put out his tongue, or shut his eyes, or hold out his hand he usually performed all these actions correctly if addressed slowly and distinctly and in monosyllables. It was manifest that his comprehension of spoken words was aided by the close watch which he kept on the lips of the speaker, for if the same phrases were repeated in such a way that he could not see the face of the person addressing him he at first completely failed to comply with the requests made. It was interesting to note that after a few trials he seemed to become acquainted with the sounds, and readily did what was required of him. Any attempts to engage him in ordinary conversation were futile, and invariably elicited the reply: "I hear you, but I don't understand what you say."

Notwithstanding his difficulty in comprehending spoken language, there was no impairment of ordinary hearing. He heard and recognised a watch ticking at a considerable distance from either ear, and he recognised and named everyday sounds, such as the noise of street traffic, the bark of a dog, a railway whistle, and the noise produced by poking the fire. He seldom spoke voluntarily, but when he did his articulation was perfect. His remarks were always short and simple, apparently his vocabulary was small, and every now and then he would misapply a word. He could write readily and distinctly, and he read aloud with ease and with intelligence. When shown various objects, for example, watch, pencil, penknife, and coins of different values, he could name them all correctly and without hesitation. His musical faculty was impaired. Previous to his illness he could sing to some extent, and was fairly well acquainted with Scotch and other melodies, but when tested at the organ soon after admission he failed to recognise such well-known airs as "Auld Lang Syne" and "We're a' Noddin'," and was equally at a loss with the "Old Hundredth" and "God Save the Queen." The only air with which he showed familiarity was "Comin' thro' the Rye," and this he hummed with tolerable accuracy. He recognised by sound that the musical instrument which was played was an organ, and he could distinguish sacred from secular music. His intelligence seemed unaffected, and his memory, though good for past events, was miserable as regards the present. He was emotional, and easily depressed by trifling occurrences. Nowhere was there evidence of paralysis. The movements of the pupils and eyes were normal, and the appearance of the discs was natural. All the reflexes were in perfect order. The sounds of the heart were feeble but free from murmur; the left ventricle was slightly dilated; the arterial system as indicated by the condition of the superficial arteries, was atheromatous. The urine was healthy.

During the patient's stay in hospital his condition decidedly improved. At first he seldom spoke, but latterly he expressed himself with considerable freedom and fluency. He frequently volunteered remarks, and he rarely misused a word. His power of comprehending speech also increased to a certain extent, but it was still very defective when he left the infirmary on April 11th. The treatment which I adopted consisted mainly in attempts to remedy the imperfect perception of speech by speaking to the patient slowly and distinctly, and by the repetition of short words and phrases, exactly as one would do in trying to teach colloquially a foreign language.

Since the foregoing was written I have again examined the patient. He was still partly word deaf, and also, I fancied, a little deaf to ordinary sounds, but his faculty of expression had evidently further improved since he left the hospital. His speech was wonderfully accurate; only once or twice did he fall into error, using the word "pacified" for "satisfied," and "extinctly" for "distinctly." He told me that he had been to church the day before, but that he could only now and then comprehend what the preacher was saying though he heard his voice distinctly. With the view of verifying this statement I read to him a few sentences taken at random from a book, and I found that he could not understand a single word that I said.

On testing his musical faculty, it was at once apparent that a marked improvement had taken place since its condition was last investigated. He now recognised the "Old Hundredth" and "Auld Lang Syne," singing a few bars of the latter air, and he stated that other tunes which were played were quite familiar to him, though he had forgotten their

names. But his musical capacity could hardly be considered completely restored, nor could his powers be pronounced absolutely satisfactory, for, after listening attentively to "God Save the Queen," he came to the conclusion that the air which he heard was "Auld Sang Syne," with variations!

In commenting upon this case I would first direct attention to the account given of the onset of the symptoms. Clearly on February 11th a pathological lesion, some hæmorrhage or softening took place in the patient's left brain, resulting in the production of auditory and visual aphasia along with agraphia—he could not understand language, he could barely speak, he could not write, and he was evidently unable to read. In a few days agraphia and visual aphasia passed away, but the auditory aphasia persisted, thus indicating that the lesion must have involved the left auditory centre, and that the visual word centre had suffered only from the inhibiting effects of the injury in the neighbouring convolution.

