, only larger, and in spirits stretched on wood.

No. 21. *s.* The Arteries, and Veins on the Intestine, and Mesentery of the Antelope injected red; the lacteals full of their own chyle, numerous and distinct, but passing in greater numbers at some distance from the principal blood vessels.

No. 22. The Lacteals on the mesentery of a Kitten; large, and filled with mercury, going into the pancreas Asellii.

No. 23. A portion of the large Intestine of the Ass; the arteries filled with red, the veins with yellow, and the absorbents as large as crow quills with mercury.

No. 24. A portion of Intestine from the Turtle; the arteries injected red, the veins black, and the absorbents with quicksilver: these last ramify exactly as the arteries and veins; the artery has every where two veins, and two absorbents attending it; the artery is in the middle, a vein on each side, and an absorbent on the outside of each vein; the absorbent trunks are in many places as large as the arteries, though much smaller than the veins; on the internal surface of the intestine, the absorbents appear ramifying with the arteries and veins, on the top of the villi, to great minuteness.

No. 25. *s.* Ditto, with the mesentery; unopened, and showing nearly as in the last.

No. 26. *s.* Ditto; in the middle of the mesentery, the smaller absorbents form a plexus or network very intricate, resembling a kind of gland, and probably doing the same office as absorbent glands on the mesenteries of other animals.

No. 26. *a.* Not described: same as last; plexus more minute.

No. 27. *s.* Ditto; showing as No. 25.

No. 28. *s.* Ditto; absorbents only injected and running to great minuteness on the mesentery, as well as on the intestine.

No. 29. *t.* Ditto slit open; shows the mercury poured out into the cellular interstices, surrounded on the one hand by villous coat, and on the other by muscular.

No. 30. *t.* Ditto exceedingly beautiful, unopened, and absorbents very minute; veins and arteries injected black.

No. 31. *t.* Ditto inverted, and distended; showing an apparent extravasation of the mercury between muscular and villous coats, but which was proved in the general description [in most places?] to be vessels.

No. 32. *s.* Internal surface of the Turtle's Intestine, spread on a card, and showing by bristles some appearance of extremities in the absorbent branches on that surface.

No. 33. *s.* Ditto; extremely minute.

No. 34. *s.* Ditto; two bristles pointing to something like valves in the extremity of the absorbent branches.

No. 35. *t.* Ditto opened, after it was dried inflated; the arteries injected red, the veins black, and the absorbents with mercury: the seeming extravasation of mercury between villous and muscular coat evidently vessels, in the inside view.

No. 36. *d.* Spread on green paper and varnished, a portion of the Intestine and Mesentery of the Porpoise: the arteries injected with wax, the absorbents with mercury, run along the mesentery to glands at eight inches distance from the edge of the gut; the absorbents are very small in this animal, and their subdivisions, as they enter the glands, barely visible.

No. 38. *s.* A portion of the Intestine of the Turbot; the absorbents elegantly filled with mercury: the same network between muscular and villous coat as in the turtle, but less crowded, and of course more distinct.

No. 39. *t.* Ditto, in the Cod; the arteries red; the absorbents injected with mercury.

No. 42. *s.* A portion of the opened Intestine of the Turbot; the arteries injected, to great minuteness, with size and vermilion; the villi resemble those on the human gut, but are much larger: the absorbents injected with mercury, ramify with great minuteness on the villi.

No. 43. *s.* Internal surface of Intestine in the Cod, arteries red: absorbents injected with mercury; the extreme branches barely visible, but very elegant.

No. 44. *s.* Ditto, showing ditto; the arteries make a fine honeycomb network in the internal surface of the gut.

No. 45. *s.* Ditto, showing ditto.

No. 46. *s.* A portion of the Intestine of the Turbot; absorbents alone injected with quicksilver, and on the edges of the villi, forming a most elegant border.

No. 47. *s.* Ditto, showing ditto.

No. 48. *s.* Ditto, showing ditto.

No. 49. *s.* The Absorbents filled with mercury, very large and numerous, on a portion of the stomach of an Ass.

No. 50. *s.* The Absorbents filled with mercury, running to great minuteness, on the villous coat of the intestine of the Turtle.

No. 51. *d.* The Absorbents on the intestinal tube of the Skate, running to great minuteness; the arteries injected red; the veins empty, or partly filled with yellow coloured size.

No. 52. *t.* A portion of the Stomach of a Turtle; arteries injected red, veins black, absorbents with mercury: very beautiful.

No. 53. *s.* A portion of the Stomach of the Skate, injected red; the absorbents most beautifully and minutely filled with quicksilver, also exceedingly numerous; the veins partly injected with black.

No. 53. *a. s.* A Haddock opened; the arteries injected red; the absorbents with yellow: these last run pretty minute on some parts of the intestine.

No. 54. *t.* A portion of the Stomach of the Skate; the Absorbents filled with mercury.

No. 55. The entire Stomach of the Skate; arteries and veins black; absorbents filled with mercury.

No. 56. *t.* A portion of Stomach Ditto; showing, chiefly, the absorbents filled with mercury, running to great minuteness, and numerous.

No. 57. *t.* The Stomach of the Conger Eel; arteries and veins both red; the absorbents filled with mercury, numerous, regular, and beautiful.

No. 58. *t.* A portion of another Ditto; shows ditto, but much more numerous.

No. 59. *s.* A portion of the Liver, from a Boy twelve years old: the absorbents exceedingly numerous, are injected with quicksilver; they are passing from the small lobe towards the left ligament, to perforate the diaphragm, by a portion of which the preparation hangs on one side; they ramify like a tree, going from smaller branches to large trunks: the trunks sometimes run on the upper surface of the diaphragm forwards to the pericardium; sometimes backwards along the crura passing behind, where they go into thoracic duct.

No. 60. *s.* Ditto, from an adult, ditto; shows also on the opposite side the absorbents passing through the substance of the liver, along the coats of vena portarum, some large branches of which are cut open to show this.

No. 61. *s.* Ditto, from the same Boy as No. 59; the Absorbents injected with mercury, exceedingly numerous, indeed covering the great lobe of the liver on the upper convex surface, and also running towards the diaphragm; after which, they meet those of the small lobe at the pericardium, or go down on the crura of the diaphragm to the duct: the arteries, both here and in No. 59, are injected red.

No. 62. *s.* The Absorbents on the convex surface of the great lobe, running over the ligamentum suspensorium hepatis, in their way to pericardium to join the former, [those from the small lobe]; arteries injected red.

No. 62. *a.* Absorbents on surface of Liver, (not described).

No. 64. *s.* The upper surface of the spleen of a Calf; covered with absorbents which are filled with quicksilver, and exceedingly varicose, that is, alternately large and small.

No. 65. *s.* A portion of human Lungs; the absorbents injected with quicksilver, passing from the lungs into glands at the root of the lungs.

No. 66. *s.* The Absorbents in the Spleen of the Turtle, filled with quicksilver; the arteries injected red, the veins black.

No. 68. *s.* Lobe of Lungs in a Child at birth; the external surface of the lungs quite covered with absorbents, forming network.

No. 69. *d.* A portion of the Lungs of a Porpoise, the arteries injected red, the absorbents with quicksilver; these last do not form a network as in the human subject, but long branches as in the Lion, &c.: on green paper.

No. 70. *t.* The Absorbents of the Lungs in the Turtle, forming a network still more regular than in the human subject; attached to red paper.

No. 71. *t.* The human Heart, with the Absorbents of the right and left ventricles injected with quicksilver: the trunk of the right ventricle goes over the arch of the aorta on the forepart, passes between the two carotids, and gets into glands between trachea and arch of the aorta; the trunk of the left ventricle passes under pulmonary artery behind arch of aorta, to the same glands; and thence large vessels go either to the right or left subclavians, having joined the absorbents of the lungs.

No. 73. *s.* A small portion of the Heart; the Absorbents filled with quicksilver, ramifying to great minuteness: to show numbers.

No. 74. *s.* One of the largest, and most perfect Thoracic Ducts, perhaps, ever injected: it is filled with quicksilver; is about sixteen inches long; in many places larger than a goose quill, smaller about the middle, where for an inch or two it is double, forming an island; it begins by three trunks, one from each leg, and one from the mesentery; the largest trunk lies under aorta, a little above its bifurcation into the iliacs, and is as thick as one's little finger; this trunk belongs to the left leg; the trunk from the right is smaller, but appears previously to have united with the last lower down; that from the mesentery is nearly as large as a goose quill; the duct also enlarges above the middle, and splits into several branches before it terminates in the angle between jugular and left subclavian: these veins are filled with green wax, which appears evidently to have been prevented from entering the duct by a pair of valves at the mouth of the duct; so that the quicksilver of the duct terminates in a wedge-like edge passing between the distended valves.

No. 75. *t.* The Spine of a Child at birth, arteries injected red; along the spine is seen Thoracic Duct injected with quicksilver, and terminating by two branches in the right subclavian instead of the left: the tallowy injection thrown into the arteries and veins, had got into the thoracic duct, having dropt the colour; this was melted out in hot water, and quicksilver thrown into the duct in its stead.

No. 76. *t.* The Thoracic duct in the Cat, filled with quicksilver, lying on the Spine, and terminating both in right and left subclavians, but chiefly in the left; it appears triple all the way, instead of single as in men; the valves in that branch, which goes towards the right, are exceedingly distinct and numerous.

No. 77. *s.* Thoracic duct in a Dog, filled with red wax: the beginning is very large; below the middle it becomes double, after which it is not much larger than a crow quill; it then enlarges as it comes near its termination, and is seen terminating in the jugular vein, where a bristle points to a valve which covers its entrance, and prevents the blood in violent efforts from going that way, instead of going to the heart.

No. 78. *t.* Not numbered, nor described.

GRAVID UTERUS. R. R.

No. 6. *s.* A transverse section through the thickness of the Uterus, at the ninth month; macerated in water and a little spread out, to show substance of uterus principally vessels, and now that it is a little unravelled two or three inches thick.

No. 8. *s.* A section transversely through the substance of Uterus, some days after delivery, when it had contracted to a fifth of its former size; the sides are now about two inches thick, and the cavity an inch broad, and seven-eighths from before to behind: this section was a little above the cervix.

No. 7. *s.* Another portion Ditto; section longitudinal: shows ditto. [Marked on glass No. 9, to description of which it does not correspond.]

No. 10. *s.* The Uterus much contracted after delivery; boiled and unravelled, to show its muscular fibres.

No. 11. *s.* Two portions of the Uterus at birth, in the centre of which are seen the orifices of the Fallopian tubes coming into the cavity of uterus, and round these orifices, for four or five inches, are seen the muscular fibres in packets, forming vortices or concentric circles.

No. 12. *s.* A portion of Ditto, near the cervix; the fasciculi of muscular fibres appear parallel, and forming circles parallel to ostinæ.

No. 13. *s.* Ditto; shows the same as one of the portions in No. 11.

No. 14. *s.* Fundus Uteri contracted after delivery a few days: inverted; shows muscular fibres concentric to and around the orifices of the Fallopian tubes, and nearer the middle concentric to the cavity of the uterus: a portion of decidua still adheres.

No. 15. *s.* The same portion as No. 13, shows ditto; the veins have been injected yellow.

No. 16. *s.* The whole Gravid Uterus, at the ninth month; turned inside out, to show its muscular fibres. (The one engraved. See Anatomy of Gravid Uterus, Plate VI. figg. 1, 2, 3).

