

One of the best slings for the arm I have ever used, is

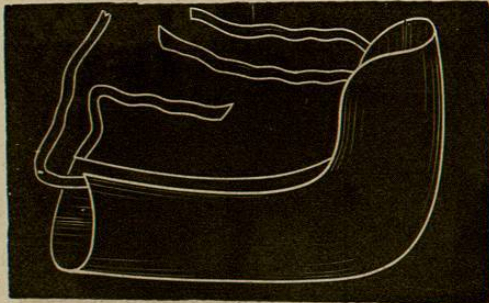


FIG. 60.

made from a long legged stocking. By cutting it up on the anterior border, and attaching tapes to each angle, the arm is better supported and more securely held than by any dressing, for a similar purpose, with which I am acquainted.

PART ELEVENTH.

BANDAGES FOR THE TRUNK.

The trunk will often require bandaging for fracture of the ribs, for emphysema, perhaps for dropsy; and the mammæ will need supporting bandages in mastitis, hypertrophy, and some forms of tumor.

SPIRAL OF THE CHEST.—Drop about a yard of the bandages over the left shoulder, in front. Carry the roller down the

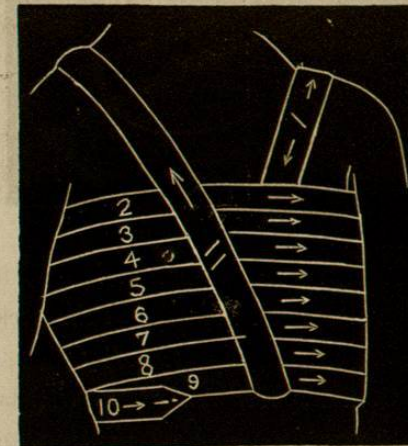


FIG. 61.

back, diagonally to the right axilla, whence make the first turn about the chest (2). Continue these turns, working downwards, until a sufficient number have been taken, each turn overlapping about one-half of the preceding, and fasten the end as usual (7). Next take the free end (8), carry it up over the turns to the right shoulder, and secure it to the turns on the back. This has the effect to counteract the

tendency to slip down which would otherwise prove very annoying. The roller should be about nine yards long, and two inches in width. By increasing the length of the roller the bandage may be extended downwards over the abdomen.

CIRCULAR BANDAGE OF THE THORAX.—Take a piece of muslin about six inches in width, and long enough to encircle the chest two or more times; secure it firmly by pins or stitches.

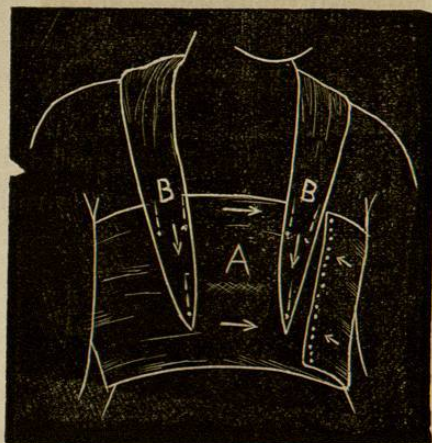


FIG. 62.

Then take a folded cravat or handkerchief, folded cravat fashion, place the centre on the nape of the neck, and attach each end to the body bandage in front by pins.

In the case of woman, particularly those with large mammæ, the chest should be well padded with cotton, to protect the breasts from the injurious effects of pressure.

CROSS OF ONE BREAST.—When well applied this form of bandage is useful to support the mammæ, but it is liable to become deranged, and is not to be preferred to some one of the simple slings to be given shortly. The roller should be eight yards long and two inches in width. Confine the initial end by a few circular turns around the chest from below upwards. Then carry the roller up over the chest, between

the mammæ, nearest the sound side; take it over the shoulder, and diagonally across the back, and make another circular

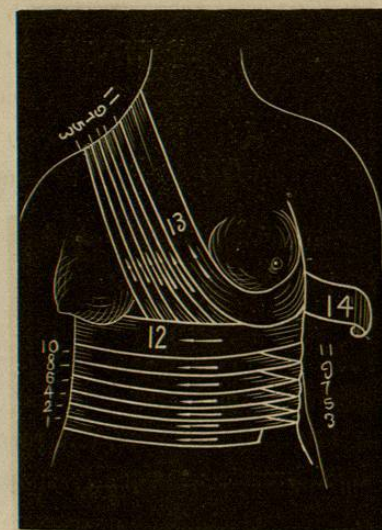


FIG. 63.

turn. Again ascend the chest, nearest the diseased side, overlapping the former ascending turn, and descend the back for another circular turn about the body. Continue these turns until the mammæ is covered in, well-supported, or the bandage is exhausted. It will require pins or stitches at all the cross turns, as the turns cannot be drawn very tight—to prevent the bandage from becoming disarranged, and not only give the patient much annoyance, but often defeat the object for which it was applied.

