

PART SIXTH.

BANDAGING IN GENERAL.

Bandages being used for various purposes, as for making compression, retaining dressings, or to protect from irritation, the mode of application varies with the object sought to be attained. The general principles, however, are the same in all methods, and may be said to be smoothness of application, equalization of pressure, and security from displacement. The application of a bandage, in some of the details, varies with the part, and we shall be compelled to devote a separate chapter to each anatomical region. At this place we will simply allude to the general principles of bandaging, which will avoid frequent repetition elsewhere.

COMPRESSING BANDAGES, are either circular or spiral; the former intended to exercise compression on limited surfaces, the latter those more extensive.

Circular bandages are applied as follows: Take the roller in the right hand, with about six inches of the initial extremity unwound, the free end directed to the left, the body of the roller uppermost. Place the initial extremity on the part to be bandaged, and pass successive turns drawn tightly from left to right, exactly covering each other, until the desired number of turns are passed or the necessary compression secured. The bandage is then torn, the end neatly folded in, and secured by inserting a pin, with the head towards the free end (or



FIG. 29.

right), a stitch with needle and thread, or a small strip of adhesive plaster.

SPIRAL BANDAGES are of two kinds, those with reverse turns, and those without. The latter are made as follows:

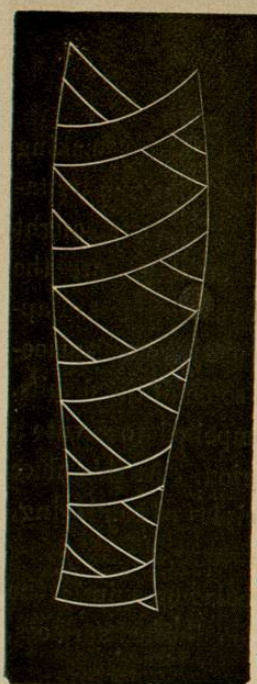


FIG. 30.

Commencing at the lower end of the limb, or that nearest to the surgeon, apply the roller smoothly up the limb, in a spiral manner, each turn to be so made that when drawn tightly it will be perfectly smooth. When these turns have been continued high enough, make similar turns, crossing the others, to the point of beginning. This leaves diamond-shaped spaces between the turns of the bandaging. Repeat this process, up and down the limb, drawing each turn tight and smooth, until all the spaces are filled, and the integument completely covered. Fasten the end as usual. Such a bandage is rarely used, the extreme compression for which it is designed, rarely being necessary, and the amount of material needed being double or three times that used by other methods.

The spiral bandage, with reversed turns, is the common form, and is applicable for all varieties of dressing. It is applied as follows: Supposing a leg to be bandaged, apply the initial extremity to the dorsum of the foot, so as to slightly overlap the toes, and fasten the end with a couple of circular turns. Continue the turns up the leg, from left to right, taking care that each turn of the roller overlaps the preceding for about one-third of its width. When the

small of the calf is reached, or sooner, it will be found that to enable the turns to lie perfectly smooth, the roller will be directed so far up the limb that the turns will not overlap, and the integument will be exposed. It is now necessary to make what is called a "reverse turn." Keeping the bandage drawn tight, place the forefinger of the left hand on the lower edge of the bandage, by slightly remitting the tension, then rotate the body of the roller towards you, and thus make a turn in the bandage (fig. 31). After

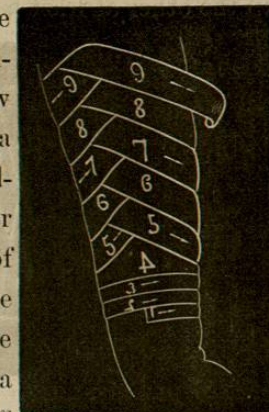


FIG. 31.

passing the bandage around the limb, the turn may be drawn tight, and smoothed down with the left hand. These reverse turns are to be continued as long as the turns will not overlap, making them in a straight line, as in the figure (31). If it is wished to strengthen the bandage by continuing it back to the point of starting, the reverse turns are to be made by reversing the preceding, *i. e.*, turning the bandage *up* instead of down. It will require much practice to make reverse turns quickly and neatly, and every opportunity should be embraced to acquire the requisite skill. The slightest wrinkle, or failure to "break joints" with the turns, indicates failure, and another attempt must be made.

