A set of anatomical tables, with explanations, and an abridgment of the practice of midwifery: with a view to illustrate a treatise on that subject, and collection of cases / by William Smellie, M.D.

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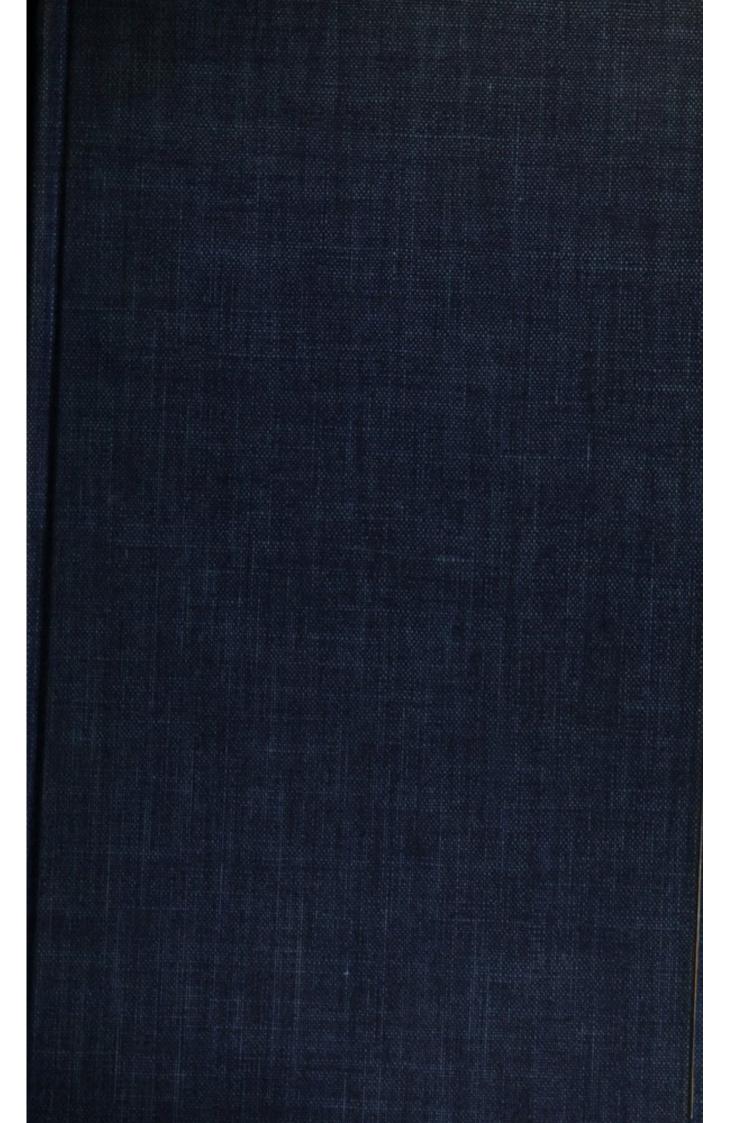
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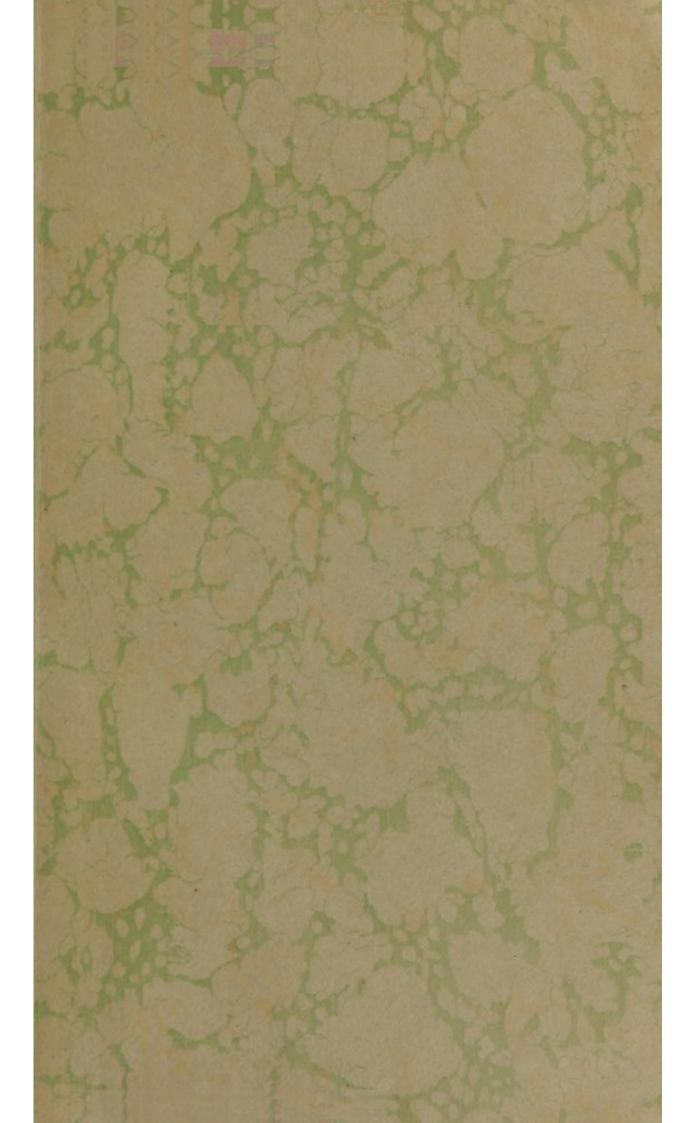


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S E T

OF

ANATOMICAL TABLES,

WITH

EXPLANATIONS,

And an Abridgment of the PRACTICE OF MIDWIFERY;

WITH A VIEW TO

ILLUSTRATE A TREATISE ON THAT SUBJECT,

AND

COLLECTION OF CASES.

Br WILLIAM SMELLIE, M. D.

PHILADELPHIA;

PRINTED BY T. DOBSON, AT THE STONE-HOUSE, Nº 412 SOUTH SECOND-STREET.

1797.



PREFACE.

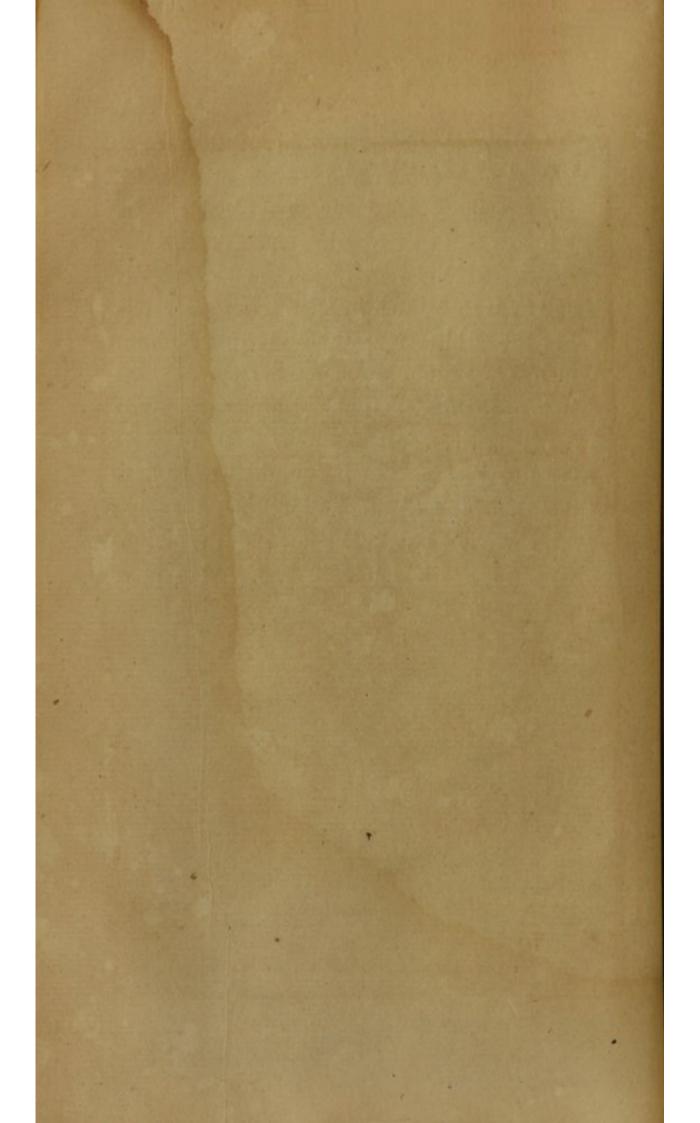
AS, in a long course of teaching and practice in Midwifery, I hope I may without vanity fay, that I have done fomething towards reducing that Art into a more fimple and mechanical method than has hitherto been done, I have attempted to explain the fame in my Treatise of the Theory and Practice of Midwifery and Collection of Cases; and finding that most of the representations hitherto given of the parts subservient to uterine gestation and parturition were in many respects deficient, I have been induced to undertake the following Tables, with a view to supply in fome measure the defects of others, and at the fame time to illustrate what I have taught and written on the subject. How far I have obtained those ends, it belongs to others to I shall only beg leave to observe here by way of Preface, that the greatest part of the figures were taken from Subjects prepared on purpose, to shew every thing that might conduce A 2

Practitioner: Avoiding, however, the extreme minutiæ, and what else seemed foreign to the present design; the situation of parts, and their respective dimensions, being more particularly attended to, than a minute anatomical investigation of their structure.

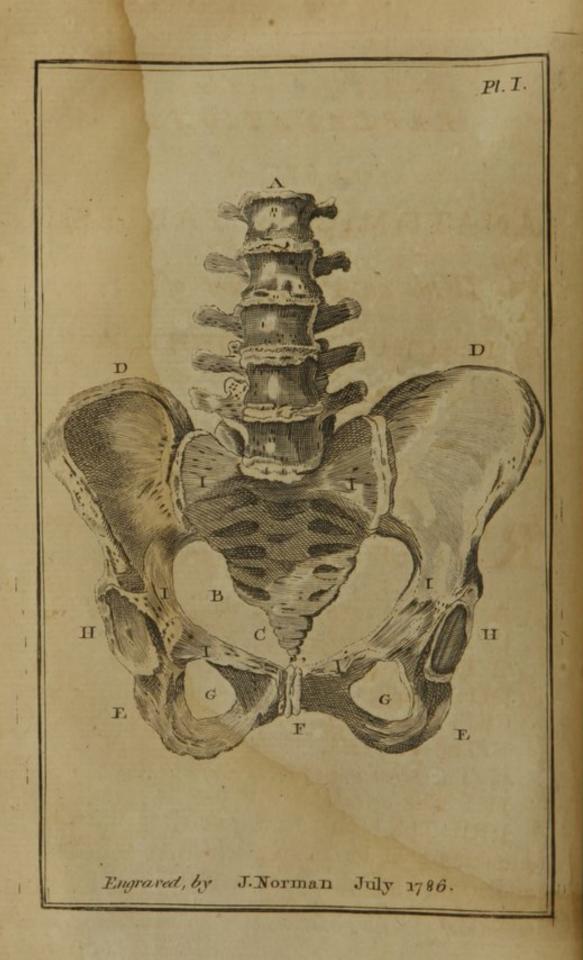
As these Tables may possibly fall into the hands of some who have not seen my former work, I have added an Abridgment of the Practice; which, though far from being complete, may serve to illustrate several things which otherwise, by a bare representation, would be hardly intelligible.

References are made to Vol. I. II. and III. By Vol. I. I mean that which I first published in the year 1752, and contains a view of the Theory and Practice of Midwifery; Vol. II. and III. containing the Collection of Cases mentioned above. My first plan for these Tables confined them to the number of Twenty-two, which Mr. Rymsdyke had finished above two years ago; but I soon saw that a further illustration, and consequently an addition to that number, was necessary. In eleven of these, Dr. Camper, formerly Profes-

for of Medicine at Franequer in Friesland, now Professor of Anatomy and Botany at Amsterdam, greatly affished me, viz. Table XII. XVI. XVII. XVIII. XIX. XXIV. XXVII. XXVII. XXVIII. XXXIV. and XXXVII. The rest were drawn by Mr. Rymsdyke; except the thirty-seventh and thirty-ninth, which were done by another hand. The whole of the drawings are faithfully engraved; in which, however, delicacy and elegance have not been so much consulted as to have them done in a strong and distinct manner; with this view chiesly, that from the cheapness of the work it may be rendered of more general use.







EXPLANATIONS

OF A SET OF

ANATOMICAL TABLES,

With an Abridgment of the PRACTICE OF MIDWIFERY.

THE FIRST TABLE.

REPRESENTS, in a front view, the Bones of a well-formed Pelvis.

A The five vertebræ of the loins.
B The os facrum.
C The os coccygis.

DD The offa iliûm.

EE The offa ischium.

F The offa pubis.

G The foramina magna.

HH The acetabula.

IIIIII The brim of the pelvis, or that circumference of its cavity, which is described at the sides of the inferior parts of the offa ilium,

iliûm, and at the back and fore parts by the fuperior parts of the offa pubis and facrum.

In this Table, besides the general structure and figure of the feveral bones, the dimensions of the brim of the pelvis, and the distance between the under parts of the offa ischium, are particularly to be attended to; from which it will appear, that the cavity of the brim is commonly wider from fide to fide than from the back to the fore part, but that the fides below are in the contrary proportion. The reader, however, ought not to conclude, that every pelvis is fimilar in figure and dimensions, fince even well-formed ones differ in fome degree from each other. In general, the brim of the pelvis measures about five inches and a quarter from fide to fide, and four inches and a quarter from the back to the fore part; there being likewise the same distance between the inferior parts of the offa ischium. All these measures, however, must be understood as taken from the skeleton; for, in the subject, the cavity of the pelvis is confiderably diminished by its teguments and contents. Correspondent also to this diminution, the usual dimensions of the head of the full-grown fætus are but three inches and a half from ear to ear, and four inches and a quarter from the fore to the hind head.

Vide Tab. XVI. XVII. XVIII. Also Vol. I. Chap. I. Sect. 1. 2. 3. where the form and dimensions

dimensions of the pelvis, as well as of the head of the fætus, and the manner in which the same is protruded in labour through the basin, are fully treated of. Consult likewise Vol. II. Coll. 1. No. 1, 2. where cases are given of complaints of the pelvis arising from difficult labours.

THE

THE SECOND TABLE

Gives a lateral and internal view of the Pelvis divided longitudinally.

A The three lower vertebræ of the loins.

B The os facrum.

C The os coccygis.
D The left os iliûm.

E The left os ischium.

F The os pubis of the same side.

G The acute process of the os ischium.

H The foramen magnum. III The brim of the pelvis.

THIS Plate shews the distance from the fuperior part of the os facrum to the offa pubis, as well as from the last-mentioned bones to the coccyx, which in each amounts to about four inches and a quarter. The depth likewise of the posterior, lateral, and anterior parts of the pelvis, is shewn, not in the line of the body, but in that of the pelvis from its brim downward, which is generally three times deeper on the posterior than anterior part, and twice the depth of the last at the sides.

