SIR HUMPHRY DAVY.

Some time near the end of last century there lived in a sea coast town of Cornwall, England, a bright, active, healthy boy who was fond of sports and fond of stories, he had a remarkably retentive memory, was a boy of rather forward manners but of a very affectionate disposition and so fond of fishing that, as a child, when he could get no better place, he would fish industriously in the gutters at the sides of the streets. But all this love of play was not indulged in at the expense of work, for young Humphry Davy while at school always stood at the head of his classes.

He was born in Penzance in December, 1778, and at the age of seventeen was apprenticed to a surgeon in his native town. But the rocky Cornish coast on which he lived was too full of natural interest to allow him to devote all his time to medicine. In his spare time he explored the numerous tin and copper mines in the vicinity, roamed the sea-coast to study the origin and formation of the rocks, examined the character of the seaweed which drifted upon the shore, and in short every natural object he could lay hands upon to find out what they were composed of and what changes they might have undergone.

To aid him in this his study of chemistry he set up a private laboratory in the garret of a friend's house and there spent his spare hours. But his experiments were not always successful and occasionally the household would be thrown into consternation by an unexpected explosion, "This boy Humphry is incorrigible," the owner of the house would exclaim, angrily, "Was there ever so idle a dog!"--"He will blow us all into the air!"

But he was not idle, as his friends appeared to think, and the results of his work came very soon to be known. Mr. Gregory Watt, son of James Watt, the famous inventor of the steam engine, was staying with Davy's mother for a change of air during the winter of 1797 and became deeply interested in the boy, and with another friend introduced him to Dr. Beddoes who soon engaged him to superintend a medical institution which he had just established in Bristol. Here the genius of young Davy had full scope. He had the use of excellent scientific apparatus instead of his former rude appliances, and the companionship of men of high scientific attainments, and he was not slow to profit by them both. He had intended, at the close of his engagement with Dr. Beddoes, to go to Edinburgh to complete his medical studies, but chemistry had too strong attractions for him and he decided to make it his life work.

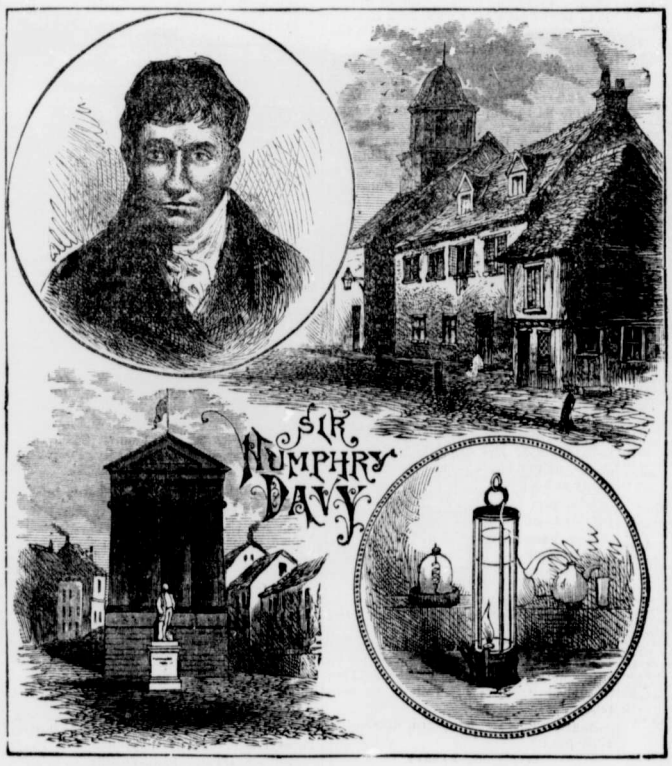
His first original experiment was made when he was only eighteen and was to discover what kind of air was confined in the vesicles of the common sea-weed which he found upon the shore. He discovered also that the slender stems of reeds and corn and grasses, which otherwise would be unable to stand upright, were held erect by the presence of silica in their outer coats; he discovered the use of laughing gas; he separated from their compounds many minerals which had hitherto been unknown, and many more works he accomplished which there is neither time nor space to explain.

So rapidly did his fame spread that at the age of twenty-two he was appointed lecturer to the Royal Institution of London. His lectures became at once very popular, and during the eleven years in which he remained in the institution they attracted the attention of men of the highest ranks. His work on Agricultural Chemistry passed through many editions and was translated into almost every language in Europe. But his constant work began to tell upon his health and, in 1807, he was prostrated by a severe attack of typhoid fever, and for weeks his life was despaired of. In 1803 he was elected a fellow of the Royal Society and in 1807 was appointed one of the secretaries. In 1812 he married and about the same time was knighted. The next year he visited France and for two years continued his scientific researches in that country.

But there has yet to be related the invention by which he will ever be most widely known. A terrible explosion took place in a coal mine near Newcastle in May, 1812, in which ninety-two men were killed. As every one knows, a gas rises in coal mines, popularly known as fire-damp, and this, unless mixed with a certain quantity of air, explodes with terrific violence whenever it touches a flame. Hitherto the poor miners had had no way of protecting their lights from this gas and explosions were of very common occurrence. In 1815 Sir Humphry Davy's attention was called to the matter and he was asked if he could not do something to overcome so great an evil. He went to work and in a few months produced the lamp shown in our illustration which has since and will always be known as the Davy safety-lamp. He first found out that fire-damp would not explode unless mixed with less than six or more than fourteen times its volume of air, and that to even explosive mixtures of this gas fire could not pass through narrow, short iron tubes. Reducing the size of these tubes gradually as the experiment went on he found that even through a simple iron wire gauze, having twenty-eight wires to the linear inch, no flame could reach the gas to ignite it. With a cylinder of this gauze he surrounded the flame as shown in our illustration, protected it on the outside by a cage of four or five bars and the work was done. Of course it was expected that he would take out a patent for his invention but when spoken to on the subject he said "No, my good friend, I never thought of such a thing, my sole object was to serve the cause of humanity; and if I have succeeded, I am amply rewarded in the gratifying reflection of having done so."