- No. 17. *s.* One side of Gravid Uterus, also at the ninth month; arteries injected red, veins yellow, to show vascularity from without; the placenta is left adhering, and has its cells injected from the uterus.
- No. 18. *s.* Ditto, arteries red, veins green; shows ditto: veins four or five times the size of the arteries.
- No. 19. *s.* The Spermatic and Hypogastric arteries and veins, injected on the Gravid Uterus upon one side; the former red, the latter yellow: very fine.
- No. 20. *s.* The other side of Ditto; the trunk of the vein almost ten times the size of the artery.
- No. 21. *s.* One side of the Gravid Uterus at the sixth month, with placenta adhering: the red injection returned by the veins of the Mother from the hypogastric artery; not a drop got into the cord, though the uterus was exceedingly red; the cord was afterwards injected white and black.
- No. 22. *s.* The other half of Ditto, shows also great vascularity.
- No. 23. *s.* A portion of another Uterus equally highly injected red; shows ditto.
- No. 25. *s.* 26. *s.* Portions of another Gravid Uterus, the arteries injected red, the veins yellow; shows ditto.
- No. 26. *a.* Portion of Gravid Uterus with Ovarium and Fallopian Tube, highly injected red; surface of uterus partially covered by decidua, which is likewise seen injected from the vessels of the uterus. (Not described, nor numbered).
- No. 27. *s.* An inverted Gravid Uterus, at the ninth month, arteries injected red, the veins yellow; there are large venal orifices on the inside surface, which were torn through in separating the placenta; the arteries no where form villi, but pretty coarse branches which are also seen torn through, by the sides of the torn veins; the whole is exceedingly vascular.
- No. 28. *s.* An Uterus turned inside out: shows a downy irregular surface; the place where placenta adhered, rougher than any other, and remarkable for broken orifices and veins plugged with coagulated blood.

No. 30. *s.* Another Ditto, but at the sixth month apparently; placenta seems to have adhered to the fundus uteri.

No. 31. *s.* A portion of Uterus at the place where placenta adhered; the orifices of the torn veins full of large plugs of coagulated blood: very remarkable.

No. 33. *s.* A portion of Uterus, in which the arteries had been injected red, the veins yellow; shows inside surface, and the torn orifices of the veins filled with the yellow injection.

No. 34. *s.* Ditto; shows ditto.

No. 35. *s.* Os Tincæ from the Gravid Uterus, at the ninth month.

No. 36. *s.* Ditto, ditto; it projects a little way into vagina: bristles are introduced into the follicles, which secrete the gelatinous fluid which blocks up the cervix: in this, and in the preceding preparation, cervix is seen on the posterior side.

No. 37. *s.* A portion of Uterus, at the ninth month; shows a portion of os tincæ, cervix uteri, and vagina: in a lateral view the cervix (?) thinner by one-sixth than the os tincæ. (V. MSS.)

No. 38. *s.* A beautiful Cervix Uteri, shows the rugæ pennatæ well, and the follicles of os tincæ passing some way up the cervix.

No. 40. *s.* A side view of Cervix Uteri, in its shut state; also of vagina and bladder; the gelly also seen filling up the lower part: from the gravid uterus at nine months.

No. 43. *s.* An Ovarium, and Fallopian Tube, with a portion of Gravid Uterus adhering; the tube is distended with spirits, and is larger at the end next ovarium than the barrel of a writing pen; ovarium slit open, shows corpus luteum very large, as big as a hazel nut, with cavity nearly as large, so that the sides are very thin.

No. 44. *s.* Ditto; cavity not half so large, and the side of corpus luteum pretty thick, and its substance radiated round this cavity.

No. 45. *s.* Ditto; cavity of corpus luteum still less, and the sides in proportion thicker: a bristle is introduced into the Fallopian tube, at the end next the uterus; its orifice there would admit a fine probe.

No. 46. *s.* Ditto: Fallopian Tube slit up its whole length, and thrown into longitudinal rugæ on its internal surface; a bristle in both orifices: corpus luteum also slit open, and a bristle in an orifice apparently leading into its cavity, which is here less, as is the whole bulk of its body.

No. 48. *s.* A section of Corpus Luteum, highly injected red; the cavity is white and carries no vessels apparently, but the surrounding glandular substance is as vascular as any thing in the body; at some little distance, are seen the remains of a former corpus luteum, in which the glandular substance is lost, and the mere cavity remains.

No. 51. *s.* Fallopian Tube, and Ovarium; the latter slit open shows a pretty large corpus luteum, with a very small cavity.

No. 52. *s.* Ditto; from a woman who died undelivered, (at Knightsbridge); she died of her third child: ovarium is slit open; there are three corpora lutea, one recent, and two old ones; the first has a very large cavity.

No. 52. *a. s.* An Uterus from the dissecting-room, slit open; the internal surface of uterus is rough; the ovaria slit open show also on one side a large corpus luteum, and on the other the remains of three or four former ones: from these circumstances, we concluded the woman had formerly had children, and was at the time she died impregnated.

No. 53. *s.* Fallopian Tube, and Ovarium injected red; ovarium slit open, very vascular, as is corpus luteum, which is not larger than a small pea, and has a pretty large cavity.

No. 54. *s.* Ditto; two corpora lutea, but both small, in ovarium slit open.

No. 55. *s.* Ditto; corpus luteum, with little or no cavity slit open.

No. 55. *a. s.* Fallopian Tube filled with spirits, to show its size; ovarium slit open shows a small corpus luteum, with a considerable cavity.

No. 55. *b. s.* Ditto, shows ditto; corpus luteum very large, but no apparent cavity or orifice.

No. 56. *s.* Ditto of one side, with both Ovaria; in the uppermost, is seen corpus luteum entire, like a small pea, separated nearly from its bed; there seem to be the remains of one in the under ovarium.

No. 57. *s.* Ditto and Ovarium, at birth; corpus luteum large, its cavity triangular.

No. 58. *s.* Ovarium slit open; injected red: shows a small corpus luteum, with little or no cavity.

No. 59. *s.* Corpus Luteum and Fallopian Tube, from the Cow; in spirit of sea salt, with distilled water: it appears rather dissolving, but shows corpus luteum three or four times larger than the human, of a deep yellow colour, and with a small cavity; its substance also radiated round the cavity.

No. 61. *s.* Another Ditto, entire, slit open.

No. 62. *s.* Ditto injected red; corpus luteum very vascular, and the cavity somewhat triangular and narrow.

No. 63. *s.* Ditto uninjected: corpus luteum divided into different sections, to show texture; a bristle also points to an apparent orifice.

No. 64. *s.* A Child at birth, enclosed in its amnion, with its placenta; giving an idea of an entire human ovum.

No. 65. *s.* Another Ditto; the vessels of placenta unravelled, and hanging loose and floating.

No. 66. *s.* Ditto, exceedingly perfect: chorion also adhering, but removed at one part to show amnion more transparent underneath, and foetus more distinct under it.

No. 67. *a.* Ditto, at full time or nearly so.

No. 68. *s.* Uterus, at birth, opened on one side, and twins seen in situ bent in such a posture, as to take up as little room as possible.

No. 70. *b.* Section of substance of Gravid Uterus, imperfectly injected. (Not described).

No. 78. *s.* A Navel-string coiled up in a bottle with spirits, after the vessels had been injected with coarse wax.

No. 79. *t.* Ditto injected with quicksilver; coiled round a thick piece of wood.

No. 80. *s.* Ditto inflated, and dried; to show convolutions on the artery resembling knots, at one end.

No. 81. *s.* The lower half of a Fœtus, at four months: abdomen opened shows the bladder turgid with quicksilver, to prove that urachus is impervious; in the place of the urachus, a ligament is seen dissected off from between the arteries; this is continued all the way to the placenta.

No. 82. *s.* A portion of the Cord spread open, to show this ligamentary substitute of urachus in its centre.

No. 84. *s.* A very large Placenta, injected red; showing its size, and on the under side its lobulated appearance.

No. 85. *s.* Ditto, very beautiful; arteries red, and veins yellow, injected with yolks of eggs.

No. 86. *s.* Ditto, injected also with yolks of eggs; the vessels thence more rounded and full; the arteries red, the veins green from verdigris.

No. 87. *t.* A portion of Placenta.

No. 87. *a. s.* A Placenta, of which both the arteries and veins are beautifully injected with mercury. (Not described).

No. 87. *b. d.* Ditto, dry, and in a glass frame; injected yellow from the vein, and red from the arteries. (Not described).

No. 88. *b.* A whole Placenta, injected: artery red, and vein yellow; there appears to be one artery only; the lobuli of the placenta, on the side that adheres to the uterus, are very well marked.

No. 88. *a. s.* A section of Gravid Uterus, the arteries injected red, and the veins yellow; two convoluting small arteries can be seen, on the inner surface; and the veins can be seen ending in nodules, where they lost themselves in the cells of the placenta.

No. 89. *s.* A section of an Uterus, apparently about five months pregnant, where placenta is left adhering: the opaque membrane of decidua is very well seen at one part detached, and its termination at the beginning of the cervix; and behind it there is a distinct view of the muscular fibres of the uterus: the child is above the uterus, by which the preparation is suspended.

No. 90. *s.* An Uterus at full time, cut open and inverted: in some places the muscular fibres are nearly bare, in other places portions of the membranes are left adhering; there is an uncommon roughness at one part, where the placenta had adhered.

No. 91. *s.* An Ovum, where there had been twins; one child only remains, apparently near the full time, but blasted and shrunk.

No. 92. *s.* A section of an Uterus, where may be seen immediately above os tinæ an oblique rupture two inches in length: the placenta had been adhering over os tinæ, and there is the appearance still of there having been considerable hæmorrhage.

No. 93. *s.* A Male Child not, apparently, at full time; injected green: the head and abdomen had been opened, but they are now sewed up.

No. 94. *s.* Apparently, the Amnios of a Quadruped having its vessels filled with mercury; it is kept distended by spirits.

No. 96. *s.* A portion of a Placenta, and its membranes: on the surface which adhered to the uterus, may be seen some very small curling arteries injected red, and veins injected black which are going to the cells of the placenta.

No. 97. *s.* A section of Placenta, highly injected from the navel string: showing its vascularity; and showing, besides, the amnios, chorion, and decidua.

No. 97. *a. s.* Ditto; a portion of the same.

No. 98. *s.* Ditto; a section probably of the same placenta.

No. 98. *a. s.* Ditto, similar.

No. 99. *s.* An Ovum, apparently between the fourth and fifth month; the membranes are nearly entire: uninjected.

No. 100. *s.* A small section of Placenta, with part of the membranes: the cells of the placenta have been filled from the veins of the uterus, or vice versa; the cells are not very bare; on the side which adhered to the uterus, the veins may be seen very distinctly.

No. 101. *s.* A section of Uterus, where the veins are injected black, and the injection is protruding by irregular plugs into the cavity of the uterus.

No. 102. *s.* A part of an Uterus injected black; the membranes on the inside are detached in part: the amnios and chorion are not injected, but the decidua is, proving it to belong to the uterus.

No. 103. *s.* A section of Uterus injected by veins a dark green; the veins are very large, and on the inside there is a breaking off of the injection and large orifices, where the veins were ruptured and had passed to the placenta.

No. 104. *s.* An half of an Uterus not at full time: where on the outside may be seen a small rounded tumour near the origin of one of the Fallopian tubes; and on the inside the membranes partly adhering, the cervix uteri not at all enlarged, and at os tinæ a cluster of follicles filled with jelly, giving an irregularity to the surface of os tinæ.

No. 105. *s.* A section of an Uterus injected red with fine injection, and inverted; it seems to have been previously dried: on the inside may be seen lying over bristles, irregular fasciculi of muscular fibres, the fibrous appearance of which is very distinct.

No. 106. *s.* A section of Uterus, with membranes partly turned down, and showing a double layer of decidua.

No. 107. *s.* A section of Ditto; probably from the same Uterus: where, however, one lamina of decidua is left entirely adhering; but the preparation in every other respect resembles No. 106.

No. 107. *a. s.* Not described.