From this view appears also the angle which is formed by the last vertebra of the loins and the fuperior part of the os facrum, as likewise the concavity or hollow space in the posterior internal part of the pelvis, arising from the cur-

vature





vature of the last-mentioned bone and coccyx; finally, the distance from which to the posterior parts of the ossa ischium is here expressed.

Vide Tab. XVI. XVII. XVIII. XIX. Also

Vide Tab. XVI. XVII. XVIII. XIX. Also Vol. I. and II. as referred to in the former

Table.

THE

THE THIRD TABLE

Exhibits a front view of a difforted Pelvis.

A The five vertebræ of the loins.

B The os facrum. C The os coccygis.

DD The offa iliûm.

EE The offa ischium. F The offa pubis.

GG The foramina magna.

HH The acetabula.

From this Plate may appear the great danger incident to both mother and child when the pelvis is difforted in this manner; it being only two inches and an half at the brim from the pofterior to the anterior part, and the same diftance between the inferior parts of each os ifchiûm. Vide Tab. XXVII. where the pelvis is one quarter of an inch narrower at the brim than this, but fufficiently wide below. Various are the forms of distorted basins, but the last mentioned is the most common. It is a great happiness, however, in practice, that they are seldom fo narrow, though there are instances where they have been much more fo. The danger in all fuch cases must increase or diminish, according to the degree of distortion of the pelvis, and fize of the child's head.

Vide Vol. I. Book I. Chap. 1. Sect. 4, 5. and Vol. II. Col. 1. No. 3, 4, 5. Alfo Coll.

21. 27. and 29.





THE FOURTH TABLE

Shews the External Female Parts of Generation.

A The lower part of the abdomen.

BB The labia pudendi separated.

C The clitoris and præputium.

DD The nympha.

E The fossa magna or os externum.

F The meatus urinarius.

G The frænum labiorum.

H The perinaum.

I The anus.

K The part that covers the extremity of the coccyx.

LL The parts that cover the tuberosities of

the offa ischium:

As it is of great consequence to every practitioner in midwifery, to know exactly the fituation of the parts concerned in parturition, and which have not been accurately described by former anatomists with a view to this particular branch, I have given this draught from one of the preserved subjects which I keep by me, in order to demonstrate these parts in the ordinary course of my lectures. From a view, then, of the situation of the parts, it appears, that the os externum is not placed in the middle of the

the inferior part of the pelvis, but at the anterior and inferior part of the pubes; and that the labia cover likewise the anterior part of these bones.

Secondly, It may be observed, that as the franum labiorum, which is nearly adjoining to the inferior part of the offa pubis, is only about an inch from the anus, between which and the coccyx there is about three inches distance; it follows, that the anus is nearer to the first mentioned bones than to the latter.

Thirdly, The view of this and the following Table will furnish proper hints with respect to the method of touching or examining the os uteri, without hurting or inflaming the parts; as it appears, that the os externum is placed forwards towards the pubes, and the os uteri backwards towards the rectum and coccyx. By this wife mechanism of nature many inconveniences are often prevented, which must happen if these parts were opposite to each other, and fituated in the middle of the inferior part of the pelvis; particularly a prolapfus of the vagina and uterus, either in the unimpregnated state, or in any of the first four months of pregnancy; as also too sudden deliveries in any of the laft months.

Fourthly, From a view of the fituation of the parts, it will appear, that in labour, when the os uteri is sufficiently opened to allow a passage for the head of the fætus, the same is protruded to the lower part of the vagina, by which the ex-

ternal

ternal parts are pushed out in form of a large tumour, as in Table XV.

Lastly, It may be observed, that when it is necessary to dilate the os externum, the principal force ought to be applied downwards and towards the rectum, to prevent the urethra and neck of the bladder from being hurt or inflamed.

Vide Vol. I. Book I. Chap. 2. Sect. 1. Vol. II. Coll. 2.

THE FIFTH TABLE.

in situ suspended in the vagina; the anterior parts of the ossa is schium, with the ossa pubis, pudenda, perinæum, and anus, being removed, in order to shew the internal parts.

A The last vertebra of the loins.

BB The offa iliûm. CC The acetabula.

DD The inferior and posterior parts of the offa ischium. Vide Table XXIX. where the offa pubis and the anterior parts of the offa ischium are represented by dotted lines.

E The part covering the extremity of the

coccyx.

F The inferior part of the rectum.

GG The vagina cut open longitudinally, and stretched on each side of the collum uteri to shew in what manner the uterus is suspended in the same.

HH Part of the vesica urinaria stretched on each side of the vagina and inferior part of the fundus uteri.

I The collum uteri.

K The fundus uteri.

LL The tubæ Fallopianæ and fimbriæ.

IMM The ovaria.

NN The ligamenta lata and rotunda.

OO The fuperior part of the rectum.

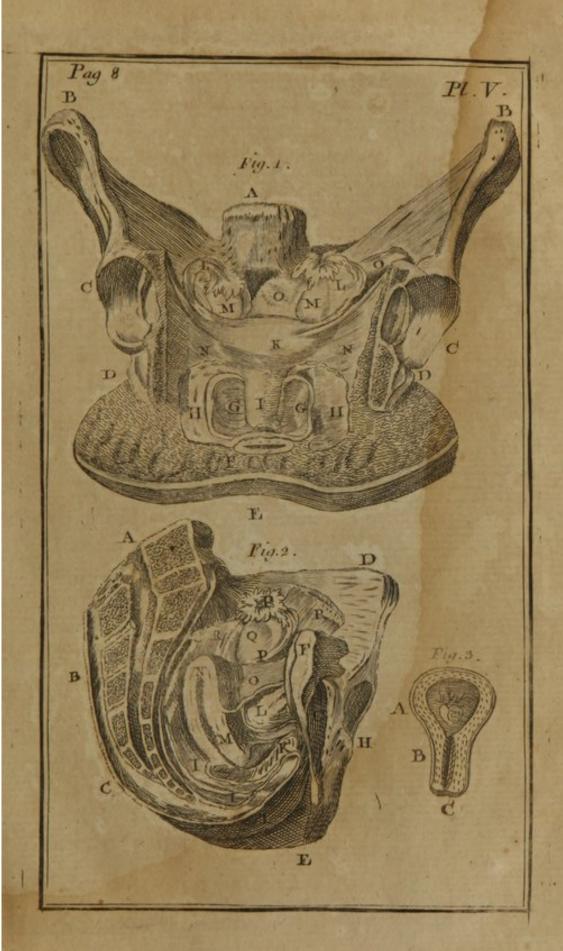


FIGURE III. Gives a front view of the Uterus in the beginning of the first month of pregnancy; the anterior part being removed, that the Embryo might appear through the amnios, the chorion being diffected off.

A The fundus uteri.

B The collum uteri, with a view of the rugous canal that leads to the cavity of the fundus.

C The os uteri.

Vide Vol. I. Book I. Chap. 2. Sect. 2, 3. Vol. II. Coll. 3.





THE SIXTH TABLE.

FIGURE I. In the same view and section of the parts as in the first sigure of the former table, shews the *Uterus* as it appears in the second or third month of pregnancy, its anterior part being here likewise removed.

F The anus.

G The vagina, with its plica.

HH The posterior and inferior part of the urinary bladder extended on each side, the anterior and superior part being removed.

II The mouth and neck of the womb, as raifed up when examining the same by the touch,

with one of the fingers in the vagina.

KK The uterus as stretched in the second or third month, containing the embryo, with the placenta adhering to the fundus.

It appears from this and the former Table, that at this time nothing can be known, with respect to pregnancy, from the touch in the vagina, as the resistance of the uterus is so inconsiderable that it cannot prevent its being raised up before the finger; and even were it kept down, the length of the neck would prevent the stretching being perceptible. The uterus likewise not being stretched above the pelvis, little change is made as to the figure of the abdomen, further than that the intestines are raised a little

a little higher; whence possibly the old observation of the abdomen being a little flatter at this period than usual, from the intestines being pressed more to each side. Women at this period miscarry oftener than at any other. It is a great happiness, however, in practice, that although they are frequently much weakened by large discharges, yet they rarely fink under the fame, but are fooner or later relieved by labour coming on, which gradually fretches the neck and mouth of the womb, by the membranes being forced down with the waters; and if the placenta is separated from the internal of the uterus, all its contents are discharged. But if the placenta still adheres, the membranes break, the waters and fætus are expelled, and the flooding diminishes, from the uterus, contracting close to the fecundines, which also are usually discharged sooner or later.

From the structure, finally, of the parts, as represented in this and the former table, it may appear, that it is much safer to restrain the slooding, and support the patient, waiting with patience the efforts of nature, than to endeavour to stretch the os uteri, and deliver either with the hand or instruments, which might endanger a laceration and inslammation of the

parts.

Vide C in Table XXXVII. Also Vol. I. Book II. Chap. 2. Sect. 2, 3, 4. Vol. II. Coll. 12. No. 2.

FIGURE II. Represents the Uterus in the fourth or fifth month of pregnancy, in the same view and section of the parts with the former figure, excepting that in this the anterior part of the collum uteri is not removed.

In the natural situation, the mouth and lips of the womb are covered with the vagina, and these parts are contiguous to each other; but here the vagina G is a little stretched from the neck and lips of the former, in order to shew the parts more distinctly. I, The neck of the womb, which appears in this sigure thicker, shorter, and softer, than in the former. K, The inferior part of the fundus uteri; the stretching of which can sometimes be felt through the vagina, by pushing up a singer on the anterior

or lateral part of the same.

The uterus now is fo largely stretched as to fill all the upper part of the pelvis, and begins also to increase so much as to rest on the brim, and to be supported by the same, the fundus at the same time being raised considerably above the pubes. From the abdomen being now more stretched the woman is more sensible of her growing bigger; and the uterus also, from the counter-pressure of the contents and parietes of the abdomen, is kept down, and the os uteri prevented from rising before the singer as formerly. In lean women, the stretching of the uterus can sometimes be perceived in the vagina at this period as well as above the pubes: But nothing

nothing certain can be discovered from the refistance or feel of the mouth of the womb or lips, which are commonly the same in the first months of pregnancy as before it.

The fize or bulk of the fætus is finally here to be observed, with the placenta adhering to

the posterior part of the uterus.

Vide the references to Vol. I. and II. in the former Table.

THE





THE SEVENTH TABLE

Represents the Abdomen of a woman opened in the fixth or seventh month of pregnancy.

AAAA The parietes of the abdomen opened, and turned back to shew

B The uterus.

CCC The intestines raised upwards.

The labia pudendi are fometimes affected in pregnancy with adematous fwellings, occafioned by the pressure of the uterus upon the returning veins and lymphatics. If the lobia are fo tumefied as to obstruct the patient's walking, the complaint is removed by puncturing the parts affected. By which means the ferous fluid is discharged for the present, but commonly recurs; and the same operation must be repeated feveral times perhaps before delivery; after which, however, the tumefaction entirely fubfides. Here it may be observed, that this complaint can feldom or never obstruct delivery; as the labia are fituated at the anterior part of the offa pubis, and can rarely affect the stretching of the franum, perinaum, vagina, and rectum. From this figure it appears, that the stretching of the uterus can eafily be felt at this period in lean subjects, through the parietes of the abdomen; especially if the intestines do not lie before it. In general indeed, as the uterus stretches, it rifes higher; by which means the intestines



THE EIGHTH TABLE.

In the same view and section of the parts as in Table VI. is represented the *Uterus* of the former Table, in order to shew its contents, and the internal parts as they appear in the fixth or seventh month of pregnancy.

A The uterus stretched up to the umbilical region.

BB The superior part of the offa iliûm.

CC The acetabula.

DD The remaining posterior parts of the offa ischiûm.

E The anus.

F The vagina,

G The bladder of urine.

H The neck of the womb shorter than in Table VI. and raised higher by the stretching of the uterus above the brim of the pelvis.

I The veffels of the uterus larger than in the

unimpregnated state.

KK The placenta adhering to the inferior

and posterior part of the uterus.

LL The membranes that furround the fætus, the head of which is here represented (as well as of those in Table VI.) situated downwards at the inferior part of the uterus, and which I am apt to believe is the usual situation of the fætus when at rest and surrounded with a great quantity of waters, as the head is heavier than any other

other part. With respect to the situation of the body of the fætus, though the fore-parts are often turned towards the sides and posterior parts of the uterus, they are here, as well as in the foregoing Table, represented at the anterior part or forewards, in order to shew them in a more distinct and picturesque manner.

Vide Vol. I. Book I. Chap. 3. Sect. 3, 4.

Vol. II. Coll. 13. No. 1.

FROM this Table may appear the difficulty of stretching the os uteri in flooding cases, even at this period, from the length and thickness of the neck of the womb, especially in a first pregnancy: Much the same method, however, is to be followed here as was directed in Table VI. till labour comes on to dilate the os uteri. If the flooding is then confiderable, the membranes should be broken, that the uterus may contract, and thereby lessen the discharge. The labour likewise, if it is necessary, may be affisted by dilating the os uteri in time of the pains; which alfo, if wanting, may be provoked by the fame method, when the patient is in danger. If this danger is imminent, and the woman feems ready to expire, the uterus, as appears from this Table, is at this time fufficiently stretched to receive the operator's hand to extract the fætus, if the os internum can be fafely dilated.

Lastly, It may be observed that women are in greater danger at this period and afterwards,

than in the former months.

Vide Vol. I. Book III. Chap. 4. Sect. 3. No. 1, 2, 3. Vol. III. Coll. 33. No. 2. See also in the Edinburgh Physical and Literary Observations, Art. xvii. the diffection of a woman with child, by Dr. Donald Monro, Physician at London.

THE

THE NINTH TABLE

In the same view and section of the parts with the former, represents the *Uterus* in the eighth or ninth month of pregnancy.

A The uterus as stretched to near its full extent, with the waters, and containing the fætus entangled in the funis, the head presenting at the upper part of the pelvis.

BB The superior part of the offa ilium.

CC The acetabula.

DD The remaining posterior parts of the offa ischium.

E The coccyx.

F The inferior part of the rectum.

GGG The vagina stretched on each side.

H The os uteri, the lips of which appear larger and fofter than in the foregoing Table, the neck of the womb being likewise stretched to its full extent, or entirely obliterated.

II Part of the vesica urinaria.

KK The placenta at the superior and posterior part of the uterus.

LL The membranes.

M The funis umbilicalis.

This and the foregoing Table shew in what manner the uterus stretches, and how its neck grows shorter, in the different periods of pregnancy; as also the magnitude of the fætus, in order





order more fully to explain Vol. I. Book 1. Chap. 3. Sect. 4, 5. also Lib. 3. Chap. 1. Sect.

1, 2. likewise Vol. II. Coll. 13. No. 1.

Notwithstanding it has been handed down as an invariable truth, from the earliest accounts of the art, to the present times, that, when the head of the fætus presented, the face was turned to the posterior part of the pelvis; yet, from Mr. Ould's observation, as well as from some late diffections of the gravid uterus, and what I myself have observed in practice, I am led to believe, that the head presents for the most part, as is here delineated, with one ear to the pubis, and the other to the os facrum; though sometimes this may vary, according to the form of the head, as well as that of the pelvis.