CROSS OF BOTH BREASTS.—The roller should be at least twelve yards in length, by two inches in breadth. It is a much more secure dressing than the former. Confine the initial extremity at a point about midway between the sternum and the umbilicus, by a few circular turns from left to right. Carry the roller then up over the front of the chest, between the breasts, nearest the left one; down across the left

shoulder and back, another circular turn, mounting the back of the right shoulder, carrying the turn across the chest to

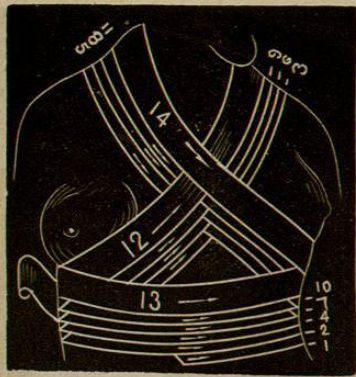


FIG. 64.

the left side, whence make another circular turn. Continue these turns until both breasts are equally supported, or the bandage expended.

SLINGS FOR THE BREAST.--Slings may be made in three ways; the single cravat, double cravat, and the bourse.

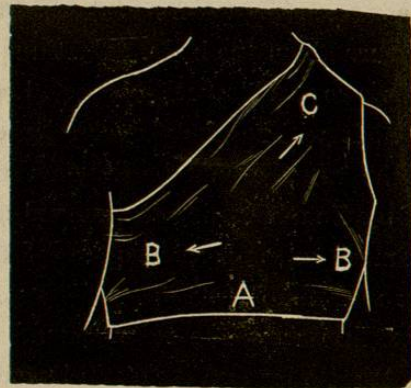


FIG. 65.

(a). The *single cravat* is made by folding a cloth into a triangle of proper size, say with a base a yard long. Place the centre of the base between the mammæ, and, if the left breast is to be supported, carry the upper angle around the right side

of the neck, the lower around the left side of the chest, underneath the breast, and knot them together on the back. The apex is now taken over the left shoulder and knotted to the others.

(b). The *bourse* is made as follows (LEONARD *Bandaging*, p. 79): A piece of linen, ten inches in length and eight

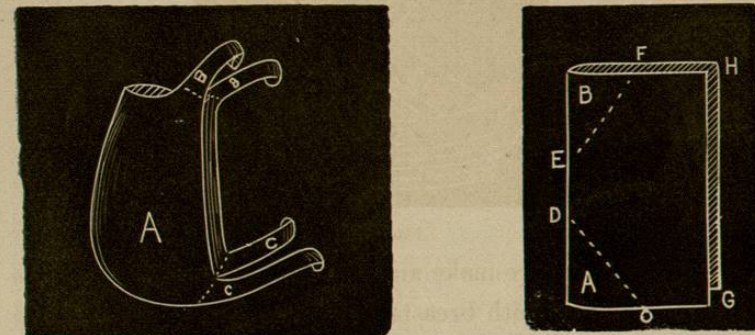


FIG. 66.

inches in width when folded at the centre. Cut then the folded corner A and B off by the dotted lines c-d and e-f. Stitch then the whole together, from G to F. This done, to each of the two corners at G, and the two at H, (b), stitch a narrow strip sufficiently long to meet and tie, with its fellows, (the two inferior) about the body, and (the two superior) about the neck."

PART TWELFTH.

BANDAGES FOR THE LOWER EXTREMITY.

The bandages for the inferior extremities have a certain relation to those of the superior, making due allowance for the different form of the ankle as compared to the wrist. They may be arranged, therefore, into those including the feet alone, those extending to the knee; those including the knee; those extending to the hip, and those in which the hip is covered in. In this connection it is proper to include, also, slings applicable to this region.

FOR THE FOOT.—We have in this region, three forms of bandage, each of which is employed to fill certain requirements.

(a). The *circular of the foot* is made by applying the initial extremity of the roller at the base of the toes, and passing the turns, in a circular manner, from left to right, until a sufficient portion of the foot is covered, and the end is secured as usual.

(b). The *demi-gauntlet* is applied somewhat as in the case of the hand. Confine the initial extremity of a narrow roller around the ankle, immediately over or below the malleoli, by two or three turns from left to right. Carry the roller across the dorsum of the foot to the outside of the little toe, carry it under and around this, and between the toes, thence up to a point below the left malleolus, take a circular turn and repeat the former turn, encircling the third toe in the same manner. As the natural position of the foot is nearly

at right angles to the leg, it will be necessary to make the circular turns as low down on the leg as possible, to secure a smooth, even bandage.

