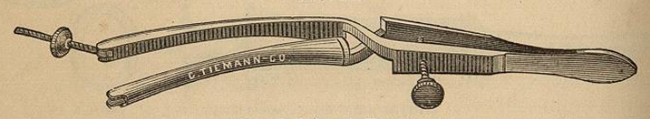
prepuce is composed of two layers, separated by a cellular tissue of such lax texture as to admit of an almost indefinite amount of motion between them. The internal or mucous layer is firmly attached to the penis posterior to the corona glandis, and hence is incapable of being drawn forwards to any great extent in front of the glans. The external or integumental layer, on the contrary, is continuous with the flaccid skin of the body of the penis, and may be greatly elongated; its anterior portion doubling in upon itself as the posterior is drawn forwards. It follows from this anatomical arrangement, that a section of the prepuce in front of the glans can only include the integumental, together with an insignificant portion of the mucous layer.

Of the various methods of performing circumcision recommended by different authors, I prefer the following:

The patient should be upon the bed where he is to lie, if possible, until cicatrization is accomplished, in order after the operation to avoid unnecessary motion and hæmorrhage, which would interfere with speedy union; and it is decidedly best that he should be ether-

Fig. 26.



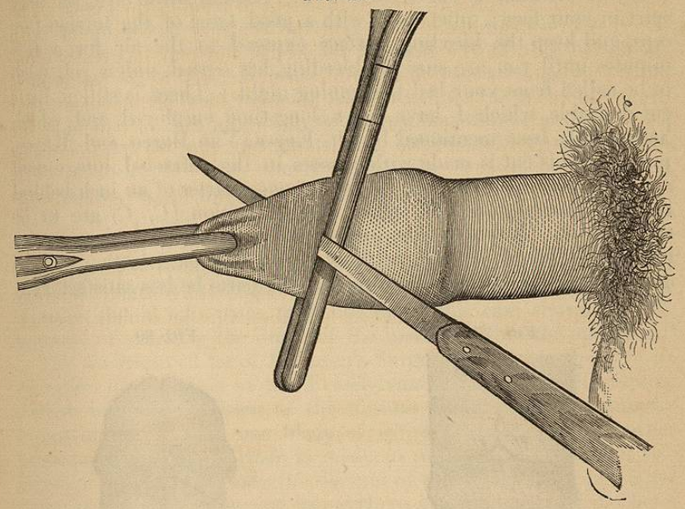
Henry's Phimosis Forceps.

ized. The requisite instruments are a pair of long-bladed forceps, a sharp-pointed bistoury, blunt-pointed scissors, and sutures of very fine silk. Henry's forceps, represented in Fig. 26, are the best on this occasion, although any long forceps will answer.

A tape may be tied around the base of the penis near the pubes to restrain the hæmorrhage. Allow the penis to hang without traction, in its natural condition, and, if your eye is not a sufficiently accurate guide, trace with a pen and ink a line upon the skin corresponding to the corona glandis, to serve as a guide for the incision. Next draw the prepuce forwards, until this line is in front of the glans, and grasp it from above downwards between the long blades of the forceps, which should be intrusted to an assistant; the external part is now to be excised in front of, and close to the blades of the forceps, having first been put upon the stretch by the left hand of the operator. Any attempt to cut from either margin of the fold will be attended with some difficulty, since the several layers of the skin and mucous membrane oppose an amount of resistance to the knife that is not readily overcome; hence, it is better to transfix the centre of the flap (the blade of the knife parallel to, in front of, and in contact with the forceps), cut downwards, and complete the section by turning the knife, and cutting upwards (Fig. 27).

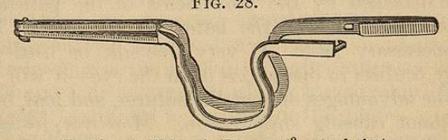
The assistant should now remove the forceps, when the integument will retract, carrying its cut edge back to the base of the glans, and exposing the raw external surface of the mucous membrane

Fig. 27.



which still covers the glans (Fig. 29). If the mucous membrane be in a healthy condition it may be divided with scissors along the dorsum, and turned back to be united to the integument; but if thickened by chronic inflammation, vegetations, or the cicatrix of an ulcer, the flap (E, B, B) on either side should be excised. Indeed, the latter course is always best, with this important proviso, how-

Fig. 28.



