

using the reciprocating or duck's-foot paddles, which also failed, from the loss of time and power by the return stroke. In 1785, James Rumsey, of Virginia, tried a boat on the Potomac, and afterwards in London, both without success; and about the same time Mr. Fitch, of Philadelphia, tried one, with paddle-wheels, on the Delaware, but this boat also did not succeed, and was given up as a failure. J. C. Stevens, of New York, made experiments in 1804 with a "boat twenty-five feet long and five feet wide," which, of course, did no good, and was stopped as a failure, though again brought to notice as preceding Mr. Fulton's. In 1788 and 1789, William Symington, in conjunction with Patrick Millar and James Taylor, made experiments with their patents for navigating by steam, and in 1802 commenced running a boat on the canal at Glasgow, which made three miles an hour; but after many changes of her propellers and trials, the scheme was given up, and no more was heard of the steamboat of Mr. Symington until long after those of Fulton were widely spread over the American waters. In 1816 the Marquis de Jauffroy complained that the Fulton steamboat on the Seine had taken the "paddle-wheels" invented by him, and used at Lyons thirty-four years before, but also abandoned by him. To this charge Mons. Royou replied in the *Journal des Debats* thus: "It is not concerning an invention, but the means of applying a power already known. Fulton never pretended to be an inventor in regard to steamboats in any other sense. The application of steam to navigation had been thought of by all artists, but the means of applying it were wanting, and Fulton furnished them." The first ocean steamer was the *Fulton*, of 327 tons, built in 1813, and the first steamer for harbor defence was built under Fulton's direction, 2,470 tons; launched in 1814. This became the model ship for the ironclad batteries and rams since constructed with many changes. It will be seen by the drawings of Fulton's plans that he had tried the several other kinds of propellers—the chain float, duck's-foot and the screw fan—before adopting the paddle-wheel; for, though the screw was good in principle, it was many years before it could be constructed to act efficiently. The James Watt was the first boat with the screw running between London and Havre, about ten years after the advent of the *Margery*. In 1811, I endeavored to introduce steam navigation into England, but I found a strong conviction that it would not answer in this country, our most eminent engineers say-

ing, "We don't doubt the success of steamboats in the wide rivers and harbors of America, but in our comparatively small rivers and crowded harbors they will never answer." Even such scientific engineers as the late John Rennie, Sr., and Peter Ewart, a Vice-President of this Society, both advised me to relinquish the attempt to introduce steamboats, as sure to prove a waste of time and money to no purpose. However, when conviction came over the public mind that steam navigation would answer here—but not until after more than 5,000 tons of steamboats had been launched on the Hudson in 1816, did it so come—then began the spread of steam navigation, since extended with such marvellous rapidity and perfection as to atone for the sluggish beginning. Since nations are indebted to the genius of Watt for success in using steam power, to that of Fulton for its successful application to navigation, to Stephenson for the like success on railways, the meed of praise due to each of their names should be cheerfully awarded by all who are so largely benefited by the result of their labors. In doing this we should bear in mind that inventions do not spring into existence perfect from their birth, like Pallas from the brain of Jupiter, but they come from the prior labors of many brains, and he is the true inventor who first collects the essence of and gives the stamp of vitality to those labors. In this sense the invention of steam navigation will forever illustrate the name of Robert Fulton.

Hope's Quiet Hour.

Making Steady Progress.

The other day I sat on the grand-stand at the Toronto Exhibition and watched the wonderful feats of bodily agility, performed with such apparent ease by those who had spent long years in steady practice. It looked as easy as possible to fly through the air and catch an outstretched hand with unerring exactness. It did not appear to be difficult for a boy to stand on his head on his father's head, while the father walked up a ladder and down again. Even the trained horses and bears went through their various performances with easy grace—if one may describe a Polar bear riding on a ball as graceful. If these tricks had been done with strain and difficulty by the performers, they would not have given pleasure to the cheering thousands. If they had not been hard to do, no one

would have cared to pay for the privilege of being a spectator. Those performers did hard things with ease, and in that was the secret of their charm.

The power of habit is almost miraculous. Professionals in continuous training can easily do things in their own line of work that could not possibly be done by beginners. This law of habit is given to help us in our climbing, and it works just as certainly in the spiritual as in the natural world. Gannett says that he once asked a cobbler how long it took to make a good shoemaker. He answered promptly: "Six years, and then you must travel." Another cobbler was asked the same question, and he answered: "All your life, sir."

