The Young Folks.

Only a Boy.

Only a boy with his noise and fun,
The veriest mystery under the sun;
As brimful of mischief, and wit, and glee,
As ever a human frame could be,
And as hard to manage as—what! ah me!
'Tis hard to tell,
Yet we love him well.

Only a boy, with a fearful tread,
Who cannot be driven, must be led;
Who troubles the neighbors' dogs and cats
And tears more clothes, and spoils more hats,
Loses more kites, and tops, and bats,
Than would stock a store
For a year or more.

Only a boy, with his wild, strange ways,
With his idle hours, or his busy days,
With his queer remarks and odd replies,
Sometimes foolish, and sometimes wise,
Often brilliant for one of his size,
As a meteor whirled
From the planet world.

Only a boy, who will be a man,
If nature goes on with her first great plan—
If intemperance, or some fatal snare,
Conspire not to rob us of this our heir,
Our blessing, our trouble, our rest, our care,
Our torment, or joy!
"Only a boy."

A Touch of Pride.

It was a cold night in winter. The wind blew and the snow was whirled furiously about, seeking to hide itself beneath cloak and hoods, and in every hair of those that were out. A distinguished lecturer was to speak, and notwithstanding the storm the villagers ventured forth to hear him. William Annesly, buttoned up to his chin in his thick overcoat, accompanied his mother. It was difficult to walk through the new fallen snow, against the piercing wind, and William said to his mother:

"Couldn't you walk more easily if you took my arm?"

"Perhaps I could," his mother replied, as she put her arm through his and drew up as close as possible to him. Together they breasted the storm; the mother and the boy who had once been carried in her arms, but who has now grown up so tall that she could lean on his. They had not walked far before he said to her:

"I am very proud to-night."

"Proud that you can take care of me?"

"This is the first time you have leaned on me," said the happy boy.

There will be few hours in that child's life, of more exalted pleasure than he enjoyed that evening, even if he should live to an old age, and should in his manhood lovingly provide for her who watched over him in helpless infancy. It was a noble pride that made his mother love him, if possible, more than ever, and made her pray for him with more earnestness, thankful for his devoted love, and hopeful for his future. There is no more beautiful sight than affectionate, devoted, obedient children. I am sure that He who commands children to honor their father and their mother must look upon such with pleasure. May He bless every boy whose heart is filled with ambition to be a blessing and a "staff" to his mother.

My Mother Knows Best.

A party of little girls stood talking beneath my window. Some nice plan was on foot; they were going into the woods, and they meant to make oak leaf trimmings, and pick berries, and carry luncheons. Oh, it was a fine time they meant to have. "Now," said one of the number, "Ellen, you run home and ask your mother if you may go. Tell her we are all going and you must." Ellen, with the green crape bonnet, skipped across the way and went into the house opposite. She was gone some time.

The little girls kept looking up to the window very impatiently. At length the door opened and Ellen came down the steps. She did not seem to be in a hurry to join her companions, and they cried out, "You got leave—You are going, are you?" Ellen shook her head, and said her mother could not let her go. "Oh," cried the children, "it is too bad! Not go! It is really unkind in your mother." "Why I would make her let you." "Oh, Oh," "I would go, whether or no." "My mother knows best," was Ellen's answer, and it was a beautiful one. Her lips quivered a little, for I suppose she wanted to go, and was much disapointed not to get leave; but she did not look angry or pouting, and her voice was very gentle, but firm, when she said, "My mother knows best." There are a great many occasions when mothers do not see fit to give children leave to go, and do where and what they wish to; and how often are they rebellious and pouting in consequence of it. But this is not the true way. The true way is cheerful acquiescence in your mother's decision.—Trust her and smooth down your ruffled feelings by the sweet and beautiful thought, "My mother knows best." It will save you many tears and much sorrow. It is the gratitude you owe her who has done so much for you.

As a stern-wheel steamboat was passing up the Ohio river the other day, a little girl who was standing on the hotel stoop ran into the house to her mother, calling out, "Mother, mother, come and see this steamboat—it's got a bustle on."

Sunday school teacher: "Annie, what must one do to be forgiven?" Annie: "He must sin."

Farm and Household.

The Fuel of the Future.