Consult Dr. Hunter's elegant plates of the

gravid uterus.

THE TENTH TABLE

Gives a front view of Twins in Utero in the beginning of labour; the anterior parts being removed, as in the preceding Tables.

A The uterus as stretched with the membranes and waters.

BB The fuperior parts of the offa iliûm.

CC The acetabula.

DD The offa ischium.

E The coccyx.

F The lower part of the rectum,

GG The vagina.

H The os internum stretched open about a finger's breadth with the membranes and waters in time of labour-pains.

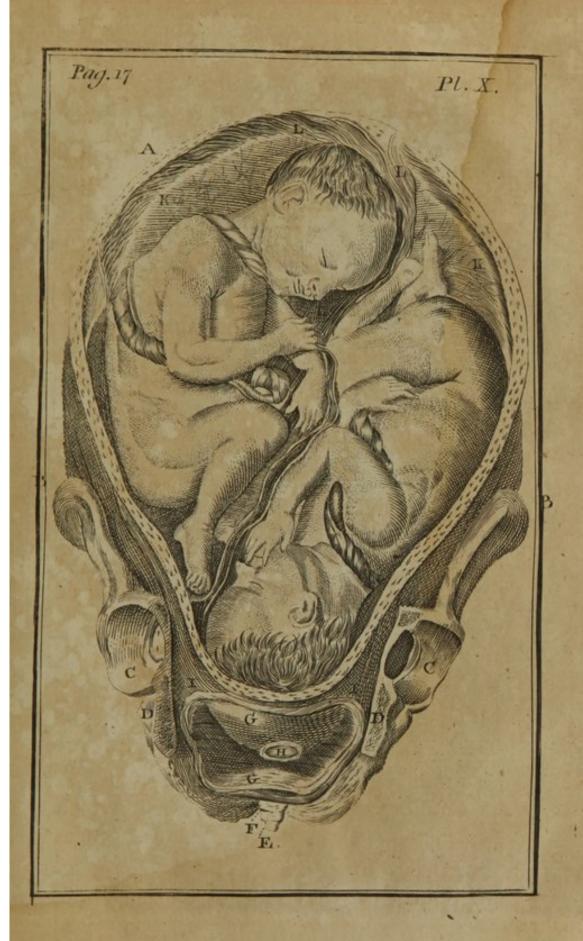
II The inferior part of the uterus stretched with the waters which are below the head of

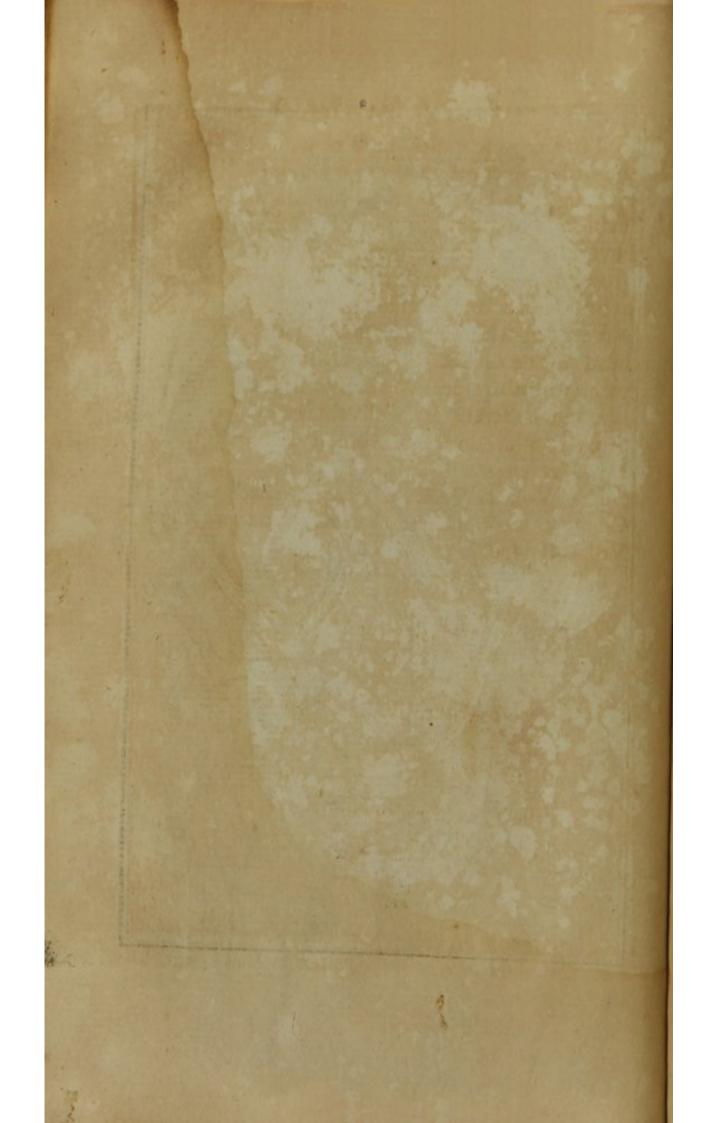
the child that prefents.

KK The two placentas adhering to the posterior part of the uterus, the two fætuses lying before them; one with its head in a proper position, at the inferior part of the uterus; and the other situated preternaturally, with the head to the fundus: The bodies of each are here entangled in their proper funis, which frequently happens in the natural as well as preternatural positions.

LLL The membranes belonging to each pla-

centa.





This representation of Twins, according to the order observed in my Treatise of Midwisery, ought to have been placed among the last Tables; but, as that was of no consequence, I have placed it here in order to shew the os uterigrown much thinner than in the former figure, a little open and stretched by the waters and membranes which are pushed down before the head of one of the fatuses in time of a labourpain. With respect to the position of twins, it is often different in different cases; but was thus, in a late diffection of a gravid uterus by Dr. Mackenzie.

Vide Vol. I. Book 3. Chap. 1. Sect. 4. and Chap. 5. Sect. 1. and Vol. II. Coll. 14. and Vol. III. Coll. 37.

THE ELEVENTH TABLE

Exhibits another front view of the Gravid Uterus in the beginning of labour; the anterior parts being removed, as in the former Table; but in this the Membranes, not being broken, form a large bag containing the Waters and Fætus.

A The substance of the uterus. BBCCDD The bones of the pelvis.

E The coccyx.

F The inferior part of the rectum.

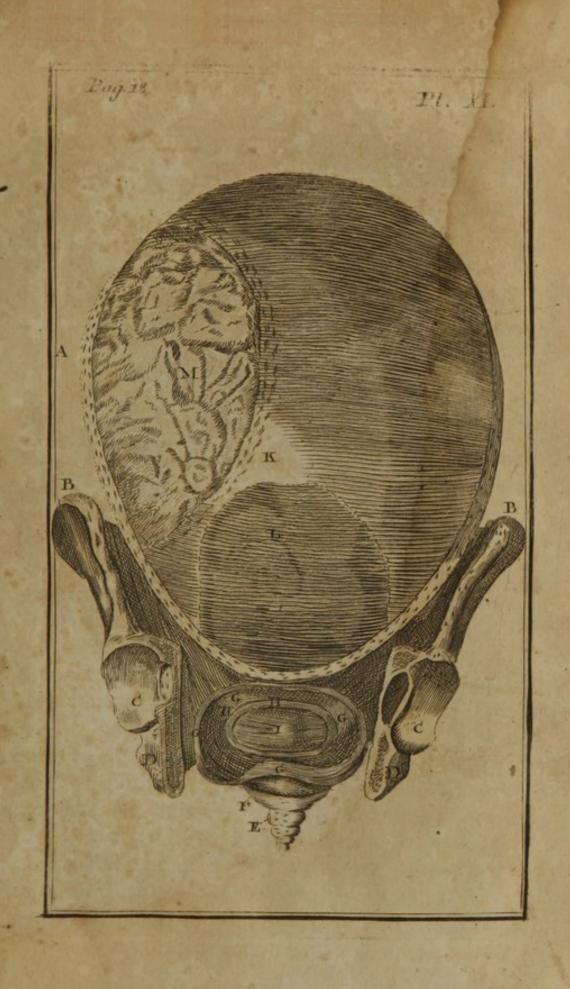
GGGG The vagina.

HH The mouth of the womb largely stretched in time of a pain; with I, the membranes and waters. This circumstance makes it usually certain that labour is begun; whereas from the degree of dilatation represented in the former Table there is little to be ascertained, unless the pains are regular and strong, the os uteri being often found more open several days, and even weeks, before labour commences.

K The chorion.

L The same diffected off at the inferior part of the uterus, in order to shew the head of the fætus through the amnios. N. B. This hint is taken from one of Dr. Albinus's Tables of the gravid uterus.

M The placenta; the external convex furface of which, divided into a number of lobes,





is here represented, its concave internal parts

being covered by the chorion.

The placenta has been found adhering to all the different parts of the internal surface of the uterus, and sometimes even over the inside of the os uteri; this last manner of adhesion however always occasions floodings as soon as the same begins to dilate.

Table VI. VIII. IX. X. shew the internal surface of the placenta towards the fætus, with the vessels composing its substance proceeding from the funis, which is inserted, in different placentas, into all the different parts of the

fame, as well as in the middle.

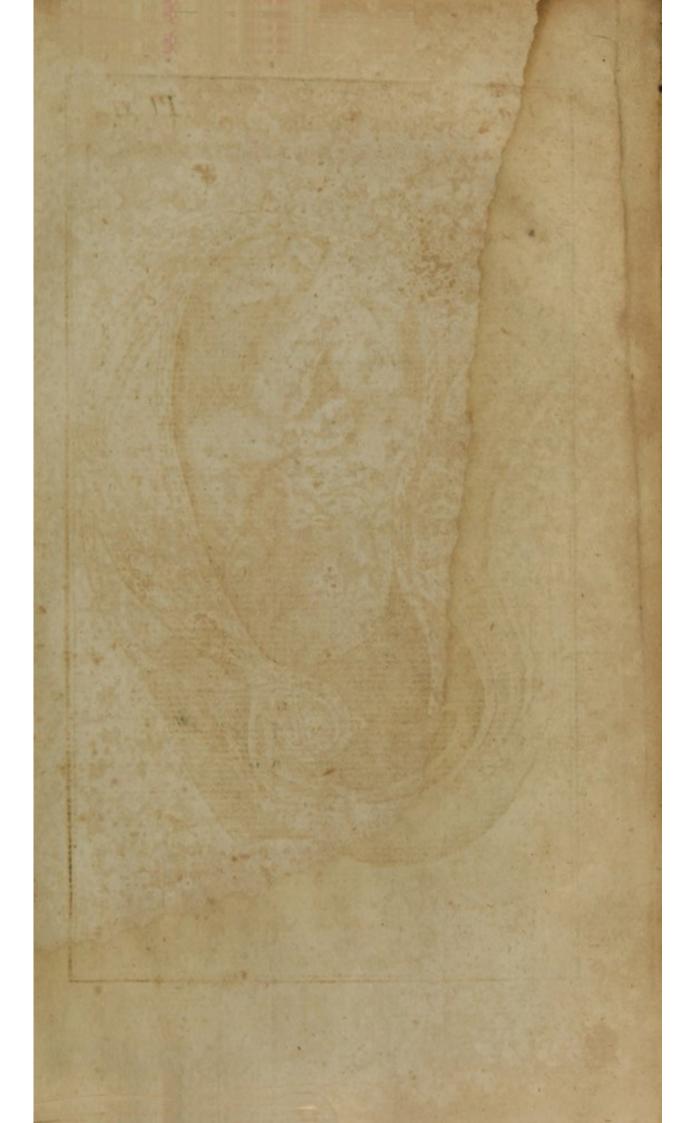
The Thirtieth and Thirty-third Tables shew the insertion of the funis into the abdomen of

the fætus.

With respect to the expulsion of the placenta, when the membranes break, the uterus contracts as the waters are evacuated till it comes in contact with the body of the fætus: The same being delivered, the uterus grows much thicker, and contracts closely to the placenta and membranes, by which means they are gradually separated, and forced into the vagina. This shews that we ought to follow the method which nature teaches, waiting with patience, and allowing it to separate in a slow manner: Which is much safer practice, especially when the patient is weak; as the discharge is neither so great or sudden as when the placenta is hurried down in the too common method. But then

we must not run into the other extreme, but assist when nature is not sufficient to expel the same.

Vide Vol. I. Book 3. Chap. 1. Sect. 4. Chap. 2. Sect. 2, 5. Vol. II. Coll. 14, 23.





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THE TWELFTH TABLE

Shews (in a lateral view and longitudinal divifion of the parts) the Gravid Uterus, when labour is fomewhat advanced.

A The lowest vertebra of the back.

B The ferobiculus cordis; the distance from which to the last mentioned vertebra is here shewn by dotted lines; as also part of the region below the diaphragm.

CC The usual thickness and sigure of the uterus when extended with the waters at the

latter end of pregnancy.

D The same contracted and grown thicker

after the waters are evacuated.

EE The figure of the uterus when pendulous. In this case, if the membranes break when the patient is in an erect position, the head of the fætus runs a risk of sliding over and above the ossa pubis, whence the shoulders will be pushed into the pelvis.

FF The figure of the uterus when stretched higher than usual, which generally occasions vomitings and difficulty of breathing. Confult on this subject Mr. LEVRET sur le Mecha-

nisme de differentes Grossesses.

'G The os pubis of the left fide.

HH The os internum.

I The vagina.

K The left nympha.

L The labium pudendi of the same side.

M The remaining portion of the bladder.

N The anus.

OP The left hip and thigh.

In this period of labour the os nteri being more and more stretched by the membranes pushing down, and beginning to extend the vagina, a great quantity of water is forced down at the same time, and (if the membranes break) is difcharged; whence the uterus contracts itself nearer to the body of the fætus, which is here represented in a natural position, with the ver-, tex resting at the superior part of the offa pubis, and the forehead towards the right os iliûm. As foon as the uterus is in contact with the body of the fætus, the head of the same is forced backward towards the os facrum from the line of the abdomen BG into that of the pelvis, viz. from the uppermost F to near the end of the coccyx, and is gradually pushed lower as in the following Table.

If the membranes do not break immediately upon their being pushed into the vagina, they should be allowed to protrude still further in or-

der to dilate the os externum.

Vide Vol. I. Book 1. Chap. 2. Sect. 2. Chap. 3. Sect. 3. Book 3. Chap. 1. Sect. 1, 2, 4. Chap. 2. Sect. 3. Chap 3. Sect. 4. No. 5. Vol. II. Coll. 10. No. 4. Cafe 3, 4. Coll. 14. Vol. III. Col. 34. No. 2. Cafe 4.





THE THIRTEENTH TABLE,

In the same view and section of the parts as in Table VI. shews the natural position of the head of the Fætus when sunk down into the middle of the Pelvis after the Os Internum is fully opened, a large quantity of the waters being protruded with the Membranes through the Os Externum, but prevented from being all discharged, from the head's filling up the Vagina.

A The uterus a little contracted, and thicker, from some of the waters being sunk down before the child, or discharged.

BB The superior parts of the offa ilium.

C The inferior part of the rectum.

DD The vagina largely stretched with the head of the fætus.

