

CHAPTER VIII.

BANDAGES OF THE UPPER EXTREMITY.

SPIRAL OF ONE FINGER.

Description.—This bandage should be one and one-half yards in length by three-quarters of an inch in width.

Application.—Suppose it is the right fore-finger to which



Spiral of one Finger.

you wish to apply the bandage. Pronate the hand; after unrolling four or five inches of the bandage, place it upon the back of the wrist, as 1, and confine it by a single circular turn, 2. Continue the course of the bandage about the wrist till you come to the ulnar border, when you cross down the back of the hand (course 3), and continuing the course of the bandage onwards along the radial side of the forefinger, you encircle this at the tip, as course 4. Courses 5, 6, 7, 8, 9, 10 and 11 encircle the diseased member spirally; while course 12 runs obliquely upwards, from the first finger-cleft, across the back of the hand to the radial side of the wrist, partially encircling it, when you tie both extremities, as at 13.

Uses.—For maintaining the coaptation of severed parts, when there is a longitudinal wound; also for confining dressings and splints to the part. This bandage is applied to any one of the fingers, or the thumb, of either hand.

POSTERIOR FIGURE OF 8 OF THE THUMB AND WRIST.

(Spica of the Thumb.)

Description.—This bandage should be two yards in length by three-quarters of an inch in width.

Application.—If it be the right you wish to bandage, place the hand midway between pronation and supination. Unroll four or five

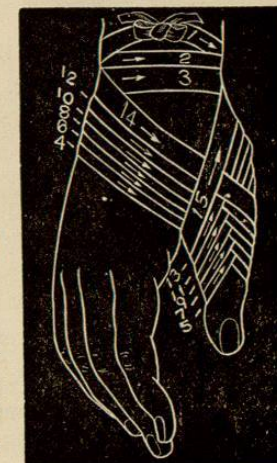
inches of the bandage, and thus place it, 1, upon the back of the wrist, and confine by two circular turns, 2 and 3; continue in the same course till you come to the ulnar border of the hand, when you descend obliquely across the back of the hand to the radial side of the thumb, at the phalangeal articulation, thus finishing course 4. Pass under the thumb, and then up over it, and diagonally upwards to the radial side of the wrist, finishing course 5. Courses 6, 8, 10, 12 and 14, etc., respectively follow the course of turn 4; while those of 7, 9, 11, 13 and 15, those of course 5. At last exhaust the bandage by circular turns about the wrist, and confine by tying.

Uses.—For confining dressings to the back of the thumb, or the first metacarpal space; also as dressing after the reduction of a dislocation of the first phalanx. It can be applied so that the spiral shall run *downwards*, instead of *upwards*, as we have given; but the descending spiral can rarely be put on so evenly and regularly.

POSTERIOR FIGURE OF 8 OF THE HAND AND WRIST.

Description.—This bandage should be one and one-half yards in length by one and one-quarter inches in width.

FIG. 41.



Posterior Figure of 8 of the Thumb and Wrist.

Application.—Place the initial end, 1, on the back of the

FIG. 42.



Posterior Figure of 8 of the Hand and Wrist.

wrist—the left, for example,—and confine by a circular turn, 2; continue the course of the bandage about the wrist till you come to the radial border, when you descend obliquely across the back of the hand to the fifth metacarpo-phalangeal articulation, thus finishing turn 3. Turn 4 is a circular course about the metacarpo-phalangeal articulations; while course 5 ascends, obliquely, across the hand, from the radial border of the fore-finger, to the ulnar border of the wrist. Turn 6 is a simple circle of the wrist. Course 7 is in line of course 3, slightly overlapping it; course 8, in line of course 4; course 9, of course 5. Exhaust the bandage, at last, by simple circles about the wrist, and confine in the ordinary way.

Uses.—For confining dressings to the back of the hand or wrist, as cataplasmata, graduated compresses over ganglionic cysts, etc.; also as an after-dressing after a dislocation backwards of the os magnum, or any of the dislocations backwards of the first row of phalanges.

✓ ANTERIOR FIGURE OF 8 OF THE HAND AND WRIST.

Description.—This bandage should be one and one-half yards long by one and one-quarter inches wide.

Application.—Just the reverse of that seen in figure 42; that is, imagine the palm of the hand presenting, and then apply as above described.

Uses.—To confine dressings to the palm of the hand, and to the anterior surface of the wrist; also to confine compresses to the region of the palmar arches, in case the vessels are wounded, and ligation is called for.

FOUR-TAILED BANDAGE OF THE HAND.

(Sling of the Hand.)

