He gave a history of three weeks' illness. He had general oedema, evening temperature 101° F., pulse 124. He was bled, given an enema and hot pack, with only water to drink. He recovered consciousness under this treatment. I saw him a fortnight after. He was then generally oedematous, passing 20 oz. of urine, which contained a large quantity of albumin and a few pus cells. *S. albus* and streptococci were isolated. He was given 25 million staphylococcus antigen + 2½ streptococcus antigen on December 18th, 1919, and the doses were increased to 1,000 + 100. The series was 25 + 2½, 50 + 5, 75 + 7½, 100 + 10, 150 + 15, 200 + 20, 300 + 30, 400 + 40, 800 + 75, 1,000 + 100. He had distinct focal and general reactions after the first few doses. After the first his temperature went to 101.8° F., and his urine increased from 20 to 40 oz. in twenty-four hours. He was discharged apparently cured on February 11th, 1920.

CASE IV.

J. K., aged 39, labourer, was admitted into Dr. Steevens's Hospital on December 23rd, 1919, with severe headache and general oedema. He was passing 15 oz. of urine loaded with albumin. He gave a history of several similar attacks. When I saw him at the end of January, 1920, he was still oedematous and had severe headaches. His urine contained 4 grams per litre of albumin, and he was passing about 70 oz. in the twenty-four hours. *S. albus* was isolated from his urine and 5 million antigen was given on February 2nd, 1920. The series of doses was 5, 10, 15, 20, 30, 40, 50, 60, 75, 100, 150, 200, 300, 400, 600, 800, 1,000, 1,250, 1,500, 1,750, 2,000. He steadily improved, losing his headache and oedema, and was discharged May 9th, 1920, his urine containing 0.75 to 1 gram per litre. He returned to work June 20th, 1920, and has remained in full work ever since. His urine now (September, 1922) contains 0.5 gram per litre, so that the improvement in his kidneys has continued.

CASE V.

P. C., aged 14, admitted Dr. Steevens's Hospital under Dr. Kirkpatrick with general oedema. Temperature 101° F., pulse 104. Urine contained blood. *S. albus* and streptococci were isolated from his urine, and on March 2nd he was given 10 million staphylococcus antigen + 1½ million streptococcus antigen; the series of doses was: 10 + 1½, 25 + 2½, 50 + 5, 75 + 7½, 100 + 10, 150 + 15, 200 + 20, 400 + 40, 600 + 50, 800 + 75, 1,000 + 100, 1,500 + 150, 2,000 + 200. The focal reactions in this case were very pronounced after the third dose; for instance, the albumin, which was 1.5 grams before the dose, increased to 4 grams on the next day, and then fell to 1 gram on the fifth day after. The boy left hospital on June 7th, 1920, with a bare trace of albumin. He has remained well since and is now (September, 1922) quite free from albumin.

CASE VI.

Girl aged 17, under the care of Dr. Pepper, gave a history of chronic nephritis with acute exacerbations for many years. When she came under treatment she was suffering from violent headache, general oedema, and her urine contained 2 grams per litre albumin. Staphylococci and streptococci were isolated from her urine. She was given 5 million staphylococcus + 1 million streptococcus antigen, which was steadily increased until a dose of 4,000 + 500 million was attained. The patient had then greatly improved. Her headaches had greatly diminished and her oedema had disappeared. The albumin had reduced to 0.75 gram per litre. She is now (September, 1922) in good health; no oedema of her legs, her only symptoms being occasional slight headaches. Her urine still contains 0.7 gram per litre albumin.

CASE VII.

V. F., a boy aged 5, admitted to Dr. Steevens's Hospital under Dr. Winter, October 19th, 1921, with general oedema and headache, passing 10 oz. urine containing over 12 grams per litre of albumin. The albumin fluctuated in an extraordinary way, being sometimes as low as 0.5 gram and as high as the U mark on the Esbach tube. When I saw him in December, 1921, his oedema and general condition had greatly improved, but he had still an enormous quantity of albumin. Staphylococci and streptococci were isolated. He was given 5 + 1, and had a very distinct increase of oedema after this and several other doses. As the albumin did not show any improvement after the 50 + 10 dose I reinvestigated the bacteriology of his urine, and found as well as the other microbes a coliform bacillus. The addition of an antigen of this did not, however, make any difference, and he left hospital May 31st, 1922, in very good general condition, but still passing as much albumin as ever. Evidently his kidneys were irretrievably damaged. The initial dose was 5 million staphylococcus + 1 million streptococcus antigen, and the series was: 5 + 1, 7½ + 1½, 10 + 2, 15 + 3, 20 + 4, 30 + 6, 40 + 8, 50 + 10, 60 + 10 + 2½ (coliform antigen), 75 + 15 + 5, 100 + 12½ + 7½, 150 + 20 + 10, 200 + 25 + 12½, 300 + 30 + 15, 400 + 40 + 20, 500 + 50 + 30. This boy now (September, 1922) is playing about like a normal child with no sign of illness, but has still 3 grams per litre of albumin. His after-history will be interesting.