Horteloup's Phimosis Forceps ($\frac{2}{3}$ actual size).

ever: don't cut off the whole of the flap quite down to the line of its insertion; if you do, you will find the introduction and removal of your sutures difficult, and union by first intention is less likely to be attained; hence, make your cuts on either side so as to leave about half an inch of the mucous membrane behind.

This ablation of the flaps may be done by successive cuts with ordinary curved scissors, on a line parallel with the corona glandis;

or further accuracy may be secured by the assistance of Horteloup's phimosis forceps[1] (Fig. 28), which, placed astraddle on the penis, are made to grasp the flap, and the redundant membrane is then excised by one stroke of a bistoury.

If the frænum is short, divide it. Several little arteries may spirt in your face; quiet them with a good twist of the torsion forceps, and keep the bleeding surface exposed to the air for a few minutes until you are sure all bleeding has ceased, unless you wish to be called from your bed the coming night. There is still a little cut desirable, which I have for a long time employed, and which has recently been mentioned by Dr. Keyes (Van Buren and Keyes, p. 11). This cut is made with scissors in the retracted integument along the dorsum to a point (*A*) about one-quarter of an inch behind the free margin, and the edges of the incision (*C*, *C*) are to be rounded off. Its object is to insure perfect freedom from constriction at the line of division, without which both cicatrization will be delayed and the ultimate condition of the parts be less satisfactory.

Fig. 29.

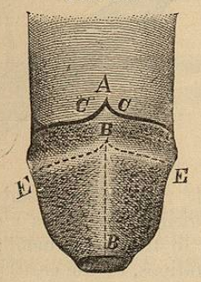
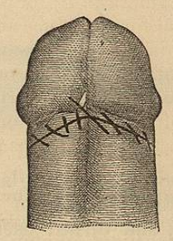


Fig. 30.



For the purpose of uniting the edges of the wound some surgeons employ serres-fines, and others silver sutures. The former are likely to be detached by the movements of the patient before he recovers from the ether, and the latter are too stiff to be removed without unnecessary pain. If very fine silk be used—such as is employed by oculists in operations upon the eye—it will be found to possess all the advantages of metallic sutures, and may be left in for a week without causing suppuration. Moreover, instead of using interrupted sutures, as is usually done, if we employ the continuous suture, commencing at the frænum, it will be found that this part of the operation can be finished in one-quarter of the time, and the edges will be much better adapted to each other, as seen in Fig. 30.

Simple exposure to the air, and protection by means of a cradle from contact with the bedclothes, is all that is required for the first twelve hours, after which a water-dressing may be applied. The

[1] Bull. gén. de thérap., etc., Paris, 1878, p. 559.

patient should remain in bed until the parts have nearly healed, and, if contact of the urine with the wound cannot be otherwise prevented, should micturate with his penis immersed in a basin of tepid water. In favorable cases, confinement to the house for three to five days is sufficient.

It would hardly seem necessary to caution the surgeon not to excise too large a portion of the integument, were it not for the following case reported by Nélaton:[1] A patient appeared at the clinique who had been operated upon for phimosis eleven days before by the usual method. The physician, forgetting that the integument of the penis is very lax and extensible, had, before making the incision, drawn it forwards to its utmost limits; the consequence was that, after the operation, the penis was denuded nearly to the abdominal wall. An extensive suppurating surface had remained, which was torn and made to bleed by frequent erections. The case does not appear to have been followed to its termination, but Nélaton remarks upon the rigidity and malformation of the organ, provided cicatrization should take place, and adds that "this case shows the importance of marking the limits of the incision before the operation."