Description.—This bandage should be eighteen inches in length by three or four inches in width. Fold the ends together, and then tear, or cut them back to within two inches of the folded centre, thus making a bandage similar to the compress seen in figure 4, page 22.

Application.—Place the plane of the bandage either upon the palm or the back of the hand, according to the seat of injury. Tie the inferior ends about the metacarpo-phalangeal articulations; the superior ends you carry obliquely upwards to the wrist, and confine them there by tying about it.

Uses.—This bandage is intended to take the place of the Posterior and Anterior Figure of 8's of the Hand and Wrist, in injuries about the palm or the back of the hand. As it is more easily applied, it has, perhaps, become a more general favorite.*

DOUBLE T OF THE BACK OF THE HAND AND WRIST.

Description.—The main bandage, A, should be some twenty-eight inches in length by one inch in width. At a distance of three inches from the initial end, stitch, at right angles, another bandage, B, twenty inches long, by three-quarters of an inch wide; at a point two inches from this, stitch, at right angles to the plane of the main bandage, and parallel to B, another bandage, C, of the same dimensions as B.

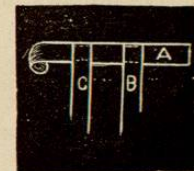


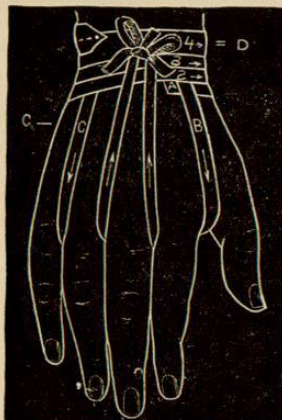
Diagram.

Application.—Place the initial end of the bandage, A, upon the back of the wrist, so that the first perpendicular portion

* NOTE.—The systems of *Triangles* and *Cravats* are so readily applied to the hand, and are in such common use by the laity, even, no description of them is thought necessary.

of the bandage, B, will correspond to the first interosseous space, and the portion C, with the fourth interosseous space. Confine the initial end by a single circular turn, 2, about the wrist. Carry the portion B down the first interosseous space, around over the palmer surface of the first joint of the index

FIG. 44.



Double T of the Back of the Hand and Wrist.

finger, and then back, over the second interosseous space, to the wrist; this done, make another circular turn about the wrist with the main bandage, as turn 3, running over the recurrent portion of B at the wrist. Continue these circular turns of A until the bandage is exhausted, when confine with a pin. Conduct, now, the other perpendicular portion, C, down the fourth interosseous space, across the palmer surface of the metacarpo-phalangeal articulation of the ring-finger, back, over the third interosseous space, to the wrist, here tying with the end

or the first portion, B, as at D, after the requisite amount of extension of the palmar tissues, or fingers, has been obtained.

Uses.—In cases of burns of the palm of the hand, or extensive suppurations, where vicious cicatricial contractions are to be feared. In cases of injuries of the finger-clefts, from burns or otherwise; here using compresses, soaked in carbolized oil, to prevent the union of the sides of the fingers from “angular” granulation. Also for confining dressings to the back of the hand.

Variety.—*Single T of the Back of the Hand and Wrist.*—In this case but one perpendicular portion of the bandage is used, as B, or C; it being applied between any finger-clefts desired, and in a manner similar to the above.

The *uses* are similar to the Double T just described, only are more limited.

DOUBLE ANTERIOR T OF THE HAND AND WRIST.

Description.—The same as the Double T of the Back of the Hand and Wrist (page 63).

Application.—The reverse of the Double T of the Back of the Hand and Wrist; that is, it is to be applied to the *front* of the hand.

Uses.—Similar to the above in cases of finger-cleft injuries, or after web-finger operations. Also in cases of burns across the back of the metacarpo-phalangeal articulations, or transverse wounds across the front of the same joints, the point in the use of the dressing being to forcibly *flex* the first row of phalanges as much as possible.

Variety.—*Single Anterior T of the Hand and Wrist.*—Only one perpendicular, or finger-cleft, portion of the bandage is to be used. It can be applied to any of the finger-clefts desired.

The *uses* are similar to the Double Anterior T of the Hand and Wrist, only they are much more limited.

PERFORATED T OF THE HAND AND WRIST.

Description.—A bandage, A, A', eighteen inches in length by one inch in width. At the middle of this, at right angles to it, stitch a piece of linen, or flannel, B, twelve inches in length by four inches in width, having five perforations; the first, corresponding, from its size and position, with the thumb, as C. The other perforations are made at such a distance from each other, and of such size, as will readily admit the fingers.