On reviewing the symptoms previously detailed it is apparent that the case is far from being one of complete auditory aphasia. The patient has considerable powers so far as the production of language is concerned, but his capacity for understanding speech is greatly diminished, and his musical faculty is still capable of further cultivation. In all probability the symptoms are the outcome of a lesion which has damaged but not destroyed the left auditory centre, thus bringing about the changes which I have already detailed.

Lastly I would draw attention to the improvement which has taken place in the patient's condition since he first came under notice. This observation is in keeping with what seems to be a well-established fact—namely, that of all the forms of aphasia the auditory variety is the most susceptible of amelioration or cure, a circumstance believed to be due to the faculty possessed by the right auditory centre of acquiring through a process of slow education the special functions located in the corresponding convolutions of the opposite side.

[Shortly before leaving Aberdeen for San Remo I had another opportunity of examining the patient whose case is related above. He was then free from aphasic symptoms and there was no evidence of amusia.]

CASE OF PTOMAINÉ POISONING FROM EATING TURKEY.

By E. S. WORRALL, M.R.C.S.Eng., L.R.C.P.Lond.,
Crouch End.

On February 15th, at 6.20 P.M., I received an urgent call to Mrs. M., and found her in a collapsed condition, cold and clammy, the pulse 75, and the pupils contracted. I was unable to arouse her so as to obtain any answer to questions. There were no signs of injury from a fall or blow, no typical smell in the breath, and on looking carefully round the room I could find nothing to account for her condition. On questioning the servant and the mother's help, who were in the house all day, I found that Mrs. M. had not been well on the previous day, February 14th, when she complained of pain in the abdomen and vomited three times; and on the morning of February 15th she had vomiting and diarrhoea, and complained of pain in the abdomen. She took no breakfast and no food whatever that day, but a half-wineglassful of coca wine in the morning and about midday a little brandy and water, vomiting immediately after. About 2 P.M. she went to lie down on the sofa, where she remained till after the children came from school, about 5 P.M. Soon after she was heard to call out to her daughter, who went to her and found her on the sofa, and was alarmed as her mother seemed very ill, and could not talk properly. Later on I was sent for as above stated.

On further inquiry I ascertained that they had all been unwell after eating turkey at 2 P.M. the previous afternoon. The cook informed me that the turkey seemed all right when she was preparing it for roasting, but that when it commenced to cook she noticed it had an unpleasant smell, and the husband of the patient remarked on this when it was brought to table. All, however, seem to have eaten some of the bird, and Mrs. M. ate very little, but partook freely of

the gravy made from the giblets. The children, three girls and a boy, had only a little, and chiefly off the breast, as also did Mr. M. The son wanted to eat more, but Mr. M. took it from him as he did not think it good. In the evening and next morning Mr. and Mrs. M., three of the children, the mother's help, and the cook all felt unwell, three of them vomited, and all had pain in the abdomen and diarrhoea.

I administered an emetic to Mrs. M., which I repeated in a quarter of an hour. These did not act, and I at once passed the stomach tube and well washed out the stomach with warm water, little else returning than the water and a little mucus. The husband returned from the city at 8.30 P.M., and was much alarmed when I told him of his wife's condition. He himself had felt uncomfortable pains after leaving home early in the morning, and had been to a chemist's and taken a good draught of aperient water. I told him there was little doubt that it was due to poisoning by ptomaines from eating the turkey. I remained with the patient the greater part of the night. At about 11.30 P.M. she passed a copious motion under her, which was very foul smelling. I administered hypodermics of ether, etc., but could not arouse her by any of these means; she remained quite unconscious, breathing quietly; the abdomen was not distended, the pupils were moderately dilated and did not react to light; the conjunctival reflex was absent. In the morning I got Professor Sidney Martin to see her in consultation. He entirely agreed with the diagnosis, and advised continuation of the treatment with the hypodermic injection of ether and of strychnine. Nutrient enemata of peptonised gruel were administered. Reaction had now set in; the temperature was 101.6° in the axilla, and the pulse was 136. Dr. Martin also recommended me to use warm boracic lotion for repeated washing out of the large intestine. This I did, turning the patient gradually over from the left side, and back then to the right side, and back again in order to wash out as much as possible of the large intestine. The patient, however, remained comatose, never recovered consciousness from the time I first saw her, till death occurred at 2.10 A.M. on February 17th, she having been unconscious for 31½ hours. There was a rise of temperature on the evening of February 16th to 103.6°. The following is a copy of the notes I made at the necropsy, at which Mr. H. S. Elworthy, F.R.C.S., kindly assisted.