EE The os internum fully opened.

F A portion of the placenta.

GG The membranes.

HH The ligamenta lata.

II The ligamenta rotunda. Both these last stretched upwards with the uterus.

The vertex of the fætus being now down at the inferior part of the right os ischium, and the wide part of the head at the narrow and inferior part of the pelvis, the forehead by the force of the pains is gradually moved backwards; and as it advances lower, the vertex and occiput turn out below the pubes, as in the next Table. Hence may be learnt of what consequence it is to know, that it is wider from side to side at the brim of the pelvis, than from the back to the fore part; and that it is wider from the fore to the hind head of the child, than from ear to ear.

Vide Vol. I. Book 1. Chap. 1. Sect. 3, 5. Also Book 3. Chap. 3. Sect. 3, 4. No. 3. Vol. II. Coll. 14.





THE FOURTEENTH TABLE,

In a fimilar view and fection of the parts with Table XII. shews the forehead of the fatus turned (in its progression downwards, from its position in the former Table) backwards to the os facrum and the occiput below the pubes; by which means the narrow part of the head is to the narrow part of the pelvis, that is, between the inferior parts of the offa ischium. Hence it may be observed, that though the diftance between the inferior parts of the last-mentioned bones is much the fame as between the coccyx and pubes; yet as the cavity of the pelvis is much shallower at the anterior than lateral part, the occiput of the fætus, when come down to the inferior part of either os ischium, turns out below the pubes: this answers the same end as if the pelvis itself had been wider from the posterior part than from side to side; the head likewise enlarging the cavity by forcing back the coccyx, and pushing out the external parts in form of a large tumour, as is more fully defcribed in the following Table.

Vide Vol. I. II. as referred to in the preced-

ing Table.

A The uterus contracted closely to the fatus

after the waters are evacuated.

BCD The vertebræ of the loins, os facrum, and coccyx.

E The anus.

F The left hip.

G The perinæum.

H The os externum beginning to dilate.

I The os pubis of the left fide.

K The remaining portion of the bladder.

L The posterior part of the os uteri.

N. B. Although for the most part, at or before this period, the waters are evacuated, yet it often happens that more or less will be retained, and not all discharged, till after the delivery of the child; occasioned from the presenting part of the fatus coming into close contact with the lower or under part of the uterus, vagina, or os externum, immediately, or soon after the membranes break.





THE FIFTEENTH TABLE

Is intended principally to shew in what manner the Perinæum and external parts are stretched by the head of the Fætus, in a first pregnancy, towards the end of labour.

A The abdomen.

B The labia pudendi.

C The clitoris and its prapulium.

D The hairy scalp of the fætus swelled at the vertex in a laborious case, and protruded to the os externum.

EF The perinæum and anus pushed out by the head of the fætus in form of a large tumour.

GG The parts that cover the tuberosities of the ossa ischium.

H The part that covers the os coccygis.

The perinæum in this figure is stretched two inches, or double its length in the natural state; but when the os externum is so much dilated by the head of the fætus as to allow the delivery of the same, the perinæum is generally stretched to the length of three, and sometimes four inches. The anus is likewise lengthened an inch, the parts also between it and the coccyx being much distended. All this ought to caution the young practitioner never to precipitate the delivery at this time; but to wait, and allow the parts to dilate in a slow manner; as,

from the violence of the labour-pains, the sudden delivery of the head of the fætus might endanger the laceration of the parts. The palm of the operator's hand ought therefore to be pressed against the perinæum, that the head may be prevented from passing till the os externum is sufficiently dilated, to allow its delivery without tearing the frænum, and parts betwixt that and the anus, which are at this time very thin.

Vide Vol. I. Book 3. Chap. 2. Sect. 2. Chap. 3. Sect. 4. No. 1. and Book 4. Chap. 1. Sect. 1. Also Vol. II. Coll. 14, 24. Vol. III. Coll.

40.

THE



Pag. 25 P

THE SIXTEENTH TABLE

And the three following shew in what manner the Head of the Fætus is helped along with the Forceps, as artificial hands, when it is necessary to affist with the same for the safety of either Mother or Child. In this Table the head is represented as forced down into the Pelvis by the labour-pains, from its former position in Table XII.

AABC The vertebræ of the loins, os facrum, and coccyx.

D The os pubis of the left fide.

E The remaining part of the bladder.

FF The intestinum rectum.

GGG The uterus.

H The mons veneris.

I The clitoris, with the left nympha.

X The corpus convernosum clitoridis.

V The meatus urinarius.

K The left labium pudendi.

L The anus.

N The perinæum.

QP The left hip and thigh.

R The skin and muscular part of the loins.

The patient in this case may be, as in this Table, on her side, with her breech a little over the side or soot of the bed, her knees being likewise pulled up to her belly, and a pillow F 2 placed

placed between them, care being taken at the fame time that the parts are by a proper covering defended from the external air. If the hairy scalp of the fætus is so swelled that the fituation of the head cannot be diftinguished by the sutures as in Table XXI. or if by introdueing a finger between the head of the child and the pubes, or groins, the ear or back part of the neck cannot be felt, the os externum must be gradually dilated in the time of the pains with the operator's fingers (previously lubricated with hog's-lard) till the whole hand can be introduced into the vagina, and flipped up in a flattish form between the posterior part of the pelvis and child's head. This last is then to be raifed up as high as is possible, to allow room for the fingers to reach the ear and pofterior part of the neck. When the position of the head is known, the operator must withdraw his hand, and wait to fee if the stretching of the parts will renew or increase the labourpains, and allow more space for the advancement of the head in the pelvis. If this, however, proves of no effect, the fingers are again to be introduced as before, and one of the blades of the forceps (lubricated with lard) is then to be applied along the infide of the hand or fingers, and left ear of the child, as reprefented in the Table. But if the pelvis is diftorted, and projects forward at the fuperior part of the os facrum, and the forehead therefore cannot be moved a little backwards, in order to

turn the ear from that part of the pelvis which prevents the end of the forceps to pals the fame; in that case, I say, the blade must be introduced along the posterior part of the ear at the fide of the difforted bone. The hand that was introduced is then to be withdrawn, and the handle of the introduced blade held with it as far back as the perinæum will allow, whilft the fingers of the other hand are introduced to the os uteri, at the pubes, or right groin, and the other blade placed exactly opposite to the former. This done, the handles being taken hold of and joined together, the head is to be pulled lower and lower every pain, till the vertex, as in this Table, is brought down to the inferior part of the left ischium, or below the same. The wide part of the head being now advanced to the narrow part of the pelvis betwixt the tuberosities of the offa ischium, it is to be turned from the left ischium out below the pubes, and the forehead backwards to the concave part of the os facrum and coccyx, as in Table XVII. and afterwards the head brought along and delivered as in Table XVIII. and XIX. But if it is found that the delivery will require a confiderable degree of force from the head's being large, or the pelvis narrow, the handles of the forceps are to be tied together with a fillet, as represented in this Table, to prevent their position being changed, whilst the woman is turned on her back, as in Table XXIV.

XXIV. which is then more convenient for delivering the head than when lying on the fide.

This Table shews that the handles of the forceps ought to be held as far back as the os externum will allow, that the blades may be in an imaginary line between that, and the middle space between the umbilicus and the scrobiculus cordis. When the forceps are applied along the ears and sides of the head, they are nearer to one another, have a better hold, and mark less than when over the occipital and frontal bones.

Vide Vol. I. Book 3. Chap. 3. from Sect. 1. to 6. and Vol. II. Coll. 25, 26, 27, and 29.

THE





THE SEVENTEENTH TABLE,

In the same view with the former, represents in outlines the Head of the Fætus brought lower with the Forceps, and turned from the position in the former Table, in imitation of the natural progression by the labour-pains, which may likewise be supposed to have made this turn, before it was necessary to assist with the Forceps, this necessary at last arising from many of the causes mentioned in Vol. I.

In this view the position of the forceps, along the ears and narrow part of the head, is more particularly expressed. It appears also, that when the vertex is turned from the left os ischiûm, where it was closely confined, it is difengaged by coming out below the pubes, and the forehead that was pressed against the middle of the right os ischium is turned into the concavity of the os facrum and coccyx. By this means the narrow part of the head is now between the offa ischium or narrow part of the pelvis; and as the occiput comes out below the pubes, the head passes still easier along. When the head is advanced so low in the pelvis, if the position cannot be distinguished by the sutures, it may for the most part be known by feeling for the back part of the neck of the fætus, with a finger introduced betwixt the occiput and pubes, or towards

wards one of the groins. If the head is squeezed into a longish form, as in Table XXI. and has been detained many hours in this position the pains not being sufficient to complete the delivery, the assistance of the forceps must be taken to save the child, though the woman may be in no danger. But if the head is high up in the pelvis, as in the former Table, the forceps ought not to be used except in the most urgent necessity.

This Table also shews that the handles of the forceps are still to be kept back to the perinæum, and when in this position are in a line with the upper part of the focuum, and if held more backwards, when the head is a little higher, would be in a line with the ferobiculus cordis. If the forceps are applied when the head is in this position, they are more easily introduced when the patient is in a supine position, as in Table XXIV. Neither is it necessary to tie the handles, which is only done to prevent their alteration when turning the woman from her side to her back.

As I have had several cases where a longer fort of forceps that are curved upwards are of great use to help along the head, when the body is delivered first, as in Table XXXV. the same are represented here by dotted lines. They may be used in laborious cases as well as the others, but are not managed with the same ease.

Most

Most of the parts of this Table being marked with the same letters as the former, the descriptions there given will answer in this, except the following.

LM The anus.

MN The perinæum.

O The common integuments of the abdomen.

R The short forceps.

S The long curved forceps. The first of these is eleven inches long, and the last twelve inches and a half, which I have after several alterations found sufficient; but this need not confine others who may choose to alter them from this standard.

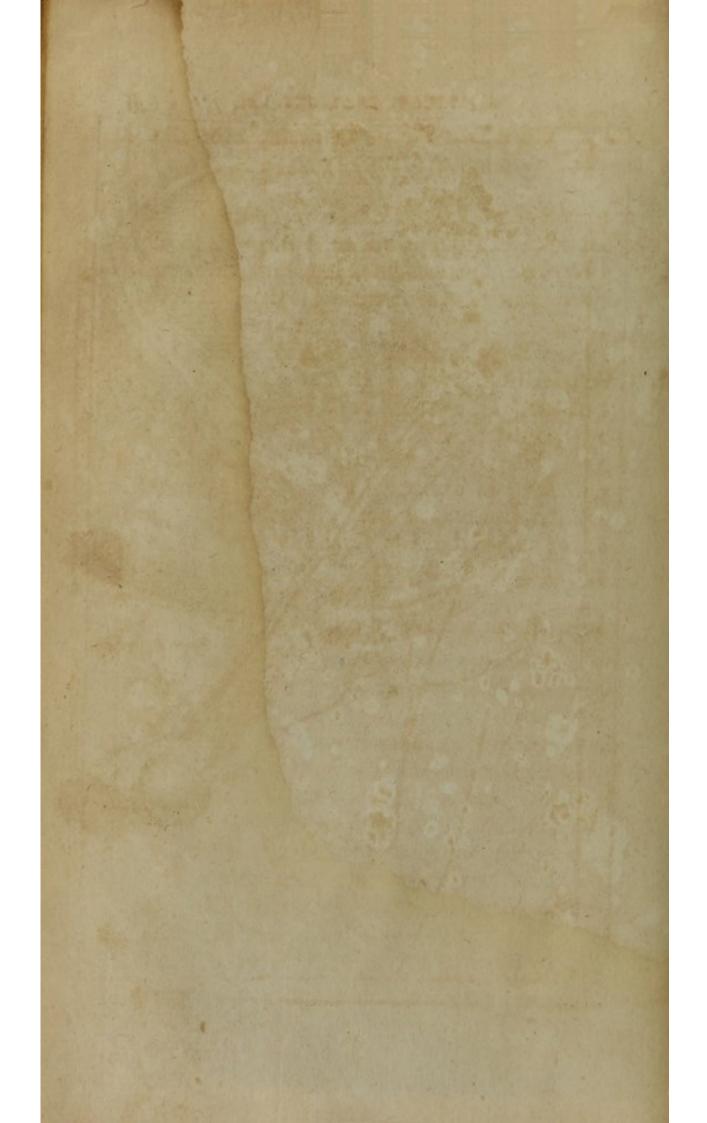
Vide Table XXXVII.

THE EIGHTEENTH TABLE,

In the same view and section of the parts, shews the Head of the Fætus in the same position, but brought lower down with the Forceps than in the former Table; for in this the Os Externum is more open, the Occiput come lower down from below the Pubes, and the Forehead past the Coccyx, by which both the Anus and Perinæum are stretched out in form of a large tumour, as in Table XV.

WHEN the head is fo far advanced, the operator ought to extract with great caution, lest the parts should be torn. If the labour-pains are fufficient, the forehead may be kept down, and helped along in a flow manner by preffing against it with the fingers on the external parts below the coccyx: at the same time the forceps being taken off, the head may be allowed to ftretch the os externum more and more in a gradual manner, from the force of the labourpains as well as affiftance of the fingers. But if the former are weak and infufficient, the affistance of the forceps must be continued. (Vide the description of the parts in Table XVI.) ST, in this, represent the left fide of the os uteri. The dotted lines demonstrate the fituation of the bones of the pelvis on the right fide.





fide, and may ferve as an example for all the lateral views of the fame.

abch The outlines of the os iliûm.

Def The same of the pubis and ischiûm.

iik The acetabulum. And

mn The foramen magnum.

Vide Vol. I. Book 3. Chap. 5. Sect. 3. Vol. II. Coll. 25.

THE

THE NINETEENTH TABLE,

In the same view and section of the pelvis, is intended by outlines to shew, that as the external parts are stretched, and the os externum is dilated, the occiput of the fætus, rises up with a semicircular turn from out below the pubes, the under part of which bones are as an axis, or sulcrum, on which the back part of the neck turns, whilst at the same time the forehead and face, in their turn upwards, distend largely the parts between the coccyx and os externum. This is the method observed by nature in stretching these parts in labour; and as nature is always to be imitated, the same method ought to be followed when it is necessary to help along the head with the forceps.

Vide the three former Tables for the descrip-

tions and references.





THE TWENTIETH TABLE,

In the same section of the parts, but with a view of the right side, shews the Head of the Fætus in the contrary position to the three last sigures, the Vertex being here in the concavity of the Sacrum, and the Forehead turned to the Pubes.

AB The vertebræ of the loins, os facrum, and coccyx.

C The os pubis of the right fide.

D The anus.

E The os externum not yet begun to stretch.

F The nympha.

G The labium pudendi of the right side.

H The hip and thigh.

II The uterus contracted, the waters being all discharged.

When the head is small, and the pelvis large, the parietal bones and the forehead will, in this case, as they are forced downwards by the labour-pains, gradually dilate the os externum, and stretch the parts between that and the coccyx in form of a large tumour, as in Table XV. till the face comes down below the pubes, when the head will be safely delivered. But if the same be large, and the pelvis narrow, the difficulty will be greater, and the child in danger; as in the following Table.

