



### Does a Saw Follow the Grain of the Wood?

MESSRS. EDITORS:—I saw, in No. 11 of the present volume of the SCIENTIFIC AMERICAN, a new mode of hanging circular saws, invented by an experienced sawyer. I do not see but what the invention is good, and no doubt will answer all purposes set forth; but there is one point I wish to notice, and if I am wrong, I wish to be corrected. Our practical sawyers say that in sawing crossgrained stuff, the saw is inclined to follow the grain of the timber, and should therefore be set in the opposite direction. I would say that I thought I knew some little about sawing, but I must admit that a saw running with the grain of the wood in a crooked stick is a new feature in sawing, as I invariably see them run the opposite of the crook in the stick.

The reason is, that when a saw is cutting in cross-grained stuff, the fibers or grain of the wood on the rounding side of the stick run off from the saw at an angle in proportion to the crook, and the saw, in cutting these fibers, will form a kind of lint or woolly surface on the kerf next the rounding side of the log, and this lint will eventually crowd the saw in a line that will crook the reverse of that of the log.

And, again: in sawing a stick that twists with the sun, if you stand at the head end of the log, the saw will bind on top of the log on the left hand side, and underneath it on the right hand side, because in these places it comes in contact with the fibers, as before described.

WM. BARNES.

Boaz, Mo., April 4, 1861.

### Rock Oil as Fuel for Steam Engines.

MESSRS. EDITORS:—An application of the rock oil of Pennsylvania for generating steam for motive power under steam engine boilers is exciting much attention in the oil region. The following is a description of the apparatus used: A series of iron pipes are laid in the fire arch of the boiler, which pipes are perforated in their upper surface with minute holes; the oil is supplied to those pipes by means of a force pump, aided by an air receiver, to preserve a constant pressure. A spray, so to speak, of oil is thus made to fill the space usually filled by the flame of wood or coal used to raise steam; this, once ignited, fills the fire arch and flues of the boiler, and maintains the desirable amount of heat in the boiler.

If this fuel is not found to be too expensive, it will prove a good thing for the use of steamers on sea voyages. Its practical use has been proved, and it remains for chemists and others to test it on ships, &c., in a large way.

There can be but little doubt that this oil will be found cheaper than coal for gas-making for lighting dwellings, streets, &c.; its price, under the influence of the vast supply raised, will soon come down to a matter of 15 or 20 cents per gallon.

ADOLPH BERGER, C. E.

Buffalo, N. Y., April 9, 1861.

[The invention of a suitable furnace for burning coal oil is a desideratum. This seems to be an inviting field for inventors.—Eds.]

### A Successful and Satisfied Inventor.

MESSRS. EDITORS:—In the current volume, page 196, of your very valuable paper, I noticed that you made mention of my patent, among others in England, for an improved mode of attaching tools to handles. Allow me to inform you that I am now extensively engaged with my partner, Mr. J. S. Silver, Jr., under the name of Emerson & Silver, in the manufacture of the various tools made under that patent. We are meeting with unbounded success thus far, and have the satisfaction of knowing that tools made under our patents are meeting with universal favor and appreciation. Allow me to extend to you my sincere thanks for the many favors I have received at your hands. The cordial welcome, gratuitous council and advice, and unvaried attention always bestowed by you and your scientific and gentlemanly assistants, cannot meet with other than appreciation by inventors. I feel as free in your office as I do in my own counting room.

J. E. EMERSON.

Trenton, N. J., March 23, 1861

### The Compliments of a Day—Not of the Season.

Young gentlemen, in their round of calls on New Year's Day, often congratulate their friends with the expression, "I wish you the compliments of the season," instead of saying "good morning," "good bye," &c.

It is in another sense that we employ the word "compliment" at the head of this article, with a confidence that there is far more heart in the expression of our correspondents than exists in those who use it in the first sense.

If we should publish all the complimentary letters we receive during a season, we should have room in our paper for little else; so we will take space to insert only those which were received during a single day. They are a fair specimen of such as come to hand nearly every day, and we annex them to speak for themselves:—

MESSRS. MUNN & Co.:—Your last favor is at hand, and I am glad to hear that you have met with success in procuring a patent for me. Please, gentlemen, accept my thanks for the efficient manner in which my case has been conducted, as I am sure that the case would have been rejected if in any other hands but yours. Expecting again to require your services, I remain yours most respectfully,

JOS. LOFVENDAHT.

South Boston, Mass., April 2, 1861.

MESSRS. MUNN & Co.:—I duly received my patent for facilitating the drying of pasteboard; thanks to you for your attentions and courtesy. It works equal to my most sanguine expectations. If the same promptness and fidelity marks all your patent business, inventors cannot do better than to commit their applications to your care and judgment. By so doing, I have avoided labor, anxiety and expense. Yours,

J. H. PATTERSON.

Schaghticoke, N. Y., April 1, 1861.

P. S.—I want to add that professional men of every description need the SCIENTIFIC AMERICAN; every number adds to any reader's store of knowledge beyond appreciation. It should be placed in every college, academy and district school library.

J. H. P.

MESSRS. MUNN & Co.:—I have to acknowledge, with great pleasure, the receipt of your note this morning, informing me of the success of my application for a patent for Enameling Photographs, and that my Letters Patent will be issued next Tuesday. As this intelligence reaches me five days before the papers will be issued from the Patent Office, I refer to it as further evidence of your promptness and your facilities for knowing how things are working in that institution. I long since discovered that a thing that is worth doing is worth doing well; and as I have learned by corresponding with other patent attorneys that your fees are as favorable for inventors as the best of them, I feel it my duty to advise all inventors to secure your services, assuring them that in no case is the old maxim, "The best is the cheapest," more applicable than in taking out a patent. Yours, with many thanks,

D. W. S. RAWSON.

Galena, Ill., March 28, 1861.

