to troublesome hæmorrhage. Two instances, in which nearly fatal hæmorrhage occurred from the posterior palatine artery, have been recorded by Mr. Howard Marsh, in both of which the hæmorrhage was successfully arrested by plugging the palatine canal with a wooden plug pushed through the palate.

In 1874, Sir William Fergusson brought forward what was then believed to be a new proposal, but was afterwards shown to be a revival of a suggestion of Dieffenbach's, viz., to detach the bony edge of the hard palate with a chisel, and to push the two portions of the hard palate towards the median line. In his early cases, Fergusson used silk sutures, but in his later ones he found he gained sufficient approximation by stuffing the gap made on each side with lint. In this proceeding the damage done to the parts is considerable, and necrosis, with some exfoliation, is apt to follow. Mr. Mason has proposed to limit the action of the chisel by boring holes in the line of incision with a brad-awl before the chisel is applied; but even with this modification the operation is one of limited application, which has not found favour with many surgeons.

Although the surgeon will not undertake to supply artificial aid himself in cases of deformity of the mouth, it is essential that he should be able to advise his patient in the matter, and possibly direct the dentist or mechanician as to the method to be adopted. In Mr. James Salter's and Mr. Oakley Coles' works, there will be found complete historical accounts of the methods adopted by successive practitioners to obviate mechanically the deformities of the palate; but for surgical purposes it will be sufficient to say that, as regards congenital cleft-palate, it is only during the last sixty years that anything like success has been attained. In 1820, M. De la Barre seems first to have employed "elastic gum" in making artificial palates, and in 1828 Mr. Snell made a palate of gold with a movable velum, which was subsequently improved by Stearn (1845), Sercombe (1857), and Parkinson (1867). All these palates acted simply as obturators, *i.e.*, were placed below the palate, and overlapped the margins of the cleft, thus more or less completely shutting off the nose from the mouth. In 1864, Dr. Norman Kingsley, of New York, brought before the Odontological Society of Great Britain an artificial palate made entirely of vulcanised rubber, cast in moulds of metal taken from impressions in plaster-of-Paris. The velum of soft rubber (Figs. 3 and 4) had the great peculiarity that it fitted between the

halves of the split palate and moved with them, at the same time filling up the gap between the palate and back of the pharynx. With this palate, adapted by Mr. Coles, I have seen very remarkable results; but the method has the drawback that, if applied to patients whose growth is not complete, frequent alterations are required, in addition to the fact that the soft rubber wears out and requires renewal.

A palate on a totally different principle, contrived originally by Dr. Wilhelm Suerssen of Berlin, and lately brought to my notice by Mr. Oakley Coles, appears in many cases to afford the most satisfactory means of treating cases of wide congenital cleft of the palate. It consists entirely of hard rubber (Fig. 5), the posterior part being much thicker than the hard palate, to which it is attached by a narrow stem. The posterior part, which is triangular shape, is set at an angle so as to pass above the soft palate, and fill up the cavity of the pharynx, the edges of the soft palate coming in contact with it in deglutition and phonation. Mr. Coles has found that the tone of the voice is improved by substituting gold in the hard palate, and having induced a highly intelligent medical student to try one of these palates after having worn one of Kingsley's, he informs me that he has no hesitation in giving the preference to the former, whilst I am able personally to testify to the improvement of his voice.

Whatever method of treating a congenital cleft palate may be adopted, the improvement in the voice must be gained to a great degree by education. A patient has in the first few years of life acquired vicious habits of speaking, and particularly a guttural and nasal tone,

Fig. 5.

which requires great care to overcome. It is essential that he should be taught to speak with his lips, and to throw the voice forward; and, with proper teaching and diligent practice, he will in time speak as distinctly as the majority of healthy persons.

ANTISEPTIC INHALATIONS.

By WILLIAM HARTIGAN, M.K.Q.C.P.I., Hong Kong.

THE antiseptic treatment of lung-disease being still to a certain extent on its trial, I have thought that the report of a few cases occurring in the tropics, where infectious germs seem to be more numerous and active in direct proportion to the heat and moisture prevailing, might be of interest.

These cases, purposely selected as representing different types of lung-disease, seem to confirm the opinions of Drs. W. Williams and Coghill, that, by killing infectious bacteria, the purulent secretion of cavities is rendered innocuous, and that thereby the spreading of destructive action is prevented, or the setting up, by means of emboli, of foci of infection elsewhere; and that this leads first to arrest of disease (at least, of non-tubercular disease), and finally to repair.

