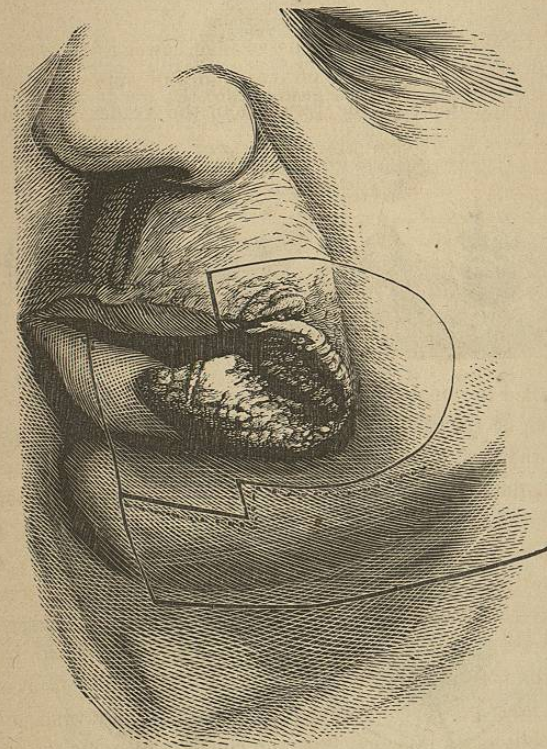


*Reporter*—consists in carrying the vertical lines beneath the jaw, so that the flaps when put in place show but the single central line upon the face. By this modification not only are observable scars avoided, but the lip is not apt to be shortened by the cicatrization: indeed, it is possible by such manner of cutting to obliterate the triangular breaks left in the operation shown, the yielding integuments of the neck being made to close the breaks.

The transplantation of particles of skin, now an accepted means, may be practised in the Mütter plan: this consists in snipping from sound parts small pieces, and by careful application uniting them with the uncovered surface of the triangles.

Fig. 485 exhibits an operation practised by the author for the removal and restoration of parts of both the upper and lower lips.

FIG. 485.



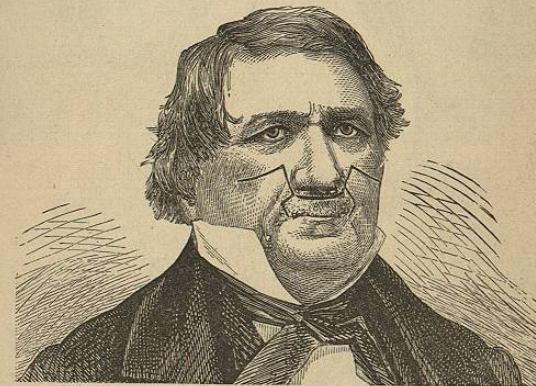
At the angle of the mouth is seen the lesion designed to be removed, circumscribed by lines which fully include it; all tissues within these lines are ablated. Commencing now at the angle of the wound in the mesial centre, an incision is carried downward beneath the jaw, and outwardly—as

shown in the diagram—as far as the line of the facial artery;\* this flap being next dissected from its base is lifted until it meets the free border of the natural half of the lip; to this it is pinned. The angle seen back of the mesial incision will be recognized as receiving accommodation in the second angle in the upper lip; this relationship limits the size of the commissure on the side, which limitation, however, is to be corrected by a subsequent operation practised after the manner of Dieffenbach.

Remedy for disease thus situated is of frequent necessity. The operation shown is one that may be practised with entire satisfaction. With various required modifications the author has repeated it many times.

Fig. 486 exhibits lines of section demanded for the restoration of a lost upper lip. The case here shown, represents a case in which the author found

FIG. 486.



himself compelled to remove the upper lip on account of the rare affection, as here located, of epithelial cancer. Imagining the lip away, the reader will perceive that lateral flaps dissected from the cheek, as shown in the diagram, must admit necessarily of being brought down and stitched together in the place of the lost part.

Fig. 487, demonstrative of the same operation, as the making of a lip is concerned, shows the face of a patient when first presenting for treatment.

Fig. 488 exhibits the appearance of the face immediately after the completion of an operation for a new lip, practised precisely as shown by the lines marked upon the face of Fig. 486. The triangular space, left necessarily on each cheek, as must be appreciated by a study of the drawing, on the left side is shown obliterated by compelling the cheek to override the space. On the right side it has been allowed to remain. The artist, however, should have represented this space by a dark rather than by a light surface.