Height 5 feet 2 inches. Fairly well nourished. Pericardium contains a normal amount of clear fluid. Heart the size of deceased's closed fist, weight as removed 8½ ozs. Pulmonary valves normal, aortic valves normal; some irregular thickening of mitral valves (old). Tricuspid valve normal; some recent clot and fluid blood in the cavities. Heart muscle normal, no induration or degeneration noticed. Aorta, coronary arteries, and large blood vessels quite healthy; no staining. Tongue slightly furred; oesophagus normal, but some slight redness near the lower end. Larynx healthy, trachea and bronchi slightly red and infected. Right pleura no fluid and no adhesions, left pleura same. Right lung dark coloured on section, somewhat oedematous, otherwise healthy; left lung same; cut portions of both float in water. Peritoneum slight dulness and stickiness generally, where covering ascending colon more marked. Stomach no ulceration, some petechial patches about the lesser curvature, contents ½ ounce fluid (kept No. 1). Intestines: Petechiae along upper part of small intestine, more in large intestine in transverse colon; no glands seen in mesentery. Liver: Surface smooth, weight 3 lbs. 7 ozs., consistence diminished, cut surface greasy; gall bladder full of green bile. Spleen not enlarged, consistence normal, dark in colour. Right kidney 3½ ozs., capsule only slightly adherent, more friable than normal; left similar; both cloudy-looking on section. Bladder healthy, urine none present. Suprarenals normal. Uterus small, cavity tending to obliteration, otherwise healthy; slight amount of mucus seen at external os; ovaries normal. Meninges healthy, some slight amount of fluid under membranes, vessels on surface fairly full; nothing abnormal noticed on surface of brain; vessels at base quite healthy. Brain weighs 50½ ozs., healthy on section; about a drachm of clear fluid in the ventricles; left posterior cornu somewhat enlarged; small oedematous swellings on the choroid plexus on each side. Crura, pons, cerebellum, and medulla normal in appearance externally and on section.

REMARKS.

The course of the case seemed clearly to indicate poisoning by food. There was the partaking of tainted food which affected all the members of the household, some more than others. In the patient who died there was at first the combination of *malaise*, weakness, and gastro-intestinal symptoms which usually accompany food poisoning. These were, however, not accompanied by fever. This appeared later, and with the more severe symptoms may be taken to indicate bacterial poisoning as distinguished from chemical poisoning.

THE German Otological Society will hold its sixth annual meeting this year at Dresden on June 4th and 5th.

A NEW METHOD FOR LOCALISING BRAIN LESIONS.

By ROBERT H. COX, F.R.C.S.I.,
Shanghai, China.

THIS method supplies a simple and infallible means of mapping out on the scalp the positions of any (or all) of the underlying convolutions of the cerebral cortex, a result accomplished, with the "cerebro-graphometer" and its chart, almost automatically.

The cerebro-graphometer consists entirely of the mechanical device known technically as "lazy-tongs," formed into a circle with two accessory loops, one bearing the numerals and the others the letters A to V.

The chart shows, on a gnomonic projection, the boundaries of the lobes and convolutions of a hemisphere of the brain, with the lines of latitude and longitude corresponding to the numbers and letters of the instrument (Fig. 1).

Fig. 1.—A diagrammatic map (on a gnomonic projection) of the external surface of a hemisphere of the brain, showing the boundaries of the lobes and convolutions, and the lines of latitude and longitude corresponding to the engraved rivets of the instrument.

Localising is performed as follows: Extend the instrument and apply the end of the lettered loop, marked V, to the occipital protuberance and the other end to the glabella, then press down the loop to the scalp in the middle line and close the circle round the head, so that the 10 on the numbered loop will lie on the lettered loop. Consult the chart for the bearings, and place the number 10 on the letter of longitude, when the number of latitude will rest over the part sought for.

Fig. 2.—The same projected on the right side of the skull; also shows the instrument in position for localising.

Fig. 2 shows the instrument in position for localising; also the evolutions mapped out.