

**The restoration of a lost nose by operation : exemplified in a series of cases / by John Hamilton.**

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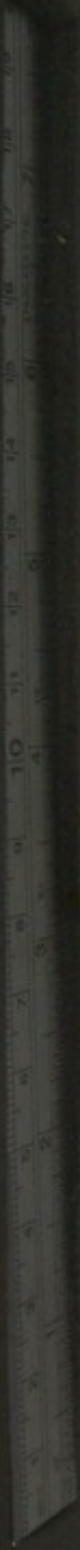
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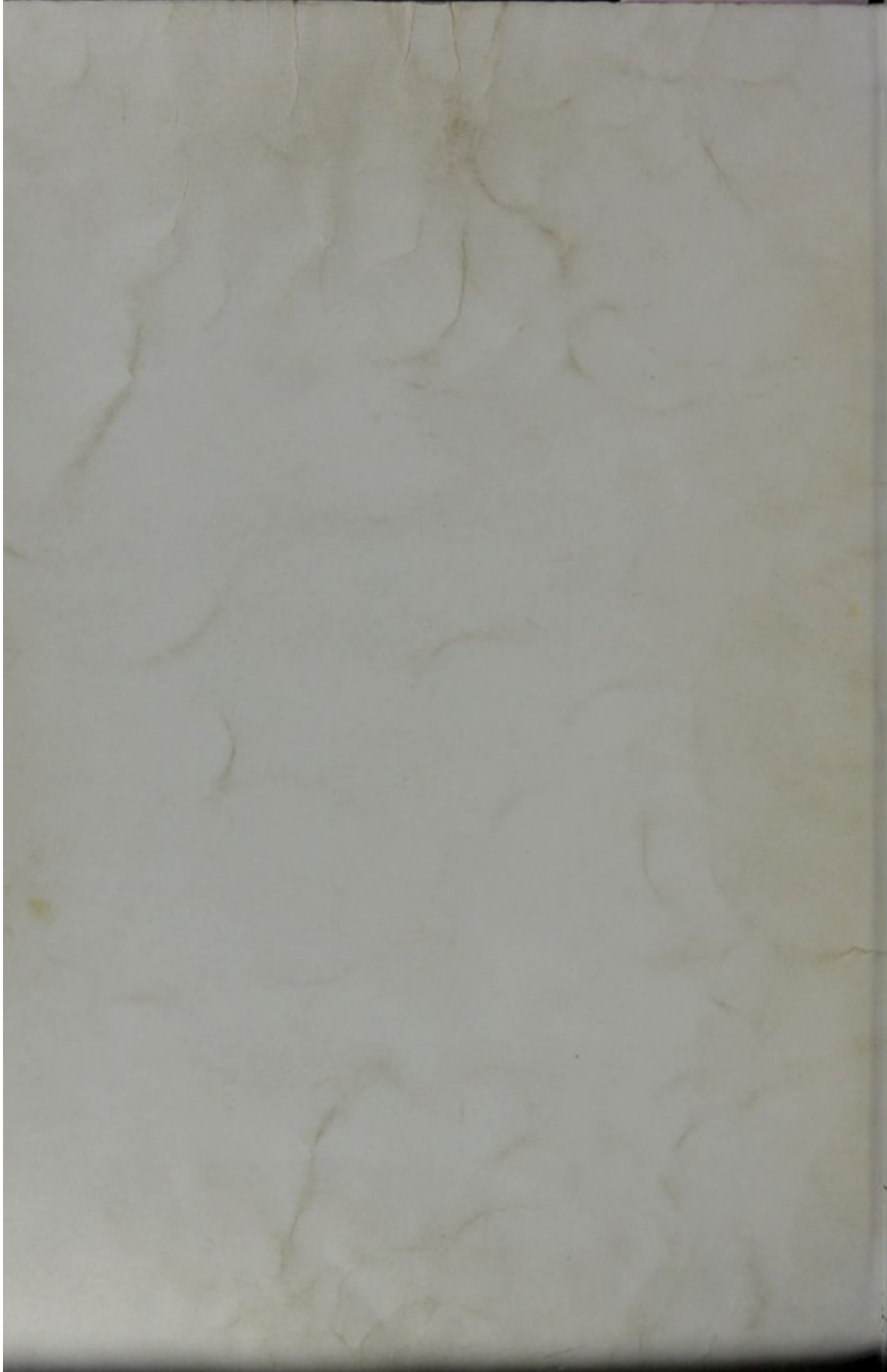
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THE  
RESTORATION OF A LOST NOSE

BY OPERATION :

EXEMPLIFIED IN A SERIES OF CASES, ILLUSTRATED  
WITH WOOD ENGRAVINGS.

BY

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LONDON :

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1864.

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WITH WOOD ENGRAVINGS

DUBLIN:

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1861

## RESTORATION OF A LOST NOSE.

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THE restoration of a lost nose has been effected in two ways : the first named the Taliacotian, after Taliacotius, one of the most celebrated operators in this line in his day ; the second, the Indian method, from its having originated in India, having been practised there from time immemorial. I shall give a brief historical sketch of these two operations.

In Europe, the first operation of this kind appears to have been done in 1442, by a Sicilian surgeon, Brancas.\* His son also not only restored the nose, but also lost lips and ears. Vincent Vianeus, a Calabrian surgeon, likewise practised it, and subsequently it is mentioned in the works of Vesalius and Ambrose Paré. The latter thus speaks of the operation :—“There was in Italy a surgeon, who, by his skill, made noses of flesh in this manner :—He cut away entirely the callous or cicatrized edges of the lost nose, as is done in hare lip, then made as large and deep an incision as was necessary in the middle of the biceps muscle, one of those which bend the arm ; he then puts the nose into the incision, and bandages the arm to the head, so that it cannot move to and fro ; and certain days after, which generally is about the fortieth day, knowing that the agglutination of the nose with the flesh of the afore-

\* Carpue—“An account of two successful Operations for Restoring a Lost Nose,” 1816, p. 1.



said muscle had taken place, he cut out as much as would replace the lost portion of the nose, fashioning it in such a way that he restored the nose to the requisite figure, length, and thickness." "We have this on the testimony of a gentleman, Le Cadet de St. Thomas, who having lost the nose, and carried for a long time one of silver, became tired of the remarks, accompanied by laughter, made on him in company; and having heard that there was in Italy one skilled in remaking lost noses, went there to find him, who made it for him in the manner above described, as many have seen, not without admiration, particularly those who had known him when he wore the silver nose. The thing, therefore, is not impossible; it appears to me, however, very difficult and hard to be borne by the patient, not only on account of the trouble of keeping the arm bound to the head for so long a time, as well as the pain of the incisions into the healthy parts, cutting out a part of the flesh of the arm to form the nose, joined to which is, that this flesh is not of the same temperature as that of the nose, and, agglutinated to it however closely, can never be of the same appearance and colour as that which formerly constituted the lost portion of the nose; also the cavities of the nostrils can never be such as they were originally."\*

Paré's opinion against the operation can have little weight with us, who know how erroneous this description is, the new nose being stated to have been formed by the flesh of the biceps muscle; but it is very probable that it had immense influence in preventing its adoption in France, and one reason, no doubt, that no operation of the kind was practised in that country—at least, there is none recorded. It is only surprising that it never was adopted by any one of that galaxy of distinguished surgeons, the Louis, Petits, &c., who contributed to the great work, "The Memoirs of the Academy," from which the practice of surgery received so remarkable an impulse.

\* Paré, folio, p. 894.

In 1491, Alexander Benedictus, a celebrated surgeon of Verona, wrote on the subject, but was not favourable to the operation.

But the best known and the most deservedly eminent was Gaspardus Taliacotius. He was Professor of Anatomy and Surgery at Bologna, and of such high reputation that the Faculty of Bologna raised a statue to him, which represented him holding a nose in his hand. He died in 1553; and forty-four years after his death his Treatise was published, "*De Curtorum Chirurgia, sive de narium et aurium defectu per insitionem arte hactenus ignota sarciendo:*" Venice, 1597, in folio, with figures. An octavo edition (which I have) was published at Frankfort, in 1598, also with figures. The work is very elaborate, and contains a long dissertation on the nature of the nose, its dignity and uses, with the operation necessary for its restoration when lost. The directions in the last part on the subject of the operation are clear and precise; and the different processes, and the necessary instruments, are well illustrated by the plates. The Taliacotian operation was as follows:—A portion of the skin of the arm, in the bicipital region, was marked out, of the requisite size, and of an oblong square form. An incision was made on each side, and the integument separated from the subjacent parts, remaining still attached above and below; a piece of linen was inserted under the integument, between it and the subjacent muscle. This was left so for some days. The next thing was to divide one end of the isolated portion of skin, leaving it attached at the other. It became thick and contracted, and suitable to supply the lost portion of the nose. The sides of the old nose were dissected away, and made raw. A model of the intended nose was taken with paper, and served to fashion the size and shape of the portion of skin, the upper cut end of which was applied to the raw surface of the old nose, by bringing the arm to the face, and the edges were kept together by sutures. To prevent motion of

the arm, it was fastened to the head by a peculiar dress and bandages, which, though they appear complicated, yet seem to have answered admirably the intended purpose. The parts were kept so for twelve days, when the connexion between the piece of skin and the arm was divided. The former was then fashioned so as to make a respectable nose.

After the death of Taliacotius, the operation fell into oblivion, or at least was so seldom resorted to as to have received little notice in the surgical works of the time. A writer in "The Gentleman's Magazine" for 1794 quotes the following case from Hildanus, which shows that it was not entirely given up:—

"Ann. 1590. When the Duke of Savoy made war on Geneva, a virgin fell into the hands of the soldiers, whose chastity when they had attempted in vain, they, being enraged, cut her nose off. About two years after she went to Lausanne, where Mr. John Griffonius, a most ingenious and successful surgeon, then lived. He undertook to cure her, and restored her nose so artificially, that, to the admiration of all, it appeared rather natural than artificial. I myself have seen her several times, and she continues unmarried at Lausanne, this present year 1613. It is true, in the cold of winter the tip of her nose looks livid; but it is nourished as other parts of the body, and endued with sense. Griffonius had some hints of the method from an Italian as he travelled through Lausanne, who had conversed with the famous Taliacotius, though he had never seen the operation performed, nor Taliacotius' works, before he had cured the maid. But he cured the maid in the same manner as Taliacotius describes it."—Hildanus, *Obs. Chir.* 31 Cent.

We may therefore say that, with the above exception, the operation of Taliacotius, in which the materials of the new nose were taken from the skin of the arm, nearly entirely ended with its author.

The first notice in England, I believe, of the Indian method of restoring a lost nose, is in "The Gentleman's Magazine," 1794. It is *verbatim* as follows:—

"A friend has transmitted to me, from the East Indies, the following very curious, and in Europe I believe unknown, chyrurgical operation, which has long been practised in India with success, viz., affixing a new nose on a man's face:—

"Cowasjee, a Mahratta of the caste of husbandmen, was a bullock driver with the English army, in the war of 1792, and was made a prisoner by Tippoo, who cut off his nose and one of his hands. In this state he joined the Bombay army, near Seringapatam, and is now a pensioner of the Honourable East India Company. For above twelve months he remained without a nose, when he had a new one put on by a man of the brick-maker caste, near Poonah. This operation is not uncommon in India, and has been practised from time immemorial. Two of the medical gentlemen, Mr. Thomas Cruso, and Mr. James Trindlay, of the Bombay Presidency, have seen it performed, as follows:—A thin plate of wax is fitted to the stump of the nose, so as to make a nose of a good appearance. It is then flattened, and laid on the forehead. A line is drawn round the wax, and the operator then dissects off as much skin as it covered, leaving undivided a small slip between the eyes. This slip preserves the circulation till an union has taken place between the new and old parts. The cicatrix of the stump of the nose is next pared off, and immediately behind this raw part an incision is made through the skin, which passes around both alæ, and goes along the upper lip. The skin is now brought down from the forehead, and, being twisted half round, its edge is inserted into this incision, so that a nose is formed with a double hold above, and with its alæ and septum below fixed in the incision. A little terra Japonica is softened with water, and being spread on slips of cloth, five or six of these are placed over each other to secure the joining. No other dressing but this cement is used for four days. It is

then removed, and cloths dipped in ghee (a kind of butter) are applied. The connecting slips of skin are divided about the twenty-fifth day, when a little more dissection is necessary to improve the appearance of the new nose. For five or six days after the operation the patient is made to lie on his back, and on the tenth day bits of soft cloth are put into the nostrils to keep them sufficiently open. This operation is very generally successful. The artificial nose is secure, and looks nearly as well as the natural one; nor is the scar on the forehead very observable after a length of time.'"

A likeness is given of Cowasjee after the restoration of the nose. It gives a favourable, though not exaggerated, impression of the utility of the operation.

Mr. Carpue says:—"I did myself the honour to write to Sir Charles Mallet, who had resided many years in India, and who obligingly confirmed to me the report that this had been a common operation in India from time immemorial; adding, that it had always been performed by the caste of potters or brickmakers, and that, though not invariably, it was usually successful. Mr. James Stuart Hall, a gentleman who was many years in India, assured me that he had seen the operation performed, and that it was of tedious length. From Dr. Barry, of the Indian Service, I learned that he also had seen the operation; that it had occupied an hour and a half, and was performed with an old razor, the edge of which, being continually blunted in the dissection, was every moment reset. Tow was introduced to support the nose; but no attempt to form nostrils, by adding a septum, was made. I am obligingly informed by Major Heitland, of the India Service, that in India several years ago, in the time of Hyder Ali, Mr. Lucas, an English surgeon, was in several instances successful in the operation, which he copied from the Hindoo practitioners."\*

\* Carpue, 1816, page 40.

