

(For the Scientific American.)  
Lignum Vitæ Journal Boxes.

In last week's Scientific American I perused an article from one of your correspondents, on the subject of wooden boxes for machinery, in which he states that he uses fustic for the purpose, which I have no doubt is good, as he speaks from experience, but I would beg leave to inform him that I use lignum vitæ, and prefer that to any metal or other material that I have ever heard of. In the first place it contains more gum, which is of an oily nature in itself, and when in operation the machinery requires much less oil than does metal. About nine years ago I fitted up a circular saw for light work, the mandril running upon steel centres; in the course of a few months they became entirely useless, having worn so much that I threw the whole concern aside, built me a new steel mandril mounted in lignum vitæ, and when I last saw the machine, about a year ago, it was in as good order to all appearance, as the day I made it, and has never required the slightest repair, although in constant use. I have lately fitted up a steam cabinet factory in this city, and have used wood entirely for all my journals; although it has been running about nine months I have not even had occasion to tighten up once. The manner in which I construct them may possibly be new to some of your readers. In the first place I turn the ends of my shaft in the form of a step, then select my wood of as even grain and quality as possible; turn the outside to any size you may think will be strong enough, to fit into a hole bored with a centre bit, then turn a recess in the end of the plug, to fit the step of the shaft, about 3-8 of an inch deep, according to the weight, and at the bottom of the recess make deeper, so as to form a cavity to contain oil; one plug is stationary, about 1 or 1½ inches long, driven solid into the timber or bearer; the other end about 3 or 4 inches long, to slide through the hole easy, but fit; now, all being ready, insert one end of the shaft in the stationary plug, and slide up the other, and key it fast, and the shaft is hung. Should it ever require repairing or re-centering, the expense would be a mere trifle. With the experience I have had, I am perfectly satisfied of its superior merits, as an anti-friction substance for machinery.

Maysville, Ky., March 12.

**Liquors used in the United States.**

MESSRS. EDITORS—In an article headed "Liquors made in the United States," published in your paper of this date (March 27th), you set down the number of gallons of beer at 1,177,924; which I consider as altogether too small, to say nothing of the rum and whisky. If that is all the Census Report gives, then I think the Census requires revision, for Vassar's brewery at Poughkeepsie, alone, turns out 600,000 barrels of ale per annum, which, multiplied by 30, make the number of gallons 1,800,000! When we consider that there are many other breweries in this State, the Census Report cannot be relied on if it gives only 1,177,924 gallons as the entire malt product of the whole Union. What do you say?

A. HOSS.

**Fire Engine Performances.**

MESSRS. EDITORS—I send you some statements of engine playing, which may not be uninteresting to you:—"Nameang" engine of New London, Ct., drew 20,000 gallons of water from a cistern in 67 minutes; "Augusta" engine, of Augusta, Ga., weighing 2,800 pounds, and manned by 36 men, played an inch stream 198 feet; and an inch and a quarter stream, 180 feet; this was the first time the engine had ever been tried, and it was worked by a company unused to that style of engine; under the circumstances I consider it equal to any horizontal playing that has come to my notice. For playing under any circumstances, I think the "Gaspee," of this city, has exceeded any engine which has ever been built. I have given you, in a previous letter, a statement of her playing from a pipe, and I now add another item, which will give you an idea of her capacity:—With 20 men at the brakes, she drew upwards of 11,000 gallons of water from a cellar, in twenty-five minutes, equal to 26,000 gallons in an hour. From personal knowledge of this engine, I think 20 men could work it at that rate, with

as little fatigue as at most any other labor. The above engines were built by Mr. Wm. Jeffers, of Pawtuck, R. I. W. S. I.

**Accidents On Railroads.**

Seeing so many accounts of collisions and accidents on railroads, and many of them occurring through inattention to the Time Table, a plan has suggested itself to my mind, which, I think, would obviate much of the carelessness and recklessness shown in many of them. It is this:—to have some paper selected, say the Scientific American, or other paper of a like character, in which should be published the names of all the conductors employed on the various roads in the country, and each superintendent to keep such a list, then make discharge a penalty for want of attention or recklessness, and let every such discharge be published; also, to have a rule adopted among the superintendents, that no such discharged conductor shall be employed on any road. This, I believe, would operate as a check upon one of the causes of so many accidents, resulting in the loss of life and property, to a great extent.

H. LILL.

(For the Scientific American.)  
**Cultivation of the Olive.**

The Olive has been, and is now, cultivated to some extent in Georgia and Florida. Olives have been grown in St. Augustine, Fla., for a long time, from which the finest oil has been made. The trees are large and luxuriant, and produce fine berries.