No. 108. *s.* A section of Uterus injected black, and red; where the decidua is turned down, and in part also injected: showing the same circumstance as No. 102.

No. 109. *s.* A portion of Decidua dried, with some vessels running on it filled with coagulated blood.

No. 110. *s.* Cervix Uteri, and Os Tincæ from an Uterus at full time of pregnancy, after it had somewhat contracted itself; os tincæ appears twice larger than in the unimpregnated uterus, being fully half an inch in length.

No. 111. *s.* A section of an Uterus, with Placenta adhering, showing difference of structure, and comparative thickness of each: the veins of the uterus are seen very large and numerous.

No. 112. *s.* A portion of Placenta very highly injected, and unravelled, appearing to be a beautiful shag of vessels.

No. 113. *s.* A Fallopian Tube and Ovarium laid open, showing the fimbriæ continued to the ovarium, and showing some very obscure appearance of a corpus luteum.

No. 114. *s.* A Fallopian Tube, and Ovarium: in the centre of the ovarium there is a very distinct corpus luteum, having a large cavity which contains some white coagulated matter.

No. 115. *s.* A section of an Uterus, most probably the same with No. 104: showing on the outside, a tumour apparently schirrous; and on the inside, the membranes reaching down only as far as cervix uteri, and os tincæ studded with follicles full of jelly.

No. 116. *s.* A portion of Uterus, with two laminæ turned down, the one of decidua, the other of chorion.

No. 117. *s.* A portion of Uterus, including the cervix; showing five or six different laminæ of decidua, besides amnion, and chorion.

No. 118. *s.* A section of Uterus, with Placenta partly adhering, and partly detached, showing in the angle the mode of adhesion.

No. 119. *s.* A Cervix Uteri at nine months; laid open, showing a different structure from what is found in an unimpregnated uterus.

No. 120. *s.* An impregnated Uterus, laid open, apparently near the sixth month: showing the Placenta adhering, and going to be converted into Hydatids; and at the bottom of the bottle a foetus: on the other side of the uterus there remains a portion of the bladder, showing the opening of the ureters and beginning of urethra.

No. 121. *s.* A section of an Uterus, with Placenta detached from os tincae, to which it had adhered: it had probably been separated, by the dilatation of cervix and os uteri during labour, occasioning a rupture of vessels and hemorrhage, which is frequently, and was most likely in this case, fatal.

No. 122. *s.* A section of Uterus about the sixth month: showing the placenta and membranes adhering; the different structure of the placenta from the uterus; but, especially, that the cervix uteri does not contain any part of the ovum, but is as narrow and contracted as in the unimpregnated uterus.

No. 123. *s.* A section of the same Uterus, showing the same circumstances, together with the foetus attached to the placenta by the navel-string.

No. 124. *s.* A small portion of Placenta and Uterus, where the cells of placenta have been injected from the veins of the uterus; the veins are seen very large, entering into the substance of the placenta: injection green.

No. 124. *a. s.* Ditto, showing ditto.

No. 125. *s.* Another section of Ditto: showing ditto; and especially two corresponding veins, which were passing from the uterus to the placenta, and ruptured by the placenta being detached.

No. 126. *s.* A section of Uterus and Placenta, not injected, where some vessels have been traced by bristles from the uterus into the placenta.

No. 127. *s.* A section of Uterus and Placenta, where the vessels of the navel-string are injected green, but the cells are not injected, nor has any injection passed into the uterus.

No. 128. *s.* A section of the Uterus, with its vessels injected black, which are very large and project upon the inside, where they were continued into the substance of the placenta.

No. 129. *s.* A longitudinal section of Uterus, appearing thicker and denser in its substance than the gravid uterus commonly is; the vessels also upon the whole are considerably smaller, and fewer in number than they are generally met with; upon the inside the decidua is adhering, in some parts hanging down ragged.

No. 130. *s.* A section of Uterus and Placenta, where the veins are filled with a blackish injection, and the cells of the placenta with the same injection; the vessels of the navel-string are also filled with a black injection, which had better been omitted, as the preparation would have been more distinct.

No. 131. *s.* A portion of Uterus about the sixth month, the arteries and veins being injected of different colours: on its inside the decidua appears an opaque porous membrane, distinguishable from every other membrane in the body, and resembling somewhat a fine lace; the cervix uteri is altered from its common appearance in the unimpregnated uterus, its pyriform appearance being rendered very indistinct.

No. 134. *s.* An Uterus at a very early period of pregnancy, with the cervix blocked up by jelly.

No. 135. *s.* A section of Uterus, with amnios, chorion, and decidua partly detached.

No. 136. *s.* Ditto.

No. 137. *s.* Ditto; decidua injected from the vessels of the uterus.

No. 138. *s.* A Foetus about the sixth month, seen through the amnios.

No. 139. *s.* An Ovum; the decidua being removed at one part, shows amnios and chorion surrounding the Foetus: the whole is now obscured: about the fifth month of pregnancy.

No. 140. *s.* A portion of Placenta and Membranes injected; showing thickness, &c.

No. 140. *a. s.* Ditto; showing ditto.

No. 141. *s.* Ditto; a larger section, with a portion of navel-string.

No. 142. *s.* A Placenta unravelled, without injection.

No. 144. *s.* A portion of Placenta injected black: some veins may be seen injected green, which are entering into the substance of placenta.

No. 145. *s.* A portion of Uterus, with placenta adhering, injected red: the cells of the placenta are injected from the uterus.

No. 146. *s.* Ditto: a section of the same.

No. 147. *s.* A portion of Placenta, with the cells filled apparently with fine injection of a red colour; less distinct than when coarse injection is employed: the vessels of the navel-string are quite empty, although the injection of the cells had been very minute, proving no communication.

No. 147. *a. s.* Another portion of Ditto.

No. 148. *t.* A portion of Placenta, injected red and black; hardened, and in oil of turpentine.

No. 149. *t.* A portion of Uterus and Placenta; the arteries injected of a dark colour, and veins green: both vessels are seen entering into the substance of the placenta.

No. 150. *t.* A portion of Placenta, with the cells injected of different colours.

No. 151. *t.* Ditto; vessels of Navel-string empty.

No. 152. *t.* Ditto; the two colours very distinct.

No. 153. *t.* A section of Placenta; at present very obscure: there is an appearance of the vessels of the uterus green and red, entering into the substance of placenta.

No. 154. *s.* A small section of Placenta adhering to uterus; showing different structure, &c., so often already shown.

No. 155. *s.* A Placenta injected red, and beautifully unravelled.

No. 156. *t.* A portion of Placenta, vessels injected green; at one part the cells are injected, although not from the vessels of the navel-string.

No. 157. *s.* A portion of Uterus and Vagina, vessels injected green: the vessels of vagina are enlarged, as well as those of uterus.

No. 158. *t.* A portion of Uterus and Placenta; the placenta being partly detached, showing veins injected green from the uterus going into the posterior surface of placenta: the placenta itself injected with a different injection.

No. 159. *s.* A whole Placenta injected red and yellow, with a portion of the membranes preserved.

No. 159. *a. t.* A portion of Placenta injected green, and having its cells filled with red injection, probably from vessels of uterus. (Not described).

No. 159. *b. t.* A portion of Placenta injected, but not minutely, red and white, and partially unravelled. (Not described, nor numbered).

No. 160. *s.* A Placenta injected from the navel-string red, to great minuteness, and most entirely unravelled, showing a most beautiful shag of vessels: it has been hardened by spirits of wine, probably, and put into oil of turpentine.

No. 162. *s.* A Placenta: the arteries injected of a lake colour, and the large branches of the vein white; and unravelled, although not very completely.

No. 163. *s.* Placenta injected black; being partly unravelled, and the decidua partly adhering, giving it a motley appearance.

No. 164. *s.* A Placenta most entirely unravelled, injected brown and white; looking somewhat like dried grass.

No. 165. *s. t.* A Placenta injected black and red; and in some places there is no injection, from small lobules being tied by a ligature before the injection: the whole has a varied motley appearance.

No. 166. *s. t.* A portion of Placenta adhering to Fundus Uteri, not injected: the ovarium is slit open, showing a corpus luteum with an evident cavity near its centre.

No. 167. *s. t.* A Section of Placenta, with its cells injected black and red.

No. 167. *a. s. t.* Ditto; a section of the same.

No. 168. *s. t.* A very small portion of Placenta, injected red to great minuteness, and put into oil of turpentine.

No. 169. *s. t.* A portion of Uterus, with Placenta adhering; the vessels of the uterus injected red and black: the cells of the placenta are filled with a different injection, and therefore not from the vessels of the uterus, but must have been previously filled from the spongy substance of the placenta itself.

No. 170. *s.* A portion of Uterus, showing membranes partly detached, and an ovarium larger than common, with a very large corpus luteum having no cavity: one half of the corpus luteum is subdivided by a cut nearly through the whole of it.

No. 171. *s.* A portion of Uterus injected of a black and lake colour: decidua is partly detached, showing two laminæ, one injected and the other not.

No. 172. *s.* A small portion of Placenta, with the vessels of the navel-string injected black and red, but not unravelled.

No. 173. *s.* A portion of Uterus, with the membranes partly detached.

No. 174. *s.* Ditto, injected green and red.

No. 175. *s.* Ditto, injected red.

No. 176. *s.* Section of Uterus, with Placenta adhering; the cells of the placenta are injected red from the vessels of the uterus.

No. 177. *s.* A small portion of Uterus injected red; showing distinctly muscular fibres.

No. 178. *s.* A small section of Uterus, with the veins injected green, and broken off when they were entering into the placenta.

No. 179. *s.* A very small portion of Placenta, and membranes; the cells injected red, and some vessels from the uterus seen behind, passing towards the placenta.

No. 180. *s.* An Uterus about the fourth month; the veins injected black, and the arteries red: they may both be seen projecting inwards as they were going to the cells of the placenta.

No. 181. *s.* The Placenta taken out from the last No.; its cells are fully injected, but not a particle of injection has got into the vessels of the navel-string: the child and navel-string may be seen through the transparent amnion.

No. 182. *s.* An Uterus between the third and fourth month: the vessels of the substance of the uterus are injected, and the injection has passed into the cells of the placenta, but none into the navel-string or child: the placenta is allowed to adhere, except at one part of the edge; the decidua is removed; and the child is seen through the amnion with its head pressing against cervix uteri.

No. 183. *s.* A longitudinal narrow section of an Uterus, with Placenta adhering: the veins appear to be filled with a yellowish injection, but none of the injection seems to have reached the placenta.

No. 184. *s.* Ditto: a section of the same.

No. 185. *s.* One half of a Gravid Uterus, with Decidua adhering; and at the side, not far from the cervix uteri, a rounded schirrous mass, which might impede the full contraction of the uterus.

No. 186. *s.* The other half of Ditto: the inner surface of Uterus very ragged.

No. 187. *s.* A Section of Uterus, with Placenta adhering; not far from os tincæ there is an appearance of some coagulated

blood, where vessels had been ruptured in the detachment of that part of the placenta: on the other side a portion of the bladder is left adhering.

No. 189. *s.* A longitudinal section of Uterus, with Placenta adhering; about the fourth month: the child is also seen with a pretty long navel-string between it and the placenta: the whole is uninjected.

No. 190. *s.* The remaining portion of Ditto.

No. 191. *s.* An Uterus, with an uncommonly rough surface of adhesion with the placenta, which has been separated.

No. 192. *s.* A Child enclosed in the amnion; about the sixth month.

No. 193. *s.* An Uterus, about the fourth month; most minutely and beautifully injected: a considerable portion is cut off from the side of the uterus, and decidua is likewise removed, to look upon the foetus through the transparent membranes: the foetus is not at all injected, although the uterus has been injected very minutely: the cavity where the foetus lies, is kept distended by spirits.

