it becomes the duty of the Council of the Provincial Association to ponder well the probable effects of such a bill on the medical profession in the provinces.

The bill is intended to contain the constitutional principle of representation: and, true to its political prototype, the second clause of the bill asserts the power of taxation. The act is to be worked out by a most expensive machinery of registrars, councillors, and senate, aided a little by the police in Ireland, and certain schoolmasters in Scotland. The expenses to be defrayed by a capitation tax on "every registered or unregistered medical practitioner in the United Kingdom."

This is the first principle of the bill. How would the members of the other learned professions relish such a tax? How would a barrister, perhaps without a brief or client, or a clergyman without curacy or cure of souls, like to be so taxed? During the late war, a tax upon income was justly considered a great grievance, but here is a tax gravely proposed on persons who may have no income.

The second principle of the bill is that of self-government. How is this proposed to be carried out? The medical practitioners, scattered widely throughout each division of the United Kingdom, being registered in conformity to the act, are to choose from among themselves councillors, who are again to choose one governing senate. The election not to be of medical representatives of towns or districts of country, as in parliamentary representation, but to be by voting papers sent from all parts of the country to a metropolitan registrar, who, on the principle of the ballot, will nominate as councillors those who shall have the most votes. What must be the necessary result of this mode of election? The choice of councillors must, in every instance, fall on the faculty residing in the metropolis; who, from their condensed position, and personal intercourse, would have the power to nominate each other; and all that would remain for the provincial faculty, of Mr. Warburton's bill, would be the obligation of complying with its penal enactment. It is unnecessary to pursue the subject through the remaining clauses of the bill; the objections here stated are sufficient to show the Association that this, or any other bill based on similar principles, would be injurious to the medical profession in the provinces.—I remain, gentlemen, yours very sincerely,

JAMES M'CABE, M.D.

Member of the Council.

MEDICO-LEGAL TESTIMONY IN THE STOCKPORT CASE OF POISONING.

By JOHN RAYNER, Esq., Surgeon, &c.

THE proceedings and result of the Coroner's inquest, which was recently held at Stockport, on the bodies of Elizabeth, Mary Anne, and Catharine Sandys, are doubtless familiar to all our readers.

In the circumstances of exhumation and of the nature of the poison employed, the case of these unfortunate children bears a striking analogy to the celebrated one of M. Lafarge.

Through a feeling of reserve, which will be readily understood, we shall not allude here to any of the general evidence brought forward at the Coroner's inquest, nor to any of the facts which were there established, but shall simply publish the medical testimony; for a detailed account of which we are indebted to the kindness of Mr. JOHN RAYNER, of Stockport, by whom the medico-legal investigations were conducted in a very able manner.

The examination of the body of MARY ANNE SANDYS, æt. 4 years, took place at the Police Office, Stockport, 15th October, 1840.

There were no marks of violence visible externally, nor were there any appearances of inflammation in the mouth, anus, or genitals. The body was well formed and free from any appearances of disease.

Chest: The anterior edge of each lung was of a vermilion hue; the posterior edge of both much congested; the heart was empty and healthy.

Abdomen: The convex surface of the liver was of a bright red colour; the remainder of the abdominal viscera appeared healthy. The stomach and gullet being removed, and the contents secured by means of ligatures, the whole length of the intestinal tube was cut open, and patches of an inflammatory redness here and there noticed, more especially in the duodenum and upper part of the jejunum; the colon and rectum were free from these appearances. The uterus and its appendages, together with the kidneys and bladder, were quite healthy; the bladder was empty. The stomach having been emptied, was cut open, and presented marks of excessive inflammation on its entire surface; at the greater curvature of the stomach there was the appearance of a slough about one inch and a half in length, and half an inch in breadth. This portion of the stomach was remarkably thickened, and on it were recognized yellow gritty particles; there was also the appearance of another slough at the pylorus, about the size of a shilling, and several smaller ones near to it, about half the size of peas. The gullet was highly inflamed.