(c). The whole foot, with the toes, may be bandaged, either by making the *complete gauntlet*, modified as in the former, or an ordinary spiral bandage, as in the case of the hand, shown at fig. 51

LEG TO THE KNEE.—The foot is to be covered in by either method—probably the last being the best. When the circular turns refuse to lie smoothly, the roller must be carried in a figure of eight around the ankle, repeating the turns, slightly overlapping each time, until the ankle and heel are covered. Up to this point no reverse turns must be made if it is possible to avoid them. After the heel and ankle are fully covered, ascend the leg in the ordinary spiral manner, making reverse turns as they are needed, and confine the whole by circular turns below the knee,

INCLUDING THE KNEE.—Upon reaching the tibial attachment of the ligament of the patella, the leg is to be placed in the desired position, and covered in by figure of eight turns, as in the case of the ankle. When covered completely, ascend the thigh, as high as is desired, by spiral reversed turns, and confine as usual. It is occasionally necessary to bandage the knee alone, either to retain dressings or to exercise compression. Apply the initial extremity of the bandage, immediately above the patella, confine it by one or two circular turns, and cover in the knee with figure of eight turns; when complete, pass one or two circular turns above or below, and fasten as usual.

INCLUDING THE HIP.—Upon reaching the trochanters, one or two circular turns are to be taken to give additional security to the dressings, and the hip is covered in by successive fig-

ures of eight turns, carried around the opposite hip, the



FIG. 67.

whole being secured and confined by a few circular turns about the body.

Should it be desired to apply a bandage to the hip alone, it may be done as follows: Secure the initial extremity by a few circular turns about the body from left to right, when the left hip is to be bandaged, or from right to left for the right hip. Carry the roller over the abdomen to the thigh, below the trochanter, bringing it around through the groin over the thigh again, thus crossing the former turn, up over the back to the point of starting. Here make another cir-

cular turn, and repeat. The first turn is the lowest on the thigh, each succeeding turn overlapping the last, gradually ascending until the hip is covered in.

SLINGS FOR THE LOWER EXTREMITY.—It is occasionally necessary to carry the lower extremity in a sling, or to temporarily preserve flexion or extension of the knee or foot. After dressing a fractured leg in an immovable dressing, a sling may be employed to enable the patient to move about on crutches; this is perfectly proper, and the practice is universal. To secure extension or flexion of the foot or knee, however, a splint had better be employed. For mere temporary purposes, a sling may be used, and they may be made as follows:

Flexion of the foot.—Encircle the knee with a cravat, in a figure of eight. Apply a folded cravat circularly around the foot. Connect the two by a connecting band or long cravat, or towel, making tension to the desired extent.

Extension of the foot.—Apply a cravat or bandage circularly on the thigh, and another around the instep of the foot, as in the last method. Make the extension by connecting the two with a band or handkerchief passing down posteriorly. The apparatus may be modified, by substituting a slipper for the band on the foot, removing the heel, and about an inch of the heel-part of the sole. The extending band is attached to the sole of the slipper. This last dressing is often used to maintain extension after operations for talipes.

Slings for the leg, are of two kinds: those extending to the foot, and those to the knee. The first are made by carrying a broad band from the neck to the foot, passing underneath it, and up again to the neck, when the ends are knotted together. It will answer the purpose better if the sling is

confined by a circular band around the waist, as the leg is otherwise allowed to swing too much.

Slings extending to the knee, are usually mere temporary dressings, and are made of two or more towels or cravats, on the system of MAYOR. Supposing the right leg to be the one



FIG. 68.

concerned. A band is placed over the left shoulder, reaching to the right hip. Make a triangle with a base of one yard and a half, and a height of about two feet. Apply the base of the triangle to the leg, as near the ankle as possible, the leg being flexed. Carry the angles up each side of the leg, and knot them into the shoulder band. The apex is then pinned across the front of the leg, preventing the leg from slipping out of the sling.

Here we will dismiss further considerations of bandaging, or temporary dressings, and may state that while very much

more might be included, what has been written will be found to be all that is essential in actual practice. Many manuals on bandaging and minor surgery are filled with methods of bandaging that are never used in practice, seeming to be designed more for the purpose of exercising the student, or showing the ingenuity of the writer.

PART THIRTEENTH.

PERMANENT DRESSINGS.

In cases of fracture as well as some forms of morbid action, circumstances frequently demand that insecure, movable, or temporary apparatus be replaced by something more permanent in character, permanent in the sense that its use may be continued until the treatment of the case has terminated. These dressings are of two general characters, which may be described under splints, and the application of bandages, stiffened in various ways, which are designed to take the place of the former. The consideration of splints will be withheld for a subsequent chapter.

The use of bandages stiffened by various substances, has recently attracted much attention, but is far from being of modern origin. In some forms the principle was recognized by some of the ancient surgeons, Hippocrates and Galen having employed some preparations of glue, and Avicenna refers to similar procedures. COOPER, as late as 1830, was the first of the more modern surgeons to employ such dressings with any frequency, but it was not until within the last fifteen or twenty years that the practice became at all general.

The material used to stiffen the dressings, is either starch, plaster of Paris, silicate (liquid glass), various mucilages and glues, solutions of rubber and the like, but the choice at present seems to be limited to either starch or gypsum. Each of these articles has earnest advocates; MR. ERICHSEN