Fig. 489 shows what is known as the Dieffenbach operation for removal and

\* Mistake has been made by the artist in not giving width enough to the flap; it is to be one-eighth in excess of the part removed.

restoration of an upper lip. The inferred diseased part, *d*, being ablated, an incision, *b*, is carried upward, outward, and downward, as seen. Fig. 490 exhibits *b* carried to the place of *d*; the line on either side, with its double dots, representing the seats of flaps after approximation.

FIG. 487.

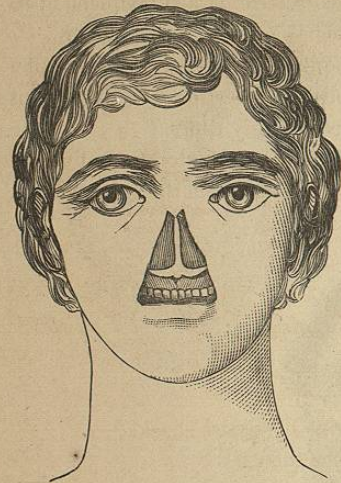
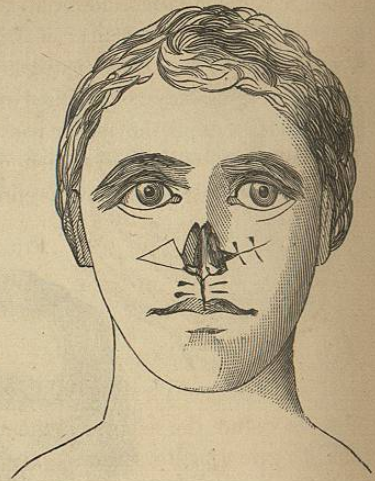


FIG. 488.



Another manner of making an upper lip is known as Leidillot's. Fig. 491 shows the lines of incision. Fig. 492 the flaps in place.

FIG. 489.



FIG. 490.



The lady represented in Fig. 493 applied to the author for relief from the deformity exhibited, the irregularity of features being dependent on injury done the facial nerve in an inflammation and necrosis of the temporal bone from accident met with in childhood. Paralysis was complete; not the slightest power existed in the muscles of the affected side.

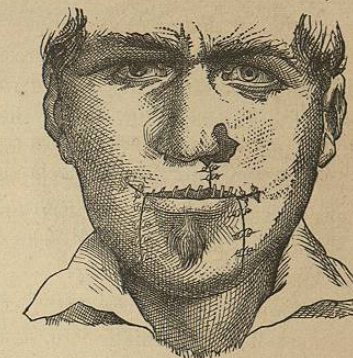
The desire of the patient was for a symmetrical mouth and face; the question was, the accomplishment of such an end.

TREATMENT.—A case of this kind is treated strictly from an operative stand-point. The indications are threefold:

FIG. 491.

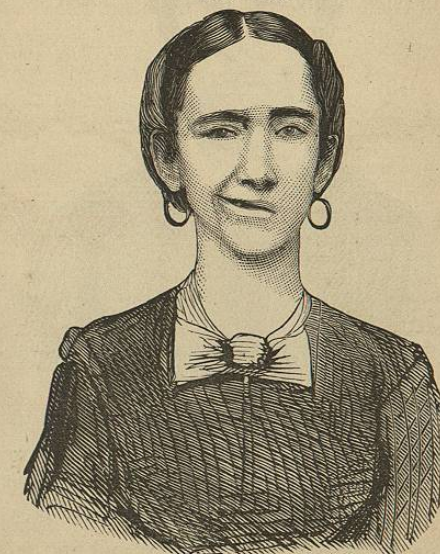


FIG. 492.



- 1st. To reduce the flabby redundancy of the paralyzed cheek.
- 2d. To give comeliness and regularity to the mouth.
- 3d. To antagonize the muscular action (when in play) of the vital side.

FIG. 493.