The late Mr. Cowper, of St. Simon's Island, on the coast of Georgia, cultivated the olive with much success, and produced oil equal to the best imported article. The greatest hindrance has been the long time it took for trees to bear. If the new variety, recently introduced into Spain, Portugal, and France, could be successfully grown here, of which I have no doubt, we have one of the finest regions in the world for them. Our sea islands, from Charleston, S. C., to the St. John's River, are admirably adapted, in soil and temperature, as well as a large strip along the seaboard. A large portion of Florida could be brought into requisition, and oil made that has some of the peculiarities of the olive in it. It would diversify labor now bestowed upon the idol of the South—a cotton bale; which idol is as much interwoven into every thought and feeling, as the household gods of the heathen; cotton is our all! All of our hopes and fears are based upon cotton, and cotton rules this nation—the North as well as the South bow down to this idol. Every thing else is sacrificed to make incense for it, and what is the consequence? Over-producing has brought low prices, and utter ruin to many of its devotees. We hear the cry of money is scarce, and why? Because we send away all we make, for the self-same articles we could produce at home. When will the South see her folly? I fear not in this generation, for all seem agreed "to walk in the steps of their illustrious predecessors."

Savannah, Ga.

**To Prevent Teeth from Bleeding.**

Dissolve alum in alcohol; saturate cotton or lint, which is better, and pack the cavity from which the tooth has been extracted, and bleeding will cease instantly. The packing may be retained for a day or two without becoming offensive, which is not the case when the alum is dissolved in water. During a practice of eight years, it has never failed. In one case many fears were expressed, before trial, on account of former failures of many styptics.

M. C. HEALD, Dentist.

(For the Scientific American.)  
**Transporting Timber.**

I perceive that your correspondent, Charles S. Watts, of Boston, does not understand the mode in which Mr. Cochran transports lumber. Had he known the practice of lumbering in our mountainous country, he need not have referred to history to show that lumber had been conveyed down steep mountains by means of artificial slides. For I presume there is scarcely a town on the range of the Green Mountains in which there are not slides of some kind for "running logs," either constructed of rough poles, timber, plank, or otherwise, according to the advantages of the situations or the enterprise and capital of the proprietor. But in all slides where the tim-

beris propelled by its own gravity, there are several things which are indispensable, viz., a very great descent, a perfect straight line, and of uniform grade. None of which are essential in the trough constructed by Mr. Cochran, it having a variety of different grades and curves, conforming to the general shape of the country through which it passes. In the great Switzerland slide, there was a descent of several thousand feet. In Mr. Cochran's, only five or six hundred, and it would be effectual if there were but fifty feet, or if extended to your city. It is a good, feasible, and practicable mode of conveying lumber, fuel, or logs of any dimensions, and may be adopted with perfect success in every forest where there is a stream of water flowing from it, which is nearly always the case. I believe it is one of the great improvements of the age, and will be of untold worth to the lumbering interests of our country. And whether or no it is new I am not inclined to endorse or inculcate the opinions of Mr. Watts, that, in this age, there is "nothing new under the sun." M. M. M. East Dorset, Vt.

**Accidents from Fire-Arms--Safety Locks.**

The following is part of a letter from T. N. Jones, of London, N. H., who, after adducing many accidents from the use of fire-arms (and one to himself), which have been increasing since percussion locks came into such general use, says, "I have invented a self-acting lock, and any lock of common construction can be changed to a reliable safety lock at no expense, and by a few minutes' labor by a common artisan, or the sportsman himself. I have proved it to my own satisfaction, and it has been pronounced an excellent safe-guard by others, among whom are gun manufacturers. I keep it no secret, and cheerfully submit it, with your leave, Messrs. Editors, to your numerous readers. Take out the tumbler of the lock and file in it a third ketch, below the half-cock catch, so that when the dog is set on it, it will raise the hammer about an eighth of an inch from the cap. By this arrangement the cap is prevented from falling or being brushed from the nipple, and all pressure from the hammer is taken off. Load and cap your piece in the usual way; drop your hammer down until the dog enters the safety catch; when you wish to discharge your piece bring it to full cock and pull trigger. The dog will then go by the third or safety notch the same as it goes by the second or half cock, and strike with its usual force on the cap. The value of the arrangement is this: your gun cannot be exploded in any of the usual accidental ways. If it falls, no explosion can take place, as the cap is guarded from all concussion. If a twig pulls back the hammer and lets it go, the safety catch is sure to bring it up; in fact, in no way can the piece be discharged but by bringing it to full cock and pulling on the trigger; for when the trigger is not pressed, the safety catch invariably arrests the further descent of the hammer. With such an apparatus on my detonator, I feel perfectly safe in my excursions for game, be it "duck or plover;" I go alone, generally, my setter—knowing dog!—excepted, thinking it wise to eschew the company of blundering companions of the biped species. Very truly yours and your readers, T. N. JONES."