FIG. 45.

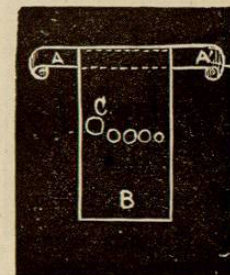
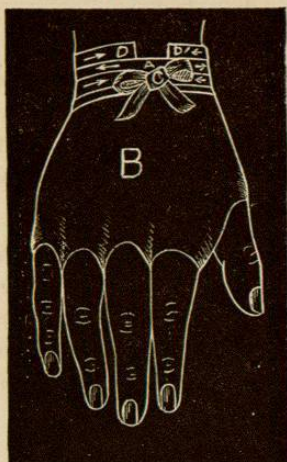


Diagram.

Application.—Suppose it to be the right hand. Carry the fingers and thumb through their respective perforations in the

FIG. 46.



Perforated T of the Hand and Wrist.

portion B, and place the portion A at the back of the wrist. Carry forwards the lower portion of B (see figure 45), up across the palm of the hand, folding it about the wrist, as D, D'. Conduct, now, the two extremities of the main bandage (A, A', figure 45) circularly about the wrist, binding down the recurrent portion of B (D, D'); and when exhausted, tie the ends together, as at c.

Uses.—Designed to take the place of the Double or Single T Bandage of the Hand and Wrist; also for confining dressings to the palm of the hand, as well as to the dorsal portion.

CARPO-DIGITO-PALMAR TRIANGLE.

Description.—This should be a triangle having a base twenty-four inches in length and a height of twelve inches.

Application.—Place the base of the triangle upon the palmar surface of the wrist; conduct both extremities circularly around the wrist, tying at the back.

FIG. 47.



Carpo-Digito-Palmar Triangle.

Fold the sides of the triangle over the dorsum of the hand, and carry the apex of the triangle up over the back of the fingers (extending them as circumstances demand) to the wrist, as at B, there confining.

Uses.—For maintaining dressings to the palm of the hand, and also for extending the fingers upon the forearm, in cases of burns of the palm, where vicious cicatrization is to be feared; also in

transverse wounds of the back of the hand. In these latter cases it takes the place of the Double T of the Back of the Hand and Wrist.

CARPO-DIGITO-DORSAL TRIANGLE.

Description.—Same as Carpo-Digito-Palmar Triangle.

Application.—The reverse of that seen in figure 47, in that you place the base of the triangle at the back of the wrist, confining as in the preceding case. Afterwards fold the apex up over the palm of the hand, thus flexing the fingers upon the forearm, and confine at the wrist.

Uses.—For maintaining dressings upon the hand, and for maintaining the fingers in a state of flexion, when vicious cicatrization is to be feared upon the back of the hand; also, in cases of transverse wounds of the palm of the hand. It is then designed to take the place of the Double Anterior T of the Hand and Wrist.

SPIRAL OF ALL THE FINGERS.

(Gauntlet.)

Description.—This should be a bandage ten yards in length by three-quarters of an inch in width.

Application.—Suppose it be the right hand to which it is to be applied. After letting drop four or five inches (enough to tie with) of the initial end, place the bandage upon the back of the wrist, 1, and confine by the circular turns, 2 and 3; afterwards you come obliquely down across the back of the hand, from the radial side, to the little finger, finishing course 4. Continue the bandage outwards to the tip of this finger, making a circular turn, 5, and

FIG. 48.



Spiral of All the Fingers

the spiral turns 6, 7, 8, 9, 10, 11, 12, 13 and 14 about the same member; then conduct the bandage upwards and outwards from the fourth finger-cleft to the palmar surface of the wrist, thus finishing course 15. Course 16 is essentially that of course 4, with this difference: it goes to the ring finger; this finger is spirally bandaged, and the recurrent course, 27, of the bandage is similar to that of course 15. Each of the remaining fingers are similarly wound, and at last both ends of the bandage are tied at the back of the wrist, or forearm, 62.

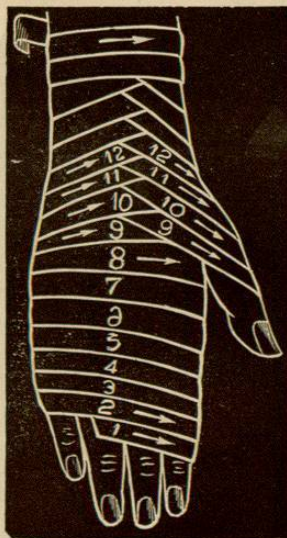
Uses.—In cases of fracture, or dislocation of the phalanges, and burns or other wounds of the fingers and hand, where vicious cicatricial contraction is to be feared, or after an operation for web-finger.

