

(For the Scientific American.)

Leather and its Interests.

Being a constant reader of your valuable paper, and feeling a great interest, a real pocket interest, in every thing relating to leather, —I read with more than ordinary interest, your article on this subject, in the Scientific American of the 4th inst. It has long been settled by one of the wise men of the world, I may say, reduced to an axiom, that "there is nothing like leather." But what is leather? would seem to be a question yet to be solved. Webster defines it thus, "the skin of an animal dressed and prepared for use," which would seem to be plain enough, until you turn to his definition of "tanning," which is, "the practice, operation, and art of converting the raw hides of animals into leather by the use of tan," which would seem to imply that "tan" was an essential ingredient in the production of leather. This would seem to be Dr. Ure's idea, if I properly understand him, when he says, "it is the skin of animals, so modified by chemical means as to have become unalterable by the external agents which tend to decompose it in its natural state." If tan or tannic acid is an essential ingredient in the production of leather, you will readily perceive that it is a misnomer to call the "Preller" process of softening hides and skins "tanning." Indeed I have no hesitation in saying that "tawing" is a much better term, by which to designate the "Preller" process; as the vegetables you enumerate as constituting the compound used by him, have little or no tannic acid in them; the minerals none at all. Least I should be considered captious, I will change my remarks to what may more properly be considered, the merits of the question, pertaining to this Preller process. You say it is claimed that the leather produced by this process, is much stronger, and will wear much better." That the first half of the proposition, that hides and skins may be made tougher, by undergoing a process such as described, as that of Preller's, than if they were subjected to the ordinary tanning process, will not be denied by any one, who understands the art or mystery of tanning. No, it is an indisputable fact, that the raw skin is tougher than after it is manufactured into leather; that is, take two pieces of skin, of given width and substance, the one tanned and the other raw; and it will require a greater force to separate the raw than the tanned piece. So likewise is a piece of tawed skin tougher than a piece, of tanned skin; but that it will "wear better" for the ordinary purposes for which leather is used, will scarcely be admitted by so old a member of the "craft" as I am. No, we profess to change the material upon which we operate, by chemical means, so as to render it less alterable by the external agents which tend to decompose it, in its natural state; in short, to make it "wear better."—The intelligent manufacturer and consumer wants something more than toughness in the quality of his leather—he wants suppleness, and the nearest approximation to imperviousness consistent with a condition to permit the ready escape of perspiration; that is, wants an article which, while it will let in the smallest amount of dampness, will offer the least obstruction to the escape of that which is in. He wants an article about equidistant from india rubber and Indian dressed or tawed (not tanned) buckskin or buffalo robes, a mean which I do not believe Mr. Preller, or any one else, can obtain from the use of the materials designated in your article, as those used by him. While I shall be, or rather should be, much pleased, to hear of any real improvement, in the manufacture of leather, from an experimenter, upon the Preller process. I frankly confess that I do not for one moment anticipate such a result. S. S.

Dayton, Ohio, June, 1853.

[The author of the above has experimented a great deal in tanning, and is author of the patent process favorably noticed on pages 288 and 289, of Campbell Moffitt's work on the subject.

Old Northmen Relics.

A spoon about the size of a rather small table spoon, was lately dug up with some other articles near the head of a cove at New London, Conn, from a depth of fifteen feet; the original beach having been covered to

that depth by successive washings from the surrounding hills. A New London paper says it is supposed that they were left there by the crew of a ship of some of the "Northmen" who visited and described the shores of Long Island Sound eight hundred or a thousand years ago. The spoon has been sent to the Connecticut Antiquarian Society, and they have pronounced it of Danish manufacture, a composition of bell-metal and gold. A heart and an arrow head that are on it are very perfect; there are also three other smaller figures that are scarcely distinguishable.

(For the Scientific American.)

Natural Resources of Arkansas.

I noticed in your valuable paper of the 4th an article from a western pen, about a large quarry of granite, near Little Rock, Ark., and what I have to say in relation to it is, simply, to add to the story, what I know to be unknown to many:—Within 30 miles of Little Rock, is an extensive quarry of free stone of superior quality and while there in 1839, I saw some Scotch stone cutters cutting out several Ionic capitals for columns. I noticed that the stone under the chisel and mallet of a skillful workman could be finished into anything that was beautiful.