No. 194. *s.* A portion of Placenta injected red to considerable minuteness, and partly unravelled.

No. 195. *s.* Ditto, a smaller portion.

No. 196. *s.* A Foetus, about the sixth month.

No. 197. *s.* Ditto, about seventh month; with its head downwards, and coiled together, resembling a child in the common situation in utero.

No. 198. *s.* An Ovum very young, (perhaps two weeks), where shaggy vessels arise every where from the outside of chorion, and there is no particular appearance of the part which is afterwards to become placenta.

No. 199. *s.* Ditto, opened; a little larger: no appearance of foetus.

No. 201. *s.* An Ovum older than No. 198.

No. 202. *s.* Ditto.

No. 204. *s.* Ditto, perhaps a little older, where the shaggy vessels have been absorbed every where (?) but where they are to form placenta, exhibiting, except at one place, the smooth surface of chorion.

No. 205. *s.* Ditto, where this process is just beginning, showing a small spot of smooth chorion.

No. 206. *s.* Ditto, more of smooth chorion appearing, and the shaggy vessels more condensed, so as to resemble more the substance of placenta.

No. 207. *s.* Ditto laid open, where a Fœtus may be seen: it is an oblong body, enlarged at one extremity where the head is, which is at this period much larger than afterwards in proportion to the bulk of the body; and there is scarce any appearance of the upper and lower extremities: there is as yet no appearance of navel-string, the ovum being about a month old, but the child adheres closely to the membranes: there is a considerable bag seen adhering to the chorion called vesicula umbilicalis, which towards full time degenerates into a white opaque spot or disappears entirely.

No. 208. *s.* Ditto, farther advanced, perhaps about six weeks: the child is seen suspended transversely, consisting of two ovals nearly equal to each other, viz., the head, and the rest of the body; the upper and lower extremities are very little advanced, projecting as two buds from the body.

No. 209. *s.* An Ovum, as large as the former although not so far advanced, showing shaggy vessels of chorion except at one part of it.

No. 210. *s.* Ditto larger than the former, and more of the chorion smooth.

No. 211. *s.* Ditto, and where the child may be seen obscurely through the smooth part of chorion.

No. 212. *s.* Ditto considerably earlier, but chorion becoming at one part smooth.

No. 213. *s.* Ditto, about six weeks: part of chorion is removed, showing amnion immediately surrounding foetus; and a small vesicle, with a very thin thread running from it between amnion and chorion, which is called vesicula umbilicalis.

No. 214. *s.* An Ovum, showing particularly Decidua Reflexa: which is a layer of decidua covering the projection of chorion; into which a rounded opening has been made: two bristles point out, also, the openings in decidua at the beginning of the two Fallopian tubes, and at the cervix uteri.

No. 215. *s.* Ditto, with a larger opening, showing more distinctly the angle of reflexion between decidua vera and decidua reflexa: the decidua is very well seen to be a porous opaque membrane.

No. 217. *s.* Ditto, the Child hanging out of the cavity; showing the navel-string about an inch long, not twisted, the vessels small in proportion to the investing membranes without the interposition of jelly, and the smallest part of the cord where it joins the placenta.

No. 218. *s.* An Ovum, like many formerly described; and showing particularly the amnion, chorion, and decidua separated from each other.

No. 219. *s.* Ditto, decidua in part being separated from it; showing how that membrane envelopes the ovum.

No. 220. *s.* An entire Ovum, considerably advanced, perhaps about three months.

No. 221. *s.* A Miscarriage; the whole being altered from the natural appearance, and its parietes being formed into a dense firm substance, by the extravasation of blood which had coagulated and remained in the uterus for some time.

No. 222. *s.* A white opaque spot called Vesicula Alba, into which vesicula umbilicalis formerly described has degenerated.

No. 223. *s.* Ditto.

No. 224. *t.* An Ovum, with the shaggy vessels of chorion, injected red to great minuteness; hardened, and put into oil of turpentine.

No. 224. *a. t.* Not numbered, nor described.

No. 225. *s.* Three Ova of different sizes, with shaggy vessels injected to great minuteness.

No. 226. *s.* A Child about eight weeks, showing the large proportion of the size of the head at this period, and the extremities comparatively small.

No. 227. *s.* A Miscarriage, very young, that had remained some time in the cavity of uterus before expulsion.

No. 228. *s.* An Ovum, showing child at a very early period, and particularly vesicula alba.

No. 229. *s.* Apparently two Ova, stuck on blue paper, and at a very early period.

No. 230. *s.* An Ovum: showing particulars of the relative growth of the parts of the Child, at an early period; but particularly the navel-string untwisted, and without jelly.

No. 231. *s.* An Ovum, showing cavity where the Child is contained; but the child does not remain.

No. 232. *s.* Ditto, its cavity being kept distended by a card.

No. 233. *s.* Ditto, the Amnion and Chorion being separated from each other.

No. 234. *s.* A Miscarriage, dead sometime before its expulsion from the womb; thickened by coagulated blood, and on the inside tuberculated.

No. 235. *s.* An Ovum; cavity exposed, but no child.

No. 236. *s.* A longitudinal section of an Ovum, about seven weeks; showing navel-string very short, and being little else than an empty bag of membrane, which ends in a small thread continued to the placenta.

No. 236. *a. s.* The remaining portion of Ditto.

No. 237. *s.* A Child, without the membranes; showing a similar navel-string.

No. 238. *s.* An Ovum, very early, and the shaggyvessels very few.

No. 239. *s.* An Ovum laid open, showing the membranes; child removed, but a portion of navel-string remaining.

No. 240. *s.* An Ovum considerably advanced; the decidua being in part removed, discovers the shaggy vessels of the chorion: but the preparation is a good deal torn, probably from the frequent motion of the bottle.

No. 241. *s.* An Ovum; the shaggy vessels being very few and distinct, and the vesicula alba very apparent.

No. 242. *s.* An Ovum about seven weeks, unopened.

No. 243. *s.* Ditto; cavity opened, showing a very small foetus.

No. 244. *s.* Ditto; amnion and chorion separated, and decidua removed.

No. 245. *s.* A portion of a very considerable Ovum; membranes separated, but no child preserved.

No. 246. *s.* A Miscarriage, that remained sometime in utero after it had become dead; being thickened, and tuberculated.

No. 247. *s.* Ditto; the coagulated blood at the lower part being very distinct, putting on somewhat a recent appearance.

No. 248. *s.* Two Miscarriages; thickened, and tuberculated.

No. 249. *s.* An Ovum between two and three months; there being an opening into the cavity for containing the child, which is kept open by a bristle.

No. 250. *s.* An Ovum at a very early period; the chorion partly having become smooth: unopened.

No. 251. *s.* A Child about six weeks, with part of amnion preserved, and a very distinct vesicula alba.

No. 252. *s.* An Ovum, considerably advanced; with decidua almost entirely removed, discovering the shaggy vessels of chorion: the child is not remaining, but there is hanging down a considerable portion of navel-string.

No. 253. *s.* An Ovum, showing particularly decidua, the two apertures at the beginning of the Fallopian tubes, and another at cervix uteri.

No. 254. *s.* A longitudinal section of an Ovum considerably advanced, showing its cavity, but no child preserved.

No. 255. *s.* An Ovum, at an early period, perhaps three or four weeks.

No. 256. *s.* A portion of Decidua, showing it to be a pretty thick, opaque, porous membrane, in some places perforated by small foramina.

No. 257. *s.* A Miscarriage about two months; substance condensed, and recently coagulated blood appearing on the outside.

No. 258. *s.* Ditto: a large quantity of coagulated blood; no child appearing.

No. 259. *s.* A longitudinal section of Ditto, the membranes somewhat separated.

No. 260. *s.* Ditto tuberculated, and child suspended by an inch of funis.

No. 261. *s.* Ditto, no child.

No. 262. *s.* Ditto; child preserved, near two months advanced.

No. 263. *s.* Ditto, younger.

No. 264. *s.* Two Miscarriages, about the sixth month.

No. 268. *s.* A Miscarriage, about six weeks; not very entire: cavity very large in proportion to size of foetus, which is always the case in the earlier months of pregnancy.

No. 269. *s.* A Miscarriage, about seven weeks.

No 270. *s.* An Uterus laid open, about eight weeks pregnant : showing the ovum entirely confined to fundus uteri ; the decidua vera, and reflexa ; and the opening towards cervix kept stretched by bristles, which would be made by the child in passing from the uterus, but now has been made artificially.

No. 271. *s.* An Ovum cut open ; showing the rudiments of a foetus contained in amnion, exceedingly small : perhaps about four weeks.

No. 272. *s.* An entire Ovum, about seven weeks.

No. 273. *s.* A Foetus and Placenta, between two and three months: the navel-string is considerably long at this period, and may be seen at one place knotted.

No. 274. *s.* Ditto, near three months.

No. 276. *s.* An Ovum laid open, about four or five weeks, (earlier); showing child, navel-string, &c.

No. 277. *s.* Ditto, still earlier.

No. 278. *s.* A Miscarriage, near three months; without the child, but a portion of navel-string remaining.

No. 279. *s.* A portion of Ovum, about six weeks, with the foetus apparently deformed.

No. 280. *s.* A portion of Chorion with its shaggy vessels, and decidua seen behind.

No. 281. *s.* Chorion seen transparent, with a very few shaggy vessels.

No. 283. *s.* Decidua pretty complete ; putting on the shape of fundus uteri ; being an opaque, uneven, porous membrane.

No. 284. *s.* Ditto ; the inequalities still more strongly marked.

No. 285. *s.* Ditto more complete ; resembling very much No. 283.

No. 286. *s.* Ditto; a portion only: one part is tinged with blood; the surface next the uterus is very ragged and unequal.

No. 287. *s.* A small portion of Decidua, behind chorion; injected red from the vessels of the uterus.

No. 288. *s.* A small portion of Decidua, not injected; the amnion and chorion are partly detached, showing the opacity of decidua better, from contrast with the two other membranes which are transparent.

No. 289. *s.* A portion of Secundine; showing the different membranes, but not very distinct.

No. 290. *s.* An Ovum, at a very early period; showing the foetus in amnio, and a very large vesicula umbilicalis.

No. 291. *s.* An Ovum, about six weeks; showing amnion, chorion with its shaggy vessels, vesicula alba behind chorion [amnion?], a foetus, and an inch of navel-string: fixed to blue paper. [Extra-uterine, see No. 367.]

No. 292. *s.* A Foetus, about two months, where all the parts are formed, but do not keep the same proportion to each other as in the adult: the head is large in proportion, and the forehead projects very high above the eyes; the eyes are at a great distance from each other, and the nose lies obscure, not projecting much from the general surface of the face; the upper and lower extremities are small in proportion to the body; and there is almost no appearance of buttocks, the lower extremities projecting at once from the end of the trunk.

No. 293. *s.* Ditto, a little older.

No. 295. *s.* Ditto, younger.

No. 297. *s.* Ditto.

No. 298. *s.* Ditto; head upwards.

No. 299. *s.* Ditto, a little older; showing particularly the upper and lower extremities, arising from the body like buds; the arms

and thighs may be traced in their shape, still adhering to the body, so as to make a part of it : suspended by the navel-string.

No. 300. *s.* Ditto, a little farther advanced.

No. 301. *s.* Ditto, included in amnion.

No. 302. *s.* Ditto, about three months ; opened, so as to give a general view of the thoracic and abdominal viscera : the liver is much larger in proportion than in the adult, occupying more than one half of the cavity of abdomen.

No. 303. *s.* Ditto, seemingly upwards of three months : (not numbered, nor described).

No. 304. *s.* A Child and Placenta, a little more than three months ; the navel-string is of considerable length, and is convoluted.

