

The Extravagance of Our Forefathers

Chemistry

By EDWIN E. SLOSSON

There are many things our ancestors did that we cannot approve of, but perhaps nothing shocks us more, when we think of it, than their wasteful habits. The modern man supports his family on what his grandfather threw away. It appears that once they butchered animals for their meat. To our economical minds this is as shocking as to read of hunters on the Western plains who slaughtered buffalo by the thousands to get their hides. Nowadays the packers could afford to give away the meat because they make more money out of what used to be mostly refuse. Still, they are not satisfied. They keep experts at work all the time shortening the process so fewer people need spend their time at this necessarily disagreeable work. Their chemists run after the doctors, crying, "Here's a useless organ. Can't you use it in your business?" And the doctors hunt around until they find a use for it, in stopping blood, curing cretins, digesting banquets or something else.

The dump-heaps of our ancestors are our mines. We go over them and pick out the precious metals they left, the gold, uranium and radium. Whenever they made anything they were just as likely as not to throw away the most valuable part. When they made soda they let the chlorine escape into the air, contaminating that, instead of utilizing it to make bleaching powder for purification. When they made charcoal, they let the alcohol and

the vinegar and a hundred valuable medicines and perfumes go up in smoke. It was like burning up a whole drug store. When they made iron they let the slag go to waste instead of making cement for walks and bridges and houses out of it. When they picked the seeds out of cotton they threw them away, never thinking how much salad oil could be got out of them.

The farmer's wife who put her wood ashes into a wooden hopper in the back yard thought she was economical, but when she made her soap she threw away the glycerine, never dreaming that she might blast out subways with it or blow up a Czar. Into the fireplace were thrown great logs, enough to print a Sunday edition of a yellow journal. Perhaps a hundredth part of 1 per cent. of the heat it produced reached the joint turning on the spit or the shivering limbs of the household. The ancient Chinese way of roasting pig was miserly in comparison.

When they used coal they burned it right up under the boiler in making steam. If they had had any ideas of economy they would have made gas of it and exploded that in the cylinder, conveying power from a central plant with little leakage by electric wires. When they made gas for lighting they did not even take the trouble to save the ammonia and the sulfur. To celebrate a political election the boys were allowed to burn barrels of tar, sending up in nasty smoke finer perfumes than attar of

roses, flavors of more fruits than the botanist knows, dyes of more colors than there are in the rainbow, and medicines that cure all the diseases that the flesh has since become heir to.

Nowadays, when we practice our stricter economies, partly on account of their prodigality, our filial respect for them is impaired by the thought of their lack of consideration for us, their heirs. We would not mind their waste of time and labor, foolish as it seems, if they had not also squandered the world's capital, its natural resources.

Those were the days when pins were saved, when carpenters stooped to pick up dropped nails, and scraps of paper were pasted together to make notebooks. If they had had forethought they would not have shaped pins and nails expensively by hand and made paper out of such valuable material as rags.

Penny wise and pound foolish our grandfathers were. Of course, we must remember that they did not know any better, but to read of their carelessness is like watching a child burn up the paper money that he has found in his father's desk.

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High Pressure Steam

Engineering

High-pressure methods of modern business are now used in the boiler houses and power plants as well as in sales offices. More than twenty designs of boilers successfully operating and generating power at pressures of 500 pounds per square inch or over were described to the American Society of Mechanical Engineers at Pittsburgh, recently, by George A. Orrök, New York engineer.

Although the usual boiler installation generates steam at about 200 pounds pressure, there are six successful designs that operate at over 1000 pounds and one at 2000 and over. Forty power plants in the country use the newly evolved high-pressure boilers of more than 500 pounds pressure.

Saving in fuel, space and economies in operation are reported as a result of the use of the higher pressures.

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Insects Make Late Appearance

Entomology

Caterpillars, moths, grubs and other insects due to put in an appearance about this time of the year are behind schedule, according to the U. S. Bureau of Entomology. All the crawling, flying pests that distract vacationists and drive farmers and fruitgrowers frantic should have appeared from two to three weeks earlier and their absence, or presence in small numbers only, indicates that the season is still late.

However, the Nova Scotia season is three weeks ahead of last year's schedule and fruit growers there are already being advised to begin late

treatment for red mites and bud moths.

In the United States white grubs and cutworms appear to be less prevalent than last year, but the wireworm is doing unusual damage in the New England, East Central and West Central states.

Cabbages, asparagus and cucumber plants are suffering severe attacks from the insects peculiar to them. The European red mite survived the winter well and will be present in large numbers again this year, probably exceeding the infestation of last season.

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