About 3 miles from Little Rock are several ridges or knolls, where I found an abundance of quartz of various sizes, sorts, and shapes; they were very clear, and a friend of mine sent some to Pittsburgh, to be set in rings, pins, and other articles of jewelry.

On the Ouichita River are extensive quarries of oil stone of superior quality, which brings a great price at present among our eastern mechanics; I have seen tons of them piled up in Little Rock for shipping.

At or near the well-known Hot Springs, some 40 miles from Little Rock, there is found in large quantities load stones or magnets. I used to amuse myself by dropping a small piece of this load stone into a cask of nails, and then take it out with nails hanging thickly on it. There are doubtless many kinds of minerals in Arkansas that have not yet been found. When the Great Central Railroad is completed, then the tide of emigration to that part of the unknown west will begin to flow and I have no doubt but we shall hear of the discovery of many valuable things that are now unthought of. P.

Reform our Railroad System.

A committee was appointed by the Legislature of Connecticut to examine into the cause of the sad railroad accident at Norwalk, made a report on the subject on the 7th inst. The conclusions of the committee coincide with the views we have taken of the subject, and attribute the cause of that accident more to a bad railroad system than to the inefficiency or bad conduct of any individual connected with the train which was precipitated through the opening of the draw bridge.—The committee have acquitted the engineer of any wilful act in producing the disaster, and plainly state that the danger was created in entire conformity to the express orders of the company. The signal, they believe, was not sufficient, and the train was run at a speed entirely unsafe.

The committee in their report also say, the public demand a rate of speed which on the road as originally constructed can scarcely be run with safety. The road was constructed too cheaply to warrant the highest rate of speed,—the grades are too heavy, the curves of too small radius, and the bridges are not of as permanent a character as they should be: a large outlay has been made for a double track, and still more is needed to remedy many defects in the original construction of the road, which the Committee are informed by the President, the Company now have under consideration. Another cause tending to produce this and other disasters is, the want of a thorough supervision of the road by its officers. So far as the Committee could ascertain, the whole duty of supervision is devolved upon Mr. Whistler, the Superintendent; they have the fullest confidence in his ability and fidelity, but say that the duties are too great for one man, and that the personal supervision of the President of the road would very much tend to insure proper obedience to rules on the part of employees,

and reduce the chances of disasters. In conclusion the committee expressed the opinion that the weight of responsibility for the calamity must rest upon the company, for not guarding more securely against the dangers which were known to exist, and which were created by their own orders—against the negligence even of their own employees in such a place of danger. They say that considerations of a pecuniary nature should not operate to prevent care.

We believe that railroads can be built and trains run upon them at a velocity of 80 miles per hour with greater safety than they now can on the majority of our railroads, at the rate of 25 miles per hour. But our railroad companies are not blameable altogether for our present inefficient railroad system. It was difficult, and still is to obtain heavy subscriptions for the construction of railroads; moneyed men want a dollar to go farther with us than a pound in England, hence our cheap railroads. The daily papers of this city have been flooded with editorials and communications on the subject of railroad management since the Norwalk accident. We have not seen a really sensible article on the subject in one of them; every man seems to have his own favored panacea for the prevention of accidents, such as some new way of managing the signals, switches, or something else. The remedy for the evils of railroad accidents is well known to all who are practically acquainted with the subject; it is more money; and although it is very true, as the report of committee says, that the weight of responsibility for the accident must rest on the railroad company, and that considerations of a pecuniary nature should not operate to prevent care, we do say that some of the responsibility must also be thrown upon the people for allowing any railroad of inefficient construction, in fixed and rolling stock to go into operation. Single tracks should not be allowed; the rails should be heavier and better secured than they are upon any of our railroads; all the tracks should be fenced in, the bridges should be of the most substantial character, and every measure and means adapted to perfect our railroad system. Every good engineer knows exactly what is wanted and what should be done to make our railroads more safe; we wish that our moneyed men—the companies, could be made to feel more deeply on the subject.