RECURRENT BANDAGES, are applied to free extremities, as a stump after amputation, and are made as follows: Place the initial end of the roller on the side of the part to be bandaged, having it held in position by an assistant; carry a turn half around the part, to a corresponding point on the opposite side, having it held by an assistant, or the other

hand of the same assistant. Carry it back to the side of beginning, by folding the bandage over, having the turn overlap the other at least half its width, or a little more; and so

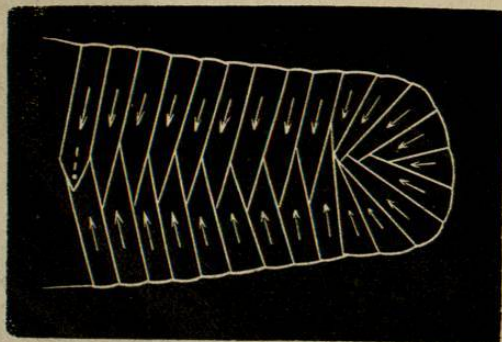


FIG. 32.

continuing the recurrent turns until the whole face of the stump is covered. Next secure the ends and folds, as held by the assistant, by passing the roller, in a circular manner around the limb, over the ends, and securing with a pin, as in fig. 32.

With the single headed roller, these four methods of bandaging, modified by the part to be bandaged, comprise the whole subject. Compound, and double-headed rollers, will need attention later. As most of the dressings in surgical practice are made with the simple roller, however, the student should spend much time in practicing the methods of application given above.

Unequal pressure will often defeat the aim of the surgeon, by forming obstructions of the circulation in the part, and may even establish gangrene. Great precaution must be had, therefore, to apply the bandage smoothly, reverse turns smooth, and see that knots in the warp of the material or the selvage edge are all removed. The roller must never be wet, to make it lie smoother, and never forcibly *stretched* to overcome any tendency to wrinkle. When a perfectly smooth turn

will not cover in the skin, or properly overlap the preceding turn, make reverse turns until it will do so. Unless otherwise indicated, for some exceptional indication, always bandage from below upwards. The degree of tightness must be estimated by a consideration of the object of the bandage, and the probability of subsequent swelling, or the subsidence of an existing tumefaction. In the majority of instances, it is proper to remove some of the inequalities by filling up natural depressions with cotton.

PART SEVENTH.

BANDAGES FOR THE HEAD.

Bandages to the head are usually employed for the purpose of retaining dressings, or to protect the parts from injury, when from any cause the cuticle is denuded of epithelium. We have the recurrent; "T" or double "T" bandages; six-tailed, knotted, and two-tailed bandages applicable to the head proper, to the exclusion of the face.

The RECURRENT bandage is applied in one of two ways, usually, although other modifications are occasionally employed. In the first method, the initial extremity is placed on the nape of the neck, the bandage carried across the vertex, folded and returned, and so on until one side has been covered. Then pass one or two circular turns around the head, to confine the ends and cover the other side in the same manner, confining the ends by circular turns as before. In the second method, the bandage starts from the side of the head, immediately above the ear, is carried around the occiput to the opposite side, and by passing backwards and forwards, overlapping as laid down elsewhere—until the last turn is above the superciliary ridges, when it is continued around the head, as a circular bandage, a number of times sufficient to firmly confine the ends. Neither form can be used indiscriminately, I think, the turns of the bandage running in different directions, the circumstances of a case might readily loosen and derange one, whilst the other would be more secure.