I could add other cases, but I hope these will sufficiently illustrate the possibilities of the treatment. Even if complete cure is not possible one can often, as in Cases iv and vi, restore them to good health and full working capacity. If the cases are taken in time, complete cure ought to be possible in the large majority of them. I am as ever deeply indebted to my colleagues at Dr. Steevens's Hospital for placing their cases at my disposal.

RESTORATION OF THE SUNKEN NOSE.

BY

HAROLD BURROWS, C.B.E., F.R.C.S.,
ASSISTANT SURGEON, ROYAL PORTSMOUTH HOSPITAL.

THE practice of making good a defect of the contour of the nose by inserting a graft of cartilage beneath the skin is one the soundness of which is sufficiently well established. Nevertheless, I suppose that most surgeons have sometimes had cause to lament that the practical result has fallen short of the ideal. This being so, any little idea that may help toward the achievement of better results will be acceptable. I would like, therefore, to describe the operation which I have employed, in order to introduce a mechanical detail which has been of considerable assistance.

FIG. 1.—Cast of nose before operation. (In addition to the sunken bridge there is considerable deformity of the anterior nares, from old ulceration.)

FIG. 2.—Cast of same nose after operation.

Preliminary Measures.—The first step is to obtain a plaster cast of the patient's nose and neighbouring features. Having acquired this, the nasal defect which is shown in the cast is filled with plasticine, which is moulded with care so as to produce on the plaster model the shape of nose which it is hoped to reproduce on the patient. This plasticine model of the nasal defect is then removed from the plaster cast and well powdered with boric acid. This dries the plasticine, which, when dry, is less likely to become altered in shape under subsequent handling. With a small metal

FIG. 3.—Plasticine models. The two small pieces represent grafts used to stiffen the alae nasi, which were sunk and lacking in cartilaginous support.

calliper the length of the plasticine model is measured. **Operation.**—With the patient under general anaesthesia the right fourth rib cartilage is removed. The separated fragment is replaced in its bed and the skin wound temporarily closed with towel clips. This having been done, a transverse incision is made across the nose at the level where the bridge of a pair of spectacles would naturally rest. Through this incision the skin of the nose is separated from the underlying structures over the whole area of the nasal defect. The towel clips are now taken from the chest wound and the cartilage is removed for modelling. First of all it is cut to the correct length as shown exactly by the calliper. Then, with the plasticine model held in front of him by a nurse who can manipulate it as required, the surgeon carves the piece of cartilage in the likeness of the clay model, and having completed this fashioning the graft is slipped into its bed in the nose, the skin incision being closed by two or three horsehair sutures. The chest wound is then sewn up and a dressing applied. But no dressing other than a dusting with boric powder is used for the nose.

FIG. 4.—Metal calliper for measuring the grafts.

After-Course.—The horsehair stitches are removed on the fifth day. The cartilage graft having been properly modelled lies comfortably in its bed without any tendency to slip out of place.

Comments on the Operation.

1. By raising the bridge of the nose an epicanthus can be eliminated.

2. Scarring of the skin of the nose from previous trauma or disease interferes considerably with the cosmetic result of the operation just described.

3. In many cases the defect is too deep to be filled by a single cartilage graft—as, for example, in those instances in which a patient can see one eyeball with the other eye. Here the operation is duplicated. The right fourth cartilage is used for the first operation, and at the second operation, which is done only after an interval of one year or longer, the left fourth rib cartilage is used to complete the filling of the defect.

4. Cartilage, especially when wet with normal saline, is a slippery substance to hold, and unless he is well on guard against such an accident the surgeon may find the graft slip out of his fingers and come to rest upon some unintended and infected landing place.

5. In one instance the cartilage graft shifted after the operation had been completed.

This was in a case of a very large defect, and during the first operation it occurred to me that I might be able to remedy to some extent the forward prospect of the nostrils by making the cartilage graft somewhat longer than the plasticine model, so that when inserted it would thrust downward the lower end of the nose. There was such a deep ledge for the graft to rest against at the upper end of the defect that I thought dislocation was impossible. However, the graft did gradually become displaced, the upper end slipping forward and upward.

Had this displacement taken place laterally, or had the case been one where a single graft only was needed, the accident would have been most unfortunate. As it is, however, probably no irregularity will be noticeable when the second stage has been completed. In any case, I do not now think it was sound practice to attempt an elongation of the nose by inserting a graft large enough to cause considerable pressure and counter-pressure.

INJURY TO THE BOWEL WITH RECURRENT HAEMORRHAGE.

BY

MAURICE HORAN, F.R.C.S. EDIN.,

SURGICAL SPECIALIST, WAR PENSIONS HOSPITAL, SUNDERLAND.

THE following case is recorded as one of interest on account of the long history and intermittent character of the symptoms, of which haemorrhage was a prominent feature. It has been suggested that the recurrent haemorrhage was due to the formation of an aneurysm in a vessel at the site of injury in the bowel, which appears to be the most probable explanation of the case.

