does. There are many trades and handicrafts, for example, closed to the blind, in which a deaf man would have no difficulty whatever in competing with his normal neighbours. On the other hand, although less crippling to the individual probably in the mass, the damage resulting to the State as a whole from the defect of hearing is quite as serious, since it is probably the case that the number of men rendered deaf by war is greater than the number who are blinded.

Thus one can foresee that institutions formed to combat this new defect of the body politic will have to be numerous and wisely distributed over the country. One of the first tasks to be faced will be, as in the case of blindness, the separation of the functional from the organic defects. Then it will be necessary to provide the deaf with information as to what trades and occupations are suitable to them, and to train them for those callings.

In addition, there ought also to be classes for the teaching of lip-reading, as that accomplishment is, we understand, by no means difficult for a person of average intelligence to acquire.

In England the movement has been started in a letter to the press by Sir Frederick Milner. But, before his letter had appeared, the work had already been set agoing in Edinburgh with very great and encouraging success.

Just as we are going to press we learn that the Government has intimated its intention of dealing with the problem. This is, of course, just as it should be.

CLINICAL RECORDS FROM A PROVINCIAL HOSPITAL.

By Neil Maclay, C.M.,
Hon. Surgeon, Throat and Ear Hospital, Newcastle-on-Tyne.

1. **Laryngectomy for Cancer of the Larynx.**
2. **Laryngo-fissure for Intrinsic Cancer of the Larynx.**
3. **Post-cricoidal Cancer of the Gullet.**
4. **Tuberculosis of the Larynx; Tracheotomy; Improvement.**
5. **Epithelioma of the Nose superimposed on a Tubercular Lesion.**
6. **Septic Lateral Sinus Thrombosis.**
7. **Temporo-sphenoidal Abscess.**

1. Laryngectomy for Cancer of the Larynx.

Mrs. M——, aged forty-four, was sent to me on January 19, 1916, by Dr. Whyte, of South Shields, on account of hoarseness.

Her personal and family history is good. She is the mother of nine children, the youngest being nine months old.

History of Present Condition.—Intermittent aphonia, then huskiness and hoarseness for a whole year prior to coming under observation by me. There has been no pain, or cough, or difficulty in breathing. Her weight was not thought to be reduced, and there was no complaint of general weakness.

Condition on Examination.—The patient was a short, spare woman with a somewhat anxious expression. The mouth was edentulous save for three septic stumps, and the fauces and nasopharynx were free from any defect.

Examination of the larynx revealed a broad, flat, sessile, new growth with a papillomatous surface and rather pale pink colour, involving the greater part of the right vocal cord. The right cord was practically immobile; there were no palpable glands in the neck.

The condition was thought to be malignant and operation was suggested. The patient was adverse to any kind of operation, but promised to allow a portion of the growth to be removed for microscopical investigation.

Nothing more was seen of her till July 20, 1916, when she returned to me complaining of aphonia and some pain. She now looked thinner and betrayed a little stridor. There were no enlarged glands to be felt in the neck.

Examination of the larynx revealed the fact that the growth was now definitely extrinsic. The true and false cords on the right side were now replaced by a deep rugged ulcer with rounded irregular edge. The right side of the thyroid cartilage was tender to pressure externally.

A portion of the growth was immediately removed, and histological examination showed it to be a squamous epithelioma. After the dental sepsis had been treated and the mouth rendered clean, the trachea was exposed and opened below the thyroid isthmus on September 9, 1916.

At this operation the trachea was isolated and gauze packing introduced in order to promote the growth of granulation tissue and lead to the fixation of the trachea in the neck.

On September 23, 1916, the larynx was removed through the usual incision.

As soon as the larynx was divided from the trachea, the open end of the latter was plugged with a small sponge and the anæsthesia continued through the original tracheotomy opening. The trachea showed no disposition to recede, being firmly fixed by the new-formed fibrous tissue on each side of it.

The larynx was dissected from the anterior wall of pharynx from below upwards, and during this procedure one was guided by a per-nasal india-rubber tube.

The anterior wall of the pharynx was completed above by suturing mucous membrane, fascia, and muscles.

The upper cut end of the trachea was now closed by stout fourteen-day catgut sutures after removal of the sponge plug, which in the meantime had very successfully prevented anything from getting into the windpipe.

The skin-flaps were united by silkworm-gut and ample provision made for drainage at lower end, where gauze was introduced under the flaps and around the tracheal stump. There was very little bleeding during the operation.

The patient was fed through the per-nasal tube as soon as she had recovered from the anæsthesia.

The skin-flaps united for the most part, and in spite of copious discharge of mouth secretion from the lower end of the wound the trachea remained tolerably dry. At the end of the first week the mucous discharge increased in amount, and on opening the upper angle of the skin wound we discovered that the anterior wall of the new-formed pharynx had broken down, exposing the rubber tube for quite $2\frac{1}{2}$ in.

The wound was now drained from above and below, and though the discharge was copious, the amount of pus was small.

A fortnight after operation it was decided not to remove the sutures from upper end of the trachea, but to allow it to become embedded in the granulation tissue, which was now in active formation.

The lower end of the wound gradually became sealed up by granulation tissue, and the additional drainage opening at upper end was allowed to close up. The feeding-tube was retained for five weeks, and at the beginning of the sixth week it was found that the patient could swallow liquids without any leakage from the wound.

The original tracheotomy opening was enlarged in order to accommodate a large-sized cannula for permanent use.

There was no evidence of pulmonary trouble, and, in fact, no untoward constitutional disturbance of any kind.

The patient left the hospital at the end of nine weeks, able to swallow ordinary food, and with her wound soundly healed.