Vide Vol. I. Book 3. Chap. 3. Sect. 4. No.

3. Vol. II. Coll. 16. No. 2.

THE TWENTY-FIRST TABLE

Shews the Head of the Fætus in the same pofition as in the former Table; but, being much larger, it is by strong labour-pains squeezed into a longish form with a Tumour on the Vertex, from the long compression of the head in the Pelvis. If the Child cannot be delivered with the labour-pains, or turned and brought footling, the Forceps are to be applied on the head, as described in this figure, and brought along as it presents; but if that cannot be done without running the risk of tearing the Perinaum, and even the Vagina and Rectum of the Woman, the Forehead must be turned backwards to the Sa-To do this more effectually, the Operator must grasp firmly with both hands the handles of the Forceps, and at the same time pushing upwards raise the Head as high as possible, in order to turn the Forehead to one fide, by which it is brought into the natural position; this done, the head may be brought down and delivered as in Table XVI. &c.

Vide Vol. I. Book 3. Chap. 3. Sect. 4. No. 2. and Vol. II. Coll. 28. Also the former Table for the description of the parts, except

K The tumour on the vertex. The same compression and elongation of the head, as well





as the tumour on the vertex, may be supposed to happen in a greater or less degree in the XVI. XVII. XVIII. XIX. Tables, as well as in this, where the difficulty proceeds from the head being large, or the pelvis narrow. Vide Table XXVIII. and XXVIII.

Sometimes the forehead may be moved to the natural polition by the affiltance of the fingers, or only one blade of the forceps. The forceps may either be the straight kind, or such as are curved to one side, when it is necessary to use one or both blades.

M The vefica urinaria much distended with a large quantity of urine from the long pressure of the head against the urethra; which shews that the urine ought to be drawn off with a catheter, in such extraordinary cases, before you apply the forceps, or in preternatural cases where the child is brought footling.

N The under part of the uterus. OO The os uteri.

THE TWENTY-SECOND TABLE,

Shews, in a front view of the parts, the Fore-head of the Fætus presenting at the brim of the Pelvis; the Face being turned to one side; the Fontanelle to the other; and the Feet and Breech stretched towards the Fundus Uteri.

AA The superior part of the offa iliúm.

B The anus.

C The perinaum.

D The os externum; the thickness of the posterior part before it is stretched with the head of the child.

EEE The vagina.

F The os uteri, not yet fully dilated,

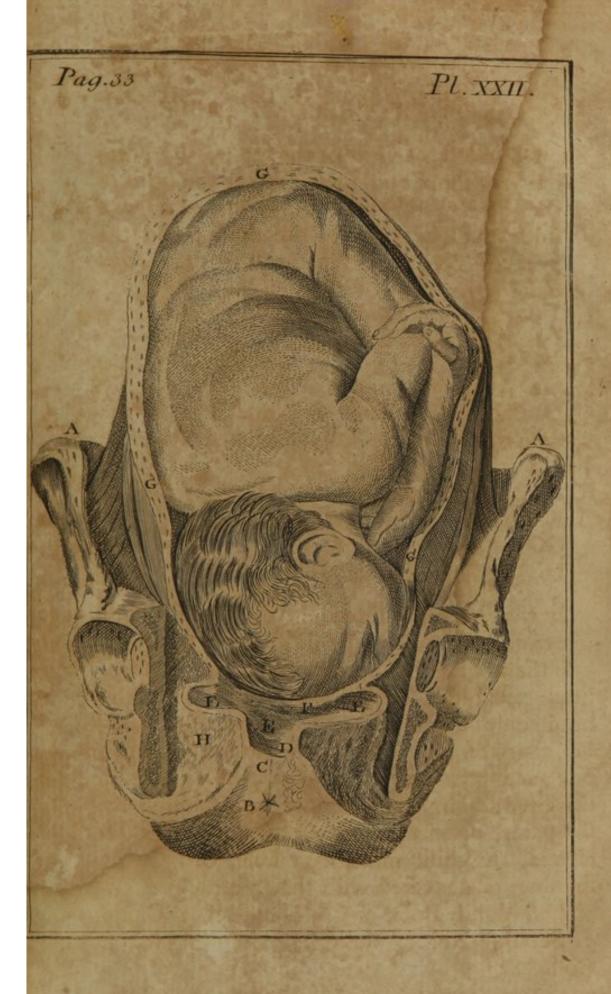
GGG The uterus.

H The membrana adiposa.

If the face is not forced down, the head will fometimes come along in this manner, in which case the vertex will be flattened, and the forehead raised in a conical form; and when the head comes down to the lower part of the pelvis, the face or occiput will be turned from the side, and come out below the pubes. But if the head is large and cannot be delivered by the pains, or if the wrong position cannot be altered, the child must, if possible, be brought footling, or delivered with the forceps.

Vide Vol. I. Book 3. Chap. 2. Sect. 3. Chap. 3. Sect. 4. No. 3. Vol. II. Coll. 16. No. 4.

Coll. 28.





THE TWENTY-THIRD TABLE

Shews, in a lateral view, the Face of the Child presenting, and forced down into the lower part of the Pelvis, the Chin being below the Pubes, and the Vertex in the concavity of the Os Sacrum: The waters likewise being all discharged, the Uterus appears closely joined to the body of the Child, round the neck of which is one circumvolution of the Funis.

AB The vertebræ of the loins, os facrum, and coccyx.

C The os pubis of the left fide.

D The inferior part of the rectum.

E The perinæum.

F The left labium pudendi.

GGG The uterus.

When the pelvis is large, the head, if small, will come along in this position; and the child be faved: For as the head advances lower, the face and forehead will stretch the parts between the frænum labiorum and coccyx in form of a large tumour. As the os externum likewise is dilated, the face will be forced through it; the under part of the chin will rise upwards over the anterior part of the pubes; and the forehead, vertex, and occiput, turn up from the parts below. If the head, however, is large, it

will be detained either when higher or in this position. If this case, if the position cannot be altered to the natural, the child ought to be turned, and delivered footling. If the pelvis, however, is narrow, and the waters not all gone, the vertex should, if possible, be brought to present; but if the uterus is so closely contracted that this cannot be effected, on account of the strong pressure of the same, and slipperiness of the child's head, in this case the method directed in the following Table is to be taken.





THE TWENTY-FOURTH TABLE

Represents, in the lateral view, the Head of the Fætus in the same position as in the former Table; but the delivery is supposed to be retarded from the largeness of the Head, or a narrow Pelvis.

In this case, if the head cannot be raised, and pushed up into the uterus, it ought to be delivered with the forceps, in order to fave the child. This position of the chin to the pubes is one of the fafest cases where the face presents, and is most easily delivered with the forceps, the manner of introducing of which over the ears is shewn in this Table. The patient must lie on her back, with her breech a little over the bed, her legs and thighs being supported by an affistant sitting on each side. After the parts have been flowly dilated with the hand of the operator, and the forceps introduced, and properly fixed along the ears of the child, the head is to be brought down by degrees, that the parts below the os externum may be gradually stretched: The chin then is to be raifed up over the pubes, whilst the forehead, fontanelle, and occiput, are brought out flowly from the perinæum and fundament to prevent the same from being hurt or lacerated. But if the fætus can neither be turned, nor extracted with the forceps, the delivery must be left to the labour-H 2 pains,

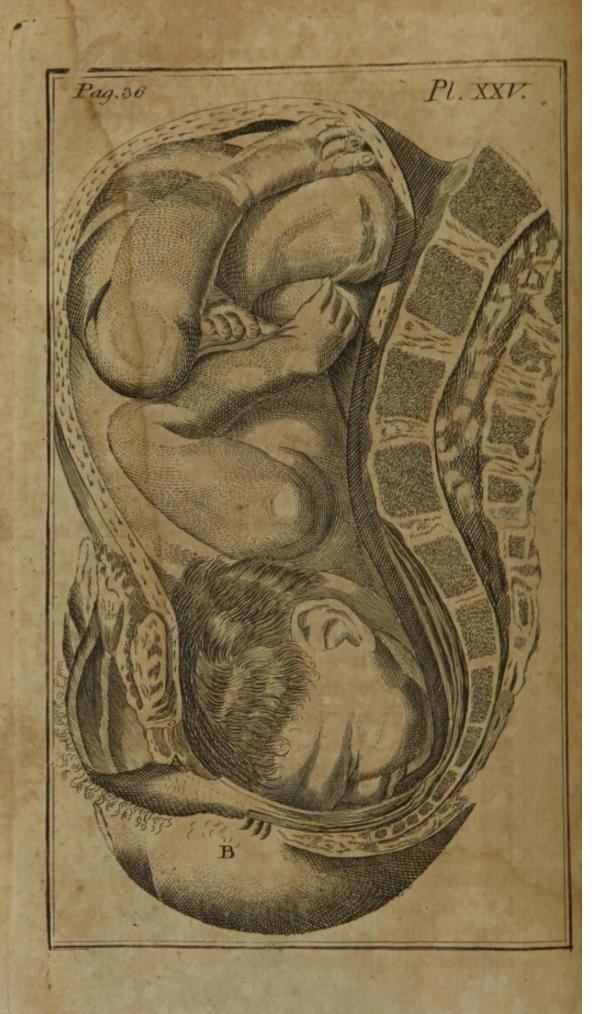
pains, as long as the patient is in no danger; but if danger is apparent, the head must be delivered with the curved crotchets. Vide Table XXXIX.

When the face presents, and the chin is to the side of the pelvis, the patient must lie on her side; and after the forceps are fixed along the ears, the chin is to be brought down to the lower part of the os is is included, and then turned out below the pubes, and delivered in a slow manner as above.

Vide Vol. II. Coll. 16. No. 6. as also Tables XVI. XVII. XVIII. and XIX. for the defeription of the parts.

THE





THE TWENTY-FIFTH TABLE

Shews, in a lateral view of the right fide, the Face of the Fætus presenting, as in Table XXIII. but in the contrary position; that is with the chin to the Os Sacrum, and the Bregma to the Pubes, the Waters evacuated, and the Uterus contracted.

A The os externum not yet begun to stretch. B The anus. Vide Table XX. for the further description of the parts.

In fuch cases, as well as in those of the lastmentioned Table, if the child is small, the head will be pushed lower with the labour-pains, and gradually stretch the lower part of the vagina, and the external parts; by which means the os externum will be more and more dilated, till the vertex comes out below the pubes, and rifes up on the outfide; in which case the delivery is then the same as in natural labours. But if the head is large, it will pass along with great difficulty; whence the brain, and veffels of the neck, will be fo much compressed and obstructed, as to destroy the child. To prevent which, if called in time, before the head is far advanced in the pelvis, the child ought to be turned, and brought footling. If the head however is low down, and cannot be turned, the delivery is then to be performed with the forceps, either by bringing along the head as it prefents, or as in the following Table. See the references in the preceding Table. THEFT

THE TWENTY-SIXTH TABLE

Represents by outlines, in a lateral view of the left side of the subject, the Fætus in the same situation as in the former Table.

THE head here is squeezed into a very oblong form; and though forced down so as fully to dilate the os externum, yet the vertex and occiput cannot be brought so far down, as to turn out from below the pubes (as in the foregoing Table), without tearing the perinæum and anus,

as well as the vagina and rectum.

The best method in this case, after either the fhort or long curved forceps have been applied along the ears (as represented in the Table), is to push the head as high up in the pelvis as is possible; after which, the chin is to be turned from the os facrum to either os ischium, and afterwards brought down to the inferior part of the last mentioned bone. This done the operator must pull the forceps with one hand, whilst two fingers of the other are fixed on the lower part of the chin or under-jaw, to keep the face in the middle, and prevent the chin from being detained at the os ischium, as it comes along; and in this manner move the chin round with the forceps, and the above fingers, till brought under the pubes; which done, the head will be eafily extracted, as in Table XXIV.

If, before affiftance has been called, the head is fo fqueezed down into the pelvis, that it is impossible





impossible to move the chin from the facrum to either os ischium, so as to deliver with the forceps for the safety of the child, the operator must wait with patience, as long as the woman is not in danger, or there is no certainty of the death of the factus: But if the patient runs the least risk, the head must be delivered with the crotchet.

In general, with respect to the posture of the woman in the application of the forceps, when the ears are to the sides of the pelvis, the forceps, as was observed in Table XXIV. are most easily introduced when the patient lies upon her back, and her breech over the side of the bed; but when the ear is to the pubes or groin, they are better applied when the patient lies on her side, as was observed in the cases where the vertex presented.

Vide Table XXIV. for the description of the parts, and the references. Also Table X-XXIX.

for the manner of using the crotchet.

THE TWENTY-SEVENTH TABLE

Gives a lateral internal view of a distorted Pelvis, divided longitudinally, with the Head of a Fætus of the seventh month passing the same. Vide the Explanation of Table III.

ABC The os facrum and coccyx. D The os pubis, of the left fide.

E The tuberosity of the os ischium, of the same side.

THE head of the fætus here, though small, is with difficulty squeezed down into the pelvis, and changed from a round to an oblong form, before it can pass, there being only the space of two inches and one quarter between the projection of the superior part of the facrum and the ossa pubis. If the head is soon delivered, the child may be born alive: But if it continues in this manner many hours, it is in danger of being lost, on account of the long pressure on the brain. To prevent which, if the labourpains are not sufficiently strong, the head may be helped along with the forceps, as directed in Table XVI.

This figure may ferve as an example of the extreme degree of distortion of the pelvis, between which and the well-formed one are many intermediate degrees, according to which the difficulty of delivery must increase, or diminish, as well as from the disproportion of the





pelvis and head of the fætus; all which cases require the greatest caution, both as to the management and fafety of the mother and child.

Vide Vol. 1. Book 3. Chap. 2. Sect. 3. No. 5. Chap. 3. Sect. 4. No. 3. Vol. II. Coll. 21.

No. 1. and Coll. 29.

THE TWENTY-EIGHTH TABLE

Gives a side-view of a distorted *Pelvis*, as in the former Table, with the Head of a full-grown *Fætus* squeezed into the Brim, the *Parietal* Bones decussating each other, and compressed into a conical form.

ABC The os facrum and coccyx.

D The os pubis of the left fide.

E The tuberofity of the os ischiûm.