✓ SPIRAL OF THE FINGERS AND THE HAND.

Description.—This bandage should be three yards, or more, in length, and one and one-quarter inches in width.

Application.—Place the initial end of the bandage, 1, at or

FIG. 49.



Spiral of the Fingers and the Hand.

near the extremities of the fingers, and confine by the spiral turn 2; make six other spiro-circular turns about the fingers, and on the 9th, 10th, 11th, 12th, etc., courses, make the reverse to each turn, so as to accommodate the obliquity of the thumb, and thus prevent the bandage slipping off. At last exhaust by simple circular turns about the wrist, or lower part of the forearm, and confine with the pin, as usual.

Uses.—In cases of fracture, or dislocation of the phalanges; and also for confining dressings to any part of the hand and wrist. If the fingers should each, separately, demand compression, then the Spiral of All the Fingers (The Gauntlet) should be employed.

THE SHEATH OF THE FINGERS.

Description.—Instead of the more elaborate ones recommended by some authors, you can use the fingers from a large glove; or, if the whole hand is to be enveloped, a mitten.

Uses.—In the simpler injuries about the hand where the more complex bandages are hardly called for.

FIGURE OF 8 EXTENSOR OF THE HAND UPON THE FOREARM.

Description.—This bandage should be six yards in length, by one and a half inches in width, and rolled into two equal heads.

Application.—Place the plane of the roller upon the back of the hand, 1, conduct both heads to the palm, cross them, one above the other, and remount to the back, crossing them there, 2, 2, and conduct them to the palm again. Re-crossing them, carry the heads upwards across the arm, 3, 3, to a point above the olecranon process, the hand being sufficiently extended; make a circle of the arm at this point, 4, 4, crossing the heads before and behind, and at last descend upon the arm again, 5, 5, to make another circuit about the hand, thence to remount to the elbow again. Finally exhaust both heads by circular turns above the elbow, confining as usual.

FIG. 50.

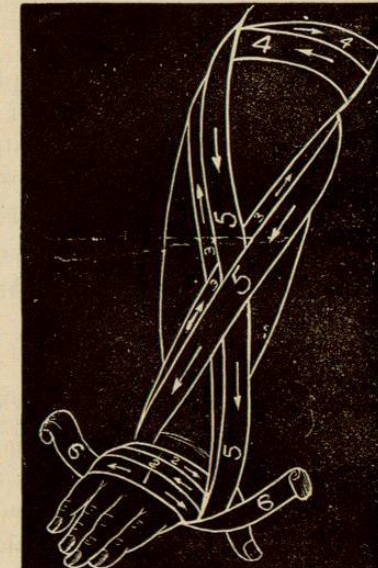


Figure of 8 Extensor of the Hand upon the Forearm.

Uses.—In cases of burns of the palmar surface of the hand, wrist or forearm, where vicious cicatricial contraction is to be feared, and in all other cases, where extension of the hand upon the forearm is desired, as in transverse wounds of the back of the wrist.

FIGURE OF 8 FLEXOR OF THE HAND UPON THE FOREARM.

Description.—This bandage should be six yards in length, by one and a half inches in width, and rolled into two equal heads.

Application.—Similar to the preceding; the plane of the bandage being placed at the palm of the hand, the member being flexed upon the forearm. Courses 1 and 2 are to be made as in the Extensor of the Figure of 8 of the Hand upon the Forearm, and the heads carried above the elbow and the remaining courses made in a similar manner to those of the preceding bandage.

Uses.—In maintaining forward flexion of the hand upon the forearm, as in case of burns of the back of the hand, wrist and forearm, where vicious cicatricial contraction is to be feared. Also in cases of transverse wounds of the forepart of the wrist, where a tendency to gaping occurs.

CARPO-OLECRANON CRAVAT.

Description.—I. Two cravats, each eighteen inches in length.

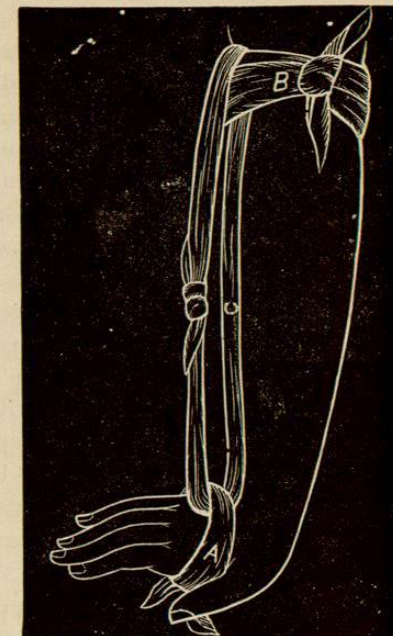
II. A third cravat, thirty-six inches in length.