But, although the letter in "The Gentleman's Magazine" appeared in the most popular periodical of the day, we have no evidence of any surgeon having performed the operation, or any impression on the profession having been made by it, till Mr. Carpue's work appeared in 1816. He gives a complete history of the operation, so satisfactory in every respect, that I should never have thought of giving the present brief historical sketch except that his book is long out of print, and a copy of it hard to be obtained. He relates two successful cases. The first, an officer whose nose had been destroyed by syphilis, the cartilages of the alæ and front of the septum gone, but the nasal bones remaining. The second case also that of an officer, whose nose had been cut off by a sabre; a portion of the right alæ remained, and the operation was therefore to a certain extent partial. Both succeeded very well, and to Carpue certainly belongs the merit of having re-introduced this operation into Europe. Rust and Graeffe, of Berlin, followed in 1818. The latter recommended an instrument which pressed laterally on the new nose, so as to make it prominent and narrow. The celebrated Delpéch, in 1820, operated on his first case, a congenital deficiency of one side of the nose; the operation was consequently partial. He subsequently performed two complete operations. His paper is well worth perusal, as he therein demonstrates the inutility of Graeffe's instrument, as nature, in the process of healing, causes the new nose flap to contract from side to side, and to thicken, so that it becomes narrower and more prominent without the use of any mechanical contrivance. Dieffenbach, Lisfranc, Blandin, and others, performed and wrote on Rhinoplasty. In Scotland and England, the operation has been performed and described by Liston, Syme, Ferguson, Miller, Erichsen, and others. Mr. Curling showed me the photograph of a case operated on by Mr. Ward, of the East London Hospital, and no operation could have succeeded better. It is strange how little has been done in this way in Ireland.

About thirty years ago, the operation was attempted in Dublin, but with so unsatisfactory a termination as to discourage from other attempts. I recollect having seen it when a student. The woman was heartily ashamed of the new feature, and no wonder, as it was a small, round, snubby appendix, changing often in colour, sometimes bright red, at others of a livid white, alternating in appearance between a Kentish and a whiteheart cherry; the temperature was also unequal. But, when the operation is successful, it is certainly a boon of the utmost importance and value to the poor patient. The nose has ever been considered, from peculiarities of shape, size, and form, a fair target for the shafts of wit; but the man who has no nose at all is not only disfigured and humiliated in his own estimation, but is sure of an amount of unfeeling ribaldry from many, and of being an object of repugnance to all. It becomes, therefore, a desirable object to the surgeon, by remedying the deformity, to relieve so much mental distress.

It is needless to follow the example of Carpue, Thompson, and others, in devoting space to support the feasibility of the operation by instances of the union of parts temporarily separated from the body, and afterwards applied to the raw surface from which they had been removed. The fact is sufficiently well established. Fingers, toes, ears, and noses cut away for a time, have thus completely united. Garengeot's\* case is well known, and quite sufficient in the way of proof.

In a quarrel, a soldier had his nose bitten off by a comrade, who spat out the nose into the gutter. M. Galin washed it with warm water, as it was cold, replaced it, and kept it fixed by sticking plaster. Though some time had elapsed, the union next day appeared complete; and on the fourth day, when the dressing was removed, the extremity of the nose had quite united and become cicatrized.

\* Garengeot, "Traité des Operations," vol. iii.

I have met with a somewhat similar case myself. About ten years ago a young man came to the Richmond Hospital in a half drunken state, with the end of the nose separated, and hanging on merely by a shred of skin. Almost immediately before I saw him, he had had a quarrel with a comrade in a public house, who seized him by the nose with his teeth, and, before he could disengage himself, nearly bit it quite off. There had been a great deal of bleeding. I readjusted it carefully, and secured it by a couple of sutures. Union took place throughout, and the marks of the accident were scarcely perceptible.

Now, with regard to the cause of the loss of the organ which we are called on to remedy, I believe the most commonly received opinion among the public is that the mutilation arises from the ravages of syphilis; it is the prevailing belief now, and was so more than a hundred years ago. In an amusing paper on the Taliacotian operation, in "The Tatler," December 7, 1710, the frequent loss of noses is accounted for by the following fable:—"Mars, the god of war, having served during the siege of Naples in the shape of a French colonel, received a visit one night from Venus, the goddess of love, who had always been his professed mistress and admirer. The result was a little Cupid. This boy, whether it was by reason of any bad food that his father had eaten during the siege, or any particular malignity in the stars that reigned at his nativity, came into the world with a very sickly look and crazy constitution. As soon as he was able to handle his bow, he made discovery of a most perverse disposition. He dipped all his arrows in poison that rotted everything they touched, and, what was more particular, aimed all his shafts at the nose, quite contrary to the practice of his elder brothers, who had made a human heart their butt in all countries and ages. To break him off this rogueish trick, his parents put him to school to Mercury, who did all he could to hinder him from demolishing the noses of mankind; but, in spite of education,



the boy continued very unlucky ; and though his malice was a little softened by good instruction, he would frequently let fly an envenomed arrow, and wound his votaries oftener in the nose than in the heart."

A more matter-of-fact age rejects the fable, but preserves the opinion as strong now as then.

Mr. South, in his notes to Chelius, says—"Though probably not so many rhinoplastic operations at least are performed here as abroad, perhaps for the reason that loss of nose is with us of not very common occurrence, since our syphilitic treatment has been improved."

This popular impression that syphilis is the most common destroyer of the nose, I believe to be unfounded. That it is occasionally there can be no doubt, and the destruction occurs in different ways. Sometimes a secondary phagedenic ulcer will form on the alæ or tip of the nose, and end in the destruction of the cartilages, of the alæ, and the cartilaginous septum, with more or less of the integument. This was the case in the policeman Whelan (observation 8). Or strumo-syphilitic ulceration at a late period commences inside the nose on the membrane of the cartilaginous septum, soon extending to and destroying the cartilage itself, with the adjacent soft parts, and finally extending even to the bones. This ulceration is of a lupoid character. The worst form of strumo-syphilitic disease, and the most unmanageable, begins in the bones of the inside of the nose and their lining membrane: the bony septum, the nasal, ethmoid, and turbinated bones. They become dead, and are separated with horribly fetid discharge and much suffering, both local, constitutional, and mental. In such cases, not unfrequently a perforation is formed from the nose through the hard palate into the mouth, by ulceration of the soft, and caries and necrosis of the bony tissues. This opening is, no doubt, an effort of nature to form a more ready exit for the discharge and any portions of loose bone. Through such a hole in the hard palate I have extracted large

pieces of dead bone, on one occasion the greater part of the box of the ethmoid.

Though this form of the disease has "its broken arch, its ruined wall, and portals foul," the integuments generally escape; but even so, a sufficiently hideous and very characteristic feature remains: the nose quite flat, with a transverse depression across its centre, distorted, puckered, and with contracted but spread out and misshapen nostrils.

In Ireland, in the majority of cases where we are called upon to make a substitute for a lost nose, the destroying agent is lupus. This disease is very common among the scrofulous poor; and, while early and judicious treatment will arrest its course, the ignorant apathy and carelessness of the lower classes, particularly in the country, where it is most common, allow more or less of the organ to be lost before medical assistance is sought. First the alæ, next the cartilaginous septum, and then the remaining fleshy portions fall away before the destructive ulceration; even in some cases the nasal bones are removed.

My hospital experience of the treatment of lupus of the nose is pretty extensive. No single method is suited to all cases; to be effectual, the treatment must be varied according to the circumstances of each case, and the constitutional peculiarities of the patient. Nor in obstinate and tedious cases does it do to continue too long the same medicine. In certain pale leuco-phlegmatic subjects, much benefit follows the temporary use of iron, and prepares the way for other remedies, such as may be supposed to exercise a more specific action on the disease. These are the oxymuriate (bichloride) of mercury in compound tincture of bark, the hydriodate of potash with infusion or decoction of sarsaparilla, or the same salt dissolved in the infusion of the *scrofularia nodosa*, five grains in a wine glass full three times a day; in this combination I have great confidence. Arsenic is a valuable remedy, either Fowler's solution, or, what is better, the arseniate of iron.

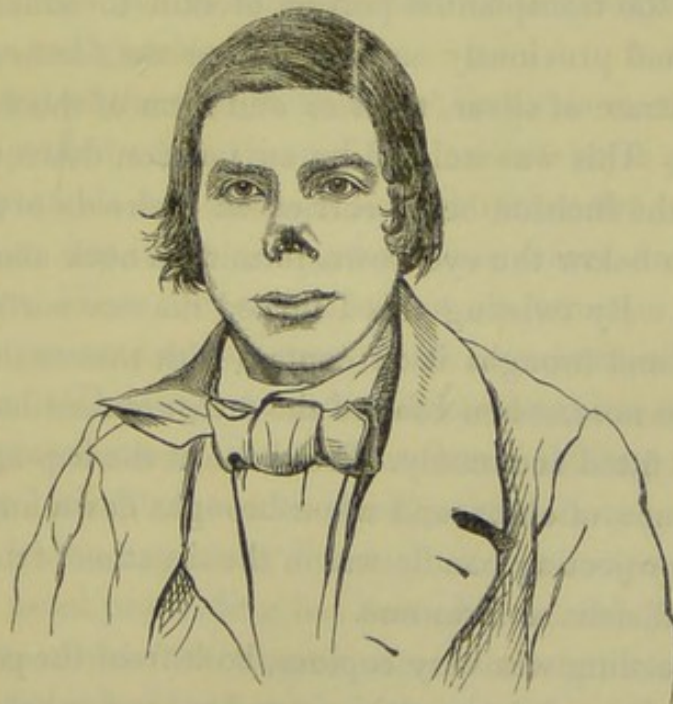
By the use of these medicines, much may be done in arresting the progress of lupus, but not by their use alone; the local is quite as essential a part of the treatment as the constitutional. Indeed, our very first endeavour should be to change the action of the destructive ulceration, which is best accomplished by the application of some powerful caustic. There are many caustics, as the arsenical powder or paste, the chloride of zinc, the butter of antimony, the acid nitrate of mercury, which would appear to be nearly equally effectual in attaining this object. I prefer myself the potassa fusa. It is manageable and effectual, and less painful than the caustics I have named, for the pain it causes soon subsides. It requires usually to be applied several times, as, though the greater part of the ulcer may have assumed a healthy aspect, a portion may still exhibit the specific character and require its re-application.

I could adduce, but that I consider it foreign to the object of this Essay, many cases where these means, combined with good diet, pure air, and exercise, have been successful. But too often the patient applies when the time for remedies has past, and when the nose has been eaten away. The question then presents itself as to the most eligible means of restoring the lost organ. I believe this is best accomplished by the Indian method of operation; and it is with a view of exhibiting its advantages that I have ventured to lay before the Profession in Ireland, where it has been very little adopted, the details of several cases, as they will best exhibit the various forms of mutilation, the modifications occasionally necessary in performing the operation, its complications and after treatment. I have hitherto had the good fortune to have been successful in every case.

CASE I.—A young man, of the name of John Ferguson, came to the hospital with the greater part of the nose destroyed by lupus, at least an inch of the extremity of the organ having been ulcerated away, and the diseased action still going on in the septum. By the local use of the solid nitrate of silver, and the

constitutional effects of the hydriodate of potash and sarsaparilla, the ulceration completely healed, and that red scurfy eruption, so constant an attendant on lupus of the nose, was removed from the adjacent parts of the face. To prevent any relapse, the treatment was persevered in for many weeks; and, as the remains of the mutilated organ offered some encouragement for the attempt, I began to consider whether I could not by a new nose remove the unsightly appearance which presented itself in this case, as it does in other similar ones, giving the face, as I have already said, the aspect of a skull.

The sides of the remains of the nostrils presented sufficiently fleshy edges, and were pretty even, but the septum was a good deal eaten away, so as to offer no central support; the portion of the bridge of the nose which remained appeared too prominent; but still the parts were not in such an unfavourable condition as to prevent a satisfactory result from the operation being hoped for.



The operation I preferred was the Indian method of taking a portion of integument from the forehead. The case was

favourable for this, as the forehead was high enough, the integument thick, and the base of the nose between the eyebrows broad.

The first time fixed for operation, the chloroform caused such excessive vomiting that I thought it best to defer it to another opportunity. On the second occasion there was the same trouble, as, after he had become insensible, and I had pared the edges of the nostrils, he commenced vomiting again; but this time I did not desist, but went on and completed as rapidly as I could all the cutting part of the operation. The steps of the operation were as follows:—I first made a deep incision, about half an inch from the edge, all down the sides of the nostrils, and dissected off the part between this and the rim. A broad border of raw surface was thus obtained on each side. I next made a short straight cut down the centre of the nose, about half an inch from the projecting tip, and then dissected away the angles; and this made a larger bare surface at the top than elsewhere, so as to leave sufficient space for the raw surface of the transplanted portion of skin to adhere and fix itself. I had previously marked out on the forehead, with a piece of nitrate of silver, the size and form of the flap for the new nose. This was isolated by an incision down to the periosteum, the incision being carried on each side of the root of the nose to below the eyebrows, forming a neck about half an inch wide. By twisting this I turned the raw surface of the flap over, and brought it in contact with that at the tip and sides of the nose, when I found the measurement had been so just that it fitted accurately. The shape of the flap approached that of an ace of clubs, and when brought down and applied, the small projecting handle was in the situation of the septum, but not sufficient to form one.

The bleeding was very copious, both from the pared edges of the nostrils and those of the wound in the forehead, particularly the latter. I waited till it had entirely ceased, and then the flap was brought down from the forehead, and carefully applied

over the pared surface of the remains of the nose. They were kept accurately in contact by a few points of suture, two on the right side, three on the left, the last being the side to which the twist of the root of the flap was made. The whole fitted well. The open wound in the forehead was closed at its lower part by sutures, the remainder filled with lint smeared with simple dressing. A little lint and simple dressing were put over the nose.