On May 31, 1917, the patient was examined, and found to be in good health, and able to perform her house duties.

The initial closure of the upper end of the trachea and the subsequent obliteration by granulation tissue undoubtedly prevented pulmonary infection during the prolonged escape of the mouth and pharyngeal secretion.

2. Laryngo-fissure for Intrinsic Cancer of the Larynx.

J. W. H——, a clerk, aged fifty-one, consulted me on September 13, 1915, on account of hoarseness of five months' duration. The personal and family histories contain nothing of note.

Condition on Examination.—He was a healthy-looking man, and there was no swelling or palpable gland enlargement in the neck. The mouth was edentulous and clean, and the naso-pharynx normal. The epiglottis was of the infantile type and overhanging, but otherwise normal. Examination of the larynx revealed a soft-looking, irregular, pink, fleshy growth involving the anterior third of the left vocal cord. The cord moved freely. An attempt was made to remove a part of the new formation by the indirect method, but the condition of the epiglottis and a highly sensitive patient rendered this procedure impracticable.

On September 16, 1915, with the aid of Hills' slotted tube spatula, a portion of the tumour was removed, and subsequently described by the pathologist as a squamous epithelium. The operation of laryngo-fissure was performed on September 20, 1915.

A hypodermic injection of morphine and atropine was given half an hour before $CHCl_3$ anæsthesia.

The trachea was opened above the isthmus, and a small laryngotomy tube introduced between the rings. Five minutes before opening the windpipe about 10 minims of 2½ per cent. cocaine solution was injected into the lumen, and this abolished all reflex coughing. The thyroid cartilage was divided in the middle line with shears and the mucous membrane with a knife.

The wings of the thyroid were gently held apart, and the interior of the larynx carefully inspected with a reflected light. A small captive sponge was now introduced into the upper aperture of the trachea and the soft tissues, including the affected cord, separated from the cartilage from the anterior cut edge back to the vocal process.

The removal of the cord was then completed with scissors, cutting first along the lower limit of separated portion. Bleeding

was controlled by pressure, followed by swabbing with tinct. benz. co.

After removal of captive sponge the thyroid wings were accurately opposed, and the skin and subcutaneous tissues sutured with fishing-gut.

The tracheal cannula was removed in twenty-four hours, and patient was out of bed on the third day. Primary union occurred.

Recent inspection shows that the left vocal cord is replaced by a band of fibrous tissue, which, apart from the colour, is very like a true cord. There is no sign of recurrence, and the patient looks well. The voice is husky.

3. Post-cricoidal Cancer of the Gullet.

Mrs. R——, aged thirty-two, was admitted on April 19, 1917, on account of laryngeal obstruction and inability to swallow solids and liquids.

History of Illness.—Difficulty in swallowing for nine months, which had culminated in complete obstruction six days before admission. The difficulty in breathing commenced on April 16, and was increasing.

Condition on Admission.—Patient looked very ill, and was gasping for breath. Temperature subnormal, pulse 120. There was a hard lump under the right sterno-mastoid and a fulness of the thyroid gland. She was in the seventh month of pregnancy.

Laryngoscopic examination showed a soft cauliflower-like growth in the hypopharynx and bi-lateral abductor paralysis; the cords were being sucked together during inspiration.

The trachea was opened at once under local infiltration anæsthesia, some difficulty being experienced with an enlarged thyroid isthmus. Rectal feeding and stimulation was adopted.

Next day an attempt was made to pass through the stricture Hills' styletted feeding-tube, without success.

With the tube spatula the growth could be seen filling up the post-cricoidal area and extending upwards into the lower pharynx.

Rectal feeding was well tolerated, and patient's condition improved during the next few days.

On April 24, 1917, she gave birth to a fairly well-nourished stillborn child. Two days later, under general anæsthesia, a further attempt was made to use Hills' feeding-tube. On this occasion a small-sized bronchoscopic tube was gently insinuated

through the stricture and the styletted tube passed through its lumen well down into the œsophagus.

On recovery from the anæsthetic, patient was fed through the Hills' tube which was twisted round the ear and retained there by a strip of bandage.

In less than a week she was able to swallow liquids freely alongside the tube. During the last fortnight she has been able to swallow egg, bread, and biscuit, as well as liquids, and the tube though it remains *in situ* is only used for an occasional wash through.

The patient has been up and about for more than a fortnight, and at her own request is allowed to assist the ward-maid.

June 21, 1917. Under chloroform anæsthesia the styletted tube was removed. The rubber was found to be quite soft and friable, and exposed a small part of the metal stylette. A fresh feeding-tube was introduced. The patient is now able to swallow a variety of solid foods with apparent ease.

It is interesting to note that she is not aphonic—the position of the vocal cords permitting a useful degree of phonation.

The case emphasises the value of Hills' styletted tube and its superiority to gastrostomy, at all events in the later stages of malignant stricture of the gullet. The stomach operations have in my experience been most disappointing, and have sometimes made one wish the patient had been left alone.

(To be continued.)

ABSCESS OF THE NASAL SEPTUM OF SIX YEARS' DURATION.

By James B. Horgan, M.B., Ch.B.,
Laryngologist to the North Charitable Infirmary, Cork.

The patient, E. A——, a man, aged twenty-four, consulted me on December 12, 1916, for deafness and nasal obstruction, which he stated were due to nasal polypi.

The history was that he had always been healthy. Six years ago he had had a bad fall from a horse, falling on his face. He has since suffered from nasal obstruction, but did not notice any other serious immediate ill-consequences, was not rendered unconscious, and rode his horse the same day.