

**A Story, with Illustrations and a Moral.**

There is a story told by the Eastern fabulists something like this: "Once upon a time the course of a river was interrupted for some distance by rugged rocks and small cascades. At that spot it was narrow also, and the stream, in consequence, was swift, turbulent and dangerous. Far up the river, and on the numerous streams that fed it, were large and small cities, all of which wanted to send the products of their industry down to the sea, there to be distributed over the whole world; but these rapids were the great obstacle. One ingenious man suggested they should be removed. But that was over-ruled, as it would inundate the country below. Another proposed a canal, but that was impossible, for the rocky mountains rose high and rough above them on either side, and the poor citizens scarcely knew what to do. At last a generous man said he would try and do his best to overcome the difficulty, and, taking a small boat, he explored the obstacles until he knew every inch of water—dangerous and safe. Coming back to the cities he told their inhabitants he would establish himself at the rapids and would pilot the freighted barges to the safe waters below. His proposition was accepted, and many thousand valuable cargoes he piloted safely through. From each boat he took a small toll, but such was the gratitude of the people that they continually were sending to him testimonials and thanks for the good service he had rendered them; and sincere, indeed, were the good wishes bestowed on him by those who got rich by his pilotage of their boats, and they were many."

The Eastern moral is, "Be not content in merely paying for kindness, be grateful also." "But what can this have to do with the SCIENTIFIC AMERICAN?" asks the reader, in amazement at our usually scientific quill taking a story-telling turn. Be patient, gentle reader, and read the following extracts from letters recently received by us, as exemplifying the practical application of the above precept:—H. D. Wickes, of Flint, Mich., writes, on Dec. 10:—"Your letter of good tidings came to hand yesterday. I feel ever grateful to you for your kind attention, knowing you have done all in your power to bring this decision about." This was on the occasion of the issuing of his patent.

O. B. Thompson, of Western Reserve College, Hudson, Ohio, writes as follows:—"I am happy to acknowledge the receipt to-day of yours, together with the letters patent for my lock. I feel myself under obligation to you for the accuracy and despatch with which my business has been carried on, and though, if I fail, I have spent more money than I can well afford, I will still have the satisfaction of knowing I have tried."

W. Harvey, of Albany, N. Y., says, in a letter to us:—"I need not assure you of the great pleasure I feel in tendering you my heartfelt thanks and gratitude for the prompt and efficient manner in which you have conducted my business with the Patent Office and brought my case to a favorable close."

J. Moore, of Bart, Lancaster co., Pa., (a notice of whose invention will be found in another column) writes Dec. 10, in the following terms:—"Yours of the 6th inst. has been duly received bringing intelligence of your success in procuring a patent for our railroad car brake, which is glorious news to me; and to you I shall have to attribute praise for your skill in conducting a case which seemed so difficult. 'All's well that ends well.'"

A. R. Bodley, of Princeton, Ill., says:—"It may not be uninteresting to you to hear how we have succeeded with our washing machine. It is now a little over two months since we received our patent through your agency; since which time we have sold over ten thousand dollars' worth of rights for manufacturing, and have not been out of two counties to do it. Our machine has taken the first premium at every fair where it has

been entered, and, in a number of instances, over four to ten other machines."

J. Mackenzie, of Cleveland, Ohio, writing on Dec. 13, remarks:—"I received my letters patent on the 11th inst., and am highly satisfied with the prompt and careful manner in which you have managed the business. Your charges have been no more than I had to pay to another agent for the case I trusted him with, and which he lost. I am confident, had I trusted my previous case to you, I would have been saved the cost of an application."

Philander Perry, of Troy, N. Y., writes:—"It will be only the just dictate of gratitude should I express my high appreciation of yourselves for the liberality and promptness with which you have carried my late patent to a successful issue. I particularly admire your sagacity, as well as honesty, in discovering and securing an important claim, which I saw not; and I shall not be slow to recommend your patent *corps* to the many inventors who need such assistance; indeed, sirs, I have thus recommended you and have secured several applications, and another important application, through my influence, will shortly be made to you."