As some acknowledgment of the service done them the mining proprietors, in 1817, presented him with a service of plate valued at £2,000, and the following year he was awarded a baronetcy. In the year 1820 he was elected president of the Royal Society of London and was re-elected for seven successive years.

A few years after this his health began to fail and in 1828 he quitted work and went to the continent for a rest, but while in Rome he had an attack of paralysis, from which he had before suffered, and never fully recovered. He died on the 29th of May, 1829. His wife lived until 1868, and on her death bequeathed to the Royal Society the service of plate, to be sold and the proceeds to be devoted to the encouragement of science.



OVERWORKED WOMEN.

BY LOUISE FISKE BRYSON.

American women can do anything, so they try to do everything. Nature cries out against this covetousness. No one person is allowed to have or do everything. Only a certain amount of vitality is manufactured within a given time; and if the expenditure exceeds the income, the result, according to Micawber's calculation, is—misery! That is the state of our women—misery from overwork.

It grows largely from the fact of not understanding the relative value of things, and of not understanding the relativeness of things themselves. Luxury and beauty have a great moral influence, but they are not so valuable as peace of mind and rest of body, nor is their moral influence as great as that of a cheerful woman. Her price is above rubies. Like the Indian chief, we are forced to say, mournfully: "Too much house." That is what ails our women; they are dying of "too much house."

When there is too much house, there is always too little home. Good housekeeping is by no means as rare as good homekeeping. It is of far less importance. A certain amount of drudgery must be gone through with, daily, in any calling; about three-fourths of life is drudgery. One-fourth can be rescued from the toil and moil of the world by management and thought. The most difficult and the most necessary lesson for a housekeeper to learn is that she must assert her individuality. It is useless to try to please everybody. Many things in our homes are done directly with "an eye single" to our neighbors. Work must be pruned down and lopped off until it matches strength, for the latter refuses to be enlarged by any amount of thought.

It is a nice point to adjust this balance properly. It requires much giving up and letting go. What shall we give up? Ay, there's the rub. Everything seems so important. Things must be kept clean, there is no doubt about that; but the number of things to be kept clean can be greatly diminished. Wisdom would suggest the minimum consistent with comfort and refinement. In many homes there is an embarrassment of riches in the shape of conveniences and petty treasures that must be kept in order, stealing time that might be bestowed with profit and satisfaction upon the higher things of life: people, books, art, nature, and all the subtle excellences that make life worth living.

Each must solve for herself the question of simplifying living in order to ennoble domestic life. Every woman knows her own complexity. The same things do not press with equal weight upon all. On general principles, however, it is safe to say that

"There's too much worry goes to a bonnet,
There's too much ironing goes to a shirt."

There are too many preserves, too many ruffles and tucks and elaboration in the making and trimming of garments, that add labor and do not add to their beauty.

Woman's fetters are largely self-made. Carvings, upholstery, brasses, bronzes, that cause frowns, back-aches, irritability, and heart-aches, are a poor investment of money and time. Things, more than people, bring women to the verge of despair. The endless round of imagined duties causes chronic overwork among women, produces the saddest results to them and those dependent upon them for rest and comfort. "There is nothing in the world I dread," said the Household Philosopher, "like a thoroughly exhausted woman. No amount of personal comfort ever compensates for such a state of affairs." Of course not. What constantly tired woman is capable of generous sympathy and ready help, or of companionship? Can she divide care and double joy? The better part of life cries out for warmth and tenderness; but the women who should give it are blindly wasting themselves on material things, polishing the outside of the cup without a thought of the wine within.

To conquer prejudice, surmount education, and overcome habits of mind and body, implies force of will and power of effort. This same conquering and overcoming is necessary to the true emancipation of women.—*Christian Union.*

I WISH some strong, bright angel stood before you, just now while you read, girls, to flash before you as no words of mine can, the power you possess to help or hinder the cause of temperance; to make you feel your responsibility, because you are girls, in this matter; to shudder at its weight and to never cease trying to fulfill it!.....When the time comes that the young man who now shares his time in your company and the saloon; who jokes about temperance in your presence, and takes a glass, socially, now and then, is made to feel that these things can not be if you are to be his companion at party, ride or church; that good society cannot tolerate these things in its members; in short, that this kind of man is unfashionable and unpopular, then alcohol will tremble on its throne, and the liquor traffic will hide its cancerous fall.—*Elizabeth Cleveland, Mistress of the White House.*

THE TWO COUNTIES of Perth and Waterloo are now completely surrounded by counties which have adopted the Scott Act. Wentworth or Grey are the nearest counties to which anyone could go to get drink. Perth rejected the Scott Act by a small majority on the 18th inst. There will be an excellent opportunity to compare Perth and Waterloo with the surrounding counties, provided that the Act be properly enforced where it has been adopted. It seems likely that it will from the number of prosecutions already brought to an issue favorable to the temperance cause.