Saturday, November 29th (fourth day), the dressings were removed: everything looked well; the flap constituting the new nose was warm, and of a good colour, and the edges adherent. Lint dipped in spirit lotion covered with oiled silk was applied.

December 2nd (seventh day), I removed the ligatures everywhere; they had, in fact, begun to eat their way out—the whole edge appeared united, that on the right side presenting a perfect amalgamation of surface, so that the line of union was indistinct: the new nose quite warm and sensitive. I did not take the lint from the forehead wound till some days after; it was healthy and granulating.

At the end of the fifth week everything was most satisfactory, all in perfect union throughout, and the nose presented a most respectable appearance, though rather flat; at first it was too white, but it has now got a better colour, and is warm and sensitive. Were it even left as it is, an immense improvement in his personal appearance would have been effected by the operation. The large wound in the forehead has contracted to a small granular sore, little larger than a shilling.

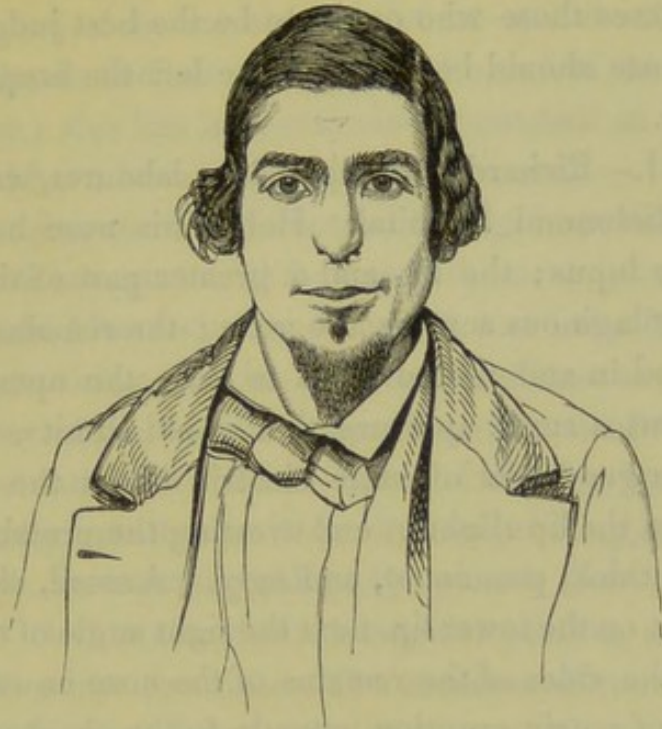
January 13th (the seventh week), circulation being fully established in the new nose, I thought it time to make a septum. The usual proceeding has been, before this part of the operation, to divide the narrow slip at the root of the nose, where the twist had been made in turning down the flap—it appeared to me better to reserve this for the last, as I should thus have the benefit of whatever circulation was carried on at

this part, in bringing about the union of the septum to the place where it was to be inserted. I altered somewhat the operation of making the septum from the upper lip. The general plan has been to make two incisions in the centre, leaving a narrow, straight slip between them: the incisions are carried quite through the prolabium. This slip, connected only at the upper point has the prolabium removed from the tip, and is brought up and fixed by ligature or needle to the surface prepared for it on the inside of the end of the new nose. As the lip in this man was unusually long, I thought it unnecessary to carry the incision through the prolabium; but instead of this, I merely cut a triangular piece sufficiently large, the base adherent above, the apex loose below; the point of this last was squared, turned up, and brought in contact with the pared end of the small projection of the new nose, and secured in this position by a single point of suture; union by the first intention took place. After removal of the ligature on the third day, I perceived that the nostrils were contracting; this was readily arrested by the insertion of two small conical plugs of lint smeared with ointment, which, as he was a handy fellow, he managed very well himself.

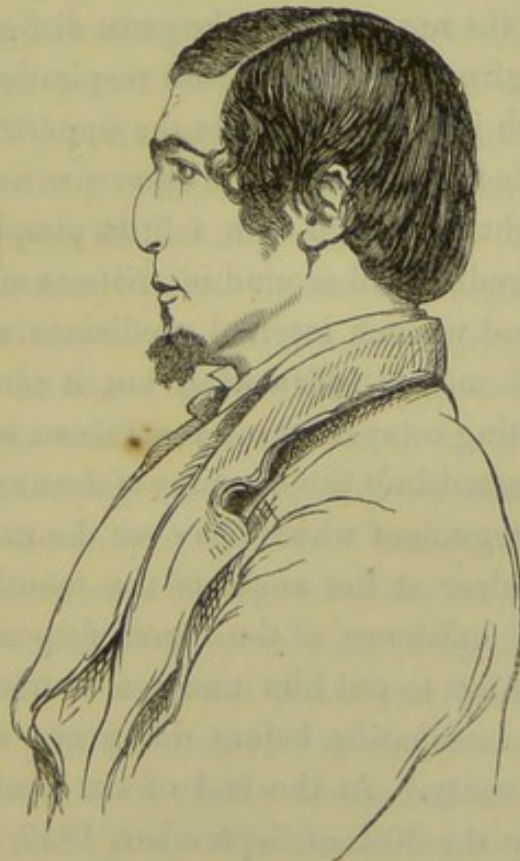
In the eleventh week, the septum being firm, and the sides of the nostrils skinned over, I divided the narrow band at the root of the nose; the end was cut wedge-shaped, and inserted into a deep incision between the eyebrows, and fixed there by a transverse needle; it fortunately united at once.

The woodcuts will best show the form of the new nose, which is perfectly satisfactory to the man and to myself. If the engravings in Carpue's work are referred to, the same tendency to the hook-nosed form will be seen. It appears to arise chiefly from the thick integument that forms the new nose being placed over the bridge of the old one, so as considerably to increase its height, and also from the tip being drawn back by the contraction from the cicatrization of the inside, and perhaps that of the new septum; but we have

no right to be particular when we reflect that it is here a



question of nose or no nose ; and the present, though not per-



fect, is still fleshy, firm, sensitive, and warm ; he can breathe,



blow, and sneeze with it ; and the best proof in its favour is, that it pleases those who ought to be the best judges of what a manly nose should be, for since he left the hospital he has got a wife.

CASE II.—Richard Stark, aged 20, a labourer, was admitted into the Richmond Hospital. Half of his nose has been destroyed by lupus ; the tip and a greater part of the alæ, and all the cartilaginous septum, are gone ; the remains of the alæ have turned in and united so as to close the opening of the nose, all but a small aperture that would admit a large pea. There is a good deal of white cicatrix about the upper lip, drawing up the lip slightly, and everting the prolabium, making the lip thick, prominent, and ugly. A small, clean, round ulcer exists on the lower lip, next the right angle of the mouth ; and from the sides of the remains of the nose on each side, a red patch of scurfy eruption extends to the cheeks for two or three inches.

The state of the nose, besides the great disfigurement, is further distressing from interfering with respiration, as he cannot breathe through it unless he raises the upper rim of the small opening with his finger nail. He is otherwise healthy. The disease began eight years ago with a little pimple on the tip of the nose, with redness all around it. Nitrate of silver, he says, was applied, and various internal medicines administered in the Cork and Limerick Infirmaries, but it continued for five years slowly eating away till three years since, when it stopped. If a probe is passed into the opening of the nose, it can be felt through the integument which lies over the nasal aperture.

The small ulcer at the angle of the mouth was the only evidence of the existence of the lupoid disposition, but quite enough to lead me to put him under a course of hydriodate of potash and sarsaparilla before doing any operation to remedy the deformity. At the end of six weeks it was quite healed ; and on the 30th of September, 1857, I proceeded to operate.

I had marked, the day before, with a piece of nitrate of silver, the line of the incision of the ace-of-clubs-shaped flap of the forehead, and also that round the end of the stump of the old nose ; this last line extended about half an inch from what would have been the border of the nose.

In consequence of the septum having been destroyed in front, but the integument at the end of the nose not completely so, this last, as I have already described, had fallen in, and left so small an opening, that he could scarcely breathe through it. The first part of the operation was the removal of this fallen-in and adherent portion of the skin. I did this by passing a probe-bistoury into the small opening, and slitting horizontally on each side, then cutting obliquely upwards from each end to the centre. I thus removed a triangular portion, and made a large opening into the nose. The incision all round the end of the nose (which I had previously marked out) was then made, and the integument within this line dissected off, so as to leave a broad raw margin round the end of the nose. This, and the previous part of the operation were attended with a very free flow of blood ; and to prevent its running down into the pharynx by the posterior nostrils, as he lay on his back, a piece of sponge was stuffed into the nostril.

The flap was then cut from the forehead, and turned down ; and as the blood flowed freely from the exposed surface, and still more from the edges of the wound, pieces of fuzzy lint and sponge dipped in cold water were applied. When all bleeding had ceased, the flap was brought down over the nose, and, by twisting it round, the raw surface and its edges were adjusted to the incisions round the end of the nasal stump. They fitted most accurately, and were secured by six points of suture : the incision at the lower end of the forehead, just above where the root of the forehead flap had been turned down, was approximated by a needle and a twisted suture, and a point of suture above this. The remaining bare surface on the forehead was dressed with lint, well smeared with simple oint-

ment. The new nose was seen to flap to and fro when he breathed.

The mere operative proceedings only occupied a few minutes, but it required a long time before the bleeding had entirely ceased, altogether about one hour and a quarter. During the operation the patient was under the influence of chloroform. After the first few minutes of inhaling, he gulped two or three times, as if going to be sick, but it went off. But after all was over he vomited up some blackish matter, evidently blood which had been swallowed, and become altered in the stomach.

Fourth day.—He was rather feverish yesterday, and complained of the soreness of his forehead, but the nose looked well; the flap of a natural colour and warmth. I did not remove the dressings over the nose till to-day, when I was happy to find that complete union had taken place on each side, everywhere. I thought it best, however, not to touch the sutures; but I removed the needle at the wound between the eyebrows, and found this part also united; I left the ligature above this, and did not touch the dressing on the forehead, but put a little water dressing over it. There was some plugging of lint in the nose, which I considered would come away looser in a day or two; and I was anxious to disturb as little as possible the newly united parts.

Sixth day.—I took out the ligatures.

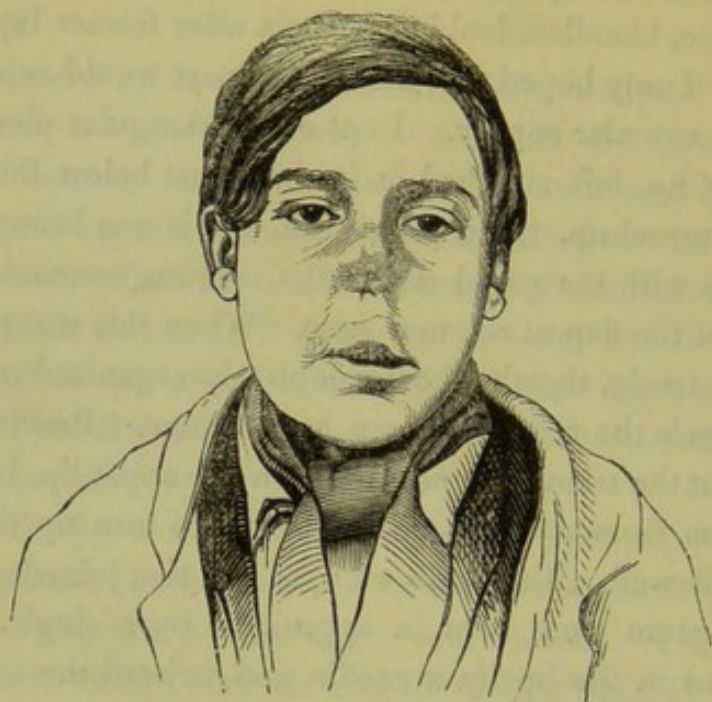
Ninth day.—Everything in a most desirable condition. The line of union on each side perfectly consolidated; the new nose flap of good colour and temperature. The wound in the forehead granulating and filling up rapidly. General health good. Eight weeks after the operation the nose was getting quite natural in appearance, as well as becoming firmer, and scarcely distinguishable in colour from the neighbouring parts; it appeared, therefore, a good time to put in the septum.

The promise of the success of this was not very great, as

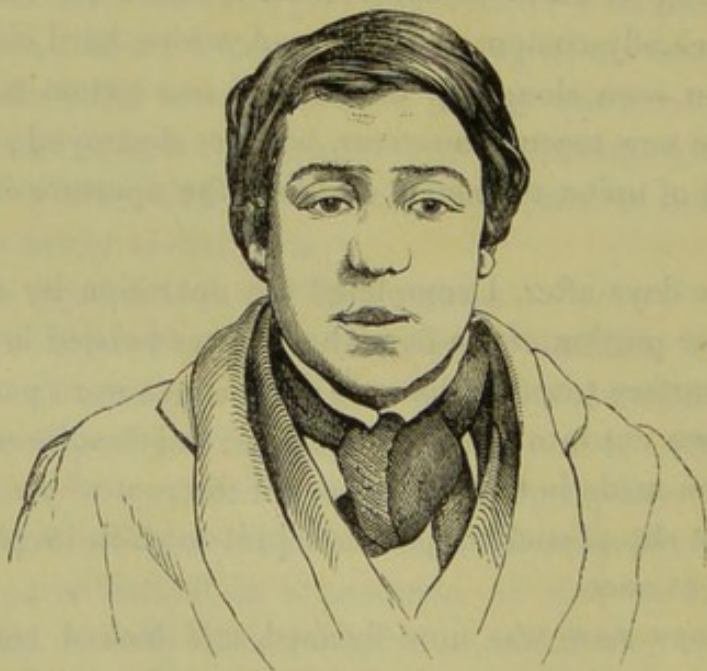
the centre of the lip from which the septum was to be taken was a white, bloodless-looking cicatrix after former lupoid ulceration. I only hoped that the deeper part would supply the necessary vascular supply. I cut out a triangular piece from the upper lip, left attached at its base just below the nose; this was turned up, the point cut off, and it was brought into apposition with the pared end of the septum, connected with the base of the flap of the new nose. When this was pared, it bled very freely, showing how completely organized with new blood-vessels the restored organ had become. Previously to cutting out the triangular portion from the upper lip, I divided the frenum from the gum, to enable me to turn up this new septum-bit well. The fresh ends of the two joined portions of the septum were kept in apposition by a single suture, the wound in the lip by a needle and twisted thread. The wound in the lip, from which the triangular bit was cut, united by the first intention, but not so the septum; as I had anticipated, the vital power was too weak, and it sloughed. In operating in cases of contraction after burns, where the parts are chiefly composed of a glazed, white, hard cicatrix, I have often seen sloughing of more or less extent to result. The entire new septum, however, was not destroyed; a small thin band of union remained, dividing the aperture into two nostrils.