The "T" BANDAGE is used to retain dressings on the scalp, and is made, as shown at Fig. 19, and consists of a band two

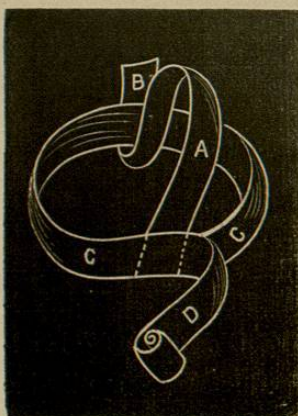


FIG. 33.

yards long, and about two inches wide, for the longer strip; the shorter one is of the same width, about half a yard long. In applying it, the shorter strip is laid across the vertex, the initial extremity posteriorly, the opposite end; attached to the longer band, rests on the forehead immediately above the superciliary ridges. It will make a neater dressing, if the short band is attached to the larger

about eighteen inches from one extremity, so that the portion on each side is of different lengths. The shorter end is now passed around the head, confining the occipito-frontal band, and will reach about to the place of starting; the longer end is now passed around the head circularly, the free end of the short band turned up behind, and the bandage completed by expending it in

circular turns. The method can be readily comprehended from the accompanying figure (33). A, is the occipito-frontal band; B, the end turned up to be confined with the longer end (D); C, is the short end; D, the long.

The DOUBLE T BANDAGE, for similar purposes to the

last, is applied by a modification of it, which will be readily



FIG. 34.

comprehended by reference to the accompanying figure (34). Its uses are the same as the single T.

The TWO-TAILED BANDAGE is made by taking a piece of muslin one yard long and about six inches wide, split into two tails at each side by tearing it up to within two or three inches of the centre. The centre is placed over the dressing to be retained, as on the vertex—the tails crossed, the two anterior tied or pinned at the back of the head, the two posterior tied under the chin. In many particulars it is a better dressing than the recurrent bandage, as it is easily applied, and more secure.



FIG. 35.

The SIX-TAILED BANDAGE, otherwise known as Galens bandage—is a very useful dressing, in some particulars preferable to the above. The muslin, a yard long, and half a

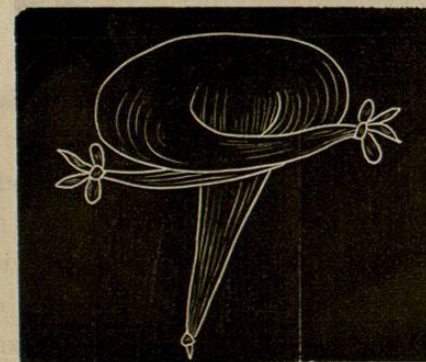


FIG. 36.

yard wide—is torn into three tails at each end, and applied as in the cut. The two centre strips are tied under the chin; the posterior strips on the forehead, and the anterior on the occiput.

The **KNOTTED BANDAGE**, sometimes used to control hæmorrhage from the temporal artery, or other vessel in the scalp—is made with a compress and double-headed bandage, but is not to be preferred to ligation or other more radical treatment, except as a temporary dressing. It is made by

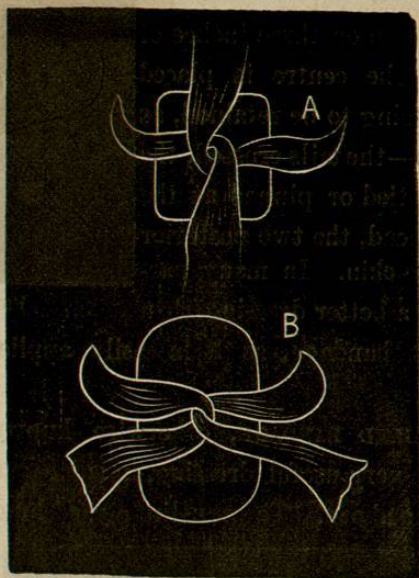


FIG. 37.

placing the compress (a) over the wounded vessel. Apply the centre of the roller to the compress, carry both rollers around the head, crossing on the opposite side—and on reaching the compress again twist them over each other, carrying the lower end over the head, the upper under the chin (A). On reaching the compress again, twist the parts around each other again (B), and carry them around the head, repeating the twists, alternately, until the desired compression has been obtained, or the bandage is expended.