The American editor of Erichsen's Surgery states that the favorite operation for phimosis at the Pennsylvania Hospital, Philadelphia, consists in simple division of the mucous layer of the prepuce, by means of fine scissors, one blade of which is sharp, and the other probe-pointed. The former is made to penetrate between the two layers of the prepuce along the dorsum of the organ, while the latter passes between the glans and its envelope, and thus the internal layer may be divided as far as the corona glandis. The prepuce should be retracted several times each day, especially during micturition, both in order to prevent contact of the urine with the wound, and also immediate union, which would thwart the purpose of the operation.

Faure accomplishes the division of the mucous layer in a simpler manner, as follows: The skin of the penis is forcibly drawn towards the abdomen, when an incision is made with blunt-pointed scissors upon the dorsum of the retracted preputial orifice, implicating the mucous membrane, but sparing the integument. This allows of a still further retraction of the prepuce, bringing into view an additional portion of mucous membrane, which, by a succession of the above procedures, may be divided to the base of the glans.

Dr. Hue,[2] of Rouen, instead of dividing the prepuce with a cutting instrument, passes a needle through its dorsal surface close to the base of the glans, and ties the portion of skin in front of the puncture with an elastic ligature, which is said to cut its way through in three or four days. Dr. H. states that he has operated with satisfactory results by this method in eighty cases, comprising adults and children.

[1] Pathologie chirurgicale, t. v., p. 663.
[2] Doctor, Lond., Nov, 1, 1878, p. 235.

Jobert (de Lamballe) makes an incision from the preputial orifice on each side of the frænum as far as the corona glandis; then cuts off the frænum, which is now included in a small triangular flap; and finally unites the skin and mucous membrane by the interrupted suture, thus leaving the greater portion of the prepuce intact and merely enlarging its orifice beneath.[1]

These methods, unattended by any loss of substance, may suffice when it is desired simply to relieve uncomplicated phimosis; but when the mucous membrane is in a diseased condition, as is generally the case when an operation is required, circumcision should be preferred.

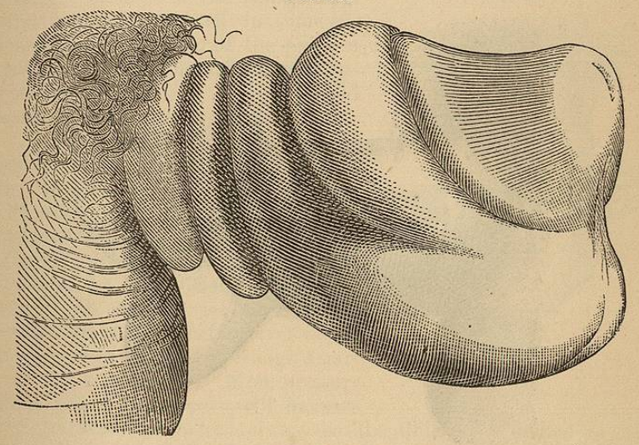
[1] Gaz. d. hôp., Paris, 27 Aug., 1861.

CHAPTER V.

PARAPHIMOSIS.

The term Paraphimosis implies exactly the opposite of phimosis, viz., the retracted prepuce cannot again be drawn forward so as to envelop the glans. This condition is often met with in boys with a tight prepuce, as the result of their first attempt to expose the glans; again it may follow coitus with a woman whose vulvar orifice is small, or it is often produced by patients themselves by retraction of the prepuce for the purpose of inspecting or dressing some venereal affection with which they are afflicted. Having thus exposed the glans, and ignorant of the danger of thus leaving it for any length of time, they allow the prepuce to stay back, and soon find it impossible to bring it forward again. The tight preputial orifice has acted

Fig. 31.



Paraphimosis. (After Jullien.)

like a ring constricting the penis; the glans has in consequence become congested and swollen, and in any attempt at reduction the preputial ring meets with obstruction from the abrupt base of the corona, such as the knuckle offers to a tight ring on the finger. The swelling goes on increasing; the submucous and sub-integumental cellular tissues become infiltrated with serum, and the parts present the appearance represented in Fig. 31.