**Selection of a Carpet.**

The walls being properly papered, the next thing is to consider the pattern of the carpet. In this also the rule must be followed, of selecting small patterns for small rooms. There is economy in this, as well as taste, because small-patterned carpets are generally found the most durable. As a rule, a formal geometrical pattern is best for a carpet; it should be something which does not appear unnatural to tread upon. It is a mistake to put flowers, trees, or figures of birds or animals, into a carpet, for we do not walk on such things; far other are their purposes and uses. Sometimes a carpet is made to represent a picture or landscape, which is also a mistake, for it offends our notions of propriety to see such objects spread on a floor. In the formal pattern, all these defects are avoided; it is not unusual to walk upon ornamental pavements or floors, and we are not displeased at seeing varieties of similar ornaments reproduced in a carpet. Those persons who have seen the House of Lords, will remember that

the pattern of the carpet is nothing more than a small amber-colored star, on a deep blue ground, which, simple as it appears, harmonizes admirably with the superb decorations of the spacious edifice.

Another reason why a small pattern should be chosen is, that it suits best with the furniture of a room. The furniture must of course cover some portions of the carpet, so that if the pattern be large, there is so much confusion between what is seen and what is hidden, that a very disagreeable effect is produced. With a small pattern, on the contrary, the concealing of a portion by the furniture does not spoil the effect of that which remains uncovered. In the general suitability the Turkey carpet is the best; it is adapted for almost any style of furniture, and no one ever gets tired of it, owing to the perfect naturalness and harmony of the pattern. Let it be remembered, that neither on the wall nor on the floor should there be any one strong predominating color, which injures the effect of everything else in the room. As a rule, the color of the carpet should be darker than that of the walls; very light patterns are most suitable for bedrooms.

[The above we select from an exchange, and it, no doubt, took it from a foreign paper. It makes no matter where it originated, it is good, and it would be well if the advice it contains were more often followed than it is; and it will accomplish the object for which we insert it, if it be the means of leading any one who reads it to adopt it. A short time ago we overheard a conversation on one of our steamboats between two gentlemen whom we supposed to be carpet merchants. They were discussing the merits of foreign and American carpets; and they highly extolled some American patterns for their beauty and cheapness; they believed them to be superior in looks to the English carpets, "but then," says one, "the colors, they do not stand like the English." This required no proof to convince the other, it was admitted to be a fact by free mutual consent. It is our opinion that there is a foolish public prejudice against American colors. We cannot see how there can be the least difference in the colors of the carpets made in England and those in the United States. They are dyed with the same dyes and by the same processes, and in many cases by the same men. Some people think the water and climate are the causes of the difference; this is all nonsense—we believe there is no difference.

**Researches in Terrestrial Physics.**

Prof. A. Henessy has brought the higher mathematics to bear upon various questions connected with the changes in a globe cooling from fusion. In the course of his paper, the author shows that the solidification of the earth could not have begun at the centre, but must have gone on from the surface, adding successive layers of cooled rocks. He infers that the least possible thickness of the crust is 18 miles, and the greatest possible thickness 600 miles. He infers also that a considerable amount of friction and pressure must exist between the shell and fluid nucleus.

[Inferences are very excellent, but still we must hold them to be nothing more than inferences. If some person, commencing existence in a 1,000 feet deep Mexican mine, were, for the first time, to approach the surface of the earth, measuring the temperature as he ascended, he would undoubtedly infer that it would be freezing cold when he reached the surface. How surprised would he be to find it so much warmer than the place from whence he commenced his subterranean pilgrimage.

**Hydraulic Cement Paint.**

We have been informed that if hydraulic cement be mixed with oil, it forms a first-rate anti-combustible and excellent water-proof paint for the roofs of buildings, outhouse walls, &c. We know that if the cement is ground fine enough, it will make a good coarse paint, and so will sand if well mixed with good white lead. We prefer the latter, as a water-proof hard paint to any other, but the hydraulic cement paint is much better for its incombustible qualities. Our farmers should try this paint. They need not be very particular about the quality of the oil which they use.