These appearances of sloughs were removed by macerating a few days in water, when the lymph that was here thrown out, giving this appearance, separated, together with a clot of blood, leaving the stomach entire beneath, and of a deep red colour. There was arachnitis to a considerable extent.

CHEMICAL EXAMINATION.

The contents of the stomach, together with the washings of it, were boiled for half an hour in distilled water, and thrown on a filter.

A part of the clear solution was put into Marsh's apparatus; the gas, being ignited, burnt with a blue flame, and deposited the metal on several portions of glass, together with its protoxide and deutoxide. One of these glasses was held over the spirit lamp, when the whole of the metal was volatilized before the red heat was produced; another had a drop of nitric acid applied to it; the delicate crust was thus easily detached, and speedily dissolved, leaving, when evaporated, a delicate whitish powder; to this was added a solution of the nitrate of silver, which converted it to a brick-red colour.

The second part of the clear solution was tested with ammoniacal nitrate of silver, ammoniacal sulphate of copper, and sulphuretted hydrogen. Scheele's green and the arsenite of silver were thus produced, together with a brownish yellow deposit, the impure sulphuret of arsenic. The stomach, gullet, and half of the duodenum, cut into small pieces, were next boiled with pure potass for half an hour, acidulated with acetic acid, and filtered. The residue was of a brownish muddy appearance; this was evaporated to dryness, and again boiled in successive portions of distilled water, filtered, and acidulated, as before. Sulphuretted hydrogen produced a yellow precipitate, which, being collected and dried, was reduced with black flux; thus a metallic incrustation was obtained, possessing all the characteristic appearances of arsenicum, which was afterwards converted into arsenious acid.

The stomach and all the deposits left on the filters were boiled in a weak solution of nitric acid for half an hour, or thereabouts, and filtered. This solution was of a yellow turbid appearance, and on being neutralized with potass, became of a beautifully clear amber colour. The trial test of ammoniacal nitrate of silver produced a very abundant characteristic lemon-coloured precipitate; ammoniacal sulphate of copper scarcely acted upon it; lime-water produced a flocculent precipitate, which, owing to the colour of

the solution, appeared of a yellow hue; sulphuretted hydrogen threw down a copious yellow precipitate, on the addition of acetic acid. The dry sulphuret was next obtained, which was soluble in ammonia, and insoluble in muriatic acid; it was washed and reduced with black flux. A metallic crust, of an iron grey externally, and a dull white internally, was obtained, which was afterwards converted by the spirit lamp into arsenious acid, and dissolved in boiling water, which had been previously acidulated with nitric acid. This solution was neutralized with potass, and, on being retested, produced, with lime-water, a white flocculent deposit; with ammoniacal sulphate of copper, Scheele's green; with ammoniacal nitrate of silver, a yellowish white; and with sulphuretted hydrogen, a lemon-yellow precipitate.

Another crust, boiled in *distilled water alone*, produced arsenite of lime, Scheele's green, and a *more* characteristic appearance of the arsenite of silver.

The remaining part of the amber-coloured solution was put into Marsh's apparatus, and produced the metal many times in a very satisfactory manner. Nitric acid, on being applied to one of these crusts, converted it into a whitish powder; nitrate of silver, which was afterwards applied, changed it to a brick-red colour.

All the refuse matters were next collected and dried, then mixed with nitrate of potass and burnt. This incinerated mass was boiled in a weak solution of nitric acid, filtered, and put into Marsh's apparatus. The metal was obtained from this source also.

The exhumation of Elizabeth Sandys, æt. 6 months, who died on the 23d September, 1840, took place on Thursday, the 15th October, 1840, at the burial ground of the Roman Catholic chapel, Edgeley.