No. 305. *s.* Child, little more than four months ; extremities still small in proportion : the preputium clitoridis projects much beyond the labia, so as to give the appearance of a male, although it be a female : the skin is removed from a part of the left leg, showing the muscles.

No. 306. *s.* Ditto male, about six and a-half months ; skin very black.

No. 307. *s.* Ditto ; part of cranium behind, and brain being removed : female.

No. 308. *s.* Ditto, more advanced ; white skin : male.

No. 308. *a. s.* Ditto : (not numbered, nor described).

No. 309. *s.* Ditto.

No. 310. *s.* Ditto.

No. 311. *s.* Ditto, probably at full time ; integument from the right half of the body taken off, showing the superficial muscles.

No. 312. *s.* Ditto, about ten weeks ; entire, hanging very awkwardly by the navel-string and right arm.

No. 313. *s.* Amnion and Chorion with two Cotyledons, from the Cow; vessels injected, principally white.

No. 314. *s.* A portion of the Gravid Uterus from Ditto, injected; showing the infantile part of the placenta partly separated from the maternal, which arises from the uterus like a rounded sponge, having irregular openings upon its surface to receive the processes of the infantile part: the infantile part is highly injected from the vessels of the navel-string.

No. 315. *s.* The infantile part highly injected, and separated from the maternal; it looks a good deal like the unravelled human placenta, but consists more of separated bundles of vessels.

No. 316. *s.* Ditto; the membranes also highly injected.

No. 317. *s.* Ditto; the separated bundles very distinct.

No. 319. *t.* Ditto: probably from a Sheep.

No. 320. *s.* A portion of Gravid Uterus from the Cow; showing the oval fungus of the maternal part of the placenta, resembling in its surface pretty much a cauliflower. This and the foregoing preparations show, that in many quadrupeds the maternal and infantile parts of the placenta are quite distinct in structure from each other, and may throw light on the human placenta, where there is a more intimate [connection] between the foetal and maternal portions.

No. 321. *s.* A portion of the Gravid Uterus from the Sheep; showing a great number of Ditto.

No. 322. *s.* The Foetal portions seen inclosed in the Maternal, the membranes from most of them having been torn off.

No. 323. *t.* A single one complete from Ditto, highly injected: hardened, and in oil of turpentine.

No. 324. *s.* Ditto, the one portion separated from the other; the foetal part not injected, although the uterus and maternal part is highly injected.

No. 325. *s.* A portion of Uterus, with a perpendicular section through three of Ditto, showing structure and connection.

No. 326. *s.* Ditto; some sections perpendicular, and others transverse.

No. 327. *s.* Two horns of the Uterus laid open; showing a prodigious number of cotyledons of different sizes: the ovarium laid open exhibits sections of two corpora lutea, very much resembling the corpora lutea in the human subject.

No. 328. *s.* Two horns of a Gravid Uterus, where the cotyledons are at pretty regular distances from each other, and are oblong in their shape, forming belts on the inside, surrounding the cavities of the horns: probably from the bitch.

No. 329. *s.* A portion of Gravid Uterus; showing one cotyledon and the inner membrane partly detached so as to look down upon the substance of uterus: the inner membrane is perforated by a prodigious number of small holes.

No. 330. *s.* Ditto, injected green; the foetal portion being partly detached from the maternal.

No. 332. *s.* A Puppy lying transversely, inclosed in amnion: between amnion and chorion may be observed a double conical membrane called Allantois, losing itself at each extremity in chorion; there is also seen a portion of the placenta which is tuberculated in its surface and oblong in its shape; the placenta is in some degree vascular from the uterus, and a membrane corresponding to decidua is partly detached, also vascular.

No. 333. *s.* Ditto; Foetus not inclosed in amnion: the allantois more distinct than in the former preparations.

No. 334. *s.* Ditto: amnion opened and abdomen opened, showing omphalo-mesenteric vessels; decidua behind partly detached.

No. 335. *s.* Ditto: the last mentioned vessels seen injected; and the placenta injected to great minuteness, both from foetus and mother.

No. 336. *s.* Ditto: the placenta vascular only from the mother; the foetus and amnion entire.

No. 337. *s.* Placenta and Chorion entire; the veins are injected, and they may be seen beautifully ramifying on the chorion.

No. 338. *s.* A portion of Uterus, Placenta, and Membranes: the internal surface of uterus is seen very vascular; the placenta is irregularly furrowed where it is in contact with the uterus; the decidua may be seen resting partly on the uterus, and partly on placenta: placenta is injected partly from the womb, and partly by the navel-string; the navel-string injected red and white.

No. 339. *s.* An Amnion filled with spirits, and its vessels injected with quicksilver.

No. 340. *s.* Ditto, larger; dried, and in oil of turpentine: the vessels are most of them small, but are numerous, and form a most beautiful network upon the membrane.

No. 341. *s.* A portion of Chorion from the Mare; with its vessels injected white and red; and showing, on the side next the uterus, an infinite number of small tubercles, consisting of shaggy vessels, forming a bond of union between the chorion and the uterus, and serving the purpose of placenta.

No. 342. *s.* Apparently, a portion of Amnion from the Quadruped; showing a number of opaque vessels, uninjected.

No. 343. *s.* An Amnion moderately distended, and containing a Puppy.

No. 344. *s.* Amnion containing a young Calf: at the lower part is a globule of mercury, to sink the preparation.

No. 345. *s.* A young Puppy, with part of the abdomen at the navel laid open.

No. 346. *s.* A very young Calf, with the abdomen laid open.

No. 347. *s.* A section of the Gravid Uterus from the Sow; showing the inner membrane extremely vascular, which in that animal joins with the chorion without the intervention of a placenta.

No. 348. *s.* A Placenta and portion of the Membranes, from the human Subject, about the third month of pregnancy.

No. 349. *s.* A Child injected, and Placenta; about the fifth month.

No. 350. *s.* A Child injected, (a female), with the parietes of the thorax and abdomen removed, showing the general situation of thoracic and abdominal viscera.

No. 352. *s.* The Foetal part of Placenta, with a portion of Chorion, most minutely injected: hardened, and in oil of turpentine: from the sheep.

No. 354. *s.* A portion of Chorion from the Mare; the arteries being injected red, and the veins yellow: showing an infinite number of convoluting branches overspreading the whole membrane.

No. 367. *s.* An Uterus where there had been an Ovum in one of the Fallopian Tubes; the Fallopian tube is distended to nearly the size of a hen's egg, and has been ruptured, the ovum probably passing out into the cavity of the belly: what is remarkable is the increase of the uterus, as if it contained an ovum, and the presence in it of the decidua, which is clearly proved by this Preparation to be formed by the uterus, and to be independent in some measure of the ovum. [The foetus was found in a coagulum, and is preserved in the Bottle marked R. R. 291.]

No. 368. *s.* Another portion of Ditto, showing decidua.

No. 369. *s.* A longitudinal section of Uterus, where a placenta is seen extraneous to the uterus, and occupying a Fallopian tube: the uterus in this case has not increased very much in its size.

No. 370. *s.* The Foetus belonging to the last No., very much defaced and compressed.

No. 374. *s.* A monstrous production in the Ovarium; consisting of a jaw, teeth, some fat, and hair.

No. 375. *s.* Some Teeth in the Rectum; a monstrous production formed, most probably, in the ovarium, and which had ulcerated its way into the rectum: the uterus on the other side ap-

pears to be of the natural size, and never to have contained any ovum: what is remarkable is, that the woman, (aged about nineteen), in whom this preparation was found, appeared to have a hymen uninjured. (Dissecting room).

No. 376. *s.* A section of a Gravid Uterus, showing a cavity containing a serophulous kind of matter.

No. 377. *s.* Another section of Ditto, showing ditto.

No. 378. *s.* An extra Uterine Fœtus, very much deformed: the face scarce, or rather not at all distinguishable; the upper extremities lost, and the two lower jutting out, exactly resembling what are called drumsticks in a fowl.

No. 379. Ditto, small and compressed; the head, trunk, and upper extremities very distinguishable, but the two lower hanging down like two membranes.

No. 380. *s.* A Placenta converted into Hydatids, of different sizes and of the shape of a Florence flask; they hang by small threads of different lengths, some from the substance of placenta, others from neighbouring hydatids.

No. 381. *s.* Ditto; a very large mass.

No. 382. *s.* Ditto; some of the hydatids of large size.

No. 383. *s.* Ditto.

No. 384. *s.* Ditto.

No. 385. *s.* Ditto.

No. 386. *s.* Ditto.

No. 387. *s.* Ditto.

No. 388. *s.* Ditto.

No. 389. *s.* Ditto.

No. 390. *s.* Ditto.

No. 391. *s.* Ditto.

No. 392. *s.* Ditto.

No. 393. *s.* Ditto.

No. 394. *s.* Ditto.

No. 395. *s.* Ditto.

No. 397. *s.* A considerable Hydatid, with some smaller ones growing from its surface, showing mode of formation.

No. 398. *s.* Ditto.

No. 399. *s.* Ditto.

No. 400. *s.* Ditto.

Nos. 406. *s.* }

407. *s.* }

408. *s.* }

409. *s.* }

410. *s.* }

411. *s.* }

412. *s.* }

413. *s.* }

414. *s.* }

415. *s.* }

416. *s.* }

417. *s.* }

418. *s.* }

419. *s.* }

420. *s.* }

422. *s.* }

424. *s.* }

425. *s.* }

426. *s.* }

427. *s.* }

428. *s.* }

429. *s.* }

Numbered on glass, but not described in Hunterian MSS.

Nos. 430. *s.* }

431. *s.* }

432. *s.* }

433. *s.* }

434. *s.* }

435. *s.* }

436. *s.* }

437. *s.* }

438. *s.* }

Not numbered, nor described.

CASTS CHIEFLY IN PLASTER OF PARIS.

No. 1. (R.R. No. 1. Anatomy of Gravid Uterus, Plates I. II. III.) A Cast in Paris Plaster, coloured after life; takes in the lower half of the trunk of the body, and upper half of the thighs: shows abdomen opened, and the gravid uterus at the ninth month, occupying the pelvis and the largest anterior part of the abdomen; the intestines are behind, above, and chiefly to the left of the uterus; it is not of a regular pyriform appearance, but there are eminences and cavities on its surface, owing to the shape of the child's body underneath; the bladder is seen compressed into a flattish form between uterus and pubis, and the external parts of generation are in situ: the arteries and veins on the uterus large.

No. 2. Ditto.

No. 3. Ditto.

No. 4. (Plate III. Anatomy of Gravid Uterus, R.R. No. 2?). A fore-view of the Womb, and of the contents of the pelvis: the ossa pubis, with the muscles and integuments which cover them, being removed.

No. 5. (R.R. No. 3.) Ditto, from another Woman at the full time: uterus of a prodigious size, and more rounded on its surface; shows nearly as No. 1; abdomen only opened.

No. 6. (Plate VI. Anatomy of Gravid Uterus, R.R. No. 70). A Cast in Paris Plaster from a pregnant Woman at the full time, including the lower half of the trunk of the body, and upper half of the thighs; abdomen opened, and the anterior parietes of uterus removed: shows the child in situ, its head downwards behind the bladder, the left ear forwards and an inch or two to the left of symphysis pubis; the body of the child lies entirely in the right side of the uterus, and placenta and waters were on the left; the child's buttocks are under the great lobe of the liver, and its face is near the left groin: its situation then is very oblique.

No. 7. Ditto, cast in lead.

No. 8. Ditto; position of head different, so that face looks more anteriorly, and left ear is to the right of symphysis pubis.

No. 9. (R.R. No. 73?). A Cast in Paris Plaster, nearly the whole trunk of the body, and upper part of the thighs included, from a Woman at ninth month: uterus opened, shows the child presenting by the breech; the child does not lie oblique, but almost perpendicular, and parallel to the sides of the body; one turn of the navel-string is round its neck.