A few days after, I completed the operation by dividing the narrow portion of the flap where it was twisted in turning the raw surface towards the nose; the edges were pared, and the end was cut into a triangular shape, and then inserted into an incision made in the integument of the root of the nose; a transverse slip of sticking-plaster kept it down in its place, and it united at once.

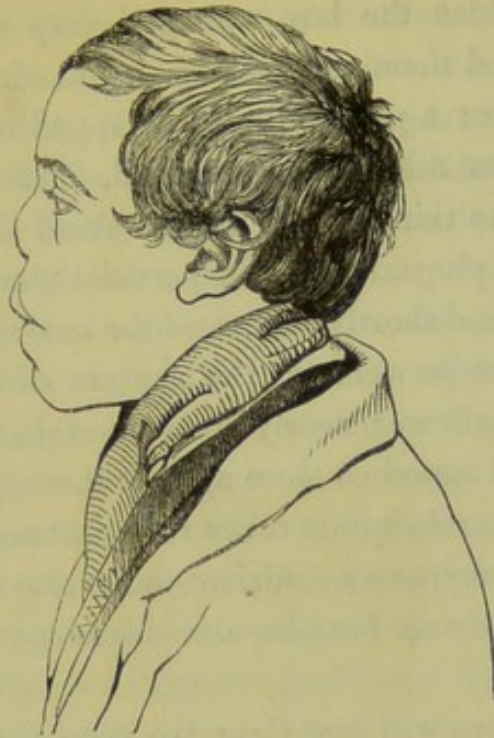
The new nose was now finished, and looked very well; but there was a great tendency to contraction of the nostrils, which became very small, in spite of the insertion of small



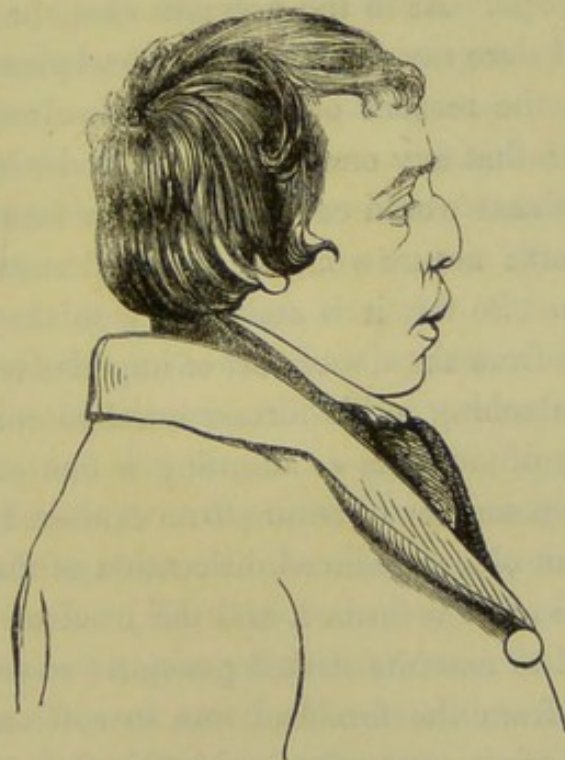
Case of Richard Stark.—From a photograph taken before the operation.



Case of Richard Stark.—From a photograph taken about three months after the operation.



Case of Richard Stark.—From a photograph taken before the operation.



Case of Richard Stark.—From a photograph taken about three months after the operation.

plugs of lint, which the boy managed very well himself: I therefore enlarged them so that they would admit freely about a No. 12 catheter; a piece of quill, wrapped round with lint, was kept in them till they should heal. After a few days I perceived that the thin septum did not stand the pressure between these two plugs, and that superficial ulceration existed, which went on, and shortly destroyed the new septum entirely. It turned out just as well, for the septum of the flap, taken from the forehead, was nearly long enough, and it was so turned back, and rested so close against the upper part of the lip, whence a natural septum takes root, that no one would observe any deficiency, and a sufficient transverse opening exists, through which he can breathe and discharge mucosities by blowing his nose.

The illustrations will best show the state of the patient before the operation, and also the appearance of the new member; the temperature, colour, and consistence, are as satisfactory as the shape. As in the previous case, the profile is very hooked, but I dare say there will be found plenty of admirers of this form, the reasons of which I have already explained. I do not think that any one not acquainted with the circumstances of the case would consider the new feature as the manufacture of art: nature would be believed answerable for any faults of form. So far, it is satisfactory to the poor patient, and frees him from the discomfort of impeded respiration, and the ridicule attaching to his former noseless condition. One fact is worthy of mention, as affording a fine example of the inexhaustible resources of nature to meet altered conditions of parts: as in an old, unreduced dislocation of the humerus or femur a new socket is formed, and the head of the displaced bone changed to meet its altered position; so here, though at first the flap from the forehead was so soft and thin that it moved to and fro in expiration and inspiration, yet after union had been confirmed, the blood-vessels supplied so hard a nu-

trititious material to the new nose, that it became firm and thick, and not very much less consistent than the old. This may reassure those about to undertake the operation.

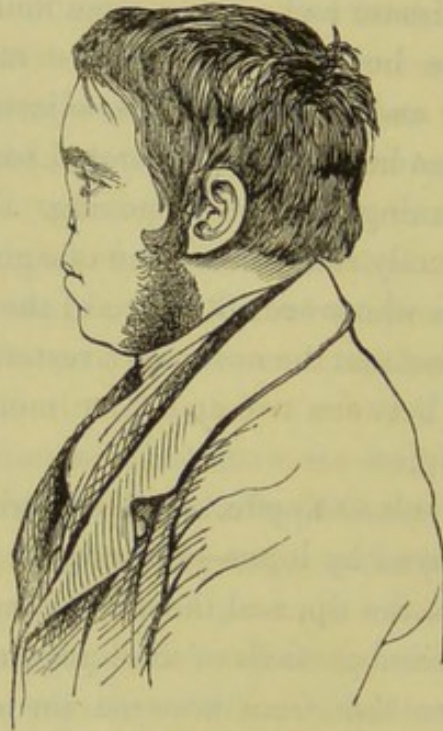
Stark came to the hospital, in consequence of lupus having commenced in the upper lip, about five years after the operation. The disease had existed some months previous to his coming to the hospital. It had also attacked the left angle of the lower end of the new nose, adjacent to the disease in the lip; adhesion between the ulcerated surfaces had taken place, rather lessening the nasal opening. The nose itself, however, was perfectly sound, firm, and of a good temperature, and those students who were not aware of the previous operation did not perceive that the nose was a restored one. He left the hospital after between two and three months, just well of the lupus of the lip.

CASE III.—Denis O’Keeffe, aged 30, admitted with the nose nearly destroyed by lupus—the greater part of the nasal bones, the septum, the tip, and the alæ having been ulcerated away. The cicatrized portions of the integuments of the nose have fallen flat, so that from between the eyes downwards the remains of the nose are on a level with the cheeks. The integument, which has fallen over the nostrils, and closes them, with the exception of a transverse slit at the lower part, presents a shining, reddish, irregular surface from former ulceration; and this extends a little on either side of the face. Some irregular cicatrization, but less marked, is observable between the eyes; and there is a slightly prominent narrow white band of cicatrix at the right rim of this space, extending up between the eyebrows to the forehead, and an inch above the right eyebrow. The skin is shining and cicatrized; and, therefore, from this part of the forehead no flap could be taken to form the new nose. The condition of the nose, independent of deformity, is further distressing by rendering respiration difficult; and the opening is so small, that it be-



comes clogged by mucosities, which are discharged with considerable effort.

The disease began eight months before with a small pimple on the side of the septum.



July 28, 1858.—*Operation.*—The chloroform was unsatisfactory, exciting rather than quieting him. I first removed the cicatrized and puckered integument which covered the nostrils. This I did by passing a strong probe bistoury through the slit at the lower end of the remains of the nose, and cutting out horizontally, on both sides, and then on each side, obliquely upwards to the centre. The triangular portion thus isolated was found adherent beneath to the remains of the septum, from which it had to be detached. Both nostrils were now open; and I could put my finger into each. The blood flowed so freely from the thick divided edges that, to prevent its getting back into the mouth, I stuffed the nostrils with pieces of sponge. I next cut from the centre of the

bridge of the nose, downwards and outwards, deep, and about one third of an inch beyond the edge of the open nostrils; the edges of the incisions were dissected up a little, and a raw space left on each side of about half an inch wide. The bleeding, which was profuse, subsided under pressure with a sponge wet with cold water. The flap was next removed from the forehead, not as usual from the centre, but a little to the left, to avoid the cicatrized portion of the integument, which began in the middle of the forehead, and extended to the right side. In carrying the incisions between the eyebrows I had also to keep from the right side, to avoid the prominent band of cicatrix which there existed. This root of the new nose was broad and thick. A small artery bled so smartly it had to be tied; but the bleeding from the sides and base of the wound, left by the removal of the forehead flap, yielded to cold water and a few small compresses of dry lint. After all bleeding had ceased, the flap was adapted to the raw surface and edges of the old nose, and fitted accurately, with plenty of freedom, not the least on the stretch. It was secured by three sutures of silk on each side, and a piece of sticking plaster across the upper part, to keep the raw surfaces there in close contact; but not too tightly, for fear of strangulating the vascular supply; for if strong pressure with the finger was applied, the whole flap became pale. The lower part of the gaping wound of the forehead was brought in contact by a needle and twisted suture; but not as low as usual, for fear of the effects of pressure on the band of cicatrix. The rest of this wound was dressed with pledgets of lint smeared with ointment. A long pledget of lint, dipped in oil, was put under the flap of the new nose.

Second day.—Doing well; the new nose quite warm; only complains of soreness of the forehead and difficulty of respiration, from the closure of the nostrils with lint, which I had had to stuff them with, as bleeding began from the edges when I withdrew the pieces of sponge.

Third day.—Complains much of pain in the forehead and soreness at the lower part, between the eyebrows and a little above it. I found this part swollen and red, and the needle pressing into it. I therefore withdrew the needle, rotating it and using careful traction, so as not to disturb the adhesions, did any exist.

Fifth day.—The parts were very uncomfortable, with a hot, sore feel of the forehead. The dressings were all removed. Adhesion had taken place all along the line of the new nose at each side; also between the eyebrows, where the parts had been brought together by the needle and twisted suture. The open wound of the forehead was greenish on the surface, and no sign of granulation; but the edges were not unusually inflamed, and the whole contracted in size. A soft bread-and-water poultice. The plugs of lint were removed from under the flap of the new nose and from the nostrils. A fresh piece was put under the flap.

Sixth day.—When the poultice was removed, the forehead wound was red and granulating. The six ligatures were taken out, the adhesion of the edges of the wounds being perfect. General health and appetite good.

Twenty-third day.—As far as union and vitality, the case has done very well; but, from the destruction of all the nasal bones, and the septum in great part, the flap lies too flat; and about one third from the bottom of the new nose there is a transverse depression, marring the outline of the nose. There is a tendency also to too close union between the inside of the nasal flap and the raw surface of the septum and the edges of the nostrils. This not only causes the depression I have mentioned, but interferes with the freedom of respiration. I therefore divided the adhesions, and plugged up the space very well, and very high, with lint. I found this operation of use; the transverse depression considerably lessened. After taking away the plug of lint, I replaced it with a triangular piece of horn, fashioned to the shape of the part, being outwardly

convex, and with two small holes for strings to keep it secure. These strings, when the piece of horn was pushed up as high as it would go, were carried round the head above the ears, and fastened at the occiput. He liked it better than plugging with lint, and could breathe quite easily.

In the seventh week I divided the connecting slip at the root of the nose, and cut a bed for it, in which, after the edges had been pared, it was placed, and secured by sutures. It united at once by the first intention, except at the very tip. To show how well the new nose had been supplied by blood at this situation, directly I divided the slip a vessel as large as the labial spirted into my face.

During the latter period of healing I put first two pieces of sponge, and afterwards two pieces of large catheter, in the nostrils to ensure their openings.

The eleventh week he went home.