The coffin and corpse having been duly identified, the examination of the body was proceeded with. It was well formed, well cushioned with adipose tissue, and bore no external marks of injury. The smell was not very offensive. The face was of a leaden hue; the eyes were sunk in their sockets; the epidermis easily peeled off the legs and arms; the skin of the belly was of a green colour.

Chest: The lungs were very pale, in a state of decomposition and emphysematous; the posterior surface of the heart, particularly on the left side, was highly inflamed.

Abdomen: The external surface of the stomach was of a dark red colour, especially at its left extremity, where it was much softened, and tore with the least touch; the smaller curvature was of the same colour, but was not softened; on opening it, the lining membrane was found to be inflamed throughout, and covered with a brown viscid mucus, amongst which white specks were distinguished.

The upper part of the duodenum was highly inflamed; the lining membrane of the jejunum, at its upper half, was inflamed and ulcerated, and in some places so soft as to be easily torn; white specks were recognizable in this bowel also. One of the ulcerations was of the size of a shilling, and had perforated the bowel; another, near the larger bowel, was the size of a fourpenny-piece. At the commencement of the large bowels there were marks of excessive inflammation.

The kidneys were, to all appearance, healthy, but contained some yellow gritty particles, like sand.

The uterus and its appendages, together with the bladder, were healthy.

That part of the liver lying over the small curvature of the stomach, and a portion of its under surface (*lobulus spigelii*) were inflamed.

The spleen was healthy; the brain was very soft, and far advanced in putrefaction.

The contents of the stomach of ELIZABETH SANDYS were boiled with pure potass in distilled water for the space of half an hour, and afterwards thrown on a filter. The solution, which was rather turbid, and of a yellow colour, was tested in the following manner.

Marsh's apparatus produced the metallic arsenic very satisfactorily, which was dissolved with nitric acid, and had afterwards applied to it the nitrate of silver. The same results followed as in the case of Mary Anne Sandys, viz. first a white, and then a brick-red colour.

Ammoniacal nitrate of silver produced a brownish deposit.

Ammoniacal sulphate of copper an abundant green precipitate.

Lime water did not throw down anything.

Sulphuretted hydrogen changed the yellow solution to a brown colour.

The stomach and part of the bowels were next boiled in distilled water, with potass, for a considerable time, and filtered. The solution, which was turbid, was freed from organic matters in the following manner:—1st, acidulated with nitric acid; 2d, precipitating with nitrate of silver; 3d, filtering and removing the excess of silver by, 4th, chloride of sodium; 5th, neutralizing with potass; 6th, acidulating with acetic acid, and, 7th, passing a stream of sulphuretted hydrogen gas through it.

This last part of the process threw down a yellow precipitate, the sulphuret of arsenic, which was washed, collected, and dried, and afterwards reduced to the metallic state by the aid of the spirit lamp and black flux. The metallic crust thus obtained, was afterwards converted into arsenious acid by the spirit lamp, which was dissolved in boiling distilled water, and submitted to the tests of lime-water, ammoniacal sulphate of copper, and ammoniacal nitrate of silver, and in every instance produced satisfactory results; the arsenites of lime, copper, and silver, being thus obtained.

The stomach, which had already been boiled, together with the remaining portion of the bowels, was then boiled in a weak solution of nitric acid for an hour. This solution again produced, by Marsh's apparatus, a deposit of metal. The remaining portion of it was neutralized with potass, acidulated with acetic acid, and filtered. A clear yellowish solution was thus obtained, which was tested in the same manner as the *contents* of the stomach. Ammoniacal nitrate of silver gave a yellow, ammoniacal sulphate of copper a green, and sulphuretted hydrogen a copious yellow precipitate; lime-water had no effect on it. The sulphuret of arsenic was collected, washed, and dried, and was soluble in ammonia, and insoluble in muriatic acid. This was reduced to a metallic state by means of black flux.

The exhumation of the body of Mary O'Neil, æt. 18 months, who died Sept. 30th, 1840, took place at the Roman Catholic burial ground, Edgeley, on Monday, the 19th of October, 1840.

