REVIEWS.

How to Use the Forceps. With an Introductory Account of the Female Pelvis, and of the Mechanism of Delivery. By HENRY G. LANDIS, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Starling Medical College, Columbus. Pp. 168. New York: E. B. Treat. 1880.

THIS is an essay on the midwifery forceps and its uses, together with a consideration of the pelvic canal and the mechanism of labour. In his introduction the author refers to the fact that there are a great many forms of the instrument in use, and argues from this that the subject is not yet fully cleared up. "The great diversity in the shape and design of forceps now in use, and the vague and conflicting opinions as to the manner of their employment, are a sufficient evidence that an exact and scientific basis has not yet been reached, or, if known at all, that it has not been well and generally understood."

It is held that the pelvic canal is a double tube at the inlet and a single one at the outlet; that "the outline of the inlet is compounded of two partially super-imposed ellipses similar to the outline of the foetal head,—while the outlet represents but one such outline." It is somewhat difficult to make the author's meaning plain without his diagrams. He thinks that heads entering the pelvis in the right and left oblique diameters, enter two entirely different canals, although the one overlaps the other anteriorly. The one canal looks outwards and to the right, the other outwards and to the left, and these come together at the outlet.

Dr. Landis believes in the bi-parietal obliquity of Naegele, and explains it by this double canal theory. The head entering at the brim obliquely from right or left, one or other parietal bone must be lower than its fellow. He points out that the uterine axis is almost always to one side of the middle line of the body, ordinarily to the right, because, from the left being occupied by the rectum, the right canal is the roomier. The following is the author's view of the relation of the head to the pelvis in the left occipito-anterior position:—"At the beginning of labour the head in this position is placed with its occipito-frontal plane coincident with the initial plane of the right canal. The occipital protuberance is opposite a point in front of the left acetabulum; the bi-frontal suture is in front of the right sacro-iliac symphysis, and the right parietal protuberance is opposite a point over the right obturator foramen

towards its inner edge. The left parietal protuberance is not opposed to any point of the pelvic circumference, but is in the free space in front of the left sacro-iliac symphysis. The occipito-frontal diameter is therefore coincident with the right oblique diameter of the pelvis. The head is obliquely situated with reference to the plane of the conjugate diameter, one side of the head being below and the other above that level. This fact was first noticed by Naegele, but stated too generally, since this obliquity frequently and indeed usually disappears in the succeeding stages. For as soon as the uterine efforts become at all effective, the head undergoes a compound movement, by reason of which its synclitism with the initial plane of the right canal disappears, and therefore its obliquity to the plane of the conjugate diameter, while another head plane than the occipito-frontal is made to engage by means of flexion. The cause of this movement is to be found principally in the unequal resistance offered by the pelvic walls. The right parietal protuberance is directly applied to the anterior pelvic margin, while the left is entirely free, and the same may be said of the entire right and left sides of the head, the protuberances being cited merely as the more prominent parts. If the size of the head and the calibre of the right canal are at all equal, and the fit is tight, the right side of the head will meet with considerable resistance to its onward motion communicated from the uterine forces, and will, therefore, be arrested, while the left side, being untrammelled, will descend. There will result a lateral flexion of the head, which will bring the occipito-frontal plane synclitic with the plane of the conjugate diameter."

Davis' double-curved forceps are recommended, but it is added that "special skill in the use of any doubled-curved forceps may enable an operator to use it effectively." "I say nothing of the straight forceps because it is nearly obsolete, and every text book bears witness against it." There are some sensible remarks on the foolishness of attempting to apply the forceps under the bedclothes. "It is better to wound the feelings than the pelvic tissues."

In regard to the position of the patient when the forceps is about to be applied, it is said that the dorsal is best, with the vulva overhanging the edge of the bed, and the feet on two chairs. "The English prefer to apply the forceps with the woman upon her side, which is much more difficult, and sometimes well nigh impossible." It is no doubt true that there are certain advantages in the dorsal position, but the left lateral is much more pleasant for the patient, and if the thighs be