CASE 1.—In September 1880, I first saw a man aged 29, who had resided in China for five years, having left England to get rid of the sequelæ of catarrhal pneumonia. Though feeling better than when at home, he was still troubled with cough, and had been sent down to Hong Kong on account of serious pulmonary symptoms. He had lost forty-two pounds in eight months, and perspired profusely at night. The left chest was much flattened, scarcely expanding on inspiration; it was dull on percussion. Vocal resonance and fremitus were somewhat diminished; and coarse muco-crepitant *râles* were heard over its whole surface, both anterior and posterior. The right chest was fuller, and expanded more; but, on percussion, the cracked-pot sound could be heard immediately below the clavicle and nearly to the nipple-line; and over this space the respiratory sound was loud and blowing. The rest of the lung was resonant, but crepitant. The expectoration was profuse, muco-purulent, nummular, and offensive; it amounted to about thirty ounces in twenty-four hours. There was great dyspnoea; and the face had that unhealthy, livid grey colour so often accompanying septic absorption. Temperature 102° Fahr.; pulse 130; respirations 40. In addition to general treatment, antiseptic inhalations were ordered. At the expiration of four months, both lungs were resonant, and expanded fairly well. There was slight dry crepitation at the right apex; bronchial respiration over the left. He coughed only on waking, and about a drachm of frothy mucus was expectorated. He had no night-sweats. He had gained twenty-eight pounds. He could run up stairs without distress. Temperature 98°; pulse 78; respirations 16. The respirator used was at first a double fold of wadding, as suggested by Mr. Wilson Hope; subsequently, an imitation of Dr. Coghill's instrument, made by the patient with pasteboard and wire, but deeper than the original form, which was, I think, an advantage; at least, the patient, after procuring a respirator from England, continued to use his own in preference. The antiseptic was carbolic acid in solutions varying from 1 in 20 to 1 in 5. No difficulty whatever was expe-

rienced. The patient frequently wore the respirator all night, and always, until lately, for four hours a day. The general treatment consisted of mineral acids, cod-liver oil, with chloride of calcium and milk.

CASE II.—A gentleman aged 32 was in good health until, on catching cold in April 1880, he began to lose weight rapidly. He had severe cough, with muco-purulent expectoration (about ten ounces per day), fever and night-sweats and dyspnoea. His mother and elder brother died of consumption. He consulted me in December 1881. The upper half of the right lung was dull and crepitating. Puerile respiration was heard over the left lung. Temperature 101° Fahr.; pulse 110; respirations 32. During the following fortnight, when general and local treatment was used, the weight decreased nine pounds. The temperature continued from 102° to 103° Fahr. The cough and expectoration increased; a cavity had formed near the right apex, and the left lung had become involved. The least exertion brought on great dyspnoea and pain. He now began using a respirator (an impromptu cardboard one, as before), and at first had difficulty in doing so, but in a few days became accustomed to it. After eighteen days, the temperature was 98°; pulse 90; respirations 22. The night-sweats had stopped. He had gained five pounds. The expectoration was about an ounce; the cough only troublesome morning and evening. The crepitating *râles* heard in both lungs, previously moist, were now dry and creaking. The patient improved so much that, without telling me, he discontinued the inhalations. The temperature at once rose, varying from 101° to 103° Fahr.; and his previous symptoms returned—loss of weight, increased cough and expectoration, etc. Since resuming the inhalations (two months), the temperature has never risen above 100° Fahr.; six pounds have been gained; the expectoration has decreased, and is of a mucoid character; crepitation is dry. The general treatment consisted of quinine and mineral acids; pills of belladonna, zinc, and nuxvomica, at night; iodine over the chest; and milk in large quantities.

CASE III.—Mrs. —, aged 36, caught cold in December last. An old consolidation at the left apex, the remains of a pleuropneumonia from which she suffered six years ago, began to break up; a cavity formed. Coarse gurgling could be heard over a space two inches square. Expectoration was purulent, very viscid, sometimes tinged with blood; the quantity was about six ounces daily; it was offensive both to taste and smell, "like rotten eggs", as the patient described it. Some placed under the microscope showed traces of lung-tissue. The temperature was constant, at 99° Fahr. The cough was incessant. After using the inhalations for three months, the cough was much diminished; the expectoration was reduced to about two drachms of frothy mucus, which principally was brought up on walking; its offensive character had quite disappeared; and the only physical sign of disease present was a dry crepitation at the left apex, over a space of the size of a shilling. The cough was more troublesome than I could wish; but Wyeth's chlorate of potash tablets gave great relief. Chloride of ammonium and hydrochloric acid, with blisters to the affected part, constitutes the other treatment.