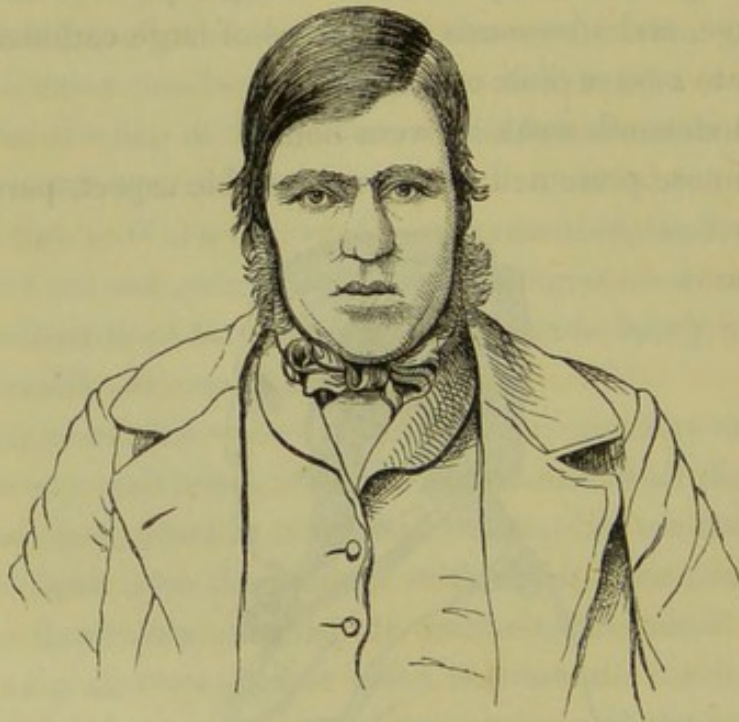
The nose presented a very respectable aspect, particularly



in front. It was too flat in profile. At the lower third there is a tendency to the turn-up or pug-nose form. I found that

this was increased by raising the end of the nose, so I determined not to put a septum. It would, moreover, not have improved the appearance, the centre small projecting piece of the flap having turned in so as to present the character of a short septum, with the openings of the nostrils on either side sufficiently large and free for him to breathe through perfectly. He says he has the natural feel of a nose, and *can smell well*, which he could not do before the operation, probably because respiration through the mutilated nose was so imperfect.

The flesh also of the new organ is of a good colour, a little paler, perhaps, than usual, of the natural temperature, and of



firm consistence, offering in this respect another confirmation of the curious physiological fact, of the nose-supporting vessels having deposited in the new nose a material approaching that of the natural organ, and thus turned a soft loose flap, as it came from the skin of the forehead into a firm fleshy structure, not far removed from the consistence of the real nose; another reason is no doubt the contraction and necessary con-

solidation of the part. Altogether, therefore, the operation has succeeded very well in improving his appearance, and by facilitating nasal respiration, and restoring the sense of smell, added materially to his comfort.

Two years and five months after I received a satisfactory letter from O'Keeffe:—"If you were to see me now, you would scarcely know me, as I am the surprise of all who saw me before I had the good fortune of becoming a patient of yours."

CASE IV.—Thomas Taylor, aged 14, admitted into the Richmond Hospital, October 28th, 1858, with considerable deformity and diminution of the nose, from caries and necrosis of the osseous portion of the organ. Nearly two years before, he began to suffer from a discharge from the nose, and after a time a small piece of bone came away, which was followed by the discharge of several more pieces, with an increased flow of matter, but little pain, except from one large piece, which hurt him severely, cutting the edges of the nostril, and causing a good deal of bleeding.

Last May he perceived a discharge from the palate; a hole came there, and finally a loose bit of bone was felt and pulled away; it was long and thin. The bony and cartilaginous supports having been destroyed, the shape of the nose is gone; it is quite flat to the face. The tip of the nose is represented by a small pale papilla in the centre, with deep ridges on each side, particularly the left, where the soft part of the nose is, as it were, folded to that side. These soft parts, however, with the lateral cartilages, are healthy looking. Under the papilla in the centre is an opening into the nose, representing, as it were, a single central nostril; through this there was a little yellow discharge, but no diseased bone internally was discoverable. There was a hole in the hard palate.

He was a delicate looking little fellow, with a head disproportionately large for his neck.

It was a very unfavourable case for operation, as the ab-

sence of the nasal bones and any portion of the cartilaginous septum deprived me of support for a flap; but both the boy, who was very intelligent, and his mother, were anxious that something should be done, I therefore reluctantly consented. I resolved to make the central papilla of the old nose a support for the flap of the new one; it was the only part I could use for this purpose, from the depressed, wrinkled, and irregular surface of the other soft parts left of the old nose.

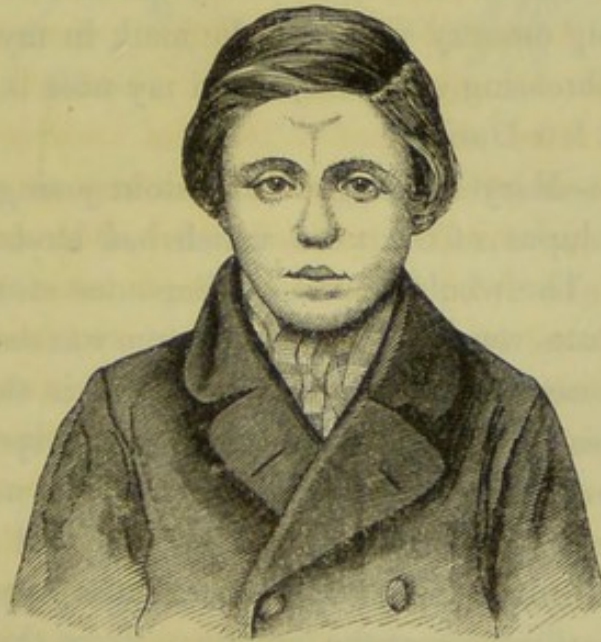
March 10th, 1859.—I operated in the usual way, except that from the inside of the upper third of the lateral incisions I carried obliquely down on each side two incisions, which met at the lower part of the central papilla, so as to isolate a triangular piece of the integument in the centre, which, being removed, left a more extended raw surface for the flap from the forehead to rest upon. When this was turned over, it was found to fit accurately down the sides, leaving the centre loose and unstretched, flapping slightly to and fro with inspiration and expiration. Three ligatures were put in on each side, the two lower of silk, the upper of silver wire, fastened by perforated shot. A strip of lint, wet with oil, was gently put up the nose at the lower part of the flap. Across the upper part of the flap of the new nose a piece of sticking plaster was drawn, so as to press the two raw surfaces in contact there close together. Before I settled the flap, I dressed the wound on the forehead from which it had been taken, to lessen the quantity of blood lost, as it bled freely. The lower and narrower end of this wound I brought into apposition by a needle and twisted suture, and above this with a single suture. The remaining open part was dressed from the bottom by pledgets of lint smeared with simple ointment. Waiting for the hemorrhage and also the vomiting from the chloroform to cease before the parts were arranged, rendered the operation tedious. Even after he was put to bed he vomited, but happily without disturbing the dressings.

Third day.—Union has taken place along the sides, except

in one spot on the left. The new nose looks remarkably well, and his appearance is already improved by it.



Fourth day.—As the union appeared everywhere firm (except at the spot already mentioned), I removed all the



ligatures. It was remarkable how little irritation existed where the silver wire ligatures were. There was a strong contrast in their favour.



Seven weeks after the operation the union was everywhere complete, and the new nose confirmed in its vascular supply, firm, and full of vitality. I divided the root of connexion, pared its edges, and fixed it in an incision made to receive it in the soft parts at the root of the nose. It was fastened by two sutures; one side united by the first, the other by the second, intention. Some weeks after I tried to form a septum from the upper lip, and united it to the projection at the lower end of the flap of the new nose (left for the purpose), by silver ligature. He complained a good deal when the needle perforated the end of the new nose, showing its sensibility. The new septum united for a few days, and then shrivelled away; and, as it did not seem essential to the appearance of the nose, I thought it best to make no further attempt to make one.

The woodcuts will show the extent of the destruction of the nose, and consequent great deformity; and the improvement in his appearance by the restoration.

I got a letter from Taylor two years afterwards, saying, "I am getting on very well, and the mark in my forehead is gradually decreasing every day; and my nose is much better than when I left Dublin."

CASE V.—Mary Neil, aged 18, a stout young woman, admitted with lupus of the nose, which had already destroyed that organ. The whole of the cartilaginous structures, both alæ and septum, were gone. The septum was destroyed even within the nose, and there is still ulceration in the remains of it. The sides have cicatrized, except at one spot within the lateral pillar of the nose; but the ulceration is not extensive. The left nostril is contracted by adhesions, and is one third less than the other. The right nostril also appears a little lessened by adhesions at the bottom. From this cause, and the swelling of the remains of the septum round the ulcer, the passages of the nose are considerably diminished—an instinctive provision of nature (whose similar operations the sur-

geon has so often to admire) to make up for the destruction of those parts which covered and protected the interior of the organ of smell. There is a belt of that deep scurfy redness across the bridge of the nose, so common in these cases; it extends to the cheeks, and terminates in an ulcerated margin—the ulcers small, superficial, and yellow, of a semilunar shape, the outer edge sharp and distinct, and some are covered with a greenish scab.



Taken altogether, the complete destruction of the two lower thirds of the nose flat to the face, the exposure of the interior, the red, scurfy, ulcerated patch over the nose and cheeks, constituted a repulsive deformity.

She was ordered an ounce of the decoction of *scrophularia nodosa*, with five grains of the hydriodate of potash, three times a day. The ulcerated parts were touched with the *potassa fusa*.

But, in spite of this and other treatment, the ulceration of the roof of the nose proved very obstinate, and it was only some months after admission that I could operate. I allowed her to remain two months well before I did so, and then her health was excellent.

December 5th, 1860.—I need not dwell on the steps of the operation, which presented nothing unusual, except that, after the stump of the nose had been made raw, the bleeding was very free, being kept up chiefly by a small artery in the lower left angle, which required strong continued compression with a cold wet sponge to stop it, as I was anxious to avoid ligature. The forehead wound bled also very smartly, but was quickly restrained by iced water. Indeed, with the exception of the small artery, the hemorrhage in this case, though violent, was more rapidly checked by this method than usual. Six silver wire sutures were used to secure the nose flap.

December 8th (third day).—Has gone on well, only occasionally slightly hysterical. The union of the new nose appeared firm and complete—the nose itself warm, and natural



in colour. The wound also between the eyebrows had united; so I removed the two needles and twisted suture there. The silver sutures were removed a few days after; and in about a month the connecting slip was divided, pared, and put into a bed prepared for it. Union by the first intention took place. In no case had I less trouble than in this one. Even in the

third week (December 28th) the nose looked very natural; and she remarked, that "she saw that day what she had not seen for ten years, *the shadow of her nose on the wall.*"

The woodcut shows how great was the deformity prior to the operation.

CASE VI.—April 2nd, 1862.—I operated on Winifred Byrne. She was a short, stout young woman, the lower half of whose nose had been destroyed by lupus. The cartilaginous septum was gone, the tip, and the alæ; the cicatrized edges white and hard. The destruction had stopped at the bony



septum, which is entire. The cicatrized edges were white and hard; but the bridge of the nose, and extending across to the cheeks on either side, was red and rather scurfy. Destructive ulceration was going on inside the nose, on the remains of the septum, and inside the tip; but, under varied treatment, rendered difficult by extreme irritability of stomach, and by occasionally sending her to the country, I managed to heal the ulceration, and restore her to good general health. There were few circumstances in the operation worth detailing at length. The chloroform, which acted very well in saving suffering, made her stomach sick; but, in consequence of the

precaution of no food having been taken for two or three hours previous to the operation, it caused little trouble or delay. Time was also saved by using iced water to restrain the hemorrhage. The flap, when turned down, fitted well. I could not bring the open gap left by the flap as close as usual, but dressed it with lint and spermaceti ointment, and it healed up well. When making the flap incisions at each side of the root of the nose between the eyebrows, I found some difficulty in making them even, in consequence of her wrinkling this part up so much while the edge of the knife passed along it, although senseless from chloroform. Three ligatures



were required on the right, and four on the left side. The lower ligatures were silver wire, the upper silk—which last I used in consequence of their more ready introduction. The wound nearly entirely united by the first intention. I did not remove the silver ligatures till the eighth day.

April 30th.—The twenty-eighth day I divided the root of the flap, pared the edges, and fixed it, in a bed prepared for it, by silver wire sutures.

May 7th.—This united by first intention. The nose is getting firm and natural-looking. The centre bit retracted, and looks like a septum.

May 10th.—She is very proud of the nose, and happy in walking about without a veil, which she always previously used. Her attention to personal appearance is shown by her now wearing a pair of gold ear-rings. She was very anxious to show the nose to her friends, so I let her go home for a week.



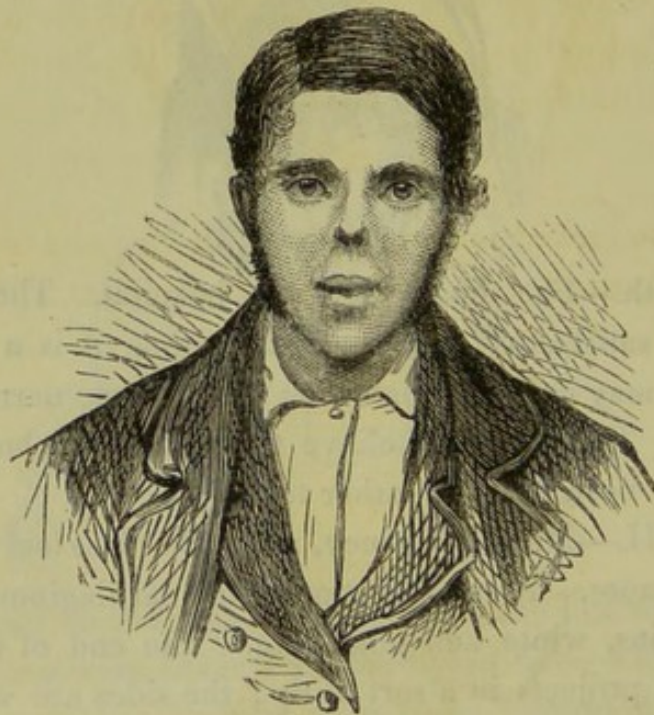
June 7th.—She finally left the hospital. The nose in every way satisfactory, except that, I think, it is a little too broad. It may contract somewhat and become narrower, but not much. The reason I believe to be, that the bed I made for the new nose flap was rather too wide.