E. Conroy, of Boston, Mass., is also a grateful friend. He says:—"I have much pleasure in informing you that I have this morning received my third and last patent, secured through you, for improved machinery for cutting corks and bungs, from the Patent Office in Washington. All the claims I put in are allowed, and all my hopes and expectations are, thus far, completely realized. In the midst of my satisfaction at this successful issue of many years of arduous labor and study, a feeling of joy and thankfulness pervades my mind at the thoroughly business-like tact and masterly style which you have at all times displayed from the first commencement of my intercourse with you, in conducting and forwarding my several applications for patents through their several stages of advancement—from the first rough embodiment of my ideas down to their triumphant completion, which I behold in these elaborate and (to me) invaluable documents (the patents and assignments) which are now lying on my table, bearing the broad seal of this great republic of science, literature and commerce. These papers explain and describe, in the most beautifully simple, lucid and concise terms, the particulars of my inventions and improvements already referred to, and reflect the greatest possible credit on their talented compilers. Permit me further to express my sentiments of gratitude and delight for the very courteous treatment I have invariably received in your office, both from yourself and from every employé in your establishment. If the publication of this letter (which I have penned from motives of duty, and as only a just acknowledgement of the immense services you have rendered me) will be agreeable to you, I fully authorize you to make this or any other use of it you may think proper."

Frank Chase, of Sutton, N. H., writes on the 11th inst., that he has sold the patent on a blind which we took out for him in 1855, and he encloses a new invention on which he wishes us to obtain a patent.

And, lastly, comes a tribute from J. Ericsson, the well-known inventor of the hot-air engine, screw propeller, &c. It is dated Dec. 16, and is as follows:—"I have duly received from the Patent Office, a patent for improvements in hot-air engines, dated Dec. 14. Pray accept my best thanks for your potent aid in the matter."

Now then, reader, do not the foregoing extracts remind you of the Eastern story? They are but a few items from the many of similar import that come to us in the regular course of business. We quote them to show the hesitating inventor, who is arguing within himself whether it will pay to secure his invention, that patents *do* sell and that money is made by patentees.

The testimonials also show that our clients

are not insensible, in point of gratitude, to those who have aided them in securing their rights, which acknowledgement gives us far greater pleasure than the amount of fees which they pay us for conducting their business. This is Christmas time. Another year has rolled around, and thus it is a fitting period for all to cast a retrospective glance over a twelvemonth past, and meditate upon what has been done amiss or what has occurred to make the heart glad. In our meditation we have thought of much that we have said and done amiss, but in all our dealings with hundreds of patrons during the past year we do not recall one instance in which our clients have not been satisfied with our dealings with them; and it is specially gratifying when we take a wider scope in our meditation, and look back over a dozen years, to find that, of the many thousand patents obtained through our agency, we are not aware that any one of them has proved invalid from defective claims, when tested before our courts of law. These are the enjoyments of reflection.

In the list of sixty-eight patents issued last week, the claims of which will be found on another page, twenty-five of the number were secured by us. This is present satisfaction.

We are also grateful that the inventors of this truly inventive country have, by general acclamation, declared that the Scientific American Patent Agency is the patent pilot (the good man of the story) of the United States. We repeat, this is Christmas time, and thankfully and sincerely we rejoice.

**Something more about Salt.**

In the very center of the State of New York extensive beds of salt far below the surface of the earth. Geologists assert that the sea waves once flowed where these saline deposits are now found; be that as it may, however, hundreds of miles of plain, hill and mountain now intervene between them and the ocean. They are valuable as a source of revenue and wealth to the State, employing a capital of about three millions of dollars. The amount of salt sent from these springs to market this year is 6,800,000 bushels, of which 4,500,000 were shipped from Syracuse by way of Oswego for the Canadas and the Upper Lake districts. Very little of this product comes east to tidewater, it being mostly used in the interior. The salt is obtained from deep brine wells in the vicinity of Syracuse, the brine being partly evaporated by solar and artificial heat. Large sheds, covering hundreds of acres of ground, contain the troughs for exposing the brine to the sun in summer; but in winter the brine is evaporated in pans, and the salt obtained by a forced concentration. The skimmings of the salt-pans are sold to farmers in the neighborhood for fertilizing purposes, and when mixed with wood ashes, they make an excellent top dressing for grass lands.

**The Banyan.**

This is a kind of Indian fig, the *ficus indica* of Linnæus, forming a very large tree, which sends down roots from its branches, and those roots striking into the ground themselves become trunks, which serve as props to the extending branches; and as the tree is very long-lived, the quantity of ground an individual tree will thus cover is incredible. Dr. Roxburgh says, he has seen the tree 100 feet high, and full 500 yards in circumference round the extremities of the branches. It is found wild in the skirts of the Circar mountains; its leaves are used by the Brahmins as plates to eat off of; a species of birdlime is obtained from its juice, and the fruit is eaten by birds.

LIEUT. MAURY, in one of his lectures on the "Highways and Byways of the Ocean," states that animal matter, at the bottom of the deep sea, owing to the superincumbent pressure, the exclusion of light and heat, and the saline properties of the water, cannot decompose, but must remain precisely in the state in which it is deposited, for ages and ages.