No. 10. Ditto, uterus opened; foetus seen through amnion everywhere, but at the lower part, where decidua remains over it. (Not described).

No. 11. Ditto; membranes completely removed from the fore part of foetus. (Not described).

No. 12. Not described.

No. 13. (Plate XIII. Anatomy of Gravid Uterus). From a Subject in the ninth month of pregnancy. A fore-view of the Womb, (with the vagina and vesica urinaria), in which all the enclosing parts were cut through and turned up, to show the situation of the child with its head upwards: the vessels of the womb had been previously injected.

No. 14. (Plate XVII. Anatomy of Gravid Uterus). From a Subject at eight months. A direct fore-view of the Womb, after the outer stratum had been dissected off, to show the distribution of the larger uterine vessels in their way to the placenta, which in this case adhered to the fore-part, and fundus of the womb.

No. 15. (Plate XX. Anatomy of Gravid Uterus). From the same Subject. A fore-view of the womb, fully opened, to show the child in its natural situation: all around at the fundus, the substance of the placenta as well as that of the womb itself, is seen cut through.

No. 16. One half of Uterus at full time, after foetus had been removed; placenta remains attached to cervix: cast in lead. (Not described).

No. 17. (R.R. No. 365.) A cast of a Child at full time, being coiled up into an oval shape, showing how the different parts of it were disposed in the uterus, so as to occupy least room.

No. 18. (R.R. No. 366.) Ditto.

No. 19. Not described.

No. 20. Shows abdomen opened, and anterior parietes of Uterus removed, in a Subject in the sixth month of utero-gestation. (Not described).

No. 21. View of Uterus and other Abdominal Viscera, in the fourth month of pregnancy. (Not described).

No. 22. Cast of Uterus, at fifth month of pregnancy.

No. 23. Ditto.

No. 24. Shows malformation of Genital Organs in the Male, simulating hermaphroditism: penis so small as to resemble clitoris; scrotum divided by a cleft in the middle, so that the two halves of it resemble the labia majora. [Should have been placed in section M.M.]

WET PREPARATIONS,

NOT REFERRIBLE TO ANY OF THE PRECEDING SECTIONS, OR WHICH HAVING BEEN MISPLACED, WERE OMITTED IN THE SECTIONS TO WHICH THEY PROPERLY BELONG. Ω.

Nos. 1. s.

2. s.

3. s.

4. s.

5. s.

6. s.

7. s.

8. s.

9. s.

10. s.

11. s.

12. s.

13. s.

14. s.

15. s.

16. s.

17. s.

18. s.

19. s.

20. s.

21. s.

22. s.

BONES.

- Four Sets of Bones.
- One Set for Epiphyses.
- Two Sets of loose Bones of Head.
- A Complete set of Sections of Cranium.
- Four natural Skeletons of Children.
- A Skeleton of a Dwarf, called Leathercoat Jack; where the cartilages are most of them ossified.
- A Skeleton, with incurvated Spine.
- A Skeleton of a Monkey.
- Two upper Extremities, with ligaments and joints preserved.
- A Pelvis with Thigh Bones, having the ligaments about the joints.
- Ten Pelves.
- Two Trunks.
- Three Spines.
- Two sections of Ditto.
- Two Dozen of Skulls; most of which, however, were not reckoned part of the collection.
- A Drawer full of Bones, of the upper Extremity.
- Ditto, of the lower Extremity.
- Ditto, containing Ribs and Sterna.
- Ditto, containing Sections of Bones.

DISEASED BONES.

DRY.

The collection of diseased Bones is so extensive, that it would require nearly as much time and labour to describe each bone particularly, as has been bestowed on all the other parts of the Catalogue taken together. We shall not therefore attempt it, but mention only the number of specimens, and general circumstances, so as to be able to ascertain sufficiently to the members of the Glasgow University this part of the Collection.*

INFLAMMATION.

A Bone may inflame as well as a soft part, although the process be slower. The inflammation is of two sorts when not affected by any specific cause; viz: the adhesive, and the suppurative producing granulations. Those were first distinguished by Mr. Hunter, and the distinction is well founded.

When a Bone has been affected by the adhesive inflammation, it becomes generally enlarged and heavier, the surface of it is a little more irregular than in a sound bone, but the difference in this respect is not very striking,

The granulations of Bone may be distinguished by the general surface being much more irregular, but especially by the granulations rising up at right angles to the general surface of the bone. This appearance, however, after some time is lost, for in limbs

* It has been found impossible from want of suitable accommodation, to arrange the specimens of Diseased Bones in the order of the Catalogue. They are disposed, in the meantime, in five horizontal Cabinets. In four of these placed in the Vestibule, the specimens are arranged in an anatomical order, bones of the same kind being placed together with whatever disease they had been affected. In the fifth Cabinet, placed in the middle of the large Hall, the specimens are arranged in a pathological order, to illustrate Dr. Hunter's views of the Diseases of the Bones. This series comprehends fractures; ankylosis; equable enlargement from adhesive inflammation; irregular enlargement from suppurative inflammation producing granulations; enlargement of both kinds, with exfoliation internal and external; exostosis; rickets; mollities ossium; caries; spina ventosa, and osteo-sarcomatous enlargement.

where there had been compound fractures, the absorbents smooth the surface of the new bone, making it resemble in its surface natural bone.

Nine Specimens of Thigh Bones in a state of inflammation: of three there are sections, showing the bony parietes at least twice or perhaps three times the natural thickness.

A Thigh Bone, with luxuriant granulations at the lower extremity.

Three beautiful specimens of granulations from the end of Stumps in the thigh bone. Two specimens where bone had been smoothed by absorption after amputation.

Thirty-three specimens of inflammation in the Tibia; one of those is a section showing a thickening through the whole length of the bone, and the adventitious bone from its appearance, may be easily separated from the natural.

An excellent specimen of a Node on the Tibia of a Quadruped.

A Tibia with an immense mass of granulations: contained in a glass bottle.

Twenty-six Fibulæ in a state of inflammation: two of these sections are showing the increased thickness of the bone; in one there is a prodigious quantity of irregular granulations at the upper extremity, where the tibia had probably partaken of the same disease.

Three Ossa Humeri in a state of inflammation.

Three Radii in a state of inflammation.

Nine Ulnæ in a state of inflammation.

A Section of Cranium, with considerable thickening from inflammation over the left orbit, which has extended in some degree through the upper jaw.

CARIES.

By Caries is meant an Ulcer in a bone. This is produced from the same causes as an ulcer in soft parts; as from some previous inflammation having been produced, which has advanced to supuration; from some extraneous body; from some dead bone, which is to be thrown out, as in exfoliation; from the pressure of an aneurysm. These ulcers will be different in their nature according to the constitution; and according to the nature of the cause, whether it be specific, &c.: but this most commonly cannot be ascertained from looking at a dead bone, but is to be known only from the history of the case.

Five Spines, with Caries of many of the vertebræ; some from scrophula, others from the pressure of an aneurysm: one of these has a portion of the aneurysmal sack remaining opposite to the caries; another has the aorta injected, keeping the curve of the spine.

Four Sections of two Spines, that are carious.

Four Specimens of portions of Spines, which are carious.

One Specimen of ulceration of Sternum and four Ribs, from the pressure of an aneurysm.

A small Skull, with a considerable Ulcer, which has destroyed a pretty large portion of the upper jaw; it looks like a gum boil.

A portion of Cranium with two Ulcers, one large, the other smaller, with granulations in the neighbourhood.

Twelve specimens of portions of Crania affected with ulceration, from Lues Venerea.

It is to be remarked that the Skulls affected with Lues Venerea in the Collection, seem to exhibit a peculiar appearance. There are a prodigious number of small irregular ulcerations, seeming as if the bone was gnawed with insects; these gradually spread so as to form larger ulcers, and then this appearance becomes in a great measure lost.

Two lower Jaws affected with Caries.

Five Ossa Innominata partly carious.

Eight portions of Thigh Bones, affected more or less with Caries; two of these at the upper extremity, and six at the lower extremity: in one the ulcer is very large, having destroyed the whole of one condyle.

Thirteen Tibiæ affected with Caries: eight of these have the ulcer at the upper extremity; four are carious in their bodies, one almost through the whole extent of the body, and three partially; one of them was the consequence of a wound by a bullet.

Two carious Patellæ.

One carious Scapula.

Six carious Ossa Humeri: three of these at the lower extremity, and three partly at the upper extremity.

Two Ulnæ with caries at the upper extremity.

EXFOLIATION.

It not uncommonly happens, that a portion of a Bone becomes dead, either from exposure or from violence. In this case the living bone absorbs itself immediately round the dead bone, so as to remove it, a dead bone acting upon the living parts exactly as any extraneous body. When an external lamina only becomes dead, it is soon removed, and the other parts heal by granulation: but if the bone becomes dead through the greater part of its substance, then the surrounding living parts form a bony case containing the dead bone, which lies loose in it; and there are a number of holes to be seen in the newly formed bony case, which is the effect of absorption being an endeavour to form an outlet for the dead bone. Sometimes it happens that nature nearly completes this process by throwing a considerable number of these holes into

one canal, so that the bone may be easily removed, but this rarely happens. A dead bone most commonly appears like the natural bone, and the living bone appears diseased, having undergone the process of inflammation, &c. The dead bone in many places appears to be worm eaten, which is the effect of absorption of the neighbouring living parts, and is probably an attempt to diminish the size of the dead bone, to render the expulsion of it more easily accomplished.

Two Crania with Exfoliations, one very large from an epileptic Woman, where the bone was destroyed by her falling into the fire.

Five pieces of exfoliated bone from a Skull; in a small box.

A lower jaw with a very large Exfoliation.

Nine sections of Thigh bones, showing exfoliation; three internal, and the others external.

Nineteen Tibiæ, with exfoliations, eleven of which are internal, and the others external.

An Os Humeri, with internal exfoliations.

A Small Box containing above a dozen pieces of exfoliated bone, chiefly from tibia.

RICKETS.

The disease of Rickets may be distinguished by the following circumstances, viz., the bones are much lighter than they should be naturally, and being less fitted for support they yield to pressure and become curved. If a bone be broken, especially a cylindrical one, which is affected with this disease, the central cavity appears very large and the parietes very thin, often so much so as to be easily broken between the thumb and finger. There appears, therefore, to be in Rickets a deficiency both of the earthy and animal materials, which constitute bone.

A Skull affected with Rickets; the cranium above being flatter, and the fontanelle much more open than it should be, resembling, in this last respect a hydrocephalous skull.

Four Crania, rickety.

A portion of the Trunk, rickety; the spine being bent, the ribs at the sides flattened, and the breast pushed out.

Two Skeletons rickety; one in a child, another in a woman of forty, a French woman, whose height was diminished incredibly by the curvature of the bones.

Four Sterna affected with Rickets, being rendered hollow towards the cavity of the chest.

Three Pelves very much distorted from Rickets, so as to render the passage of a child impossible, and to render necessary the Cæsarean operation or the use of the Crotchet.

Seventy-two Thigh bones more or less affected by Rickets, the necks being nearly at right angles to the bodies of the bones, and the bodies being curved from pressure so as to be very hollow backwards.

Sixteen Tibiæ affected with Rickets, two of them straight but very light, the others either bent forwards or outwards.

Six Fibulæ, much bent outwards.

MOLLITIES OSSIUM.

This disease is very similar to Rickets, and may perhaps be considered as a more advanced degree of the same disease. In rickets although there is a great deficiency in the materials of bone, yet there is a considerable hardness. In Mollities Ossium there is a greater softness, there being a greater deficiency of the earthy part, which is not deposited in the usual quantity, during the natural change of bones within a certain period of years; or if

it be deposited it is absorbed in much larger quantity, or both may happen, so as to produce a great deficiency of earth, leaving little else than the animal substance. Hence the bones lose their office of support, and become very much curved, at first probably from weight, afterwards, when the disease is further advanced, from the action of the muscles. Such bones are cut easily with a knife, like a piece of cheese; and in their cavity contain a large quantity of a bloody, oily matter.