Application.—Tie one of the short cravats about the hand, as at *a*; and then tie the other about the arm, above the olecranon process, as at *b*. Extend, now, the hand upon the forearm, and confine it by tying the long cravat, *c*, between, and to, them.

Uses.—The same as the Figure of 8 Extensor. As these cravats are easier applied, and full as safe as the roller bandage, they are to be preferred to it.

Variety.—If need be, a *Flexor* variety of this cravat may be employed. In this case the hand is flexed upon the anterior surface of the forearm, by running the long cravat, *c*, down the *anterior* surface of the member. This bandage would then take the place of the Figure of 18 Flexor of the Hand upon the Forearm just described.

FIG. 51.



Carpo-Olecranon Cravat.

✓ SIMPLE SPIRAL OF THE FOREARM.

Description.—This bandage should be two yards in length by one and a half inches in width.

Application.—Place the initial end at the wrist and confine by a circular turn above it; exhaust the bandage by encircling the arm with spiraliform turns, as you see in the upper courses of the bandage depicted upon page 68.

Uses.—To retain dressings upon the forearm.

✓ REVERSED SPIRAL OF THE SUPERIOR EXTREMITY.

(Roller of the Superior Extremity.)

Description.—This should be twelve yards in length by one and one-half inches in width.

Application.—See figure 11, page 28. This bandage is to be applied as here represented, the courses being continued upwards to the axilla, here confining in the usual way.

Uses.—Most generally employed in cases of fractures, etc., to restrain muscular action, swelling, and to favor the return of venous blood to the vena cava superior. When employed the surgeon should guard himself that he does not allow unequal pressure at any of the courses of the bandage. Should

FIG. 52.



Reversed Porous Spiral of the Superior Extremity.

he have one part of the member more tightly constricted than another, he will only increase the mischief already done by the accident by favoring the development of gangrene, from venous stagnation, at the more constricted portions. When evenly and smoothly applied this bandage is of great service to the surgeon; when inaptly applied, a source of great danger to his patient and chagrin to himself. (See note at foot of page 74).

Variety.—When it is specially desired to secure the limb with a bandage that shall not slip, and where steady pressure may be continued for some little time, as in “green stick” fractures, then adhesive bandage, or what is better, the porous adhesive bandage of Grosvenor & Richards could be used, as shown in the cut, in place of the flannel or cotton roller. There would not need to be quite as long a bandage used in these cases, as the overlapping of the courses would be

ANTERIOR FIGURE OF 8 OF THE ELBOW.

Description.—This bandage should be two and a half yards in length by one and a half inches in width.

Application.—Suppose it to be the right arm to be bandaged. Place the initial end of the bandage, 1, above the bend of the elbow, and confine by a single circular turn, 2. Continue in the same direction till you get to the outside of the arm, when you descend diagonally across the front of the joint, to a point four or five inches below it, thus finishing turn 3. Turn 4 is a circular course about the upper portion of the forearm; turn 5, a spiral turn upwards to the inside of the arm above the bend of the elbow;

FIG. 53.



Anterior Figure of 8 of the Elbow.

whilst turn 6 is in course of turn 3; turn 7, of course 5, and so on; at last exhaust by circular turns about the arm, and confine as usual.

A variation can be made, and to good advantage sometimes, by making course 6 to be a circular turn about the arm, as course 2; course 7 then being the same as course 6 in the figure, whilst course 8 is a circle of the forearm, as course 4 in the wood-cut; course 9 would then take the place of course 7 in the cut.

Uses.—Generally to fix a compress over the median-cephalic vein after venesection. Can be employed in cases of wounds in that region, or for maintaining dressings thereto.

Variety.—By making similar courses of the bandage upon the *posterior* surface of the arm and forearm, you get the *Posterior Figure of 8 of the Elbow*.

The *Uses* of this variety are essentially to confine dressings about the back of the joint.

A *Triangle of the Elbow* and also a *Four-tailed Bandage* (Anterior and Posterior) have been devised to take the place of the roller varieties. But these are so readily applied that no further description is necessary.