\* PERSONS who write to us, expecting replies through this column, and those who may desire to make contributions to it of brief interesting facts, must always observe the strict rule, viz., to furnish their names, otherwise we cannot place confidence in their communications.

J. F. M., of Mass.—We cannot give a reason satisfactory to ourselves for the phenomena you speak of.

C. D. N., of N. H.—We do not know where cotton thread spools are made.

C. N., of Pa.—Yes, it is true that there was a patent granted in Europe, many years ago, for a revolving retort, which could be used with entire freedom in this country in the distillation of coal oil. Remit \$5, and we will send you a copy of the drawing and specification of said patent.

G. W. J., of Miss.—You can unite copper joints with tinsmiths' solder, but the solder of copper-smiths is made of six parts brass, one of zinc, and one of tin. The soldering of copper is a process similar to that of tin. The reason why railroad bars sometimes become magnetic is involved in obscurity. Some believe that the rolling of the cars is the cause of it, others that the magnetic currents of the earth polarize the rails.

J. S. S., of Ga.—So far as we know sumac is not cultivated for tanning purposes in any part of our country. Catechu, alum and salt, fern leaves, willow bark and blackberry bark and stems have been used as substitutes for oak bark.

J. S. H., of Pa.—There is no substance known to us which can be usefully applied for mixing with tallow to make candles burn brighter. Resin and other substances have been mixed with the tallow of candles, but without effecting a special improvement.

J. D. F., of Ohio.—The preparation employed in preserving specimens of natural history is arseniated soap. It must be applied very cautiously. Arsenic mixed with dry pipe clay is also rubbed in at the root of the feathers. In skinning birds a steady hand and a sharp knife are the most important requisites. Stuff with sawdust and tow, using copper wires for the neck, body and legs to give them stiffness and position.

W. M. L., of N. Y.—In reference to melting and refining gold we would advise you to inquire of E. N. Kent, at the United States Assay Office, in Wall street. He is fully competent to give any advice on this subject.

C. S., of N. Y.—By steeping plaster of Paris in a strong solution of alum for two hours, then drying it, and afterwards grinding to powder, it makes a hard and strong cement when mixed with water capable of taking a high polish, and is superior to stucco for many purposes. Gutta serena heated and mixed with plaster of Paris, or carbonate of lime, makes a good molding cement for ornamental work.

D. W., of N. Y.—It is not a question of so much importance to construct canal and river boats on the life-boat principle, as it is to construct sea and lake steamers on this principle. There is not the least necessity for using four wheels for your boat; a single screw will answer every purpose, and thus save considerable expense. The boat which you propose is novel in some respects, but you cannot obtain results from it commensurate with the extra expense of its construction.

R. F. B., of R. I.—We do not believe that you can apply the lifting power of hollow cylinders, economically, in propelling a vessel. We witnessed a steamboat built with its hull upon air-tight cylinders to give it buoyancy, but the arrangement was fatal to its speed, and, besides, it was totally unmanageable.

J. C., of N. H.—In changing your fly-wheel from the fast to the slow shaft, you must make it sufficiently large to have a circumferential velocity equal to what the wheel had on the fast shaft.

R. L. S., of N. Y.—Skins are colored so as to resemble bronze, with a strong solution of logwood, red sanders and alum. Take one pound each of logwood and sanders, boil them in a gallon of water for one hour, then add an ounce of alum. The clear liquor colors the skins; apply it with a sponge.

COTTON SCREW.—We have received a letter describing a cotton screw, which cannot be answered, as the writer has omitted his name and Post-office address. He seems to be in a great hurry to get his case into the Patent Office. Let us have a fair chance, friend, and we are ready.

J. M. H., of Ill.—Tinware is japanned with colored copal varnish, put on in successive coats, and then baked in an oven until the varnish becomes perfectly dry and hard.

W. H., of Maine.—The sample of mineral you send us for examination is pure silica, or sand. It can be used for making mortar, or by boiling under pressure with an alkali, as potash or soda, the soluble silicate of those bases may be made from it. The value entirely depends on the necessities of the locality.

D. B. Tiffany, of Xenia, Ohio, wishes to correspond with some one engaged in making woodenware of oval shape.

M. S., of Mass.—We do not know where you can get such a machine as you want. Address W. H. Van Gieson, Newark, N. J.

H. B., Jr., of C. W.—For such information as you want respecting wire gages, you had better address Brown & Sharp, Providence, R. I.

W. M., of Ohio.—We thank you for the fine list of names you send us. In reference to the Young patent, it does not cover the broad ground of making oil from coal. It must necessarily relate to some peculiar apparatus or process for making oil.

S. T. W., of Canada, asks an answer to the following:—"A possesses an invention in a foreign country. A is a natural-born citizen of the United States, but