The body having been identified, was removed to the adjoining school-room. On opening the coffin there was a most offensive odour. The corpse was much emaciated, and bore no external marks of injury. The face was very putrid; the eyes had sunk in their sockets; the body was in many places covered with white mould; the epidermis easily peeled off.

Head: The brain was very soft and putrid.

Chest: The parts contained in the chest much putrified. The lungs occupied a very small space.

Abdomen: The parts contained in the abdomen were also becoming very putrid. The stomach, which was full of food, was in a state of gelatinous softening, particularly at its left side. Red patches were seen here and there on the bowels, but not of an inflammatory character. The stomach and bowels being removed, were tested, together with their contents, as in the cases of the Sandys', but no traces of poison could be detected.

Examination of the body of Catherine Sandys, exhumed on Monday, Oct. 26th, 1840, from the burial ground of the Catholic chapel, Edgeley. Died July 16th.

The coffin was made of deal, and buried in a common

grave about three feet deep. The inscription on the plate was—"Catherine Sandys, aged 2 years 4 months, 1840." On removing the coffin lid, the face of the corpse was exposed. The forehead was covered with white mould, and the features considerably decomposed. There was a cap on the head of common net, with a plain net border. The rest of the body was enveloped in a piece of calico, on removing which the body was discovered to be that of a female about the age marked on the coffin plate. The right arm was placed across the chest. The skin of the *belly* was not in a decomposed state; that of the chest and the legs was more decomposed, and separating on the feet. On opening the chest, the lungs were in a state of far advanced decomposition, and collapsed; much more so than the heart. The ribs had separated from the spine. On cutting through the integuments of the abdomen, (which exhibited no external marks of decomposition,) the fat was firm, and of the consistence of suet; the *belly* was flat. The stomach and bowels were in a good state of preservation. The liver was more decomposed than any other parts; and the skin and flesh of the back, which were in apposition with it, were externally decomposed. The intestines exhibited patches of yellow in different parts, which were visible through their coats; they also contained a small quantity of gas.

The *stomach* and *bowels* were first examined. The whole interior of the stomach had a reddened appearance; its left side was thickened and corrugated. Its right side was much inflamed. It was empty; but on careful inspection, a few very small whitish or greyish specks were discovered adhering to its living membrane. The *duodenum* had also a red appearance, and contained a few yellowish white specks.

The *jejunum* was likewise red, and contained a few white gritty particles of matter. At the upper part of this gut there was a bright yellow stain.

The *ileum* contained a *yellow pasty substance*, which gave an orange tint to the fingers.

The ascending and transverse portions of the *colon* had a healthy appearance. The valve between the small and large bowels (ileo-cæcal) was inflamed; the descending part of the colon was of a rosy hue.

The *rectum* was healthy, and filled with *fæces* of a light yellow colour.

The liver appeared healthy, though more putrid than any other part of the *belly*. Its gall bladder was empty. The spleen, pancreas, and kidneys, were healthy, as was also the urinary bladder.

The whole of the stomach and bowels were in an excellent state of preservation. The lungs were very soft and putrid. The heart appeared redder than natural.

The stomach and bowels were cut into small pieces, and boiled in distilled water with pure potass for the space of half an hour, and filtered.

A portion of this solution (after being rendered neutral with potass) was used for the trial test of ammoniacal nitrate of silver, which cast down its characteristic lemon-coloured precipitate. The remaining portion of it, after being acidulated with acetic acid, was submitted to a stream of sulphuretted hydrogen gas for about half an hour. An abundant sulphur-yellow precipitate was thus obtained, and dried in a watch glass over a vapour bath, and became of a brownish yellow colour.

One part of this precipitate was next introduced into a Berzelius tube, and covered with black flux, and reduced by means of the spirit lamp. Brilliant specks of a metallic lustre, and of an iron grey colour, were easily detected, and an alliaceous odour was recognized.