MAYOR'S bandage for the head is very simple, but is not superior to the six or two-tailed bandage. A handkerchief, or piece of muslin of suitable size, is folded by joining the

corners, so as to make a triangle. Place the base of the triangle on the frontal region, and knot the two lateral angles over the posterior, or carry them around the head in opposite directions, tying or otherwise securing them on the forehead. Next fold up the posterior point over the others, and secure it on the vertex.



FIG. 38.

PART EIGHTH.

BANDAGES FOR THE FACE.

Many bandages for the face may be made by a simple modification of those already noted for the head; in others the ordinary rules for general bandaging may suffice. In a few instances, however, special methods must be employed, a few of which will be given.

MASK FOR THE FACE.—In cases of burns or other injuries to the face, it may be necessary to cover it from the air. Take a piece of muslin, about four inches wide,

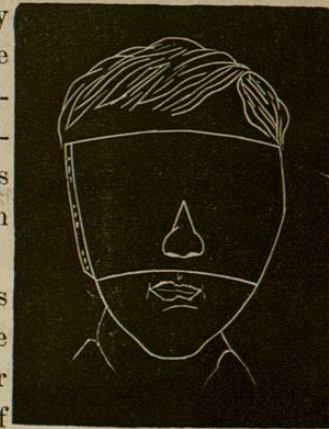


FIG. 39.

and long enough to circle the head, lapping an inch, or enough for a seam. Cut a triangular opening for the nose, in the middle, near the lower edge, and stitch it around the head, as in the figure (39).

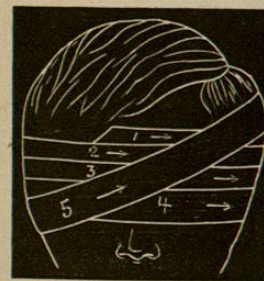


FIG. 40.

The **CIRCULAR BANDAGE FOR THE EYES**, is made by starting over the right eye (Fig. 40, A), and carrying circular turns around the head, working downwards, until both eyes are covered, then carrying the last turn up over the occiput, across the head and face obliquely (B), under the angle of the

jaw, and repeating the turns until the bandage is expended, or sufficient turns have been made to securely hold the circular turns.

The CROSS OF THE EYES, a more secure dressing, is used for

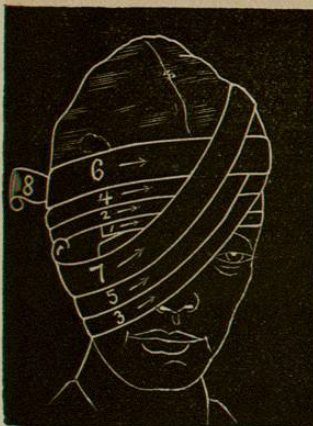


FIG. 41.

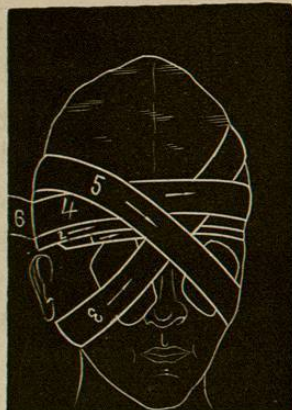


FIG. 42.

the same purpose as the last, *viz.*, the retention of dressings, or for purpose of compression—and is made as follows:

Place a compress over each eye, to fill up the cavity of the orbit. Commence by passing a roller, from below upwards, beginning immediately over the superciliary ridge, until two or three turns are made. Then take one or two turns obliquely over the occiput, vertex, and face, covering the compress on one side. One or two more circular turns are then taken, to confine the oblique turn, and a similar cross made, in the opposite direction to the last, crossing the remaining compress; a few more circular turns are then taken to confine the whole. The oblique turns may be put on double or triple. A *double cross*, for both eyes, may be made by a modification easily comprehended from the second cut (41).