If I were asked how long it took to make a good Christian, I should certainly answer: "All one's earthly life—and then one is only a beginner." Perhaps we read the story of Israel's army daily tramping round Jericho for a week, and think wonderingly that the wearisome march could have no real part in helping on the victory. And yet what a splendid parable it was of our victories. "Genius is patience," said one man who knew. "Drudgery is the gray angel of Success," said another. If we worked as steadily at the perfecting of our characters as professional athletes work at the perfecting of their gymnastic feats, we could not fail to make steady progress.

Good intentions can never put us forward one step on our way unless they are changed into realities. Admiration of good people, and even a desire to grow better, will not help us, unless it is made solid by effort—then, and then only, we can make steady progress. One might watch a professional athlete admiringly for years without learning how to swing lightly from the trapeze. But steady practice means steady progress, and the younger one begins, the more perfect he may become.

Think of the power of steady progress. Look at a great tree that has pushed its way up in defiance of gravitation, and is able to hold its own in the face of a hurricane. How did it become so great and so strong? By slow, monotonous, unnoticed progress during many thousands of quiet, uneventful days. Quietly the tiny leaves and hidden roots worked on through the long summer days, and patiently the tree stood and waited through the dreary winter weather—waited hopefully for the spring, with its opportunities of going ahead again.

If we want any virtue, we must not rest satisfied with desiring it, but must make it our own by practice. We want

to become unselfish and considerate for others—then we must actively devote ourselves to their service. Then, instead of being sorry when distasteful tasks stand waiting for someone to volunteer, we shall be delighted at the fine opportunity offered us of strengthening little by little the habit of unselfishness, and shall seize the chance gladly.

If we want to grow generous, like the widow who poured all she had into the Temple treasury, we can never form that habit by wishing we were rich, so that we might help the world a great deal. But we can form that habit by slow degrees, not by wishing, but by acting—by giving gladly when we have the chance. God measures the size of a gift by the love that is expressed by it, not by the money value of it. There is a story told of a prince to whom his people brought presents. One brought a crown, studded with jewels. The prince asked his reason for bringing it, and the man said: "Some day you will be a king, and I hope you will give me a high position in return for this rich gift. Another brought a large sum of money, because he hoped the prince would pay it back with large interest. A little girl brought a bunch of flowers. The prince asked why she gave it to him, and she answered, "Because I love you." He rejected the gifts which seemed more valuable—they had no value in his eyes, because they were selfish in their motive. Never say, nor think, that you have nothing worth while to offer to God. You have as much to offer as the richest king the world has ever known. Does God need our money? Did He not make all the gold in the world? But he does need our love, and love can only grow strong by giving—giving of what we have. We may have money to give, and may be forming a habit which we call "prudent economy," but which is growing slowly into that ugly disease which God calls "covetousness." The love of money can crush out many a tender virtue. Let us be careful to form habits of active benevolence—giving when it costs us something, not only when we have all we want. Giving is one of the many things that become easier by practice.

A painter was once asked how long it took him to paint a certain picture, and he answered, "All my life." It is always so. The past life has its influence in everything we do. If anyone asked me how long it took me to write "The Vision of His Face," the only true answer would be, "All my life." In fact, we ought to go farther back, and say that the life of our parents and grandparents influence us always. Take a grain of wheat, and you have in it the concentrated essence of thousands of years, back to the first molecule from which it sprang. Yes, and back to the Infinite God Who made it, and is constantly working through it.

And think how silent and unnoticed the progress is. Seed is hidden out of sight in the ground. The days slip away, men wake and sleep, seeing little change each morning. There is no noise, no fuss, but by slow degrees the green blade pushes its way to the light and grows steadily on until the "full corn in the ear" has matured. So we are told that God's kingdom—His rule over a heart—"cometh not with observation." It goes on growing as quietly as the grass and the leaves. A soul ripens in the beauty of holiness, drawn up out of the attracting earthliness around by the mighty, silent attraction of the Sun of Righteousness.

It has been very beautifully said: "A man ought to carry himself in the world as an orange tree would if it could walk up and down in the garden—swinging perfume from every little censer it holds up to the air." There is a fragrance about beautiful lives—the lives which God Himself has anointed with the oil of gladness—reminds one of the words of the Psalmist: "All thy garments smell of myrrh, aloes, and cassia: out of the ivory palaces, whereby they have made thee glad."

Yes, steady progress means growing beauty in the sight of God and man. We may not be able to see the beauty ourselves, because such a little bit of life is given into our hands at one time, as the tapestry weavers work patiently, though they cannot see the full pattern of their work. How glad we ought to be if God can see any beauty in our lives; if He takes up our work, bit by bit, as we lay



"Temptation."

From a painting by George Smith. Loaned to Canadian National Exhibition, Toronto, 1908, by the Victoria and Albert Museum.