CASE VII.—Michael Cooney, aged 20. Has lost the lower half of the nose. A small portion of the cartilaginous septum alone remains, white and glistening. The end of the mutilated organ projects in a sort of tip; the sides are white and cicatrized-looking. Ten years ago he felt a stoppage in the nose, soon followed by swelling, redness, ulceration, and scabs, the ulceration finally destroying a large portion of the nose. He was admitted under the care of my colleague, Mr. Smith, whose treatment arrested the further progress of the disease, and by whom he was transferred to me for operation.

October 4th, 1862.—He was put under chloroform, and the nose restored by the method already so frequently de-

scribed. The operation was tedious, from the persistence of hemorrhage from one or two points; iced water and the application of ice itself were found useful in checking the general bleeding; but one small vessel was so obstinate, that I seized it with the points of a fine forceps, and arrested the hemorrhage from it by torsion.

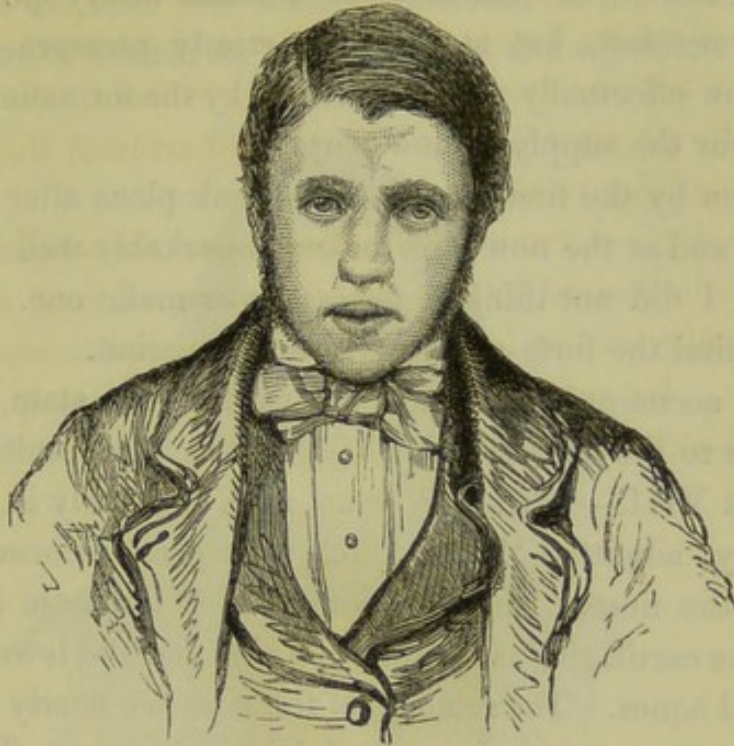
Fifth day.—I removed the dressings; the whole wounds appear to be united by the first intention. I took away the upper needle on the forehead, and the thread twisted round the other. He suffered no pain, and wished to get up, which I allowed him to do.



Sixth day.—I took out the lower needle from the forehead; I also removed from under the new nose the piece of lint smeared with ointment, that had been placed there as a support.

Seventh day.—Removed all the ligatures but the one on the lower end of the right side of the nose. The whole edges have united by the first intention—the union so per-

fect between the eyebrows that the line is scarcely perceptible.



The new nose looked remarkably well, altering and improving the whole physiognomy. His health is excellent.



Thirty-fourth day.—I divided the neck of the flap, pared



and pointed it, and fixed it in a bed made for it at the root of the old nose. In this division a small artery poured out blood very fast, but stopped on steady pressure—another proof how effectually nature provides by the formation of new vessels for the supply of new parts.

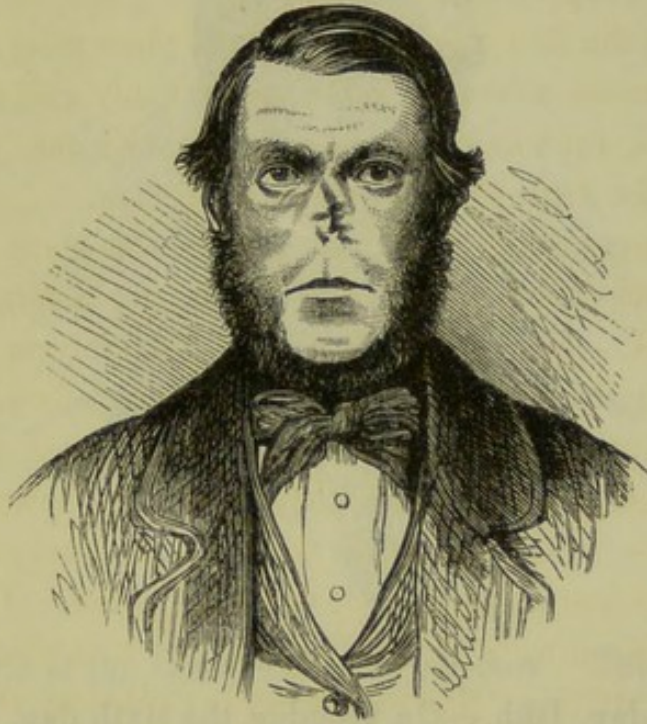
Union by the first intention also took place after this operation; and as the new nose looked remarkably well without a septum, I did not think it necessary to make one. He left the hospital the forty-sixth day after admission.

The accompanying woodcuts exhibit the state of parts previous to the operation, and the satisfactory results.

CASE VIII.—Patrick Whelan, aged 35, lately in the constabulary, admitted March, 1862, with great deformity from loss of the nose. The anterior part of the nose is nearly gone, the cartilaginous septum, the alæ, and the lower part of the nasal bones. The remains of the nose are nearly quite flat to the face, except at the root of the nasal bones. The opening is represented by a narrow vertical slit that would admit the edge of a shilling; this narrowing is caused by the falling in and contraction of the remains of the alæ. Of the cartilaginous septum only a small portion exists, discernible when the edges of the opening are held asunder. Besides the great deformity of the mutilation, he is annoyed when speaking by the necessity of holding the edges of the slit open, as otherwise he does not breathe freely, nor is his voice sufficiently strong; his respiration at other times is not impeded, the lateral flaps moving to and fro in inspiration and expiration. A slight superficial ulceration exists on the remains of the septum, but this is all the disease at present apparent. When he was admitted, six or seven weeks since, there was redness and swelling at the edge of the bridge of the nose, and a deep fissure-like ulcer, transversely, where the nose and upper lip join.

So long ago as 1852, he contracted a chancre, for which he got mercury to salivation, and the sore healed in two months. Since then he has suffered occasionally from pains

in the knees and periosteal pains at the tips of the shoulders. A year ago the nose first became ulcerated on the inside, the ulcer gradually destroying the soft parts and a portion of the



bones. He was in consequence discharged from the constabulary.

He was under treatment for a long time before I could operate. First for osteitis and periostitis; one small node formed exactly in the centre of the forehead, whence the flap would have to be taken, besides others on the ribs and sternum. Then, when this disease of the bones and periosteum was cured, he became affected with pleuritis, with effusion in the lower part of the right pleura. When he had recovered from this I sent him to the seaside for a while, from whence he returned so well, that June 3rd, 1863, I performed the operation. I was careful to make the raw bed for the new nose flap as narrow as possible, while the flap from the forehead was of a good size. The nose was carefully approximated, and the edges kept together by four sutures on the

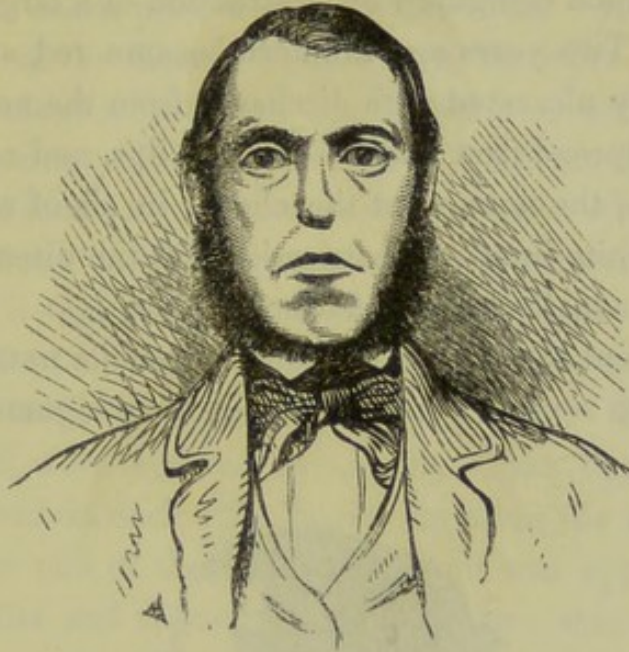
left, and three on the right side, beginning from the bottom. I used fine thread for the sutures.



Wednesday, 10th.—On Monday, the sixth day, I removed the needles and four of the upper sutures. Yesterday the left lowest ligature, to-day the right. The whole of the edges had united by the first intention, and on each side presented two clean even lines. The new nose looks very well, altering for the better, most remarkably, the whole expression of the face. The forehead wound granulating healthily, the lower part between the eyebrows scarcely showed the line of union. I had found the introduction of silver wire ligatures troublesome, and consequently painful; for this reason, in this case I used fine thread, which exceeded my expectation in the nearly total absence of all irritation. Indeed, on the sixth day, so little inflammation surrounded them, that it was not easy to say where they were.

July 11th.—Thirty-eighth day.—I divided the root of the new nose, and treated it as usual. Union by the first intention followed. After this the nose looked remarkably well,

firm, and fleshy, and a good shape, being sufficiently promi-



nent in spite of the absence of bony support. The only draw-



back was, that, as I had not removed the lateral flaps of the old

nose, he could not sniff up well. I removed these, and he could sniff up quite well after.

CASE IX.—Cornelius Maher, aged 45, a healthy-looking man, but much disfigured by destruction of a large portion of the nose. Two years ago the nose became red and swollen, and it finally ulcerated with discharge from the nostrils. The ulceration spread from the nose to the lips, and up along the right side of the nose, next the cheek, in all of which places there are white lines of cicatrization; as the disease went on, the nose gradually became flatter.

At present the nose is flat to the face, the nasal bones and cartilaginous septum being gone, but the integument remains,



generally healthy-looking, though rather puckered at the lower part, with a slight slit-like depression a little to the left of the centre. A small portion of the lowest part of the septum remains, like a thin cord of flesh. The right side of the mutilated nose is on a plane below that of the left, in consequence of the nasal ridge of the maxillary bone having been destroyed.

The inside of the nose now appears free from disease. It is twenty years since he had a chancre and two buboes, followed by secondary ulcers over the body. He was cured by about two dozen pills, which salivated him. He never had a symptom of the disease since. It is therefore probable that the destruction of the nose was purely from scrofulous lupus.

Wednesday, July 15th, 1863.—I operated in the usual way; but found it hard to make the raw bed for the new nose as narrow as desirable, by reason of the cicatrix on the right side, and a slightly elevated ridge beyond it. There was a good deal of bleeding from the cut surface of the old nose, from the forehead wound, and the flap itself. The parts fitted well, and were secured *in situ* by eight ligatures of fine thread, four on each side, beginning from the inferior angle. The lower end of the forehead wound was approximated by two needles and twisted suture; the two side angles of the forehead wound and that of the centre, where the septum piece was removed, were brought together by thread sutures, so that the gap was considerably lessened.

He did not feel weak after the operation, but walked from the table to his ward.

Thursday, 16th.—Some rather smart bleeding from under the flap; it was restrained by cold water.

July 25th.—On this day, the tenth, the last ligature was removed; the wound all united, and the general appearance much improved. About a month after I divided the root and arranged it, and union took place at once. The previous woodcut shows the great deformity previous to the operation, and the present one the good result after it. From the total absence of nasal bones in both these last cases, the irregular cicatrization in this case, and the somewhat advanced age of the patient, and the great delicacy of Whelan, I approached the operation in each case not very sanguine as to its success, but I do not think it possible, under the circumstances, that the terminations could have been more favourable—the new noses in both being prominent, of good size

and colour, and improving the appearance of both the men beyond expectation.



The next case differs from the foregoing. The nose was amputated partially for malignant disease, and subsequently restored by operation.

CASE X.—A little man, of the name of Thomas Sherrigan, 58 years of age, was admitted into No. 5 ward, January 31st, 1860, with a cancerous ulcer on the tip of the nose. It began two years before with a little black wart on the end of the nose. He did not mind it till about four or five months since, when it had become so large and had ulcerated (the ulcer covered with a horny scab), that he came to the hospital, and was admitted. The disease was then entirely destroyed by Mr. Hutton with potassa fusa, and he left the hospital some time after with the part healed. But he had been out a very short time when it broke forth again.

There is now a large ulcer on the end of the nose, the size of a crown piece, encroaching on each side over part of the ala. It occupies about the lower third of the nose. It is

evidently of a malignant nature, circular, with a raised round white scirrhous border, the centre soft, of various shades of grey and brown, but no granulations apparent. It was very tender, and he suffered from darting pains in it of much severity. He did not appear otherwise unhealthy, but was very anxious and depressed, particularly as the progress of the disease had been very rapid.

The size of this ulcerated wart was so large, and so deeply seated in the part, that it appeared to me clearly a case in which caustic was not likely to succeed in destroying it so entirely as to lead to a radical cure. Besides, in its earlier state, when much smaller, my colleague, Mr. Hutton, had tried this means, and the part was scarcely healed when it broke out again. It was possible, from its situation, to cut it off completely, but that this might be effectual a good portion of the nose must be sacrificed; the greater portion of the right ala, somewhat less of the left, and the whole tip must go. After the removal, therefore, the nose would remain in a mutilated state, and consequently one of much disfigurement. But this sacrifice, great as it was, became necessary to save life, for the disease would surely kill him if left alone. The deformity would even be less than its present condition. We sacrifice a leg or an arm to preserve life; why not a nose? There were no diseased glands to forbid the operation. These facts were fairly stated to the patient, and he willingly consented to it.