The DOUBLE T FOR THE NOSE, to confine dressings on the nose, is made by using a double T of narrow bandage, not

more than one inch in width. The circular portion (A) is passed around the head, over the upper lip; one arm of the T is carried up, obliquely, over the bridge of the nose, and passing over the vertex and occiput is knotted or pinned to the circular band behind. The other arm is carried up in the opposite direction, crossing the first on the bridge of the nose, and likewise secured to the circular band behind.

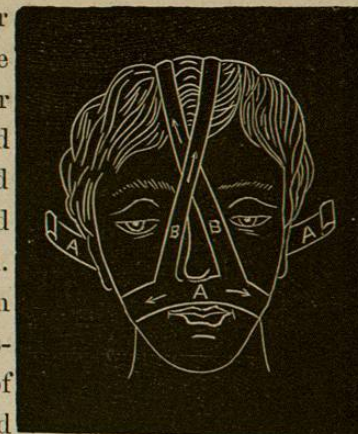


FIG. 43.

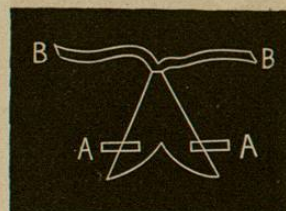


FIG. 44.

The NOSE BAG (or sling), may be used in place of the bandage and is made by cutting a piece of muslin, of suitable size, in the form of a triangle, and notching the base, as in the figure. The sides of the notch

are then to be stitched together, and tapes attached to the apex (b). The bag may be secured to the face by small adhesive strips, (a), and to the nose by knotting the tapes around the forehead.

The TWO TAILED BANDAGE OF THE CHIN is made with a piece of muslin from four to six inches wide, and a yard to a yard and a half in length. The ends are to be split, to within two inches of the centre; the untorn portion

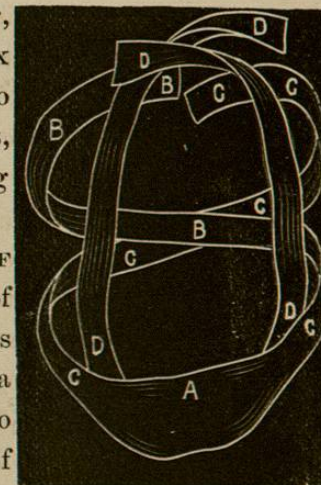


FIG. 45.

being placed on the point of the chin, the bandage is com-

pleted as follows: The left outside strip is carried around the back of the neck, crossing obliquely upwards over the occiput, and terminates on the right side (B). The right tail (C) joins B on the forehead, when they are secured with a pin, or stitched together. The inside strips (D) are carried directly upwards, and joined on the vertex, and confine all the ends. They may be drawn up through the outside strip on the chin, as in the figure, or carried outside.

All other bandages of the face are either obvious modifications of the above, or of those of the head.

PART NINTH.

BANDAGES FOR THE NECK.

Bandages for the neck are intended to be applied for injuries to this region, but are not necessarily applied directly to the injured surface. Thus, wounds of the neck need dressings that will keep the wound closed, and these can only be applied by attaching them to the shoulders, chest, or back from the head.

The CIRCULAR BANDAGE for the neck is made by commencing low down, on the neck, and passing circular turns around the part, gradually working upwards, until the desired extent has been attained. Great care must be taken to avoid exercising too much compression, as the circulation might be seriously impeded. This bandage is used mainly to retain dressings on the neck.

The POSTERIOR FIGURE OF EIGHT, (head and axilla), is an exceedingly secure bandage, and well conceived to hold the head firmly. It is used in case of transverse wounds of the back of the neck, to hold the edges in apposition; or in burns of the anterior portion, to overcome the tendency to contraction. It is also useful in maintaining the head in one position, for many purposes. The following description, as well as the accompanying cut—is taken with some modifications, from a *Manual of Bandaging*, by LEONARD: Standing at the back of the patient, place the initial end of the bandage at the occiput, 1, and confine by a horizontal turn, 2, about the head. Bend, now, the patients head backward,