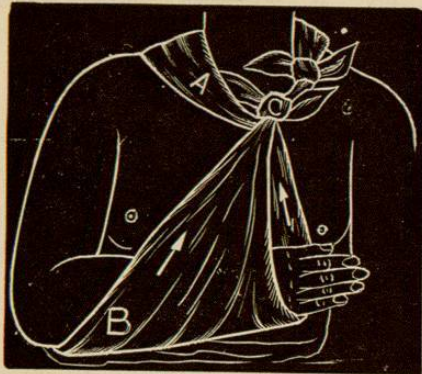
CERVICO-ULNAR CRAVAT AND TRIANGLE.

Description.—I. A cravat two feet in length.

II. A triangle having a base of two feet, and a height of twelve inches.

Application.—Tie the cravat A, about the neck. Flex the

FIG. 54



Cervico-Ulnar Cravat and Triangle.

forearm, at right angles upon the arm; then place the base of the triangle at the ulnar border of the hand, the apex, B, being at the elbow, and tie the two extremities of the triangle into the cravat of the neck, as at c.

Uses.—In cases of burns at the back part of the elbow, or transverse wounds of the

front of the joint; also, as a "sling," in cases of injuries of the forearm, or hand, where elevation, or "rest," of the part may seem demanded. It may be applied over the clothing.

SPIRAL OF THE ARM.

Description.—This bandage should be one and one half yards in length, by one and a half inches in width.

Application.—Essentially the same as that of the Spiral of the Forearm, described upon page 71, except that you begin at the elbow.

Uses.—To confine dressings to the arm-regions, or for the support of the edges of longitudinal wounds, thus securing coaptation. It may or may not be applied with "reverses;" yet, should the biceps be well developed, it would be best to employ them, otherwise the bandage would be in great danger of slipping down.*

*NOTE.—See, for all of these *Spiral* bandages, the description of the *Figure of 3 Spiral of the Extremities* described upon page 107.

FOUR-TAILED BANDAGE OF THE SHOULDER.

Description.—This should be a piece of cloth some forty-eight inches in length, and five or six inches in width. Fold, lengthwise, at the centre, and then cut, or tear, back the extremities to within four or five inches of this point, thus shaping it something like the "sling compress," figure 4, page 22.

Application.—Place the plane of the bandage over the diseased shoulder, and carry the two superior ends of the bandage obliquely down across the chest (one upon its anterior, and the other upon its posterior surface), and tie them below the opposite axilla. Then carry the two inferior extremities of the bandage up around the neck (one in front and the other behind), and confine them by tying.

Uses.—To confine dressings about the shoulders. It furnishes a very handy, though not very firm, variety of dressing.

LARGE OBLIQUE TRIANGLE OF THE ARM AND CHEST.

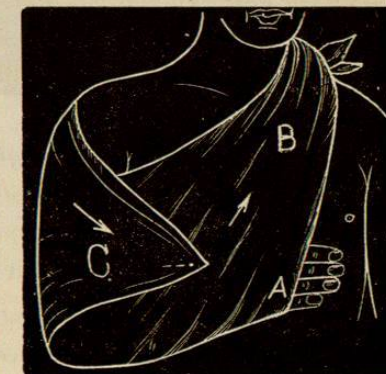
(Large Triangular "Sling" of the Arm.)

Description.—A piece of linen, or flannel, folded to the form of a triangle, so that it shall have a base of some sixty inches, and a height of twenty-four.

Application.—Having flexed the forearm to a right angle with the arm, fold it to the breast; place the base of the triangle, A, at the hand, and

carry one end backwards under the axilla of the diseased member, to bring forwards, across the back, to the opposite shoulder, there to tie with its fellow, B, that ascends directly upwards, across the front part of the chest, to the same side. The apex of the triangle, c, is then to be brought forward, and pinned as you see in the wood-cut.

FIG. 55.



Large Oblique Triangle of the Arm and the Chest.

Uses.—To support the arm and forearm in cases of injury. The cut represents the bandage as being applied over the naked body; it is applied with equal frequency over the clothing.

TRIANGULAR FRONT OF THE FOREARM.

(The Ordinary Arm-Sling.)

Description.—This should be a triangle having a base of forty-eight inches and a height of twenty inches. The laity usually make it from a large shawl, folded to a wide cravat.

Application.—Having flexed the forearm upon the arm, fold it to the chest, and place the middle of the base of the triangle at the hand, *A*, and conduct the extremities up and around the neck, and confine them by tying. The apex of the triangle can now be folded under the arm to a sufficient extent to have the bandage fit easily, and yet furnish efficient support.