Pensioner J. B., aged 33, was admitted to hospital on January 13th, 1922. In 1917, while serving in the trenches during shelling, he was struck in the abdomen by a sandbag blown in from the parapet. He was seized with abdominal pain, shortly followed by the passage of dark-coloured blood from the rectum in considerable quantity. He was admitted to hospital, and after a couple of weeks, the pains having subsided and no further haemorrhage occurring, was transferred to England. While in hospital there he had two more severe haemorrhages from the bowel accompanied with pain, and the question of operation was considered. This was eventually negatived, and he was discharged some time later. Since then haemorrhage, similar in character but slight in amount, generally followed the taking of solid or more particularly of indigestible food. The haemorrhage was always accompanied with pain. He voluntarily restricted himself to a diet mainly of slops, and from being a professional footballer had refrained from exercise.

On examination tenderness was present in the left side of the abdomen, to which area the pain was referred. Nothing else was detected. Rectal examination was negative. In the course of preparation for a laparotomy which was decided on the administration of an enema was followed by a good deal of pain and the passage of a quantity of dark-coloured blood.

The abdomen was opened to the left of the middle line and the gut was systematically examined. Two small areas of scarring, without deformity, were present in the lower part of the ileum. In the lower part of the jejunum a circular area of bluish discoloration of the size of a farthing and resembling a haematoma was present on the antimesenteric surface of the gut; extending from this, to the root of the mesentery, was a cord-like deposit of lymph. On palpating the gut a definite area of thickening corresponding to the discoloration was felt. The remainder of the bowel appeared normal, as did the other viscera. The portion of gut containing the lesion was resected and the continuity of the bowel restored by anastomosis. He made an uneventful recovery and was discharged from hospital on February 23rd, 1922. He has since returned to ordinary diet, and there has been no recurrence

of the pain or haemorrhage; he expresses himself as being quite well.

The specimen removed, on section, presented the appearance of a haematoma, dark clotted blood occupying the space between the mucous membrane and outer wall of the bowel. The muscular coats were torn, blood being extravasated throughout, and in direct contact with the mucous membrane, which appeared intact.

My thanks are due to Surgeon Captain Bishop, R.N., C.M.G., administrator of this hospital, for permission to record the case.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CROSS-WIRE AXIS FINDER IN ASTIGMATISM.

THE following description of a very simple piece of apparatus may be of interest to those who are engaged in refraction work, for it saves a great deal of time, tends to efficiency, and is so small that it can be carried in the ophthalmoscope case. It consists of a ring, the exact size of the trial lens mount, across the middle of which stretch two fine wires at right angles to one another.

In retinoscopy, if a band of light is seen, or if one appears in the course of correction, this cross is placed in the front cell of the trial frame in such a position that one of the wires is exactly parallel to the edge of the band. This wire is in the axis of astigmatism, and where its extremity appears to meet the scale will give the reading required. The wire is very easily seen as a fine black line against the illumination of the fundus.

There are now four ways of checking the finding:

1. Move your own head slightly sideways, so that the wire is up and down the middle of the band. If now the black line appears parallel to the edges, and does not approach them at an angle either at the top or at the bottom, the axis is indicated correctly.

2. Move your light along the second wire, and if the band keeps at right angles to this and follows the same direction, not sneaking off above or below, the axis is correct.

3. Overcorrect considerably, and the band will appear turned into the other meridian, and should then have the second wire exactly up and down its length.

4. Put a cylinder into the frame, with its axis over the meridian of the wire. If the wire is right there will not appear to be any rotation of the band now; if the wire is wrong the band will appear to be rotated through quite a perceptible amount, this rotation depending partly on the amount of error and partly on the strength of the cylinder used. This is a delicate check, as the error is magnified, so that, say, five degrees of error will send the band round through ten or fifteen.

My instrument was made by removing the brass rim from a trial-box lens and forming the cross of the fine wire used by florists, but it is difficult to get the wires exactly at right angles and to have the crossing point exactly in the centre. I have used it for the last twelve months, doing difficult refractions at an average rate of sixty a week, and find that in nine cases out of ten it gives the cycloplegic correction straight away. The failure in the tenth case is due to fatigue in the observer and is not instrumental in origin. Messrs. Dixey, 3, New Bond Street, will make the apparatus for anyone who requires it.

Southampton.

JOSHUA KEYMS, M.D.

THE THIRD STAGE OF LABOUR.

Is anyone prepared to give an authoritative statement why in some cases pressure on the fundus uteri readily delivers the detached placenta and in other cases pressure sufficient to hurt the patient has no effect? The other day I attended a multipara and the second stage made me think I would have an easy time with the after-birth. In twenty minutes, with the easy confidence engendered by the second stage, I pressed on the fundus and there was no satisfactory opening of the vulva that indicates a speedy end. Having ample time I decided to be patient, but after several unsuccessful attempts, including traction on the cord (*Clinical Obstetrics, Jardine*), I found ninety minutes had passed since the child was born, so I proceeded to remove the placenta manually. As I expected, I found it lying in the upper strait of the vagina. It seemed to me that synchronously with my looking