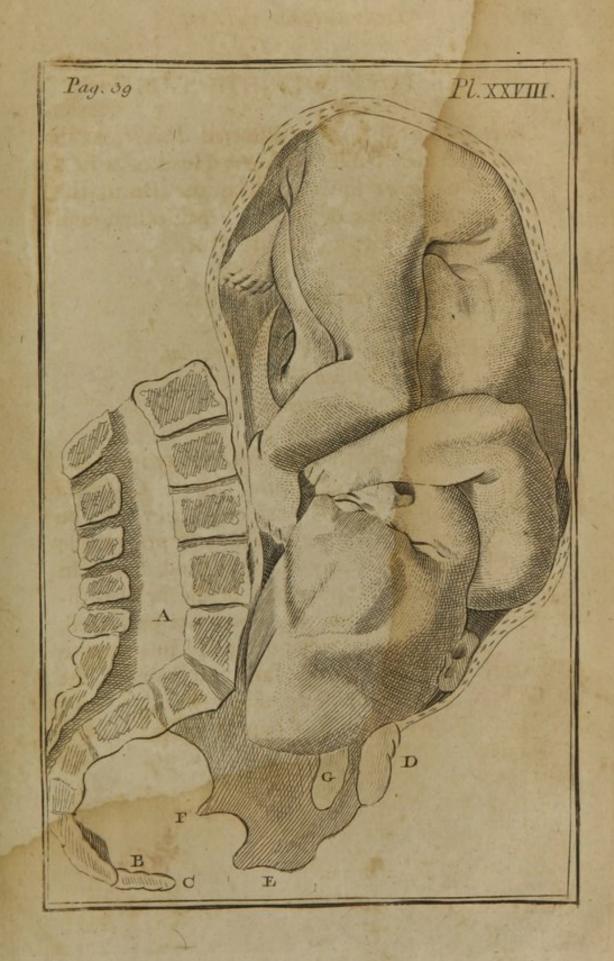
F The processus acutus.

G The foramen magnum.

This Table shews the impossibility in such a case to save the child, unless by the Casarean opertion; which, however, ought never to be performed, excepting when it is impracticable to deliver at all by any other method. Even in this case, after the upper part of the head is diminished in bulk, and the bones are extracted, the greatest force must be applied in order to extract the bone of the face and basis of the skull, as well as the body of the factus.

Vide Vol. I. Book 3. Chap. 3. Sect. 7. Chap.

5. Sect. 3. and Vol. III. Coll. 31, 39.





THE TWENTY-NINTH TABLE

Represents, in a front view of the Pelvis, as in Table XXII. the Breech of the Fætus presenting, and dilating the Os Internum, the Membranes being too soon broke. The foreparts of the Child are to the posterior part of the Uterus; and the Funis with a knot upon it surrounds the neck, arm, and body.

Some time after this and the following Tables were engraved, Dr. Kelly shewed me a subject he had opened, where the breech prefented itself, and lay much in the same position with its body as in the ninth Table, supposing the breech in that figure turned down to the pelvis, and the head up to the fundus uteri.

I have fometimes felt, in these cases, [when labour was begun, and before the breech was advanced into the pelvis] one hip at the facrum, the other resting above the os pubis, and the private parts to one side: But before they could advance lower, the nates were turned to the sides and wide part of the brim of the pelvis, with the private parts to the facrum, as in this Table; though sometimes to the pubes, as in the sollowing Table. As soon as the breech advances to the lower part of the basin, the hips again return to their former position, viz. one hip turned out below the os pubis, and the other at the back parts of the os externum.

N. B. In this case the child, if not very large, or the pelvis narrow, may be often delivered alive by the labour-pains; but if long detained at the inferior part of the pelvis, the long pressure of the funis may obstruct the circulation. In most cases where the breech prefents, the effect of the labour-pains ought to be waited for, till at least they have fully dilated the os internum and vagina, if the same have not been stretched before with the waters and membranes. In the mean time, whilst the breech advances, the os externum may be dilated gently during every pain, to allow room for introducing a finger or two of each hand to the outside of each groin of the fætus, in order to affist the delivery when the nates are advanced to the lower part of the vagina. But if the fætus is larger than usual, or the pelvis narrow, and after a long time and many repeated pains the breech is not forced down into the pelvis, the patient's strength at the same time failing, the operator must in a gradual manner open the parts, and, having introduced a hand into the vagina, raise or push up the breech of the fætus, and bring down the legs and thighs. If the uterus is fo strongly contracted that the legs cannot be got down, the largest end of the blunt hook is to be introduced, as directed in Table XXXVII. As foon as the breech or legs are brought down, the body and head are to be delivered as described in the next Table, only there is no necessity here to alter the position of the child's body.

Vide Vol. I. Book 3. Chap. 4. Sect. 1, 2.

Vol. III. Coll. 32.

The description of the parts in this, and the following Table, is the same as in Table XXII; only the dotted lines in this describe the place of the ossa pubis, and anterior parts of the ossa is-chiûm which are removed, and may serve in this respect as an example for all the other front-views, where, without disfiguring the Table, they could not be so well put in.

THE THIRTIETH TABLE

Shews, in the fame view and with the fame references as the former, the breech of the fætus presenting; with this difference, however, that the fore-parts of the ehild are to the fore-part of the uterus. In this case, when the breech coming double as it presents is brought down to the nams, the legs must be extracted, a cloth wrapped round them, and the fore-parts of the child turned to the back-parts of the woman. If a pain should in the mean time force down the body of the child, it ought to be pushed up again in turning, as it turns easier when the belly is in the pelvis, than when the breast and shoulders are engaged; and as sometimes the face and forehead are rather towards one of the groins, a quarter turn more brings these parts to the fide of the pelvis, and a little backwards, after which the body is to be brought down. If the child is not large, the arms need not be brought down, and the head may be delivered by preffing back the shoulders and body of the child to the perinaum, and whilst the chin and face are within the vagina, to bring the occiput out from below the pubes, according to Daventer's method. Or the operator may introduce a finger or two into the mouth, or on each fide of the nofe, and, supporting the body on the same arm, fix two fingers of the other hand over the shoulders, on each side of the child's



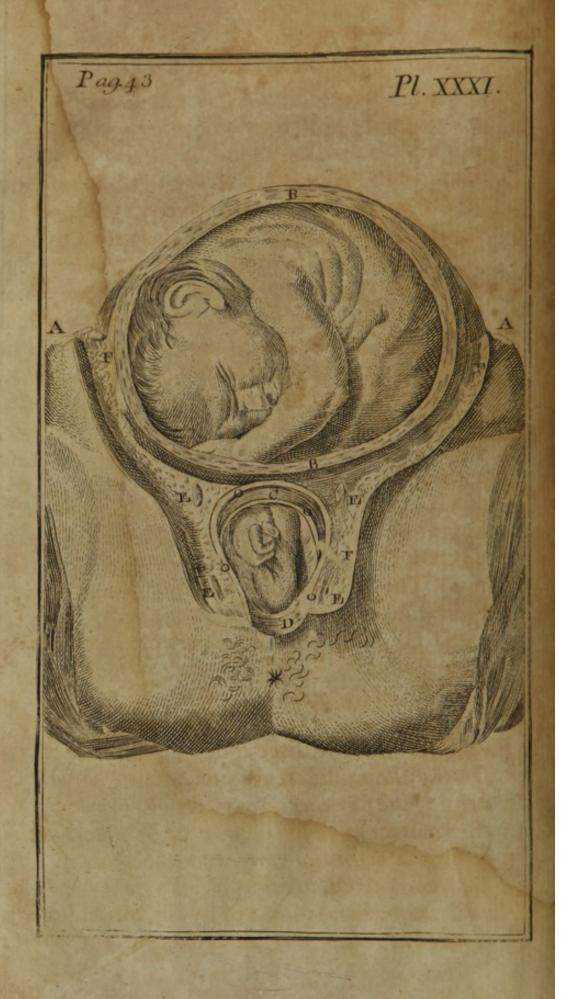


child's neck, and in this manner raise the body over the pubes, and bring the face and forehead out with a semicircular turn upwards, from the under part of the os externum. All this may be easily done when the woman lies on her fide; but if the child is large, and the pelvis narrow, it is better to turn the patient on her back, as described in Table XXIV.; and after the legs and body are extracted as far as the shoulders, the arms are to be cautiously brought down, and the head delivered. If the woman has strong pains, and when by the felt pulsation of the funis umbilicalis, or the struggling motions of the fætus, it is certain that the child is still alive, wait with patience for the affistance of the labour: But if that and the hand are infufficient, and the pulfation of the funis turns weaker, and if the child cannot be brought double, the breech must be pushed up; and if the refistance of the uterus is so great, as to prevent the extraction of the legs, the patient ought to be turned on her knees and elbows. When the legs are thus brought down, the woman, if needful, is to be again turned to her back, to allow more freedom to deliver the body and head, as before described. If the head after feveral trials cannot be delivered, without endangering the child, from overstraining the neck, the long curved forceps ought to be applied, as in Table XXXV. If thefe fail, and the patient is not in danger, some time may be allowed for the effect of the labour-pains;

which likewise proving insufficient, the crotchet must be used as in Table XXXIX. and when it is certain that the child is dead, or that there is no possibility of saving it.

THE





THE THIRTY-FIRST TABLE

Represents, in a front view of the Pelvis, the Fætus compressed, by the contraction of the Uterus into a round form, the fore-parts of the former being towards the inferior part of the latter, and one Foot and Hand sallen down into the Vagina. In this figure the anterior part of the Pelvis is removed by a longitudinal section through the middle of the Foramen Magnum.

AA The fuperior parts of the offa iliûm.

BB The uterus.

GG The mouth of the womb stretched, and appearing in

0000 The vagina.

D The inferior and posterior part of the os externum.

EEEE The remaining part of the offa pubis and ischium.

FFFF The membrana adipofa.

This and the three following Tables, reprefenting four different preternatural politions of the fætus in utero, may serve as examples for the manner of delivery in these as well as in all other preternatural cases.

In all preternatural cases, the fætus may be easily turned and delivered by the seet, if known before the membranes are broke, and the waters K discharged;

discharged; or if the pelvis is narrow, and the patient is strong, the head, if large, may be brought down so as to present in the natural way: but if all the waters are discharged, and the uterus is strongly contracted to the body of the fætus, this last method can seldom take place on account of the strong pressure of the uterus,

and flipperiness of the child's head.

In the present case, the woman may either be laid on her back or fide, as described in Tables XVI. and XXIV.; and the operator, having flowly dilated the os externum with his fingers, must introduce the same into the vagina, and push up into the uterus the parts of the fætus that present; or if there is space for it, his hand may pass in order to dilate the os internum if not fufficiently previously stretched by the membranes and waters. This done, he must advance his hand into the uterus to know the position of the fætus: and, as the breech is rather lower than the head, fearch for the other leg, and bring down both feet without the os externum. A cloth must then be wrapped round them; and, having grasped them with one hand, he is to introduce the other into the uterus, in order to raise the head of the fætus, whilft the legs and thighs are pulled down by the hand that holds the feet. When the head is raised, and does not fall down again, the hand of the operator may be withdrawn from the uterus, and the delivery completed as directed in the two former Tables. By the artless method

thod of taking hold and pulling one or both feet, the breech may come down and the head rife to the fundus; but if this should not happen, there will be great danger of overstraining the fætus, which is prevented by the former method. If the membranes are broken before the os uteri is largely opened, and the hand of the operator cannot be introduced, which sometimes happens in a first pregnancy, the parts of the fætus should be allowed to protrude still further, by which means the rigidity of the os internum will in time be lessened.

Vide Vol. 1. and III. on preternatural labours.

THE THIRTY-SECOND TABLE

Represents, in the same view with the former, the Fætus in the contrary Position; the Breech and Fore-parts being towards the Fundus Uteri, the left Arm in the Vagina, and fore Arm without the Os Externum, the shoulder being likewise forced into the Os Uteri.

The operator in this case must introduce his fingers bet ween the back part of the vagina and the arm of the fætus, in order to raise the shoulder and make room for preffing his hand into the uterus to diffinguish the position. This being known, he ought to push up the shoulder to that part of the uterus where the head is lodged, in order to raise the same to the fundus. If the body of the fætus does not move round, and thereby lie in a more convenient position for bringing down the legs, the hand of the operator ought to be pushed up still higher to fearch for and take hold of the feet, which are to be brought down as far as poffible. If this should not change the position, the shoulder is to be pushed up, and the legs pulled down, alternately, till they are brought down into the vagina, or without the os externum; after which the delivery may be completed, as in the former cafe.

Pag. 10 Pl. XXXII.



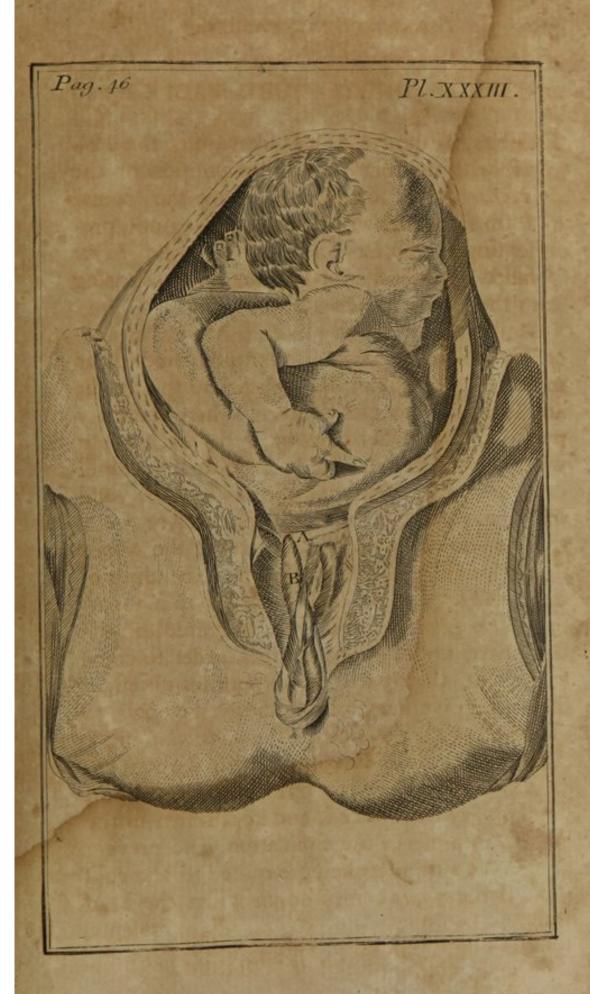
If the feet cannot be brought down lower than into the vagina, a noofe may be introduced over both ankles, by which the legs are brought lower by pulling the noofe with one hand, whilst the other, previously introduced into the uterus, pushes up the shoulders and head. By this double force the position of the fætus is to be altered, and the delivery effected. In these cases, as the shoulder is raised to the fundus, the arm commonly returns into the uterus; but if the arm is fo fwelled as to prevent the introduction of the operator's hand, and cannot be folded up or returned into the uterus, it must be taken off at the shoulder, or elbow, in order to deliver and fave the woman. If both arms come down, when the breast presents, the methods above described are to be used.

Vide the explanations and references of the foregoing Table to illustrate this and the following.

THE THIRTY-THIRD TABLE

Exhibits, in the same view likewise of the Pelvis with the former, a third position of the Fætus when compressed into the round form; the Belly, or Umbilical Region, presenting at the Os Internum, and the Funis fallen down into the Vagina, and appearing at the Os Externum.

The delivery in this case is to be effected, as in the former Table, by pushing up the breast, and bringing down the legs. When the belly presents, it is easier coming at the legs, than when the breast presents, because in the former case the head is nearer to the fundus uteri, and the legs and thighs lower. If the belly or breast is forced down into the lower part of the pelvis, the child will be in danger from the bending of the vertebræ, and the pressure of the spinal marrow. So great a force is also required to raise these parts up into the uterus, in order to come at the feet, that it will be sometimes necessary to turn the woman to her knees and elbows, to diminish the resistance of the abdominal muscles. When the funis comes down without the os externum, if there is a pulsation felt, it must immediately be replaced, and kept warm in the vagina, to preferve the circulation, and prevent a stagnation from its being exposed to the cold air. If the funis comes down when the head prefents.





presents, the child is in danger, if not speedily delivered with the pains, or brought footling.
See the two former Tables for the explana-

tions and references.