A section of an Os Humeri, affected with this disease.

A section of Os Femoris, affected with Ditto.

A section of Tibia, affected with Ditto.

A section of Patella, affected with Ditto. N.B. These belonged to the Shoemaker at Wapping, whose case is published in the London Medical Observations.

A Thigh, Leg, and Foot, affected with Ditto.

INCURVATION.

This affection would appear to be very similar to Rickets, and probably only a smaller degree of the same disease. It belongs principally to the Spine. The incurvation generally extends through the greater part of the length of the chest and belly to the one side or the other, by which the cavity of the chest on one side is very much diminished, and the ribs lose in some degree their relative situation to each other; at the same time, the neck generally takes a curve to the opposite side, so as in some degree to counterbalance the distortion. The Pelves attached to such spines are often very well formed, and not at all affected.

Six Trunks with incurvated Spines, the pelves not being affected.

A Spine with Os Sacrum only, without ribs, affected with incurvation.

A Spine without ribs but with pelvis, affected with Ditto; pelvis not affected.

A portion of Spine with ribs, affected with Ditto.

A Skeleton, with incurvation of the Spine.

HYDROCEPHALUS.

Hydrocephalus cannot properly be ranked among the diseases of the Bones, because it consists of an accumulation of water within the cavity of the skull. There is, however, in hydrocephalous Skulls a considerable deviation from the natural appearance, so that in a Catalogue of this sort they must be ranked among the specimens of diseased bone.

In Hydrocephalus the upper part of the cranium is very large in comparison with the jaws; the fontanelles are exceedingly wide; the bones at the sutures are separated at a considerable distance from each other; the bones project very much on the upper part of cranium, at the original centres of ossification; and there are often little islands of bone in the membrane, produced by particular ossifications,—a sort of attempt to complete the bony circumference of the cranium as soon as possible.

Four specimens of entire Hydrocephalous Skulls, of different sizes.

Four of the upper portions of Cranium.

ANCHYLOSIS.

By Anchylosis is meant an incapacity for motion in a joint. It is generally divided into complete and incomplete; complete

where there is no power of motion whatever, and incomplete where the power of motion is diminished. This condition of a joint may arise from various causes. 1st From an alteration in the shape of the parts which constitute the joint. 2nd. From some extraneous bony matter surrounding a joint. 3rd. From soft parts joining Bones together, being converted into bone and preventing motion at the joint, although the joint itself may be in a natural state. 4th. From an Ulcer in a joint. 5th. From the Bones at a joint growing or shooting into each other and obliterating the joint.

A Trunk, with all the vertebræ anchylosed, and the joints of the ribs anchylosed, from extraneous bony matter being placed around the joints.

The lower part of Spine, with left Os Innominatum, anchylosed from same cause.

Two Ribs, and some Vertebræ anchylosed.

A Rib, and one Vertebra anchylosed.

Fourteen portions of Spines, consisting of more or fewer vertebræ anchylosed.

An Anchylosis between Atlas and skull.

An Anchylosis between three upper vertebræ, and between atlas and skull.

Two entire Pelves, with anchylosis of joints between ossa innominata and sacrum.

Eight portions of Pelves, consisting each of one os innominatum and os sacrum, with anchylosis of the joint.

Seven Ossa Innominata, where there must have been incomplete anchylosis from alterations in the shape of acetabulum.

Two specimens of incomplete Anchylosis, between the thigh bone and os innominatum from alteration of shape.

Two specimens of complete Anchylosis between Ditto, from bony union.

A Pelvis, where the thigh bones had formed a new joint on each side with ossa innominata. This perhaps does not altogether rank properly with Anchylosis, but it cannot come so well into any other part of the Catalogue.

Twelve Thigh Bones, where there must have been incomplete anchylosis either of the hip joint or of the knee, from an alteration in the shape of parts. N.B. One of these has a little swelling in the anterior surface of its body something like a splinter united.

Nine Specimens of Anchylosis between the Thigh and Leg.

One Specimen of Tibia, where there must have been incomplete Anchylosis at knee, from alteration of shape.

Two Specimens of an Anchylosis between patella and femur.

A Specimen of Anchylosis between Tibia and Fibula, at the lower part.

A Specimen of Ditto, at both extremities.

Ditto, between Tibia, Astragalus, and Os Calcis.

Ditto, between Leg and Foot, and of the bones of the foot among themselves.

Two sections of Anchylosis, between two bones of the foot of a Horse, from extraneous bony matter surrounding the joint.

Three Specimens of Anchylosis between two ribs, from part of the intercostal muscles being converted into bone.

One Specimen of Ditto, in a Quadruped.

Two Specimens of incomplete Anchylosis between Scapula and Os Humeri, from alteration of shape.

One Ditto, from Ulcer.

A Scapula, with alteration of shape in Glenoid cavity, where there must have been incomplete Anchylosis.

One Specimen of incomplete Anchylosis in the elbow joint, from alteration of shape.

Six Specimens of complete Anchylosis, in the elbow joint from bony union.

Two Specimens of complete Anchylosis between Radius and Carpus, and bones of Carpus among themselves.

One Specimen of Anchylosis in the bones of the carpus.

FRACTURE.

A Fracture generally may be very easily discovered in a dead bone. There is a kind of swelling at the fractured part; if the fracture has been simple, and well managed by the Surgeon, the swelling will be small, and have exactly the same natural surface with the other parts of the bone; if the fracture has been a bad compound one, and ill managed by the Surgeon, you will have one part of the bone projecting, and riding upon the other, very often with considerable processes. These processes are sometimes sharp, but more often they have been sharp originally, but are in time blunted and smoothed by the absorbents, that the muscles lying upon them may not be irritated. In sawing through a fractured bone, a firm compact stratum of bone may be seen running between the fractured extremities, being produced by the blood extravasated in the time of the fracture, and going through its natural changes into callus, and afterwards into bone.

Fourteen portions of different Crania, where there had been fracture, and where the trepan had been employed in all except one: in one the bone has become dead, immediately surrounding the hole of the trepan, and is beginning to separate: in two the

regeneration of bone is almost completed, so that the crania are almost entire.

Two Scapulæ, with Fracture; one, of the acromion; the other, of the lower costa, immediately under the glenoid cavity, and perforated with a number of holes through its dorsum.

Nine Fractured Clavicles.

Seven fractured Ossa Humeri; three in the middle, two near the upper extremity, and two near the lower extremity.

Two fractured Radii; the fracture near the lower extremity.

A Radius and Ulna, with a fracture of radius near the middle, and where there is at the place of fracture, a bony union between radius and ulna, preventing pronation and supination.

Ditto, in a Sow, with fracture of both bones, and bony union at the place of fracture between the two bones.

Eighteen fractured Ribs; most of the fractures either a little more anterior than the angles, or near the anterior cartilaginous extremity.

Two fractured Ribs, with a bony union between the two at the place of fracture.

Three Ribs fractured in two places.

Twenty-three Thigh Bones with fractures; of which eleven are near the middle of the bone, seven are near the upper extremity, and five near the lower extremity: two of these fractured at the upper extremity, are accompanied with such a luxuriant growth of bone, as to appear like exostosis.

It may be remarked here that the lower extremity of a fractured Thigh Bone, generally gets behind the upper, and the two ride a little.

One Thigh Bone, fractured in two places.

Two portions of a Thigh Bone, where there had been fracture, but the fracture had never united; and at the broken ends there

is a smooth surface formed by absorption, and a very thin kind of cartilaginous lamina, where the fractured extremities formed a kind of joint, admitting of some motion.

Thigh Bone. One portion of another, somewhat similar to the above.

Three fractured Thigh Bones in Quadrupeds.

Twenty-three fractured Tibiæ; in twenty of which the fracture is about two or three inches above the lower extremity, and in the other three the fracture is near the middle. Seven of them are accompanied with fractured fibulæ; and in all of these, except two, there is a bony union between the two bones, at the place of fracture.

Two sections through a fractured Tibia and Fibula, showing an oblique compact stratum of new bone running between the broken extremities of the bones.

A Section of a fractured Tibia.

A Tibia and Fibula fractured, where there had been no union, perhaps occasioned by a dead piece of bone; and where there had been considerable inflammation, and growth of bone at the fractured extremities.

A fractured Tibia and Fibula from a Sow.

Twelve fractured Fibulæ, of which seven are fractured within one or two inches of the upper extremity, two are fractured near the lower extremity, and three are fractured near the middle.

EXOSTOSIS.

By Exostosis is understood a præternatural growth of Bone, forming a bony tumour arising from the natural surface of a bone. This I think should be distinguished from a luxuriant growth of bone at a fracture, and from spina ventosa, a disease afterwards to be taken notice of.

A small knob of Bone, arising from the outside of Os Humeri near its middle.

A Thigh Bone, with a sharp process of bone arising about two inches above the inner condyle, and pointing upwards.

A Thigh Bone, with a large exostosis upon its fore part, near the middle.

Ditto, with small exostosis near middle, behind.

A Thigh Bone with a very large tumour, not exactly of bone but containing chiefly the earth of bone, enveloping the lower extremity.

A Section of a Thigh Bone near the lower extremity, with three large bony tumours.

A Tibia, belonging to the last thigh bone, with two bony tumours at its upper extremity.

A half of a lower Jaw, with a small exostosis.

An upper Jaw converted into a very large irregular mass of bone, consisting of thin laminæ variously disposed towards each other, the whole forming a mass twice as large as a child's head at birth: it can be discovered to be a jaw by one tooth only that is still remaining. It becomes difficult to determine, whether to rank this with Exostosis or Spina Ventosa.

Two irregular Spherules of Bone, near the bulk of a fist, which were found loose in a grave, and appear somewhat like separated exostoses.

SPINA VENTOSA.

By Spina Ventosa is meant the disease, in which the body of a Bone, or a part of it is changed into a bony, hollow tumour; so that the body of the bone, as far as the tumour extends, is entirely lost.

A Thigh Bone, with the upper extremity of it metamorphosed into a hollow irregular tumour, considerably larger than the adult skull, with many external openings leading into the cavity.

A Fibula, with the upper part converted into a similar tumour, as large as two fists conjoined.

A Fibula, with the greater part of its body converted into the same sort of tumour.

The Metacarpal Bone of the fore finger of the right hand, converted into a tolerably regular hollow tumour, rather larger than the fist.

URINARY CALCULI.

The matter of which Urinary Calculi are formed is always secreted by the urinary organs, but it is only concreted into calculi under particular circumstances, viz., when there is some nucleus to serve for a basis of crystallization. These nuclei may be of various kinds, as a little coagulated blood, any extraneous body whatever, as lead, hair, a piece of bougie, &c. When the nucleus is very small, it is lost in the crystallizations which are formed around it; so that in sawing through many stones no nucleus, distinct from the stone itself, appears. If this circumstance was not necessary to crystallization, there seems to be no good reason, why there should be any thing like a distinct stone, and why the whole surface of the excretory ducts of the kidneys, or the inner surface of the bladder should not be often incrustated with the matter of calculi.

SPECIFIC GRAVITY.—Urinary calculi differ considerably from each other in their specific gravity, but are generally about twice the specific gravity of water.

COLOUR.—They differ very much from each other in their colour, being of a white light brown, a dark brown, or black colour, and the different tints or shades from white to black are almost innumerable.

SURFACE.—There is also much variety in this respect: some being very smooth on their surface; others being granulated; others with larger prominences, so as to resemble a mulberry; and others with sharper processes arising from the general surface, which have given them the name of spinous.