A second portion of it was again operated on in a similar manner, and a satisfactory metallic crust was obtained. The end of the tube containing the flux was next filed off, and the *crust* carefully examined. Its exterior was of the iron grey colour of arsenicum. Its interior had a dull greyish white appearance. This metallic crust was then converted into arsenious acid by the spirit lamp.

A third portion of the powder was put into Marsh's ap-

paratus, and the gas being ignited, burnt with a blue flame, and deposited a metallic crust on several pieces of glass.*

Several of the glasses containing crusts, and the arsenious acid obtained in the Berzelius tube, were boiled for upwards of half an hour in distilled water, and filtered. To this filtered solution, in divided portions, the same liquid tests were applied, when the arsenites of silver, copper, and lime, and the sulphuret of arsenic, were obtained. One of the glasses containing the metallic crust from Marsh's test, on being held over the spirit lamp, soon lost it by volatilization, and this before a red heat was applied.

Another, after being boiled in distilled water for some minutes, became of a pure white.

ANALYSIS OF ENGLISH JOURNALS.

DR. GRAVES ON SUDDEN AND VIOLENT DELIRIUM SUCCEEDING MACULATED TYPHUS FEVER.

DR. GRAVES having expressed a doubt whether any writer has illustrated with sufficient details the fact, that delirium of a most violent and dangerous description sometimes suddenly supervenes in patients who, to all appearance, have passed favourably through the various stages of maculated fever; and having alluded to an instance of this affection already published by him, says, it is evident, from the nature of the means successfully employed in treating it, that this alarming seizure has little or no affinity to the delirium which, in the first stages of fever, so often accompanies the inflammation or congestion of the brain, but is rather allied to delirium tremens, delirium traumaticum, and acute puerperal madness.

CASE I.—Four years ago Dr. Graves attended a young gentleman labouring under maculated fever, through which he had gone favourably; on the sixteenth day all danger seemed over, his pulse had fallen to 60, his tongue was moist, his eyes were clear, he had no thirst, and not the slightest headache, nor any appearance of cerebral determination. There was present, certainly, a degree of nervous excitement tending to produce want of sleep. An opiate draught was prescribed, but this unfortunately was not administered, and next day he was in a state of high delirium; his pulse beat 60, his skin was cold, his countenance collapsed, and he had been during the night wholly sleepless. His life was saved with great difficulty, by a nutritious diet, wine and black drop exhibited freely and repeatedly, and fomentations of the legs.

CASE II.—Mr. Buckton, a pupil of the Meath Hospital, a young man of studious habits, was attacked with the prevailing fever; maculæ were visible on the 5th day, but there were no symptoms of a severity to call for very active measures; with the exception of the early occurrence of tremors and subsultus tendinum, the disease was mild, and on the morning of the 17th day, Dr. Graves found him in a very promising condition,—his pulse down to 60, his tongue moist, his skin of a natural temperature, and no symptom present but a certain degree of nervous excitement. To obviate this an enema, containing twenty drops of tincture of opium, was ordered to be administered nightly. The enema was unfortunately omitted for one or two nights. The muscular tremors increased, and a good deal of anxiety of mind and quickness of manner supervened; this was soon followed by delirium so violent that it was necessary to call in the aid of three or four persons to keep him in bed. Opiates were first tried, but failed. Tartar emetic was then freely administered along with extract of belladonna; of the latter he took five or six grains in the twenty-four hours. Subsequently the tartar emetic was omitted, and black drop administered, when, after forty

* The deposits from the sulphuret in this case, differed from those obtained by the arsenious acid, inasmuch as the metallic crust consisted of a very narrow rim of metal, surrounded by a yellowish deposit. There was neither the white nor the black appearance which surrounds the metal obtained from arsenious acid; and their yellow appearance became pure white when boiled in distilled water.