MESSRS. MUNN & Co.:—We have received your letter of the 26th inst., notifying us that our patent for an Improvement on Panel Machines is ordered to issue. We feel heartily thankful to you for the energy you have used in pushing our claims through, and if we should happen to have any more patent business to attend to, you shall have the preference. Very respectfully yours,

BAIN & BROWN.

Richmond, Ind., March 30, 1861.

MESSRS. MUNN & Co.:—I take pleasure in stating to you that I received my Letters Patent from Washington on the 3d inst. I feel indebted to you for your promptness in the prosecution of my case before the Patent Office, and I can assure you I will not lose a favorable opportunity to recommend your agency to my friends and acquaintances. I have already got three new subscribers to your most valuable paper in our shop. Respectfully yours,

M. JOHNSTON.

South Boston, Mass., April 4, 1861.

MESSRS. MUNN & Co.:—I thank you for the promptness exhibited in procuring a patent on my Wagon Tailboard; it proves what I have often heard to be true—that your agency was the only reliable one for a working man to employ.

JOSEPH D. FARRELL.

Boston, Mass., April 4, 1861.

KEEP HOUSE PLANTS CLEAN.—The London *Cottage Gardener* relates an experiment, showing the advantage of keeping the leaves of plants free from dust. Two orange trees, weighing respectively 18 and 20 ounces, were allowed to vegetate without their leaves being cleaned for a year, and two others, weighing respectively 19 and 20½ ounces, had their leaves sponged with tepid water once a week; the first two increased in weight less than half an ounce each, while of the two latter, one had increased two and the other nearly three ounces. Except the cleaning, the plants were similarly treated.

SOURCE OF THE NORTHERN LIGHTS.—An oil well having been discovered at Aurora, N. Y., a wag writes that it has caused considerable of a sensation, and has afforded a scientific explanation of the source of the *Aurora bore-oil-is*.

### Terrible Rope Sliding Feat.

On the road among the Himalaya mountains, I beheld a species of tight rope performances which might bring the color into M. Blondin's cheeks. The rope extended from an eminence on the hillside above the village over a ravine and down to a great knoll in the fields below, and was drawn as tight as several hundred men with their united strength could effect. They had just finished stretching it when we arrived, and I could scarcely believe a man was actually going to slide down it, the feat appeared to be so utterly impracticable with any chance of safety. Imagine a rope extended from the top of a rock, at least 500 feet high, to a pole some 2,000 feet from its base, and some idea may be formed of the undertaking. A great concourse of people of both sexes were assembled in all their holiday garb, and the man who was to slide was swinging round at the end of a long plank fixed on an upright pole as a pivot. Every few minutes he called upon some person among the crowd by name, and swinging round several times to the individual's honor, received from him a trifling gratuity. He no sooner noticed me than I was included in this category; and being told that it was in no way a religious ceremony, I gave him a rupee. When this was over, he was escorted to the eminence above, amid the loud lamentations of his family and the discordant music of the village band. With the glass, I saw him placed on a kind of saddle on the rope, and two individuals busied fastening something to his legs, which I afterward saw was filled with earth. The spectators, among whom I stood, were assembled in groups near the pole to which the lower end of the rope was attached, all intently watching for the descent. Presently he let go, and came down several hundred yards with terrible velocity, a stream of smoke following in his wake. As he approached us, the incline being gradually diminished, his career was less rapid, and became slower and slower near the end, where, the rope being sufficiently near the ground, he was taken down amid the shouts and congratulations of the villagers.—*Rambles in the Himalayas.*

RAISING EARLY TOMATOES, &c.—A correspondent of the *Country Gentleman* gives the following method for raising early plants:—Start the seeds in a box of moist earth, and when the plants are about two inches high, transplant them into a turnip, scooped out and filled with fine, rich mold. Set them out in your hotbed, and when the spring frosts are past, remove them to the garden. This is better than making a basket for the roots, as sometimes recommended, as the turnip decays and nourishes the plant. Tomatoes are benefited by an early transplanting, which causes them to throw out more roots and grow "stocky." Do not pinch out the center shoot, unless you wish a succession of lateral suckers all the season. If you start the seeds in a hotbed, the plants should still be moved, if only an inch or two, in the bed. Of cucumbers, melons, Lima beans, and other tender plants that suffer from transplanting, the seeds may be planted in the turnip. Sink the turnips in the soil, or they will dry up; or you can keep them in the house in a shallow box, surrounded with earth.

ARNICA HAIR WASH.—When the hair is falling off and becoming thin from the too frequent use of castor, macassar, oils, &c., or when premature baldness arises from illness, the Arnica hair wash will be found of great service in arresting the mischief. It is thus prepared: take elder water, half a pint; sherry wine, half a pint; tincture of arnica, half an ounce; alcoholic ammonia, one drachm—if this last-named ingredient is old, and has lost its strength, then two drachms instead of one may be employed. The whole of these are to be mixed in a lotion bottle, and applied to the head every night with a sponge. Wash the head with warm water twice a week. Soft brushes only must be used during the growth of the young hair.—*Septimus Piessé.*

COAL TAR SOAP.—M. Semeaux, in *Comptes Rendus*, recommends a new preparation of tar for disinfecting purposes, which is different from the emulsion made from tar. He prepares it by digesting equal parts of coal tar soap and rectified spirits in a water-bath until complete solution has taken place. The soap thus formed is said to be soluble both in warm and cold water.