THE

THE THIRTY-FOURTH TABLE

Shews, in a lateral view of the Pelvis, one of the most difficult preternatural cases. The lest Shoulder, Breast, and Neck of the Fætus presenting, the Head reslected over the Pubes to the right Shoulder and Back, and the Feet and Breech stretched up to the Fundus, the Uterus contracted at the same time, in form of a long Sheath, round the Body of the Fætus.

ABC The os facrum and coccyx.

D The os pubis of the left fide.

E Part of the urinary bladder.

F The rectum.

KL The private parts.

M The anus.

MN The perinæum.

V The meatus urinarius.

O The os uteri, not yet opened, and fituated backwards towards the rectum and coccyx.

RS The same represented in dotted lines, as

opened when the labour is begun.

IH The same more fully dilated, but nearer to the posterior than anterior part of the pelvis.

WP The same not fully stretched at the forepart, though entirely obliterated at the backpart, the *uterus* and *vagina* being there only sometimes one continued surface.





Hence it appears why the anterior part of the os uteri is frequently protruded before the head of the fætus at the pubes, which, if it retards delivery, is removed by sliding it up with a finger or two between the head and last-mentioned part. Vide Tables IX. X. XI. XII. XIII.

The manner of delivery in the position of the fætus, as reprefented in this Table, is to endeavour with the hand to force up the part presenting, in order to raise the head to the fundus. If this is impossible from the strong contraction of the uterus, the operator must push up his hand in a flow and cautious manner along the breast and belly of the child, in order to come at the legs and feet, which are to be taken hold of, and brought down as far as the position of the fætus will admit of. The body is then to be moved round, by pushing up the lower parts, and pulling down the upper, till the feet are brought without the os externum, and the delivery completed as in Table XXXI. But if the feet cannot be got down, so as to be taken hold of without the os externum, a noofe must be fixed over the ancles, as in Table XXXII.

Vide Vol. I. and III. as directed in Table XXXI.

THE THIRTY-FIFTH TABLE

Shews, in a lateral view of the *Pelvis*, the method of affifting the Delivery of the Head of the *Fætus* with the long curved Forceps, in preternatural Cases, when it cannot be done with the hands, as described in Tables XXIX. and XXX.

A The three lowest vertebra of the loins, with the os facrum and coccyx.

B The os pubis of the left fide.

CC The perinæum and anus pressed backwards with the forceps.

D The intestines.

EE The parietes of the abdomen.

FFF The uterus.

G The posterior part of the os uteri.

H The rectum.

I The vagina.

AFTER the body and arms of the child are delivered, and the different methods used to bring down the head with the hands, as directed in the above Table, and more fully described in Vol. I. and III. the following method is to be tried in order to save the child, which must otherwise be lost by overstraining the neck and spinal marrow. The woman being in the supplied position, as in Table XXIV. one of the affistants ought to hold the body and arms of





the child up towards the abdomen of the woman, to give more room to the operator, who having introduced one hand up to the child's face, and moved it from the fide a little backwards, for the easier application of the forceps along the fides of the head, must then turn his hand to one of the ears, and introduce one of the blades with the other hand between the fame and the head, with the curved fide towards the pubes, as in this Table. This done, the hand is to be brought down to hold the handle of the blade of the forceps, till the other hand is introduced to the other fide of the head, by which means the same is pressed against the blade that is up, and which is thus prevented from flipping, whilft the other hand introduces the fecond blade on the opposite fide. The blades being thus introduced, care must be taken, that in joining them no part of the vagina is locked in. After the forceps are firmly fixed along the fides of the head, the face and forehead must be turned again to the fide of the brim of the pelvis, by which means the wide part of the head is to the wide part of the brim. This done, the head is to be brought lower, and the force gradually increased, according to the relistance from the largeness of the head, or narrowness of the pelvis. The forehead, when brought low enough down, is then to be turned into the concavity of the os facrum and coccyx, the handles of the forceps raifed upwards, and the fame caution used in bringing

bringing the head through the os externum, as described in Table XIX. and XXX. By this method the head will be delivered, the child frequently saved, and the use of the crotchet prevented, except in those basins that are so narrow, that it is impossible to deliver without diminishing the bulk of the head.

Vide Table XXXIX. Alfo Vol. I. Book 3.

Chap. 4. Sect. 5. Vol. III. Coll. 34, 35.

THE





THE THIRTY-SIXTH TABLE

Represents, in a lateral view of the Pelvis, the method of extracting, with the affistance of a curved Crotchet, the head of the Fætus, when left in the Uterus, after the Body is delivered and separated from it, either by its being too large, or the Pelvis too narrow.

ABC The os facrum and coccyx.

D The os pubis of the left fide.

EE The uterus.

F The locking part of the crotchet.

ghi The point of the crotchet on the infide of the cranium.

IF this case happens from the forehead's being towards the pubes, or the child long dead, and fo mortified that both the body and underjaw are separated unexpectedly, the long forceps that are curved upwards will be fufficient to extract the head; but if the same is large, and the pelvis narrow, and the delivery cannot be effected by the above method, then the head must be opened, that its bulk may diminish, as it is extracted. The patient being placed either on her back, or fide, as in the explanation of Table XVI. and XXIV. the left hand of the operator is to be introduced into the uterus, and the forehead of the fætus turned to the right fide of the brim of the pelvis, and a little backwards,

wards, the chin being downwards; after which the palm of the hand and fingers are to be advanced as high as the fontanelle, and the head grafped with the thumb and little finger on each fide, as firm as is possible, whilst an affistant presses on each side of the abdomen with both hands, to keep the uterus firm in the middle and lower part of the fame. This done, the operator having with his right hand introduced and applied the crotchet to the head (the point being turned towards the forehead, and the convex part towards the facrum), he must go up along the inside of the left hand as high as the fontanelle, and there, or near it, fix the point of the crotchet, keeping still the left hand in the former position, till with the other he pierces the *cranium* with the point of the instrument, and tears a large opening in it from k to i; after this, keeping the crotchet steady, he may slide down his left hand in a cautious manner, left the former position should be altered, and the head will fink lower down by the affiftant's preffing on the abdomen. The two fore-fingers of the left hand are then to be introduced into the mouth, and the thumb below the under-jaw, the hand being above the blade of the crotchet. When this firm hold is taken, the operator may begin and pull flowly with both hands; and as the brain discharges through the perforation, the head will diminish, and come along. If this method should fail from the flipperiness of the head, or its being so much

much offified that a fufficient opening cannot be made, the vertex must be turned down to the brim of the pelvis, the fontanelle backwards, and each blade of the long forceps introduced along the fides of the head, with the curved fide towards the pubes. After they are joined and locked, the handles are to be tied together with a fillet, to keep them firm on the head; an affistant is to keep the handles backwards till the cranium is largely opened with the long fciffars shewn in Table XXXIX. This done, the head is to be extracted in a flow manner. first turning the forehead to the side of the brim; and as the brain evacuates, and the head comes lower down, again turning the forehead into the concavity of the facrum, and completing the delivery, as in Table XVI.

This Table may also serve for an example, to shew the method of fixing the crotchet on the head, when although the body is not separated from it, yet it cannot be delivered with the operator's hands, or the long forceps, as in Ta-

ble XXIX. and XXXV.

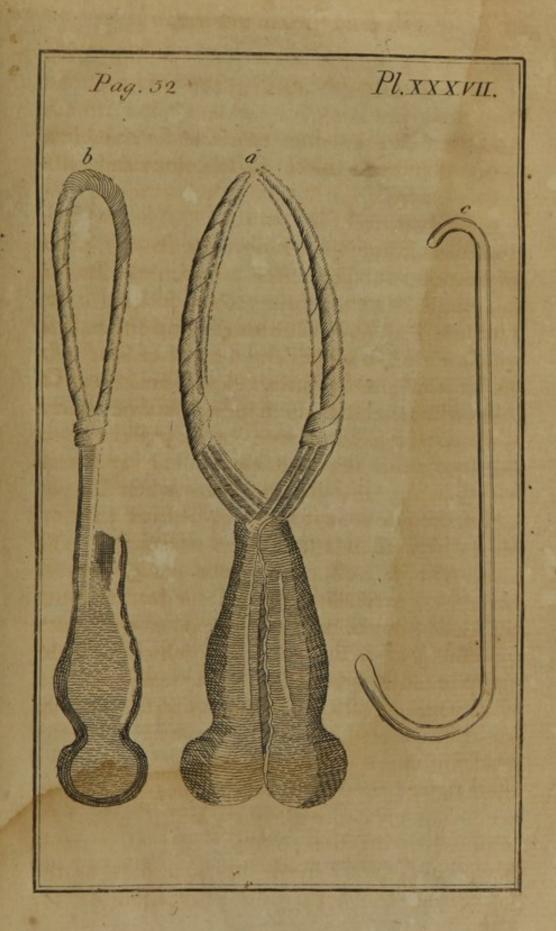
Vide Vol. I. Book 3. Chap. 3. Sect. 7. Chap. 4. Sect. 5. Also Vol. III. Coll. 31, 36.

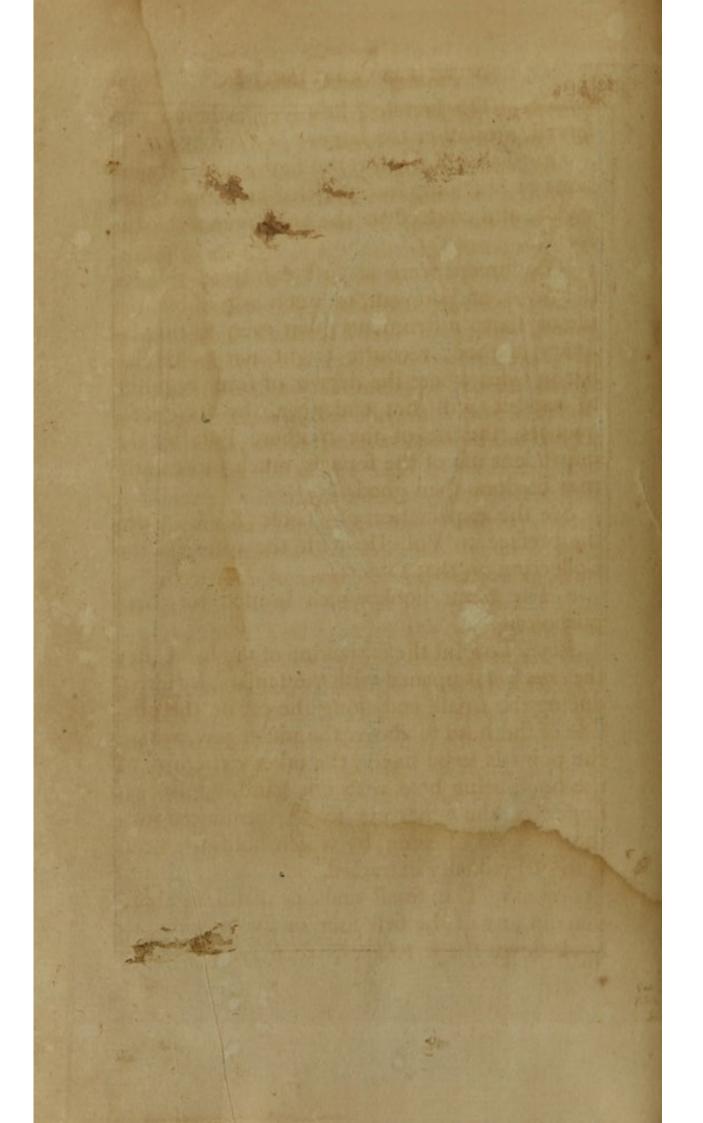
THE THIRTY-SEVENTH TABLE,

And the two following, represent several kinds of Instruments useful in laborious and difficult Cases.

a The straight short forceps, in the exact proportion as to the width between the blades, and length from the points to the locking part: The first being two and the second fix inches, which with five inches and a half (the length of the handles), makes in all eleven inches and a half. The length of the handles may be altered at pleasure. I find, however, in practice, that this standard is the most convenient, and with less difficulty introduced, than when longer, having also sufficient force to deliver in most cases where their affistance is necessary. The handles and lowest part of the blades may as here be covered with any durable leather; but the blades ought to be wrapped round with fomething of a thinner kind, which may be eafily renewed when there is the least suspicion of venereal infection in a former case: By being thus covered, the forceps can have a better hold, and mark less the head of the child. For their easier introduction, the blades ought likewife to be greafed with hog's lard.

b Represents the posterior part of a single blade, in order to shew the open part of the same, and the form and proportion of the





whole. The handles, however, as here repre-

fented, are rather too large.

Vide Table XXI. for the figure and proportions of the long forceps, that are curved upwards, and covered in the fame manner as the former.

The forceps were at first contrived to save the fætus, and prevent, as much as possible, the use of sharp instruments; but even to this salutary method, recourse ought not to be had but in cases where the degree of force requisite to extract will not endanger, by its consequences, the life of the mother: For, by the imprudent use of the forceps, much more harm may be done than good.

See the explanation of Table XVI. Also the preface to Vol. II. with the cases in the

Collection on that fubject.

c The blunt hook which is used for three

purpoles.

First, To affish the extraction of the head after the cranium is opened with the scissars, by introducing the small end along the ear on the outside of the head to above the under jaw, where the point is to be fixed; the other extremity of the hook being held with one hand, whilst two singers of the other are to be introduced into the aforesaid opening, by which holds the head is to be gradually extracted.

