detected an alkali, originally a carbonate, converted by the vinegar into an acetate, and which was present in some of the samples in large quantity, and also in one, if not two cases, alum.

The Jurors' report states, moreover, that Messrs. Batty and Co. use "a colouring material from vegetables and green foliage." Here, again, the information given is defective, the nature of this material and the vegetables or plants from which it is prepared not being specified. We have a difficulty in understanding in what way the green colour of one vegetable can be extracted and introduced into another, since the chlorophyll is located in certain cells from which it is not easy to remove it; and if this were accomplished, then it would have to be incorporated with the texture of the vegetable to which it was transferred. Further, when thus introduced, this colouring matter being of the same nature as that of the gherkins, beans, or other pickle to be preserved, it would be liable, like it, to be similarly affected by the salt, vinegar, and heat used in the process of preservation.

The case of pickles affords a very striking illustration of the unsatisfactory grounds upon which these Exhibition medals and awards are both withheld and bestowed. One English firm, whose pickles were entirely free from copper, fail to secure an award because, it is alleged, their pickles are of a bad colour and contain a little iron derived from the boilers; the facts being—first, that their colour is just that of all vegetable substances preserved in the natural way, and without the addition of copper or any other chemical reagent; and, second, that since they were never in metallic "boilers" at all, they could not have obtained "a little iron" from that source. Other firms, also English, obtain either medals or honourable mention, although their pickles contain copper. Lastly, the foreign firms alluded to secure rewards on the ground that their pickles, as alleged, being free from copper, are still of a green colour; and yet in the pickles of two of these firms minute quantities of copper are found, in all three an acetate, derived from the carbonate of an alkali—probably soda—added, and in one, if not two of them, alum as well.

Even in the entire absence of copper, it is very questionable whether medals ought to be awarded for pickles made green with alkali and alum. We object, and rightly, to have our bread thus doctored, nor do we see any good or sufficient reasons why our pickles should be drugged, and this for the mere sake of a few shades of colour and at the cost of purity.

We now bring these reports to a conclusion. In reviewing the results of the somewhat minute and extensive examination we have made of the Substances used for Food exhibited in the British Department of Class III., we feel great satisfaction in expressing an opinion highly favourable of that display; the quality of the articles shown was in general very superior, and their purity great. Extensive as this collection was, one could not help observing that the number of British non-exhibitors of most articles for the most part greatly outnumbered the exhibitors, so that to some extent it may be questioned—and the remark probably applies with greater force to some of the other classes—how far the Exhibition of 1862 was a real exponent of the progress and actual condition in this country of the several branches of manufacture represented thereat.

As stated in our first report, Tobacco is classed with Food. Although to this arrangement we were disposed to demur, it might yet be argued that the use of that substance might be discussed on much the same grounds as that of alcohol, and that therefore its introduction amongst articles of food is not so incongruous as it might at first sight appear; nevertheless, this is scarcely the fitting place to consider the relative qualities and merits of the several kinds of tobacco exhibited. While, therefore, we thank the several exhibitors of this article, particularly Mr. Archer, Mr. Baker, Mr. Hyams, and Messrs. W. D. and H. O. Wills, for the facilities they have afforded us in examining their cases, we must defer for the present any detailed notice.

There are one or two contrivances, however, designed to render tobacco-smoking less injurious to which a very brief allusion may be made.

Messrs. Goodes have patented a glass cigarette holder, which, in itself so pure and clean, prevents the lips from coming in contact with the tobacco-juice in smoking. Messrs. Hyams and Co. adopt two expedients for rendering tobacco less noxious; one is to treat it with a weak alkaline solution, and the second to insert in each cigar a prepared charcoal plug, which, doubtless, absorbs much that is injurious. Both these expedients are ingenious and useful.

Not only are our thanks due to the several exhibitors for the

readiness and liberality with which they placed the contents of their cases at our disposal, but also to Mr. Quin, the Superintendent of the Department, for the obliging courtesy displayed on several occasions.

In our opening report we referred to some of the objections of a general character which might be urged against the system pursued of awarding medals, the grounds and the conditions of these awards not having been clearly defined: one of the chief of these was, that the medals applied to a certain article or articles only as displayed in the Exhibition; but that it by no means followed that articles of similar excellence and quality would be supplied to the public, who, however, would still be tempted to purchase by the knowledge of the fact that the vendor was the holder of an Exhibition medal.