Triangular Front of the Forearm.

support of the hand, or lower part of the forearm. This bandage may, or may not, be applied over the naked body.

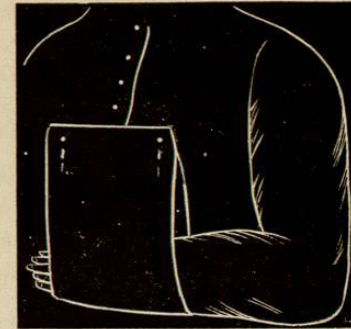
SMALL FRONT OF THE HAND OR FOREARM.

(Small Sling of the Hand or Forearm.)

Description.—A rectangular piece of cloth eighteen inches long by nine inches wide.

Application.—Flex first the forearm at right angles to the arm, and fold to the chest. Place the middle of the bandage beneath the hand, and forearm, carrying both ends upwards and pinning them to the clothing on the breast, as shown in the cut.

FIG. 57.



Small Front of the Hand or Forearm.

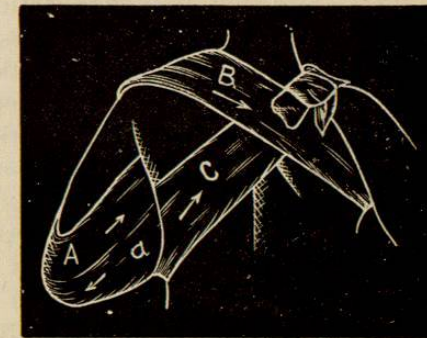
Uses.—As a support of the hand, or forearm, in cases of minor injuries.

POSTERIOR DOUBLE FIGURE OF 8 OF THE ELBOW AND THE OPPOSITE AXILLA.

Description.—This bandage should be a cravat, two yards in length by eight or ten inches in width. It can be made out of a small shawl, if necessary.

Application.—Standing in front of your patient, and holding the bandage with its centre across the palm of the hand, place the centre of the cravat over the elbow, *A*, of the injured member, both ends hanging down towards the floor. Seize the innermost extremity and carry it, *a*, across the inside of the arm, under the diseased axilla, up in front of the same axilla and over the same shoulder, and then obliquely down across the back, *B*, to the opposite axilla, where you surround the shoulder with the same extremity of the cravat, at last entrust-

FIG. 58.



Posterior Double Figure of 8 of the Elbow and the Opposite Axilla.

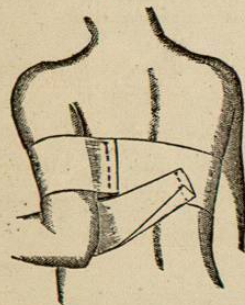
ing it to the care of an assistant. Carry the other extremity of the cravat forwards across the bend of the elbow, and over the other end of the bandage, then backwards, under the diseased axilla, as c, and then finally upwards to the opposite shoulder, there confining by tying, after the arm has been sufficiently extended backwards. You will then need a "sling," for the horizontal support of the forearm and hand, which can be pinned to the cravat as it crosses the shoulder, or about the neck. (See Figs. 55, 56 and 57.)

Uses.—This bandage was designed by Dr. E. M. Moore to take the place of the numerous dressings for fractured clavicle. It dispenses with the "axillary pad," and the more complicated system of Fox and Desault, and seems, from certain anatomical reasons, to be superior to theirs for maintaining a coaptation of the clavicular extremities. It certainly has the argument of simplicity in its favor.

SAYRE'S CLAVICULAR PLASTER SPLINT.

Description.—Two pieces of adhesive plaster, poroused or plain, each two and one-half inches in width, and two yards in length.

FIG. 59.

Sayre's Clavicular Splint.
1st Course.

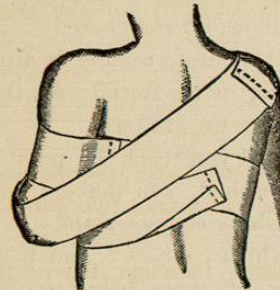
the arm of the opposite side, across the thorax, and fasten it to

Application.—Pass one strip of the adhesive plaster around the arm at the junction of the middle and lower third, making a loop, leaving an open space at the posterior part of the arm, as you see in Fig. 59; this prevents strangulation; then draw the arm back, bringing the pectoralis major upon the stretch; but the acromial end of the clavicle still rides under the sternal fragment. Now secure the arm back by passing the strip of adhesive plaster around the body, bringing it under

itself on the back. Care must be taken not to draw the arm too far back, but just sufficient to put the pectoralis major upon the stretch.