SHAPE.—This varies considerably, according to circumstances, viz: according to the shape of the cavity in which the stone is formed, and according to the presence or absence of other stones. Upon the whole, the general shape of urinary stones is oval; and when there are more stones than one, there are generally faces and angles, where the different stones while in contact, had rubbed against each other.

COMPACTNESS AND STRUCTURE.—Some Stones are so solid as to take a firm uniform polish when sawn through; while others are full of small irregular cavities. The same stone may be compact and laminated on the outside, and porous within. There may also be a remarkable difference in colour, between the outer part of a stone and its centre.

SIZE.—Exceedingly various; from the bulk of a grain of sand, to that of the fist.

Two hundred and eighty-one Sections of Stones of different sizes.

Five entire Stones.

Six Boxes containing small Stones.

Three Stones, entire, from the kidney.

One Ditto, from a Mare.

Seventeen Boxes of Fragments.

Seventeen Models of Stones in Paris plaster.

Red Sand of urine, in three small boxes.

Two Locks of Hair, incrustated with calculous matter.

Two Nails, incrustated with calculous matter.

Three Pessaries, with ditto.

Some small Stones from Hog's bladder.

SALIVARY, AND PANCREATIC STONES.

They are of the same nature as the urinary.

Four Salivary Stones.

One Pancreatic.

BILIARY CALCULI. .

These differ very much from each other, in a number of circumstances.

COLOUR.—Their colour is various; being of a greenish, a dark green, bright yellow, brown, reddish yellow, red, white, and black colour.

SIZE.—Various; from a grain of sand, to the bulk of a pullet's egg.

NUMBER.—There is sometimes only one Stone found in a Gall Bladder, or its Ducts; at other times a prodigious number.

SHAPE.—When there is one Gall Stone only, it is generally of an oblong shape; when there are more, there are many surfaces and angles by which they are adapted to each other.

SURFACE.—When not exposed to friction, they are generally more or less granulated on their surface.

STRUCTURE.—When broken they appear to consist of crystals disposed in a radiated direction: towards the outer surface, they are commonly composed of concentric laminæ still interspersed with radiated structure; sometimes the radiated structure extends throughout.

The Gall Stones are so small and numerous that it is impossible to number them individually, as it would be nearly the same kind of task as reckoning the individual particles of sand in a sand box; we shall therefore only number the Boxes containing the Gall Stones. These Boxes are of the common wafer sort, and contain one, two, three, four, a dozen, &c. of Stones: others contain an infinite number of very small Stones.

Seventy Boxes, containing Gall Stones.

BEZOAR STONES.

They are of an olive colour, and generally of an oblong figure. When broken, they are chiefly of a radiated texture, and often have a considerable cavity in their centre, containing a vegetable substance. They are said to be formed in the stomach of an animal in the East Indies of the Goat kind. There are also Bezoars brought from the West Indies, which are reckoned inferior to the Oriental. They were at one time much employed in medicine.

One entire Bezoar Stone, of the bulk of an olive.

Fourteen sections of Bezoar Stones.

INTESTINAL STONES.

In the Intestines of Quadrupeds, Balls of Hair are often found, of a very considerable size. These have sometimes a hard polished crust, containing a looser texture of hair within: sometimes there is the same texture of hair upon the outside, a round ball being formed of considerable firmness by the action of the intestines.

There are also found, in the Intestines of Quadrupeds, large Concretions, appearing to consist of the same kind of matter as the calculous concretions of the urinary bladder.

In the human Subject, there are sometimes found concretions, analogous to the hairy concretions of Quadrupeds. These are of very different sizes; have the same firmness, the same feeling to the touch as the substance of a hat; and are of a yellowish brown colour.

Nine Sections of Calculous Concretions, some of immense size, from the intestines of a Horse.

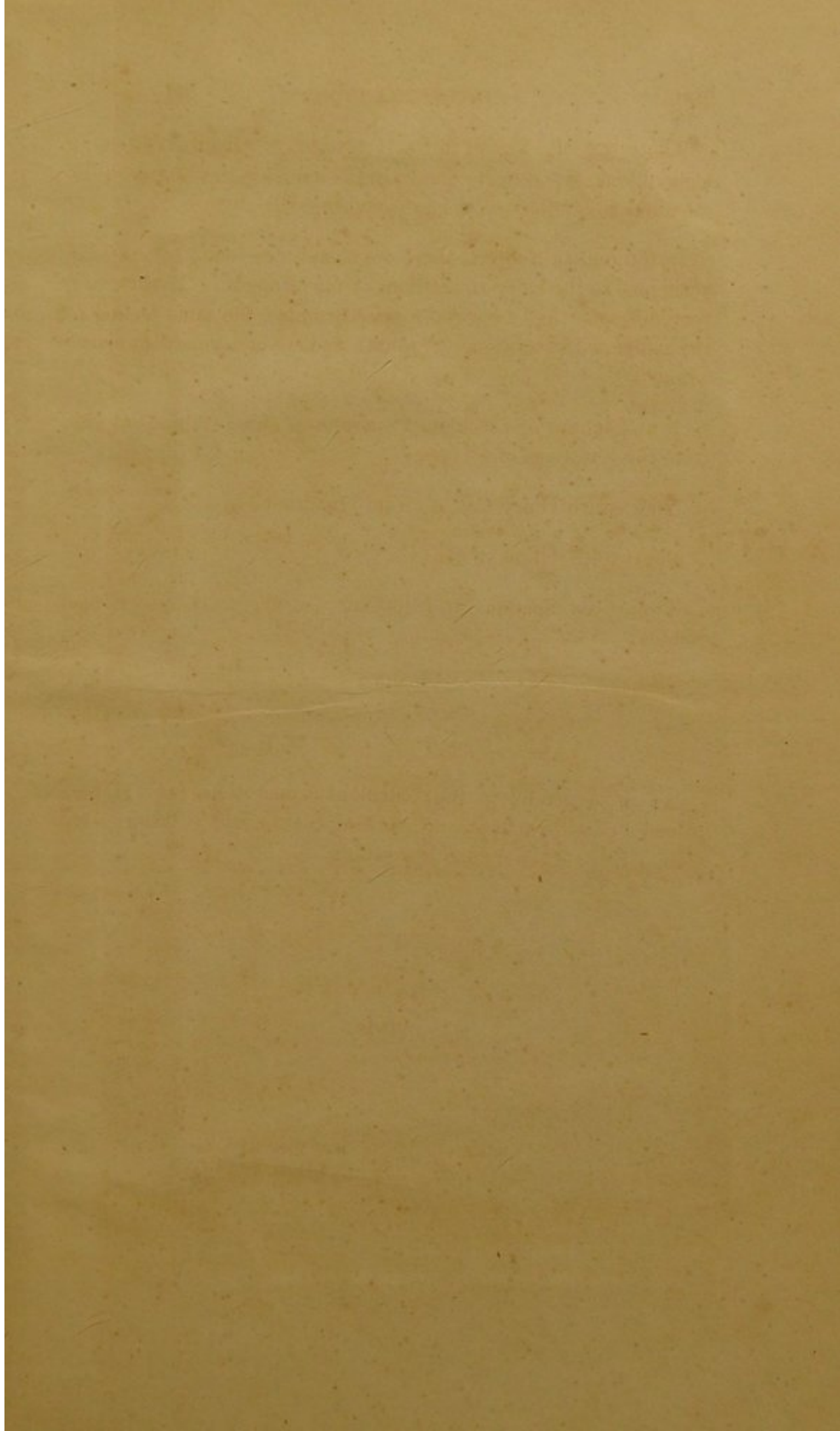
Nine entire Hairy Calculi, from Quadrupeds.

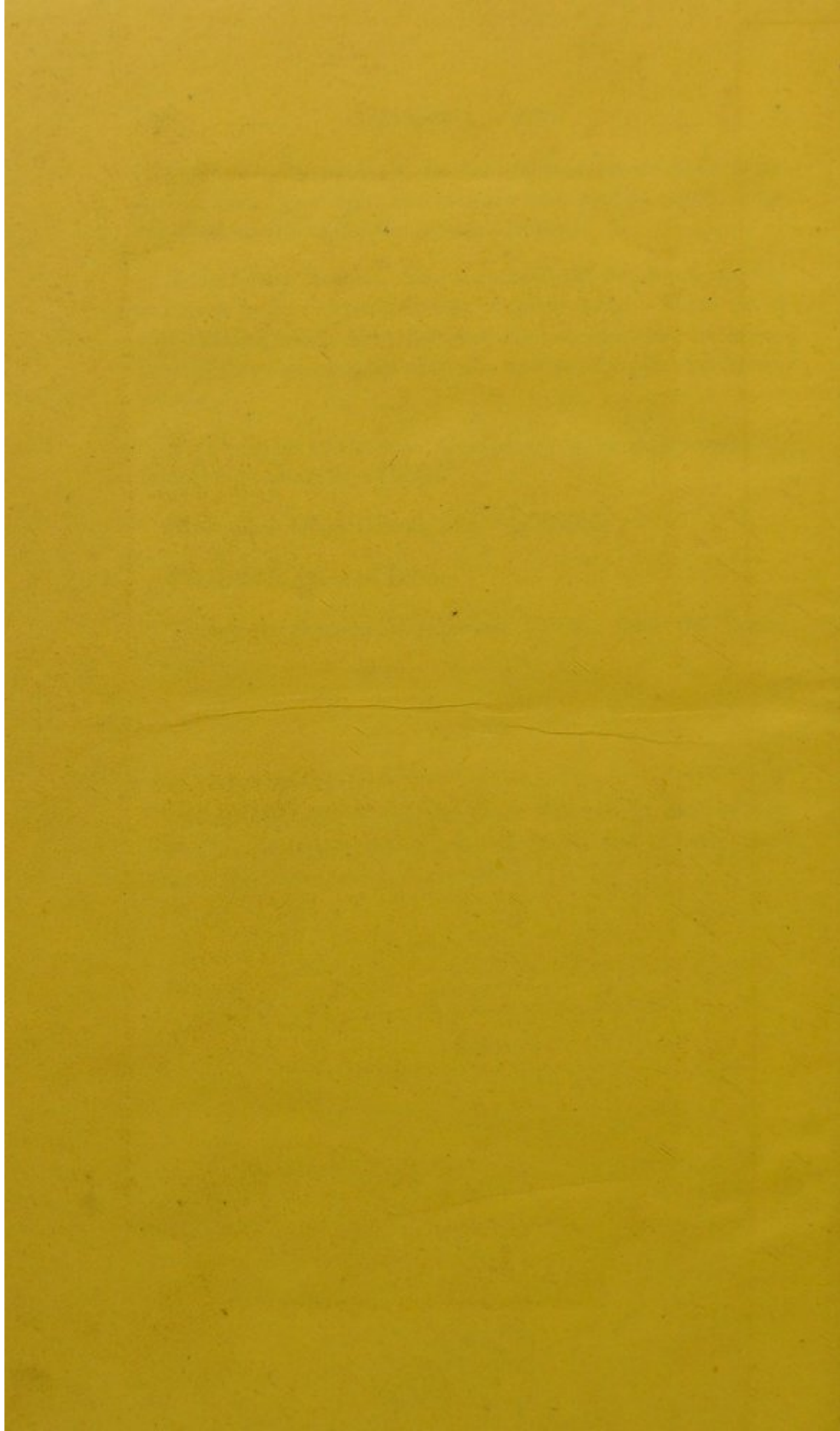
Fourteen Sections of Ditto.

Twenty-six Sections of Intestinal Calculi, from the human Subject.

As an Appendix to the Calculous Concretions may be here placed a considerable oblong piece of Slate; said to have passed from a Boy's bladder: (an imposition).

FINIS.





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