Wednesday, February 8th.—Chloroform was administered; but, as insensibility was impending, the pulse became so alarmingly weak that it had to be discontinued; the operation, therefore, was performed in that troublesome state, midway between insensibility and sensibility. I first made an incision on each side of the tumour, beginning from a point above on the bridge of the nose, and going through the skin only, marking out the incisions necessary to isolate the tumour; the incisions through the cartilages and septum were com-



pleted with scissors, and thus the ulcer tumour and its base were removed, leaving the remains of the nose quite sound. The white cartilage of the septum projected along the centre line of incision, the mucous membrane covering it on both sides having retracted a little. I cut it down to the level of the edge of the mucous membrane, obliquely on the left side, so as to meet accurately the edge of the left ala nasi, a greater part of which remained. The edges brought together were kept so by needles, and twisted suture; the opening of the nose, therefore, on that side was closed, and looked very well. The apposition of the edges by the needles and twisted sutures also stopped some smart hemorrhage, which on the other open side was arrested by a compress.

At an early period of the operation I stuffed the nares with cotton, which prevented in a great measure any blood flowing back into the fauces.

February 20th.—He has gone on favourably; the twisted suture was removed the second day, the needles on the third, when the parts were found to have united by the first intention, and the left side of the nose look remarkably well. The right side is open, but I look to considerable contraction after a time. Even now the deformity is less than I had anticipated.

April 29th.—I allowed nearly three months to elapse before doing anything to restore the deficiency on the right side of the nose, because I was anxious, before subjecting the poor man to any further operative proceedings, to see if, as so often happens, the cicatrix would exhibit any indication of a return of the cancer. Happily there was no sign of this, and the man became impatient to have the deformity rectified. The plate sufficiently explains the state he was in,—the left half looking natural, but flat; the right half gone, so as to leave the interior of the nose open, with a small portion of the ala nasi remaining. I measured with a piece of leather the size of integument I should want to fill up the gap. I had at first

thought to get sufficient by dissecting up the integument from the neighbouring cheek, but I gave this up, and removed the flap in the usual manner from the forehead. This was turned down, and applied to the raw surface already made at the edges of the gaping nostril. It fitted accurately, and was secured by six sutures, three on each side, beginning from below. A few transverse pieces of sticking-plaster were applied to press it into its bed. The wide wound in the forehead, as I had made it nearly a perfect oval, was brought together by needles and twisted suture, and happily formed a single line of union. A small piece of lint was gently stuffed under the new nasal flap. Though the bleeding was smart, it was readily restrained by cold water.

May 3rd.—Sixth day.—All the ligatures were removed from the nose, as the flap was completely united on both sides. The appearance is satisfactory.

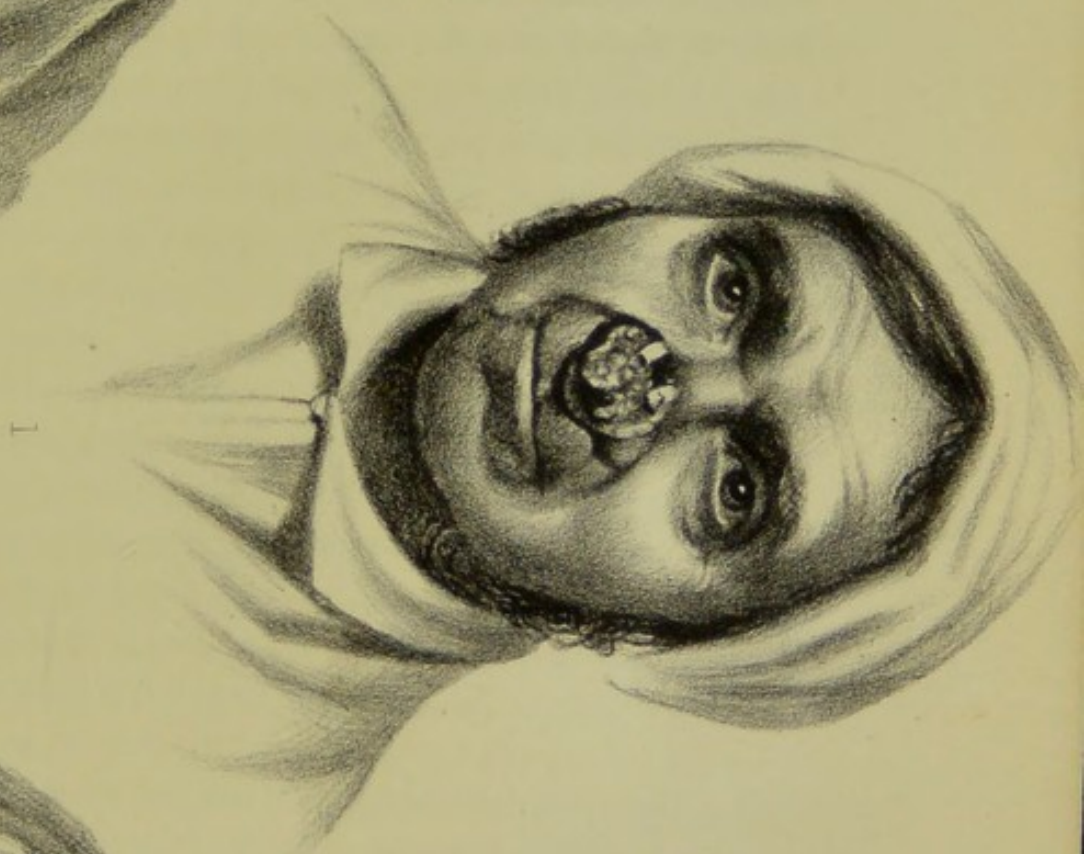
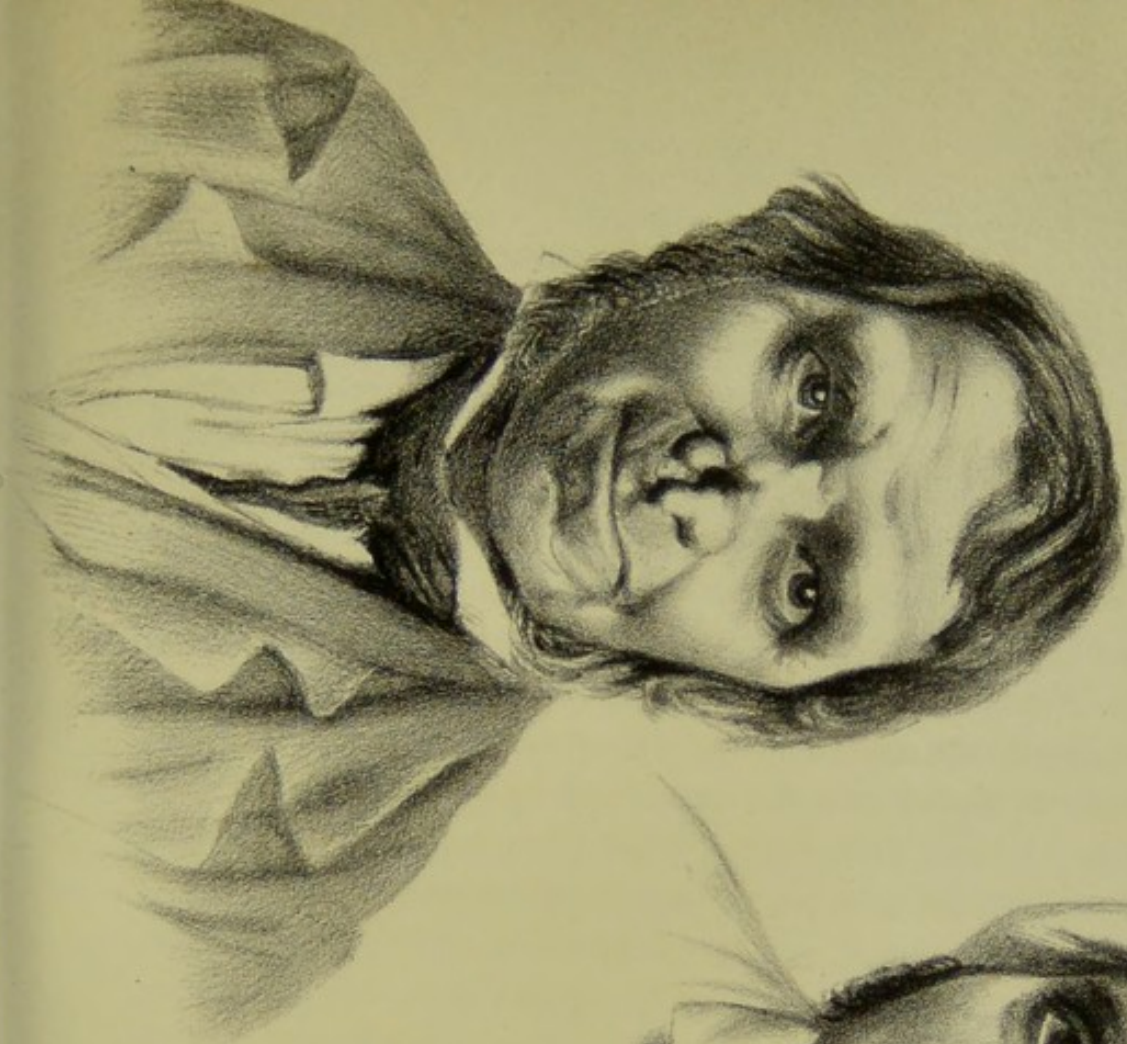
May 14th.—Seventeenth day.—One small portion of the forehead wound alone remains unhealed. The union everywhere is perfect; at the lower part of the forehead the line of union is scarcely observable. To make the nostril complete, I had to remove a small semicircular piece; the bleeding was very smart, showing how completely the flap of the new portion of the nose had become incorporated with the old parts, and how fully supplied with blood-vessels. A still more striking fact unfortunately showed itself a few weeks after as to the identification of structure, in the appearance of a small malignant fungous tumour of a red colour, and the size of a large pea, which grew from the inside of the new nose flap at its lower part, which obstructed the nostril so as to lead the man to draw my attention to it. I cut it off with the base from which it sprung, with a blunt pointed bistoury, and he had no further trouble from this cause. This complete identification of the transplanted portion of skin, as shown by the disposition to malignant action, is very curious. He left the hospital well.

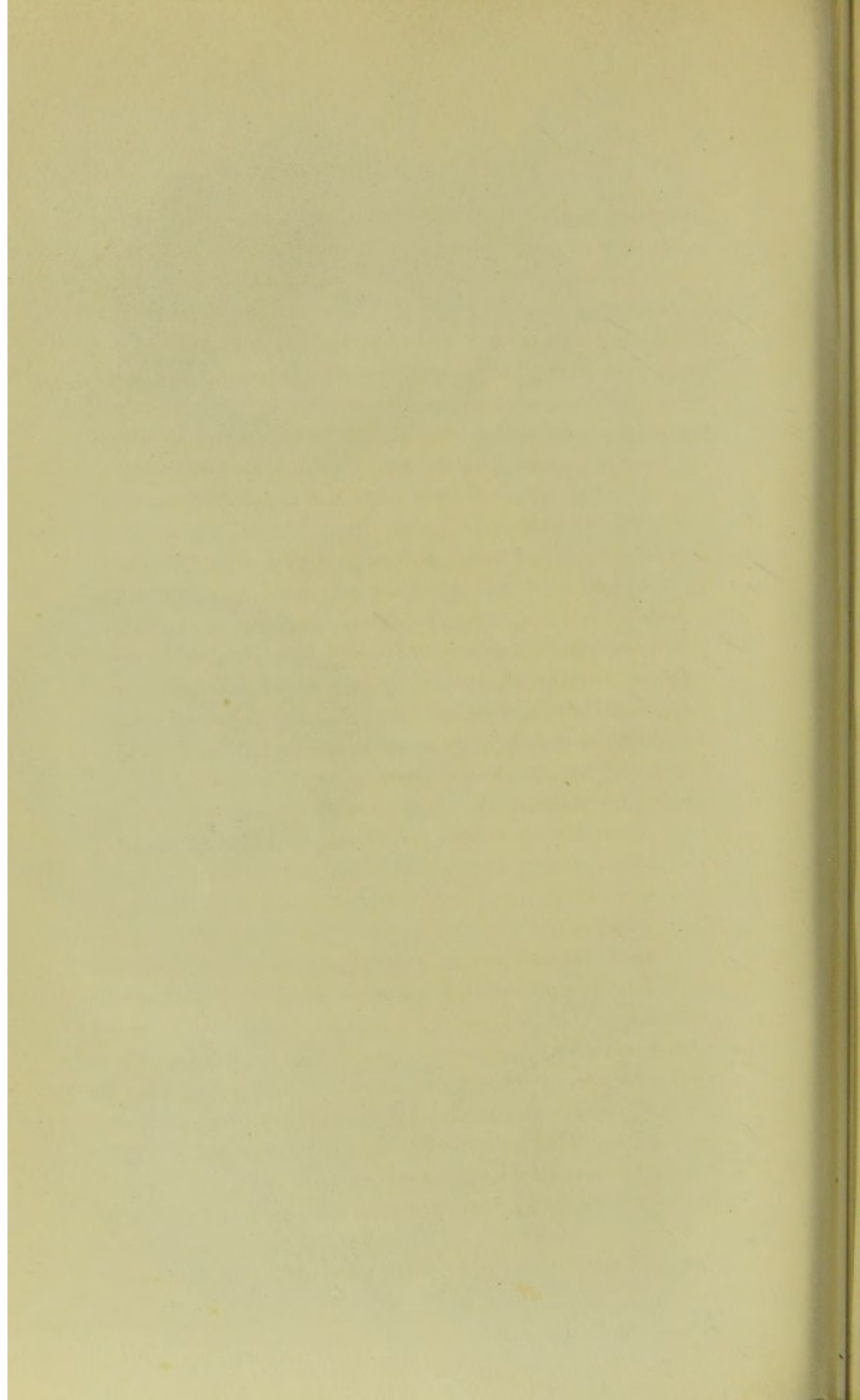
December 11th, 1860.—He returned after the harvest work was over, not on account of anything wrong in the nose, which presented a satisfactory aspect, but with a flat red tumour on the side of the right jaw : it was circular, prominent, and fluctuating. It had a very malignant aspect. The fluctuation was real, not the elastic feel so common to such tumours. I therefore made an incision into it, and let out a quantity of thin brownish fetid pus, with partial relief to the pain previously experienced. The opening did not close, but continued discharging the same fetid matter in quantity ; it became larger, with ragged edges ; ulceration undermined them, and made a deep uneven hole, threatening to open the deep vessels of the neck ; it was surrounded by dull red induration,—the pain excessive, preventing sleep.