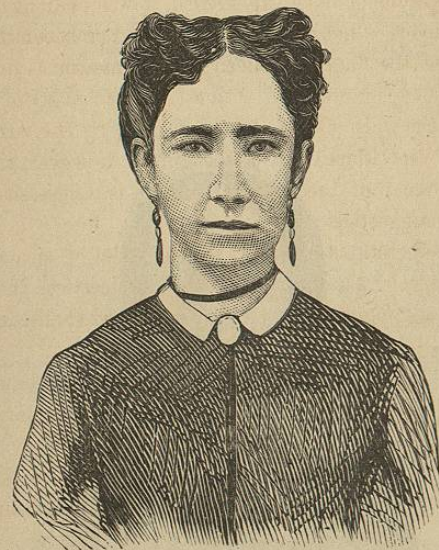
In this case these indications were attempted to be met by means as follows: A study was made of the cheek, and what was deemed to be the re-

dundant tissue was included in an ellipse drawn with a lead-pencil, one of the apices being at the middle of the nose, the other at the angle of the lower jaw,—such direction of the ellipse being with a purpose of raising the angle of the mouth. Satisfied that the removal would be found rightly placed to meet the first two indications, the part was cut out. In the operation the facial artery was the only vessel which needed a ligature, and even this ejected no more blood than does an ordinary coronary.

To bring the parts together, three hare-lip pins were used, and, somewhat surprisingly, so direct and immediate was the union, that it was found permissible to dispense with two of them on the following day; the third, the middle one, was left in until the fourth day; but this, not seemingly from necessity. The ligature, a strand of ordinary silk, remained firm for three weeks, and was finally taken away only by the use of a traction quite as great as would have sufficed for its removal the moment after it was placed about the vessel.

The result of this procedure is exhibited in Fig. 494. With the features in a state of rest, nothing more, it would seem, could be desired.

FIG. 494.



The third indication, however, showed itself a most important one. Emotion of the face altered this mechanical harmony of the parts, and exhibited the non-vitality of the side operated upon; that is to say, in laughter, for example, the superior and lateral levators would pull up the well angle, with no corresponding action on the diseased side. This was, of course, a matter which had been originally considered. The indication was met with remarkable success, as follows: A piece of rubber tubing four inches long, possessed

of an elastic power adapted to the requirements of the case, was attached by one of its ends to a hair-pin (the ordinary pin used by ladies in dressing the hair). With its other end was united a piece of strong, but delicate, gill-net string, and this, in turn, was connected with a small strip of flesh-colored court-plaster.

The application of this piece of mechanism—an artificial muscle, let us call it—was made as follows: The plaster was softened and applied to the dead side of the face, as far back upon the cheek as would answer the purpose. The lady, standing before her glass, would excite the displacing muscles into play, and antagonize them by drawing slightly backward the dead side by means of an artificial muscle, holding a required tension by the pin fixed into one of the coils of her hair, the rubber lying entirely concealed by such coil. When applied, only the plaster could be seen, the string being hidden by the hair.

This rubber muscle answered its purpose admirably. The fear that the plaster would irritate, and perhaps ulcerate, the skin, seems to have been without foundation. At any rate, this held good for six months of use, which was as long as the case was under observation; the lady living in a distant city. Should this accident have supervened, it was evident that, after a very few days of experience, a habit might be attained of accomplishing the same object by the use of the fingers applied in such manner as not to elicit attention.

This operation, the only one of the kind done by the writer, gave results which warrant its repetition. It is recognized, however, that a continued and proper employment of the artificial muscle is a necessity, otherwise the use of a finger, as suggested.

**Burns.**—Plastic operations practised for the relief of cicatricial deformities must always be of special signification. Of such cicatrices there are of course an endless variety, and it may only be that each case shall command a special operation.

Cicatricial tissue, always the result of suppurative inflammatory action, is a species of imperfect fibrous formation, dull white in color, hard, its fibres running in every direction and possessed of a contractility which, in many instances, requires years for exhaustion. In vital force this structure is of low organization, peculiarly susceptible to degenerating influences, rarely, if ever, developing to full likeness with its associated parts.