Other more special and particular objections against the system adopted are—

That the time allowed for the jurors to make their inspection and draw up their reports was too short, and the labour involved too great, to admit of justice being done. The result is, that the claims of some exhibitors have been too easily allowed, and those of others altogether overlooked, great injustice being thus committed.

That the composition of many of the juries was in a high degree objectionable, being composed in part of men engaged in the same lines of business as many of the exhibitors, and therefore having rival interests.

A third objection of a somewhat similar nature is, that some of the juries, not possessing practical knowledge of the articles of which they were made the judges, had to be guided by the advice of other and practical persons, who either were themselves exhibitors or who had private interests of their own to serve.

These and similar objections all point to the necessity that, on the occasion of any future Exhibition, the principles on which the awards shall be conferred should be strictly defined beforehand, and that greater care should be observed in the formation and constitution of the juries.

ON THE ARSENICAL IMPURITIES IN MEDICINAL BISMUTH, WITH A MODE OF PURIFICATION.

To the Editor of THE LANCET.

SIR,—The recent case of arsenical poisoning in Wiltshire has brought prominently before the public the fact that the processes adopted in the manufacture of the medicinal preparations of bismuth are very imperfect, and permit the presence in these most useful articles in the materia medica of large quantities of a highly dangerous and noxious ingredient—namely, arsenic, in some form or other. It therefore becomes most desirable that the attention of manufacturers should be called to this circumstance, in order that they might produce an article free from such dangerous impurities. Since my return from Hendon, I have examined fourteen different samples of this medicinal agent, amongst which were preparations obtained from the dispensaries of the Bristol Royal Infirmary and the Bristol General Hospital, as well as samples from some of the first pharmaceutical establishments of this city and Clifton also, and in each case have invariably detected the presence of arsenic. Some of these samples have contained as much as 1 grain of arsenic in 433 grains of the article examined; others, only 1 grain in 1000 grains. Such quantities, although minute when given in the usual medicinal doses, yet, under a similar combination of circumstances as those occurring in the case in question, might lead to very serious consequences, as it would be impossible to establish the fact of a criminal administration of the poison if bismuth in its present impure condition had been administered medicinally.

Some preliminary experiments have shown me that it is possible to remove the arsenical impurities by a very simple process, and one which would not add much to the cost of the material. On boiling either of the insoluble salts of bismuth with sufficient quantity of a solution of caustic soda or potassa, the arsenic is quickly removed in a soluble form; and the residue, on treatment a second time with the same reagent, and subsequently well washing it by large quantities of water and decantation, it is rendered perfectly pure and fit for medicinal purposes. I am not aware whether this process has been hitherto proposed, but it has succeeded perfectly in purifying some samples of nitrate and carbonate upon which I have tried it in my own laboratory.

The occasional existence of arsenic as an impurity in the

bismuth of commerce was a fact well known to me; but it was not until my return from giving evidence before the Wiltshire magistrates that I became aware of its almost universal presence; and permit me to express my acknowledgments to Dr. B. W. Richardson for having called my attention to this circumstance, my subsequent experiments having fully confirmed the truth of his observations.

It is not for me to decide whether this was the source of all the poison in the case in question. However, I think *not*; for we should then have to imagine that at least one ounce of impure bismuth had been taken by the patient in order to account for the quantity of arsenic found by me; and although all the arsenic had been retained in the viscera of the deceased, yet by some extraordinary means the *whole ounce* of bismuth had been evacuated with the exception of a mere trace, for scarcely one-twentieth part of a grain remained—a difficulty which in my opinion it is impossible to overcome.

I remain, Sir, yours obediently,

Bristol, Dec. 1862.

W. BIRD HERAPATH, M.D.

THE

LANCASHIRE DISTRESS MEDICAL FUND.

The following is the list of contributions to the present time:—

The Proprietors of THE LANCET ...	£100	0	0
Dr. Watson, President of the College of Physicians ...	5	0	0
James Luke, Esq., President of the College of Surgeons ...	2	2	0
Dr. Babington, President of the Royal Medical and Chirurgical Society...	2	2	0
George Critchett, Esq., President of the Hunterian Society ...	5	0	0
Dr. F. Sibson, President of the Medical Society of London ...	3	3	0
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Dr. Tucker ...	1	1	0
Dr. Waller Lewis ...	2	2	0
Messrs. Bunce and Groves ...	5	5	0
Dr. Purvis ...	2	2	0
E. G. (Weekly, 1st Cont.) ...	0	5	0
Frederick Wildbore, Esq. ...	1	1	0
B. W. H., a Fox hunter ...	5	5	0
The Compositors employed on THE LANCET	1	10	0

Subscriptions will be received on account of the "Lancashire Distress Medical Fund" at the London and Westminster Bank, (St. James's-square,) or at THE LANCET Office.

