

knew of examples of furnace crowns and furnace sides of steam boilers with salt water tumbling in on account of the deposit of lime or salt on those parts; and it was always considered to be the result of too little blowing off, any such accident being prevented by sufficient blowing off. Were there not other deposits formed at a greater degree of saturation? Suppose they had a quadruple strength of salt in the boiler, was the salt deposited of an injurious kind when it got to a certain density? When did the injurious deposit begin? He believed that when water got to those densities, the lime and the salt formed a crust, and became a non-conductor, and the surface got nearly red-hot, and tumbled in. Now, if the lime came out at a temperature of 220 deg., one would suppose that it would do the same at 230 deg. or 240 deg.

"Mr. James R. Napier answered that the sides of most furnaces bulged between the stays, but he did not know the cause of it.

"Mr. Lawrie remarked that there seemed to be one very important fact ascertained—that the extensive use of refrigerators could not be attended with the good that was expected from them.

"Mr. Elder had observed that the regenerators in the *Shamrock* and *Thistle* wore away rapidly at the ends of the tubes, which were of brass, where the current of water impinged against them, which he believed arose from the mechanical friction caused by the velocity of the water. He would have expected that iron tubes would have gone much more quickly; for in the cases he had mentioned there was no appearance of galvanic action.

"Mr. Lawrie said the old refrigerators did not wear away quickly, although the water struck against their brass ends.

"Mr. Thomas Russell had seen regenerator tubes worn away both from mechanical action and other causes, such as by rust; whilst he also knew that they worked about ten years in the West India boats, and yet seemed pretty perfect after that, and certainly not worn out: so much so, that when they got new boilers, they repaired their regenerators, and continued to work them for years after that. He did not know whether they were still working them."

NEW BOOKS AND PUBLICATIONS.

JOHN GODFREY'S FORTUNES. Bayard Taylor. Hurd & Houghton, publishers, New York.

There are few forms of human experience that have more interest in narration than the joys and sorrows of literary life. "John Godfrey's Fortunes" is such a narrative, and in its pages those who have never trod the steeps which lead to fame, may read the trials and temptations which beset men of this profession. The author in his preface disclaims any intention of identifying himself with the hero of the book, but it is manifest that he has passed through similar scenes and given the reader the benefit of his experience.

Regarding the work itself, no better picture of American social life, in some of its humbler phases, has appeared for many a day, and the style is easy, connected, and flowing throughout.

Deep down in the heart of the hottest pursuer after gold there is a corner which holds a remembrance of earlier days, and brighter scenes than the temples of money changers present. The plow in the newly turned furrow, the bobolink balancing on the clover tops, the cattle on a thousand hills, the birch stems that were gnawed, and the wintergreens that were plucked, are unforgotten memories of the past. Conjoined with these are the hopes of youth and the trust and faith in the general goodness of mankind. The rush and jostling of the throng cover these memories up, and cares grow over and bury them, until some such book as "John Godfrey's Fortunes" unlocks the chamber where they sleep and wakes them into life. One renews his youth, and forgets the sarcasm, the cynicism, or worse, which surrounds him, and is the better, therefore, in reading this simple story, told in an unostentatious manner. No better book for a holiday present could be given, and we trust that it will find ready sale.

ELIANA. Charles Lamb. Hurd & Houghton, New York.

"The king's chaff is as good as other people's corn," says the motto on the title page of this work;

a palpable apology for the poverty of the contents. It is very questionable taste to delve among the literary rags and tatters of great authors and exhume productions which in their own wisdom they refrained from giving to the public while living. Great writers have their moments of weakness, their periods when the muse, or the brain, is *en dishabille*; why shall these be revealed in all their nakedness to public gaze? Why shall we give unimpeachable evidence to the public that Charles Lamb could write platitudes as well as the most hackneyed penny-a-liner? This is what "Eliana" does, and if the gentle writer were alive he would not have suffered it to appear.

A common place by Charles Lamb falls as dull and cold upon the ear as one by John Smith, and the king's chaff is just as bitter to the tongue as the husks the swine did eat. "The Pawnbroker's Daughter" is the veriest balderdash that ever was written, and the only thing in "Eliana" that bears the imprint of the beautiful genius of Charles Lamb, is "the adventures of Ulysses." In this olden fragment of Grecian mythology there is some trace of the gentle fancy of the author of "an essay on roast pig."

Let us have posthumous works that keep our favorites clothed and in their right mind, but let no man throw a stone upon their monuments that disgraces them. Let us not rake up from oblivion all their weaknesses, so that the critic can shake his locks at them and say, "thou, too, hast written trash."

OUR FARM OF FOUR ACRES. James Miller, Publisher, 522 Broadway, New York.

The value of practical information on any useful subject is well shown by the popularity of this little work. It has run through twelve editions, and a demand still exists. In its pages the experience of two ladies with a farm of four acres is detailed at length, and the several delays, losses, incidents and accidents in making butter, curing pork, keeping poultry and pigs, are narrated in a lively style and lucid manner. Indeed, the book derives no small value, apart from the experiences set forth, from the very absence of pretension to literary display. Many of our readers who reside in the country own small places, and they can learn a great deal from this little book which will prove a lasting benefit.

HAND-BOOK OF HYGIENIC PRACTICE. R. T. Trall. Miller & Wood, 15 Lighthouse street, New York.

Those who believe cold water to be a specific for every ailment human flesh is heir to, and find more virtue in bran bread and coarse food of a farinaceous character, than in the goods the gods provide, will be interested in this work. In the front part is a compendious account of how delicious puddings, pies, bread, etc., can be made from indian-meal, brown flour, and similar substances. The directions for applying cold water as a curative are very full, and the book will no doubt have a good circulation.

Dog Fish for Fuel.