well flexed, quite convenient for the operator. Some experience in the use of the instrument in this position enables us to affirm that it is generally easy, and, in cases at all suitable for its application, never impossible. In most of our manuals we are taught to apply the forceps to the head at the brim, not with reference to the head, but to the pelvis. We quite agree with Dr. Landis that this is an unscientific proceeding. If there is any difficulty in making out the exact position of the head at the inlet by ordinary digital examination, it can always be done with ease when the greater part of the hand is introduced into the vagina, and as this is a necessary step in the safe application of the long forceps there is no excuse for operating with defective information. "One reason which is given by Barnes, Fauntleroy, and others, for the pelvic application of the blades, is that it dispenses with the need for our knowing the position of the head when using the forceps. But after they are on, it is of great importance that we should know in which canal the head is situated, and whether our efforts are or are not flexing or extending the head, which cannot be done unless we know the position of the head. To apply the forceps in a haphazard way to the head is a very unscientific procedure, and is not safe even for experts with the forceps, much less for the unskilled and careless, to whom the doctrine that we need not know the position of the head comes with peculiar comfort. There are occasionally met with cases in which the determination of the position is extremely difficult, but to make these the basis of a rule is not an indication of progress in our science." It appears to us that the reasons given in favour of the application of the blades to the sides of the head at the inlet are quite sound, and not to be easily controverted. "*First*, they will fit the head better. *Secondly*, they will be less likely to injure the head when compressed than when in any other situation. *Thirdly*, they will be applied in a very definite relation to the head, so that when we move them in any direction we know exactly in what way the presenting plane of the head will be disturbed. *Fourthly*, we can, if necessary, flex or extend the head, or otherwise control its relations much better when the head is grasped in this fashion. In fact, flexion of the head is next to impossible when the forceps are otherwise applied. *Fifthly*, the head can be reduced in size more certainly than in any other way, since the approximation of the blades compresses and reduces the biparietal diameter, while forced flexion of the head can be made to reduce the antero-posterior diameter, by substituting the

cervico-bregmatic for the occipito-frontal. And lastly, the application is no more difficult than any other in the undeformed pelvis."

The author fully recognises the fact that, by pulling at the handles of Davis' double-curved forceps, he cannot pull in the axis of the inlet. He seeks to get over the difficulty in much the same way as that suggested by Roberton some years ago. The latter pulls on the middle of the blades from behind, the former pushes on them from before. "When the forceps are applied at the inlet, the handles are seized by the right hand from above and held firmly, compressing the head as little as possible at first. The left hand is placed so that the ball of the thumb comes over the lock, while the index finger rests upon the upper arm of one blade, and the middle finger upon the other. Now, while the right hand holds the handles almost at rest, the fingers of the left *push* upon the blades so as to move them and the contained head downwards, backwards, and a little to the left of the median line. . . . When we consider the comparatively small amount of force which the fingers can exert, it is in marked contrast to the method of employing the united efforts of two men in pulling upon the handles, and will scarcely be credited with sufficient power by those who are accustomed to use much force." We are disposed to think that the author's plan would succeed where the delay is due to uterine inertia, but not where there is much want of room. In the former case, the mere application and presence of the instrument, by inducing uterine action, is a powerful factor in the delivery, in the latter more or less decided traction is usually necessary.

Four or five pages are devoted to proving that leverage by lateral oscillation is never an useful, and generally a mischievous, proceeding, and we think he has succeeded in doing so. Unfortunately for our readers, his argument cannot be made very intelligible without his diagrams. We wondered how Dr. Landis, recommending the double curved forceps, would meet the rotation difficulty. He clearly recognises the danger. "In occipito-posterior and mento-posterior positions the desirability of early anterior rotation is so apparent, that there is a strong temptation to bring it about with the forceps at all hazards. In these positions, when the head is at the inlet, it is highly improper to attempt anterior rotation with a pair of forceps having a decided pelvic curve. The form of the instrument distinctly prohibits this." He, like Simpson, advises that the instrument be removed and reapplied, or the case left to nature.

In regard to the time when the forceps should be applied, the author gives a decided opinion. "Whenever the second stage of labour has lasted two hours, and the head is still stationary or advancing with great slowness, we should inform the patient that we are about to apply the forceps. . . . There is no need of keeping the woman in suffering for hours solely that she may deliver herself, and still less for keeping her under the noxious influence of an anæsthetic for hours, when we can safely extract the child at will."

Dr. Landis tackles the question of Turning *versus* Forceps. He shows that while the head is diminished in its transverse diameter when the base comes first, it is still more diminished in that diameter by the proper application of the forceps to the sides of the head, and that the latter method is much the safer one for both mother and child.

The illustrations are simple—severely simple. The drawing of the pelvic inlet which forms the frontispiece is as free from anything which might be called art as any illustration could well be. Even the "shade line," which most engravers stickle for, is wanting. Most of the illustrations are purely diagrammatic, and so serve their purpose very well.

There is much that is interesting in the book, and very much that, if not new, is at least sensible and true, and worth reproduction.

The Science and Practice of Medicine. By WM. AITKEN, M.D., F.R.S. Seventh edition. London: Charles Griffin & Co. 1880.

WE have much pleasure in welcoming this seventh edition of Dr. Aitken's *Science and Practice of Medicine*. It has, indeed, assumed gigantic proportions, but this could hardly be avoided if it were to maintain the encyclopædic character which it has hitherto had in previous editions. This must, to a certain extent, remove it out of the category of text books in general use, but will render it all the more valuable as a book of reference. The students will be few and weary who wade continuously through its 2,276 pages; but to any one anxious to ascertain the latest details on any subject connected with medicine, it will prove invaluable. Dr. Aitken must be congratulated on the thoroughness and efficiency of the work; and he may, without hesitation, claim for it the character of a faithful representative of the medical science of the day. The labour entailed must have been enormous, and the manner in which the latest details, culled from home and foreign