THE DANGERS OF HOME DOCTORING.—A surgeon of Birmingham recently prescribed, for a woman of that place, a medicine containing morphia, for the cure of a cough, which had the desired effect. Shortly afterwards, on her infant suffering likewise from cough, the woman administered to it "some" of the medicine, which was attended with a fatal result. The coroner's jury which was summoned on the occasion, apparently wishing to avoid casting censure either on the surgeon or the mother, returned the singular verdict, "Died by the visitation of God."

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen passed the first part of the Professional Examination for the Licence of the College on the 5th inst.:—

Barker, William Lewington, St. George's Hospital.
 Brietzeke, Henry, H.M. Dockyard, Deptford.
 Colborne, Anthony Charles, St. George's Hospital.
 Currie, John Legge, St. Bartholomew's Hospital.
 Fairbank, Frederick Royston, Manchester School of Medicine.
 Moore, Alfred Montgomery, Lock Hospital.
 Sampson, John Henry, Charing-cross Hospital.
 Smith, Thomas Howard, Birmingham.
 Spooner, William, University College.
 Woodman, Samuel, St. Mary's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 4th inst.:—

Eddowes, Ralph, King's College Hospital.
 Griffiths, Thomas, Dystwyln-fawn, Carmarthenshire.
 Laver, Edward, Padham.
 Machin, Edmund Spooner, Erdington.
 Pick, Thomas Pickering, Waterloo, Lancashire.
 Rine, John, Lawn House, Wincanton.
 Taylor, William Frederick, Liverpool.

On the 6th inst.:—

Curtler, Henry, Droitwich.

The following gentlemen passed their first examination on the 4th inst.:—

Cottin, Thomas Wilson, St. Bartholomew's Hospital.
 Richards, Joseph Pecke, King's College Hospital.
 Smith, Solomon Charles, Sydenham College, Birmingham.
 Turner, John Sidney, Guy's Hospital.

THE LONGRIDGE PRIZE OF £40 for general proficiency in Medicine and Surgery at University College has been conferred on Mr. William Henry Griffin.

BEQUESTS.—The late James Walker, Esq., president of the Institute of Civil Engineers, has left £500 each to the London and Westminster Hospitals, and £50 to the Western Dispensary.

THE FRENCH ARMY IN MEXICO is suffering most severely from malaria. The ambulances and hospitals are crowded with the sick and dying. Offensive operations are not to be renewed until a sufficient medical staff is provided.

ST. THOMAS'S HOSPITAL.—Mr. James Adams, one of the Governors, has placed upon the requisition for the next Court of Governors a notice for rescinding the vote of £15,000 for the erection of an accident ward and dispensary.

A CONVALESCENT HOSPITAL, intended as an auxiliary to the Newcastle upon-Tyne Infirmary, has been inaugurated in the healthy vicinity of Marsden Rock, and some patients have already been transferred to it.

ASBESTOS PAPER is now made in the Northern States of America, where the material is found in long silken fibres. Writing or printing may be read after the combustible part of the paper has been burnt. It will bear handling if carefully used.

HEALTH OF INDIA.—The "Bombay Gazette" of the 12th ult. reports that sickness is on the increase in Peshawur, and that cholera has made its appearance in Poonah; it has also broken out in her Majesty's 93rd Regiment, Sutherland Highlanders.

LANCASHIRE DISTRESS.—A sick kitchen has been opened in the Town-hall, Blackburn, and is of considerable service. The infirmary, now being completed, is about to be opened as a general sick kitchen, but funds are still wanted to complete the work.

THE NIGHTINGALE FUND.—The plan for training hospital nurses by means of this fund, which has for more than two years been successfully practised at St. Thomas's Hospital, has been recently adopted at King's College Hospital, under the direction of the lady superintendent of St. John's House.

QUADRUPLE BIRTH.—The wife of a gentleman's coachman, named Garrett, was delivered on the 29th Nov., at Cranfield, near Newport Pagnel, of four girls, three living and one dead; two have since died; the fourth is thriving, and likely to do well.

MILITARY SANITARIA IN BOMBAY.—Sir Hugh Rose is advocating the establishment of military sanitaria in Bombay, on the ground that by their means the effective strength of the army would be one-fourth or perhaps one-third greater than at present.