There is probably, no branch of engineering skill in which so little improvement has been made and in which there is so wide and inviting a field for the exercise of ingenuity as in the utilization of fuel. Professor Gruner states that—

In the wind-furnace, which is from this point of view the most imperfect apparatus, there is utilized in the fusion of steel in crucibles but 1.7 of the total heat capacity of the fuel, or at most 3 per cent, of the heat generated. In the reverberatory, when steel is melted in crucibles, the useful effect is 2 per cent. of the total heat or 3 per cent. of the heat generated. In the Siemens crucible furnaces, 3 to 3.5 per cent.; in Siemens glass furnaces, operating on a large scale, 5.50 to 6 per cent.; in ordinary glass-furnaces, 3 per cent.; in fusion upon the open hearth of a reverbatory, of glass, 7 per cent.; of iron, 8 per cent.; in well arranged Siemens and Pousard furnaces, up to 15 18 and even 20 per cent, of the total heat is utilized. It is safe to assume that in ordinary steam engines where the steam is generated in plain cylinder boilers, the economy attained in the use of fuel is not much greater than in reverberatory furnaces, while in domestic use, in open grates especially, it is doubtful if as large a percentage of the heat capacity of the fuel is utilized. Yet though the extreme wastefulness of our methods of using fuel have long been the subject of remark, no inventor has yet explored with success, a field that offers a prize greater than the princely reward of the fortunate inventor of the Bessemer process for making steel. There are many causes which contribute to the enormous waste experienced in the consumption of fuel. Among the most important is the large amount of heat absorbed in the furnace itself, in the gasification of the carbon, that is, in the preparation of the fuel for combustion, and, further, in the fact that the quantity of nitrogen admitted with the atmospheric air necessary to furnish the oxygen for combustion is so great that it materially reduces the temperature of the furnace, and, as a consequence, reduces, in a still more rapid ratio, the effective work performed by the fuel. The maximum of economy would naturally seem to be attained by admitting to the combustion chamber, fuel in a condition ready to burn *i. e.*, in a gaseous form, and in the form of the gas or gases posessing the highest temperature of combustion. Hydrogen and carbonic oxide seems to be the most available, and so generally has this fact been recognized that for many years efforts have been made to manufacture these gases by the decomposition of water, in contact with coal; these efforts have not till recently been successful in an economical sense. The reports we have published from time to time during the past year or two, recording the performances of the Lowe gas process, seem to place the matter of the economical manufacture on a large scale of water gas of a very high calorific value, among the settled questions. It is not of illuminating gas, however, that we would now speak, but of heating gas, for we are convinced that the question of the economical production of a good heating gas once settled, the business of manufacturing it will greatly over shadow by its enormous proportions that of making illuminating gas. There is scarcely a use to which we now apply coal in our cities that would not be benefited by the substitution of heating gas if the price were sufficiently low. It is said that water gas, manufactured according to the Lowe system, can be made at a cost not to exceed 15 cents per 1,000 cubic feet, a figure which should allow of its distribution, in the enormous quantities required for domestic and manufacturing purposes at a very small price, say, 50 cents per 1,000 feet. If water gas, having more than four times the calorific value of Siemens gas, can be produced here in the seaboard cities, where coal costs from $4 to $5 a ton, by the Lowe or any other process, at a cost of 15 cents per 1,000 feet, it must be evident that a new era in the development of industry is dawning upon us. It is not too much to expect that, under these circumstances, gas would take the place of coal in most uses; its cleanliness, even if there were no great economy, would secure that result for domestic use, and the increased efficiency and convenience of gas and the improved quality of the products obtained by its use would be sufficient to secure its adoption for manufacturing and smelting purposes. When we consider the question of the distribution of gas for fuel, for domestic purposes, the high calorific power of the gas becomes still more important than when it is manufactured directly at the works at which it is used. We confidently anticipate the introduction, before the lapse of many years, of heating gas for general domestic use; but though this will be attended with an enormous economy in the consumption of coal, we see nothing in it to injuriously affect the coal trade. Experience has shown that every economy in the use of fuel has been followed by such a great and rapid development of the industries using coal, that the total consumption of this has increased, instead of diminished. If but half of the coal now consumed in this city were converted into heating gas, at some central works, and distributed, as illuminating gas now is, it would more than do the work now done by the coal sold. But with the great reduction in the cost, and facility in the use of heat, it would quickly be employed in a multitude of ways not now thought of; and not only the cooking and heating would be done by gas, but much of the work done by our servants would be performed by machinery; manufacturing of all kinds, and particularly those small industries that can be carried on in private houses, would multiply to an unheard-of extent. Our mills and machine-shops, factories and furnaces, able to save enormously in their fuel item, would find wider markets for their products, and in a thousand other ways the consumption of fuel would be so greatly increased that the demands for coal would be fully maintained and would soon assume proportions exceeding the most extravagant views of our most sanguine "coal men."—*Engineering and Mining Journal.*