He daily became worse and worse, and left the hospital, evidently not far from a fatal termination to his case. I have not since heard what became of him ; but up to the last day of his stay in the hospital, the nose remained in a perfectly satisfactory condition. The lithographic plate exhibits tolerably well the tumour of the nose previous to the amputation of a portion of the organ, the state of the nose after the removal of the tumour, and the result of the operation for its restoration.

I have now given testimony enough, I trust, to justify the surgeon in attempting to restore by operation a lost nose. There are, however, some surgeons of deserved eminence who are opposed to it.

Chelius says :—“ If the nose have at first a tolerable shape, yet it may gradually shrivel, especially on its two sides and upper part, the granulations which were developed on its interior becoming at last connected (adherent?) on both sides, so that the two halves of the nose grow into one solid mass, by which its root shrinks, whilst its fore part thickens, the nostrils contract, and are almost entirely closed at the end. Such shrivelled noses in no respect resemble the engravings which





have been given of them soon after the operation, and are as remarkable in their form as they are disfiguring." I can only reply to this by a reference to my own cases, and in them I have never seen anything of the kind; but the majority I have found far better after a few years as to colour, solidity, and natural feel and appearance, than when the photographs were taken some months after the operation. The woodcuts from the photographs, though they give a fair representation of the result of the restoration, do not give near as favourable a likeness as the reality would justify. For instance, the line of union at each side is generally by no means the strongly marked line of the engraving, but in many instances nearly imperceptible; and in the noses I have seen many years after the operation—in Ferguson seven years, in Stack five, in Winifred Byrne twenty months—they have appeared very natural. I cannot, therefore, agree with that distinguished surgeon, Mr. Syme, however I may respect his opinion, "that the substitute nose is even more disagreeable than the deficiency." The patients themselves, a very essential matter, all appear quite pleased and contented with their altered condition.

Ferguson says:—"I am very thankful for your favourable service in giving me really an original appearance towards the very bad way that I was in before, and I thank God for it, and you too."

O'Keeffe writes:—"But with respect to my nose (the artificial one, as you were pleased to designate it), the greatest critic would not discover but it was a natural one." Two years after he wrote in the same strain.

Taylor says:—"I wish to inform you that I am getting on very well, and the mark on my forehead is gradually decreasing, and my nose much better than when I left Dublin." Nearly two years after the operation.

Stark, whom I saw not very long since, wrote to me in a similar style, which it is not necessary to quote, any more than the expressions of gratitude from these warm-hearted

poor people,—evidences, nevertheless, of the value they attached to the change in their appearance. It no doubt raises them to self-respect, and greater confidence in working their way on in the world.

Winifred Byrne called a few days since to show me her baby, she having got married: a happy result not likely to have occurred in her former noseless condition.

I shall conclude this essay with a few practical precepts as to the performance of the operation, as far as my limited experience enables me to do.

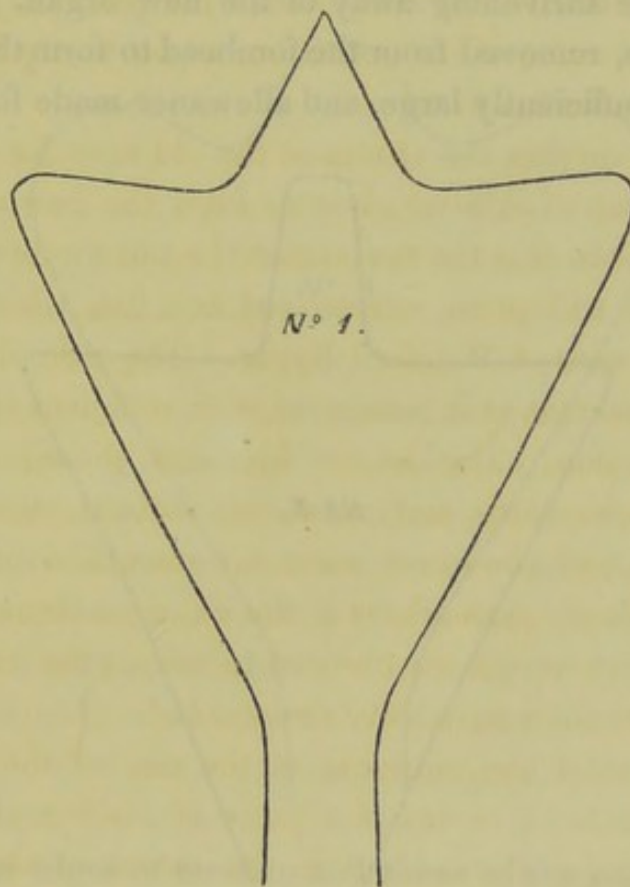
1. In preparing the stump of the old nose for the reception of the flap of skin which is to form the new organ, care should be taken that the raw surface be not too broad; for, if so, the nose will prove spread out and flat, which was the fault in the case of Winifred Byrne. The rule should be to make it as narrow as is consistent with sufficient space to ensure firm union. The lateral incisions should be carried obliquely downwards and outwards, without curve, till the lower angle, and allowance made for retraction outwards towards the cheek, particularly if the cut goes through a cicatrized part, where (as we observe in burns) the retraction is much greater than in healthy structures.\*

2. A careful measurement of the size of the new nose should be made by means of a piece of leather, and the outline of its shape marked out in the centre of the forehead. This may be done, first, with ink, but the lines afterwards gone over lightly with a finely-pointed stick of nitrate of silver; the mark of the last is durable, whereas the flow of blood during the operation soon washes away the ink, and a useful guide is thus lost.

3. The shape of the flap to form the new nose which I prefer is that delineated in Plate 1; the peculiarities of which are, that the centre septum piece above ends in a point, so

\* See Erichsen, "Science and Art of Surgery," p. 834, third edition.

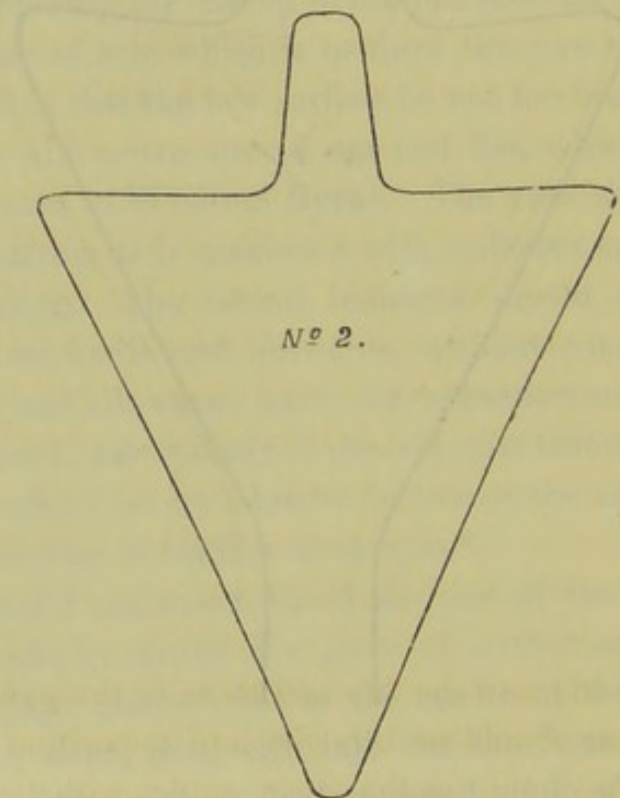
that the edges of the wound at the top, after its removal, can be perfectly approximated, and the unsightliness of the forehead cicatrix thus lessened. This centre piece is small also, for, being only useful to mark out, as it were, and give an appearance of a septum, it need not be large. The angles of the flap are only slightly rounded, imitating the natural curve



of the alæ nasi, the side lines straight. It will be seen to approach closely to Plate 2, which is a fac simile of that figured in "The Gentleman's Magazine," used by the Indian operators,—the difference being, that the angles are sharp in the latter, the centre piece long and square-ended. Each operator seems to have a flap modified in shape to his own taste. Plate 3, like an ace of clubs, is that used by Mr. Carpue and by Mr. Liston, which, having tried, I do not like; the centre



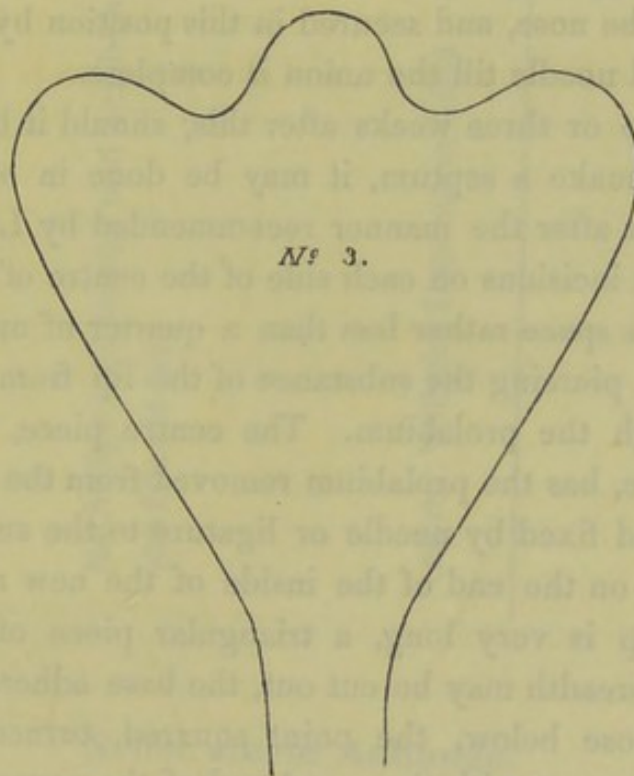
piece is clumsy, and the curve at the angles too large. This form, however, from the high character of the last operator, has been adopted by many surgeons, Mr. Skey takes his flap from the side of the forehead, but I do not think it an improvement; the necessarily long stalk must weaken the vascular supply, and hence, perhaps, explains an occurrence met with by Mr. Skey\*, but which I have never seen in my own practice, the shrivelling away of the new organ. The piece of skin, also, removed from the forehead to form the new nose should be sufficiently large, and allowance made for its reduc-



tion in size from contraction, subsequent to its removal; and, in raising it, care should be taken to leave the periosteum untouched, to prevent exfoliation of the os frontis. The root of the flap between the eyebrows should not be too narrow, and the incision lower down on the side to which the twist is to be made, usually the left.

\* "Operative Surgery," second edition, p. 524.

4. To prevent the blood running down the nostrils into the pharynx, while the patient lies on his back under the influence of chloroform, the nostrils ought to be plugged with cotton previous to commencing the incisions. All bleeding should have ceased before the parts are brought into apposition; the time necessary for this is shortened by the application of iced water.



5. The edges of the flap and those of the pared surface of the old nose should be brought into apposition from below upwards, beginning at the lower angles with two accurately applied sutures; fine silver wire is generally preferred to silk for the sutures, but I have latterly used fine strong thread, which is easier introduced, and produces quite as little irritation as the wire. At the lower part of the forehead wound, where strong traction is necessary to bring the sides of the gaping wound together, needles and twisted suture are required.

6. The ligatures may be removed about the sixth day; but

the metallic ones or those of fine thread cause so little irritation, that there is no necessity for hurrying their removal, and it is sometimes desirable to leave them a little longer at weak points of union.

7. About a month after the operation, when the vitality of the new nose is confirmed and the union everywhere soundly amalgamated, the stalk between the eyebrows may be divided, pointed, and its edges pared, and put into a bed cut for it at the root of the nose, and secured in this position by a fine suture or small needle till the union is complete.

8. In two or three weeks after this, should it be thought desirable to make a septum, it may be done in one of two ways—either after the manner recommended by Liston, viz., to make two incisions on each side of the centre of the upper lip, leaving a space rather less than a quarter of an inch between them, piercing the substance of the lip from its upper part, through the prolabium. The centre piece, only connected above, has the prolabium removed from the tip, and is raised up and fixed by needle or ligature to the surface prepared for it on the end of the inside of the new nose. Or, when the lip is very long, a triangular piece of sufficient length and breadth may be cut out, the base adherent above, the apex loose below, the point squared, turned up, and brought in contact with the pared end of the new nose (Case No. 1). To facilitate the turning up of the septum piece, the frænum labii should be divided. The nostrils are very liable to contract, and require to be kept open for some time by small rolled-up cylinders of lint, or quills. The septum, though apparently too thick and clumsy at first, soon contracts to a proper size. The edges of the divided upper lip, brought accurately together by needle and ligature, unite without any deformity.

