left, the plan that was followed here is certainly very good, to utilize the remaining conjunctiva as a lining for the lower lid. We do not need much of the recess in the upper lid to hold the artificial eye, but the lower lid must afford a deep recess for the artificial eye or it is apt to slide out. In fixing this lower lid conjunctival flap I have been using a plate on the lid to keep the flaps smooth. To fix the plate I put the sutures through its lower edge to fasten it with the skin. That absolutely insures smoothness. I leave it in until the stitches cut through. If necessary, the wound of the socket can be filled in with a Thiersch graft, fastened down by sutures, a plug of white wax moulded to the form and the depth of the sac is put in, the lids closed over it, and a pressure bandage applied to hold it firm.

We hear much about shrinkage of the flaps. They of course shrink according to the lessened resistance of the surrounding parts. If it is fixed, in ectropium of the upper lid, for instance, to the free lid border and the upper border of the cartilage, you will be surprised how little shrinkage takes place, for here the graft is attached to parts which can not be moved, and therefore successfully prevent the shrinkage of the flap. Where there are movable borders, however, the shrinkage will take place, and it may be necessary to repeat some grafting. The first case I operated on, simply to enlarge the socket, I took out the scar tissue, put in a pretty large flap. It shrank, of course, within the first three months, but I saw the patient several times in after years, and to my satisfaction saw that the flap had not shrunk visibly any more than the first three months.

MR. E. TREACHER COLLINS, London, Eng.: I have had some very satisfactory results in these cases of contracted socket from the employment of an operation devised by Dr. Maxwell of Dublin. As the first step, make an incision through the conjunctiva at the bottom of the cul-de-sac, then one through the skin of the lower lid of about the same length as the other. Mark out on the eyelid a flap of skin; you dissect up that flap but leave it attached at the center. Now make a tunnel between the two incisions—under the lid. Then pass a suture through the angle of the flap and carry it up under this bridge of tissue and insert it at this point. You then have a flap the center of which is held down. You afterward stitch up the gap in the lower lid. At the conclusion you put in a glass shell, like a glass eye with the cornea taken out, to allow drainage. I used to try to get rid of these cases, but since the adoption of this operation I am rather pleased when they come along, for I have had some very satisfactory results.

DR. W. H. WILDER, Chicago: If the plate is covered with some material such as paraffin, it is possible, even after it is in place, inasmuch as the graft then lines the pocket, to insert stitches that will anchor it in position. This, in simple cases, is not necessary. One advantage of having a plate covered with some material like paraffin, is the ease in handling the thin graft which has such a tendency to roll up, but which adheres so evenly and smoothly to the paraffin surface. Furthermore, with such a covering of the plate as paraffin, one can feel sure that the cornea will not suffer injury.

DR. M. WIENER, St. Louis: We all know that in taking the flaps *in toto* there is contraction, but there is very little contraction with the Thiersch grafts. Dr. Todd objected to inserting the lead plate because it is rough. He uses aluminum. I have used a lead plate dipped in paraffin, which makes it smooth. The Maxwell operation is mentioned in my paper, but not described. The objection I stated to this operation was that there was a good deal of puckering in the lower lid. As I have said, my reason for presenting this method is that my greatest difficulty heretofore, and also of my friends whom I have questioned, has been to establish a sufficiently deep lower sulcus. This operation has seemed to overcome this difficulty.

Treatment of Circulatory Disorders.—Paul Franz, of Bad Nauheim, states in the *Dietetic and Hygienic Gazette*, July, 1908, that the one great and fundamental factor in circulatory disorders of all kinds is to restore normal metabolism by means of physical treatment and diet.

Clinical Notes

LARYNGECTOMY FOR CARCINOMA OF THE LARYNX.

REPORT OF TWO CASES, SPECIMENS EXHIBITED.*

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CASE 1.—*Patient.*—E. L. L., age 72, a mechanic, was first examined by me Sept. 5, 1903. He had always had excellent health until he lost his voice from a cold during the previous spring. He had used tobacco constantly and alcohol occasionally. Nothing in the man's appearance indicated dissipation. The hoarseness had been persistent and occasionally a little blood came from his throat. There had been more or less constant pain in the left ear radiating from the throat.