CASE IV.—J. M., aged 32, had suffered almost constantly for ten years from bronchial asthma, with profuse expectoration of greenish muco-purulent matter, mixed with frothy mucus. The amount varied with the weather, being from ten to twenty ounces daily. The least chill or a low barometer brought on severe spasms, with loud creaking respiratory sounds. All sorts of remedies had been tried, with only partial success. One month's use of the respirator completely checked the bronchorrhœa. The moist and creaking *râles* disappeared. The patient, when he feels another attack commencing, resumes his inhalations; and, he tells me, with complete success. He has been using them, altogether, six months. The climate, being damp and changeable, is very trying to asthmatics; so I think this is a fair test case.

Before knowing the advantages of dry inhalations, I had used medicated steam inhalations in several cases of tubercular disease, caseous pneumonia, and bronchitis, accompanied with purulent expectoration; but, though they corrected fœtor, they did not reduce the expectoration like the respirators; and, not being tolerated for the same length of time, they did not seem to assist repair in the same degree as those here advocated.

In connection with this subject, I may mention that, probably owing to the moisture and other depressing influences of this climate, we often meet with cases of very rapid disintegration in lungs previously disposed to disease; and that, in such cases, accompanied by severe hæmoptysis, I have frequently (as often as four or five times a day) used the hypodermic injection of ergot, and never found it fail in checking, at least temporarily, the bleeding; nor has its use ever been followed by abscess, though the form injected was the liquid extract *B. P.*, a supposed objection to which is, that it causes inflammation.

BRITISH MEDICAL ASSOCIATION.

FIFTIETH ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

TWO CASES OF LOCOMOTOR ATAXY, WITH ANOMALOUS SYMPTOMS:

WITH ESPECIAL REFERENCE TO THE SYPHILITIC ORIGIN OF THE DISEASE AND ITS TREATMENT BY IODIDE OF POTASSIUM.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

By R. SHINGLETON SMITH, M.D., B.Sc., M.R.C.P.,
Physician to the Bristol Royal Infirmary.

CASE 1.—John T., aged 36, seaman, was admitted to the Bristol Royal Infirmary under the care of Dr. Shaw, July 4th, 1878, with a history of nerve-disorders, dating from eighteen months before. He had syphilis fourteen years ago, a bubo at twenty-three; a sore on the penis with spots, five months afterwards; he had a running also at another time. Otherwise, his previous health had been good. The first symptom noticed was that the sight was becoming dim, and that the left eyelid drooped; the pupil of the right eye was dilated, and there was external strabismus; diplopia was one of the earliest symptoms. A month later, he felt a numbness in the chest, which extended to the back, and then to the legs and arms. He had not been able to walk without support for eight months.

State on Admission.—He complained of dull aching pain in the forehead, of stiffness in the joints, especially the knees and ankles, and of some difficulty in passing his urine. He was well nourished, healthy looking. The pupils were very small; there was slight ptosis of the right eye. There was no strabismus, but the action of the right eyeball was irregular. The tongue was protruded slightly to the right, but he could turn it to the left. There was no deviation of the uvula, no ulceration of the palate, and no periosteal thickening. Large symmetrical patches of chloasma were general on the chest. He could move his legs fairly well, but he felt shaky after standing a short time, and as if his boots were coming off and his feet were enlarged when he walked. There was no loss of muscular power in the arms or legs; no muscular wasting. He could button his shirt well, but was obliged to use his eyes to do it. Electro-contraction and sensibility were slightly diminished. There was a feeling of constriction around the chest, sensibility in the fingers appeared to be diminished. The urine was of specific gravity 1009, alkaline, pale yellow, with no albumen. The tongue was furred; constipation was present.

The patient was readmitted under my care on August 11th, 1880. There was then a general wasting of the muscles of the legs; the patient was not able to stand, but could move the legs freely about the bed. He had not been able to walk for two years, not since his previous stay in the infirmary. The legs had not become worse during the previous two years, but the fingers had become more helpless. They were now stiff and useless; he was not able to feed himself. He had a feeling of a tight cord round the lower part of the abdomen. He was also blind, and the pupils were contracted. There was no facial paralysis. His grasping power was fair, but there was a want of co-ordination in the hands; he could not pick up a pin, nor fasten the buttons of his clothing. There was diminished power in the legs, and some wasting, but sensation appeared to be slightly if at all affected. The heart and lungs were normal. The urine was of specific gravity 1015, clear, acid, with no albumen. He had no difficulty in micturition. He was ordered two grains of ergotine in pill three times a day.

September 14th. He was ordered to take fifteen minims of phosphorated oil three times a day.

September 22nd. A phosphorus pill was ordered to be taken three times daily.

October 6th. The patient's condition had not undergone much change; he lay quietly in the bed, only speaking when spoken to, not appearing to notice what was going on around, but nevertheless answering intelligently when questioned. To-day vomiting came on, and he threw up a large quantity of black coffee-ground substance like altered blood. He was ordered to have fifteen grains of bromide of potassium and an ounce of hydrocyanic acid mixture three times a day.