The New York and New Haven Railroad is under the superintendence of George W. Whistler, Jr., a very able and competent engineer, and so far as public opinion was understood up to the time of the Norwalk calamity, we think it was decidedly in favor of its general management. We do not altogether agree with the report that the supervision of the president is strictly necessary, as the superintendent is assisted by a number of subordinates which necessarily leaves him more time to look after the weightier affairs of the road. Neither do we see the force of the clause in the recent bill of the Connecticut Legislature, which refers to the residence of the president, making it incumbent on him to live in Connecticut. What difference can it make at which end of the road he may happen to be located. There is something in this which appears unworthy of a legislative body; it looks as if some one had conceived a personal prejudice against Robt. Schuyler, for it does not seem to be applicable to any other individual acting in a similar capacity. Whether Robert Schuyler ought to be president of this particular road is not for us to say, but we can say that he is an able and efficient man, and is well acquainted with the railroad interests of the country.

An Alleged Wonderful Discovery.

The following article is copied from the "Boston Courier." We regard it as a serious duty, in giving place to it, to express the hope that no one will be thereby induced to rely upon its recommendations, except under the sanction of competent medical counsel. If the discovery be all that is claimed, it is most valuable to the human family, and its author will merit the gratitude of the world:

CURE FOR VIRULENT SMALL POX OR SCARLATINA AND MEASLES.—A merchant and shipowner of this city has had the following recipe sent him from England, where it was

furnished by Mr. L. Larkin, member of the Royal College of Surgeons, and who vouches for it as a "medicine that will effect a revolution in the healing art, as regards the prevention and cure, not only of small-pox, but also of measles and scarlatina, however malignant the type, in a manner more efficient and extraordinary than could have been anticipated even by the most ardent philanthropist."

"On the first appearance of fever or irritation ushering in attacks, whether occurring in families or large communities, the subjoined mode of treatment should at once be entered on:—Take one grain each of powdered foxglove or digitalis (valuable in the ratio of its greenness—the dark should be rejected) and one of sulphate of zinc (this article is commonly known as white vitriol) These should be rubbed thoroughly in a mortar, or other convenient vessel, with four or five drops of water; this done a noggin (or about four ounce-) more, with some syrup or sugar, should be added. Of this mixture a table spoonful should be given an adult, and two teaspoonfuls to a child, every second hour until symptoms of disease vanish.

Thus conducted, convalescence, as if by magic, will result. The rapidity of an event so auspicious will equally delight and astonish it may, however, be necessary further to note, that should the bowels become obstructed in progress of the disease (an evil by no means common) then a drachm of the compound powder jalap (formed of two parts cream of tartar with one of jalap) and one grain of the herb, treated as above, formed into a pastil with syrup or sugar, should be given to an adult, and half the quantity to a child. This simple medicine shuts out every other form or article whatever, as totally unnecessary, if not pernicious.

The 'methodus medendi' of these medicines, capable of effecting results so gigantic, remain now only to be given, and appears to be as follows:—The herb, by its anti-febrile properties, lays hold at once of the fever, the prolific source of woe, which it immediately strangles, while the zinc acts the part of a tonic, instantly restoring the equilibrium."

Mr. Larkin adds:—"No emigrant or government vessel should hereafter be allowed to put to sea without a few pence worth of these protectors, and it is further ardently hoped that, as the dearest interests of our common humanity are so vitally involved in this discovery, the press of all countries will give publicity to this announcement."

[As this is an alleged discovery, we, as one of the press, have given it publicity, but in doing so, let us say that we do not place such dependence on its "fever strangling" powers, as its author would have us believe it possesses.

Change in the Fisheries.

Formerly Newburyport had an abundance of codfishermen, but the mackerel business was more inviting and more profitable, and as the cod declined, mechanical trades engaged a good share of the men, till now, very few remain. The old fishermen have died, and the young ones are in other pursuits; and this year at least three-quarters are obtained from the British provinces, and the spring fishing was in many instances abandoned, from the difficulty to obtain men. The number of vessels is being reduced by losses and sales, and no new ones take their places, and yet there is a failure of men.

The Provincials have learned from the Americans, and greatly improved in their fishing operations: it they remain as at present, and the Yaukees are driven from their waters, they will have greatly the advantage, and the business must go to them.

Paper Making in North Carolina.

There are five paper mills now in operation in North Carolina, and another with a capital of \$25,000, is in process of erection, about six miles from Raleigh. The two mills near Raleigh (the "Manteo" and the "Neuse" mills) consume annually about one million and a half pounds of old rags; and the other our mills viz: at Fayetteville, Shelby, Lincoln and Salem, as much more—making 3,000,000 of stock used annually in North Carolina.