At a meeting of the Natural History Society on Wednesday evening last, an interesting account was given of the dog fish, one of the lesser sharks, its habits and the method of taking and curing it for the oil it contains. One curious fact about the species is that the flesh is also filled with oil, so that it is often dried and used for fuel, making a quick, lively blaze. The oil brings quite a high price in the market, and is an excellent lubricator. An account was also given of an efficient method of driving rats away from ships and dwelling houses, by means of chloride of lime, sprinkled around freely, taking care to allow them a means of escape. The effect is, that in a few days they will all seek pleasanter quarters. This was thoroughly tried in a ship, placing planks from one deck to another, by which means they all made their escape, and the dangerous and troublesome remedy of smoking the vessel was avoided. The meetings of the society in their new building on Berkeley street are quite well attended and full of interest.

Detecting Nitro-Benzol in Oil of Bitter Almonds.

This test consists in acting on the adulterated oil with sodium in the presence of alcohol. This metal, in contact with pure oil of bitter almonds, disengages gas, which is augmented by the addition of alcohol,

and white flocks are formed. Nitro-benzol, under the same circumstances with alcohol, becomes deep brown or black and viscid. In testing the adulterated oil, take ten or fifteen drops of it, add four or five drops of alcohol and a fragment of sodium; a brown deposit, approaching black, in proportion as the nitro-benzol is in excess, occurs. The reaction is instantaneous, and when the oil contains from 30 to 50 per cent. of nitro-benzol one minute is sufficient to obtain a thick, brown liquid.

MARKET FOR THE MONTH.

By the list of prices below it will be seen that the market for the last month has experienced no very great change, excepting the remarkable advance in beef. The prices of all imported articles, of course fluctuate with the currency, as they must be paid for in gold. For instance, the price of lead is very steady at 7 cents per pound, in gold, but on some days it can be bought for a cent per pound less in the afternoon than in the forenoon, owing to the decline in gold.

	Price Nov. 30.	Price Dec. 29.
Coal (Anth.) @ 2,000 lb.	\$9 00 @ 10 50	\$9 50 @ 10 50
Coffee (Java) @ lb.	50	48 1/2 @ 50
Copper (Am. Ingot) @ lb.	48 @ 49	48 1/2 @ 49
Cotton (middling) @ lb.	1 20 @ 1 30	1 14 @ 1 15
Flour (State) @ bbl.	\$9 65 @ 10 25	\$9 45 @ 10 25
Wheat @ bush.	\$2 50 @ 2 80	\$2 12 @ 2 80
Hay @ 100 lb.	1 45	\$1 50 @ 1 65
Hemp (Am. drs'd) @ tun. 320 00 @ 350 00		\$340 00 @ 400 00
Hides (city slaughter) @ lb.	13 1/2 @ 14	13 @ 13 1/2
India rubber @ lb.	70 @ 1 15	70 @ 1 20
Lead (Am.) @ 100 lb.	\$15 50 @ 16 00	15 00
Nails @ 100 lb.	\$9 00 @ 10 00	8 50 @ 9 00
Petroleum (crude) @ gal.	48	50 1/2 @ 51
Beef (mess) @ bbl.	\$7 00 @ 12 00	19 00 @ 24 00
Saltpeter @ lb.	30	30
Steel (Am. cast) @ lb.	30 @ 34	19 @ 34
Sugar (brown) @ lb.	16 1/2 @ 22 1/2	16 1/2 @ 25
Wool (American Saxony fleece) @ lb.	90 @ 1 10	90 @ 1 10
Zinc @ lb.	19 @ 20	19
Gold.	2 30	2 24

Beet Sugar in Germany.

How greatly the important manufacture of beet root sugar continues to prosper in the States of the Zollverein may be judged by the following figures, condensed from a recent official report:—In 1863 there were about 250 factories in operation, which used up more than 36,000,000 cwts. of beet root. Twenty years ago only 5,000,000 cwts. of beet root were worked up into sugar. Then 18 cwts. of beet root were required to produce one cwt. of sugar; now only 12 cwts. are needed. The duty levied produced \$9,000,000. The enormous profit derived from the cultivation is well known. In Austria alone 18,500,000 cwts. are grown, and 14,500,000 cwts. are worked up by 125 factories; and 32 of those each use above 140,000 cwts. of roots annually, one using as much as 408,000 cwts.

Great Deposit of Lead Slag in Greece.

At the Imperial Geological Institute of Vienna meeting, on Aug. 16, Baron von Hingenau stated that at the lead mines of Laurion, in Attica, worked for many centuries, but now abandoned, there is an accumulation of slag estimated at about 2,000,000 tons, which, according to assays made at Marseilles, produces, on an average, from 6 to 10 kilos. of lead and three grammes of silver per 100 kilos., equals from 6 to 10 per cent. of lead, containing from 6 to 9 1/2 ounces of silver per tun. A French company has undertaken the working of this slag, paying about £1,800 pounds to the Greek Government, and an annual rent of about £75 to the owners of the ground. Buildings, furnaces, engines, etc., have been erected for metallurgical operations, at a cost of 500,000 francs (£20,000).

The Parrott Guns and the Monitors in Porter's Expedition.

In the bombardment of Fort Fisher by Admiral Porter's fleet, six of the 100-pounder Parrott guns exploded, killing and wounding 45 of our men. Of the monitors, the Admiral says:—"On the 20th a heavy gale set in from the southwest, and, not being able to make a port without scattering all the vessels, I determined to ride it out, which I did without accident of any kind, except the loss of a few anchors, the monitors all behaving beautifully."

"The firing of the monitors was excellent, and where their shells struck great damage was done, and the little gunboats which covered them kept up a fire sufficient to disconcert the enemy's aim.