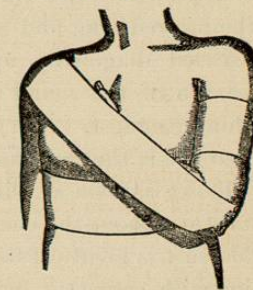
Now take the other strip of adhesive plaster, and make a slight longitudinal cut in the centre, to admit the point of the elbow; flex the arm at an acute angle over the chest, drawing it upward, forward and inward, in this manner reducing the fracture. Bring both fragments of the bone into a perfect line; you now secure the arm in this position by passing the strip of adhesive plaster over the elbow, across the back diagonally to the opposite shoulder, then bring the anterior end of the strip up along the arm and hand over the chest, and fasten it to itself at the shoulder, as shown in Figs. 60 and 61.

FIG. 60.



Sayre's Clavicular Splint, finished.

FIG. 61.



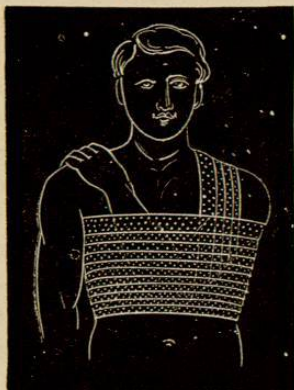
Front view of same.

Uses.—Professor Sayre claims that it is the most simple method of treating fracture of the clavicle that he has ever seen, and is the only plan of treatment which will yield him a perfect result without deformity. He never uses an axillary pad, as the pressure from this often stops the circulation in the arm, and the pain resulting is sometimes terrible.

VELPEAU'S BANDAGE.

Description.—A roller $2\frac{1}{2}$ inches in width, and 8 or 9 yards in length.

FIG. 62.



Velpeau's Bandage.

then down across the clavicle, and over the front and outside of the injured arm, and *under* the elbow. From here it is to be carried diagonally up, across the chest, to and beneath the axilla of the sound side, covering in the initial end, thus finishing course 1.

Course 2 is the same as course 1 until you reach the point of the elbow; as soon as this point is reached, you make a horizontal turn about the chest, thus finishing courses 2 and 3.

Course 4 is identical to course 1, whilst courses 5 and 6 are in line with courses 2 and 3, the only difference being to overlap each preceding course one-third to one-fourth the width of the bandage, so as to give the whole a firm support to the parts, and cover in the whole of the arm and chest, as shown in the engraving.

Uses.—This bandage is employed in dressing fractures of the clavicle, fractures of either the coracoid or acromial processes of the scapula, and also in luxations of the humerus.

To make a firmer support, the porous adhesive bandage, as shown in Fig. 62, should be used.

Application.—Have the patient place the hand of the injured side upon the opposite shoulder, as, for instance, the left, as shown in the cut.

Place the initial end of the bandage under the axilla of the *sound* side, then carry the roller-head diagonally up across the back to the top of the injured shoulder;

CHAPTER IX.

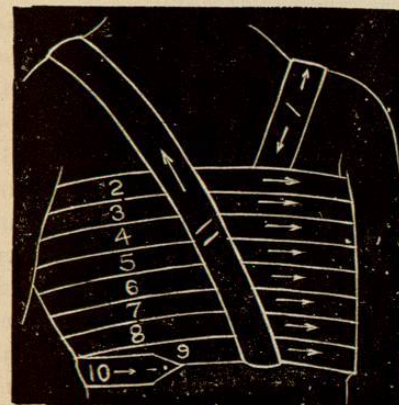
BANDAGES OF THE BODY.

SPIRAL OF THE CHEST.

Description.—This bandage should be nine yards in length, by two inches in width.

Application.—Dropping about one yard of the bandage

FIG. 63.



Spiral of the Chest.

obliquely down across the chest, from the top of one of the shoulders, the left, for instance; carry the head of the bandage down the back to a level with the arm-pits. Make now the spiral turns, 2, 3, 4, 5, 6, 7, 8 and 9, about the chest, and at last confine by pinning, as at 10. Carry, now, the free end of the bandage, 11, which you let fall at the beginning of the application,

obliquely up over the chest, to the opposite shoulder from whence dropped, and confine, by pinning, to the posterior spiral turns. The spiral courses may be stitched to course 11.

Uses.—This bandage is employed where compression about the chest is needed, as in cases of fractures of the ribs, sternum or vertebræ, or separation of the rib-cartilages; also in wounds of the abdomen with presentation of the viscera. It is also of use in emphysema, or after thoracico-paracentesis, thus compressing the walls of the chest, if they be much expanded.