Examination.—A laryngoscopic examination showed a growth rather larger than a bean, in the anterior commissure of the vocal cords, apparently springing from the under surface of the left cord. There was considerable infiltration about the left cord. The surface of the tumor was irregular and nodular, very hard and light in color, and the left cord per-

Case 1.

Case 2.

CASE 1.—Mr. E. L. Long. Left half of larynx removed for carcinoma, Feb. 5, 1904, age 72. Now has fair voice and good health at 76.

CASE 2.—Mr. J. S. Farrell. Left half of larynx removed for carcinoma, Dec. 26, 1904, age 52. At present in fair voice and good health.

fectly immobile. A saturated solution of iodid of potassium was prescribed and the patient was kept on large doses until it was found that the drug did not retard the growth of the tumor in the least. Sections were removed and submitted to two pathologists. Both reported that the growth was a carcinoma. By the first of the following February—five months—the growth had increased to such an extent and breathing was so labored that death from suffocation was evidently near at hand. The case afforded almost every clinical evidence of cancer.

Operation.—A radical operation was performed Feb. 5, 1904, in which the left half of the larynx was removed entire. The patient was placed in the Trendelenburg-Rose position and chloroform administered. The first incision extended from the hyoid bone to the sternum and the tissues were dissected and pushed aside, exposing the laryngeal and tracheal cartilages.

* Read in the Section on Laryngology and Otology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

A low tracheotomy was done and an ordinary large canula was introduced and secured with tape. The chloroform was then administered through a rubber tube connected with chloroform apparatus and the canula. The thyroid cartilage was then split (with difficulty owing to calcification) in the median line with bone forceps and the larynx laid wide open and examined with a strong head light. The interior of the larynx was then painted with cocain and adrenalin. The disease was found to be confined to the left half. The left half of the thyroid and cricoid cartilages were then removed by freeing the surrounding tissues and pushing aside the perichondrium. Great care was necessary in separating the laryngeal tissues from the esophagus. Several strips of iodoform gauze were placed in the laryngeal cavity and brought out through the lower part of the wound and secured. The upper part of the larynx was closed with sutures and the dressings placed.

Later History.—The subsequent treatment required close and careful attention. The tracheal tube was kept in two days. It was several days before fluids or solids could be swallowed without passing out the wound, so he was nourished through a tube. He made a good recovery, and now, at the end of four years, is 76 years old, in good health and able to earn his living (Fig. 1).

CASE 2.—Patient.—J. S. F., age 52, contractor, had an excellent tenor voice and often sang in choirs. He used tobacco excessively and at one period of his life used alcohol. His father, a soldier, died of dysentery during the war, at the age of 40; his mother died at 65 from an accidental fall. His six brothers and sisters were all living and healthy. There was no history of malignant disease or syphilis. The patient was an excellent specimen of manhood and had always enjoyed good health with the exception of chronic bronchitis.

Course of Disease.—A persistent hoarseness set in during the spring of 1904, following an acute laryngitis. During this attack a small papillomatous-looking growth appeared growing from below the cords in the anterior commissure. During the months of May and June applications of argyrol were made to the larynx with other local treatment and a saturated solution of the iodids administered internally. The progress of the growth was daily watched until about the first of July when sections were removed and microscopically examined. Each specimen was reported to be unmistakably a flat-celled carcinoma. After these examinations the patient took several weeks rest in the woods of Wisconsin. When he returned I advised an immediate and radical operation, and at that time a thyrotomy would have been, in my opinion, sufficient. After this advice (September 1) the patient was not seen again until December 20, when he called at my office and said that he was ready to have the radical operation performed, if I thought best. In the meantime, he said, he had consulted Dr. E. Fletcher Ingals of Chicago, who said that the growth was suspicious but that he hoped it was only a large papilloma. He removed the tumor intralaryngeally, and sent the specimen to Professor Hektoen for examination. His report was: "The specimen which you sent me is a flat-celled carcinoma." This was followed by local treatment for a few days and then the patient was permitted to return home. He again visited Dr. Ingals two months later, who found that the growth had returned. The patient was then advised to undergo a radical operation. After he had given me this history, an examination of the larynx was made and it was found that the disease had made rapid progress, but was as yet apparently confined to the left half of the larynx.