The surgeon on treating a cicatrix will find himself wisely influenced in heeding the maxims of Dupuytren:

1. Never attempt the correction of a deformity until months, and in many instances years, have passed after its production.
  2. Never operate unless certain of obtaining a larger cicatrix than that which is wished to be removed.
  3. Be certain that the operation can restore the parts to their shape.
- Dermoplasty, as this operation is called, is never to be undertaken without

full consideration of the shock to be entailed by the cutting and suppuration, and the ability of the patient to endure such shock (see page 514). In removing a cicatrix, it is to be recognized that not only may a prolonged dissection be necessitated, but the cutting is not at all unlikely to be of the most hazardous nature, requiring on the part of the surgeon not only an accurate knowledge of the anatomy of the parts involved, but a patience and a manipulative skill which are by no means a common possession.

A secondary danger associated with these operations lies in the supervention of erysipelas, a contingency to be guarded against by that preliminary attention which has taken into consideration every functional irregularity which can have a tendency to lower the resistive force of the individual locally or at large.\*

A flap is always to be at least from a quarter to a third larger than the cicatrix to be replaced; such increased size will be found necessary to counterbalance shrinkage.

A flap is always to be taken from the nearest healthy neighboring part. It is to have the widest pedicle the circumstances of the case will permit, and is not to be laid in its new situation until all hemorrhage has been fully suppressed and both flap and base are covered with a film of plasm.

In fixing a flap, unnecessary stitches are to be avoided, while compression of the most gentle nature is to be used in holding the parts in apposition.

No dressing except of the simplest character is to be employed after an operation; the surgeon is to take it for granted that no complication will arise and that the union is to be immediate and full: should, however, such results not accrue, then indications are to be met as they arise.

Concerning the wound left by the transfer of the flap, this is best treated in the endeavor to close it by the overdrawing of neighboring parts; with large surfaces, however, where the practice may not avail, the process of skin-grafting is had recourse to; this, while not so reliable as is to be desired, serves at times a satisfactory end. For further illustrations in plastic surgery see chapter on Epithelioma.

\* Erysipelas would seem to be a parasitic disease; the fungi finding habitation in a part incapable of self-defence. Repetition of the combination of a medicament always used by the author is made:

R.—Tincturæ ferri chloridi, ℥j;  
Tincturæ cinchonæ, ℥ij;  
Quiniæ sulphatis, ℥j.

Sig.—Apply hourly until blush and tension disappear. Decrease or increase tincturæ cinchonæ according to delicacy of skin.

## CHAPTER XLVIII.

### VASCULAR SYSTEM OF EXTERNAL AND DEEP FACIAL REGIONS.

#### LIGATION OF ARTERIES.

THE arteries of the face, external and deep, arise out of the external carotid. The external carotid is one of the two terminal divisions of the common carotid. A line upon the neck, laid from the sterno-clavicular articulation to the mastoid process of the temporal bone, marks the position of the common vessel in the length of its course from emergence above the clavicle to termination opposite hyoid bone. (Refer to Fig. 23.) A line drawn from a point of meeting with the first, opposite hyoid bone, to angle of lower jaw, locates the situation of external carotid. (Refer to same Fig.) A line starting from the notch upon the face of lower jaw anterior to masseter muscle, being carried to internal canthus of eye of the same side, distinguishes the course of facial artery. (Refer to same Fig.)

The external carotid artery breaks up in the substance of the parotid gland into the internal maxillary, the temporal, and the auricular. (Fig. 22.) The first passes the head of the jaw and supplies all the deep parts of the face. The second has its pulsations felt just in front of the ear, it continues upward supplying the temporal region and side of forehead. The third runs back of the ear, assisting to vascularize the posterior auricular locality.

Associated with the surgical signification of the face is the lingual artery; this is the second branch of the external carotid. It supplies the tongue, and is the not infrequent seat of ligation.

Arterial blood having passed through the capillary system is returned to the common circulation by office of the veins. A dissection of the facial venous system, one of the most perfect the author has ever seen, is here introduced as a study. (Fig. 495.)

**Arrestation of Hemorrhage.**—Ligation being found necessary for the arrestation of hemorrhage, the vessel indicated for operation is that one most directly associated with the lesion.

1. **LIGATION OF FACIAL ARTERY.**—Feeling for the anterior border of the masseter muscle, the finger is allowed to drop until resting upon the notch occupied by the artery in its passage over the jaw. Position discovered, a pencil-mark, half an inch in length, is made to designate the direction of the vessel. An incision, one inch in length, is cut oblique to this line. The artery is reached by incising skin, the subcutaneous and adipose tissue, platysma myoid