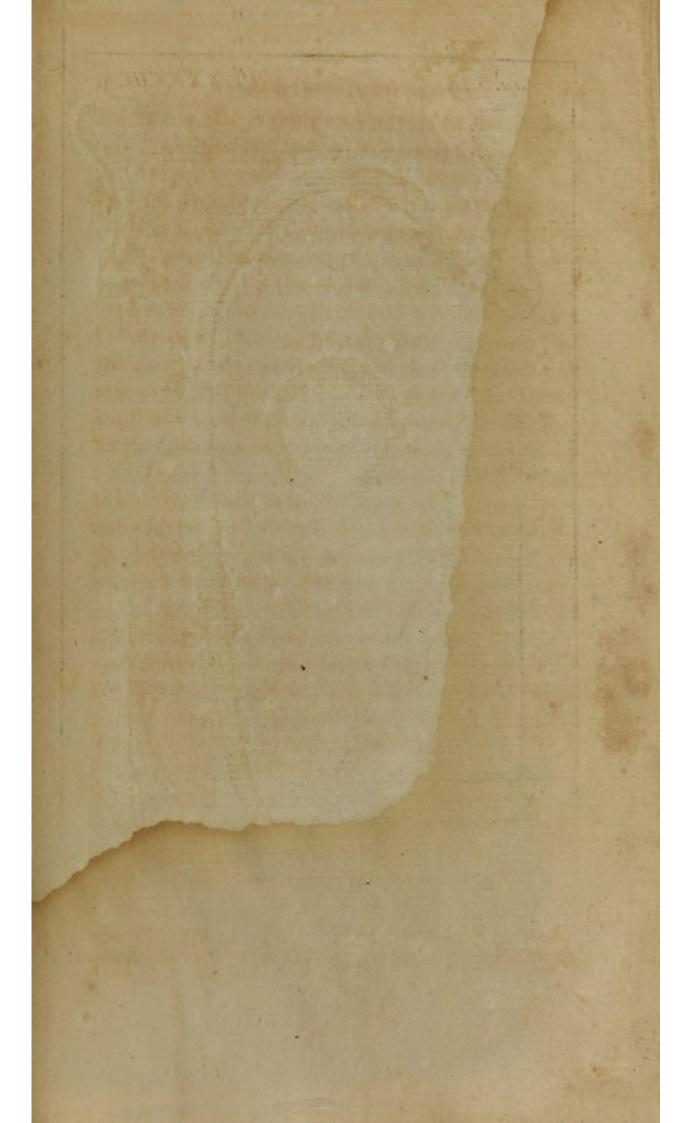
Secondly, The small ends is useful in abortions in any of the first four or five months, to hook down the secundines, when lying locse in

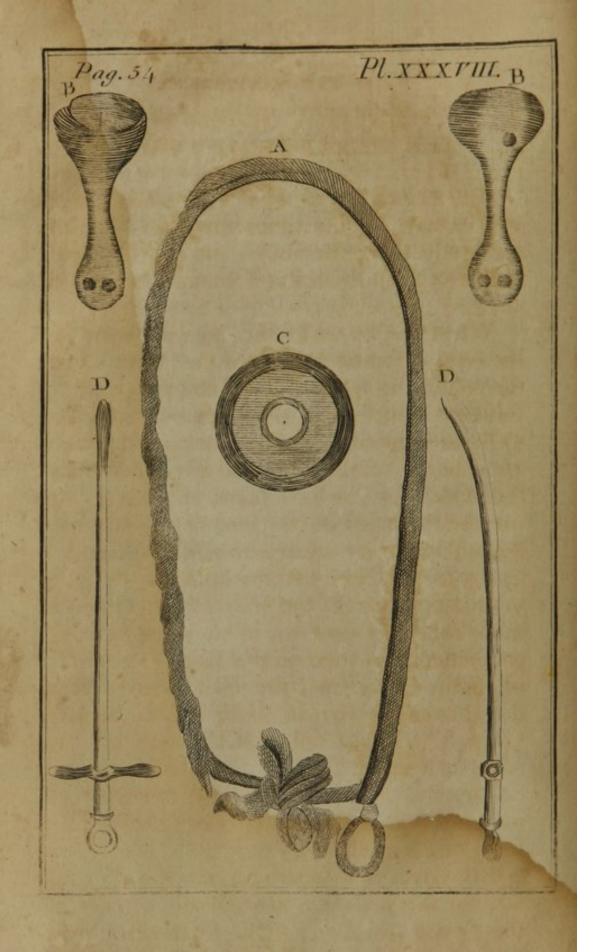
the uterus, when the patient is much weakened by floodings from the too long retention of the fame, the pains also being unable to expel them, and when they cannot be extracted with the fingers. But if the placenta still adheres, it is dangerous to use this or any other instrument to extract the same, as it ought to be left till it separates naturally. If a small part of the secundines is protruded through the os uteri, and pulled away from what still adheres in the uterus, the mouth of the womb contracts, and that irritation is thereby removed which would have continued the pains, and have separated and discharged the whole.

Thirdly, The large hook at the other end is useful to assist the extraction of the body, when the breech presents; but should be used with great caution, to avoid the dislocation or fracture of the thigh.

Vide Table XXIX. Also Vol. I. Book 2. Chap. 3. Book 3. Chap. 3. Sect. 7. and Chap. 4. Sect. 2. Vol. II. Coll. 12. Vol. III. Coll. 31,

32.





THE THIRTY-EIGHTH TABLE.

A, REPRESENTS the whale-bone fillet, which may be fometimes useful in laborious cases, when the operator is not provided with the forceps in sudden and unexpected exigencies.

When the vertex of the fætus presents, and the head is forced down into the lower part of the pelvis, the woman weak, and the pains not fufficient to deliver it, the double of the fillet is to be introduced along the fore-part of the parietal bones to the face, and if possible above the under-jaw; which done, the whale-bone may be either left in or pulled down out of the sheath, and every weak pain assisted by pulling gently at the fillet. If the head can be raifed to the upper part of the pelvis, the fillet will be more eafily got over the chin, which is a fafer and better hold than on the face. If the face or forehead prefents, the fillet is to be introduced over the occiput. Vide Vol. I. Book 3. Chap. 3. Sect. 2. Vol. II. Coll. 24.

In fuch cases, likewise the whale-bone may be supplied by a twig of any tough wood, mounted with a limber garter or fillet sewed in

form of a long sheath.

BB Gives two views of a new kind of peffary for the prolapfus uteri, being taken from the French and Dutch kind. After the uterus M 2 is reduced, the large end of the pessary is to be introduced into the vagina, and the os uteri retained in the concave part, where there are three holes to prevent the stagnation of any moisture. The small end without the os externum has two tapes drawn through the two holes, which are tied to four other tapes, that hang down from a belt that furrounds the woman's body, and by this means keep up the peffary. This fort may be taken out by the patient when she goes to bed, and introduced again in the morning; but as this fometimes rubs the os externum, fo as to make its use uneasy, the round kind marked C are of more general use. They are made of wood, ivory, or cork, (the last covered with cloth and dipt in wax): The peffary is to be lubricated with pomatum, the edge forced through the passage into the vagina, and a finger introduced into the hole in the middle lays it across within the os externum. They ought to be larger or fmaller, according to the wideness or narrowness of the passage, to prevent their being forced out by any extraordinary straining. Vide Vol. 1. Book 4. Chap. 1. Sect. 7. Vol. III. Coll. 24.

DD Gives two views of a female catheter, to shew its degree of curvature and different parts. Those for common use may be made much shorter for conveniency of carrying in the pocket: But sometimes, when the head or body of the child presses on the bladder above

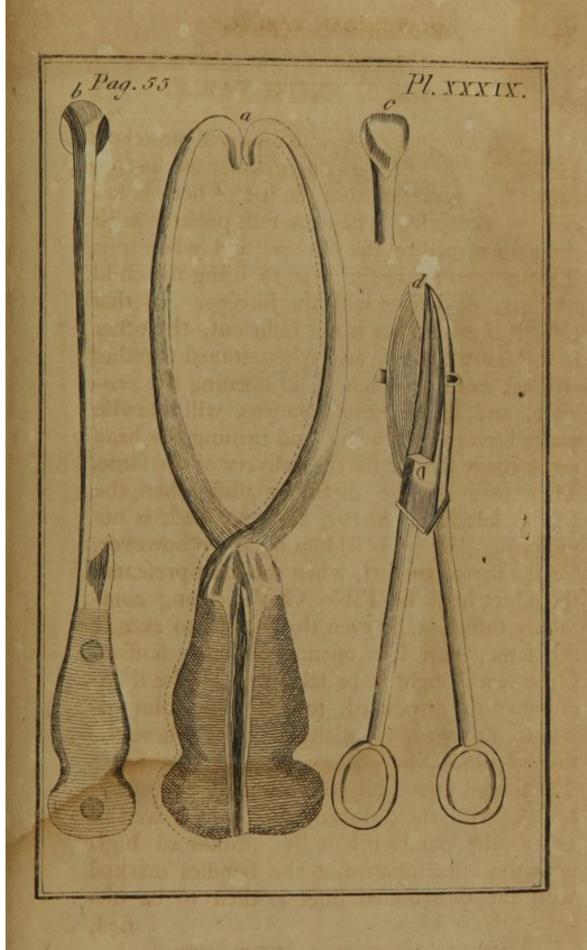
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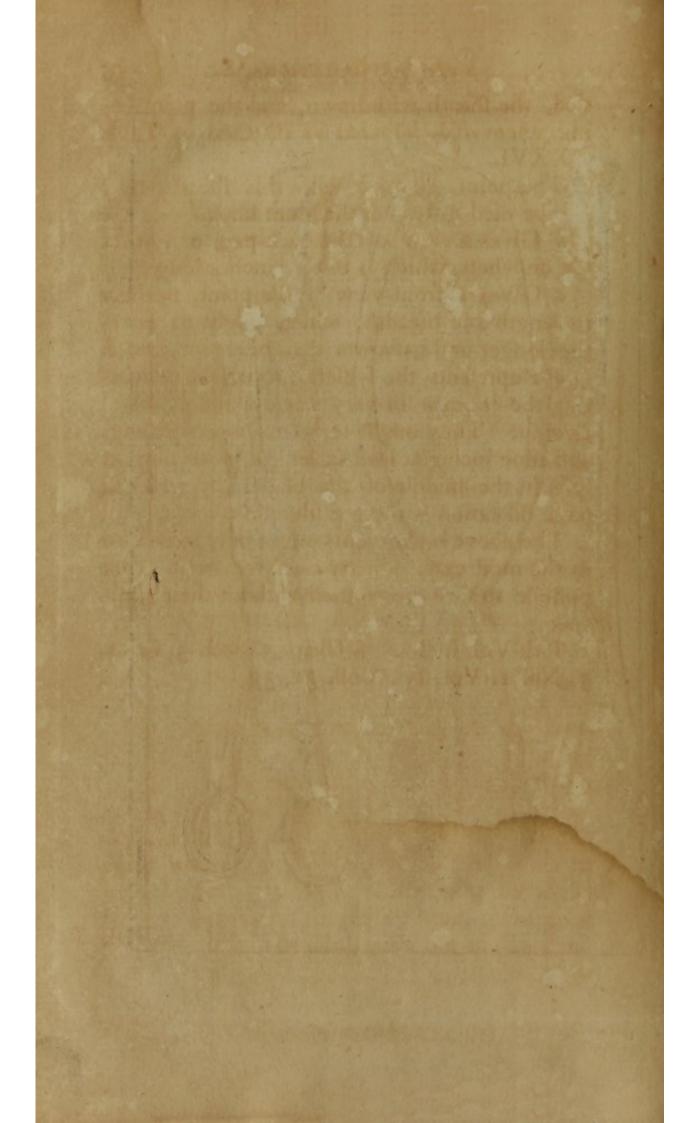
the pubes, it requires one of this length; and in fome extraordinary cases, I have been obliged to use a male catheter.

Vide Vol. I. Book 2. Chap. 1. Sect. 1, 2. Vol. II. Coll. 10. No. 2.

THE THIRTY-NINTH TABLE.

a REPRESENTS a pair of curved crotchets locked together in the same manner as the forceps. It is very rare that the use of both is neceffary, excepting when the face prefents with the chin turned to the facrum, and when it is impossible to move the head to bring the child footling, or deliver with the forceps. In that case, if one crotchet is not sufficient, the other is to be introduced, and when joined together will act both as crotchets, in opening the cranium, and, as the head advances, will likewife act as forceps in moving and turning the head more conveniently for the delivery of the fame. They may also be useful to affift when the head is left in the uterus, and one blade is not fufficient. There is feldom occasion, however, for the sharp crotchet, when the head presents; the blunt hook in Table XXVII. being commonly fufficient, or even the forceps to extract the fame, after it is opened with the sciffars. Great care ought to be taken, when the sharp crotchet is introduced, to keep the point towards the fætus, especially in cases where the fingers cannot be got up to guide the fame. The dotted lines along the infide of one of the blades, represent a sheath that is contrived to guard the point till it is introduced high enough; the ligature at the handles marked with the two dotted lines is then to be untied,





tied, the sheath withdrawn, and the point being uncovered, is fixed as directed in Table XXXVI.

The point, guarded with this sheath, may also be used instead of the blunt hook.

b Gives a view of the back-part of one of

the crotchets, which is twelve inches long.

c Gives a front-view of the point, to shew its length and breadth, which ought to be rather longer and narrower than here represented.

d Represents the scissars proper for perforating the cranium in very narrow and distorted pelvises. They ought to be made very strong, and nine inches at least in length, with stops or rests in the middle of the blades, by which a large dilatation is more easily made.

The above instruments ought only to be used in the most extraordinary cases, where it is not possible to save the woman without their assist-

ance.

Vide Vol. I. Book 3. Chap. 3. Sect. 5. Chap. 5. No. 1. Vol. III. Coll. 31, 35.

ADDITIONAL TABLE. NUMB. XL.

Among the few improvements which have been made in the obstetrical apparatus since the days of Dr. Smellie, the most important are the alterations in the *forceps*, by which the inconveniencies formerly attending the use of that instrument are obviated, and the operation is ren-

dered more fafe and eafy.

In contriving these alterations, the intentions were, 1. That the large curves should correspond as nearly as possible with that of the pelvis. 2. That their points should be thrown forwards, and made round, to prevent their hitching, or even preffing uneafily against any part of the pelvis; and likewise to maintain their hold of the head, whilst it is to be brought forwards in that curved line of direction which nature observes. 3. That an inverted curve should be made towards the joints, whereby the perinæum may be faved from injury, the extracting force rightly conducted, and the handles at the same time kept from pressing uneafily on the inferior and anterior parts of the pubes. 4. That their substance should be reduced as much as possible, so that they are not made flexible, or fo thin at the edges as to hurt the part. 5. That their clams be made to press equally on the child's head, and spread gradually from the joint, fo as not to dilate the





be of a due breadth, with the outer surface a little convex, and extremely smooth, that they may not press uneasily or hurt the woman. 7. That their length be such as can be applied safely and commodiously within the pelvis, and at the same time suit the different

fizes of the heads as much as possible.

The instrument, executed according to these intentions, is called the Short Curved Forceps. It consists of two blades, or parts; each of which is distinguished into the handle A, the joint BB, and the clams DD. See fig. 1 which represents the instrument sinished and locked, in which state it measures about 11 inches, and when properly made, weighs about 11 ounces troy. The clams must be covered with the best morocco leather shaved thin, moistened with water, and sewed on with waxed silk.

N. B. Several inconveniencies both in the introduction and confequences, having been found to attend the use of the forceps with the clams covered, practitioners at present very ge-

nerally prefer those of polished steel.

Fig. 2. A catheter with a small curve towards the point, which is better adapted to the semale urethra than the straight one. It may be perforated with 8, 12, or 16 holes in rows, as here represented, and terminated by a slight very smooth rounded or oblong knob. The length should be nearly six inches, and the diameter not too small.

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Fig. 4. The perforator of Dr. Denman, as it is called by workmen, though Dr. Orme perhaps first introduced it into practice: It is now employed by many practitioners in preference to Dr. Smellie's. If Dr. Smellie's should be still used, the sharp edges ought to be removed; they should, like those here represented, be curved towards the point, and should be provided with blunt knobs instead of angular rests, which expose the patient to the hazard of having the parts wounded or lacerated.

Fig. 4. The blunt hook at present used, having a swell in the middle by which the extraction can be accomplished with more safety and

fuccess than with the straight hook,

THE END.

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