Operation.—After explaining to the patient his chances for recovery, and that a complete laryngectomy would probably be necessary, it was decided to have the operation performed at once, Dec. 26, 1905, at the Deaconess Hospital. The teeth and upper respiratory tract were rendered as nearly aseptic as possible. The trachea was prepared by frequent injections of antiseptic oils and sprays. The patient was placed on the table in the Trendelenburg-Rose position and the chloroform was administered first by mouth and then by tube and canula. The different steps of the operation were about the same as detailed in Case 1. Extensive removal, including a part of the right thyroid cartilage and vocal cord, in addition to the entire left half of the larynx and the adjacent lymphatic

glands, was found necessary. In separating the cartilages from the esophagus, the esophageal tube was introduced and found to be of decided help.

Later History.—In the after-treatment of this case there were a number of complications. The old bronchitis was troublesome and at one time pneumonia was threatened. A very rapid pulse and irregular and disturbed respiration, due probably to interference of functions of the pneumogastric, were finally corrected with digitalis and strychnia. After the wound healed the x-ray was used with apparent good effect in preventing a return. Three and one-half years have elapsed, the allotted time, the laryngeal cavity looks exceedingly healthy, and the patient has been perfectly well since. (Fig. 2).

The Hahn canula was not found necessary in either of these cases.

30 Willoughby Building.

DOUBLE-HEADED MONSTROSITY.

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HIGHLAND, OHIO.

Parents.—Mrs. C. L. M., aged 25, weight 108 pounds; had been in good health for several years, except for a leucorrhœal discharge. She is perfectly developed. Her husband has no bad habits and no deformities. The family history on both sides is good, there being no abnormal births or twins in either family.

History.—I was called to see the woman during the latter months of pregnancy and found her suffering from persistent vomiting and from intense pain in the right side. On March 6, 1900, I was again called to see her. After protracted labor she gave birth to a female child which died in a few minutes. The breech presented, making the delivery difficult, and in addition the placenta was adherent. The mother is now in good health and has since given birth to a normal child.

Description of Child.—The child had one body, perfect in form from shoulders to feet. There were two legs and two arms, three spinal columns and two perfectly formed heads and necks, each separate and distinct. Each head measured fourteen inches in circumference. Other measurements were as follows: Across the shoulders, 8 inches; around thorax, 15½ inches; length of arm, 8½ inches; length of legs, 11 inches; length of body, 20 inches; weight, 14 pounds.

A CASE OF SUPPURATIVE PYELONEPHRITIS, WITH SPECIMEN.

G. SHEARMAN PETERKIN, M.D.

SEATTLE, WASH.

This case and specimen is presented as graphically illustrating possible sequelæ of gonorrhea and teaching (1) the necessity of care in pronouncing gonorrhea cured, i. e., that there will be no sequelæ; (2) the necessity of gentleness in genitourinary surgery; (3) the rapidity with which infection in the genitourinary tract may prove fatal.

The specimen was obtained in the following case:

History.—M., male, aged 36, occupation, logger; had gonorrhea in 1895. During the last two years he had had some trouble in voiding urine, but only when drinking heavily. At this time he had also a slight urethral discharge; otherwise, no symptoms. He was never incapacitated from work. On June 6, 1907, he had been drinking heavily, but had attended to his duties. On this date he had acute retention and the sound was used to relieve same. Twenty-four hours later, June 7, he came to Seattle and presented himself for treatment at the local hospital. His condition was referred to the visiting physician as that of a case of gonorrhea, with retention, complicated by orchitis because of the swollen scrotum. He was catheterized with difficulty and two or three ounces of bloody urine obtained; catheterization was repeated after four hours. Twenty-four hours later the case was referred to me.